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 – the Water Quality Control Division (Division);
- Exhibit 2 – Aurora Water (Aurora);
- Exhibit 3 – Big Dry Creek Watershed Association (Big Dry Creek);
- Exhibit 4 – City of Black Hawk and Black Hawk/Central City Sanitation District (Black Hawk);
- Exhibit 5 – City of Boulder (Boulder);
- Exhibit 6 – Centennial Water and Sanitation District (Centennial);
- Exhibit 7 – Central Clear Creek Sanitation District;
- Exhibit 8 – Climax Molybdenum Company (Climax);
- Exhibit 9 – Cottonwood Water and Sanitation District (Cottonwood);
- Exhibit 10 – Denver Water;
- Exhibit 11 – Front Range Energy, City of Fort Collins, City of Greeley;
- Exhibit 12 – City of Fort Collins (Fort Collins);
- Exhibit 13 – Colorado Hazardous Materials and Waste Management Division (HMWMD);
- Exhibit 14 – Littleton/Englewood Wastewater Treatment Plant (Littleton/Englewood);
- Exhibit 15 – Metro Wastewater Reclamation District (Metro);
- Exhibit 16 – MillerCoors;
- Exhibit 17 – Town of Milliken (Milliken);
- Exhibit 18 – Parker Water and Sanitation District (Parker);
- Exhibit 19 – Plum Creek Water Reclamation Authority (Plum Creek);
- Exhibit 20 – Public Service Company of Colorado (Public Service); and
- Exhibit 21 – Suncor Energy (U.S.A.) Inc (Suncor).

In these attachments, proposed new language is shown with double-underlining and proposed deletions are shown with ~~strikeouts.~~ Any alternative proposals related to the revisions proposed in Exhibits 1 through 21 and developed in response to those proposals will also be considered.

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 an Issues Scoping Hearing, which provides an opportunity for early identification of potential issues that may need to be addressed in the next major rulemaking hearing for particular regulations, and for identification of any issues that may need to be addressed in rulemaking prior to that time. The Issues Scoping Hearing for this basin was held in October 2013. The second step in the triennial review process – the Issues Formulation Hearing – results in the identification of specific issues to be addressed in the next major rulemaking. The Issues

Formulation Hearing for this basin was held in November 2014. The third step is the Rulemaking Hearing, where any revisions to the water quality classifications and standards are formally adopted. Information regarding triennial reviews of water quality classifications and standards is provided on the Commission's website at https://www.colorado.gov/pacific/cdphe/wqcc-standards-adoption-and-revision-process.

HEARING SCHEDULE:

DATE:	Monday, June 8, 2015
TIME:	10:00 a.m.
PLACE:	Florence Sabin Conference Room Colorado Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246

PUBLIC PARTICIPATION ENCOURAGED:

The commission encourages all interested persons to provide their opinions or recommendations regarding the matters to be addressed in this rulemaking hearing, either orally at the hearing or in writing prior to or at the hearing. Although oral testimony from those with party status (see below) and other interested persons will be received at the hearing, the time available for such oral testimony may be limited. The commission requests that all interested persons submit to the commission any available information that may be relevant in considering the noticed proposals, including information relating to the factors listed in section 31.7(2) of the Basic Standards and Methodologies for Surface Water, 5 CCR 1002-31.

Written submissions prior to the hearing by interested members of the public that do not have party status are encouraged. In order to be distributed to the commission for review prior to the hearing, such submissions need to be received in the commission office or the Colorado Department of Public Health and Environment's (department's) mail room by May 27, 2015. Written submissions received after this date will be distributed to commissioners at the hearing. However, for logistical reasons, the commission office cannot guarantee that electronic submissions received after 1:00 p.m. Friday, June 5, 2015 will be provided to commissioners. Interested persons wishing to submit comments or other documents after that date and time should bring paper copies to the hearing and provide PDF versions to the commission office as soon as possible after the hearing.

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 generally will not be permitted.

The commission encourages informal discussions among the parties, the Water Quality Control 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.** To help facilitate discussions, the following contact information is provided:

- Division: Sarah Johnson; sarah.johnson@state.co.us
  303-692-3609
  - o Clear Creek, Big Dry: Barbara Bennett; barbara.bennett@state.co.us
    303-692-3577
    Amanda Jensen; amanda.jensen@state.co.us
    303-692-3525

- Upper South Platte, Bear Creek, Middle South: Jim Saunders; jamesf.saunders@state.co.us 303-692-3572
- Cherry Creek, Boulder Creek, Big Thompson, St. Vrain: Patrick Bachmann; patrick.bachmann@state.co.us 303-692-3573
- Cache la Poudre, Laramie, Lower South, Republican: Stephanie Baker: stephanie.baker@state.co.us 303-692-3559

- Aurora: Jill Piatt Kemper; jpiatt@auroragov.org 303-739-7390
- Big Dry Creek, Front Range Energy: Jane Clary; clary@wrightwater.com 303-480-1700
- Black Hawk, Central Clear Creek, Milliken: Dan DeLaughter; dan.delaugher@lrewater.com 303-455-9589
- Boulder: Bret Linenfelser; linenfelser@bouldercolorado.gov 303-413-7355
- Centennial, Climax, Cottonwood, Fort Collins, MillerCoors, Plum Creek: Gabe Racz: gr@vrlaw.com 303-443-6151
- Denver Water: Dan Arnold; daniel.arnold@denverwater.org 303-628-6469
- Greeley: Andrew Neuhart; aneuhart@brwncald.com 303-239-5429
- HMWMD: Mary Boardman; mary.boardman@state.co.us 303-692-3413
- Littleton/Englewood: Andrew Rottman; arottman@hillandrobbins.com 303-296-8100
- Metro: Amy Woodis: awoodis@mwrd.dst.co.us 303-286-3240
- Parker: Ronda Sandquist; rsandquist@bhfs.com 303-223-1191
- Public Service: Jerry Raisch; jwr@vrlaw.com 303-443-6151
- Suncor: Tad Foster; tadfoster@tsfosterlaw.com 719-632-5240

PARTY STATUS:

Participation as a "party" to this hearing will require compliance with section 21.3(D) of the Procedural Rules, Regulation #21 (5 CCR 1002-21). It is not necessary to acquire party status in order to testify or comment. **For each request for party status, please provide the organization's name, a contact person, mailing address, phone number, and email address.** Written party status requests are due in the Commission Office on or before:

DATE: Tuesday, March 31, 2015
TIME: 5:00 p.m.

A single copy of the party status request may be transmitted as an email attachment to cdphe.wqcc@state.co.us, submitted by fax to 303-691-7702, mailed or otherwise conveyed so as to be received in the Department's mail room no later than this deadline.

PREHEARING STATEMENTS:

PLEASE NOTE that for this hearing two separate deadlines for prehearing statements are established:

(1) A PDF version of a **Proponent's Prehearing Statement** from:
- the Division,
- Aurora,

- Big Dry Creek,
- Black Hawk,
- Boulder,
- Centennial,
- Central Clear Creek,
- Climax,
- Cottonwood,
- Denver Water,
- Front Range Energy, Fort Collins, Greeley
- Fort Collins,
- HMWMD,
- Littleton/Englewood,
- Metro,
- MillerCoors,
- Milliken,
- Parker,
- Plum Creek,
- Public Service, and
- Suncor.

as the proponents of revisions proposed in Exhibits 1 through 21 attached to this notice, including written testimony and exhibits providing the basis for the proposals, must be submitted to the commission office no later than **March 11, 2015**. **In addition,** 14 paper copies of the Proponent's Prehearing Statement **without** written testimony and exhibits must be received in the department's mail room no later than **March 11, 2015**; and

(2) A PDF version of a **Responsive Prehearing Statement**, including any exhibits, written testimony, and alternative proposals of **anyone seeking party status and intending to respond to the proponents' proposals** must be submitted to the commission office no later than **April 15, 2015**. **In addition**, 14 paper copies of the Responsive Prehearing Statement **without** written testimony and exhibits must be received in the department's mail room no later than **April 15, 2014**.

Where a party's position or proposal is based in part on analysis of water quality data, the party should submit its analysis of the data and a description of the data upon which the analysis is based, but is not required to submit the raw data into the hearing record. However, by the prehearing statement deadline, the party shall provide an electronically manipulable copy of its data to the Division and any party that requests it. If the Division or any party chooses to submit some or all of the data into the hearing record, such data must be provided to the commission office in PDF format.

The PDF versions of all prehearing statements may be emailed to cdphe.wqcc@state.co.us, provided via an FTP site, submitted on a CD, or otherwise conveyed to the commission office so as to be received no later than the specified date.

As soon as prehearing statements are posted on the commission's web site, the commission office will email a link to the page containing the prehearing statements to proponents, parties and the Attorney General's Office representatives for the commission and the Division. Because the March 11, 2015 deadline for Proponents' Prehearing Statements precedes the March 31, 2015 due date for party status requests, the commission office will email the link to proponents' statements to all parties at the same time the party status list is distributed to parties.

Please note the request that each prehearing statement and rebuttal identify on the first page each of the water bodies addressed in the statement, including both its common name and the basin and segment number provided in the Regulations #38 tables. Also **note** that the commission has prepared a document entitled **Information for Parties to Water Quality Control Commission Rulemaking Hearings.** A copy of this document will be emailed to all persons requesting party status. It is also posted on the

commission's web site as Appendix C to the Public Participation Handbook. Following the suggestions set forth in this document will enhance the effectiveness of parties' input for this proceeding. **Please note the request that parties submit paper documents as two-sided copies on three-hole punch paper.**

REBUTTAL STATEMENTS:

Written rebuttal statements responding to the prehearing statements due on April 15, 2015 may be submitted by the Division or anyone seeking party status. Any such rebuttal statements must be received in the commission office by **May 13, 2015**. A PDF version of written rebuttal statements **including** any exhibits must be submitted to the commission office by this deadline. **In addition,** 14 paper copies **without** exhibits must be received in the department's mail room by the deadline. No other written materials will be accepted following this deadline except for good cause shown.

PREHEARING CONFERENCE:

DATE: Tuesday, May 19, 2015
TIME: 1:00 p.m.
PLACE: Room C1E
Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80246

Attendance at the prehearing conference is mandatory for all persons requesting party status. An opportunity may be available to participate in this prehearing conference by telephone. Persons wishing to participate by telephone should notify the commission office as early as possible. **Any motions regarding the conduct of this rulemaking shall be submitted by Thursday, May 14, 2015, so they can be considered at the prehearing conference. No motions will be accepted after May 14, 2015 except for good cause shown.**

SPECIFIC STATUTORY AUTHORITY:

The provisions of sections 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for consideration of the regulatory amendments proposed by this notice. Should the commission adopt the regulatory language as proposed in this notice or alternative amendments, it will also adopt, in compliance with section 24-4-103(4) C.R.S., an appropriate Statement of Basis, Specific Statutory Authority, and Purpose.

NOTIFICATION OF POTENTIAL MATERIAL INJURY TO WATER RIGHTS:

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 in the party status request submitted. In order for this potential to be considered fully by the commission and the other agencies listed in the statute, persons must fully explain the basis for their claim in their prehearing statement which is due in the commission office on the date specified above. This explanation should identify and describe the water right(s), and explain how and to what degree the material injury will be incurred.

Dated this10th day of February 2015 at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Trisha Oeth
cn=Trisha Oeth, o, ou=Water Quality Control Commission, email=trisha.oeth@state.co.us, c=US
2015.02.10 07:13:44 -07'00'

Trisha Oeth, Administrator

EXHIBIT 1
WATER QUALITY CONTROL DIVISION

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

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 31.0 - 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). As additional stream segments are classified and numeric standards for this drainage system, they will be added to or replace the numeric standards in the Tables in section 38.6). 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

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) QUALIFIERS

See Basic Standards and Methodologies for Surface Water for a listing of organic standards at 31.11 and metal standards found at 31.16 Table III. The column in the tables headed "Water Fish" are presumptively applied to all aquatic life class 1 streams which also have a water supply classification, and are applied to aquatic life class 2 streams which also have a water supply classification, on a case-by-case basis as shown in the Tables 38.6. The column in the tables at 31.11 headed "Fish Ingestion" is presumptively applied to all aquatic life class 1 streams which do not have a water supply classification, and are applied to aquatic life class 2 streams which do not have a water supply classification, on a case-by-case basis as shown in the Tables in Tables 38.6.

(3) URANIUM

(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 water supply classification be increased by any cause attributable to municipal, industrial, or agricultural discharges so as to exceed 16.8-30 µg/l or naturally-occurring concentrations (as determined by the State of Colorado), whichever is greater.

(i) The first number in the 16.8-30 µg/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.

~~(d) In no case shall uranium levels in waters assigned a water supply classification be increased by a cause attributable to municipal, industrial, or agricultural discharges so as to exceed 30 µg/l where naturally-occurring concentration are less than 30 µg/l.~~

(4) NUTRIENTS

Prior to May 31, 2022, interim nutrient values will be considered for adoption only in the limited circumstances defined at 31.17(e). 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 31, 2017, total nitrogen will be considered for adoption per the circumstances outlined in 31.17(e).

Prior to May 31, 2022, 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 & 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 & SAN 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 RECLAM DIST	CO0026638
COSPUS15	Brighton City of	BRIGHTON WWTF	CO0021547
COSPUS15	South Adams County WSD	WILLIAMS MONOCO WWTF	CO0026662
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 FACILTY	CO0026611

Segment	Permittee	Facility name	Permit No.
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
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	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. MARYS GLACIER WSD	CO0023094
COSPCL10	Shwayder Camp Wastewater	SHWAYDER CAMP WWTF	CO0047473
COSPCL11	Idaho Springs City of	IDAHO SPRINGS WWTF	CO0041068
COSPCL12	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
COSPCL14a	Golden City of	GOLDEN CITY OF	CO0042170
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 LODGEWWTF	CO0040819

Segment	Permittee	Facility name	Permit No.
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
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

Segment	Permittee	Facility name	Permit No.
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
COSPBT04c	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
COSPCP13b	Boxelder Sanitation District	BOXELDER SANITATION DISTRICT WWTF	CO0020478
COSPCP13b	Wellington Town of	WELLINGTON WWTF	CO0046451
COSPCP22	South Fort Collins Sanitation District	SOUTH FORT COLLINS SAN DIST	CO0020737
COSPLS01	Western Sugar Cooperative	FORT MORGAN FACILITY	CO0041351
COSPLS01	Cargill Meat Solutions	FORT MORGAN BEEF PLANT	CO0044270

Segment	Permittee	Facility name	Permit No.
COSPLS01	Julesburg Town of	JULESBURG TOWN OF	CO0021113
COSPLS01	Brush City of	BRUSH CITY OF	CO0021245
COSPLS01	Sterling City of	STERLING CITY OF	CO0026247
COSPLS01	Fort Morgan City of	FORT MORGAN CITY OF	CO0044849
COSPLS01	Snyder Sanitation District	SNYDER SANITATION DISTRICT	COG588016
COSPLS01	Morgan Heights WSD	MORGAN HEIGHTS WATER&SEWER INC	COG588040
COSPLS01	Ovid Town of	OVID TOWN OF	COG588106
COSPLS02a	Leprino Foods Company	FORT MORGAN CHEESE FACILITY	CO0043958
COSPLS02a	Deer Trail Town of	DEER TRAIL WWTF	COG589002
COSPLS02a	Hillrose Town of	HILLROSE WWTF	COG589030
COSPLS02a	Byers Water and Sanitation District	BYERS WATER AND SANITATION DISTRICT	COG589033
COSPLS02a	Eastern Adams County Metro District	EASTERN ADAMS CO METRO DIST WWTF	COG589035
COSPLS02b	Kiowa Town of	KIOWA WWTF	CO0033405
COSPLS02b	Elbert Water Sanitation District	ELBERT WATER & SANITATION DIST WWTF	COG589065
COSPRE03	Wray City of	WRAY CITY OF	CO0023833
COSPRE06	Flagler Town of	FLAGER WWTF	COG589036
COSPRE06	Arriba Town of	ARRIBA WWTF	COG589055
COSPRE06	Holyoke City of	HOLYOKE, CIY OF	COG589059
COSPRE06	Akron Town of	AKRON WWTF	COG589061
COSPRE06	Haxtun Town of	HAXTUN, TOWN OF	COG589062
COSPRE06	Stratton Town of	STRATTON WWTF	COG589100
COSPRE06	Burlington City of	BURLINGTON CITY OF WWTF	COG589114
COSPRE06	Seibert Town of	SEIBERT WWTF	COG589120
COSPRE07	Cheyenne Wells Sanitation District No 1	CHEYENNE WELLS SANITATION DIST	COG589039
Unclassified	Silco Oil Co	TOMAHAWK TRUCK STOP	COG589003

Prior to May 31, 2022:

- 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 footnote “C” was added to the total phosphorus and chlorophyll *a* standards in these segments. The footnote references the table of qualified facilities at 38.5(4).
- For segments located entirely below these facilities, nutrient standards do not apply.

A footnote “B” 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 the attached tables 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 31.0. 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 the attached tables:

ac	=	acute (1-day)
Ag	=	Silver
Al	=	Aluminum
As	=	Arsenic
B	=	Boron
Ba	=	Barium
Be	=	Beryllium
^{o}C	=	degrees celsius
Cd	=	Cadmium
ch	=	chronic (30-day)
Chla	=	Chlorophyll *a*
CL	=	cold lake temperature tier
Cl	=	Chloride
CLL	=	cold large lake temperature tier
Cl_2	=	residual chlorine
CN	=	free cyanide
CrIII	=	trivalent chromium
CrVI	=	hexavalent chromium
CS-I	=	cold stream temperature tier one
CS-II	=	cold stream temperature tier two
Cu	=	Copper
dis	=	Dissolved
D.O.	=	Dissolved oxygen
DM	=	daily maximum
DUWS	=	direct use water supply
E. coli	=	Eschericia coli
F	=	Fluoride
Fe	=	Iron
Hg	=	Mercury
mg/l	=	milligrams per liter
ml	=	Milliliters
Mn	=	Manganese
Mo	=	molybdenum
MWAT	=	maximum weekly average temperature
NH_3	=	ammonia as N (nitrogen)
Ni	=	Nickel
NO_2	=	nitrite as N (nitrogen)

NO_3	=	nitrate as N (nitrogen)
OW	=	outstanding waters
P	=	Phosphorus
Pb	=	Lead
S	=	sulfide as undissociated H_2S (hydrogen sulfide)
Sb	=	Antimony
Se	=	Selenium
SO_4	=	Sulfate
sp	=	Spawning
T	=	temperature
Tl	=	Thallium
Tot	=	total
Tr	=	Trout
Trec	=	total recoverable
TVS	=	table value standard
U	=	Uranium
µg/l	=	micrograms per liter
UP	=	use-protected
WAT	=	weekly average temperature
WL	=	warm lake temperature tier
WS	=	water supply
WS-I	=	warm stream temperature tier one
WS-II	=	warm stream temperature tier two
WS-III	=	warm stream temperature tier three
WS-IV	=	warm stream temperature tier four
Zn	=	Zinc

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

Fe(ch)	=	WS(dis)
Mn(ch)	=	WS(dis)
SO_4	=	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 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)
SO_4	=	250 mg/l

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

(c) ~~As used in the "Temporary Modifications and Qualifiers" column of the tables, the term "type i" refers to a temporary modification adopted pursuant to subsection 31.7(3)(a)(i) of the Basic Standards and Methodologies for Surface Water (i.e., "where the standard is not being met because of human-induced conditions deemed correctable within a twenty (20) year period"). The term "type iii" refers to a temporary modification adopted pursuant to subsection 31.7(3)(a)(iii) of the Basic Standards and Methodologies for Surface Water (i.e., "where there is significant uncertainty regarding the appropriate long-term underlying standard").~~ As used in the Temporary Modifications and Qualifiers column of the tables in 38.6(5), the term "type A" refers to a Temporary Modification

adopted pursuant to subsection 31.7(3)(a)(ii)(A) of the Basic Standards and Methodologies for Surface Water (i.e., "there is significant uncertainty regarding the water quality standard necessary to protect current and/or future use"). As used in the Temporary Modifications and Qualifiers column of the tables in 38.6(5), the term "type B" refers to a Temporary Modification adopted pursuant to subsection 31.7(3)(a)(ii)(B) of the Basic Standards and Methodologies for Surface Water (i.e., "there is significant uncertainty regarding the extent to which existing quality is the result of natural or irreversible human-induced conditions").

(d) 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 12/31/2021.

(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 12/31/2021.

(a) The first number in the range is the health-based water quality standard previously adopted by the Commission for the segment.

(b) The second number in the range is a technology based value established by the Commission for the purpose of this temporary modification.

(c) Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range.

(3) Table Value Standards

In certain instances in the attached tables, 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]**
Aluminum (Trec)	Acute = $e^{(1.3695[\ln(\text{hardness})]+1.8308)}$ pH equal to or greater than 7.0 Chronic=$e^{(1.3695[\ln(\text{hardness})]-0.1158)}$ pH less than 7.0 Chronic= $e^{(1.3695[\ln(\text{hardness})]-0.1158)}$ or 87, whichever is more stringent
Ammonia [4]	Cold Water = (mg/l as N)Total $acute = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$

	$chronic = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}} \right) * MIN\left(2.85,\ 1.45*10^{0.028(25-T)}\right)$
	Warm Water = (mg/l as N)Total $acute = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$
	$chronic\ \ (Apr1-Aug\ 31) = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}} \right) * MIN\left(2.85,\ 1.45*10^{0.028(25-T)}\right)$ $chronic\ (Sep1-Mar\ 31) = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}} \right) * 1.45*10^{0.028*(25-MAX(T,\ 7))}$
~~NH_3 = old TVS~~	~~Cold Water Acute = 0.43/FT/FPH/2$^{(4\text{ old})}$ in mg/l (N)~~
	~~Warm Water Acute = 0.62/FT/FPH/2$^{(4\text{ old})}$ in mg/l (N)~~
Cadmium	Acute = (1.136672-[ln(hardness) x (0.041838)])*e$^{(0.9151[ln(hardness)]-3.1485)}$ Acute(Trout) = (1.136672-[ln(hardness) x (0.041838)])*e$^{(0.9151[ln(hardness)]-3.6236)}$ Chronic = (1.101672-[ln(hardness) x (0.041838)])*e$^{(0.7998[ln(hardness)]-4.4451)}$
Chromium III[5]	Acute = e$^{(0.819[ln(hardness)]+2.5736)}$ Chronic = e$^{(0.819[ln(hardness)]+0.5340)}$
Chromium VI[5]	Acute = 16 Chronic = 11
Copper	Acute = e$^{(0.9422[ln(hardness)]-1.7408)}$ Chronic = e$^{(0.8545[ln(hardness)]-1.7428)}$
Lead	Acute = (1.46203-[ln(hardness)*(0.145712)])*e$^{(1.273[ln(hardness)]-1.46)}$ Chronic = (1.46203-[(ln hardness)* (0.145712)])*e$^{(1.273[ln(hardness)]-4.705)}$
Manganese	Acute= e$^{(0.3331[ln(hardness)]+6.4676)}$ Chronic= e$^{(0.3331[ln(hardness)]+5.8743)}$
Nickel	Acute = e$^{(0.846[ln(hardness)]+2.253)}$ Chronic = e$^{(0.846[ln(hardness)]+0.0554)}$
Selenium[6]	Acute = 18.4 Chronic = 4.6
Silver	Acute = ½ e$^{(1.72[ln(hardness)]-6.52)}$

	Chronic = $e^{(1.72[\ln(hardness)]-9.06)}$ Chronic(Trout) = $e^{(1.72[\ln(hardness)]-10.51)}$					
Temperature	**TEMPERATURE TIER**	**TIER CODE**	**SPECIES EXPECTED TO BE PRESENT**	**APPLICABLE MONTHS**	**TEMPERATURE STANDARD (^{O}C)**	
					(MWAT)	(DM)
	Cold Stream Tier I	CS-I	~~B~~brook trout, cutthroat trout	June – Sept.	17.0	21.~~2~~7
				Oct. - May	9.0	13.0
	Cold Stream Tier II	CS-II	~~Brown trout, rainbow trout, mottled sculpin, mountain whitefish, longnose sucker, Arctic grayling~~all other cold-water species	April – Oct.	18.~~2~~3	23.~~8~~9
				Nov. - March	9.0	13.0
	Cold Lake	CL	~~B~~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
Temperature	Cold Large Lake (>100 acres surface area)	CLL	brown trout, lake trout, ~~R~~rainbow trout	April – Dec.	18.~~2~~3	23.8
				Jan. - March	9.0	13.0
	Warm Stream Tier I	WS-I	~~C~~common shiner, Johnny darter, orangethroat darter	March – Nov.	24.2	29.0
				Dec. – Feb.	12.1	14.5
	Warm Stream Tier II	WS-II	~~B~~brook stickleback, central stoneroller, creek chub, longnose dace, Northern redbelly dace, finescale dace,razorback sucker, white sucker	March – Nov.	27.5	28.6
				Dec. – Feb.	13.~~7~~8	14.3
	Warm Stream Tier III	WS-III	~~Razorback sucker~~all other warm-water species	March – Nov.	2~~7~~8.7	31.~~3~~8
				Dec. – Feb.	~~13.9~~14.3	15.~~2~~9
	~~Warm Stream Tier IV~~	~~WS-IV~~	~~Other Warmwater Species~~	~~March – Nov.~~	~~28.7~~	~~31.3~~
				~~Dec. – Feb.~~	~~14.3~~	~~15.2~~
	Warm Lakes	WL	Yellow perch, walleye, pumpkinseed, smallmouth bass, striped bass, white bass, largemouth bass, bluegill, spottail shiner, Northern pike, tiger muskellunge, black crappie, common carp, gizzard shad, sauger, white crappie, wiper	April – Dec.	26.~~5~~3	29.~~3~~5
				Jan. - March	13.~~3~~2	14.~~6~~8
Uranium	Acute = $e^{(1.1021[\ln(hardness)]+2.7088)}$ Chronic = $e^{(1.1021[\ln(hardness)]+2.2382)}$					
Zinc	Acute = 0.978*e$^{(0.8525[\ln(hardness)]+1.0617)}$ ~~(0.8525[ln(hardness)]+1.0617)~~ (0.9094[ln(hardness)]+0.9095) Chronic = 0.986*e$^{(0.8525[\ln(hardness)]+0.9109)}$ ~~(0.8525[ln(hardness)]+0.9109)~~ (0.9094[ln(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) $FT = 10^{0.03(20-TCAP)}$;*~~

~~*Where TCAP is ≤ T ≤ 30*~~

~~*$FT = 10^{0.03(20-T)}$;*~~

~~*Where 0 is ≤ T ≤ TCAP*~~

~~*TCAP = 20^{o} C cold water aquatic life species present*~~

~~*TCAP = 25^{o} C cold water aquatic life species absent*~~

~~*FPH = 1; Where 8 ≤ pH ≤ 9*~~

~~*FPH = 1 + 10(7.4-pH);*~~
~~*1.25 Where 6.5 ≤ pH ≤ 8*~~

~~*FPH means the acute pH adjustment factor, defined by the above formulas.*~~

~~*FT Means the acute temperature adjustment factor, defined by the above formulas.*~~

~~*T means temperature measured in degrees celsius.*~~

~~*TCAP means temperature CAP; the maximum temperature which affects the toxicity of ammonia to salmonid and non-salmonid fish groups.*~~

~~*NOTE: If the calculated acute value is less than the calculated chronic value, then the calculated chronic value shall be used as the acute standard.*~~

(4) *For acute conditions the default assumption is that salmonids could be present in cold water segments and should be protected, and that salmonids do not need to be protected in warm water segments. For chronic conditions, the default assumptions are that early life stages could be present all year in cold water segments and should be protected. In warm water segments the default assumption is that early life stages are present and should be protected only from April 1 through August 31. These assumptions can be modified by the Commission on a site-specific basis where appropriate evidence is submitted.*

(5) *Unless the stability of the chromium valence state in receiving waters can be clearly demonstrated, the standard for chromium should be in terms of chromium VI. In no case can the sum of the instream levels of Hexavalent and Trivalent Chromium exceed the water supply standard of 50 µg/l total chromium in those waters classified for domestic water use.*

(6) *Selenium is a bioaccumulative metal and subject to a range of toxicity values depending upon numerous site-specific variables.*

(4) 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: Assessment Thresholds

chlorophyll = 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 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 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
- bcd 2.0: upstream of Westminster Big Dry Creek Wastewater Treatment Facility
- bcd 4.0: upstream of Northglenn Wastewater Treatment Plant

(e) Big Dry Creek Segment 2 (Standley Lake): Assessment Thresholds

Chlorophyll = 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.

- 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.

(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 assessment.

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

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS μg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
1a. Mainstem of the South Platte River from the source of the South and Middle Forks to the inlet of Cheesman Reservoir.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C summer=April-Oct D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5 - 9.0 E. Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)^{C}	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
1b. All tributaries to the South Platte River, including wetlands within the Lost Creek and Mt. Evans Wilderness Areas.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)^{C}	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
2b. Mainstem of Mosquito Creek from the confluence with South Mosquito Creek to its confluence with the Middle Fork of the South Platte River.	UP	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ch)=220	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.	UP	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ch)=280	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)^{C}	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modifications: NH_3(ac/ch) = current condition below the Florissant Wastewater Treatment Facility outfall. Expiration date of 12/31/2017. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.= 6.0 mg/l D.O.(sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2 [2 C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
5a. Mainstem of Geneva Creek from the source to the confluence with Scott Gomer Creek.		Aq Life Cold 1 Recreation E Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH = 3.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=100 P=110ug/l (tot)	As(ac)=340 As(ch)=7.6(Trec) Cd(ch)=2 CrIII(ch)=100 CrVI(ch)=25 Cu(ch)=18(dis)	Fe(ch)=1200 Pb(ch)=4 Mn(ch)=530(dis) Hg(ch)=0.05 Mo(ch)=150(Trec)	Ni(ch)=50 Se(ch)=4.6 Ag(ch)=1 Zn(ch)=190(dis)	All Metals Trec unless otherwise noted.
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011	CN=0.005 S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
5c. Mainstem of Gooseberry Gulch and all tributaries from source to Sunset Trail.		Aq Life Cold 2 Recreation U Water Supply Agriculture	T=TVS(CS-II) °C D.O.= 6.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
5d. Mainstem of Gooseberry Gulch and all tributaries from Sunset Trail to confluence with Elk Creek.		Aq Life Cold 2 Recreation U Water Supply Agriculture	T=TVS(CS-II) °C D.O.= 6.0 mg/l D.O. (sp) =7.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
6a. Mainstem of the South Platte River from the outlet of Cheesman Reservoir to the inlet of Chatfield Reservoir.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
6b. Chatfield Reservoir		Aq Life Cold 1 Recreation E Water Supply Agriculture DUWS	T=TVS(CLL) °C April-Dec $T_{(WAT)}$=23.5 ~~,4~~°C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml P(Tot)=0.030 mg/l chlorophyll = 10 µg/l measured through samples that are representative of the mixed layer during July-Sept, with an allowable exceedance frequency of 1in 5 yrs.	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	See section 38.6(4) for P(Tot) and Chlorophyll assessment thresholds.
6c. Deleted.									
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.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp) =7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10~~0~~ Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=~~100~~ 0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac/~~ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch) = WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
9. Mainstem of Bear Creek, including all tributaries and wetlands from the source to the inlet of Perry Park Reservoir, a.k.a. Waucondah Reservoir (Douglas County).		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
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.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C D.O.= 5.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modifications: Cu (ac/ch) = current condition on East Plum Creek and Plum Creek below the Plum Creek Wastewater Authority Discharge. (Type iii). Expiration date of 12/31/2018. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
10b. Deleted.										
11a. All tributaries to the East Plum Creek system, including all wetlands which are not on national forest lands.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10~~0~~ Cl=250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=~~100(Trec)~~ 0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac/~~ch~~)=~~TVS~~50 (Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
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.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=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.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
13. Mainstem of Deer Creek, including the North and South Forks, from the source to Chatfield Reservoir.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
14. Mainstem of the South Platte River from the outlet of Chatfield Reservoir to the Burlington Ditch diversion in Denver, Colorado.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C summer=14 Feb-Nov D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ch)=190(dis) Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	~~Temporary modifications: Cu(ac/ch)=TVSx2.7 (Type iii). Applies below the confluence with Marcy Gulch. Expiration date of 12/31/2015. T=current conditions (Type iii). Expiration date of 12/31/2015.~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C D.O.* pH = 6.5-9.0** E. Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=1.0 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ch)=400(dis) Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*See attached table for site-specific Dissolved Oxygen and Ammonia standards. **pH=6.0-9.0 from 64th Ave. downstream 2 miles. ~~Temporary modifications: NH_3(ac)=TVS(old); NH_3(ch)=0.10 mg/l (Type i). Expiration date of 12/31/2014. Cu(ac/ch)=TVSx2.3 (Type iii). Expiration date of 12/31/2015. T=current conditions (Type iii). Expiration date of 12/31/2015.~~
16a. Mainstem of Sand Creek from the confluence of Murphy and Coal Creek in Arapahoe County to the confluence with the Toll Gate Creek.		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS ~~Se(ch)=TVS~~ Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
16b. Aurora Reservoir.		Aq Life Warm 1 Recreation E Water Supply Agriculture DUWS	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
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 16~~jk~~.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	.
16d. Second Creek from the source to the O'Brian Canal.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-III ~~IV~~) °C D.O. (ch)=3.3 mg/l [1] pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	[1] 15th percentile of D.O. measurements collected between 6:30 a.m. and 6:30 p.m.

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS μg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
16e. Third Creek from the source to the O'Brian Canal.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-III ~~IV~~) °C D.O. (ch)=4.0 mg/l[1] pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	[1] 15th percentile of D.O. measurements collected between 6:30 a.m. and 6:30 p.m.
16f. Barr Lake Tributary from the source to the Denver Hudson Canal.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-III ~~IV~~) °C D.O. (ch)=[1] pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	[1] When water is present, D.O. concentrations shall be maintained at levels that protect classified uses.
16g. Marcy Gulch, including all wetlands from the source to the confluence with the South Platte.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac)=21 Se(ch)=13 Ag(ac/ch)=TVS Zn(ac/ch)=TVS	~~Temporary modifications:~~ ~~Cu (ac/ch) = TVSx2.4 below the Centennial Wastewater Treatment Facility outfall. (Type iii). Expiration date of 12/31/2015.~~ ~~T=current conditions (Type iii). Expiration date of 12/31/2015.~~ Selenium: see assessment locations at 38.6(4)(g).
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.		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS West Toll Gate Creek:* Se(ch)=50.6 Se(ac)=119.2 East Toll Gate Creek:* Se(ch)=14.3 Se(ac)= 15.9 Toll Gate Creek:* Se(ch)=26.5 Se(ac)=29.5	Fish Ingestion Standards * See section 38.6(4)(b) for selenium assessment locations.
16i. Mainstem of Sand Creek from the confluence with Toll Gate Creek to the confluence with the South Platte River.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=~~10~~0 Cl=250 SO_4=WS P=170ug/l (tot)[C]	As(ac)=340 As(ch)=~~0.02100~~(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS (dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS (dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Ag(ac/ch)=TVS Zn(ac/ch)=TVS Upper:* Se(ch)=38.2 Se(ac)=45.1 Lower:* Se(ch)=9.0 Se(ac)=TVS	Fish Ingestion Standards * See section 38.6(4)(f) for selenium assessment locations Temporary Modifications: ~~Cu (ac/ch) = TVSx2.6 below the Sand Creek Water Reuse Facility outfall. (Type iii). Expiration date of 12/31/2015.~~ Hg(ch)=current condition, Expiration date of 6/30/2017 As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
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.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^{2} [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10~~0~~ Cl=250 SO_4=WS P=170ug/l (tot)[C]	As(ac)=340 As(ch)= 0.02-10~~0~~ (Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ac~~/c~~h)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS (dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS (dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Ag(ac/ch)=TVS Zn(ac/ch)=TVS~~-Lee Gulch~~ ~~Se(ac/ch)=(TVS/10)~~ ~~Little's Creek,~~ ~~Se(ac/ch)= (TVS/6)~~ ~~Big Dry Creek~~ ~~Se(ac/ch)=(26/23)~~ ~~Little Dry Creek~~ ~~Se(ac/ch)=(TVS/11)~~ Lee Gulch:* Se(ac)=TVS Se(ch)=10 Little's Creek:* Se(ac)= TVS Se(ch)= 6 Big Dry Creek:* Se(ac)=26 Se(ch)=23 Little Dry Creek:* Se(ac)=TVS Se(ch)=11	~~Selenium: see assessment locations at 38.6(4)(h)~~ * See section 38.6(4)(h) for selenium assessment locations
16 k. Mainstem of Lakewood Gulch from the source to the confluence with the South Platte.	UP	Aq Life Warm 1 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml Chla=150 mg/m^{2} [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
17a. Washington Park Lakes, City Park Lakes, Rocky Mountain Lake, Berkely Lake.		Aq Life Warm 1 Recreation E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
17b. Sloan's Lake.		Aq Life Warm 1 Recreation E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
17c. Bowles Lake, a.k.a. Patrick Reservoir or Bow Mar Lake.		Aq Life Warm 1 Recreation E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	Al(ac/ch)=TVS As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
18. Lakes and reservoirs within the boundaries of the Lost Creek and Mt. Evans Wilderness areas.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml Chla=8 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
19. Lakes and reservoirs in the South Platte River system from headwaters to Chatfield Reservoir, except for specific listings in Segment 18. Includes Antero, Spinney Mountain, Elevenmile, Cheesman, and Strontia Springs.		Aq Life Cold 1 Recreation E Water Supply Agriculture DUWS*	T=TVS(CL,CLL) °C Antero Reservoir April-Dec $T_{(WAT)}$=19.65°C Spinney Mt Reservoir April-Dec $T_{(WAT)}$=20.~~2~~1°C Elevenmile Reservoir April-Dec $T_{(WAT)}$=19.8~~7~~°C[D] Cheesman Reservoir April-Dec $T_{(WAT)}$=21.98°C Strontia Springs Res April-Dec $T_{(WAT)}$=22.65°C Platte Canyon Res Mar-Dec $T_{(WAT)}$=~~25.0~~4.9°C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml Chla=8 ug/l [B,C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	*DUWS applies to Strontia Springs only
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).		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
21. Lakes and reservoirs in the Plum Creek system except for specific listings in Segment 20.		Aq Life Warm 2 Recreation E Water Supply Agriculture DUWS*	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*DUWS applies to Aurora Rampart only

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
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.		Aq Life Warm 2 Recreation E Water Supply Agriculture DUWS*	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac/~~ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Fish Ingestion Standards *DUWS applies to McLellan and Quincy only Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
22b. Lakes and reservoirs located in the Rocky Mountain Arsenal National Wildlife Refuge		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
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..		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	~~Fe(ch)=WS(dis)~~ Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Fish Ingestion Standards

UPPER SOUTH PLATTE RIVER SEGMENT 15

Site-Specific Minimum Dissolved Oxygen and Ammonia Standards

UNDERLYING STANDARDS

Dissolved Oxygen

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

1-Day[1,5,6]	3.0 mg/L (acute)
7-Day Average [1.2.,4]	5.0 mg/L

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

1-Day [1,5]	2.0 mg/L (acute)
7-Day Mean of Minimums[1,3]	2.5 mg/L
30-Day Average [1.2.]	4.5 mg/L

TEMPORARY MODIFICATION

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

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

Footnotes

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

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

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

4 North of the Lupton Bottoms Ditch diversion, the ELS 7-Day average standards for the period July 1 – June 31 shall be 4.6 mg/L.

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

6. In July, the dissolved oxygen level in Segment 15 may be lower than the 3.0 mg/L acute standard for up to 14 exceedances in any one year and up to a total of 21 exceedances in three years before there is a determination that the acute dissolved oxygen standards is not being met. Exceedances shall be counted as described in Footnote 5.

Ammonia:

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

Ammonia — Warm Water = (mg/l as N)Total

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

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

$$chronic\ (Aug1-Mar31) = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * 1.45*10^{0.028*(25-MAX(T,\ 7))}$$

NH_3 = old TVS — Warm Water Acute = 0.62/FT/FPH/2$^{(4\ old)}$ in mg/ (N)

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **CHERRY CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
1. Mainstem of Cherry Creek from the source of East and West Cherry Creek to the inlet of Cherry Creek Reservoir.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)[C]	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
2. Cherry Creek Reservoir.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Season mean chlorophyll a = 18 µg/l 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.	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
3. Mainstem of Cherry Creek from the outlet of Cherry Creek Reservoir to the confluence with the South Platte River.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
4. 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.	~~UP~~	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10~~0~~ Cl=250 SO_4=WS P=170ug/l (tot)[C]	As(ac)=340 As(ch)=~~100~~0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac/~~ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=~~1000(Trec)~~ WS (dis) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)= WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=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 2 and 6.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=20 ug/l [B,C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=83ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac/~~ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
6. Lakes and reservoirs in watersheds tributary to Cherry Creek within the City and County of Denver.		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=~~100~~7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Fish Ingestion Standards

REGION: 3 AND 4 BASIN: **BEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
1a. Mainstem of Bear Creek from the boundary of the Mt. Evans Wilderness area to the inlet of Evergreen Lake.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^{2} [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
1b. Mainstem of Bear Creek from Harriman Ditch to the inlet of Bear Creek Reservoir.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C April-Oct $T_{(WAT)}$=19.3 °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
1c. Bear Creek Reservoir.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CLL) °C April-Dec $T_{(WAT)}$=23.~~3~~2°C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Mean chlorophyll = ~~10~~15 µg/l and mean total phosphorus = ~~32~~28 µg/l measured through collection of samples that are representative of the mixed layer during summer months (July, August, September) and with an exceedance frequency of once in five years.	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: Chlorophyll and total phosphorus equal to existing conditions (Type iii). Expiration date of 12/31/~~2015~~2020. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
1d. Evergreen Lake.		Aq Life Cold 1 Recreation E Water Supply Agriculture DUWS	T=TVS(CLL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
1e. Mainstem of Bear Creek from the outlet of Evergreen Lake to the Harriman Ditch.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C April-Oct $T_{(WAT)}$=19.3 °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **BEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
2. Mainstem of Bear Creek from the outlet of Bear Creek Reservoir to the confluence with the South Platte River.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
3. All tributaries to Bear Creek, including all wetlands, from the source to the outlet of Evergreen Lake. Except for specific listings in Segment 7.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^{2} [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
4a. 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.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
4b. Deleted.									
4c. Deleted.									
5. Swede, Kerr, Sawmill, Troublesome, and Cold Springs Gulches, and mainstem of Cub Creek from the source to the confluence with Bear Creek.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^{2} [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
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.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^{2} [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
6b. Mainstem of North Turkey Creek, from the source to the confluence with Turkey Creek.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21

REGION: 3 AND 4 BASIN: **BEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS μg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
7. Mainstem and all tributaries to Bear Creek, including wetlands, within the Mt. Evans Wilderness Area.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
8. Lakes and reservoirs in the Bear Creek system from the sources to the boundary of the Mt. Evans Wilderness area.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B,C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
10. Lakes and reservoirs in drainages of Swede Gulch, Sawmill Gulch, Troublesome Gulch, and Cold Springs Gulch from source to confluence with Bear Creek.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards
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 in Segments 1c, -10, and 12; includes Soda Lakes.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
12. Lakes and reservoirs in the Turkey Creek system from the source to the inlet of Bear Creek Reservoir.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS μg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
1. Mainstem of Clear Creek, including all tributaries and wetlands, from the source to the I-70 bridge above Silver Plume.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)^{C}	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
2a. Mainstem of Clear Creek, including all tributaries and wetlands, from the I-70 bridge above Silver Plume to a point just above the confluence with West Fork Clear Creek,except for specific listings in Segments 3a and 3b.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 SO_4=WS Cl=250 P=110ug/l (tot)^{C}	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~) = TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec) Zn(ac)= 0.978e$^{(0.8537[\ln(\text{hardness})]+1.9467)}$ Zn(ch)= 0.986e$^{(0.8537[\ln(\text{hardness})]+1.8032)}$	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	Temporary modifications: Zn(ch)=353 μg/l (dis), Zn(ac)=586 μg/l (dis), (Type i) Expiration date of 7/01/2020. ~~Cd(ch)=1.54(dis)~~ ~~(Type iii)~~ ~~Expiration date of 7/01/2015.~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 SO_4=WS Cl=250 P=110ug/l (tot)^{C}	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~) = TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS ~~Zn(ch)=TVS~~	
2c. Mainstem of Clear Creek, including all tributaries and wetlands, from a point just below the confluence with Mill Creek to a point just above the Argo Tunnel discharge, except for specific listings in Segments 9a, 9b, and 10.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 SO_4=WS Cl=250 P=110ug/l (tot)^{C}	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS (tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~) = TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec) Zn(ac)= 0.978e$^{(0.8537[\ln(\text{hardness})]+1.9467)}$ Zn(ch)= 0.986e$^{(0.8537[\ln(\text{hardness})]+1.8032)}$	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	Temporary modifications: Cu(ch)=11.4 μg/l (dis), (Type iii) Expiration date of 7/01/2020. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
3a. Mainstem of South Clear Creek, including all tributaries and wetlands, from the source to the confluence with Clear Creek, except for the specific listings in Segments 3b and 19.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^{2}	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec) Zn(ac)= 0.978e$^{(0.8537[\ln(\text{hardness})]+1.9467)}$ Zn(ch)= 0.986e$^{(0.8537[\ln(\text{hardness})]+1.8032)}$	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS µg/l	TEMPORARY MODIFICATIONS AND QUALIFIERS
3b. Mainstem of Leavenworth Creek from source to confluence with South Clear Creek.	9/30/00 Baseline does not apply	Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[A] As(ac)=50(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec) Zn(ac)= $0.978e^{(0.8537[\ln(\text{hardness})]+1.9467)}$ Zn(ch)= $0.986e^{(0.8537[\ln(\text{hardness})]+1.8032)}$	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	
4. Mainstem of West Fork Clear Creek from the source to the confluence with Woods Creek.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
5. Mainstem of West Fork Clear Creek from the confluence with Woods Creek to the confluence with Clear Creek.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=~~7.6~~ 0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS (dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS (dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec) Zn(ac)=$e^{(0.8404[\ln(\text{hardness})]+1.8810)}$ Zn(ch)=$e^{(08404[\ln(\text{hardness})]+1.5127)}$	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
6. All tributaries to West Fork Clear Creek, including all wetlands, from the source to the confluence with Clear Creek, except for specific listings in Segments 7 and 8.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
7a. Mainstem of Woods Creek from the outlet of Upper Urad Reservoir to the confluence with West Fork Clear Creek~~, including Lower Urad Reservoir~~.	UP	Aq Life Cold 2 Recreation N	T=TVS(CS-I~~/CL~~)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=~~6.0~~ 6.5-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 NO_2=0.05 P=110ug/l (tot)	~~$WQS_{WC} = ((Q_{WC} + Q_{WFCC}) \times WQS_{WFCC} - (Q_{WFCC} \times C_{WFCC}))/Q_{WC}$~~ ~~$WQS_{WC}$ = Water Quality Standards for Woods Creek~~ ~~Q_{WC} = Flow for Woods Creek~~ ~~Q_{WFCC} = Flow for West Fork Clear Creek~~ ~~WQS_{WFCC} = Water Quality Standards for West Fork Clear Creek~~ ~~C_{WFCC} = Ambient Concentration in West Fork Clear Creek~~ As(ac)=340 As(ch)=150 Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	~~Standards shall be applied using the Segment 7 equation.~~
7b. Lower Urad Reservoir	UP	Aq Life Cold 2 Recreation N	T=TVS(CL)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS Cl_2(ch)=0.011 CN=0.005	S=0.002 NO_2=0.05 NO_3=10 P=110ug/l (tot)	As(ac)=340 As(ch)=150 Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS μg/l			
8. Mainstem of Lion Creek from the source to the confluence with West Fork Clear Creek.	UP	~~Aq Life Cold 2~~ Recreation E	~~T=TVS(CS-I)ºC~~ ~~D.O.=6.0 mg/l~~ ~~D.O.(sp)=7.0 mg/l~~ D.O.=3.0 mg/l pH = 3.0-9.0 E.Coli=126/100ml Chla=150 mg/m^2						
9a. Mainstem of ~~the~~ Fall River, including all tributaries and wetlands, from the source to the confluence with Clear Creek.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)^C	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	~~Temporary modification:~~ ~~Cu(ch)=9.6 μg/l (dis), (type iii)~~ ~~Expiration date of 7/01/2015.~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
9b. Mainstem of Trail Creek, including all tributaries and wetlands from the source to the confluence with Clear Creek.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~) = TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac)=TVS Zn(ch)=200	
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.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)^C	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
11. Mainstem of Clear Creek from a point just above the Argo Tunnel discharge to the Farmers Highline Canal diversion in Golden, Colorado.	UP	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(~~ac/~~ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ch)=17	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec) Zn(ac)= $0.978e^{(0.8537[\ln(\text{hardness})]+1.9467)}$ Zn(ch)= $0.986e^{(0.8537[\ln(\text{hardness})]+1.8032)}$	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	~~Temporary modification:~~ ~~Cd(ch)=1.42 μg/l (dis),~~ ~~(type iii)~~ ~~Expiration date of 7/01/2015.~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
12. 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 13a and 13b.	9/30/00 Baseline does not apply	~~Aq Life Cold 2~~ Aq Life Cold 1 Recreation E Water Supply Agriculture	~~T=TVS(CS-II) ºC~~ T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)^C	As(ac)=340 As(ch)=0.02-~~10(Trec)~~ Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
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.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O. = 6.0 mg/l D.O.(sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.	UP	Aq Life Cold 2 Recreation E Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=100 P=110ug/l (tot)[C]	As(ac)=340 As(ch)=100 (Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac/ch)=TVS ~~CrIII(ac)=50(Trec)~~ CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ch)=64	Fe(ch)=5400(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac)=TVS Zn(ch)=740	Temporary modifications: Cd(ch)=4.7 µg/l (dis), T=current condition (type iii) Expiration date of 12/31/2018.
14a. Mainstem of Clear Creek from the Farmers Highline Canal diversion in Golden, Colorado to the Denver Water conduit #16 crossing.	UP	Aq Life Warm 2 Recreation N Water Supply Agriculture	T=TVS (WS-II)ºC D.O.= 5.0 mg/l pH = 6.5-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02~~-10~~(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)=244 Hg(ch)=0.01(tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSx1.57*	~~Temporary modifications:~~ ~~Cu(ac/ch)=TVSx3.66*,~~ ~~T=current condition~~ ~~(type iii)~~ ~~Expiration date of 12/31/2015.~~ Water + Fish Standards *Site-specific standard = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/2020. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
14b. Mainstem of Clear Creek from the Denver Water conduit #16 crossing to a point just below Youngfield Street in Wheat Ridge, Colorado.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS (WS-II)ºC D.O.= 5.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02~~-10~~(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)=244 Hg(ch)=0.01(tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSx1.57*	~~Temporary modifications:~~ ~~Cu(ac/ch)=TVSx3.66*,~~ ~~T=current condition~~ ~~(type iii)~~ ~~Expiration date of 12/31/2015.~~ Water + Fish Standards *Site-specific standard = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/2020. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

~~* TVS x (times) the FWER (final water effect ratio) = site-specific standard or value of temporary modification.~~

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
15. Mainstem of Clear Creek from Youngfield Street in Wheat Ridge, Colorado, to the confluence with the South Platte River.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-II)ºC D.O.=5.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Trec) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSx1.57*	Aquatic life warm 1 goal qualifier. ~~Temporary Modifications: Cu(ac/ch)=TVSx3.66*, T=current condition (Type iii) Expiration date of 12/31/2015.~~ *Site-specific standard = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/2020. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
16a. Mainstem of Lena Gulch including all tributaries and wetlands from its source to the inlet of Maple Grove Reservoir.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II)ºC D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS ~~Cd(ch)=TVS~~ CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
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.	UP	Aq Life Warm 2 ~~Recreation N~~ Recreation E Agriculture	T=TVS(WS-II)ºC D.O.=5.0 mg/l pH=6.5-9.0 ~~E.Coli=630/100ml~~ F.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Trec) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
17a. Arvada Reservoir.	UP	Aq Life Cold 2 ~~Recreation N~~ Recreation E Water Supply Agriculture DUWS	T=TVS(CLL)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/~~ch~~)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards
17b. Mainstem of Ralston Creek, including all tributaries and wetlands, from the source to the inlet of Arvada Reservoir.		Aq Life Cold 2 Recreation U Water Supply Agriculture	T=TVS(CS-II)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/~~ch~~)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
18a. Mainstem of Ralston Creek, including all tributaries and wetlands, from the outlet of Arvada Reservoir to the confluence with Clear Creek.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) ºC D.O. = 5.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
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.	UP	Aq Life Warm 2 ~~Recreation N~~ Recreation E Water Supply Agriculture	T=TVS(WS-II) ºC D.O.=5.0 mg/l pH=6.5-9.0 ~~E.Coli=630/100ml~~ E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
19. All tributaries to Clear Creek, including wetlands, within the Mt. Evans Wilderness Area.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250 P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
20. Lakes and reservoirs in the Clear Creek system that are within the boundary of the Mt. Evans Wilderness Area.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250 P=25ug/l (tot)[B]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
21. Lakes and reservoirs in the Clear Creek system from sources to the Farmer's Highline Canal diversion in Golden, CO_T, except as specified in Segments 7, 20, 22 and 25. Upper Long Lake.	9/30/00 baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
22. Lakes and reservoirs in the North Clear Creek drainage from a point just below the confluence with Chase Gulch to the confluence with Clear Creek.	9/30/00 baseline does not apply	Aq Life Cold 1 Recreation E Agriculture	T=TVS (CL)ºC D.O. = 6.0 mg/l D.O.(sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=100 P=25ug/l (tot)[B]	As(ac)=340 As(ch)=7.6(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
23. Ralston Reservoir		Aq Life Cold 2 Recreation U Water Supply Agriculture DUWS	T=TVS(CLL)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards
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 Segment s Segments 17a, 21 and 23.		Aq Life Warm 1 Recreation U Water Supply Agriculture DUWS*	T=TVS(WL)ºC D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=20 ug/l [B C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=83ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21. *DUWS=Maple Grove Reservoir

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
25. Guanella Reservoir ~~(near Town of Empire, 39.758,-105.700)~~		Aq Life Cold 1 Recreation E Agriculture	T=TVS (CL)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=100 P=25ug/l (tot)	As(ac)=340 As(ch)=7.6(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

REGION: 3 AND 4 BASIN: **BIG DRY CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
1. Mainstem of Big Dry Creek, including all tributaries and wetlands, from the source to the confluence with the South Platte River, except for specific listing in Segments 4a, 4b, 5 and 6.	UP	Aq Life Warm 2 Recreation P Agriculture	T=TVS(WS-I)ºC D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=205/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=4.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=~~100~~ 7.6(Trec) Be(ch)=100 Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS 4/1 thru 10/31: Se(ch)=7.4* Se(ac)=TVS* 11/1 thru 3/31: Se(ch)=15* Se(ac)=19.1*	Fish Ingestion Standards *Refer to Section 38.6(4)(d).
2. Standley Lake.		Aq Life Warm 1 Recreation E Water Supply Agriculture DUWS	T=TVS(WL)ºC D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chl *a*=4.0 µg/l* See ** below for narrative standard.	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Be(ch)=4 Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	See attached Table 2 for additional standards for segment 2. *Refer to Section 38.6(4)(e).
** 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.									
3. Great Western Reservoir.	UP	Aq Life Warm 2 Recreation N Water Supply Agriculture	T=TVS(WL)ºC D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=2.7 NO_3=100	As(ac)=340 As(ch)=100 (Trec) Be(ch)=100 Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	See attached Table 2 for additional standards for segment 3.
4a. Mainstem and all tributaries to Woman and Walnut Creeks from sources to Standley Lake and Great Western Reservoir except for specific listings in Segments 4b and 5.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-I)ºC D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Be(ch)=4 Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200 (Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	See attached Table 2 for additional standards for segment 4a.
4b. 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.	UP	Aq Life Warm 2 Recreation P Water Supply Agriculture	T=TVS(WS-II)ºC D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=205/100 ml Chla=150 mg/m^2	~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005 S=0.002 B=0.75	NO_2=0.5 NO_3=10 P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Be(ch)=4 Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	See attached Table 2 for additional standards for segment 4b.
5. North Walnut Creek from the western edge of the Central Operable Unit and South Walnut Creek from its source, including all tributaries, lakes, reservoirs and wetlands, to the eastern boundary of the Central Operable Unit and Pond C-2 on Woman Creek.	UP	Aq Life Warm 2 Recreation N Water Supply Agriculture	T=TVS(WS-II/WL)ºC D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=630/100ml	~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Be(ch)=4 Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200 Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	See attached Tables 2 for additional standards a.

REGION: 3 AND 4 BASIN: **BIG DRY CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
6. Upper Big Dry Creek and South Upper Big Dry Creek, from their source to Standley Lake.	UP	Aq Life Warm 2 Recreation N Water Supply Agriculture	T=TVS(WS-I)ºC D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
7. Lakes and reservoirs in the Big Dry Creek system from the source to the confluence with the South Platte River, except for specific listings in Segments 2, 3, and 5.		Aq Life Warm 2 Recreation P Water Supply Agriculture	T=TVS(WL)ºC D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=205/100ml Chla=20 ug/l [B,C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=83ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02-10(Trec)[A] Be(ch)=100 Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **BOULDER CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS μg/l			
1. All tributaries to Boulder Creek, including all wetlands, within the Indian Peaks and James Peak Wilderness Areas.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
2b. Mainstem of Boulder Creek, including all tributaries and wetlands, from ~~the~~ a point immediately below the confluence with North Boulder Creek to a point immediately above the confluence with South Boulder Creek.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **BOULDER CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
4c. Mainstem of Cowdrey Drainage from the source below Cowdrey Reservoir #2 to the Davidson Ditch.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
4d. Mainstem of Cowdrey Drainage from immediately downstream of the Davidson Ditch to the confluence with South Boulder Creek.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
5. Mainstem of South Boulder Creek from South Boulder Road to the confluence with Boulder Creek.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
6. Mainstem of Coal Creek, including all tributaries and wetlands, from the source to Highway 93.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
7a. Mainstem of Coal Creek from Highway 93 to Highway 36 (Boulder Turnpike).	~~UP~~	Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10~~0~~ Cl= 250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=~~7.60~~.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac/~~ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS (dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS (dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
7b. Mainstem of Coal Creek from Highway 36 to the confluence with Boulder Creek.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10~~0~~ Cl=250 SO_4=WS	As(ac)=340 As(ch)=~~100~~0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac/~~ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS (dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS (dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
8. All tributaries to South Boulder Creek, including all wetlands from South Boulder Road to the confluence with Boulder Creek and all tributaries to Coal Creek, including all wetlands from Highway 93 to the confluence with Boulder Creek.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2[C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 ~~Cl=250~~ ~~SO_4=250~~ P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS ~~CrIII(ac)=50(Trec)~~ CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	~~Fe(ch)=WS(dis)~~ Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) ~~Mn(ch)=WS(dis)~~ Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modifications: Se(ch)="current condition" Expiration date of 12/31/201~~5~~20.

REGION: 3 AND 4 BASIN: **BOULDER CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
9. Mainstem of Boulder Creek from a point immediately above the confluence with South Boulder Creek to the confluence with Coal Creek.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	~~Temporary modifications:~~ ~~Cu (ac/ch)=Current Condition. (Type iii).~~ ~~Expiration date of 12/31/2015.~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
10. Mainstem of Boulder Creek from the confluence with Coal Creek to the confluence with St. Vrain Creek.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
12. Deleted.									
13. All lakes and reservoirs tributary to Boulder Creek that are within the boundary of the Indian Peaks and James Peak Wilderness Areas.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla= 8 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P= 25ug/l (tot)[B]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture DUWS*	T=TVS(CL,CLL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla= 8 ug/l [B,C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P= 25ug/l(tot)[B,C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21. *DUWS applies to Lakewood reservoir only
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.		Aq Life Cold 2 Recreation E Water Supply Agriculture DUWS*	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla= 8 ug/l [B,C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/L(tot)[B,C]	As(ac)=340 As(ch)=0.02-10(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	DUWS* applies to Kossler Lake only
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.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **BOULDER CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
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.		Aq Life Warm 2 Recreation E Water Supply Agriculture DUWS*	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-~~10~~(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*DUWS applies to Baseline, Marshall, Thomas and Waneka Reservoirs only Water + Fish Standards
18. Gross Reservior		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CLL) °C Gross Reservoir April-Dec T(WAT)=19.43°C[D] D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla= 8 ug/l [B,C]	NH3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO2=0.05 NO3=10 Cl=250 SO4=WS P=25ug/L(tot)[B,C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~eh~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec))	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **ST. VRAIN CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
1. All tributaries to St. Vrain Creek, including all wetlands, which are within the Indian Peaks Wilderness Area and Rocky Mountain National Park.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)^C	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
2b. Mainstem of St. Vrain Creek, including all tributaries and wetlands, from the eastern boundary of Roosevelt National Forest to Hygiene Road.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m$^{2\,C}$	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)^C	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	~~Temporary modification:~~ ~~Cu(ch)=6.0 µg/l (dis).~~ ~~(Type iii).~~ ~~Expiration date of 12/31/2015.~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
3. Mainstem of St. Vrain Creek from Hygiene Road to the confluence with the South Platte River.		Aq Life Warm 1 Recreation E Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
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.	UP	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
4b. Mainstem of James Creek, including all tributaries and wetlands, from the source to the confluence with Left Hand Creek.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **ST. VRAIN CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
4c. Mainstem of Left Hand Creek, including all tributaries and wetlands, from a point immediately below the confluence with James Creek to Highway 36.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
5. Mainstem of Left Hand Creek, including all tributaries and wetlands from Highway 36 to the confluence with St. Vrain Creek.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
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.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) ~~Mn(ch)=WS(dis)~~ Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	~~Temporary modifications:~~ ~~Se(ch)=6.6µg/l (dis).~~ ~~(Type ii). Expiration date of 12/31/2015~~
7. Boulder Reservoir, Coot Lake, ~~and~~ Left Hand Valley Reservoir and Spurgeon Reservoir.		Aq Life Warm 1 Recreation E Water Supply Agriculture DUWS*	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*DUWS applies to Boulder, Spurgeon and Left Hand Valley Reservoirs only Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL,CLL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
10. All lakes and reservoirs tributary to Left Hand Creek from sources to Highway 36.		Aq Life Cold 1 Recreation E Water Supply Agriculture DUWS*	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8ug/l [B,C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	*DUWS applies to Joder Reservoir only.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **ST. VRAIN CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
11. Barbour Ponds.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac/~~ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
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.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-~~10~~(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.		Aq Life Warm 2 Recreation E Water Supply Agriculture DUWS*	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac/~~ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*DUWS applies to Burch lake only

REGION: 3 AND 4 BASIN: **MIDDLE SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
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.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.* pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02~~10~~(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVSx2.2[†]	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*See attached table for site-specific Dissolved Oxygen and Ammonia standards. [†] Expiration date of 12/31/2020 Water + Fish Standards ~~Temporary modifications:~~ ~~Se(ch)=6.9 µg/l (dis). (Type iii).~~ ~~Expiration date of 12/31/2015.~~ ~~NH_3(ac)=TVS(old)~~ ~~NH_3(ch)=0.10~~ ~~(Type i). Expiration date of 12/31/2014.~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
1b. Mainstem of the South Platte River from a point immediately below the confluence with St. Vrain Creek to the Weld/Morgan County Line.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Water + ~~Fish Ingestion~~ Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
2. Deleted.									
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.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2[C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=~~10~~0 Cl=250 SO_4=WS P=170ug/l (tot)[C]	As(ac)=340 As(ch)=~~7.6~~ 0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS (dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Water + ~~Fish Ingestion~~ Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-III ~~IV~~) °C D.O. (ch)=[1] pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	[1] When water is present, D.O. concentrations shall be maintained at levels that protect classified uses.
4. Barr Lake and Milton Reservoir.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Water + ~~Fish Ingestion~~ Standards ~~Temporary modification:~~ ~~pH= existing quality (Type iii).~~ ~~Expiration date of 12/31/2015.~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
5a. Mainstem of Lone Tree Creek from the source to the confluence with the South Platte River.		Aq Life Warm 2 Recreation N Water Supply Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=~~10~~0 Cl=250 SO_4=WS P=170ug/l (tot)[C]	As(ac)=340 As(ch)=~~100~~0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS (dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS (dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	

REGION: 3 AND 4 BASIN: **MIDDLE SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
5b. Mainstem of Box~~elder~~ Elder Creek from the confluence with Coyote Run to the Denver Hudson Canal.	UP	Aq Life Warm 2 Recreation N Agriculture	T=TVS(WS-III ~~IV~~) °C D.O. (ch)=4.7 mg/l[1] pH=6.5-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=10 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	[1] 15th percentile of D.O. measurements collected between 6:30 a.m. and 6:30 p.m.
5c. Mainstems of Crow Creek and Box Elder Creek from their sources to their confluences with the South Platte River, except for specific listings in Segment 5b.		Aq Life Warm 2 Recreation N Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
6. Lost Creek from the source to Interstate 76 ~~south~~, including all its tributaries, stock ponds and wetlands.	UP	Aq Life Warm 2 Recreation N Agriculture	T=TVS(WS-III ~~IV~~) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=630/100ml	NO_3=100 $N0_2$=10 CN=0.2	S=0.002 B=0.75 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Be(ch)=100(Trec) Cd(ch)=10(Trec) CrIII(ch)=100(Trec) CrVI(ch)=100(Trec) Cu(ch)=200(Trec)	Pb(ch)=100(Trec) Mn(ch)=200(Trec) Mo(ch)=150(Trec)	Ni(ch)=200(Trec) Se(ch)=20(Trec) Zn(ch)=2000(Trec)	
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 4.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Water + Fish Standards

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

Dissolved Oxygen:

STANDARDS
Early Life Stage Protection Period (April 1 through July 31)
1-Day [1.4,5] 3.0 mg/L (acute)
7-Day Average [1.2] 5.0 mg/L
Older Life Stage Protection Period (August 1 through March 31)
1-Day [1.4] 2.0 mg/L (acute)
7-Day Mean of Minimums [1.3.] 2.5 mg/L
30-Day Average [1.2.] 4.5 mg/L

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

Footnotes

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

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

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

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

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

Ammonia:

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

Ammonia

Warm Water = (mg/l as N)Total

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

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

$$chronic\ (Aug1-Mar31) = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * 1.45*10^{0.028*(25-MAX(T,\ 7))}$$

NH_3 = old TVS

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

REGION: 3 AND 4 BASIN: **BIG THOMPSON RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
1. Mainstem of the Big Thompson River, including all tributaries and wetlands, within Rocky Mountain National Park, except for specific listings in Segment 2.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
2. Mainstem of 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.	UP	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS*	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	*Cu(ac)=11 µg/l Cu(ch)=7.5 µg/l from immediately above the Upper Thompson Sanitation District's wastewater treatment plant outfall to the Home Supply Canal Diversion. ~~Temporary modifications: D.O., *E. coli*, NH_3, NO_3, B, Cd, Pb, Hg, Ni, Se, Ag, Zn = current condition. Wapiti Meadow wetlands at the toe of Lake Estes Dam (Type iii). Expiration date of 12/31/2015~~. As(ch)=hybrid Expiration date of 12/31/21.
3. Mainstem of the Big Thompson River from the Home Supply Canal diversion to the Big Barnes Ditch diversion.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6 mg/l D.O.(sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
4a. Mainstem of the Big Thompson from the Big Barnes Ditch diversion to the Greeley-Loveland Canal diversion.		Aq Life Cold ~~2~~1 Water Supply Agriculture 5/1 – 10/15 Recreation E 10/16 – 4/30 Recreation N	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH = 6.5-9.0 5/1 - 10/15 E.Coli=126/100ml 10/16 – 4/30 E.Coli=630/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	~~Water + Fish Standards~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
4b. Mainstem of the Big Thompson from the Greeley-Loveland Canal diversion to County Road 11H.		Aq Life Warm ~~2~~1 Water Supply Agriculture 5/1 – 10/15 Recreation E 10/16 – 4/30 Recreation N	T=TVS(WS-I) °C D.O. = 5.0 mg/l pH = 6.5-9.0 5/1 – 10/15 E.Coli=126/100ml 10/16 – 4/30 E.Coli=630/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=~~10~~0 Cl=250 SO_4=WS	As(ac)=340 As(ch)=~~7.60~~.02 (Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)-TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	~~Fish Ingestion Standards~~ Temporary modification: Se(ch)="current condition" Expiration date of 12/31/20~~15~~20. As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **BIG THOMPSON RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
4c. Mainstem of the Big Thompson from County Road 11H to I-25.		Aq Life Warm 2 Agriculture 5/1 – 10/15 Recreation E 10/16 – 4/30 Recreation N	T=TVS(WS-I) °C D.O. = 5.0 mg/l pH = 6.5-9.0 5/1 – 10/15 E.Coli=126/100ml 10/16 – 4/30 E.Coli=630/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)-TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Fish Ingestion Standards
5. Mainstem of The Big Thompson River from I-25 to the confluence with the South Platte River.		Aq Life Warm 2 Agriculture 5/1 – 10/15 Recreation P 10/16 – 4/30 Recreation N	T=TVS(WS-I) °C D.O. = 5.0 mg/l pH = 6.5-9.0 5/1 – 10/15 E.Coli=205/100ml 10/16 – 4/30 E.Coli=630/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)-TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	~~Temporary modifications: Se(ch)=5.7 µg/l (dis). (Type iii). Expiration date of 12/31/2015.~~
6. All tributaries to the Big Thompson River, including all wetlands, from the Home Supply Canal diversion to the confluence with the South Platte River.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-I) °C D.O. = 5.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=110ug/l (tot)	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)-TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Fish Ingestion Standards
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)-TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
8. Mainstem of the Little Thompson River, including all tributaries and wetlands, from the source to the Culver Ditch diversion.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)-TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
9. Mainstem of the Little Thompson River from the Culver Ditch diversion to the confluence with the Big Thompson River.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10~~0~~ Cl=250 SO_4=WS P=170ug/l (tot)[C]	As(ac)=340 As(ch)=~~100~~0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modifications: Se(ch)="current condition" Expiration date of 12/31/20~~15~~20.
10. All tributaries to the Little Thompson River, including all wetlands, from the Culver Ditch diversion to the confluence with the Big Thompson River.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	.

REGION: 3 AND 4 BASIN: **BIG THOMPSON RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
11. Carter Lake.		Aq Life Cold 1 Recreation E Water Supply Agriculture DUWS	T=TVS(CLL) °C April-Dec $T_{(WAT)}$=22, ~~76~~°C[D] D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
12. Lake Loveland, Horseshoe Lake, Boyd Lake.		Aq Life Warm 1 Recreation E Water Supply Agriculture DUWS*	T=TVS(WL) °C D.O. = 5.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21. DUWS* Applies to Boyd and Loveland Lakes only.
13. Berthoud Reservoir, Johnstown Reservoir.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture DUWS	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02~~10~~(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Water + Fish Standards
14. Welch Reservoir, Lonetree Reservoir, Boedecker Lake, Lon Hagler Reservoir.		Aq Life Warm 1 Recreation E Water Supply Agriculture DUWS*	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*DUWS applies to Lonetree Reservoir only.
15. All lakes and reservoirs tributary to the Big Thompson River within Rocky Mountain National Park.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=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. This segment includes Lake Estes and St Mary's Lake.		Aq Life Cold 1 Recreation E Water Supply Agriculture DUWS*	T=TVS(CL,CLL) °C D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	*DUWS applies to St Mary's Lake only.
17. All lakes and reservoirs tributary to the Big Thompson River from the Home Supply Canal diversion to the confluence with the South Platte River, except for specific listings in Segments 12 and 14.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O. = 5.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02~~10~~(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)-TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Water + Fish Standards

REGION: 3 AND 4 BASIN: **BIG THOMPSON RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
18. All lakes and reservoirs tributary to the Little Thompson River from the source to the Culver Ditch diversion.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O. = 6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)-TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
19. All lakes and reservoirs tributary to the Little Thompson River from the Culver Ditch diversion to the confluence with the Big Thompson River, except for specific listings in Segments 11 and 13.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac/~~ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	

REGION: 3 AND 4 BASIN: **CACHE LA POUDRE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
1. Mainstem of the Cache La Poudre River, and all tributaries and wetlands, within Rocky Mountain National Park and the Rawah, Neota, Comanche Peak, and Cache La Poudre Wilderness Areas.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(c)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiratio date of 12/31/21.
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 Monroe Gravity Canal/North Poudre Supply canal diversion.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
3. Deleted.									
4. Deleted.									
5. Deleted.									
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
7. Mainstem of the North Fork of the Cache La Poudre River from the inlet of Halligan Reservoir to the confluence with the Cache La Poudre River, except for specific listings in Segment 20.		Aq Life Cold ~~2~~1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	~~Water + Fish Standards~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **CACHE LA POUDRE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
9. Mainstem of Rabbit Creek and Lone Pine Creek from the source to the confluence with the North Fork of the Cache La Poudre River.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^{2} [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
10a. Mainstem of the Cache La Poudre River from the Monroe Gravity Canal/North Poudre Supply Canal diversion to ~~Shields Street in Ft. Collins, Colorado~~a point immediately above the Larimer County Ditch diversion (40.657, -105.185).		Aq Life Cold ~~2~~1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	~~Water + Fish Standards~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
10b. Mainstem of the Cache La Poudre River from a point immediately above the Larimer County Ditch diversion (40.657, -105.185) to Shields Street in Ft. Collins, Colorado.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
11. Mainstem of the Cache La Poudre River from Shields Street in Ft. Collins to a point immediately above the confluence with Boxelder Creek.		Aq Life Warm ~~2~~1 Recreation E Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=2.7 NO_3=100	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Nitrite as a 30 day average. ~~Fish Ingestion Standards~~ ~~Temporary Modifications:~~ ~~Se(ch)=5.4 µg/l (dis). (Type iii).~~ ~~Expiration date of 12/31/2015.~~
12. Mainstem of the Cache La Poudre River from a poin immediately above the confluence with Boxelder Creek to the confluence with the South Platte River.		Aq Life Warm ~~2~~1 Recreation E Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=2.7 NO_3=100	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Nitrite as a 30 day average. ~~Fish Ingestion Standards~~ ~~Temporary modifications:~~ ~~Se(ch)=7.1 µg/l (dis). (Type iii).~~ ~~Expiration date of 12/31/2015.~~
13a. All tributaries to the Cache La Poudre River, including all wetlands, from the Monroe Gravity Canal/North Poudre Supply canal diversion to the confluence with the South Platte River, except for specific listings in Segments 6, 7, 8, 13b and 13c.	~~UP~~	Aq Life Warm 2 Recreation E Agriculture Water Supply	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^{2} [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)[C]	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
13b. Mainstem of Boxelder Creek from its source to the confluence with the Cache La Poudre River.		Aq Life Warm 2 5/15-9/15 Recreation P 9/16-5/14 Recreation N Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 5/15-9/15 E.Coli=205/100ml Chla=150 mg/m^{2} [C] 9/16-5/14 E.Coli=630/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modifications: Se(ch)=~~13.0 µg/l (dis)~~current conditions. (Type ~~iii~~B). Expiration date of 12/31/201~~5~~20.

REGION: 3 AND 4 BASIN: **CACHE LA POUDRE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
13c. 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.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
14. Horsetooth Reservoir.		Aq Life Cold 1 Recreation E Water Supply DUWS Agriculture	T=TVS(CLL) °C Apr-Dec $T_{(WAT)}$=22.~~8~~7°C[D] D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
15. Watson Lake.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
16. Reservoir #4 (T 9 N, R 68 W), Water Supply Reservoir #3 (T 8 N, R 68 W), Claymore Lake, College Lake, Dixon Reservoir, Robert Benson Lake, Black Hollow Reservoir, Seeley Lake.	UP	Aq Life Warm 1 Recreation E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=20 ug/l [B,C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=83ug/l (tot)[B,C]	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
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.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(c)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
18. All lakes and reservoirs tributary to the Cache La Poudre River from the boundaries of Rocky Mountain National Park, and the Rawah, Neota, Comanche Peak, and Cache La Poudre Wilderness Areas to the Monroe Gravity Canal/North Poudre Supply canal diversion.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL,CLL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

REGION: 3 AND 4 BASIN: **CACHE LA POUDRE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B,C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
20. All lakes and reservoirs tributary to the North Fork of the Cache La Poudre River from the inlet of Halligan Reservoir to the confluence with the Cache La Poudre River. This segment includes Halligan Reservoir and Seaman Reservoir.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CL,CLL) °C Seaman Reservoir Apr-Dec $T_{(WAT)}$=22.5~~4~~°C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B,C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Standards
21. All lakes and reservoirs tributary to the Cache La Poudre River from the Monroe Gravity Canal/North Poudre Supply canal diversion to the confluence with the South Platte River, except for specific listings in Segments 14, 15, 16, 19, 20 and 22.		Aq Life Warm 2 Recreation E Water Supply DUWS* Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=20 ug/l [B,C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=83ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02-10(Trec)[Δ] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*North Poudre Reservoir No. 3 = DUWS
22. Fossil Creek Reservoir.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **LARAMIE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
1. All tributaries to the Laramie River, including all wetlands, which are within the Rawah Wilderness Area.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-I) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
2b. Mainstem of the Laramie River from the National Forest boundary to the Colorado/Wyoming border.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
3. All lakes and reservoirs tributary to the Laramie River within the Rawah Wilderness Area.	OW	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=8 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=25ug/l (tot)[B]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

REGION: 3 AND 4 BASIN: **LOWER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
1. Mainstem of the South Platte River from the Weld/Morgan County line to the Colorado/Nebraska border.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-~~10~~(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Water + Fish Standards Temporary modification: As(ch)=hybrid Expiration date of 12/31/21. ~~Temporary modification~~ ~~Se(ch)=12.3 µg/l (dis). (Type iii). Expiration date of 12/31/2015.~~
2a. 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.	UP	Aq Life Warm 2 Recreation ~~N~~P Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=~~630/100ml~~ 205/100ml Chla=150 mg/m^2 [C]	CN=0.2	S=0.05 B=0.75 NO_2=1~~0~~ NO_3=10~~0~~ Cl=250 SO_4=WS P=170ug/l (tot)[C]	As(ac)=340 As(ch)=~~100~~0.02-10(Trec)[A] Be(ch)=~~100~~4.0(Trec) Cd(ac)=5.0(Trec) Cd(ch)=10(Trec) CrIII(ac)=50(Trec) CrIII(ch)=100(Trec) CrVI(ac)=50(Trec) CrVI(ch)=100(Trec) Cu(ch)=200(Trec)	Fe(ch)= WS(dis) Pb(ac)=50(Trec) Pb(ch)=100(Trec) Mn(ch)=WS(dis) Mo(ch)=150(Trec)	Ni(ch)=~~2~~100(Trec) Se(ch)=20(Trec) Ag(ac)=100(Trec) Zn(ch)=2000(Trec)	
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.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
3. Jackson Reservoir, Prewitt Reservoir, North Sterling Reservoir, Jumbo (Julesburg), Riverside Reservoir, Empire Reservoir, and Vancil Reservoir.	UP	Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WL) °C Jackson Reservoir April-Dec $T_{(WAT)}$=28.1~~0~~°C North Sterling Res. April-Dec $T_{(WAT)}$=26.1~~0~~°C Jumbo Reservoir April-Dec $T_{(WAT)}$=~~27.0~~ 6.9°C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=20 ug/l [B,C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10~~0~~ Cl=250 SO_4=WS P=83ug/l (tot)[B,C]	As(ac)=340 As(ch)=~~7.6~~0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac~~/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)= WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
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 3 and 5.		Aq Life Warm 2 Recreation ~~U~~P Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=20 ug/l [B,C]	CN=0.2 ~~NO_2=10~~ ~~NO_3=100~~	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=83ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02-10(Trec)[A] Be(ch)=~~100~~4.0(Trec) Cd(ac)=5.0(Trec) Cd(ch)=10(Trec) CrIII(ac)=50(Trec) CrIII(ch)=100(Trec) CrVI(ac)=50(Trec) CrVI(ch)=100(Trec) Cu(ch)=200(Trec)	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ch)=100(Trec) Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ch)=~~2~~100(Trec) Se(ch)=20(Trec) Ag(ac)=100(Trec) Zn(ch)=2000(Trec)	

REGION: 3 AND 4 BASIN: **LOWER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
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.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WL) ^{o}C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=20 ug/l [B,C]	NH_3(ac/ch)=TVS ~~Cl_2(ac)=0.019~~ Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=83ug/l (tot)[B,C]	As(ac)=340 As(ch)=0.02-10(Trec)[A] Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(~~ac/~~ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	

REGION: 3 AND 4 BASIN: **REPUBLICAN RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
1. Mainstem of the South Fork of the Republican River from a point ~~10~~23 miles above ~~Bonny Reservoir~~the Colorado-Kansas border (39.582154°, -102.350838°) to the Colorado-Kansas border.	.	Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
2. ~~Bonny Reservoir, Stalker Lake.~~Deleted.		~~Aq Life Warm 1 Recreation E Water Supply Agriculture~~	~~T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml~~	~~NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005~~	~~S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS~~	~~As(ac)=340 As(ch)=0.02(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS~~	~~Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot)~~	~~Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS~~	
3. Mainstem of the North Fork of the Republican River from the source to the Colorado/Nebraska border and the mainstem of Chief Creek.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2 [C]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=110ug/l (tot)[C]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
4. Mainstem of the Arikaree River from the confluence of the North and South Forks to the Colorado/Kansas border.		Aq Life Warm 1 Recreation E Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100 P=170ug/l (tot)	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=200(Trec) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
5. Mainstem of ~~the~~ Black Wolf Creek from the source to the confluence with the Arikaree River.		Aq Life Warm ~~2~~1 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=150 mg/m^2	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS P=170ug/l (tot)	As(ac)=340 As(ch)=0.02-~~10~~(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac/~~ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
6. All tributaries to the Republican River system in Colorado, including all wetlands, except for specific listings in Segments 1, 3, 4 and 5.	UP	Aq Life Warm 2 Recreation ~~N~~P Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=~~630/100ml~~ 205/100ml Chla=150 mg/m^2 [C]	CN=0.2 ~~NO_2=10~~ ~~NO_3=100~~	B=0.75 NO_2=10 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Be(ch)=100(Trec) Cd(ch)=10(Trec) CrIII(ch)=100(Trec) CrVI(ch)=100(Trec) Cu(ch)=200(Trec)	Pb(ch)=100(Trec) Mn(ch)=200(Trec) Mo(ch)=150(Trec)	Ni(ch)=200(Trec) Se(ch)=20(Trec) Zn(ch)=2000(Trec)	
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.	UP	Aq Life Warm 2 Recreation N Agriculture	T=TVS(WS-III~~IV~~) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=630/100ml	CN=0.2 ~~NO_2=10~~ ~~NO_3=100~~	B=0.75 NO_2=10 NO_3=100 P=170ug/l (tot)[C]	As(ac)=340 As(ch)=100(Trec) Be(ch)=100(Trec) Cd(ch)=10(Trec) CrIII(ch)=100(Trec) CrVI(ch)=100(Trec) Cu(ch)=200(Trec)	Pb(ch)=100(Trec) Mn(ch)=200(Trec) Mo(ch)=150(Trec)	Ni(ch)=200(Trec) Se(ch)=20(Trec) Zn(ch)=2000(Trec)	

REGION: 3 AND 4 BASIN: **REPUBLICAN RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
8. All lakes and reservoirs tributary to the Republican and Smoky Hill Rivers in Colorado, except for specific listings in Segment ~~2~~9.		Aq Life Warm 2 Recreation U Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	CN=0.2	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec)[A] Be(ch)=~~100~~4.0(Trec) Cd(ac)=5.0(Trec) Cd(ch)=10(Trec) CrIII(ac)=50(Trec) CrIII(ch)=100(Trec) CrVI(ac)=50(Trec) CrVI(ch)=100(Trec) Cu(ch)=200(Trec)	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ch)=100(Trec) Mn(ac~~/ch~~)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ch)=~~2~~100(Trec) Se(ch)=20(Trec) Ag(ac)=100(Trec) Zn(ch)=2000(Trec)	
9. Bonny Reservoir, Stalker Lake.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml Chla=20 ug/l [B]	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS P=83ug/l (tot)[B]	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=5.0(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac)=50(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Mo(ch)=150(Trec)	Ni(ac/ch)=TVS Ni(ch)=100(Trec) Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	

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) Total phosphorus (TP) and chlorophyll *a* standards apply only to lakes and reservoirs larger than 25 acres surface area.

(C) Total phosphorus and chlorophyll a standards apply only above the facilities listed at 38.5(4).

(D) 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.

PROPOSED

WATER QUALITY CONTROL DIVISION

38.90 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 9, 2015 RULEMAKING; FINAL ACTION AUGUST, 2014; EFFECTIVE DATE DECEMBER 31, 2015

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. Waterbody Segmentation

Some renumbering and/or creation of new segments was made to facilitate appropriate organization of waterbodies 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) differences in water quality; and/or c) certain segments could be merged into one segment because they had similar water quality and uses. The following changes were made:

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

The following segment descriptions were edited to improve clarity, correct typographical errors, and correct spelling errors (See Section Q):

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

B. Revised Aquatic Life Use Classifications and Standards

The Commission reviewed information regarding the existing aquatic communities. The following segments were assigned the full suite of standards to protect the Aquatic Life use classification:

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

Some segments were assigned an Aquatic Life use classification, but were missing one 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 removed the Aquatic Life use classification from Clear Creek segment 8. A Use Attainability Analysis submitted by the Division during this hearing demonstrated that the aquatic life use is not an existing use and is not attainable due to man-induced irreversible conditions.

The Commission reviewed information regarding the existing aquatic communities. Class 2 segments with high MMI scores or a wide variety of fish species were upgraded from Class 2 to Class 1.

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

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

The following segments were upgraded from Warm 2 to Warm 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 Commission reviewed all Class 2 segments that have fish that are "of a catchable size and which are normally consumed and where there is evidence that fishing takes places on a recurring basis." Water + fish or fish ingestion standards were applied to the following segments.

Cold Class 2:

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

Warm Class 2:

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

The acute total residual chlorine standard does not apply to segments with a Class 2 Aquatic Life use classification (see Table II in Regulation No. 31). However, most Class 2 segments in Regulation No. 38 had an acute total residual chlorine standard. The Commission removed the acute total residual chlorine standard from the following segments:

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

C. Recreation Classifications and Standards

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

Based upon evidence that portions of these segments are publicly accessible and/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. The following segments with year-round or seasonal Recreation N standards were upgraded to Recreation P:

[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 year-round or seasonal Recreation N standards were upgraded to Recreation E:

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

The following segments with year-round or seasonal Recreation U standards were upgraded to Recreation E:

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

The following segments with year-round or seasonal Recreation U standards were upgraded to Recreation P:

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

The following segments with year-round or seasonal Recreation U standards were upgraded to Recreation N:

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

A review of the segments with an existing Recreation use classification showed that several segments had incorrect E. coli standards to protect that use. The correct E. coli standards were corrected for the following segments:

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

D. Water Supply Use Classification and Standards

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

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

A review of the segments with an existing Water Supply use classification showed that some segments were missing one or more standards to protect that use. The full suite of Water Supply standards was added to the following segments:

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

Three segments have one or more numeric standards for water supply, but do not have the Water Supply use classification. The Division searched for alluvial wells on these segments and determined that there is not an existing Water Supply use. Therefore, the Water Supply standards were removed from the following segments:

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

E. Agriculture Use Classification and Standards

A review of the segments with an existing Agriculture use classification showed that some segments were missing one or more standards to protect that use. The full suite of Agriculture standards were added to the following segments:

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

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

In this hearing, the Commission adopted a standard of 150 µg/L, based on an improved understanding of the dietary- and water-intake rates for various life-stages of cattle. This standard is protective of all life-stages of cattle (including lactating cows and growing heifers, steers and bulls) at all times of year.

The Commission also notes that in view of EPA's disapproval of the 300 µg/l table value in the Basic Standards and Methodologies for Surface Water, the Commission intends to review this value during the next Basic Standards triennial review.

The Agriculture table value assumes that the safe copper:molybdenum ratio is 4:1. Food and water intake is based on growing heifers, steers, and bulls consuming 6.7 kg/day of dry matter and 56.8 liters of water per day. Total copper and molybdenum intakes are calculated from the following equations:

Cu intake mg/day = [([Cu] forage, mg/kg) x (forage intake, kg/day)] + [([Cu] water, mg/l) x (water intake, L/day)] + (Cu supplementation, mg/day)

Mo intake mg/day = [([Mo] forage, mg/kg) x (forage intake, kg/day)] + [([Mo] water, mg/l) x (water intake, L/day)] + (Mo supplementation, mg/day)

The assumed values for these equations are as follows:

[Cu] forage = 7 mg/kg, [Mo] forage = 0.5 mg/kg, forage intake = 6.7 kg/day, [Cu] water = 0.008 mg/L, [Mo] water = 0.375 mg/L, water intake = 56.8 L/day, Cu supplementation = 0 mg/day, Mo supplementation = 0 mg/day.

A molybdenum standard of 150 µg/l was adopted for all segments in Regulation 38 that have an Agriculture use classification, and where livestock or irrigated forage are present or expected to be present. The following segments do not have an Agriculture or a Water Supply use classification. Molybdenum standards of 160 µg/l or 210 µg/l were not applied to these segments to protect the Agriculture and Water Supply use classifications:

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

F. Changes to Antidegradation Designation

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

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

The Commission reviewed all Warm 1 segments designated Use Protected to determine if the Use Protected designation was still warranted. Based upon available water quality data that meet the criteria of 31.8(2)b, the Use Protected designation was removed from the following segments:

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

The Commission reviewed all Reviewable segments to determine if this Antidegradation designation was still warranted. Based upon available water quality data that fails to meet the criteria of 31.8(2)b, the Reviewable designation was removed and replaced with Use Protection in the following segments:

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

The following segments with Outstanding Waters designations were expanded:

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

G. Ambient Standards

Ambient standards are adopted where natural or irreversible man-induced conditions result in exceedances of table value standards. The Commission reviewed the information that is the basis for these standards, as well as any new information that would indicate whether they are still appropriate, need to be modified, or should be removed. The following segments have ambient-based standards that were revised:

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

New ambient-based standards were adopted for the following segments:

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

H. Numeric Standards Changes

Changes were made to the following metals criteria to implement revisions adopted by the Commission in the 2010 Basic Standards rulemaking hearing.

Aluminum: Chronic aluminum standards adopted in 2010 are pH-dependent. When the pH is greater than 7.0, the new chronic aluminum standard uses a hardness-based equation. When pH is less than 7.0, the old chronic criterion of 87 µg/l or the new hardness-based equation applies, whichever is more stringent. The new acute aluminum criterion is a hardness-based equation that applies at all pH values. The hardness for both the chronic and acute aluminum hardness-based equations is capped at 220 mg $CaCO_3$/l, rather than the typical cap of 400 mg $CaCO_3$/l. The acute and chronic aluminum equations in 38.6(3) were modified to conform to Regulation No. 31.

Ammonia: Footnote 4 was replaced. The equations for the "NH_3=TVS" were deleted and replaced by language that explains the early life stage presence/absence assumptions.

Molybdenum: In 2010, the Commission adopted a new molybdenum standard of 210 µg/L to protect the Water Supply use.

Uranium: The Commission revised the uranium standard in 2010. The new standard is a hyphenated standard with two values (16.8 – 30 µg/L). The first value, which was added in 2010, is a strictly human health-based standard. The second value, which was the old standard, is EPA's maximum contaminant level (MCL), which is higher because it takes into account treatability and detection limits. A new section 38.5(3)(c)(i) was added to explain the hyphenated standard. Subsection 38.5(3)(d) was deleted because it was redundant with 38.5(3)(c).

Zinc: The Commission adopted revisions to the zinc equation in 2010. The new chronic zinc equation is slightly more stringent at hardness values less than 157 mg $CaCO_3$/l. The new acute zinc equation is slightly less stringent than the previous one. The zinc(sculpin) equation was not adopted in Regulation No. 38 because sculpin are not found in the South Platte River basin. The acute and chronic zinc equations in 38.6(3) were modified to conform to Regulation No. 31.

I. Temporary Modifications

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

Temporary Modifications were not automatically extended if non-attainment persisted due to revisions made to the Temporary Modification provisions in 2005 and 2010.

The Commission deleted or allowed to expire on 12/31/2015 the following temporary modifications:

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

The Commission revised or extended Temporary Modification on the following segments:

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

To remain consistent with the Commission's decisions regarding arsenic in section 38.85, all existing temporary modifications for arsenic of "As(ch)=hybrid" (expiration date of 12/31/21) were retained. An arsenic temporary modification was added to the following segments, which had an existing or newly added chronic arsenic standard 0.02 µg/L and a permitted discharger with a water quality–based effluent limit compliance problem:

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

J. Temperature

The Commission adopted new criteria for temperature in 2007. In June 2009, segment-specific temperature standards were adopted by the Commission for all segments with an Aquatic Life use classification in the South Platte River basin.

In June 2010, revisions of the temperature criteria in Regulation No. 31 resulted in changes to warm stream temperature tiers. The expected range of the razorback sucker is also habitat for the more thermally sensitive white sucker. Because the temperature tier applied to a segment is based on the most thermally sensitive species, the razorback sucker tier had never been applied. Therefore, the Commission deleted the razorback sucker tier (warm stream tier III), and included the razorback sucker in warm stream tier II. In implementation of these changes, the Commission changed all warm stream tier IV segments to warm stream tier III to conform with the 2010 revisions, which affected the following segments:

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

In 2010, the Commission also reformatted the temperature criteria in 31.16 Table I and updated the values based on new data included in the Colorado Temperature Database. Several corrections were made to the temperature criteria. Both the Arctic grayling and golden shiner were moved from stream tiers to the cold and warm lake tiers, respectively, because both species are found only in lakes. Additionally, a typographical error in the chronic temperature criterion for cold stream tier II and large lakes and reservoirs was corrected.

Changes were made to bring Regulation No. 38 into conformity with all of the 2010 revisions to the Basic Standards for temperature, including updating the temperature tables at 38.6(3).

Based upon new information on the species expected to occur, the Commission change the temperature standard from CS-II to CS-I for the following segments:

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

<u>Ambient temperature standards for lakes</u>

In the 2009 triennial review, the WAT standard was found to be unattainable for a number of cold large lakes and reservoirs with apparently healthy cold-water fish populations. Because summertime temperature in the mixed layer for large lakes and reservoirs is very well correlated to the waterbody's elevation, the Commission adopted ambient temperature standards for large lakes wherever data were available to characterize a WAT and the thermal characteristics of the lakes and reservoirs were determined to be the result of natural or irreversible man-induced conditions.

However, the 2010 revisions to the dissolved oxygen criteria in Regulation No. 31 altered how lakes and reservoirs are assessed for temperature and dissolved oxygen. The Commission decided that dissolved oxygen may be less than the applicable standard in the lower portion of a lake or reservoir except where Regulation No. 31 footnote 5(c)(iii) applies or a site-specific standard has been adopted.

Footnote 5(c)(iii) states:

> When a lake or reservoir is stratified, the mixed layer may exceed the criteria in Table 1 provided that an adequate refuge exists in water below the mixed layer. Adequate refuge depends on concurrent attainment of applicable dissolved oxygen standards. If the refuge is not adequate because of dissolved oxygen levels, the lake or reservoir may be included on the 303(d) List as "impaired" for dissolved oxygen, rather than for temperature.

Therefore, the ambient standards adopted by the Commission in 2009, which were based solely on the WAT and did not account for the concept of refuge, may no longer be appropriate or protective of the aquatic life use. To ensure that adequate refuge is defined in a way that protects the Aquatic Life use, the Commission adopted Footnote D which was applied to the temperature standard for deep stratified lakes. Footnote D states "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", and was applied to following lake segments:

> *[List to be completed following preliminary final action by the Commission.]*

K. Nutrients

In March 2012, the Commission adopted interim nutrient values in the Basic Standards (Regulation No. 31) and created a new statewide control regulation (Regulation No. 85) to address nutrients in Colorado. Regulation 31.17 includes interim nutrient values for total phosphorus, total nitrogen, and chlorophyll *a* for both lakes and reservoirs, and rivers and streams. Due to the phased implementation approach adopted with these criteria (31.17(e)), the Commission adopted only total phosphorus and chlorophyll *a* standards at this time. Nitrogen standards were not considered as part of this rulemaking hearing, but will be considered in the next triennial review, currently scheduled for June 2019.

Total phosphorus and chlorophyll *a* standards were 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 No. 85 effluent limits and discharging prior to May 31, 2012. A new section (4) was added at 38.5 describing implementation of the interim nutrient values into the tables at 38.6, and includes a table which lists these facilities and the segment to which they discharge.

- 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 footnote "C" was added to the total phosphorus and chlorophyll a standards in these segments. The footnote references the table of qualified facilities at 38.5(4).

- For segments located entirely below these facilities, nutrient standards do not apply.

For rivers and streams segments, total phosphorus standards were adopted for segments with an aquatic life use. Chlorophyll *a* standards were adopted for segments with either an E or P recreation use classification.

For lakes and reservoirs segments, a Footnote B was added to total phosphorus and chlorophyll standards adopted for lakes in the tables at 38.6, as these standards only apply to lakes larger than 25 acres.

31.17(e)(iii) also allows the Commission to adopt numeric nutrient standards for Direct Use Water Supply (DUWS) lakes and reservoirs. No proposals were made by the Division to adopt standards based on this provision in this rulemaking.

31.17(e)(iii) also allows the Commission to adopt numeric nutrient standards for circumstances where the provisions of Regulation No. 85 are not adequate to protect waters from existing or potential nutrient pollution. No proposals were made to adopt standards based on this provision in this rulemaking.

Chlorophyll *a* standards were adopted for the following segments:

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

Total Phosphorus standards were adopted for the following segments:

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

L. Direct Use Water Supply Sub-classification

Also 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" (Regulation 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 has begun to apply this sub-classification and anticipates that it will 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. The public water systems are listed along with the reservoirs and segments.

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

31.17(e)(iii) also allows the Commission to adopt numeric nutrient standards for Direct Use Water Supply ("DUWS") lakes and reservoirs. No standards were adopted based on this provision in this rulemaking.

M. Chromium III Standards

A review of the chromium III standards showed that uses were not always adequately protected by the standards currently in the tables. For example, the acute Aquatic Life standard is not protective of Water Supply at any hardness, so the Water Supply standard of CrIII(ac)=50(Trec) was added to all segments with a Water Supply use. Additionally, the chronic standard to protect the Aquatic Life use classification may not be protective of the Agriculture use in some high-hardness situations. Therefore, a chromium III standard of CrIII(ch)=100(Trec) was added to segments with Aquatic Life and Agriculture use classifications, but no Water Supply use. At hardness less than 145 mg/L, the Agriculture standard is not protective of the Aquatic Life use, so the chronic chromium III Aquatic Life standard should be included/retained in all segments with an Aquatic Life use.

Uses	Acute	Chronic
Water supply (with or without Agriculture)	CrIII(ac) = 50(Trec)	CrIII(ch) = TVS
No water supply (with Agriculture)	CrIII(ac) = TVS	CrIII(ch) = TVS and CrIII(ch) = 100(Trec)
Aquatic Life Only (without Water Supply or Agriculture)	CrIII(ac) = TVS	CrIII(ch) = TVS

The Commission updated chronic chromium III standards to be consistent with the matrix for the following segments:

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

N. Other Standards for the Protection of Agriculture and Water Supply Uses

Similar to the issue identified in Section N above, there were additional segments where one or more uses are not adequately protected by current standards. For instance, depending on hardness, the Aquatic Life standards for cadmium, lead, and nickel were not protective of the Water Supply use. The Division reviewed all segments in Regulation No. 38 to determine if the current standards applied to each segment are fully protective of the assigned uses, and revised or added standards where appropriate.

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

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

A manganese Agriculture standard was added to the following segments because the chronic Aquatic Life standard is not protective of Agriculture at any hardness.

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

O. Other Site-Specific Revisions

Bear Creek Reservoir segment 1c, Bear Creek Reservoir: The site-specific standards for chlorophyll a and total phosphorus have been revised in response to US EPA's disapproval of the

Commission's 2009 action. The purpose for the revised standards remains consistent with the Commission's original goal of shifting the trophic condition to the mesotrophic-eutrophic boundary. The numeric values for chlorophyll and phosphorus have changed because the data set has been expanded by several years and an improved methodology has been applied. As before, the standards were developed using only data from Bear Creek Reservoir. Each standard is defined for average summer concentrations and has an allowable exceedance frequency of once in five years.

A. Chlorophyll Standard: The Commission revised the chlorophyll standard to 15 µg/L. If summer average chlorophyll concentrations in the reservoir exceed 15 µg/L more than once in five years, it would be firm evidence that the trophic condition goal of the pre-existing narrative (mesotrophic-eutrophic boundary) was not being met. The exceedance threshold of 15 µg/L was derived with a "translator" developed with data from Bear Creek Reservoir. The translator connects the concentration at the allowable exceedance frequency (once in five years) to the typical concentration at the mesotrophic-eutrophic boundary (8 µg/L).

B. Phosphorus Standard: The Commission revised the phosphorus standard to 28 µg/L. The standard is calculated in two steps based on the methodology used to develop statewide nutrient criteria for the 2012 Nutrient hearing. The first step involves the creation of a statistical "linkage" between phosphorus and chlorophyll based on summer average concentrations measured in Bear Creek Reservoir. The linkage is used to define the phosphorus concentration corresponding to the mesotrophic-eutrophic boundary in this reservoir; that concentration is 19 µg/L. The second step involves a translator for phosphorus that performs the same function described for the chlorophyll translator described above. The concentration at the exceedance threshold is 28 µg/L.

C. Assessment: The phosphorus and chlorophyll standards are defined as seasonal averages. Samples are to be collected at a site in deep water near the dam and should be representative of conditions in the mixed layer. Past monitoring has resulted in 5 or 6 samples during the summer months (July, August, and September); it is anticipated that the same level of effort will be applied in the future. For assessment, the average (arithmetic mean) is calculated for the summer samples in each year.

D. Independent Applicability: The chlorophyll and phosphorus standards are considered independently applicable. That is, impairment can be determined with either parameter without confirmation by the other parameter. Although the parameters are linked biologically – algae require phosphorus to grow – the linkage is "noisy" in a statistical sense because phosphorus cannot compel algae to grow (i.e., other limiting factors complicate the relationship). Independent applicability establishes a more sensitive basis for assessing departures from the target trophic condition since regulation of phosphorus cannot be used to guarantee attainment of the chlorophyll standard. Independent applicability is a practical way to adapt regulation to a complex natural relationship where neither constituent is toxic (at least not at the target levels).

E. Adoption of a Temporary Modification for Chlorophyll and Phosphorus: The underlying standards are not attained presently due to the seasonal augmentation of phosphorus concentrations from internal sources. A temporary modification set at "existing conditions" to expire 12/31/2020, is adopted in order to recognize the uncertainty regarding how soon the internal load will be reduced. The Division, in conjunction with the Bear Creek Watershed Association, is

working on studies to determine what management strategies might be feasible for reducing or controlling internal phosphorus release. Progress on resolving uncertainty will be reviewed in the annual temporary modification hearings in December 2018 and 2019.

Clear Creek segments 7a and 7b: The site-specific standards for Woods Creek and Lower Urad Reservoir were replaced with table value standards for the protection of aquatic life. Formerly, Segment 7 had standards only for downstream protection of the West Fork of Clear Creek. Standards for the protection of aquatic life were not previously applied to Segment 7, because most of Woods Creek was contained inside a pipe between Upper Urad Reservoir and Lower Urad Reservoir. Recently, the flow in Woods Creek was returned to the open channel and may be capable of supporting aquatic life. Since there remains uncertainty about what standards are necessary to protect aquatic life use in this segment and also the extent to which there are irreversible water quality impacts in this segment, the Commission adopted temporary modifications for [add] with an expiration date of 12/31/2020.

Clear Creek segments 14a, 14b, 15 and Middle South Platte segment 1a: An expiration date of 12/31/2020 was added to all segments with a site-specific standard based upon water effect ratios. These standards are derived by measuring the toxicity of a pollutant to test organisms in laboratory water compared with the receiving water, including effluent. Changes in water chemistry, such as hardness, alkalinity and the concentrations of other toxics can all impact the toxicity of a specific pollutant, such as zinc. If there are significant changes in the chemistry of the receiving water or the effluent, then the water effect ratio analysis must be repeated and the site-specific standard updated to reflect current conditions. Since the water effect ratio studies for these segments were completed in the 1990s, the Commission applied an expiration date to require re-evaluation of these standards at the next triennial review.

Big Thompson River segment 2: A site-specific copper standard derived from the Fixed Monitoring Benchmark (FMB) of the Biotic Ligand Model (BLM) was adopted for this segment in December 2014 at the Temporary Modification Rulemaking Hearing. The standard was set to Cu(ac)=11 µg/L and Cu(ch)=7.5 µg/L and was applied from immediately above the Upper Thompson Sanitation District(UTSD) outfall to the home Supply Canal Diversion. At the time of the Temporary Modification Rulemaking hearing, technical questions still existed about how the FMB-derived values should be applied for aquatic life protection and the Commission asked the Division to review the standards for this basin hearing. As a result of further dialogue and review of a wider variety of proposals, the Commission made no changes to the Big Thompson segment 2 site-specific copper standards. The resultant FMB provides an acute and chronic copper criterion that is protective of the most sensitive downstream site. Copper data did not meet the distributional assumption (lognormal) implicit in the BLM, but some additional processing ("trimming") yielded defensible values.

P. Typographical and Other Errors

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

- For all segments with manganese TVS and either an Agriculture or Water Supply use, the Division corrected the tables so that chronic TVS were deleted. The Agriculture and Water Supply chronic standards are more stringent than chronic TVS at all hardnesses.

- For Upper South Platte segment 9, "a.k.a. Waucondah Reservoir" was added to clarify the location of the waterbody.

- For Upper South Platte segment 16a, the selenium standards were split over two lines (i.e., Se(ac)=TVS and Se(ch)=TVS). The Division combined these (i.e.,

Se(ac/ch)=TVS) to be consistent with formatting elsewhere. Similarly, for Clear Creek Segment 2b, the Division combined the Zn(ac)=TVS and Zn(ch)=TVS into Zn(ac/ch)=TVS. For Clear Creek Segment 16a, the Division combined the Cd(ac)=TVS and Cd(ch)=TVS into Cd(ac/ch)=TVS.

- For Upper South Platte segments 16h, 16i, and 16j, the Division standardized the formatting of the site-specific selenium standards to be consistent among segments.

- For Upper South Platte segment 21, the Division corrected the chronic arsenic standard, which was missing a digit (i.e., "0.02-0(Trec)" was replaced with "0.02-**1**0(Trec)").

- For Upper South Platte segment 22b and St. Vrain Creek Segment 6, the Division corrected the chronic arsenic standard by adding "(Trec)", consistent with formatting elsewhere.

- For Bear Creek segments 1c, 1d, 1e, 2, and 3, the "equals" sign was missing from the chronic iron standard for water supply. The Division corrected this typo.

- For Bear Creek segment 9, specific naming of Summit Lake was included to increase clarity.

- For Bear Creek segment 11, there was an extra space in the segment description. The Division corrected this typo.

- For Clear Creek segments 4, 5, 6, 7a, 8, the stream name was corrected as "West" Fork Clear Creek.

- For Clear Creek segment 9a, the typo "the" was removed.

- For Clear Creek segments 12 and 23, the Division corrected a formatting issue in the metals column.

- For Clear Creek segment 13a, punctuation was corrected.

- For Clear Creek segment 13b, the extra space after the word "Gulch" was deleted.

- For Clear Creek segment 21, the extra comma after the word "CO" was deleted.

- For Clear Creek segment 24, the space within the word "Segments" was deleted.

- For Clear Creek segment 25, the description was revised to provide a more detailed location description.

- For Big Dry Creek segment 4b, the extra period at the end of the description was deleted.

- For Boulder Creek segment 1, the segment description was expanded to include James Peak Wilderness Area and "s" was added to "Area".

- For Boulder Creek segment 2b, the typo "the" was removed.

- For Boulder Creek segment 4a, the segment description was amended to exclude listings in segment 1 for clarity.

- For Boulder Creek segment 13, the segment description was expanded to include James Peak Wilderness Area and “s” was added to “Area”.

- For Boulder Creek segment 14, Lakewood reservoir was added to the segment description for identification of DUWS.

- For Boulder Creek segment 15, Gross Reservoir was removed from this segment and moved to new segment 18. The description of segment 15 was amended to exclude listings in segment 13 and 18 for clarity.

- For St. Vrain Creek segment 7, Spurgeon Reservoir was added to the segment description for identification of DUWS. Additionally, the “and” between Coot Lake and Left Hand was deleted.

- For Big Thompson segment 16, St. Mary’s Lake was added to the segment description for identification of DUWS.

- For Middle South Platte segment 5b, the spelling of “Boxelder” was changed to Box Elder to be consistent with maps.

- For Middle South Platte segment 6, the Division added (ch) to all of the Metals standards to be consistent with formatting elsewhere.

- For Lower South Platte segment 4, both the nitrate and nitrite standards were duplicated in the Inorganic column of the tables. The Division deleted the least restrictive nitrate/nitrite set.

- For Republican River segment 5, the Division deleted an extra “the” from the segment description.

EXHIBIT 2
AURORA WATER

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
16i. Mainstem of Sand Creek from the confluence with Toll Gate Creek to the confluence with the South Platte River.		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=~~TVS~~ 57.4/35.6	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Upper:* Se(ch)=38.2 Se(ac)=45.1 Lower:* Se(ch)=9.0 Se(ac)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	* See section 38.6(4)(f) for selenium assessment locations ~~Temporary Modifications: Cu (ac/ch) = TVSx2.6 below the Sand Creek Water Reuse Facility outfall. (Type iii). Expiration date of 12/31/2015.~~ Copper based on a Biotic Ligand Model (BLM)-based standard Hg(ch)=current condition, Expiration date of 6/30/2017

AURORA WATER
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

Site-specific copper (Cu) standards for Segment 16i were adopted based upon the Environmental Protection Agency (EPA) nationally recommended water quality criteria for Cu, which recommends use of the Biotic Ligand Model (BLM; USEPA 2007) for deriving site-specific criteria. In particular, the standards were based on the 15th percentile of the BLM-predicted acute and chronic instantaneous water quality criteria (IWQC). The site-specific standards were adopted for Segment 16i, in its entirety, described as the mainstem of Sand Creek from the confluence with Toll Gate Creek to the confluence with the South Platte River.

Data collected by Aurora Water (Aurora) and two other Sand Creek parties (i.e., Suncor Energy [Suncor] and Metro Water Reclamation District [MWRD]) supported the derivation of BLM-based standards for Segment 16i. Aurora collected data at two locations for over five years, Suncor collected data at two locations for over one year, and MWRD collected data at one location for over nine years. Comparison of the dissolved Cu concentrations measured by Aurora against those measured by the other Sand Creek parties prompted an investigation into and confirmation of an interference in Aurora's analysis of dissolved Cu, indicating that actual concentrations are much lower than reported. Since all of Aurora's Cu data were affected by this interference, Fixed Monitoring Benchmark (FMB; USEPA 2012)-based standards could not be pursued as Cu is a required parameter for estimating an FMB. However, the Commission found that in the absence of reliable Cu data, the 15th percentiles of the IWQC distributions represent a conservative estimate of the protectiveness of water against copper toxicity. Since IWQC values throughout the segment were very similar, all available data were combined and used to generate 15th percentile IWQC values for Segment 16i. The resulting acute standard was 57.4 µg/L and the chronic standard was 35.6 µg/L.

EXHIBIT 3
BIG DRY CREEK WATERSHED ASSOCIATION

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

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38.6 TABLES

. . . .

(4) Assessment Criteria

. . . .

(d) Big Dry Creek Segment 1: Selenium Assessment Locations

- bdc 1.5: upstream of Broomfield Wastewater Treatment Plant
- ~~bcd~~bdc 2.0: upstream of Westminster Big Dry Creek Wastewater Treatment Facility
- ~~bcd 4.0~~bdc 4.5: upstream of Northglenn Wastewater Treatment Plant

BIG DRY CREEK WATERSHED ASSOCIATION
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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 site-specific standard for selenium for Big Dry Creek Segment 1 was adopted in 2007, as described in the Statement of Basis and Purpose 38.68. All conditions associated with this site-specific standard apply with the exception that sampling location bdc4.0 has been replaced with bdc4.5 to provide safer access for field staff collecting samples. Bdc4.5 is located approximately one-half mile downstream of bdc4.0. Bdc4.5 represents instream conditions upstream of the City of Northglenn's discharge, which was the original purpose of sampling location bdc4.0. Attainment of the selenium standard will be assessed based on data collected at bdc1.5, bdc2.0 and bdc4.5. Data collected at the former site bdc4.0 may continue to be used for assessment. A typographical correction was also made for sampling location bdc2.0.

EXHIBIT 4
CITY OF BLACK HAWK AND BLACK HAWK / CENTRAL CITY SANITATION DISTRICT

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
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.	UP	Aq Life Cold 2 Recreation E Agriculture	T=TVS (~~CS-I~~ CS-II)ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05	As(ac)=340 As(ch)=100 (Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS	Cu(ch)=64 Fe(ch)=5400(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ch)=740	Temporary modifications: Cd(ch)=4.7 µg/l (dis), T=current condition (type iii) Expiration date of 12/31/2018.

CITY OF BLACK HAWK AND BLACK HAWK / CENTRAL CITY SANITATION DISTRICT PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

BASIS AND PURPOSE

Clear Creek, Segment 13b

The temperature standard for Segment 13b was changed from Cold Stream Tier I to Cold Stream Tier II. This change is protective of the existing Aquatic Life Class 2 designation for the segment and does not constitute a downgrade of the existing use classification.

The change is supported by the available temperature data, which indicate that ambient temperatures upstream of the Black Hawk Central City Sanitation District's Wastewater Treatment Facility exceed the acute CS-I temperature standard during the summer, and spring seasons.

Also, at present, Segment 13b is not supportive of any fishery due to elevated metals concentrations and significant habitat degradation. It is uncertain whether these conditions can be remedied within a period of twenty years. Superfund's Remedial Action Objective for metals concentrations in the segment is a surviving (non-reproducing) brown trout population. If future work to remedy high metals concentrations, riparian cover and poor habitat conditions in Segment 13b allow for a viable trout fishery to return (brown trout or brook trout), it will be appropriate to re-evaluate the temperature standard necessary to protect the species expected to be present, sensitive life stages, reproductive functions and migration patterns expected to occur in this segment. This evaluation will be conducted during routine South Platte Basin Rulemaking Hearings, or at other times as new data or studies become available.

The temporary modification for the segment remains in effect through December 31, 2018, to provide time for the BHCCSD Wastewater Treatment Facility to collect additional ambient temperature data and evaluate whether a discharger specific variance is needed.

EXHIBIT 5
CITY OF BOULDER

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **BOULDER CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
9. Mainstem of Boulder Creek from a point immediately above the confluence with South Boulder Creek to the confluence with Coal Creek.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C Jan-Oct D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Fe(ch)=WS(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modifications: Cu (ac/ch)=Current Condition. (Type iii). Expiration date of 12/31/2015. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21. Narrative Temperature standard, Nov-Dec: Temperature shall maintain a normal pattern of seasonal fluctuations.

CITY OF BOULDER
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

Temperature: Information on the transition between the summer and winter Class 1, warm water, Tier II, temperature standards for Boulder Creek, Segment 9, was provided to the Commission by the City of Boulder. The table value standards result in an abrupt temperature standard decrease from the summer values (MWAT=27.5, DM=28.6) to the winter values (MWAT=13.8, DM=14.3). This artificial decrease in the temperature standards creates compliance difficulties below the City of Boulder wastewater treatment facility discharge, and compliance with proposed wastewater treatment facility temperature permit limits, during the first week to three weeks of December in most years. Temperature standard and permit limit compliance difficulties are also affected by ambient air temperature and low flows in Boulder Creek, both of which are uncontrollable.

Based on the evidence provided by the City of Boulder, the Commission determined that the way seasonal temperature standards are applied creates a rigid, and abrupt, change from summer to winter (November 30th to December 1st) and does not reflect the normal pattern of the annual thermal cycle. The change also creates uncontrollable compliance difficulties with the winter temperature standard and associated wastewater treatment facility temperature permit limits. The Commission adopted the City of Boulder's proposal to revise the winter temperature standard to:

Tier II, Class 1, Warm Water: Boulder Creek, Segment 9

- March – October = 27.5 Deg. C (ch); 28.6 Deg. C (ac)
- November, December = Narrative statement identical to the provisions of Footnote 5 to Table 1 in Regulation 31 regarding seasonal temperature patterns: "Temperature shall maintain a normal pattern of seasonal fluctuations."
- January, February = 13.8 Deg. C (ch); 14.3 Deg. C (ac)

The Commission intends that the following elements will constitute the implementation strategy for the narrative standard applicable in November and December:

1. Numeric Water Quality Based Effluent Limits for temperature will apply for the core winter months of January and February and summer months of March through October.
2. Narrative effluent limits for temperature will apply for the months of November and December.
3. Boulder Creek temperature monitoring will be conducted upstream and downstream of the City of Boulder wastewater treatment facility discharge, for the months of November and December, to assess the maintenance of a normal pattern of seasonal temperature fluctuations in Boulder Creek.

4. If at the time of permit renewal the normal pattern of seasonal temperature fluctuations is not maintained, the Division will re-evaluate the narrative effluent limitations and develop an alternative way to translate the narrative standard into numeric effluent limitations to ensure the natural seasonal progression is maintained. A numeric limit could either be proposed as a site-specific standard or included in permits to ensure the normal seasonal temperature fluctuations are maintained in the future.

EXHIBIT 6
CENTENNIAL WATER AND SANITATION DISTRICT

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
14. Mainstem of the South Platte River from the outlet of Chatfield Reservoir to the Burlington Ditch diversion in Denver, Colorado.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C summer=14 Feb-Nov D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 ~~Cl=250~~ $S0_4$=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Fe(ch)=WS(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=190(dis) Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	~~Temporary modifications:~~ ~~Cu(ac/ch)=TVSx2.7 (Type iii). Applies~~ Copper Biotic Ligand Model (BLM)-based Fixed Monitoring Benchmark (FMB) Cu FMBa=29.9 µg/L Cu FMBc=18.9 µg/L below the confluence with Marcy Gulch.~~ Expiration date of 12/31/2015.~~ Temporary Modifications: T (Jan)=current conditions ~~(Type iii).~~ Expiration date of 6/30/2019.~~12/31/2015.~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
16g. Marcy Gulch, including all wetlands from the source to the confluence with the South Platte.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac)=21 Se(ch)=13 Ag(ac/ch)=TVS Zn(ac/ch)=TVS	~~Temporary modifications:~~ ~~Cu (ac/ch) = TVSx2.4~~ Copper Biotic Ligand Model (BLM)-based Fixed Monitoring Benchmark (FMB) Cu FMBa=56.5 µg/L Cu FMBc=37.0 µg/L below the Centennial Wastewater Treatment Facility outfall. ~~(Type iii). Expiration date of 12/31/2015.~~ Temporary Modifications: T (Dec=Feb)=current conditions ~~(Type iii)~~. Expiration date of 6/30/2019. ~~12/31/2015~~. Selenium: see assessment locations at 38.6(4)(g).

CENTENNIAL WATER AND SANITATION DISTRICT
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

Upper South Platte River Segments 14 and 16g Temperature:

For Segment 14, the Commission removed the temporary modification to the temperature standard for February through November, based on its adoption of temperature standards proposed by Littleton-Englewood. For Segment 16g (March Gulch), the Commission removed the temporary modification to the temperature standard for March through November, based on evidence submitted by Centennial Water & Sanitation District that the stream attains the summer temperature standards. The Commission extended the temporary modification for Segment 14 for January, based on Centennial's demonstrated compliance problem with the existing January temperature standard. The Commission also extended the temporary modification for Segment 16g for December through February, based on Centennial's demonstrated compliance problem with the existing winter temperature standards for Marcy Gulch. In addition, Centennial has shown that there is significant uncertainty about the appropriate winter temperature standard necessary to protect current uses on both segments.

The Commission has also reviewed the temporary modification implementation plan submitted by Centennial. Based on the existence of that plan, along with current and predicted compliance problems and uncertainty regarding the temperature standards necessary to protect current uses, the Commission extended the "current condition" temporary modification to the January temperature standard for Upper South Platte Segment 14 and to the December-February temperature standards for Upper South Platte Segment 16g to June 30, 2019.

Upper South Platte Segments 14 and 16g Copper:

Site-specific copper (Cu) standards for portions of Segment 16g and 14 were adopted based upon the Environmental Protection Agency (EPA) nationally recommended water quality criteria for Cu, which recommends use of the Biotic Ligand Model (BLM; USEPA 2007) for deriving site-specific criteria. In particular, the BLM was applied using EPA's Fixed Monitoring Benchmark (FMB) method (USEPA 2012). This method is a probabilistic tool that resolves time variability in the BLM-predicted instantaneous water quality criteria (IWQC) against that in the Cu concentrations measured in-stream. The term "FMB" is used because it is a benchmark that can be used to evaluate attainment of water quality criteria at the allowable exceedance frequency (i.e., no more than one-in-three years). The site-specific standards were adopted for the portions of Segment 16g and 14 to which the previous temporary modifications applied – for Segment 16g this was below the Centennial Wastewaster Treatment Facility outfall and for Segment 14 this was below the confluence with Marcy Gulch.

On both Segment 16g and 14, data collected at two locations for up to two years supported the derivation of FMB-based standards. On Marcy Gulch, the two locations bracketed the Centennial Water & Sanitation District (CWSD) discharge; on the South Platte River, the two locations bracketed the confluence with Marcy Gulch. Consistent with the previous temporary modifications, FMBs were derived using data only from the downstream locations. Although insufficient to run the BLM or derive FMBs, water quality data provided by parties further downstream on the South Platte River confirmed the FMB-

based standards derived using CWSD's data would be protective of downstream portions of Segment 14. The resulting acute FMBs (FMBa) for Segment 16g and 14 were 56.5 µg/L and 29.9 µg/L, respectively, and the chronic FMBs (FMBc) were 37.0 µg/L and 18.9 µg/L, respectively. The Commission adopted these FMB-based standards for the downstream portions of the segments and retained the hardness-based table value standards (TVS) throughout the upstream portions.

Upper South Platte Segment 14 Chloride:

The Commission deleted the water supply based chloride standard of 250 mg/L in Upper South Platte Segment 14. The Commission determined that the 250 mg/L standard was not necessary to protect human health. In its place the Commission intends that the 250 mg/L value be retained and implemented as a guideline to protect aesthetic quality associated with the water supply use in Segment 14. In making this determination the Commission recognizes that the 250 mg/L standard for chloride was based on the EPA National Secondary Drinking Water Regulations adopted under the Safe Drinking Water Act, EPA does not enforce the secondary maximum contaminant levels which include chloride. They were established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, odor and color. The Commission also notes that the 250 mg/L Colorado secondary maximum contaminant level for chloride was similarly not intended to be enforceable and was rather intended to be a "guideline." In view of the above, the Commission deleted the 250 mg/L chloride standard in Segment 14 and intends that a value of 250 mg/L be implemented in permits as a "guideline."

EXHIBIT 7
CENTRAL CLEAR CREEK SANITATION DISTRICT

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS μg/l			
2c. Mainstem of Clear Creek, including all tributaries and wetlands, from a point just below the confluence with Mill Creek to a point just above the Argo Tunnel discharge, except for specific listings in Segments 9a, 9b, and 10.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)°C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 SO_4=WS Cl=250	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS (tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch) = TVS Mn(ch)=WS(dis) Zn(ac)= $0.978e^{(0.8537[\ln(\text{hardness})]+1.9467)}$ Zn(ch)= $0.986e^{(0.8537[\ln(\text{hardness})]+1.8032)}$	Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	Temporary modifications: Cu(ch)=~~11.4 μg/l~~ current conditions (dis), Cd(ch) = current conditions (dis) (Type iii) Expiration date of 7/01/2020. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

CENTRAL CLEAR CREEK SANITATION DISTRICT
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

BASIS AND PURPOSE

Clear Creek, Segment 2c, Cadmium: The Commission adopted a new temporary modification for cadmium for Segment 2c. During this hearing, the Commission found that: Segment 2c is not currently in attainment of the underlying standard for cadmium, and the Central Clear Creek Sanitation District discharges to Segment 2c and has a demonstrated permit compliance problem. The cadmium Table Value Standards in Regulation No. 38 were revised to be more stringent in 2009. The revised standard will result in more stringent water-quality-based effluent limitations and, once the cadmium TMDL is revised, more stringent Wasteload Allocations (WLAs), to dischargers in the Segment.

There are additional ongoing and future remedial activities for metals that could significantly contribute to achieving the cadmium standard in Segment 2c. The extension until July 1, 2020 is intended to allow review of these temporary modifications after the next (2019) CERCLA Five-Year Review is completed and aligns with the next South Platte Basin Rulemaking Hearing.

The temporary modification for cadmium was established at “current conditions” During the effective period of this temporary modification, cadmium limits for existing dischargers to Segment 2c will be authorized to continue based on past facility performance (existing effluent quality) unless a more stringent limitation is reasonably achievable without requiring significant investment in facility infrastructure, consistent with Regulation No. 31.14(16).

Clear Creek, Segment 2c, Copper: The Commission considered a proposed revision to the temporary modification for dissolved copper for Segment 2c. During the December 2014 Temporary Modifications Rulemaking Hearing, the Commission extended the temporary modification for copper on Segment 2c, with expiration date of July 1, 2020. In the current hearing, the Commission revised the temporary modification for copper from a numeric value of 11.4 µg/L to a “current conditions” temporary modification. Evidence submitted by the CCCSD identifies that it would continue to have a permit compliance problem if ambient quality was implemented in its discharge permit. During the effective period of this temporary modification, copper limits for existing dischargers to Segment 2c will be authorized to continue based on past facility performance (existing effluent quality) unless a more stringent limitation is reasonably achievable without requiring significant investment in facility infrastructure, consistent with Regulation No. 31.14(16).

EXHIBIT 8
CLIMAX MOLYBDENUM COMPANY

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS				TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l	
7. Mainstem of Woods Creek from the outlet of Upper Urad Reservoir to the confluence with West Clear Creek, including Lower Urad Reservoir.	UP	Aq Life Cold 2 Recreation N	T=TVS(CS-I/CL)°C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.0-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 NO_2=0.05	$WQS_{WC} = ((Q_{WC} + Q_{WFCC}) X WQS_{WFCC} - (Q_{WFCC} X C_{WFCC}))/Q_{WC}$ WQS_{WC} = Water Quality Standards for Woods Creek Q_{WC} = Flow for Woods Creek Q_{WFCC} = Flow for West Fork Clear Creek WQS_{WFCC} = Water Quality Standards for West Fork Clear Creek C_{WFCC} = Ambient Concentration in West Fork Clear Creek	Standards shall be applied using the Segment 7 equation. Temporary modifications: T (ac/ch) = "current conditions" Apr, May, Oct., Nov. Exp. 6/30/19

CLIMAX MOLYBDENUM COMPANY
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

BASIS AND PURPOSE

Clear Creek Segment 7 (Woods Creek): The Commission adopted a temporary modification of the temperature standard for this segment of "current conditions" for the months of October, November, April, and May. The Commission recognizes that there is uncertainty about the appropriate temperature standard because of recent channel improvements done by Climax Molybdenum Company in Woods Creek between Upper URAD Reservoir and Lower URAD Reservoir in 2012-2015. It is uncertain whether and how the channel improvements will affect in-stream temperatures or whether sensitive life stages of cold water fish will be expected to be present in the short reach of restored surface channel downstream of the Henderson water treatment facility outfall on Woods Creek. In addition, issues about the appropriate temperature standards during the fall and spring "shoulder" seasons are larger than segment-specific issues and may be addressed by the Commission in the 2016 review of the Basic Standards. Therefore the Commission recognized that it is uncertain whether the Cold Tier I winter table value standards are necessary to protect the aquatic life use during the spring and fall "shoulder" seasons. Climax also presented information that shows a predicted compliance problem, and has submitted an adequate plan for eliminating the need for the temporary modification.

EXHIBIT 9
COTTONWOOD WATER AND SANITATION DISTRICT

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

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38.6 TABLES

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(4) Assessment Criteria

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(i) Cherry Creek Segment 4a: Selenium assessment.

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

- Upper Cottonwood Creek: All data from Sites CT-In, CT-E, CT-P1, and CT-P2.
  - CT-In – N39^0 33' 36.1" / W104^0 51' 42.1"W
    - Approximately 70 yards N of intersection with Inverness Dr. South
  - CT-E - N39^0 35' 04.2" / W104^0 51' 26.8"
    - Approximately 0.2 miles S of intersection with E Easter Ave.
  - CT-P1 - N39^0 36' 08.0" /W104^0 51' 20.0"
    - Approximately 100 yards N of intersection with Caley Ave.
  - CT-P2 - N39^0 36' 20.5"N / W104^0 50' 53.7"
    - At Peoria St.intersection
- Lower Cottonwood Creek: All data from Sites CT-1 and CT-2.

- CT-1 - N39^0 37' 27.9" / W104^0 50' 53.3"
  - Approximately 75 yards SE of intersection with Lake View Road in Cherry Creek State Park
- CT-2 - N39^0 37' 40.3" / W104^0 51' 00.9"
  - Approximately 75 yards SE of intersection with Cherry Creek Trail in Cherry Creek State Park

- Upper Lone Tree Creek: All data from Sites LTC-1 and LTC-2.
  - LTC-1 - N39^0 35' 03.7" / W104^0 50' 16.9”
    - Approximately 0.15 miles N of intersection with S. Revere Parkway
  - LTC-2 - N39^0 35' 48.7" / W104^0 50' 17.6"
    - Approximately 10 yards N of intersection with E. Peakview Ave.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **CHERRY CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
4. 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 specific listings in Segment 4a.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
4a. Cottonwood Creek, including all tributaries and wetlands, from the source to Cherry Creek Reservoir.	UP	Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Upper Cottonwood Creek Se(ac/ch)=TVS/13.0 Lower Cottonwood Creek Se (ac/ch)=TVS/4.7 Upper Lone Tree Creek Se (ac/ch)=39.7/36.3 Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Break between Upper and Lower Cottonwood Creek is at the confluence with Lone Tree Creek. Break between Upper and Lower Lone Tree Creek is at Caley Ave. See section 38.6(4)(i) for Se assessment locations. Temporary modification: Se (ac/ch)="current conditions" for Windmill Creek, Expiration: 6/30/2019.

COTTONWOOD WATER AND SANITATION DISTRICT
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

Cottonwood Creek, Cherry Creek Segment 4a: The Commission re-segmented Cherry Creek Segment 4 (All tributaries to Cherry Creek from the source of East and West Cherry Creek to the confluence with the South Platte River) to facilitate the adoption of site-specific ambient-based selenium standards for Cottonwood Creek and tributaries to Cottonwood Creek, including Lone Tree Creek. The Commission created new Cherry Creek Segment 4a, defined as Cottonwood Creek, including all tributaries and wetlands, from the source to Cherry Creek Reservoir, and adopted site-specific ambient-based selenium standards as follows: Upper Cottonwood Creek Se(ac/ch)= Upper Cottonwood Creek Se(ac/ch)=TVS/13.0; Lower Cottonwood Creek Se (ac/ch)=TVS/4.7; Upper Lone Tree Creek Se (ac/ch)=39.7/36.3. The Commission also specified assessment locations at Reg. 38.6(4)(i) in order to ensure that future assessment is consistent with the methods used to derive the standards. Other than the selenium standards, Segment 4a inherits the use classifications, antidegradation designation, and water quality standards from Segment 4 because the evidence was limited to selenium standards.

The evidence submitted by Cottonwood Water & Sanitation District ("CWSD") demonstrated that the portions of Cottonwood Creek and Lone Tree Creek located upstream of the streams' contact with the Cherry Creek alluvial aquifer have elevated selenium concentrations from natural sources that are not exacerbated by point source discharges or reversible anthropogenic factors. These portions of Cottonwood Creek and Lone Tree Creek cross areas of selenium-bearing shale and groundwater that comes into contact with the shale increases in selenium concentration, which in turn contributes selenium when the groundwater enters the streams.

CWSD and Arapahoe County Water & Wastewater Authority operate a permitted discharge to Windmill Creek for the Joint Water Purification Plant. Evidence submitted by CWSD demonstrated an existing water quality-based effluent limit compliance problem with the current selenium standards on Windmill Creek. CWSD has also demonstrated that there is significant uncertainty regarding the extent to which existing quality is the result of natural or irreversible human-induced conditions. The Commission has also reviewed the temporary modification implementation plan submitted by CWSD. Based on the existence of that plan, along with demonstrated compliance problems and uncertainty regarding the extent to which selenium concentrations in Windmill Creek are the result of natural or irreversible human-induced conditions, the Commission granted a "current conditions" temporary modification to the selenium standards for Windmill Creek with an expiration date of June 30, 2019.

EXHIBIT 10
DENVER WATER

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

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38.6 TABLES

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38.7 COMMISSION'S DETERMINATIONS 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.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
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.		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=100	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Zn(ac/ch)=TVS	Fish Ingestion Standards See section 38.7

DENVER WATER
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

Marston Forebay:

Section 25-8-101(19), C.R.S., and Rule 31.5(38) of Regulation 38 defines "State Waters" as excluding "all water withdrawn for use until use and treatment have been completed." The Commission finds and determines for the following reasons that water contained within Marston Forebay meets this exclusion. Marston is an off-channel forebay, fed through Denver Water's Conduit 20, which diverts water from the South Platte River, and Conduit 15, which diverts water from Bear Creek. Water withdrawn from these two man-made conveyances is held in Marston until treated at the adjacent Marston Water Treatment Plant and used within Denver Water's potable water distribution system. Marston Forebay is located on a topographical rise and therefore has no surface water influence, other than precipitation. In addition, there is no infiltration of groundwater into the Forebay, and the amount of infiltration from the Forebay to groundwater is de minimis and inconsistent. The Forebay is surrounded by four dams and a dike, and four operational toe-drain systems that capture and manage seepage from the Forebay. There is also no managed fishery at Marston Forebay, and public access to the Forebay is restricted.

EXHIBIT 11
CITY OF FORT COLLINS, CITY OF GREELEY, AND FRONT RANGE ENERGY

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **CACHE LA POUDRE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
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.		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=2.7 NO_3=100	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Nitrite as a 30 day average. Fish Ingestion Standards Temporary modifications: Se(ch)=7.1 µg/l (dis). (Type iii). Expiration date of 12/31/2015. T= current conditions. Expiration date of 12/31/2020.

CITY OF FORT COLLINS, CITY OF GREELEY, AND FRONT RANGE ENERGY PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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 City of Fort Collins, City of Greeley, and Front Range Energy all discharge water at various permitted discharge points located on, or immediately upstream of, Cache la Poudre River Segment 12. All three of these entities have demonstrated an existing or potential future compliance problem with existing winter temperature standards for Segment 12. In addition, these parties have shown that there is significant uncertainty regarding the appropriate temperature standards necessary to protect current uses on Segment 12.

The Commission has also reviewed the temporary modification implementation plan submitted by the City of Fort Collins, City of Greeley, and Front Range Energy. Based on the existence of that plan, along with current and predicted compliance problems and uncertainty regarding the temperature standards necessary to protect current uses, the Commission granted a “current conditions” temporary modification to temperature standards for Cache la Poudre Segment 12 to December 31, 2020.

EXHIBIT 12
CITY OF FORT COLLINS

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **CACHE LA POUDRE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
11. Mainstem of the Cache La Poudre River from Shields Street in Ft. Collins to a point immediately above the confluence with Boxelder Creek.		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=2.7 NO_3=100	As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Nitrite as a 30 day average. Fish Ingestion Standards Temporary Modifications: Se(ch)=5.4 µg/l (dis). (Type iii). Expiration date of 12/31/2015. T=current conditions, Expiration date of 12/31/2020.

CITY OF FORT COLLINS
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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 City of Fort Collins operates the Mulberry Water Reclamation Facility and Drake Water Reclamation Facility, both of which have permitted discharges located on Cache la Poudre Segment 11. Fort Collins has demonstrated existing or future compliance problems with Segment 11's winter temperature standards for both facilities. In addition, Fort Collins has shown that there is significant uncertainty regarding the appropriate winter temperature standards necessary to protect current uses on Segment 11.

The Commission has also reviewed the temporary modification implementation plan submitted by the City of Fort Collins. Based on the existence of that plan, along with current and predicted compliance problems and uncertainty regarding the winter temperature standards necessary to protect current uses, the Commission granted a "current conditions" temporary modification to the temperature standards for Cache la Poudre Segment 11 to December 31, 2020.

EXHIBIT 13
COLORADO HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION

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

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38.6 TABLES

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(4) Assessment Criteria

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(i) Clear Creek Segment 2a: Cadmium and Zinc Assessment Locations

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

- Below Silver Plume: Upstream of the confluence with South Fork Clear Creek, near the Georgetown Loop Railroad Park on Loop Drive (39.7007,-105.7067)

- At Georgetown Reservoir: Upstream from the inlet of Georgetown Reservoir (39.7192,-105.6939)

(j) Clear Creek Segment 2c: Cadmium, Copper and Zinc Assessment Locations

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

- Below Spring Gulch: Mainstem of Clear Creek below the confluence with Spring Gulch

- Above Chicago Creek: Mainstem of Clear Creek immediately upstream from the confluence with Chicago Creek near exit 240 of I-70

(k) Clear Creek Segment 5: Copper Assessment Location

Determination of attainment of the acute standard for copper will be based on the 95th percentile. The assessment location is at the mouth of the West Fork of Clear Creek.

(l) Clear Creek Segment 9a: Copper Assessment Location

Determination of attainment of the chronic and acute standards for copper will be based on the 85th and 95th percentile, respectively. The assessment location is at the mouth of Fall River.

(m) Clear Creek Segment 9b: Cadmium, Copper, Manganese and Zinc Assessment Locations

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

- Trail Creek: Mainstem of Trail Creek near the mouth

- Trail Run: Trail Run near the confluence with Trail Creek

(n) Clear Creek Segment 9c: Cadmium, Copper, Iron, Manganese, Nickel and Zinc Assessment Location

Determination of attainment of the chronic and acute standards for cadmium, copper, iron, manganese, nickel and zinc will be based on the 85th and 95th percentile, respectively. The assessment location is at the mouth of Turkey Gulch.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
2a. Mainstem of Clear Creek, including all tributaries and wetlands, from the I-70 bridge above Silver Plume to a point just above Georgetown Reservoir ~~above the confluence with West Fork Clear Creek,~~ except for specific listings in Segments 3a and 3b.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 SO_4=WS Cl=250	As(ac)=340 As(ch)=0.02(Trec) ~~Cd(ac)=TVS(tr)~~ ~~Cd(ch)=TVS~~ CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Below Silverplume*: Cd(ac)=2.3 Cd ch)= 2.2 At Georgetown Reservoir*: Cd(ac)=TVS(tr) Cd (ch)= 1.1	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch) = TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) ~~Zn(ac)= 0.978e$^{(0.8537[ln(hardness)]+1.9467)}$~~ ~~Zn(ch)= 0.986e$^{(0.8537[ln(hardness)]+1.8032)}$~~ Below Silverplume*: Zn(ac)=555 Zn(ch)= 490 At Georgetown Reservoir*: Zn(ac)=301 Zn(ch)= 295	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	~~Temporary modifications:~~ ~~Zn(ch)=353 µg/l (dis),~~ ~~Zn(ac)=586 µg/l (dis),~~ ~~(Type i)~~ ~~Expiration date of 7/01/2020~~ ~~Cd(ch)=1.54(dis)~~ ~~(type iii)~~ ~~Expiration date of 7/01/2015.~~ ~~Temporary modification:~~ ~~As(ch)=hybrid~~ ~~Expiration date of 12/31/21.~~ *See assessment locations at 38.6(4)
2b. Mainstem of Clear Creek, including all tributaries and wetlands, from a point just below Georgetown Reservoir ~~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.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 SO_4=WS Cl=250	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch) = TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Zn(ac)= 0.978e$^{(0.8537[ln(hardness)]+1.9467)}$ Zn(ch)= 0.986e$^{(0.8537[ln(hardness)]+1.8032)}$	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) ~~Zn(ac)=TVS~~ ~~Zn(ch)=TVS~~	Temporary modifications: Zn(ch)=353 µg/l (dis), Zn(ac)=586 µg/l (dis), (Type i) Expiration date of 7/01/2020 Cd(ch)=1.54(dis) (type iii) Expiration date of 7/01/2015. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
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 (39.7422, -105.5069), except for specific listings in Segments 9a, 9b, 9c and 10.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 SO_4=WS Cl=250	As(ac)=340 As(ch)=0.02(Trec) ~~Cd(ac)=TVS (tr)~~ ~~Cd(ch)=TVS~~ CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS ~~Cu(ac/ch)=TVS~~ Below Spring Gulch* Cd(ac)=TVS(tr) Cd(ch)=0.46 Cu(ac)=TVS Cu(ch)=TVS Above Chicago Creek* Cd(ac)=0.80 Cd(ch)=0.67 Cu(ac)=10.1 Cu(ch)=9.0	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch) = TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Below Spring Gulch* Zn(ac)= 0.978e$^{(0.8537[ln(hardness)]+1.9467)}$ Zn(ch)= 0.986e$^{(0.8537[ln(hardness)]+1.8032)}$ Above Chicago Creek* Zn(ac)=280 Zn(ch)=233	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	Temporary modifications: Cu(ch)=11.4 µg/l (dis), (Type iii) Expiration date of 7/01/2020. *See assessment locations at 38.6(4) Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
5. Mainstem of West Clear Creek from the confluence with Woods Creek to the confluence with Clear Creek.		Aq Life Cold 1 Recreation E Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05	As(ac)=340 As(ch)=7.6(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac)=6.1* Cu(~~ac~~/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS Zn(ac)=$e^{(0.8404[\ln(\text{hardness})]+1.8810)}$ Zn(ch)=$e^{(08404[\ln(\text{hardness})]+1.5127)}$	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	*See assessment locations at 38.6(4)
6a. All tributaries to West Clear Creek, including all wetlands, from the source to the confluence with Clear Creek, except for specific listings in Segments 6b, 7 and 8.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
6b. Mainstem of Mad Creek, including all tributaries and wetlands, from the source to the confluence with Clear Creek.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac)= 2.4 Cu(ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
9a. Mainstem of the Fall River, including all tributaries and wetlands, from the source to the confluence with Clear Creek.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS ~~Cu(ac/ch)=TVS~~ Cu(ac)=17.3* Cu(ch)=6.7*	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	~~Temporary modification: Cu(ch)=9.6 µg/l (dis), (type iii) Expiration date of 7/01/2015.~~ *See assessment locations at 38.6(4)
9b. Mainstem of Trail Creek, including all tributaries and wetlands from the source to the confluence with Clear Creek.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 SO_4=WS NO_3=10 Cl=250	As(ac)=340 As(ch)=0.02(Trec) ~~Cd(ac)=TVS(tr)~~ ~~Cd(ch)=TVS~~ CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS ~~Cu(ac/ch)=TVS~~ Trail Creek* Cd(ac)=5.1 Cd(ch)=4.1 Cu(ac)=103 Cu(ac)=80 Trail Run* Cd(ac)=14.5 Cd(ch)= 11.4 Cu(ac)=698 Cu(ch)=518	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS ~~Mn(ac/ch) = TVS~~ ~~Mn(ch)=WS(dis)~~ Hg(ch)=0.01(Tot) Trail Creek* Mn(ac)=900 Mn(ch)=618 Trail Run* Mn(ac)=2865 Mn(ch)=2201	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) ~~Zn(ac)=TVS~~ ~~Zn(ch)=200~~ Trail Creek* Zn(ac)=1047 Zn(ch)=898 Trail Run* Zn(ac)=2025 Zn(ch)=1532	*See assessment locations at 38.6(4)

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
9c. Turkey Gulch, including all tributatires and wetlands from the source to the confluence with Clear Creek	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Agriculture	T=TVS (CS-I)ºC D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10	As(ac)=340 As(ch)=100(Trec) Cd(ac)=16.3* Cd(ch)=15.6* CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac)=1374* Cu(ch)=1342*	Fe(ch)=6935(Trec)* Pb(ac/ch)=TVS Mn(ac)=12590* Mn(ch)=12175* Hg(ch)=0.01(Tot)	Ni(ac)=382* Ni(ch)=372* Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac)=3671* Zn(ch)=3524*	*See assessment locations at 38.6(4)
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.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac~~/ch~~)=~~TVS~~ 5.0 Cu(~~ac~~/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.
11a. Mainstem of Clear Creek from a point just above the Argo Tunnel discharge ~~to the Farmers Highline Canal diversion in Golden, Colorado.~~ a point just above the confluence with North Fork Clear Creek.	UP	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac/~~ch~~)=TVS(tr) Cd(ch)=0.76	CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac)=11.5 Cu(ch)=~~17~~ 9.6 Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=253 ~~Mn(ch)=WS(dis)~~ Hg(ch)=0.01(Tot) Zn(ac)= $0.978e^{(0.8537[\ln(\text{hardness})]+1.9467)}$ Zn(ch)= $0.986e^{(0.8537[\ln(\text{hardness})]+1.8032)}$	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	~~Temporary modification: Cd(ch)=1.42 µg/l (dis), (type iii) Expiration date of 7/01/2015~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
11b. Mainstem of Clear Creek from a point just above the confluence with North Fork Clear Creek to the Farmers Highline Canal diversion in Golden, Colorado.	UP	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac)=TVS Cu(ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Zn(ac)= $0.978e^{(0.8537[\ln(\text{hardness})]+1.9467)}$ Zn(ch)= $0.986e^{(0.8537[\ln(\text{hardness})]+1.8032)}$	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	As(ch)=hybrid Expiration date of 12/31/21
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, 12c, 13a and 13b.	9/30/00 Baseline does not apply	Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CS-II) ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
12b. Unnamed tributary to Clear Creek below Idaho Springs (39.74365,-105.4871).	9/30/00 Baseline does not apply	Aq Life Cold 2 Recreation E Agriculture	T=TVS(CS-II) ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10	As(ac)=340 As(ch)=100(Trec) Cd(ac)=TVS(tr) Cd(ch)=0.76 CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac)=TVS Cu(ch)=10	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=244 Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac)=188 Zn(ch)=177	

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
12c. Gilson Gulch including all tributaries and wetlands from the source to the confluence with Clear Creek	9/30/00 Baseline does not apply	Aq Life Cold 2 Recreation E Agriculture	T=TVS(CS-II) ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10	As(ac)=340 As(ch)=100(Trec) Cd(ac)=377 Cd(ch)=329 CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac)=2434 Cu(ch)=2392	Fe(ch)=3680(Trec) Pb(ac)=126 Pb(ch)=105 Mn(ac)=290000 Mn(ch)=279500 Hg(ch)=0.01(Tot)	Ni(ac)=527 Ni(ch)=484 Se(ac)=13.4 Se(ch)=13.0 Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac)=91860 Zn(ch)=87140	

COLORADO HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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 Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division (HMWMD), along with the U.S. Environmental Protection Agency, Superfund Program (EPA), provided testimony regarding the completion of the remediation efforts implemented at the Central City/Clear Creek Superfund Site. Historic mining activities along a mineralized zone in the Clear Creek Watershed have resulted in heavy metals contamination, profoundly impacting aquatic life and water quality. The Superfund Program assessed the location and impact of mining-related sources within the watershed and remediated the sources that most significantly impacted water quality. These remediation efforts have occurred over the past 30 years and have resulted in significant improvements in water quality. However, as has been the case with other mine-impacted sites within the State, the attainment of table value standards for certain metals in many locations is not feasible. In these segments, HMWMD and EPA proposed to the Commission ambient-based site-specific standards, as detailed below. Nearly all remedial actions specified in the Site Records of Decision have been implemented, and no further remediation under Superfund will occur along mainstem Clear Creek or its tributaries, with the exception of North Clear Creek. The only actions left to be completed are the construction and operation of a water treatment plant in North Clear Creek, on Segment 13b, and installation of a blow-out prevention bulk-head in the Argo Tunnel. No changes to the standards were proposed for Segment 13b and the remaining Argo work is not expected to impact water quality standards or standards attainment.

Segment 2a: The lower boundary of segment 2a was moved upstream to a point just above Georgetown Reservoir. The Commission adopted ambient-based standards for cadmium and zinc. The temporary modifications were deleted from Segment 2a.

Segment 2b: The upper boundary of segment 2b was moved upstream to a point just below Georgetown Reservoir. The Commission adopted the site-specific criteria based zinc standard, previously applied to Segments 2a and 2c. The temporary modifications from Segment 2a were moved to Segment 2b.

Segment 2c: The segment description was revised to include coordinates for the Argo Tunnel. Turkey Gulch was removed from Segment 2c and moved to a new segment 9c. The Commission adopted ambient-based standards for cadmium, copper and zinc.

Segment 5: The Commission adopted ambient-based standards for acute copper.

Segment 6a: Mad Creek was moved from this segment to a new Segment 6b.

Segment 6b: The Commission adopted ambient-based standards for acute copper.

Segment 9a: No mining-related sources were identified in the Fall River basin; data indicate naturally occurring sources of metals cause concentrations to exceed the TVS in this segment. Ambient-based standards were adopted for copper.

Segment 9b: Ambient-based standards were adopted for cadmium, copper, manganese and zinc.

Segment 9c: This new segment was created for Turkey Gulch, which was moved from Segment 2c, due to its significantly different water quality. The Commission adopted ambient-based standards for cadmium, copper, iron, manganese, nickel and zinc. The Commission also removed the temporary modifications for copper and arsenic from Turkey Gulch since there are no dischargers. The water supply use was removed from Turkey Gulch based upon evidence that water from this segment is not used for potable water supply.

Segment 10: The Commission adopted ambient-based standards for acute copper.

Segment 11a: The new Segment 11a includes the portion of the mainstem of Clear Creek that is below the Argo Tunnel and above the North Fork of Clear Creek. Segment 11 was subdivided to facilitate the adoption of ambient standards in the area where remediation has been completed and to recognize the water quality improvements that result from the treatment at the Argo Water Treatment Facility. The Commission adopted ambient-based water quality standards for cadmium, copper and manganese.

Segment 11b: The new segment 11b includes the mainstem of Clear Creek below North Clear Creek. No changes were made to the standards in this segment. Since the proposed water treatment plant on North Clear Creek has yet to be constructed, the degree to which water quality impacts are irreversible remains uncertain.

Segment 12a: Segment 12 was divided into Segments 12a, 12b and 12c. Tributaries where table values standards are thought to be attainable remain in Segment 12a.

Segment 12b: The unnamed tributary to Clear Creek downstream from Idaho Springs (39.74365,-105.4871) was moved from Segment 12 to this new segment and the Commission adopted ambient-based standards for cadmium, copper, manganese and zinc. The water supply use was removed from this unnamed tributary based upon evidence that water from this segment is not used for potable water supply.

Segment 12c: Gilson Gulch was moved from Segment 12 to this new segment and the Commission adopted ambient-based standards for cadmium, copper, iron, lead, manganese, nickel, selenium and zinc. The water supply use was removed from Gilson Gulch based upon evidence that water from this segment is not used for potable water supply.

EXHIBIT 14
LITTLETON / ENGLEWOOD WWTP

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
14. Mainstem of the South Platte River from the outlet of Chatfield Reservoir to the Burlington Ditch diversion in Denver, Colorado.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-I) ^{o}C ~~summer=14 Feb-Nov~~ Mar-Nov = TVS(WS-I) Dec and Feb = 15.7 (ch), 18.8 (ac) Jan = TVS(WS-I) D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 $S0_4$=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Fe(ch)=WS(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=190(dis) Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modifications: Cu(ac/ch)=TVSx2.7 (Type iii). Applies below the confluence with Marcy Gulch. Expiration date of 12/31/2015. ~~T=current conditions (Type iii). Expiration date of 12/31/2015.~~ Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

LITTLETON / ENGLEWOOD WWTP
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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 adopted a site-specific temperature standard for instream water temperature for Segment 14 of the Upper South Platte River proposed by Littleton/Englewood WWTP. The Littleton/Englewood WWTP, in cooperation with other members of the South Platte Coalition for Urban River Evaluation (SPCURE) compiled temperature and biological monitoring data used to evaluate the existing physical and biological conditions of the South Platte River in the context of establishing an appropriate site-specific temperature standard for Segment 14. In-river temperature was continuously monitored at 5- to 15-minute time increments at four stations near the plant since January 2005. Additional 30-minute temperature and flow data beginning in 1986 for the USGS gauging station 06711565 located 0.25 miles upstream of the facility were also considered. The instream daily maximum (DM) temperature and weekly average temperature (WAT) measured 0.25 miles downstream of the Littleton/Englewood WWTP effluent discharge exceeded the current Warm-stream Tier I (WS-I) acute and chronic table value standards on multiple dates in early December 2012, during the period of temporary modification. Additionally, downstream temperatures approached the temperature standards at the March “shoulder” transition from winter to summer. These observed and near exceedances are a function of the abrupt 50% change in the current temperature table values at March 1 and November 30, as presented in Regulation 31, and are not caused by any sudden or atypical increase in in-stream temperature related to wastewater discharges.

Accordingly, the site-specific standard adopts the current Regulation 31 chronic (24.2°C) and acute (29°C) temperature table value standards for WS-I fish species (Johnny darter, orangethroat darter, and common shiner) for the regulatory summer season months of March through November. The site-specific standard adopts the Regulation 31 chronic (12.1°C) and acute (14.5°C) standard for the core winter month of January. For the shoulder months of December and February, the site-specific standard adopts new chronic and acute standards of 15.7°C and 18.8°C, respectively. The shoulder month standards are based on observed temperature patterns in the South Platte River Segment 14 and other warm-water streams in the South Platte Basin where Johnny darter and common shiner have been observed. The shoulder month standards are approximately 65% of the summer standards. By establishing intermediate standards for the shoulder months, the site-specific temperature standards better represent the timing and pattern of observed seasonal temperatures and take into account the natural fluctuation in temperature and weather from year to year. This analysis took into consideration fish spawning temperature requirements. The Commission finds that the proposed site-specific standard is protective of the expected community in Segment 14 of the South Platte River.

EXHIBIT 15
METRO WASTEWATER RECLAMATION DISTRICT

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
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.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-I) °C D.O.* pH = 6.5-9.0** E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=1.0 NO_3=10 Cl=250 $S0_4$=WS	As(ac)=340 As(ch)=0.02-10(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS ~~Cu(ac/ch)=TVS~~ Cu(ac/ch)=35.1/22.8 Fe(ch)=WS(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=400(dis) Mn(ac/ch)=TVS Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*See attached table for site-specific Dissolved Oxygen and Ammonia standards. **pH=6.0-9.0 from 64th Ave. downstream 2 miles. Temporary modifications: NH_3(ac)=TVS(old); NH_3(ch)=0.10 mg/l (Type i). Expiration date of 12/31/2014. ~~Cu(ac/ch)=TVSx2.3 (Type iii). Expiration date of 12/31/2015.~~ ~~T=current conditions (Type iii). Expiration date of 12/31/2015.~~ Discharger Specific Variance(1). Temperature: December – February (ac) = TVS:23.4 Temperature: December – February (ch) = TVS:23.2 Expiration date: 12/31/2027.

(1) Discharger-Specific Variance, Metro Wastewater Reclamation District, Robert W. Hite Treatment Facility (CDPS # CO-0026638): The first number 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 Metro Wastewater Reclamation District's Robert W. Hite Treatment Facility. 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.

REGION: 3 AND 4 BASIN: **MIDDLE SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
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.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.* pH = 6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 $S0_4$=WS	As(ac)=340 As(ch)=0.02-10(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS ~~Cu(ac/ch)=TVSx2,2~~ Cu(ac/ch)=35.1/22.8 Fe(ch)=WS(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS MN(ch)=WS(dis) Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*See attached table for site-specific Dissolved Oxygen and Ammonia standards. Temporary modifications: Se(ch)=6.9ug/l(dis). (Type iii). Expiration Date of 12/31/2015 NH_3(ac)=TVS(old); NH_3(ch)=0.10 mg/l (Type i). Expiration date of 12/31/2014.

METRO WASTEWATER RECLAMATION DISTRICT
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

Copper

In 2009 the Commission reviewed the basis for pre-existing Water Effects Ratio-based site-specific copper standards and determined that this approach may not be the most appropriate method to use to set site-specific standards for copper. At that time the Commission adopted a Type iii temporary modification (set at the WER values) for Upper South Platte Segment 15. The previously adopted WER-based copper standards remained in effect for Middle South Platte Segment 1a.

In this hearing, the Commission adopted Biotic Ligand Model Fixed-Monitoring Benchmark-based site-specific copper standards for Upper South Platte Segment 15 and Middle South Platte Segment 1a. These site-specific standards were based on an extensive evaluation of monitoring data collected at ten different locations over multiple years throughout the two segments. The Commission determined that the uncertainty regarding the appropriate underlying standards to protect aquatic life was resolved through the BLM-FMB approach. The site-specific copper standards adopted for both segments were an acute value of 35.1 µg per L and a chronic value of 22.8 µg per L.

Temperature

In 2010, the Commission adopted the discharger-specific variance provisions at Regulation 31.7(4), which allow a temporary water quality standard to be adopted in cases where water quality-based effluent limits are not feasible to achieve. A DSV is a hybrid standard that maintains the long-term water quality goal of fully protecting all classified uses, while temporarily authorizing an alternative effluent limitation (AEL) to be developed for a specific pollutant and specific point source discharge where compliance with water quality-based effluent limit (WQBEL) is not feasible.

The Commission adopted a DSV for Upper South Platte Segment 15 for wintertime acute and chronic temperature that represents the highest degree of protection of the classified uses that is feasible for the Metro Wastewater Reclamation District's Robert W. Hite Treatment Facility (RWHTF).

Acute (daily maximum) and chronic (maximum weekly average) temperature AELs (including appropriate safety factors) were developed for wintertime (December – February) that will maintain current effluent temperature conditions such that existing conditions are not degraded. Data and information submitted by the Metro District demonstrated that temperature is not a limiting factor for aquatic life in Segment 15. Summertime temperature standards (March – November) will be implemented in the RWHTF discharge permit as water quality-based effluent limitations as the District did not seek any modifications to the summertime temperature standards for Segment 15.

During the next discharge permit renewal for the RWHTF, the Metro District shall construct in-stream structures to improve mixing of Sand Creek and Clear Creek flows with the South Platte River downstream of the RWHTF. The Commission determined that supporting information submitted by the Metro District for the selected DSV alternative showed that in-stream structures could improve

downstream wintertime temperature by approximately 3 to 4 °C. In addition, these structures would provide more diverse habitat for resident fish and macroinvertebrate populations.

The Metro District agreed to complete ongoing fish thermal tolerance studies at the University of Wyoming and provide completed project data and information to the Water Quality Control Division in 2016.

In the next RWHTF permit renewal, the Metro District also agreed to evaluate heat recovery technologies by participating in a national study sponsored by the Water Environment Research Foundation, *State of the Science and Issues Related to Heat Recovery from Wastewater*, Project ENER10C13, and submit a report to the Division within the next RWHTF permit renewal.

To support continual improvement, the District will continue to investigate additional heat mitigation alternatives as part of its Integrated Planning efforts in the 2021 to 2025 permit timeframe, including the following: heat recovery in the RWHTF interceptor system, flow augmentation, geothermal loop, multiple port diffusers, and heat recovery at the RWHTF.

The Commission agreed with the Metro District that the treatment alternatives that involved evaporative technologies would decrease in-stream flow downstream of the RWHTF and would be inconsistent with previous agreements among the Metro District, Division, EPA and Parks and Wildlife that flow is a critical habitat element for aquatic life. Accordingly, evaporative technologies were determined to be infeasible for this site-specific situation.

The Commission selected a DSV expiration date of December 31, 2027.

EXHIBIT 16
MILLERCOORS LLC

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **CLEAR CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
11a. Mainstem of Clear Creek from a point just above the Argo Tunnel discharge to the ~~Farmers Highline Canal diversion~~Ford Street Bridge in Golden, Colorado.	UP	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS (CS-I)ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ch)=17	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Zn(ac)= $0.978e^{(0.8537[\ln(\text{hardness})]+1.9467)}$ Zn(ch)= $0.986e^{(0.8537[\ln(\text{hardness})]+1.8032)}$	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	Temporary modification: Cd(ch)=1.42 µg/l (dis), (type iii) Expiration date of 7/01/2015. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
11b. Mainstem of Clear Creek from the Ford Street Bridge in Golden, Colorado to the Farmers Highline Canal diversion in Golden, Colorado.	UP	Aq Life Cold 1 Recreation E Water Supply Agriculture	Apr.-Oct. $T_{(DM)}$= 28.4 $T_{(MWAT)}$=22.8ºC Nov.-Mar. $T_{(DM)}$=22.2ºC $T_{(MWAT)}$=18.4ºC D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ch)=17	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Zn(ac)= $0.978e^{(0.8537[\ln(\text{hardness})]+1.9467)}$ Zn(ch)= $0.986e^{(0.8537[\ln(\text{hardness})]+1.8032)}$	Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	Temporary modification: Cd(ch)=1.42 µg/l (dis), (type iii) Expiration date of 7/01/2015. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21
14a. Mainstem of Clear Creek from the Farmers Highline Canal diversion in Golden, Colorado to the ~~Denver Water conduit #16 crossing~~Croke Canal diversion.	UP	Aq Life Cold 2 Recreation N Water Supply Agriculture	~~T=TVS (WS-II)~~ Apr.-Oct. $T_{(DM)}$=31.0 ºC[1] $T_{(MWAT)}$=27.1 ºC[1] Nov.-Mar No temperature stds. D.O.= 5.0 mg/l pH = 6.5-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)=244 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSx 1.57*	Temporary modifications: Cu(ac/ch)=TVSx3.66*, ~~T=current condition (type iii)~~ Expiration date of 12/31/2015. Seasonal qualifier: Effluent dependent Nov-Mar.
14b. Mainstem of Clear Creek from the Croke Canal diversion to the Denver Water conduit #16 crossing.	UP	Aq Life Warm 2 Recreation N Water Supply Agriculture	Apr.-Oct. $T_{(DM)}$=29.8ºC[1] $T_{(MWAT)}$=WS-II Nov.-Mar No temperature stds. D.O.= 5.0 mg/l pH = 6.5-9.0 E.Coli=630/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)=244 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSx 1.57*	Temporary modifications: Cu(ac/ch)=TVSx3.66*, Expiration date of 12/31/2015. Seasonal qualifier: Effluent dependent Nov-Mar.
14~~b~~c. Mainstem of Clear Creek from the Denver Water conduit #16 crossing to a point just below Youngfield Street in Wheat Ridge, Colorado.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	~~T=TVS (WS-II)~~ Apr.-Oct. $T_{(DM)}$=28.8 ºC[1] $T_{(MWAT)}$= WS-II[1] Nov.-Mar No temperature stds D.O.= 5.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)=244 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSx 1.57*	Temporary modifications: Cu(ac/ch)=TVSx3.66*, ~~T=current condition (type iii)~~ Expiration date of 12/31/2015. Seasonal qualifier: Effluent dependent Nov-Mar.

15. Mainstem of Clear Creek from Youngfield Street in Wheat Ridge, Colorado, to the confluence with the South Platte River.		Aq Life Warm 1 Recreation E Water Supply Agriculture	~~T=TVS(WS-II)~~ Mar.-Nov. $T_{(DM)}$=29.7ºC[1] $T_{(MWAT)}$= WS-II Dec.-Feb. $T_{(DM)}$=19.4ºC[1] $T_{(MWAT)}$= 14.8ºC[1] D.O.=5.0 mg/l pH = 6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Trec)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSx 1.57*	Aquatic life warm 1 goal qualifier. Temporary Modifications: Cu(ac/ch)=TVSx3.66*, ~~T=current condition (Type iii)~~ Expiration date of 12/31/2015. Temporary modification: As(ch)=hybrid Expiration date of 12/31/21.

1. Ambient water temperature may cool rapidly during high flow events, and may warm rapidly when high flow events end.

MILLERCOORS LLC
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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 resegmented Clear Creek segments 11, 14a, and 14b, and adopted site-specific temperature standards for newly-defined Clear Creek segments 11b, 14a, 14b, 14c, and existing Segment 15. The revised segments were adopted based on temperatures, the aquatic life use, and the recreational use for these portions of Clear Creek.

Based on several years of biological data submitted by MillerCoors, cold water species (specifically brown trout and longnose sucker) are abundant and in good condition from the Ford Street Bridge to the Croke Canal diversion structure. Downstream of the Croke Canal diversion structure, where Clear Creek is frequently dry, some warm water species are found. Warm water fish species then become more abundant downstream of MillerCoors Outfall 001, which is downstream of McIntyre Street. Several years of temperature data indicated that the cold tier-II table value standards are not attained between the Farmer's Highline Canal diversion and the Croke Canal diversion structure, and that the warm tier-ii daily maximum table value standard is not attained downstream of the Croke Canal. Also, the warm-water winter table value standards are not attained downstream of MillerCoors Outfall 001.

The portion of Clear Creek from the Ford Street Bridge to downstream of the Croke Canal diversion structure is close to the location where the creek exits the Clear Creek canyon. It is highly managed by water diversions from multiple major ditches, including the Agricultural Ditch, Farmers Highline Canal, and Croke Canal. These ditches divert large amounts of water for storage, including storage in Standley Lake. As a result, there is frequently no flow in portions of Clear Creek, particularly in winter when diversions to storage are occurring. The Commission found that Clear Creek is effluent-dependent from November through April downstream of the Farmer's Highline Canal diversion to just below Youngfield Street. Poor habitat throughout this reach, including straight, concrete-lined channels without refuges, limits the aquatic life. Finally, the diversion structures and extended dry periods also create physical barriers to fish movement.

The Commission considered the highly managed flow regime in Clear Creek, the aquatic life data, and temperature data, and adopted site-specific temperature standards based on Regulation 31.7(1)(b)(iii), which states that site-specific standards may be adopted pursuant to a use attainability analysis "or in accordance with comparable procedures deemed acceptable by the Commission." MillerCoors submitted evidence demonstrating an absence of prior appreciable harm to aquatic life from the thermal characteristics of its cooling water, domestic, and industrial discharges. The evidence at the hearing demonstrated that the current MillerCoors effluent temperatures and in-stream temperatures assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on Clear Creek. The evidence also demonstrated that it would not be feasible to meet the table value standards. Based on this evidence, the Commission concluded that the current effluent and in-stream temperature conditions are sufficient to protect the designated aquatic life use in Clear Creek segments 11b, 14a, 14b, 14c, and 15, and adopted site-specific temperature standards that are intended to maintain the current effluent and stream temperature conditions.

The Commission also adopted a modification to the narrative standard for temperature in segments 14a, 14b, 14c, and 15, in recognition of the fact that high flow events during spring and early summer runoff from snowmelt may cause rapid cooling of in-stream temperatures when the flow is significantly higher than the capacity of ditch diversions.

As a result of its adoption of revised temperature standards, the Commission deleted the temporary modifications to the temperature standards.

EXHIBIT 17
TOWN OF MILLIKEN

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **BIG THOMPSON RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
9. Mainstem of the Little Thompson River from the Culver Ditch diversion to the confluence with the Big Thompson River.		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modifications: Se(ch)=~~13.1 µg/l (dis).~~ current conditions (Type iii). ~~Expiration date of 12/31/2015.~~ Sulfide (ch) = current conditions EC (narrative standard) = current conditions SAR (narrative standard) = current conditions TDS (narrative standard) = current conditions Expiration date of 12/31/2020.

TOWN OF MILLIKEN
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

Selenium:

The Commission considered proposed revisions to the temporary modification for selenium for the Big Thompson River, Segment 9. The temporary modification for selenium was extended until December 31, 2020, and was changed from a numeric value of 13.1 µg/L to current conditions.

The segment is currently included on the State's 303(d) List for selenium, with a "low" priority designation and evidence submitted by the Town of Milliken identifies that the stream is not currently in attainment of the underlying chronic standard for selenium.

Milliken's reverse osmosis drinking water facility has a demonstrated water-quality-based effluent limit compliance problem for selenium.

The Commission found that there is continued uncertainty regarding the water quality standard necessary to protect the aquatic life beneficial use for the segment. The temporary modification expiration date provides additional time for EPA to finalize new aquatic life freshwater selenium criteria, which are now in draft form. There is also uncertainty regarding the extent to which selenium concentrations in Segment 9 are the result of natural or irreversible anthropogenic impacts.

During the effective period of this temporary modification, selenium limits for existing dischargers to Segment 9 will be authorized to continue based on past facility performance (existing effluent quality) unless a more stringent limitation is reasonably achievable without requiring significant investment in facility infrastructure, consistent with Regulation No. 31.14(16). The Town of Milliken has begun to evaluate alternatives for providing high quality water to its residents while limiting its contribution of selenium to the Little Thompson River. The extension of the selenium temporary modification will provide time for Milliken to complete its evaluation of alternatives, and coincides with the expected date of the next South Platte Basin Rulemaking Hearing. The temporary modification will be reviewed in December of 2018 and 2019.

Sulfide, EC, SAR, TDS

The Commission adopted a new temporary modification for the Big Thompson River, Segment 9, for sulfide, electrical conductivity (EC), sodium adsorption ratio (SAR), and total dissolved solids (TDS), expiring December 31, 2020. The Town of Milliken has provided evidence that it has a predicted compliance problem at its reverse osmosis water treatment facility for these parameters, due to the concentrating effect of the treatment process. It is noted that limits for EC, SAR and TDS are based on compliance with a narrative standard for the protection of agriculture, which is implemented via the Water Quality Control Division Policy WQP-24, "Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops". The temporary modification will allow dischargers to the segment to determine whether feasibile treatment options exist and determine whether a discharger specific variance may be needed. Milliken will include an evaluation of these parameters in its evaluation of options for its

selenium compliance problem. During the effective period of this temporary modification, sulfide, EC, SAR, and TDS limits for existing dischargers to Segment 9 will be authorized to continue based on past facility performance (existing effluent quality) unless a more stringent limitation is reasonably achievable without requiring significant investment in facility infrastructure, consistent with Regulation No. 31.14(16).

EXHIBIT 18
PARKER WATER AND SANITATION DISTRICT

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **CHERRY CREEK** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
1. Mainstem of Cherry Creek from the source of East and West Cherry Creek to the inlet of Cherry Creek Reservoir.		Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02-10(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Fe(ch)=WS(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modification Cu (ac/ch) = current condition on mainstem of Cherry Creek downstream of PWSD discharge to Cherry Creek Reservoir (Type A). Expiration date of xx/xx/20//.

PARKER WATER AND SANITATION DISTRICT
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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 considered Parker Water & Sanitation District's (PWSD) proposal for a "Current Conditions" temporary modification for copper to Segment 1 of the Cherry Creek basin. PWSD presented information that shows permit compliance issues with the existing copper limit. PWSD has collected copper data and other related data necessary to derive copper standards using the Biotic Ligand Model (BLM) which will better characterize the copper levels necessary to protect current uses. As suggested by the Division, PWSD will collect and evaluate additional data during the temporary modification. The Commission found that there was significant uncertainty regarding the water quality standards necessary to protect current and/or future uses.

The Commission reviewed the temporary modification implementation plan submitted by PWSD. Based on the existence of that plan, along with the existing compliance problems and uncertainty regarding the copper standards necessary to protect uses, the Commission adopted a "Current Conditions" temporary modification to the copper standard in Cherry Creek Segment 1 with an expiration date of xx/xx/20xx.

EXHIBIT 19
PLUM CREEK WATER RECLAMATION AUTHORITY

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
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.		Aq Life Warm 1 Recreation E Water Supply Agriculture	T=TVS(WS-I) ^{o}C D.O.= 5.0 mg/l pH = 6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=10 Cl=250 $S0_4$=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis)	Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Cu (ac/ch) = current conditions on East Plum Creek and Plum Creek below the Plum Creek Wastewater Authority Discharge. (Type iii). Expiration date of 12/31/2018. Temporary modifications: T= "Current Conditions" on East Plum Creek and Plum Creek. Expiration date 6/30/2019. Mn(ch) WS = "Current Conditions". Expiration date 6/30/2019. As(ch)=hybrid Expiration date of 12/31/21.

PLUM CREEK WATER RECLAMATION AUTHORITY
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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 Plum Creek Water Reclamation Authority ("PCWRA") discharges to East Plum Creek in Upper South Platte River Segment 10a. PCWRA demonstrated an existing or predicted water compliance problem with the existing warm tier I temperature standards and Mn(ch) WS standards for Segment 10a. In addition, PCWRA has shown that there is significant uncertainty regarding the appropriate temperature and Mn(ch) WS standards necessary to protect current uses on Segment 10a and that there is significant uncertainty regarding the extent to which existing quality is the result of natural or irreversible human induced conditions.

The Commission has reviewed the temporary modification implementation plan submitted by PCWRA. Based on the existence of that plan, along with existing or predicted compliance problems and uncertainty regarding the temperature and manganese water supply standards necessary to protect current uses, and uncertainty regarding the extent to which existing quality is the result of natural or irreversible human induced conditions, the Commission adopted"current conditions" temporary modifications to the temperature and Mn(ch) WS standards for Upper South Platte River Segment 10a with an expiration date of 6/30/2019.

EXHIBIT 20
PUBLIC SERVICE COMPANY OF COLORADO

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
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.	UP	Aq Life Warm 2 Recreation E Water Supply Agriculture	T=TVS(WS-I) ^{o}C D.O.* pH = 6.5-9.0** E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=1.0 NO_3=10 Cl=250 $S0_4$=WS	As(ac)=340 As(ch)=0.02-10(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Fe(ch)=WS(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=400(dis) Mn(ac/ch)=TVS Hg(ch)=0.01(Tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	*See attached table for site-specific Dissolved Oxygen and Ammonia standards. **pH=6.0-9.0 from 64th Ave. downstream 2 miles. Temporary modifications: NH_3(ac)=TVS(old); NH_3(ch)=0.10 mg/l (Type i). Expiration date of 12/31/2014. Cu(ac/ch)=TVSx2.3 (Type iii). Expiration date of 12/31/2015. T=current conditions (Type iii). Expiration date of 12/31/2015. Cl and So_4 = "Current Conditions", Expiration date 12/31/2020.

PUBLIC SERVICE COMPANY OF COLORADO
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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 adopted a "Current Conditions" temporary modification for chloride and sulfate in Segment 15 of the Upper South Platte River. Public Service Company presented information that shows a demonstrated or predicted water quality based effluent limit compliance problem. The Commission found that there was significant uncertainty regarding the water quality standards necessary to protect current and/or future uses and that there is significant uncertainty regarding the extent to which existing quality is the result of natural or irreversible human induced conditions.

The Commission reviewed the temporary modification implementation plan submitted by Public Service Company. Based on the existence of that plan, along with the existing or predicted compliance problems and uncertainty regarding the chloride and sulfate standards necessary to protect current uses, and uncertainty regarding the extent to which existing quality is the result of natural or irreversible human induced conditions, the Commission adopted a "Current Conditions" temporary modification to the chloride and sulfate standards in Upper South Platte Segment 15 with an expiration date of 12/31/2020.

EXHIBIT 21
SUNCOR

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: **UPPER SOUTH PLATTE RIVER** Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS µg/l			
16i. Mainstem of Sand Creek from the confluence with Toll Gate Creek to the confluence with the South Platte River.		Aq Life Warm 2 Recreation E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.5 NO_3=100	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Upper:* Se(ch)=38.2 Se(ac)=45.1 Lower:* Se(ch)=9.0 Se(ac)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	* See section 38.6(4)(f) for selenium assessment locations Temporary Modifications: Cu (ac/ch) = TVSx2.6 below the Sand Creek Water Reuse Facility outfall. (Type iii). Expiration date of 12/31/2015. Hg(ch)=~~current condition~~0.053 µg/l,below the Suncor discharge. ~~Expiration date of 6/30/2017~~

SUNCOR
PROPOSED

38.90 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 8, 2015 RULEMAKING; FINAL ACTION AUGUST 10, 2015; EFFECTIVE DATE DECEMBER 30, 2015

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

As a result of the April 2013 Rulemaking Hearing for Segment 16i (Sand Creek), the Water Quality Control Commission (WQCC), directed Suncor Energy (U.S.A.) Inc. to collect additional data to address their specific concerns. The 2013 directives included that Suncor would undertake a study to resolve the uncertainty, with the following conditions listed below, to ensure that the fish tissue data collected was representative of the potential human health exposure to mercury.

WQCC Directives

- Fish tissue will be sampled multiple times per year, during variable flow conditions and seasons.
- Appropriate sampling methods will be used for capturing the larger fish individuals.
- The largest individuals caught will be sampled for each species at site SW2-1.
- Fish tissue samples will be collected as skinless filets, where possible.
- Suncor will submit an annual progress report with fish tissue data to the Division every year beginning in December 2013.
- Suncor will continue to collect monthly water quality samples and analyze them for total mercury at SW2-1 using the low-level detection method.
- Suncor will work with the Water Quality Control Division (WQCD) and the U.S. Environmental Protection Agency (EPA) to calculate the bioaccumulation factor for Sand Creek and to develop a site-specific standard.

In response to the WQCC Directives, Suncor provided the WQCC with mercury fish tissue and water quality data collected during multiple seasons and flow regimes to resolve the uncertainty and concerns with the potential human health exposure to mercury. Appropriate field methodologies were used to capture larger fish and skinless-filets of the largest individuals of each species were analyzed for mercury. Suncor provided the WQCD with annual progress reports (2013 & 2014) that summarized their data collection efforts. Suncor also met with the WQCD and EPA in 2014 and discussed their study results and approach for developing the site-specific standard using their recent data and bioaccumulation factors.

The current mercury (Hg) standard for Segment 16i is 0.01 µg/l, expressed as total Hg (TotHg). Downstream of Suncor's discharge point to the confluence with the South Platte River, there have been instances of TotHg in the water column exceeding the water quality standard. Since 2001, EPAs mercury criteria recognized that methylmercury (MeHg) is the bioavailable fraction that is necessary to be regulated for human health protection. Since 2010, EPA's Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion has provided three options for Hg standards: either (1) the existing

water quality standard of 0.01 µg/l TotHg; (2) a fish tissue standard of 0.3 mg MeHg/kg (wet weight); or (3) a site-specific water column standard based on MeHg or TotHg. Site-specific data for the lower portion of Sand Creek and the South Platte River below the confluence demonstrated fish tissue concentrations well below the 0.3 mg/kg fish flesh criterion – often by more than a factor of 10 – indicating that Hg in fish tissues presents a low risk to human health exposure. Since 2013, the maximum water column concentration in that portion of Sand Creek downstream of Suncor's discharge point was 0.018 µg/l TotHg, and MeHg comprised 3.0% of the TotHg concentration. Bioaccumulation Factors (BAFs) were developed based on instream TotHg and the TotHg in the largest fish that presented the greatest potential for human health exposure to mercury. Using EPA equations and the BAF, a site-specific TotHg standard for the water column was developed. For that portion of Segment 16i of Sand Creek from a point immediately upstream of the Suncor discharge to the confluence with the South Platte River, a site-specific TotHg standard of 0.053 µg/l was calculated based on the 0.3 mg MeHg/kg fish flesh criterion translated into a water column TotHg concentration using individual BAFs calculated for the largest fish collected over a 2-year period, per direction from the Commission. The WQCC has considered the effects of this site-specific mercury standard on the South Platte River mercury concentrations in regard to the South Platte River standard of 0.01 µg/l. Despite concentrations in Sand Creek that have historically exceeded the previous standard of 0.01 µg/l, the substantially larger flows in the South Platte River result in a negligible change in mercury concentrations downstream of the confluence with Sand Creek. The fish tissue analysis demonstrated concentrations below the 0.3 mg/kg threshold for both young and older fish in the mainstem South Platte River, with no difference between the fish tissue concentrations above and below the confluence of Sand Creek. Therefore the WQCC has determined that with the adoption of this site-specific standard on Sand Creek, the use will still be protected on the South Platte River.