

STATE OF COLORADO

Bill Ritter, Jr., Governor
James B. Martin, Executive Director

WATER QUALITY CONTROL COMMISSION

<http://www.cdphe.state.co.us/op/wqcc/index.html>

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**Colorado
Department
of Public Health
and Environment**

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

SUBJECT:

For consideration of the adoption of revised water quality classifications, standards and designations for multiple segments in the Classifications and Numeric Standards for South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin, Regulation #38 (5 CCR 1002-38).

Proposed revisions and proposed Statement of Basis and Purpose language have been submitted by the following:

- Exhibit 1 - the Water Quality Control Division (Division);
- Exhibit 2 - Parker Water and Sanitation District;
- Exhibit 3 - Mountain Water and Sanitation District;
- Exhibit 4 - Plum Creek Wastewater Authority;
- Exhibit 5 - Chatfield Watershed Authority;
- Exhibit 6 - Centennial Water and Sanitation District;
- Exhibit 7 - Littleton/Englewood Wastewater Treatment Plant;
- Exhibit 8 - Bear Creek Watershed Association;
- Exhibit 9 - Metro Wastewater Reclamation District;
- Exhibit 10 - Suncor Energy (U.S.A.), Inc.;
- Exhibit 11 - Public Service Company of Colorado;
- Exhibit 12 - Upper Clear Creek Watershed Association;
- Exhibit 13 - Standley Lake Cities;
- Exhibit 14 - City of Boulder; and
- Exhibit 15 - Upper Thompson Sanitation District / Bureau of Reclamation.

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 15 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 for triennial review of water quality classifications and standards in Colorado. 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 these basins was held in October 2007. 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 2008. 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 <http://www.cdphe.state.co.us/op/wqcc/WQClassandStandards/ClassAndStand.html>.

HEARING SCHEDULE:

DATE: Monday, June 8, 2009
TIME: 10:00 a.m.
PLACE: Florence Sabin Conference Room
Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 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. Written submissions prior to the hearing are encouraged, so that they can be distributed to the Commission for review prior to 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 or mailing list status (see below) generally will not be permitted. 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.

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:

- Water Quality Control Division: Sarah Johnson; sarah.johnson@state.co.us
303-692-3609
- Parker Water & Sanitation Dist: Ronda Sandquist; rsandquist@jacksonkelly.com
Kristi Livedalen; klivedalen@jacksonkelly.com
- Mountain Water & Sanitation Dist: Steve Canton; scanton@geiconsultants.com
- Plum Creek Wastewater Authority: Jerry Raisch; jwr@vrlaw.com
- Chatfield Watershed Association: Ronda Sandquist; rsandquist@jacksonkelly.com
Kristi Livedalen; klivedalen@jacksonkelly.com
- Centennial Water & Sanitation Dist: Jerry Raisch; jwr@vrlaw.com
- Littleton/Englewood WWTP: Mark Wagner; markwagner@hillandrobbsins.com
- Bear Creek Watershed Association: Russ Clayshulte; rclayshulte@earthlink.net
- Metro Wastewater Reclamation Dist: Barbara Biggs; bbiggs@mwr.dst.co.us
Amy Woodis; awoodis@mwr.dst.co.us
- Suncor Energy (U.S.A.): Tad Foster; tadfoster@tsfosterlaw.com
- Public Service Company: Jerry Raisch; jwr@vrlaw.com
- UCCWA: Rick Fendel; rick@petrockfendel.com

- Standley Lake Cities: Mary Fabisiak; mfabisiak@cityofwestminster.us
Lee Johnson; ljohnson@chp-law.com
- City of Boulder: Sue Ellen Harrison; harrisons@bouldercolorado.gov
Bret Linenfelser; linenfelserb@bouldercolorado.gov
- Upper Thompson SD / Reclamation: Steve Ravel; steve@arber.com

PARTY STATUS/MAILING LIST STATUS:

Participation as a "party" to this hearing or acquisition of "mailing list status," will require compliance with section 21.3(D) of the Procedural Rules, Regulation #21 (5 CCR 1002-21). Mailing list status will allow receipt of all party documents (except individual exhibits more than five pages in length). It is not necessary to acquire party status or mailing list status in order to testify or comment. **For each request for party status or mailing list status, please provide the organization's name, a contact person, mailing address, phone number, fax number and email address if available.** Written party status or mailing list status requests are due in the Commission Office on or before:

DATE: Tuesday, March 31, 2009
TIME: 5:00 p.m.

A single copy of the party status or mailing list 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 Commission Office no later than this deadline. PLEASE NOTE that, as indicated below, parties will have the option of distributing materials to other parties electronically, except in instances where a party has requested receiving hard copies of documents. Therefore, **anyone requesting party or mailing list status that wishes to receive hard copies of documents instead of emailed copies should so indicate in the party status/ mailing list status request so that this information can be included on the list distributed by the Commission Office.**

PREHEARING STATEMENTS:

PLEASE NOTE that for this hearing two separate deadlines for prehearing statements are established: (1) An original and 13 copies of **Proponents' Prehearing Statements** from each **proponent of revisions proposed in the exhibits attached to this notice**, including written testimony and exhibits providing the basis for the proposals, must be received in the Commission Office no later than **March 24, 2009**; and (2) an original and 13 copies of a **Responsive Prehearing Statement**, including any exhibits, written testimony, and alternative proposals of the Water Quality Control Division or **anyone seeking party status and intending to respond to the proponents' proposals** must be received in the Commission Office no later than **April 28, 2009**.

For each deadline, the required number of hard copies of documents must be received in the Commission office by the specified dates. These requirements are not satisfied by electronic transmission of a facsimile copy or copies. However, **parties should also email a copy of their written documents to the Commission Office**, so that materials received can be posted on the Commission's web site. (Please email to cdphe.wqcc@state.co.us.)

Because the March 24, 2009 deadline for Proponents' Prehearing Statements precedes the March 31, 2009 due date for party status/ mailing list status requests, proponents must transmit copies of the Proponents' Prehearing Statements to all proponents and to the Attorney General's Office representatives for the Commission and the Division, in accordance with a Proponents List provided by the Commission Office. Parties who are not proponents should acquire copies of the Proponents' Prehearing Statements from the Commission's website: <http://www.cdphe.state.co.us/op/wqcc/WQClassandStandards/Reg38/Reg38.html>, or may contact the individual proponents to request hard copies.

Copies of Responsive Prehearing Statements and all subsequent filings for this rulemaking must be mailed or hand-delivered by the specific dates to all persons requesting party status or mailing list status and to the Attorney General's Office representatives for the Commission and the Division, in accordance with the party status list provided by the Commission Office following the party status/ mailing list status deadline. **Alternatively, parties may email documents to those with party status or mailing list status by the specified dates**, except to those that the list distributed by the Commission Office identifies as requesting hard copies.

In addition, 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 Regulation #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 mailed or emailed to all persons requesting party status or mailing list status. It is also posted on the Commission's web site at <http://www.cdphe.state.co.us/op/wqcc/PublicParticipation/HBappC.pdf>. Following the suggestions set forth in this document will enhance the effectiveness of parties' input for this proceeding. **Please note the request that all parties submit two-sided copies of all hearing documents on three-hole punch paper.**

MAILING LIST STATUS COMMENTS:

Those requesting mailing list status shall provide written testimony, if any testimony is to be offered for the hearing, by the above deadline for responsive prehearing statements – i.e., **April 28, 2009**. Copies shall be submitted and distributed in the same manner as noted above for prehearing statements.

REBUTTAL STATEMENTS:

Written rebuttal statements responding to the prehearing statements due on April 28, 2009 may be submitted by anyone seeking party status or mailing list status. Any such rebuttal statements must be received in the Commission Office by **May 19, 2009**. An original and 13 copies of written rebuttal statements must be received in the Commission Office by this deadline, and submission of an emailed copy as noted above is strongly encouraged. In addition, copies of these documents must be mailed or hand-delivered by that date to all those requesting party status or mailing list status, and to the Attorney General's Office representatives for the Commission and Division. **Alternatively, parties may email documents to those with party status or mailing list status by this deadline**, except to those that the list distributed by the Commission Office identifies as requesting hard copies. No other written materials will be accepted following this deadline except for good cause shown.

PREHEARING CONFERENCE:

DATE: Tuesday, May 26, 2009
TIME: 1:30 p.m.
PLACE: Florence Sabin Room
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.

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 this 13th day of February 2009 at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

A handwritten signature in black ink that reads "Paul D. Frohardt". The signature is written in a cursive style with a horizontal line extending from the end of the name.

Paul D. Frohardt, Administrator

EXHIBIT 1
WATER QUALITY CONTROL DIVISION

(Note: proposal reflects November 2008 Chatfield Reservoir,
December 2008 temporary modifications, and January Walnut/Woman Creek revisions)

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. ~~Effective until December 31, 2009: Segments or portions of segments that are first, second or third order streams above 7000 foot elevation and classified Aquatic Life cold 1 or 2 shall have a chronic temperature standard of 17 °C (MWAT) with no acute standard. The following waters designated as Gold Medal fisheries by the Colorado Wildlife Commission shall have a chronic temperature standard of 18.2 °C (MWAT):~~

- ~~▪ South Platte River (rainbow and brown trout fishery, residual cutthroats) (A) From the confluence of the Middle and South Forks of the South Platte downstream to the inlet of Spinney Mountain Reservoir; (B) Middle fork from Highway 9 bridge downstream to the South Fork of the South Platte; South fork above Antero Reservoir to Highway 285; (C) From the outlet of Spinney Mountain Reservoir downstream to the inlet of the Elevenmile Canyon Reservoir; and~~
- ~~▪ Spinney Mountain Reservoir (rainbow and brown trout fishery, some Snake River cutthroat trout) on the South Platte River, 5 miles upstream from Elevenmile Canyon Reservoir.~~

~~Other cold class 1 or 2 segments or portions of segments shall have a chronic temperature standard of 20 °C (MWAT) with no acute standard. Segments that are classified Aquatic Life warm 1 or 2 shall have a chronic temperature standard of 30 °C (MWAT) with no acute standard.~~

(2) ORGANICS QUALIFIERS

See Basic Standards and Methodologies for Surface Water, ~~31.14~~ 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 ~~40 pCi/l~~ 30 µg/l or naturally-occurring concentrations (as determined by the State of Colorado), whichever is greater.

- (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 ~~40 pCi/l~~ 30 µg/l where naturally-occurring concentration are less than ~~40 pCi/l~~ 30 µg/l.

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
°C	=	<u>degrees celcius</u>
Cd	=	Cadmium
ch	=	chronic (30-day)
CL	=	<u>cold lake temperature tier</u>
Cl	=	Chloride
CLL	=	<u>cold large lake temperature tier</u>
Cl ₂	=	residual chlorine
CN	=	free cyanide
CrIII	=	trivalent chromium
CrVI	=	hexavalent chromium
CS-I	=	<u>cold stream temperature tier one</u>
CS-II	=	<u>cold stream temperature tier two</u>
Cu	=	Copper
dis	=	Dissolved
D.O.	=	Dissolved oxygen
DM	=	<u>daily maximum</u>
E. coli	=	Eschericia coli
F	=	Fluoride
F.Coli	=	fecal coliforms
Fe	=	Iron
Hg	=	Mercury
mg/l	=	milligrams per liter
ml	=	Milliliters
Mn	=	Manganese
MWAT	=	<u>maximum weekly average temperature</u>
NH ₃	=	un-ionized 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 ₂ S (hydrogen sulfide)
Sb	=	Antimony
Se	=	Selenium
SO ₄	=	Sulfate
sp	=	Spawning
<u>T</u>	=	<u>temperature</u>
Tl	=	Thallium
Tr	=	Trout
Trec	=	total recoverable
TVS	=	table value standard
U	=	Uranium
µg/l	=	micrograms per liter
UP	=	use-protected
<u>WAT</u>	=	<u>weekly average temperature</u>
<u>WL</u>	=	<u>warm lake temperature tier</u>
<u>WS-I</u>	=	<u>warm stream temperature tier one</u>
<u>WS-II</u>	=	<u>warm stream temperature tier two</u>
<u>WS-III</u>	=	<u>warm stream temperature tier three</u>
<u>WS-IV</u>	=	<u>warm stream temperature tier four</u>
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”).

(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⁾
Ammonia ⁽⁴⁾	Cold Water = (mg/l as N)Total $acute = \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}}$ $chronic = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN(2.85, 1.45 * 10^{0.028(25 - T)})$
	Warm Water = (mg/l as N)Total $acute = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$
	$chronic (Apr 1 - Aug 31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN(2.85, 1.45 * 10^{0.028(25 - T)})$ $chronic (Sep 1 - Mar 31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * 1.45 * 10^{0.028 * (25 - MAX(T, 7))}$
NH ₃ = old TVS	Cold Water Acute = 0.43/FT/FPH/2 ^(4 old) in mg/l (N) Warm Water Acute = 0.62/FT/FPH/2 ^(4 old) in mg/l (N)
Cadmium	$Acute = (1.13667 - \ln(hardness) * (0.04184)) * e^{(1.128 \ln(hardness) - 3.6867)}$ $(1.136672 - \ln(hardness) * (0.041838)) * e^{0.9151 \ln(hardness) - 3.1485}$ $Acute(Trout) = (1.13667 - \ln(hardness) * (0.04184)) * e^{(1.128 \ln(hardness) - 3.828)}$ $(1.136672 - \ln(hardness) * (0.041838)) * e^{0.9151 \ln(hardness) - 3.6236}$ $Chronic = (1.10167 - \ln(hardness) * (0.04184)) * e^{(0.7852 \ln(hardness) - 2.715)}$ $(1.101672 - \ln(hardness) * (0.041838)) * e^{0.7998 \ln(hardness) - 4.4451}$
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	$\text{Acute} = (1.46203 - [\ln(\text{hardness}) * (0.145712)]) * e^{(1.273[\ln(\text{hardness})] - 1.46)}$ $\text{Chronic} = (1.46203 - [(\ln \text{hardness}) * (0.145712)]) * e^{(1.273[\ln(\text{hardness})] - 4.705)}$					
Manganese	$\text{Acute} = e^{(0.3331[\ln(\text{hardness})] + 6.4676)}$ $\text{Chronic} = e^{(0.3331[\ln(\text{hardness})] + 5.8743)}$					
Nickel	$\text{Acute} = e^{(0.846[\ln(\text{hardness})] + 2.253)}$ $\text{Chronic} = e^{(0.846[\ln(\text{hardness})] + 0.0554)}$					
Selenium ⁽⁶⁾	$\text{Acute} = 18.4$ $\text{Chronic} = 4.6$					
Silver	$\text{Acute} = \frac{1}{2} e^{(1.72[\ln(\text{hardness})] - 6.52)}$ $\text{Chronic} = e^{(1.72[\ln(\text{hardness})] - 9.06)}$ $\text{Chronic(Trout)} = e^{(1.72[\ln(\text{hardness})] - 10.51)}$					
Uranium	$\text{Acute} = e^{(1.1021[\ln(\text{hardness})] + 2.7088)}$ $\text{Chronic} = e^{(1.1021[\ln(\text{hardness})] + 2.2382)}$					
<u>Temperature</u>	<u>TEMPERATURE TIER</u>	<u>TIER CODE</u>	<u>SPECIES EXPECTED TO BE PRESENT</u>	<u>APPLICABLE MONTHS</u>	<u>TEMPERATURE STANDARD (°C)</u>	
					(MWAT)	(DM)
	<u>Cold Stream Tier I</u>	<u>CS-I</u>	<u>Brook trout, cutthroat trout</u>	<u>June – Sept.</u>	<u>17.0</u>	<u>21.2</u>
				<u>Oct. - May</u>	<u>9.0</u>	<u>13.0</u>
	<u>Cold Stream Tier II</u>	<u>CS-II</u>	<u>Brown trout, rainbow trout, mottled sculpin, mountain whitefish, longnose sucker, Arctic grayling</u>	<u>April – Oct.</u>	<u>18.2</u>	<u>23.8</u>
				<u>Nov. - March</u>	<u>9.0</u>	<u>13.0</u>
	<u>Cold Lake</u>	<u>CL</u>	<u>Brook trout, brown trout, cutthroat trout, lake trout, rainbow trout, Arctic grayling, sockeye salmon</u>	<u>April – Dec.</u>	<u>17.0</u>	<u>21.2</u>
				<u>Jan. - March</u>	<u>9.0</u>	<u>13.0</u>
	<u>Cold Large Lake (>100 acres surface area)</u>	<u>CLL</u>	<u>Rainbow trout</u>	<u>April – Dec.</u>	<u>18.2</u>	<u>23.8</u>
				<u>Jan. - March</u>	<u>9.0</u>	<u>13.0</u>
	<u>Warm Stream Tier I</u>	<u>WS-I</u>	<u>Common shiner, Johnny darter, orangethroat darter</u>	<u>March – Nov.</u>	<u>24.2</u>	<u>29.0</u>
				<u>Dec. – Feb.</u>	<u>12.1</u>	<u>14.5</u>
	<u>Warm Stream Tier II</u>	<u>WS-II</u>	<u>Brook stickleback, central stoneroller, creek chub, longnose dace, Northern redbelly dace, finescale dace, white sucker</u>	<u>March – Nov.</u>	<u>27.5</u>	<u>28.6</u>
			<u>Dec. – Feb.</u>	<u>13.7</u>	<u>14.3</u>	
<u>Warm Stream Tier III</u>	<u>WS-III</u>	<u>Razorback sucker</u>	<u>March – Nov.</u>	<u>27.7</u>	<u>31.3</u>	
			<u>Dec. – Feb.</u>	<u>13.9</u>	<u>15.2</u>	

	<u>Warm Stream Tier IV</u>	<u>WS-IV</u>	<u>Other Warmwater Species</u>	<u>March – Nov.</u>	<u>28.7</u>	<u>31.3</u>
				<u>Dec. – Feb.</u>	<u>14.3</u>	<u>15.2</u>
	<u>Warm Lakes</u>	<u>WL</u>	<u>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</u>	<u>April – Dec.</u>	<u>26.5</u>	<u>29.3</u>
				<u>Jan. - March</u>	<u>13.3</u>	<u>14.6</u>
Zinc	<p>Acute = $e^{(0.8473[\ln(\text{hardness})]+0.8618)}$ <u>0.978</u> $e^{(0.8525[\ln(\text{hardness})]+1.0617)}$</p> <p>Chronic = $e^{(0.8473[\ln(\text{hardness})]+0.8699)}$ <u>0.986</u> $e^{(0.8525[\ln(\text{hardness})]+0.9109)}$</p>					

TABLE VALUE STANDARDS - FOOTNOTES

- (1) Metals are stated as dissolved unless otherwise specified.
- (2) Hardness values to be used in equations are in mg/l as calcium carbonate and shall be no greater than 400 mg/L. The hardness values used in calculating the appropriate metal standard should be based on the lower 95 per cent confidence limit of the mean hardness value at the periodic low flow criteria as determined from a regression analysis of site-specific data. Where insufficient site-specific data exists to define the mean hardness value at the periodic low flow criteria, representative regional data shall be used to perform the regression analysis. Where a regression analysis is not appropriate, a site-specific method should be used. In calculating a hardness value, regression analyses should not be extrapolated past the point that data exist.
- (3) Both acute and chronic numbers adopted as stream standards are levels not to be exceeded more than once every three years on the average.
- (4) $FT = 10^{0.03(20-TCAP)}$;

Where $TCAP \leq T \leq 30$

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

Where $0 \leq T \leq TCAP$

TCAP = 20° C cold water aquatic life species present

TCAP = 25° C cold water aquatic life species absent

FPH = 1; Where $8 \leq \text{pH} \leq 9$

$$FPH = \frac{1 + 10(7.4-\text{pH})}{1.25}; \quad \text{Where } 6.5 \leq \text{pH} \leq 8$$

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.

- (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: Assessment Thresholds

chlorophyll = 11.2 µg/l, summer average, 1 in 5 year allowable exceedance frequency
phosphorus = 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.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: UPPER SOUTH PLATTE RIVER	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
1a. Mainstem of the South Platte River from the source of the South and Middle Forks to the <u>inlet of Cheesman Reservoir</u> a point immediately above the confluence with the North Fork of the South Platte River, including all mainstem reservoirs.		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	$T=TVS(CS-I) \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5 - 9.0 F.Coli=200/100ml 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)=50(Trec)-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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
1b. All tributaries to the South Platte River, including lakes, reservoirs and wetlands within the Lost Creek and Mt. Evans Wilderness Areas.	OW	Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	$T=TVS(CS-I) \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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)	Ni(ac/ch)=TVS 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 lakes, reservoirs and 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 c.		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	$T=TVS(CS-I) \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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	
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 4aE Water Supply Agriculture	$T=TVS(CS-I) \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ch)=220	Temporary modification: Zn(ch)=283ug/l (dis), based on uncertainty. Expiration date 2/28/07.
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 4aE Water Supply Agriculture	$T=TVS(CS-I) \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-340 As(ch)=0.02(Trec) Cd(ac)=TVS 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(ch)=280	Temporary modifications Cd(ch)=3.3 ug/l (dis), Zn(ch)=400 ug/l (dis) based on uncertainty. Expiration date 2/28/07.
3. All tributaries to the South Platte River, including all lakes, reservoirs and 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 4aE Water Supply Agriculture	$T=TVS(CS-I) \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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	
4. Mainstem of the North Fork of the South Platte River, including all tributaries, lakes, reservoirs 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 4aE Water Supply Agriculture	$T=TVS(CS-I) \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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	

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 ug/l				
5a. Mainstem of Geneva Creek from the source to the confluence with Scott Gomer Creek.		Aq Life Cold 1 Recreation 4a Agriculture	$T=TVS(CS-I) \text{ } ^\circ C$ D.O.=6.0 mg/l D.O. (sp)=7.0 mg/l pH = 3.5-9.0 F.Coli=200/400ml 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)=100-7.6(Trec) Cd(ch)=2 CrIII(ch)=100 CrIII(ch)=TVS CrVI(ch)=25 Cu(ch)=18(dis)	Fe(ch)=1200 Pb(ch)=4 Mn(ch)=530(dis) Hg(ch)=0.05 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 lakes, reservoirs and wetlands from source to confluence with the North Fork of the South Platte River.		Aq Life Cold 1 Recreation 4a Agriculture	$T=TVS(CS-I) \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/400ml 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)=50(Free)-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	
5c. Mainstem of Gooseberry Gulch and all tributaries from source to confluence with Elk Creek.	UP	Aq Life Cold 2 Recreation 4a Agriculture	$T=TVS(CS-I) \text{ } ^\circ C$ D.O.=6.0 mg/l pH=6.5-9.0 F.Coli=200/400ml 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)=50(Free)-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	Temporary modification: NH ₃ (ac/ch)=Existing Quality(Type iii). Expiration date of 12/31/2010.
6a. Mainstem of the South Platte River from the outlet of Cheesman Reservoir a point immediately above the confluence with the North Fork of the South Platte River to the inlet of Chatfield Reservoir.		Aq Life Cold 1 Recreation 4a Agriculture	$T=TVS(CS-II) \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/400ml 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)=50(Free)-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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
6b. Chatfield Reservoir.		Aq Life Cold 1 Recreation 4a Agriculture	$T=TVS(CII) \text{ } ^\circ C$ April-Dec $T_{WAT}=23.5 \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/400ml 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)=50(Free)-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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Mean total phosphorous P=0.030 mg/L and mean chlorophyll = 10 ug/l measured through the collection of samples that are representative of the mixed layer during summer months (July, August, September) and with an allowable exceedance frequency of once in five years. See section 38.6(4) for assessment thresholds.
6c. Deleted. Mainstem of the South Platte River from the outlet of Chatfield Reservoir to Bowles Avenue.		Aq Life Cold 1 Recreation 1a Agriculture	D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/400ml 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)=50(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)=TVS Mn(ch)=90ugl(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	*Cu (ac/ch) = TVS *2.7 below the confluence with Marcy Gulch to Bowles Avenue.
7. All tributaries to the South Platte River, including all lakes, and reservoirs and 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.	UP	Aq Life Cold 2 Recreation 4a Agriculture	$T=TVS(CS-II) \text{ } ^\circ C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/400ml 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)=100(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS Cr III(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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2,3 & 4 BASIN: UPPER SOUTH PLATTE RIVER	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
8. Mainstems of East and West Plum Creek from the source to the boundary of National Forest lands, including all tributaries, lakes, reservoirs and wetlands within the Plum Creek drainage which are on National Forest Lands, except for the specific listing in Segments 9 and 10b.		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 S ₀₄ =WS	As(ac)=50(Free)-340 <u>As(ch)=0.02(Trec)</u> 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	
9. Mainstem of Bear Creek, including all tributaries, lakes, and reservoirs, and wetlands from the source to the inlet of Perry Park Reservoir (Douglas County).		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 S ₀₄ =WS	As(ac)=50(Free)-340 <u>As(ch)=0.02(Trec)</u> 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	
10a. Mainstem of East and West Plum Creek and Plum Creek from the boundary of National Forest lands to Chatfield Reservoir, except for specific listings in Segment 10b.	UP	Aq Life Warm 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 S ₀₄ =WS	As(ac)=50(Free)-340 <u>As(ch)=0.02(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS ²	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	<u>Temporary modification:</u> Cu(ac/ch)=TVS *2.4 on East Plum Creek and Plum Creek below the Plum Creek Wastewater Authority Discharge. <u>(Type iii). Expiration date of 12/31/2014.</u> Temporary modification: NH ₃ (ac/eh)=TVS(old); <u>NH₃(ch)=0.06 mg/l</u> (Type i). Expiration date of 12/31/2011.
10b. Mainstem of West Plum Creek including all tributaries, lakes, reservoirs, and wetlands from its source to Perry Park Pond.		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 S ₀₄ =WS	As(ac)=50(Free)-340 <u>As(ch)=0.02(Trec)</u> 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	
11a. All tributaries to the East Plum Creek system, including all lakes, reservoirs and wetlands which are not on national forest lands.	UP	Aq Life Warm 2 Recreation 4aE Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrIII(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	
11b. All tributaries to the West Plum Creek system, including all lakes, reservoirs and wetlands, which are not on national forest lands, except for specific listings in Segments 9 and 12.	UP	Aq Life Warm 2 Recreation 4aE Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	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	<u>Temporary modification:</u> NH ₃ (ac/eh)=TVS(old); <u>NH₃(ch)=0.06 mg/l</u> (Type i). Expiration date of 12/31/2011.
12. Mainstem of Garber Creek and Jackson Creek from the boundary of National Forest lands to the confluence with West Plum Creek.		Aq Life Cold Warm 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 S ₀₄ =WS	As(ac)=50(Free)-340 <u>As(ch)=0.02(Trec)</u> 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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2, 3 & 4 BASIN: UPPER SOUTH PLATTE RIVER	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
13. Mainstem of Deer Creek, including the North and South Forks, from the source to Chatfield Reservoir.		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02(Trec)</u> 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	
14. Mainstem of the South Platte River from the outlet of Chatfield Reservoir Bowles Avenue in Littleton, Colorado, to the Burlington Ditch diversion in Denver, Colorado.		Aq Life Warm 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS*2.8 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: NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch)=0.06 mg/l</u> (Type i). <u>Applies below Bowles Ave.</u> Expiration date of 12/31/2011. <u>Cu(ac/ch)=TVS*2.8 (Type iii).</u> <u>Applies below the confluence with Marcy Gulch. Expiration date of 12/31/2014.</u>
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 4aE Water Supply Agriculture	<u>T=TVS(WS-I) °C</u> D.O.* pH = 6.5-9.0** <u>F.Coli=200/100ml</u> 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	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02-10(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS*2.3 Fe(ch)=WS(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=400(dis) Mn(ac/ch)=TVS Hg(ac)=2.4(dis) Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	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 64 th Ave. downstream 2 miles. Temporary modifications: NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch)=0.10 mg/l</u> (Type i). Expiration date of 12/31/2014. <u>Cu(ac/ch)=TVS*2.3 (Type iii).</u> <u>Expiration date of 12/31/2014.</u>
16a. Mainstem of Sand Creek from the confluence of Murphy and Coal Creek in Arapahoe County to the confluence with the South Platte River.	UP	Aq Life Warm 2 Recreation 4aE Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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)=TVS Se(ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modifications: Se(ch)= current condition type iii Expiration date of 12/31/2014. NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch)=0.10 mg/l</u> (Type i). Expiration date of 12/31/2011. *Cu (ac/ch) = TVS *2.6 below the Sand Creek Water Reuse Facility outfall. (Type iii). <u>Expiration date of 12/31/2014.</u>
16b. Aurora Reservoir.		Aq Life Warm 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WI) °C</u> D.O.=5.06-9 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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 =0.59 .05 NO ₃ =10 Cl=250 SO ₄ =WS	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) 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 Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
16c. All tributaries to the South Platte River, including all lakes, reservoirs and 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, 16b, 16d, 16e, 16f, 16g, and 16h17a, 17b, and 17c.	UP	Aq Life Warm 2 Recreation 4aE Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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 <u>NO₃=100</u>	<u>As(ac)=340</u> As(ch)=100-7.6(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	Fish Ingestion Organics Standards NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch)=0.06 mg/l</u> (Type i). Expiration date of 12/31/2011.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2, 3 & 4 BASIN: UPPER SOUTH PLATTE RIVER	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
16d. Second Creek from the source to the O'Brian Canal.	UP	Aq Life Warm 2 Recreation 4aE Agriculture	<u>T=TVS(WWS-IV) °C</u> D.O. (ch)=3.3 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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	¹ 15 th percentile of D.O. measurements collected between 6:30 a.m. and 6:30 p.m.
16e. Third Creek from the source to the O'Brian Canal.	UP	Aq Life Warm 2 Recreation 1aE Agriculture	<u>T=TVS(WWS-IV) °C</u> D.O. (ch)=4.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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	¹ 15 th 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 4aE Agriculture	<u>T=TVS(WWS-IV) °C</u> D.O. (ch)= pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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	¹ When water is present, D.O. concentrations shall be maintained at levels that protect classified uses.
16g. Marcy Gulch from, including all lakes, reservoirs, and wetlands from the source to the confluence with the South Platte.	UP	Aq Life Warm 2 Recreation 4aE Agriculture	<u>T=TVS(WWS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ac)=340</u> As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS ²	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	<u>Temporary modifications:</u> Ag(ac/ch)=TVS Zn(ac/ch)=TVS the Centennial Wastewater Treatment Facility outfall. <u>(Type iii) Expiration date of 12/31/2014.</u> <u>Temporary modification:</u> NH ₃ (ac/ch)=TVS(old); NH ₃ (ch)=0.06 mg/l (Type i). Expiration date of 12/31/2011.
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.	UP	Aq Life Warm 2 Recreation 4aE Agriculture	<u>T=TVS(WWS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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	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 Organics See section 38.6(4) for selenium assessment locations.
17a. Washington Park Lakes, City Park Lake, Rocky Mountain Lake, Berkely Lake.	UP	Aq Life Warm 1 Recreation 4aE Agriculture	<u>T=TVS(WL) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ac)=340</u> As(ch)=400-Z.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS <u>CrIII(ch)=TVS</u> 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	
17b. Sloan's Lake.		Aq Life Warm 1 Recreation 4aE Agriculture	<u>T=TVS(WL) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ac)=340</u> As(ch)=400-Z.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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2, 3 & 4 BASIN: UPPER SOUTH PLATTE RIVER Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
				mg/l		ug/l			
17c. Bowles Lake, a.k.a. Patrick Reservoir or Bow Mar Lake.		Aq Life Warm 1 Recreation 1a Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=400-7.6(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	
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	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/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	
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 F Water Supply Agriculture	T=TVS(CL, CLL) °C Spinney Mt Reservoir April-Dec T _{WAT} =18.5°C Elevenmile Reservoir April-Dec T _{WAT} =18.7°C Cheesman Reservoir April-Dec T _{WAT} =21.3°C Strontia Springs Res April-Dec T _{WAT} =22.6°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)=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	
20. Lakes and reservoirs in the Plum Creek system within National Forest boundaries; lakes and reservoirs in the West Plum Creek drainage from the National Forest boundary to Perry Park pond; and lakes and reservoirs in the Bear Creek drainage between the National Forest boundary and to the inlet of Perry Park 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)=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	
21. Lakes and reservoirs in the Plum Creek system except for specific listings in Segment 20.		Aq Life Warm 2 Recreation F 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/ch)=TVS CrIII(ac/ch)=TVS 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 Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	
22. 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, and 17c.		Aq Life Warm 2 Recreation F 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/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/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.

Footnotes

1. For the purposes of determining compliance with the standards, dissolved oxygen measurements shall only be taken in the flowing portion of the stream at mid-depth, and at least six inches above the bottom of the channel. All sampling protocols and test procedures shall be in accordance with procedures and protocols approved by the Division.
2. A minimum of four independent daily means must be used to calculate the average for the 7-Day Average standard. A minimum of eight independent daily means must be used to

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

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

Ammonia:

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

Ammonia

Warm Water = (mg/l as N)Total

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

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

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

NH₃ = old TVS

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

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: CHERRY CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
<u>Stream Segment Description</u>									
1. Mainstem of Cherry Creek from the source of East and West Cherry Creek to the inlet of Cherry Creek Reservoir.	UP	Aq Life Warm 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02-10(Trec)</u> 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	
2. Cherry Creek Reservoir.		Aq Life Warm 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WL) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> E.Coli=126/100ml Season mean chlorophyll a = 15 µg/l measured in the upper three meters of the water column for the months of July through September	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	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02(Trec)</u> 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 Cherry Creek from the outlet of Cherry Creek Reservoir to the confluence with the South Platte River.	UP	Aq Life Warm 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02-10(Trec)</u> 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: NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch)=0.10 mg/l</u> (Type i). Expiration date of 12/31/2011.
4. All tributaries to Cherry Creek, including all lakes, reservoirs and wetlands, from the source of East and West Cherry Creeks to the confluence with the South Platte River, except for specific listings in Segment 2.	UP	Aq Life Warm 2 Recreation 4aE Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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 modification: NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch)=0.10 mg/l</u> (Type i). Expiration date of 12/31/2011.
5. <u>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 Segment 2.</u>		<u>Aq Life Warm 2 Recreation E Water Supply Agriculture</u>	<u>T=TVS(WL) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>E.Coli=126/100ml</u>	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.5</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02-10(Trec)</u> <u>Cd(ac/ch)=TVS</u> <u>CrIII(ac/ch)=TVS</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Hg(ch)=0.01(Tot)</u> <u>Ni(ac/ch)=TVS</u>	<u>Se(ac/ch)=TVS</u> <u>Ag(ac/ch)=TVS</u> <u>Zn(ac/ch)=TVS</u>	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: BEAR CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
1a. Mainstem of Bear Creek from the source to the inlet of Evergreen Lake Harriman Ditch, including all mainstem reservoirs.		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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	
1b. Mainstem of Bear Creek from the outlet of Evergreen Lake Harriman Ditch to the inlet of Bear Creek Reservoir.	UP	Aq Life Cold 12 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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	Water + Fish Organics
1c. Bear Creek Reservoir, and Soda Lakes.		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CLL) °C</u> <u>Bear Creek Res April-Dec</u> <u>T_{WAT}=23.3 °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	*See narrative phosphorus standard below.
2. Mainstem of Bear Creek from the outlet of Bear Creek Reservoir to the confluence with the South Platte River.	UP	Aq Life Warm 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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. All tributaries to Bear Creek, including all lakes, reservoirs and wetlands, from the source to a point immediately below the confluence with Cub Creek. Except for specific listings in Segment 7.		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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	
4a. All tributaries to Bear Creek, including all lakes, reservoirs and wetlands, from a point immediately below the confluence with Cub Creek to the confluence with the South Platte River, except for specific listing in Segments 4b, 4c, 5 and 6.	UP	Aq Life Warm 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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	Water + Fish Organics Standards Temporary modification: NH ₃ (ac/ch)=TVS(old); NH ₃ (ch)=0.10 mg/l (Type i). Expiration date of 12/31/2011.
4b. Swede Gulch, including all ponds, lakes, reservoirs and wetlands, from its headwaters to its confluence with Kerr Gulch.		Aq Life Cold 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Organics Standards

*Narrative Phosphorus Standard for Segment 1c of Bear Creek. Concentrations of total phosphorus in Bear Creek Reservoir shall be limited to the extent necessary to prevent stimulation of algal growth to protect beneficial uses. Sufficient dissolved oxygen shall be present in the upper half of the reservoir hypolimnion layer to provide for the survival and growth of cold water aquatic life species. Attainment of this standard shall, at a minimum, require shifting the reservoir trophic state from a eutrophic and hypertrophic condition to a eutrophic and mesotrophic condition.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: BEAR CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
<u>Stream Segment Description</u>									
4c. Swede Gulch, including all ponds, lakes, reservoirs and wetlands, from its confluence with Kerr Gulch to its confluence with Bear Creek.		Aq Life Cold 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02(Trec)</u> 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	Water + Fish Organics Standards
5. Sawmill, Troublesome, and Cold Springs Gulches, and mainstem of Turkey Creek, including all tributaries, lakes, reservoirs and wetlands, from the source to the confluence with Bear Creek, except for specific listing in Segment 6.	UP	Aq Life Cold 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02(Trec)</u> 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	Water + Fish Organics Standards
6. Mainstem of North Turkey Creek, from the source to the confluence with Turkey Creek.		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02(Trec)</u> 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	
7. All tributaries to Bear Creek, including lakes, reservoirs and wetlands, within the Mt. Evans Wilderness Area.	OW	Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> 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	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) <u>CrIII(ch)=TVS</u> 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	
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	<u>T=TVS(CL) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 <u>F.Coli=126/100ml</u>	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac)=TVS</u> <u>Ag(ch)=TVS(tr)</u> <u>Zn(ac/ch)=TVS</u>	
9. Lakes and reservoirs in the Bear Creek system from the boundary of the Mt. Evans Wilderness area to a point immediately below the confluence with Cub Creek, includes Evergreen Lake.		Aq Life Cold 1 Recreation E Water Supply Agriculture	<u>T=TVS(CL) °C</u> Evergreen Lake April-Dec T _{WAT} =21.0°C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac)=TVS</u> <u>Ag(ch)=TVS(tr)</u> <u>Zn(ac/ch)=TVS</u>	
10. Lakes and reservoirs in drainages of Swede Gulch, Sawmill Gulch, Troublesome Gulch, Cold Springs Gulch, and Turkey Creek from source to confluence with Bear Creek.		Aq Life Cold 2 Recreation E Water Supply Agriculture	<u>T=TVS(CL) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac)=TVS</u> <u>Ag(ch)=TVS(tr)</u> <u>Zn(ac/ch)=TVS</u>	Water + Fish Standards

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: BEAR CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
Stream Segment Description			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
<u>11. Lakes and reservoirs in the Bear Creek system from a point immediately below the confluence with Cub Creek to the confluence with the South Platte River, except as specified in Segments 1c and 10; includes Soda Lakes.</u>		<u>Aq Life Warm 2 Recreation F Water Supply Agriculture</u>	<u>T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml</u>	<u>NH₃(ac/ch)=TVS Cl₂(ac)=0.019 Cl₂(ch)=0.011 CN=0.005</u>	<u>S=0.002 B=0.75 NO₂=0.5 NO₃=10 Cl=250 SO₄=WS</u>	<u>As(ac)=340 As(ch)=0.02(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS</u>	<u>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)</u>	<u>Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS</u>	<u>Water + Fish Standards</u>

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: CLEAR CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
				mg/l		ug/l			
1. Mainstem of Clear Creek, including all tributaries, lakes, reservoirs 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 4aE Water Supply Agriculture	<u>T=TVS (CS-I)°C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-340 <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) <u>CrIII(ch)=TVS</u> 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	
2a. Mainstem of Clear Creek, including all tributaries, lakes, reservoirs and wetlands, from the I-70 bridge above Silver Plume to the Argo Tunnel discharge a point just above the confluence with West Fork Clear Creek, except for specific listings in Segments 3 through 10, 3a and 3b.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS (CS-I)°C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-340 <u>As(ch)=0.02(Trec)</u> 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)=TVS Zn(ch)=200	Temporary modifications: Cu(ch)=7.4 µg/l (dis), Zn(ch)=254 µg/l (dis), type iii Expiration date of 7/01/2014.
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	<u>T=TVS (CS-I)°C</u> 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 <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) <u>Fe(ch)=1000(Trec)</u> 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)=TVS Zn(ch)=200	Temporary modifications: Cu(ch)=7.4 µg/l (dis), Zn(ch)=254 µg/l (dis), type iii Expiration date of 7/01/2014.
2c. Mainstem of Clear Creek, including all tributaries and wetlands, from 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	<u>T=TVS (CS-I)°C</u> 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 <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) <u>Fe(ch)=1000(Trec)</u> 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)=TVS Zn(ch)=200	Temporary modifications: Cu(ch)=7.4 µg/l (dis), Zn(ch)=254 µg/l (dis), type iii Expiration date of 7/01/2014.
3a. Mainstem of South Clear Creek, including all tributaries, lakes, reservoirs 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 4aE Water Supply Agriculture	<u>T=TVS (CS-I)°C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-340 <u>As(ch)=0.02(Trec)</u> 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	
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 4aE Water Supply Agriculture	<u>T=TVS (CS-I)°C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-340 <u>As(ch)=0.02(Trec)</u> As(ac)=50(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	
4. Mainstem of West Clear Creek from the source to the confluence with Woods Creek.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS (CS-I)°C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-340 <u>As(ch)=0.02(Trec)</u> 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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: CLEAR CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS	
			PHYSICAL and BIOLOGICAL	INORGANIC	METALS					
				mg/l		ug/l				
5. Mainstem of West Clear Creek from the confluence with Woods Creek to the confluence with Clear Creek.	UP 9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation 4aE Agriculture	$T=TVS (CS-I)^{\circ}C$ D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=400(Trec) 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 Zn(ac)=e ^{0.8404[ln(hardness)]+1.8810} Zn(ch)=e ^{0.8404[ln(hardness)]+1.5127}	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)		
6. All tributaries to West Clear Creek, including all lakes, reservoirs and 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 4aE Water Supply Agriculture	$T=TVS (CS-I)^{\circ}C$ D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS		
7. Mainstem of Woods Creek from the outlet of Upper Urad Reservoir to the confluence with West Clear Creek.	UP	Aq Life Cold 2 Recreation 2N	$T=TVS (CS-I)^{\circ}C$ D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.0-9.0 F.Coli=2000/100ml 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	WQSWC = ((Q _{WC} + Q _{WFC}) X WQSWFC - (Q _{WFC} X C _{WFC}))/Q _{WC} WQSWC = Water Quality Standards for Woods Creek Q _{WC} = Flow for Woods Creek Q _{WFC} = Flow for West Fork Clear Creek WQSWFC = Water Quality Standards for West Fork Clear Creek C _{WFC} = Ambient Concentration in West Fork Clear Creek			Standards shall be applied using the Segment 7 equation.	
8. Mainstem of Lion Creek from the source to the confluence with West Clear Creek.	UP	Aq Life Cold 2 Recreation 4aE	$T=TVS (CS-I)^{\circ}C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 3.0-9.0 F.Coli=200/100ml E.Coli=126/100ml							
9a. Mainstem of the Fall River, including all tributaries, lakes, reservoirs and wetlands, from the source to the confluence with Clear Creek.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	$T=TVS (CS-I)^{\circ}C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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)	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 ug/l (dis), type iii Expiration date of 7/01/2014.	
9b. Mainstem of Trail Creek, including all tributaries, lakes, reservoirs, and wetlands from the source to the confluence with Clear Creek.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	$T=TVS (CS-I)^{\circ}C$ D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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)	Ni(ac/ch)=TVS 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, lakes, reservoirs 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 4aE Water Supply Agriculture	$T=TVS (CS-I)^{\circ}C$ D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Trec)-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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS		

*REFER TO STATEMENT OF BASIS AND PURPOSE

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: CLEAR CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
				mg/l		ug/l			
11. Mainstem of Clear Creek from <u>a point just above</u> the Argo Tunnel discharge to the Farmers Highline Canal diversion in Golden, Colorado.	UP	Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS (CS-I)°C</u> D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)-340</u> <u>As(ch)=0.02(Trec)</u> 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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ch)=300	Temporary modification: Zn(ch)=325 µg/l (dis), type iii Expiration date of 7/01/2014.
12. All tributaries to Clear Creek, including all lakes, reservoirs and wetlands, from the Argo Tunnel discharge to the Farmers Highline Canal diversion in Golden, Colorado, except for specific listings in Segments 13a and 13b.	UP 9/30/00 Baseline does not apply	Aq Life Cold 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS (CS-II)°C</u> D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)-340</u> <u>As(ch)=0.02-10(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec)Cr VI(ac/ch)=TVSCu(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	
13a. Mainstem of North Clear Creek, including all tributaries and wetlands, from its source to its confluence with Chase Gulch, and Four Mile Gulch and Chase Gulch, including all tributaries, lakes, reservoirs and wetlands, from their sources to the lowest water supply intake located in each stream and Chase Gulch including all tributaries, lakes, reservoirs and wetlands from its source to the their confluence with North Clear Creek.	9/30/00 Baseline does not apply	Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS (CS-I)°C</u> D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)-340</u> <u>As(ch)=0.02(Trec)</u> 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	
13b. Mainstem of North Clear Creek including all tributaries, lakes, reservoirs and wetlands from the source <u>a point just below the confluence with Chase Gulch</u> to the confluence with Clear Creek, except for the specific listings in segment 13a.	UP	Aq Life Cold 2 Recreation 4aE Agriculture	<u>T=TVS (CS-I)°C</u> D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=340</u> <u>As(acch)=100 (Trec)</u> 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), Mn(ch)=3841 µg/l (dis), Zn(ch)=1582 µg/l (dis), Fe(trecch)=7941 (Trec), type iii Expiration date of 7/01/2014.
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 Cold 2 Recreation 2N Water Supply Agriculture	<u>T=TVS (CS-I)°C</u> D.O. = 5-9 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=2000/100ml E.Coli=630/00ml	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	<u>As(ac)=50(Trec)-340</u> <u>As(ch)=0.02-10(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVSX3.66 ±	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)=500 114 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSX4.57±	Temporary modifications: Cu(ac/ch)=TVSX3.66*, Zn(ac/ch)=TVSX1.57*, type iii. Expiration date of 12/31/2014.
14b. Mainstem of Clear Creek from the Denver Water conduit #16 crossing to Youngfield Street in Wheat Ridge, Colorado.	UP	Aq Life Warm 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS (WS-II)°C</u> D.O. = 5.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)-340</u> <u>As(ch)=0.02-10(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVSX3.66 ±	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)=500114 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSX4.57±	
15. Mainstem of Clear Creek from <u>a point just below</u> Youngfield Street in Wheat Ridge, Colorado, to the confluence with the South Platte River.	UP	Aq Life Warm 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS (WS-II)°C</u> D.O. =5.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)-340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVSX3.66 ±	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)=TVSX4.57±	Aquatic life warm 1 goal qualifier. Temporary modification: NH ₃ (ac/ch)=TVS(old); NH ₃ (ch)=0.06 mg/l (Type i). Expiration date of 12/31/2011.

* TVS x (times) the FWER (final water effect ratio) = site-specific standard.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: CLEAR CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC	METALS				
				mg/l		ug/l			
16a. Mainstem of Lena Gulch including all tributaries, lakes, reservoirs and wetlands from its source to the outlet of Maple Grove Reservoir.	UP	Aq Life Warm 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WS-II)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Free)-340 <u>As(ch)=0.02-10(Trec)</u> Cd(ac)=TVS 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/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 2N Agriculture	<u>T=TVS(WS-II)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml 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	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 <u>Hg(ch)=0.01(Trec)</u>	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 2N Water Supply Agriculture	<u>T=TVS(CLL)°C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Free)-340 <u>As(ch)=0.02(Trec)</u> 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/ch)=TVS Zn(ac/ch)=TVS	Water + Fish Organics Standards
17b. Mainstem of Ralston Creek, including all tributaries and wetlands, from the source to the inlet of Arvada Reservoir, including Ralston Reservoir, and Upper Long Lake.	UP	Aq Life Cold 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-II)°C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Free)-340 <u>As(ch)=0.02(Trec)</u> 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/ch)=TVS Zn(ac/ch)=TVS	Water + Fish Organics Standards
18a. Mainstem of Ralston Creek, including all lakes and reservoirs tributaries and wetlands, from the outlet of Arvada Reservoir to the confluence with Clear Creek.	UP	Aq Life Warm 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WS-II)°C</u> D.O.= 5.0 mg/l pH= 6.5-9.0 F.Coli=200/100ml 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)=50(Free)-340 <u>As(ch)=0.02-10(Trec)</u> 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	
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 2N Water Supply Agriculture	<u>T=TVS(WS-II)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml 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)=50(Free)-340 <u>As(ch)=0.02-10(Trec)</u> 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	
19. All tributaries to Clear Creek, including lakes, reservoirs and wetlands, within the Mt. Evans Wilderness Area.	OW	Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(CS-I)°C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 =250	As(ac)=50(Free)-340 <u>As(ch)=0.02(Trec)</u> 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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: CLEAR CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
<u>20. Lakes and reservoirs in the Clear Creek system that are within the boundary of the Mt. Evans Wilderness Area.</u>	OW	Aq Life Cold 1 Recreation F 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 =250	As(ac)=50(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	
<u>21. Lakes and reservoirs in the Clear Creek system from sources to the Farmer's Highline Canal diversion in Golden, Colorado, except as specified in Segments 20 and 22. Upper Long Lake.</u>		Aq Life Cold 1 Recreation F 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)=50(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	
<u>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.</u>	9/30/00 baseline does not apply	Aq Life Cold 1 Recreation F 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)=100(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(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	
<u>23. Ralston Reservoir</u>		Aq Life Cold 2 Recreation F Water Supply Agriculture	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)=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	Water + Fish Standards
<u>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.21 and 23.</u>		Aq Life Warm 1 Recreation F Water Supply Agriculture	T=TVS(WL)°C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=205/100ml	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/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/ch)=TVS Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: BIG DRY CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
1. Mainstem of Big Dry Creek, including all tributaries, lakes, reservoirs and wetlands, from the source to the confluence with the South Platte River, except for specific listing in Segment 2, 3, 4a, 4b, 5 and 6.	UP	Aq Life Warm 2 Recreation 4bP Agriculture	<u>T=TVS(WS-I)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=325/100ml E.Coli=205/100ml	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 =4.5	As(ac)=340 As(ac ch)=100(Trec) Be(ch)=100 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 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)=45.9.2 Se(ac)=49.416	Temporary modifications: NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch) = 0.10 mg/l</u> (Type i). Expiration date of 12/31/2011.
2. Standley Lake.		Aq Life Warm 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS(WL)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec)340 <u>As(ch)=0.02(Trec)</u> Be(ch)=4 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	See attached Table 2 for additional standards for segment 2. See * for narrative standard.
3. Great Western Reservoir.	UP	Aq Life Warm 2 Recreation 2N Water Supply Agriculture	<u>T=TVS(WL)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml 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	As(ac)=400(Trec)340 <u>As(ch)=0.02-10(Trec)</u> Be(ch)=100 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	See attached Table 2 for additional standards for segment 3. Temporary modification: NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch) = 0.10 mg/l</u> (Type i). Expiration date of 12/31/2011.
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 4aE Water Supply Agriculture	<u>T=TVS(WS-I)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	As(ac)=50(Trec)340 <u>As(ch)=0.02-10(Trec)</u> Be(ch)=4 Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(acch)=0.01(Tot)	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 4a.
4b. North and South Walnut Creek and Walnut Creek, from the outlet of ponds A-4 and B-5 to Indiana Street.	UP	Aq Life Warm 2 Recreation 2P Water Supply Agriculture	<u>T=TVS(WS-II)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml E.Coli=630/205/100ml	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	As(ac)=50(Trec)340 <u>As(ch)=0.02-10(Trec)</u> Be(ch)=4 Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(acch)=0.01(Tot)	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 4b.
5. Mainstems of North and South Walnut Creek, including all tributaries, lakes, reservoirs and wetlands, from their sources to the outlets of ponds A-4 and B-5, on Walnut Creek, and Pond C-2 on Woman Creek. All three ponds are located on Rocky Flats property.	UP	Aq Life Warm 2 Recreation 2P Water Supply Agriculture	<u>T=TVS(WS-II)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml E.Coli=630/205/100ml	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	As(ac)=50(Trec)340 <u>As(ch)=0.02-10(Trec)</u> Be(ch)=4 Cd(ac/ch)=TVS CrIII(ac)=50(Trec) 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	See attached Tables 2 and 3 for additional standards and temporary modifications for seg 5. Goal qualifier for all use classifications, expires 12/31/09.

*Narrative standard for Segment 2, Big Dry Creek, Standley Lake. 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. Implementation of this narrative standard shall only be by Best Management Practices and controls implemented on a voluntary basis.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: BIG DRY CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
6. Upper Big Dry Creek and South Upper Big Dry Creek, from their source to Standley Lake.	UP	Aq Life Warm 2 Recreation <u>2N</u> Water Supply Agriculture	<u>T=TVS(W.S-I)°C</u> <u>D.O.=5.0 mg/l</u> <u>pH=6.5-9.0</u> <u>F.Coli=2000/100ml</u> <u>E.Coli=630/100ml</u>	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.5</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=50(Free)-340</u> <u>As(ch)=0.02-10(Trec)</u> <u>Cd(ac/ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac/ch)=TVS</u> <u>Zn(ac/ch)=TVS</u>	
7. <u>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.</u>		<u>Aq Life Warm 2</u> <u>Recreation P</u> <u>Water Supply</u> <u>Agriculture</u>	<u>T=TVS(WL)°C</u> <u>D.O.=5.0 mg/l</u> <u>pH=6.5-9.0</u> <u>E.Coli=205/100ml</u>	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.5</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02-10(Trec)</u> <u>Be(ch)=100</u> <u>Cd(ac/ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac/ch)=TVS</u> <u>Zn(ac/ch)=TVS</u>	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 AND 3 BASIN: BOULDER CREEK	DESIG	CLASSIFICATION S	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
Stream Segment Description			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
1. All tributaries to Boulder Creek, including all lakes, reservoirs and wetlands, within the Indian Peaks Wilderness Area.	OW	Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/400ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) <u>CrIII(ch)=TVS</u> 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	
2a. Mainstem of Boulder Creek, including all tributaries, lakes, reservoirs and wetlands, from the boundary of the Indian Peaks Wilderness Area to a point immediately above below the confluence with South North Boulder Creek, except for the specific listings in Segment 3 and 12.		Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/400ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) <u>CrIII(ch)=TVS</u> 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	
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.		<u>Aq Life Cold 1 Recreation E Water Supply Agriculture</u>	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=126/100ml	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> <u>Cd(ac)=TVS(tr)</u> <u>Cd(ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrIII(ch)=TVS</u> <u>CrVI(ac/ch)=TVS</u>	<u>Cu(ac/ch)=TVS</u> <u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac)=TVS</u> <u>Ag(ch)=TVS(tr)</u> <u>Zn(ac/ch)=TVS</u>	
3. Mainstem of Middle Boulder Creek, including all tributaries, lakes, reservoirs and wetlands, from the source to the outlet of Barker Reservoir, except for specific listings on Segment 1.		Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/400ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) <u>CrIII(ch)=TVS</u> 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	
4a. Mainstem of South Boulder Creek, including all tributaries, lakes, reservoirs and wetlands, from the source to the outlet of Gross Reservoir.		Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/400ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	
4b. Mainstem of South Boulder Creek, including all tributaries, lakes, reservoirs 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 4a E Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/400ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	
4c. Mainstem of Cowdrey Drainage from the source below Cowdrey Reservoir #2 to the Davidson Ditch.	UP	Aq Life Warm 2 Recreation 4a E Water Supply Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/400ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02-10(Trec)</u> 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)=TVS Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 AND 3 BASIN: BOULDER CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC	METALS				
Stream Segment Description				mg/l		ug/l			
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 4a <u>E</u> Water Supply Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02-10(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) 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	
5. Mainstem of South Boulder Creek from South Boulder Road to the confluence with Boulder Creek.	UP	Aq Life Warm 1 Recreation 4a <u>E</u> Water Supply Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) 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	
6. Mainstem of Coal Creek, including all tributaries, lakes, reservoirs and wetlands, from the source to Highway 93.	UP	Aq Life Cold 2 Recreation 4a <u>E</u> Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02-10(Trec)</u> 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	
7a. Mainstem of Coal Creek from Highway 93 to Highway 36 (Boulder Turnpike).	UP	Aq Life Warm 1 Recreation 4a <u>E</u> Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ch)=400(Free)</u> <u>As(ac)=340</u> <u>As(ch)=7.6(Trec)</u> 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	
7b. Mainstem of Coal Creek from Highway 36 to the confluence with Boulder Creek.	UP	Aq Life Warm 2 Recreation 4a <u>E</u> Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ch)=400(Free)</u> <u>As(ac)=340</u> <u>As(ch)=100(Trec)</u> 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: NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.06</u> (Type i). Expiration date of 12/31/2011.
8. All tributaries to South Boulder Creek, including all lakes, reservoirs and wetlands from South Boulder Road to the confluence with Boulder Creek and all tributaries to Coal Creek, including all lakes, reservoirs and wetlands from Highway 93 to the confluence with Boulder Creek.	UP	Aq Life Warm 2 Recreation 4a <u>E</u> Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 Cl=250 SO ₄ =250	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=100(Trec)</u> 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	
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 4a <u>E</u> Water Supply Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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: type (iii) <u>Cu(ac/ch)=Current</u> Condition. Expiration date of 4/23/2009. NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.06</u> (Type i). Expiration date of 12/31/2011

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 AND 3 BASIN: BOULDER CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
10. Mainstem of Boulder Creek from the confluence with Coal Creek to the confluence with St. Vrain Creek.	UP	Aq Life Warm 1 Recreation 4a E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Free) 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: NH ₃ (ac/ch)=TVS(old) NH ₃ (ch)=0.06 (Type i). Expiration date of 12/31/2011.
11. All tributaries to Boulder Creek, including all lakes, reservoirs, and 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 4a E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Free) 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	
12. Deleted.									
13. All lakes and reservoirs tributary to Boulder Creek that are within the boundary of the Indian Peaks 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	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/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	
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 segments 13. This segment includes Barker Reservoir.		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)=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	
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. This segment includes Gross Reservoir.		Aq Life Cold 2 Recreation E Water Supply Agriculture	T=TVS(CL,CLL) °C Gross Reservoir April-Dec T _{WAT} =20.8°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) 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	
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) 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	
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	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/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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 AND 3 BASIN: ST. VRAIN CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
1. All tributaries to St. Vrain Creek, including all lakes, reservoirs and wetlands, which are within the Indian Peaks Wilderness Area and Rocky Mountain National Park.	OW	Aq Life Cold 1 Recreation 4a 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 F.Coli=200/100ml 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)=50(Trec) 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	
2a. Mainstem of St. Vrain Creek, including all tributaries, lakes, reservoirs and wetlands, from the boundary of the Indian Peaks Wilderness Area and Rocky Mountain National Park to Hygiene Road the eastern boundary of Roosevelt National Forest.		Aq Life Cold 1 Recreation 4a 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 F.Coli=200/100 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)=50(Trec) 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	
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 F.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	
3. Mainstem of St. Vrain Creek from Hygiene Road to the confluence with the South Platte River and Barbour Ponds.	UP	Aq Life Warm 1 Recreation 4a E Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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(ch)=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	Temporary modifications: NH ₃ (ac/ch)=TVS(old) NH ₃ (ch)=0.06 (Type I). Expiration date of 12/31/2011.
4a. Mainstem of Left Hand Creek, including all tributaries, lakes, reservoirs and wetlands, from the source to highway 36 a point immediately below the confluence with James Creek, except for specific listings in Segment 4b.		Aq Life Cold 1 Recreation 4a 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 F.Coli=200/100ml 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)=50(Trec) 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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
4b. Mainstem of James Creek, including all tributaries, lakes, reservoirs and wetlands, from the source to the confluence with Left Hand Creek.		Aq Life Cold 1 Recreation 4a 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 F.Coli=200/100ml 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)=50(Trec) 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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
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 F.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/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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 AND 3 BASIN: ST. VRAIN CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS ug/l				
Stream Segment Description									
5. Mainstem of Left Hand Creek, including all tributaries, lakes, reservoirs and wetlands from Highway 36 to the confluence with St. Vrain Creek.	UP	Aq Life Warm 2 Recreation 4a E Water Supply Agriculture	T=TVS(WS-I) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/400# 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 SO ₄ =WS	As(ac)=50(Trec) 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)=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	
6. All tributaries to St. Vrain Creek, including lakes, reservoirs and 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 4a E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/400# 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 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 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: Se(ch)=6.6µg/l (dis). Type iii). Expiration date of 2/28/10. NH ₃ (ac/ch)=TVS(old) NH ₃ (ch)=0.10 (Type i). Expiration date of 12/31/2011.
7. Boulder Reservoir, Coot Lake, and Left Hand Valley Reservoir.		Aq Life Warm 1 Recreation 4a E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/400 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)=50(Trec) 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	
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 F.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/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	
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 F.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/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	
10. All lakes and reservoirs tributary to Left Hand Creek from sources to Highway 36.		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 F.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/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	
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 F.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/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/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 F.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) 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/ch)=TVS Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 AND 3 BASIN: ST. VRAIN CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS	
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l			METALS ug/l			
Stream Segment Description										
<u>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.</u>		<u>Aq. Life Warm 2</u> <u>Recreation E</u> <u>Water Supply</u> <u>Agriculture</u>	<u>T=TVS(WL) °C</u> <u>D.O.=5.0 mg/l</u> <u>pH=6.5-9.0</u> <u>E.Coli=126/100ml</u>	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.5</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02-10 (Trec)</u> <u>Cd(ac/ch)=TVS</u> <u>CrIII(ac/ch)=TVS</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac/ch)=TVS</u> <u>Zn(ac/ch)=TVS</u>		

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: MIDDLE SOUTH PLATTE RIVER	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS					TEMPORARY MODIFICATIONS AND QUALIFIERS	
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS Ug/l				
Stream Segment Description									
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 4a E Water Supply Agriculture	<u>T=TVS(WS-II) °C</u> D.O.* pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS*2.2	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. <u>Fish Ingestion Organics Standards</u> Temporary modifications: NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011.
1b. Mainstem of the South Platte River from a point immediately below the confluence with St. Vrain Creek to the Weld/Morgan County Line.	UP	Aq Life Warm 2 Recreation 4a E Water Supply Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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/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	<u>Fish Ingestion Organics Standards</u> Temporary modifications: NH ₃ (ac/ch)=TVS(old) (Type i). Expiration date of 12/31/2011.
2. Deleted.									
3a. All tributaries to the South Platte River, including all lakes, reservoirs and 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, 4, 5a, 5b, 5c, and 6.	UP	Aq Life Warm 2 Recreation 4a E Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ch)=100(Free)</u> <u>As(ac)=340</u> <u>As(ch)=7.6(Trec)</u> 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	<u>Fish Ingestion Organics Standards</u> Temporary modifications: NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011.
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 4a E Agriculture	<u>T=TVS(WS-IV) °C</u> D.O. (ch)= pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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	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 4a E Water Supply Agriculture	<u>T=TVS(WL) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Free)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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/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	<u>Fish Ingestion Organics Standards</u> Temporary modification: <u>pH= existing quality (Type iii).</u> Expiration date of 12/31/2014.
5a. Mainstems of Lone Tree Creek, Crow Creek and Box Elder Creek from their the sources to their the confluences with the South Platte River, except for specific listings in Segment 5b.	UP	Aq Life Warm 2 Recreation 2 N Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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	
5b. Mainstem of Boxelder Creek from the confluence with Coyote Run to the Denver Hudson Canal.	UP	Aq Life Warm 2 Recreation 2 N Agriculture	<u>T=TVS(WS-IV) °C</u> D.O. (ch)=4.7 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=340</u> 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	15 th 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	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.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 <u>NO₃=100</u>	<u>As(ac)=340</u> <u>As(ch)=100(Trec)</u> 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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: MIDDLE SOUTH PLATTE RIVER	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS Ug/l			
Stream Segment Description									
6. Lost Creek from Interstate 76 south, including all its tributaries, stock ponds and wetlands.	UP	Aq Life Warm 2 Recreation 2 <u>N</u> Agriculture	<u>T=TVS(WS-IV) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/400ml E. Coli=630/100ml	NO ₃ =100 NO ₂ =10 CN=0.2	S=0.002 B=0.75	<u>As(ac)=340</u> As=100(Trec) Be(ch)=100(Trec) Cd=10(Trec) CrIII=100(Trec) CrVI=100(Trec) Cu=200(Trec)	Pb=100(Trec) Mn=200(Trec) Ni=200(Trec) Se=20(Trec)	Zn=2000(Trec)	
<u>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.</u>		<u>Aq Life Warm 2 Recreation E Water Supply Agriculture</u>	<u>T=TVS(WL) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>ON=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.5</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> <u>Cd(ac/ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Mn(ac/ch)=TVS</u> <u>Hg(ch)=0.01(Tot)</u> <u>Ni(ac/ch)=TVS</u>	<u>Se(ac/ch)=TVS</u> <u>Ag(ac/ch)=TVS</u> <u>Zn(ac/ch)=TVS</u>	<u>Water + Fish Standards</u>

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

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

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

$$chronic (Apr1 - July 31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$$

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

NH₃ = old TVS

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

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: BIG THOMPSON RIVER	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS ug/l				
Stream Segment Description									
1. Mainstem of the Big Thompson River, including all tributaries to the Big Thompson River system, including all lakes, reservoirs and wetlands, which are within Rocky Mountain National Park, except for specific listings in Segment 2.	OW	Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Free) <u>As(ac)=340</u> As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) <u>CrIII(ch)=TVS</u> 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	
2. Mainstem of the Big Thompson River, including all tributaries, lakes, reservoirs, 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.		Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Free) <u>As(ac)=340</u> As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) <u>CrIII(ch)=TVS</u> 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	Temporary modifications: D.O., F.Coli, NH₃, NO₂, B, Cd, Cu, Pb, Hg, Ni, Se, Ag, Zn = existing quality. Wapiti Meadow wetlands at the toe of Lake Estes Dam (type iii) Expiration date of 12/31/2009
3. Mainstem of the Big Thompson River from the Home Supply Canal diversion to the Big Barnes Ditch diversion.	UP	Aq Life Cold 2 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(Free) <u>As(ac)=340</u> 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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Organics Standards
4a. Mainstem of the Big Thompson from the Big Barnes Ditch diversion to the Greeley-Loveland Canal diversion.	UP	Aq Life Cold 2 Water Supply Agriculture 5/1 – 10/15 Recreation 4a E 10/16 – 4/30 Recreation 2 N	<u>T=TVS(CS-II) °C</u> D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 5/1 - 10/15 F.Coli=200/100ml E.Coli=126/100ml 10/16 – 4/30 F.Coli=2000/100ml 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)=50(Free) <u>As(ac)=340</u> 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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Water + Fish Organics Standards
4b. Mainstem of the Big Thompson from the Greeley-Loveland Canal diversion to County Road 11H.	UP	Aq Life Warm 2 Agriculture 5/1 – 10/15 Recreation 4a E 10/16 – 4/30 Recreation 2 N	<u>T=TVS(WS-I) °C</u> D.O. = 5.0 mg/l pH = 6.5-9.0 5/1 – 10/15 F.Coli=200/100ml E.Coli=126/100ml 10/16 – 4/30 F.Coli=2000/100ml 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 <u>NO₃=100</u>	As(ch)=100(Free) <u>As(ac)=340</u> 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	Fish Ingestion Organics Standards Temporary modification: Se(ch)=5.5ug/l (dis). (type iii) Expiration date of 2/28/10.
4c. Mainstem of the Big Thompson from County Road 11H to I-25.	UP	Aq Life Warm 2 Agriculture 5/1 – 10/15 Recreation 4a E 10/16 – 4/30 Recreation 2 N	<u>T=TVS(WS-I) °C</u> D.O. = 5.0 mg/l pH = 6.5-9.0 5/1 – 10/15 F.Coli=200/100ml E.Coli=126/100ml 10/16 – 4/30 F.Coli=2000/100ml 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 <u>NO₃=100</u>	As(ch)=100(Free) <u>As(ac)=340</u> 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	Fish Ingestion Organics Standards

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: BIG THOMPSON RIVER	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS ug/l				
Stream Segment Description									
5. Mainstem of The Big Thompson River from I-25 to the confluence with the South Platte River.	UP	Aq Life Warm 2 Agriculture 5/1 – 10/15 Recreation 4B E 10/16 – 4/30 Recreation 2 N	<u>T=TVS(WS-II) °C</u> D.O. = 5.0 mg/l pH = 6.5-9.0 5/1 – 10/15 <u>F.Coli=325/100ml</u> <u>E.Coli=205/100ml</u> 10/16 – 4/30 <u>F.Coli=2000/100ml</u> <u>E.Coli=630/100ml</u>	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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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: NH ₃ (ac/eh)=TVS(old) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011.
6. All tributaries to the Big Thompson River, including all lakes, reservoirs and wetlands, from the Home Supply Canal diversion to the confluence with the South Platte River, except for specific listings in Segments 12.	UP	Aq Life Warm 2 Recreation 4A E Agriculture	<u>T=TVS(WS-II) °C</u> D.O. = 5.0 mg/l pH = 6.5-9.0 <u>F.Coli=200/100ml</u> <u>E.Coli=126/100ml</u>	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 <u>NO₃=100</u>	<u>As(ch)=100(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=7.6(Trec)</u> 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	Fish Ingestion Organics Standards Temporary modifications: NH ₃ (ac/eh)=TVS(old) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011.
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 4A E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> <u>E.Coli=126/100ml</u>	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	<u>As(ac)=50(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	
8. Mainstem of the Little Thompson River, including all tributaries, lakes, reservoirs and wetlands, from the source to the Culver Ditch diversion.		Aq Life Cold 1 Recreation 4A E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> <u>E.Coli=126/100ml</u>	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	<u>As(ac)=50(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	
9. Mainstem of the Little Thompson River from the Culver Ditch diversion to the confluence with the Big Thompson River.	UP	Aq Life Warm 2 Recreation 4A E Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> <u>E.Coli=126/100ml</u>	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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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: NH ₃ (ac/eh)=TVS(old) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011.
10. All tributaries to the Little Thompson River, including all lakes, reservoirs and wetlands, from the Culver Ditch diversion to the confluence with the Big Thompson River, except for specific listings in Segments 11 and 13.	UP	Aq Life Warm 2 Recreation 4A E Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100mg</u> <u>E.Coli=126/100ml</u>	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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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: NH ₃ (ac/eh)=TVS(old) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011.
11. Carter Lake.		Aq Life Cold 1 Recreation 4A E Water Supply Agriculture	<u>T=TVS(CLL) °C</u> <u>April-Dec</u> <u>T_{WAT}=22.7°C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100ml</u> <u>E.Coli=126/100ml</u>	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	<u>As(ac)=50(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: BIG THOMPSON RIVER	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC	METALS				
Stream Segment Description				mg/l	ug/l				
12. Lake Loveland, Horseshoe Lake, Boyd Lake.		Aq Life Warm 1 Recreation 4a E Water Supply Agriculture	T=TVS(WL) °C D.O. = 5.0 mg/l pH = 6.5-9.0 F.Coli=200/400mp 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)=50(Trec) 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	
13. Berthoud Reservoir, Johnstown Reservoir.	UP	Aq Life Warm 2 Recreation 4a E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/400mp 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)=50(Trec) 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	
14. Welch Reservoir, Lonetree Reservoir, Boedecker Lake, Lon Hagler Reservoir.		Aq Life Warm 1 Recreation 4a E Water Supply Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/400mp 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)=50(Trec) 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	
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)=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	
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.		Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CL, CL1) °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)=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	
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/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 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	
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. (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/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	
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) 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 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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: CACHE LA POUVRE RIVER	DESIG	CLASSIFICATIO NS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
Stream Segment Description				mg/l		ug/l			
1. Mainstem of the Cache La Poudre River, and all tributaries, including lakes, reservoirs 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 4a E Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec) <u>As(ac)=340</u> 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	
2a. Mainstem of the Cache La Poudre River, <u>including</u> and all tributaries, including lakes, reservoirs and wetlands 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 to a point immediately below the confluence with the South Fork Cache La Poudre River.		Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec) <u>As(ac)=340</u> 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	
2b. Mainstem of the Cache La Poudre River, <u>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.</u>		Aq Life Cold 1 Recreation E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> <u>Cd(ac)=TVS(tr)</u> <u>Cd(ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrIII(ch)=TVS</u> <u>CrVI(ac/ch)=TVS</u>	<u>Cu(ac/ch)=TVS</u> <u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac)=TVS</u> <u>Ag(ch)=TVS(tr)</u> <u>Zn(ac/ch)=TVS</u>	
3. Deleted.									
4. Deleted.									
5. Deleted.									
6. Mainstem of the North Fork of the Cache La Poudre River, including all tributaries, lakes, reservoirs and wetlands, from the source to the inlet of Halligan Reservoir.		Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec) <u>As(ac)=340</u> 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	
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.	UP	Aq Life Cold 2 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec) <u>As(ac)=340</u> 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	Water + Fish Organics Standards
8. All tributaries to the North Fork of the Cache La Poudre River, including all lakes, reservoirs and wetlands from the inlet of Halligan Reservoir to the confluence with the Cache La Poudre River, except for specific listings in Segment 9.	UP	Aq Life Cold 2 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec) <u>As(ac)=340</u> 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	Water + Fish Organics Standards

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: CACHE LA POUVRE RIVER	DESIG	CLASSIFICATION S	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS ug/l				
Stream Segment Description									
9.		Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	
10.	UP	Aq Life Cold 2 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	Water + Fish Organics Standards
11.	UP	Aq Life Warm 2 Recreation 4a E Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ah)=400(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=7.6(Trec)</u> 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 Organics Standards Temporary Modifications: Cu(ac/ch)=Current Condition-type (iii) Expiration date of 12/31/2009. NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011.
12.	UP	Aq Life Warm 2 Recreation 4a E Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ah)=400(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=7.6(Trec)</u> 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 Organics Standards Temporary modifications: Cu(ac/ch)=Current Condition-type (iii) Expiration date of 12/31/2009. NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011.
13a.	UP	Aq Life Warm 2 Recreation 4a E Agriculture <u>Water Supply</u>	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=400(Trec)</u> <u>0.02-10(Trec)</u> Cd(ac/ch)=TVS CrIII(ac/ch)=TVS <u>CrIII(ac)=50(Trec)</u> CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	<u>Fe(ch)=WS(dis)</u> Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS <u>Mn(ch)=WS(dis)</u> Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac/ch)=TVS <u>Ag(ch)=TVS(tr)</u> Zn(ac/ch)=TVS	Temporary modification: NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.06</u> (Type i). Expiration date of 12/31/2011.
13b.	UP	Aq Life Warm 2 5/15-9/15 Recreation 4b E 9/16-5/14 Recreation 2 N Agriculture	<u>T=TVS(WS-II) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 5/15-9/15 F.Coli=325/100ml E.Coli=205/100ml 9/16-5/14 F.Coli=2000/100ml 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 <u>NO₃=100</u>	<u>As(ac)=340</u> 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 modification: NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: CACHE LA POUVRE RIVER	DESIG	CLASSIFICATION S	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS ug/l				
Stream Segment Description									
13c. <u>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.</u>		Aq Life Cold 2 Recreation F 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)=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	
14. Horsetooth Reservoir.		Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	T=TVS(CLL) °C Apr-Dec T _{WAT} =22.1°C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/400ml 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)=50(Trec) As(ch)=50(Trec) 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	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	
15. Watson Lake.		Aq Life Cold 1 Recreation 4a 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 F.Coli=200/400ml 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)=50(Trec) 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)	Ni(ac/ch)=TVS 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 4a E Agriculture	T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/400ml 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(ch)=400(Trec) 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	
17. <u>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 Area.</u>	OW	Aq Life Cold 1 Recreation F 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)=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	
18. <u>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 Area to the Monroe Gravity Canal/North Poudre Supply canal diversion. This segment includes Lake Estes.</u>		Aq Life Cold 1 Recreation F Water Supply Agriculture	T=TVS(CL, CL1) °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)=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	
19. <u>All lakes and reservoirs tributary to the North Fork of the Cache La Poudre River from the source to the inlet of Halligan Reservoir.</u>		Aq Life Cold 1 Recreation F 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)=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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: CACHE LA POUVRE RIVER	DESIG	CLASSIFICATION S	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
20. <u>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.</u>		<u>Aq Life Cold 2 Recreation E Water Supply Agriculture</u>	<u>T=TVS(CL,CLL) °C Seaman Reservoir Apr-Dec T_{WAT}=22.5°C D.O.=6.0 mg/l pH=6.5-9.0 E.Coli=126/100ml</u>	<u>NH₃(ac/ch)=TVS Cl₂(ac)=0.019 Cl₂(ch)=0.011 CN=0.005</u>	<u>S=0.002 B=0.75 NO₂=0.05 NO₃=10 Cl=250 SO₄=WS</u>	<u>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</u>	<u>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)</u>	<u>Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS</u>	<u>Water + Fish Standards</u>
21. <u>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, and 20.</u>		<u>Aq Life Warm 2 Recreation E Water Supply Agriculture</u>	<u>T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml</u>	<u>NH₃(ac/ch)=TVS Cl₂(ac)=0.019 Cl₂(ch)=0.011 CN=0.005</u>	<u>S=0.002 B=0.75 NO₂=0.5 NO₃=10 Cl=250 SO₄=WS</u>	<u>As(ac)=340 As(ch)=0.02-10(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS</u>	<u>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</u>	<u>Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS</u>	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: LARAMIE RIVER	DESIG	CLASSIFICATIO NS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
1. All tributaries to the Laramie River, including all lakes, reservoirs and wetlands, which are within the Rawah Wilderness Area.	OW	Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec) <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	
2. Mainstem of the Laramie River, including all tributaries, lakes, reservoirs and wetlands, from the source to the Colorado/Wyoming border, except for specific listings in Segment 1.		Aq Life Cold 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec) <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	
<u>3. All lakes and reservoirs tributary to the Laramie River within the Rawah Wilderness Area.</u>	<u>OW</u>	<u>Aq Life Cold 1 Recreation E Water Supply Agriculture</u>	<u>T=TVS(CL) °C</u> <u>D.O.=6.0 mg/l</u> <u>D.O.(sp)=7.0 mg/l</u> <u>pH=6.5-9.0</u> <u>F.Coli=126/100ml</u>	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> <u>Cd(ac)=TVS(tr)</u> <u>Cd(ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac)=TVS</u> <u>Ag(ch)=TVS(tr)</u> <u>Zn(ac/ch)=TVS</u>	
<u>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.</u>		<u>Aq Life Cold 1 Recreation E Water Supply Agriculture</u>	<u>T=TVS(CL) °C</u> <u>D.O.=6.0 mg/l</u> <u>D.O.(sp)=7.0 mg/l</u> <u>pH=6.5-9.0</u> <u>F.Coli=126/100ml</u>	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> <u>Cd(ac)=TVS(tr)</u> <u>Cd(ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac)=TVS</u> <u>Ag(ch)=TVS(tr)</u> <u>Zn(ac/ch)=TVS</u>	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 1 BASIN: Lower South Platte River	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
Stream Segment Description				mg/l		ug/l			
1. Mainstem of the South Platte River from the Weld/Morgan County line to the Colorado/Nebraska border.	UP	Aq Life Warm 2 Recreation 4a E Water Supply Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec) As(ac)=340 As(ch)=0.02(TTrec) 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/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: NH ₃ (ac/ch)=TVS(old) NH ₃ (ch)=0.10 (Type i). Expiration date of 12/31/2011.
2a. All tributaries to the South Platte River, including all lakes, reservoirs and wetlands, from the Weld/Morgan County line to the Colorado/Nebraska border, except for the specific listings in Segments 2b and 3.	UP	Aq Life Warm 2 Recreation 2 N Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml E.Coli=630/100ml	CN=0.2 NO ₂ =10 NO ₃ =100	B=0.75	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)	Ni(ch)=200(Trec) Se(ch)=20(Trec) Zn(ch)=2000(Trec)	
2b. All tributaries to the South Platte River, including all lakes, reservoirs and 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.	UP	Aq Life Warm 2 Recreation 4a E Agriculture	T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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: NH ₃ (ac/ch)=TVS(old) NH ₃ (ch)=0.06 (Type i). Expiration date of 12/31/2011.
3. Jackson Reservoir, Prewitt Reservoir, North Sterling Reservoir, Jumbo (Julesburg), Riverside Reservoir, Empire Reservoir, and Vancil Reservoir.	UP	Aq Life Warm 1 Recreation 4a E Agriculture	T=TVS(WL) °C Jackson Reservoir April-Dec T _{WAT} =28.1° North Sterling Res. April-Dec T _{WAT} =28.1° Jumbo Reservoir April-Dec T _{WAT} =27.0° D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=400 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	
4. All lakes and reservoirs tributary to the South Platte River from the Weld/Morgan County line to the Colorado/Nebraska border, except for the those specific listings in Segment 3.		Aq Life Warm 2 Recreation N Water Supply Agriculture	T=TVS(WL) °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	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(TTrec) Be(ch)=100(TTrec) Cd(ch)=10(TTrec) CrIII(ch)=100(TTrec) CrVI(ch)=100(TTrec)	Cu(ch)=200(TTrec) Fe(ch)=WS(dis) Fe(ch)=1000(TTrec) Pb(ch)=100(TTrec) Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot)	Ni(ch)=200(TTrec) Se(ch)=20(TTrec) Zn(ch)=2000(TTrec)	
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) °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(TTrec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(TTrec) 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	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 1 and 5 BASIN: Republican River	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
Stream Segment Description				mg/l		ug/l			
1. Mainstem of the South Fork of the Republican River from a point 10 miles above Bonny Reservoir to the Colorado-Kansas border.	UP	Aq Life Warm 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	
2. Bonny Reservoir, Stalker Lake.		Aq Life Warm 1 Recreation 4a E Water Supply Agriculture	<u>T=TVS(WI) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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 4a E Water Supply Agriculture	<u>T=TVS(CS-II) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=0.02(Trec)</u> 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	
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 4a E Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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 <u>NO₃=100</u>	<u>As(ch)=100(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=7.6(Trec)</u> 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	
5. Mainstem of the Black Wolf Creek from the source to the confluence with the Arikaree River.	UP	Aq Life Warm 2 Recreation 4a E Water Supply Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	<u>As(ac)=50(Trec)</u> <u>As(ac)=340</u> <u>As(ch)=100(Trec)</u> 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	
6. All tributaries to the Republican River system in Colorado, including all lakes, reservoirs and wetlands, except for specific listings in Segments 1 through 5.	UP	Aq Life Warm 2 Recreation 2 N Agriculture	<u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/400ml E.Coli=630/100ml	CN=0.2 NO ₂ =10 NO ₃ =100	B=0.75	<u>As(ac)=340</u> 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)	Ni(ch)=200(Trec) Se(ch)=200(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, lakes, reservoirs and wetlands, from the source to the Colorado/Kansas border.	UP	Aq Life Warm 2 Recreation 2 N Agriculture	<u>T=TVS(WS-IV) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/400ml E.Coli=630/100ml	CN=0.2 NO ₂ =10 NO ₃ =100	B=0.75	<u>As(ac)=340</u> 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)	Ni(ch)=200(Trec) Se(ch)=20(Trec) Zn(ch)=2000(Trec)	
8. All lakes and reservoirs tributary to the Republican and Smoky Hill Rivers in Colorado, except for specific listings in Segment 2.		Aq Life Warm 2 Recreation N Water Supply Agriculture	<u>T=TVS(WI) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=630/100ml	<u>CN=0.2</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.5</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=340</u> <u>As(ch)=0.02-10(Trec)</u> <u>Be(ch)=100(Trec)</u> <u>Cd(ch)=10(Trec)</u> <u>CrIII(ch)=100(Trec)</u> <u>CrVI(ch)=100(Trec)</u>	<u>Cu(ch)=200(Trec)</u> <u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ch)=100(Trec)</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ch)=200(Trec)</u> <u>Se(ch)=20(Trec)</u> <u>Zn(ch)=2000(Trec)</u>	

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).

Table 3
Temporary Modifications (type i)
Big Dry Creek, Segment 5

Effective until December 31, 2009 for the Walnut Creek portions of segment 5:

Parameter	mg/l
Nitrate	100
Nitrite	4.5

Effective until December 31, 2009 for all of segment 5:

Parameter	mg/l
Benzene	0.005
Carbon tetrachloride	0.005
1,2-Dichloroethane	0.005
1,1-Dichloroethene	0.007
Tetrachloroethylene	0.005
Trichloroethylene	0.005

All other organic and radiologic parameters are covered by the Basic Standards.

WATER QUALITY CONTROL DIVISION PROPOSED

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 2009 RULEMAKING

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

The Commission decided to split lakes/reservoirs from segments that contained both streams and lakes/reservoirs so that new temperature standards could be adopted. The water supply use was presumptively applied to these segments in the absence of information indicating that the water supply use is neither existing nor potentially existing. Lakes and reservoirs were deleted from the following segments that previously encompassed both streams and lakes/reservoirs:

- Upper South Platte River Segments 1a, 1b, 2a, 3, 4, 5b, 7, 8, 9, 10b, 11a, 11b, 16c, and 16g
- Cherry Creek Segment 4
- Bear Creek Segments 1a, 3, 4a, 4b, 4c, 5, and 7
- Clear Creek Segments 1, 2, 3a, 6, 9a, 9b, 10, 12, 13a, 13b, 16a, 17b, 18a, and 19
- Big Dry Creek Segment 1
- Boulder Creek Segments 1, 2, 3, 4a, 4b, 6, 8, and 11
- St. Vrain Creek Segments 1, 2, 4a, 4b, 5, and 6
- Middle South Platte River Segments 3a and 6
- Big Thompson River Segments 1, 2, 6, 8, and 10
- Cache La Poudre River Segments 1, 2, 6, 8, and 13a
- Laramie River Segments 1 and 2
- Lower South Platte River Segments 2a and 2b
- Republican River Segments 6 and 7

The following lakes/reservoirs segments were created:

- Upper South Platte River Segments 18, 19, 20, 21, and 22
- Cherry Creek Segment 5
- Bear Creek Segments 8, 9, 10, and 11
- Clear Creek Segments 20, 21, 22, 23, and 24
- Big Dry Creek Segment 7
- Boulder Creek Segments 13, 14, 15, 16, and 17
- St. Vrain Creek Segments 8, 9, 10, 11, 12, and 13
- Middle South Platte River Segment 7
- Big Thompson River Segments 15, 16, 17, 18, and 19
- Cache La Poudre River Segments 17, 18, 19, 20, and 21
- Laramie River Segments 3 and 4
- Lower South Platte River Segments 4 and 5
- Republican River Segment 8

Some renumbering and/or creation of new segments was made due to information which showed that: a) the original reasons for segmentation no longer applied; b) new water quality data showed that streams should be resegmented based on changes in their water quality; and/or c) certain segments could be grouped together in one segment because they had similar quality and uses. In particular, segmentation

was changed to facilitate adoption of the new temperature standards into individual segments. The following changes were made:

Upper South Platte River 1a: The segment description was amended to exclude lakes and reservoirs, and the segment now ends at the inlet of Cheesman Reservoir. Lakes and reservoirs formerly included in this segment are now part of Segment 19. The portion of the segment from Chatfield Reservoir to a point immediately above the confluence with the North Fork of the South Platte River is now part of Segment 6a. The alteration of the segment boundary, the amendment of the description, and the resultant creation of Segment 19 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 1b: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 18. The amendment of the description and the resultant creation of Segment 18 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 2a: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 19. The amendment of the description and the resultant creation of Segment 19 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 3: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 19. The amendment of the description and the resultant creation of Segment 19 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 4: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 19. The amendment of the description and the resultant creation of Segment 19 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 5b: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 19. The amendment of the description and the resultant creation of Segment 19 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 6a: The segment description now begins at the outlet of Cheesman Reservoir. The added portion of the segment, which extends from the Cheesman outlet to a point immediately above the confluence with the North Fork of the South Platte River, was formerly in Segment 1a. The alteration of the segment boundary was necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 6c: The segment has been deleted and the portion of the mainstem from the outlet of Chatfield Reservoir to Bowles Avenue has been incorporated into Segment 15. The change was necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 7: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 19. The amendment of the description and the resultant creation of Segment 19 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 8: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 20. The amendment of the description and the resultant creation of Segment 20 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 9: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 20. The amendment of the description and the resultant creation of Segment 20 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 10b: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 20. The amendment of the description and the resultant creation of Segment 20 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 11a: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 21. The amendment of the description and the resultant creation of Segment 21 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 11b: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 21. The amendment of the description and the resultant creation of Segment 21 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 14: The segment description now begins at the outlet from Chatfield Reservoir. The portion of the segment from the Chatfield outlet to Bowles Avenue was formerly in Segment 6c. The alteration of the segment boundary was necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 16c: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 22. The amendment of the description and the resultant creation of Segment 22 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 16g: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 22. The amendment of the description and the resultant creation of Segment 22 were necessary to facilitate the adoption of appropriate temperature standards.

Upper South Platte River 18: The segment description was created to encompass lakes and reservoirs within the boundaries of the Lost Creek and Mt. Evans Wilderness areas. This segment includes lakes/reservoirs formerly within Upper South Platte River Segment 1b.

Upper South Platte River 19: The segment description was created to encompass 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. This segment includes lakes/reservoirs formerly within Upper South Platte River Segments 1a, 2a, 3, 4, 5b, and 7.

Upper South Platte River 20: The segment description was created to encompass lakes and reservoirs in the Plum Creek system within National Forest boundaries; lakes and reservoirs in the West Plum Creek drainage from the National Forest boundary to Perry Park pond; and lakes and reservoirs in the Bear Creek drainage between the National Forest boundary and to the inlet of Perry Park Reservoir (Douglas County). This segment includes lakes/reservoirs formerly within Upper South Platte River Segments 8, 9, and 10b.

Upper South Platte River 21: The segment description was created to encompass lakes and reservoirs in the Plum Creek system except for specific listings in Segment 20. This segment includes lakes/reservoirs formerly within Upper South Platte River Segments 11a and 11b.

Upper South Platte River 22: The segment description was created to encompass 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, and 17c. This segment includes lakes/reservoirs formerly within Upper South Platte River Segments 16c and 16g.

Bear Creek 1a: The segment description was amended to exclude lakes and reservoirs, and the segment now ends at the inlet of Evergreen Lake. Lakes and reservoirs formerly included in this segment are now part of Segment 9. The portion of the segment from Evergreen Lake to Harriman Ditch is now part of Segment 1b. The alteration of the segment boundary, the amendment of the description, and the resultant creation of Segment 9 were necessary to facilitate the adoption of appropriate temperature standards.

Bear Creek 1b: The segment description now begins at the outlet of Evergreen Lake. The added portion of the segment, which extends from the Evergreen Lake outlet to Harriman Ditch, was formerly in Segment 1a. The alteration of the segment boundary was necessary to facilitate the adoption of appropriate temperature standards.

Bear Creek 1c: The segment description now contains Soda Lakes along with Bear Creek Reservoir. The Soda Lakes are now a part of newly created Segment 11. The alteration of the segment boundary was necessary to facilitate the adoption of appropriate temperature standards.

Bear Creek 3: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 9. The amendment of the description and the resultant creation of Segment 9 were necessary to facilitate the adoption of appropriate temperature standards.

Bear Creek 4a: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 11. The amendment of the description and the resultant creation of Segment 11 were necessary to facilitate the adoption of appropriate temperature standards.

Bear Creek 4b: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 10. The amendment of the description and the resultant creation of Segment 10 were necessary to facilitate the adoption of appropriate temperature standards.

Bear Creek 4c: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 10. The amendment of the description and the resultant creation of Segment 10 were necessary to facilitate the adoption of appropriate temperature standards.

Bear Creek 5: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 10. The amendment of the description and the resultant creation of Segment 10 were necessary to facilitate the adoption of appropriate temperature standards.

Bear Creek 7: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 8. The amendment of the description and the resultant creation of Segment 8 were necessary to facilitate the adoption of appropriate temperature standards.

Bear Creek 8: The segment description was created to encompass lakes and reservoirs in the Bear Creek system from the sources to the boundary of the Mt. Evans Wilderness area. This segment includes lakes/reservoirs formerly within Bear Creek Segment 7.

Bear Creek 9: The segment description was created to encompass lakes and reservoirs in the Bear Creek system from the boundary of the Mt. Evans Wilderness area to a point immediately below the confluence with Cub Creek; includes Evergreen Lake. This segment includes lakes/reservoirs formerly within Bear Creek Segments 1a and 3.

Bear Creek 10: The segment description was created to encompass lakes and reservoirs in drainages of Swede Gulch, Sawmill Gulch, Troublesome Gulch, Cold Springs Gulch, and Turkey Creek from source to confluence with Bear Creek. This segment includes lakes/reservoirs formerly within Bear Creek Segments 4b, 4c, and 5.

Bear Creek 11: The segment description was created to encompass lakes and reservoirs from a point immediately below the confluence with Cub Creek to the confluence with the South Platte River, except as specified in Segments 1c and 10; includes Soda Lakes. This segment includes lakes/reservoirs formerly within Bear Creek Segments 1c and 4a.

Cherry Creek 4: The segment description was amended to exclude lakes and reservoirs. Lakes and reservoirs formerly included in this segment are now part of Segment 5. The amendment of the description and the resultant creation of Segment 5 were necessary to facilitate the adoption of appropriate temperature standards.

Cherry Creek 5: The segment description was created to encompass lakes and reservoirs in the 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 Segment 2. This segment includes lakes/reservoirs formerly within Cherry Creek Segment 4.

Clear Creek 2a: This segment was created to encompass the 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. The resegmentation of Segment 2 was necessary in order to better represent differences in water quality between this segment and Segments 2b and 2c.

Clear Creek 2b: This segment was created to encompass the 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. The resegmentation of Segment 2 was necessary in order to better represent differences in water quality between this segment and Segments 2a and 2c.

Clear Creek 2c: This segment was created to encompass the mainstem of Clear Creek, including all tributaries and wetlands, from a point just below the confluence with Mill Creek to a point a point just above the Argo Tunnel discharge, except for specific listings in Segments 9a, 9b, and 10. The resegmentation was necessary in order to better represent differences in water quality between this segment and Segments 2a and 2b.

Clear Creek Segment 20: This segment was created to encompass lakes and reservoirs within the boundary of the Mt. Evan Wilderness Area. This segment includes lakes/reservoirs formerly within Segment 19.

Clear Creek Segment 21: This segment was created to encompass lakes and reservoirs within the Clear Creek system from its source to the Farmer's Highline Canal diversion in Golden, Colorado, except for those in Segments 20 and 22; and Upper Long Lake. This segment includes lakes/reservoirs formerly within Segments 1, 2, 3a, 6, 9a, 9b, and 10.

Clear Creek Segment 22: This segment was created to encompass lakes and reservoirs within the North Clear Creek drainage from a point just below the confluence with Chase Gulch to its confluence with Clear Creek. This segment includes lakes/reservoirs formerly within Segment 13a.

Clear Creek Segment 23: This segment was created for Ralston Reservoir. This segment includes a lakes/reservoir formerly within Segment 17b.

Clear Creek Segment 24: This segment was created to encompass lakes and reservoirs in the Clear Creek system from the Farmers Highline Canal diversion in Golden, Colorado to the confluence with the South Platte River, except for specific listings in Segments 21 and 23.

Big Dry Segment 7: This segment was created to encompass 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. This segment includes lakes/reservoirs formerly within Segment 1.

Boulder Creek Segment 2a: This segment description was amended to remove the portion of the Boulder Creek system from a point immediately below the confluence with North Boulder Creek to a point immediately above the confluence with South Boulder Creek. The Commission moved that portion of the Boulder Creek system to a newly created Segment 2b, to facilitate the adoption of appropriate temperature standards.

Boulder Creek Segment 2b: This segment was created to encompass the Boulder Creek system from a point immediately below the confluence with North Boulder Creek to a point immediately above the confluence with South Boulder Creek. The Commission created this segment from portions of the Boulder Creek system split from Segment 2a to facilitate the adoption of appropriate temperature standards.

Boulder Creek Segment 13: This segment was created to encompass lakes and reservoirs tributary to Boulder Creek that are within the boundary of the Indian Peaks Wilderness Area. This segment includes lakes/reservoirs formerly in Segment 1.

Boulder Creek Segment 14: This segment was created to encompass lakes and reservoirs tributary to Boulder Creek from the source to a point immediately above the South Boulder Creek confluence. This segment includes lakes/reservoirs formerly in Segments 2 and 3.

Boulder Creek Segment 15: This segment was created to encompass lakes and reservoirs tributary to South Boulder Creek from the source to Highway 93 and all lakes and reservoirs tributary to Coal Creek from the source to Highway 93. This segment includes lakes/reservoirs formerly in Segments 4a, 4b and 6.

Boulder Creek Segment 16: This segment was created to encompass lakes and reservoirs tributary to South Boulder Creek from Highway 93 to the confluence with Boulder Creek and all lakes and reservoirs tributary to Coal Creek from Highway 93 to the confluence with Boulder Creek. This segment includes lakes/reservoirs formerly in Segments 4b and 8.

Boulder Creek Segment 17: This segment was created to encompass lakes and reservoirs tributary to Boulder Creek from a point immediately below the South Boulder Creek confluence to the confluence with St. Vrain Creek. This segment includes lakes/reservoirs formerly in Segment 11.

St. Vrain Creek Segment 2a: The segment description was amended to remove the portion of the St. Vrain Creek system from the eastern boundary of the Roosevelt National Forest to Hygiene Road. The Commission moved that portion of the St. Vrain Creek system to a newly created Segment 2b, to facilitate the adoption of appropriate temperature standards.

St. Vrain Creek Segment 2b: This segment was created to encompass the St. Vrain Creek system from the eastern boundary of the Roosevelt National Forest to Hygiene Road. The Commission created this segment from portions of the St. Vrain Creek system split from Segment 2a to facilitate the adoption of appropriate temperature standards.

St. Vrain Creek Segment 4a: This segment description was amended to remove the portion of the Left Hand Creek system from a point immediately below the confluence with James Creek to Highway 36. The Commission moved that portion of the Left Hand Creek system to a newly created Segment 4c, to facilitate the adoption of appropriate temperature standards.

St. Vrain Creek Segment 4c: This segment was created to encompass the Left Hand Creek system from a point immediately below the confluence with James Creek to Highway 36. The Commission created this segment from portions of the Left Hand Creek system split from Segment 4a to facilitate the adoption of appropriate temperature standards.

St. Vrain Creek Segment 8: This segment was created to encompass lakes and reservoirs tributary to St. Vrain Creek that are within the boundary of the Indian Peaks Wilderness Area and Rocky Mountain National Park. This segment includes lakes/reservoirs formerly in Segment 1.

St. Vrain Creek Segment 9: This segment was created to encompass lakes and reservoirs tributary to St. Vrain Creek from sources to Hygiene Road. This segment includes lakes/reservoirs formerly in Segment 2.

St. Vrain Creek Segment 10: This segment was created to encompass lakes and reservoirs tributary to Left Hand Creek from sources to Highway 36. This segment includes lakes/reservoirs formerly in Segments 4a and 4b.

St. Vrain Creek Segment 11: This segment was created to encompass Barbour Ponds. This segment includes lakes/reservoirs formerly in Segment 3.

St. Vrain Creek Segment 12: This segment was created to encompass lakes and reservoirs tributary to Left Hand Creek from Highway 36 to the confluence with St. Vrain Creek. This segment includes lakes/reservoirs formerly in segment Segment 5.

St. Vrain Creek Segment 13: This segment was created to encompass lakes and reservoirs tributary to St. Vrain Creek from Hygiene Road to the confluence with the South Platte River. This segment includes lakes/reservoirs formerly in Segment 6.

Middle South Platte River Segment 5a: This segment description was amended to remove Crow Creek and Box Elder Creek from their sources to their confluences with the South Platte River. The Commission moved those portions of Crow Creek and Box Elder Creek to a newly created Segment 5c, to facilitate the adoption of appropriate temperature standards.

Middle South Platte River Segment 5c: This segment was created to encompass Crow Creek and Box Elder Creek from their sources to their confluences with the South Platte River. The Commission created this segment by splitting Crow Creek and Box Elder Creek from Segment 5a to facilitate the adoption of appropriate temperature standards.

Middle South Platte River Segment 7: This segment was created to encompass 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. This segment includes lakes/reservoirs formerly in Segment 3a.

Big Thompson River Segment 15: This segment was created to encompass lakes and reservoirs tributary to the Big Thompson River within Rocky Mountain National Park. This segment includes lakes/reservoirs formerly in Segment 1.

Big Thompson River Segment 16: This segment was created to encompass 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 lakes/reservoirs formerly in Segment 2.

Big Thompson River Segment 17: This segment was created to encompass lakes and reservoirs tributary to the Big Thompson River from the Home Supply Canal diversion to the confluence with the South Platte River. This segment includes lakes/reservoirs formerly in Segment 6.

Big Thompson River 18: This segment was created to encompass lakes and reservoirs tributary to the Little Thompson River from the source to the Culver Ditch diversion. This segment includes lakes/reservoirs formerly in Segment 8.

Big Thompson River Segment 19: This segment was created to encompass lakes and reservoirs tributary to the Little Thompson River from the Culver Ditch diversion to the confluence with the Big Thompson River. This segment includes lakes/reservoirs formerly in Segment 10.

Cache La Poudre River Segment 2a: This segment description was amended to remove the portion of the Cache La Poudre River system 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. The Commission moved that portion of the Cache La Poudre system to a newly created Segment 2b, to facilitate the adoption of appropriate temperature standards.

Cache La Poudre River Segment 2b: This segment was created to encompass the Cache La Poudre system 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. The Commission created this segment from portions of the Cache La Poudre system split from Segment 2a to facilitate the adoption of appropriate temperature standards.

Cache La Poudre River Segment 13a: This segment description was amended to remove North Branch Boxelder Creek, South Branch Boxelder Creek and Sand Creek from their sources to their confluences with the mainstem of Boxelder Creek. The Commission moved that portion of the Cache La Poudre system to a newly created Segment 13c, to facilitate the adoption of appropriate temperature standards.

Cache La Poudre River Segment 13c: This segment was created to encompass North Branch Boxelder Creek, South Branch Boxelder Creek and Sand Creek from their sources to their confluences with the mainstem of Boxelder Creek. The Commission created this segment from portions of the Cache La Poudre system split from Segment 13a to facilitate the adoption of appropriate temperature standards.

Cache La Poudre River Segment 17: This segment was created to encompass lakes and reservoirs tributary to the Cache La Poudre River from within Rocky Mountain National Park and the Rawah, Neota, Comanche, and Cache La Poudre Wilderness Area. This Segment includes lakes/reservoirs formerly in segment 1.

Cache La Poudre River Segment 18: This segment was created to encompass lakes and reservoirs tributary to the Cache La Poudre River from the boundaries of Rocky Mountain National Park and the Rawah, Neota, Comanche, and Cache La Poudre Wilderness Area to the Monroe Gravity Canal/North Poudre Supply Canal diversion. This Segment includes lakes/reservoirs formerly in segment 2.

Cache La Poudre River Segment 19: This segment was created to encompass lakes and reservoirs tributary to the North Fork of the Cache La Poudre River from the source to the inlet of Halligan Reservoir. This segment includes lakes/reservoirs formerly in Segment 6.

Cache La Poudre River Segment 20: This segment was created to encompass 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 lakes/reservoirs formerly in Segment 8.

Cache La Poudre River Segment 21: This segment was created to encompass 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. This segment includes lakes/reservoirs formerly in Segment 13a.

Laramie River Segment 3: This segment was created to encompass lakes and reservoirs tributary to the Laramie River from within the Rawah Wilderness Area. This segment includes lakes/reservoirs formerly in Segment 1.

Laramie River Segment 4: This segment was created to encompass lakes and reservoirs tributary to the Laramie River from the Rawah Wilderness Area to the Colorado/Wyoming border. This segment includes lakes/reservoirs formerly in Segment 2.

Lower South Platte River Segment 4: This segment was created to encompass lakes and reservoirs tributary to the South Platte River from the Weld/Morgan County line to the Colorado/Nebraska border. This segment includes lakes/reservoirs formerly in Segment 2a.

Lower South Platte River Segment 5: This segment was created to encompass 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. This segment includes lakes/reservoirs formerly in Segment 2b.

Republican River Segment 8: This segment was created to encompass lakes and reservoirs tributary to the Republican and Smoky Hill Rivers in Colorado. This segment includes lakes/reservoirs formerly in Segments 6 and 7.

B. Revised Aquatic-Life Use Classifications

The Commission reviewed information regarding existing aquatic communities. The following changes to the aquatic-life use classification were made based on review of the fish communities:

Clear Creek Segment 14a: Warm 2 to Cold 2
Upper South Platte River Segment 12: Cold 1 to Warm 1
Upper South Platte River Segment 6c: Cold 1 to Warm 1

C. Recreation Classifications and Standards

As part of the Basic Standards hearing of 2005, recreation classifications were revised into four new classifications. The Commission reviewed the previous segment classifications (1a, 1b and 2) and determined the appropriate new classification based on classification criteria presented as part of the Basic Standards Hearing, use attainability analyses or other basis. In addition, during the 2005 Basic Standards Hearing, the transition from the use of the fecal coliform standard to *E. coli* standard was completed. Fecal coliform criteria were deleted from the numeric standards.

Based on information that showed existing primary contact recreation use is in place in at least a portion of the segment, the Commission converted the following segments from Recreation Class 1a to Recreation Class E with a 126/100 ml *E. coli* standard:

Upper South Platte River Segments 1a, 1b, 2a, 2b, 2c, 3, 4, 5a, 5b, 5c, 6a, 6b, 6c, 7, 8, 9, 10a, 10b, 11a, 11b, 12, 13, 14, 15, 16a, 16b, 16c, 16d, 16e, 16f, 16g, 17a, 17b, and 17c
Cherry Creek Segments 1, 2, 3, and 4
Bear Creek Segments 1a, 1b, 1c, 2, 3, 4a, 4b, 4c, 5, 6, and 7
Clear Creek Segments 1, 2a, 2b, 2c, 3a, 3b, 4, 5, 6, 8, 9a, 9b, 10, 11, 12, 13a, 13b, 14b, 15, 16a, 17b, 18a, and 19

Big Dry Creek Segments 2 and 4a
Boulder Creek Segments 1, 2, 3, 4a, 4b, 4c, 4d, 5, 6, 7a, 7b, 8, 9, 10, and 11
St. Vrain Creek Segments 1, 2, 3, 4a, 4b, 5, 6, and 7
Middle South Platte River Segments 1a, 1b, 3a, 3b, and 4
Big Thompson River Segments 1, 2, 3, 4a, 4b, 4c, 6, 7, 8, 9, 10, 11, 12, 13, and 14
Cache La Poudre River Segments 1, 2, 6, 7, 8, 9, 10, 11, 12, 13a, 14, 15, and 16
Laramie River Segments 1 and 2
Lower South Platte River Segments 1, 2b, and 3
Republican River Segments 1, 2, 3, 4, and 5

The following segments were converted from Recreation Class 1b to Recreation Class P with a 205/100 ml *E. coli* standard:

Big Dry Creek Segment 1
Big Thompson River Segment 5
Cache La Poudre River Segment 13b

Based on a review of existing Use Attainability Analyses showing that primary contact recreation does not occur or is not attainable, the following segments were converted to Recreation Class N classification with 630/100 ml *E. coli* standard:

Clear Creek Segments 7, 14a, 16b, 17a, and 18b
Big Dry Segments 3 and 6
Middle South Platte River Segments 5a, 5b and 6
Big Thompson River Segments 4a, 4b, 4c and 5
Cache La Poudre River Segment 13b
Lower South Platte River Segment 2a
Republican River Segments 6 and 7

Based on conditions that have changed from those originally limiting the recreational use in an existing Use Attainability Analysis, the following segments were converted to from Recreation Class N to Recreation Class P with a 205/100 ml *E. coli* standard:

Big Dry Segments 4b and 5

Newly created segments had the same Recreation use classification as the segment they were split from, unless there was insufficient evidence to support keeping that classification or evidence to show that the use classification was inappropriate. The one newly created segment for which the Recreation use classification was changed is now classified Recreation Class U with a 126/100 ml *E. coli* standard:

Clear Creek Segment 25

D. Addition of Water Supply Use Classification and Standards

Based on review of information regarding the location of public water supplies, Water Supply use classifications and standards were added to the following segment:

Cache La Poudre River segment 13a

E. Agriculture Standards

A review of the standards associated with the Agriculture use classification showed that many segments were missing a nitrate standard protective of the use. A nitrate standard, NO₃=100, was added to the following segments classified for Agriculture use:

Upper South Platte River Segments 5a, 7, 11a, 11b, 16a, 16c, 16d, 16e, 16f, 16g, 17a, 17b and 17c
Cherry Creek Segment 4
Boulder Creek Segments 7a and 7b
St. Vrain Creek Segments 3 and 6
Middle South Platte River Segments 3a, 3b, and 5a
Big Thompson River Segments 4b, 4c, 5, 6, 9, and 10
Cache La Poudre River Segments 11, 12, 13a, 13b, and 16
Lower South Platte River Segments 2b and 3
Republican River Segment 4

F. Changes to Antidegradation Designation

As part of the 2005 Basic Standards hearing, the Commission revised the criteria for antidegradation designations.

Decoupling Aquatic Life Cold 2 and UP: Because the Commission eliminated the direct linkage between cold-water aquatic life class 2 and the use-protected designation. Therefore, all cold-water aquatic life class 2 segments that are use-protected were reviewed to determine if that designation is still warranted. The following segments are now reviewable:

Upper South Platte River Segments 5c and 7
Bear Creek Segments 1b and 5
Clear Creek Segments 5, 12, and 17b
Boulder Creek Segment 6
Big Thompson River Segments 3 and 4a
Cache La Poudre River Segments 7, 8 and 10

Decoupling Aquatic Life Warm 2 and UP Because the Commission decided that the presence of a warm-water aquatic life class 2 would still be a presumptive basis for applying a use-protected designation; however, that presumption can be overcome if there is data showing that the water is of high quality. Therefore, the Commission reviewed all warm water class 2 segments to determine if the use protected designation is still warranted. The following segment(s) are now reviewable:

Upper South Platte River Segment 16a
Cherry Creek Segments 1 and 3
Bear Creek Segment 4a
Boulder Creek Segment 7b
St. Vrain Creek Segment 5
Middle South Platte River Segments 1a, 1b, and 5a
Big Thompson River Segments 4b, 4c, 5, and 9
Cache La Poudre River Segments 11, 12, and 13b
Lower South Platte River Segment 1
Republican River Segment 5

Removing UP from Aquatic Life Warm 1: The twelve-parameter test was applied where possible to determine if use-protection remains warranted for segments classified for warm-water aquatic life class 1. The following segments are now reviewable:

Upper South Platte River Segments 10a and 17a
Bear Creek Segment 2
Clear Creek Segments 15
Boulder Creek Segments 5 and 10
St. Vrain Creek Segment 3
Republican River Segment 1

Removing UP from Aquatic Life Cold 1: The twelve-parameter test was applied where possible to determine if use-protection remains warranted for segments classified for cold-water aquatic life class 1. The following segments are now reviewable:

Clear Creek Segment 5

G. Ambient Quality-Based Standards

There are 15 segments in the Basin that have ambient standards. Ambient standards are adopted where natural or irreversible man-induced conditions result in exceedences 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 dropped. The Commission *did not* adopt any changes to the following ambient quality-based standards.

Clear Creek Segments 2: Zn(ch) = 200 µg/L

Clear Creek Segment 7: all metals

Clear Creek Segment 9b: Zn(ch) = 200 µg/L

Clear Creek Segment 11: Cu(ch) = 17 µg/L, Zn(ch) = 300 µg/L

Clear Creek Segment 13b: Fe(ch) = 5400 µg/L (Trec), Cu(ch) = 64 µg/L

Big Dry Creek Segment 1: Se(ch) = 7.4 µg/L (April 1 to October 31 only)

Big Dry Creek Segments 2, 3, 4a, 4b, and 5: Plutonium, Americium, Tritium, and

Uranium (see Table 2 of Regulation 38 for individual numbers), Be(ch) = 4 µg/L

Middle South Platte River Segment 5b: D.O.(ch) = 4.7 mg/l (qualifier)

Upper South Platte River Segment 5a (all metals Trec unless otherwise noted): Cd(ch)=2 µg/L,

CrVI(ch)=25 µg/L, Cu(ch)=18 µg/L (dis), Fe(ch) = 1200 µg/L, Pb(ch)=4, Mn(ch)=530 µg/L (dis), Hg(ch)=0.05 µg/L, Ni(ch)=50 µg/L, Ag(ch)=1 µg/L

The Commission *did* adopt changes to the following ambient quality based standards:

Clear Creek Segment 14a: Mn(ch) = 500 µg/L, modified to 116 µg/L

Clear Creek Segment 14b: Mn(ch) = 500 µg/L, modified to 116 µg/L

Big Dry Creek Segment 1: Se(ch) = 15 µg/L, Se(ac) = 19.1 µg/L (November 1 to March 31 only),
modified to Se(ch) = 9.2 µg/L, Se(ac) = 16.0 µg/L

H. Water Effects Ratios (WERs)

The Commission reviewed the basis for pre-existing WER-based site-specific copper and zinc standards.

Copper: Current information indicates that the WER may not be the most appropriate method to use to set site-specific standards for copper. However, EPA’s guidance for implementing the Biotic Ligand Model to set site-specific copper standards is not yet fully developed.

Zinc: The zinc WER was adopted in 1994. A temporary modification is needed to provide time to review the original studies in light of any new information. The Commission replaced the standards based upon WERs with temporary modifications (set at the WER values) for the following segments. These type iii temporary modifications will expire 12/31/2014.

Upper South Platte River Segments 6c, 10a, 14, 15, 16a, 16g
 Boulder Creek Segment 9
 Clear Creek Segment 14a
 Big Thompson River Segment 2
 Cache La Poudre River Segments 11 and 12

The Commission did not convert WERs to temporary modifications for the following segments because these segments do not contain affected dischargers:

Clear Creek Segments 14b, and 15

I. Aquatic Life Metals Standards

New Table Value Standards: As part of the Basic Standards hearing of 2005, new zinc and cadmium table values were adopted. The acute and chronic zinc and cadmium equations in 38.6(3) were modified to conform to Regulation No. 31.

Chromium III Standards: A review of chromium III standards showed that the standard associated with the Water Supply use classification was not protective of aquatic life where the average hardness was less than 61 mg/l. A chromium standard, CrIII(ch)=TVS was added to following segments with an Aquatic Life use classification and average hardness values less than 61 mg/l.

Upper South Platte River Segments 2a, 3, 4, 5a, 5b, 9, 11a, and 17a
 Bear Creek Segments 1a, 1b, 3, and 7
 Clear Creek Segments 1, 3a, and 20
 Boulder Creek Segments 1, 2, 3, and 6
 St. Vrain Creek Segments 1 and 2
 Big Thompson River Segments 1 and 2
 Cache La Poudre River Segments 1, 2, and 6

J. Arsenic Standards

For arsenic, each use (except recreation) has a different arsenic (“As”) value, including Fish Ingestion (FI) and Water Plus Fish (W+F). In different combinations of uses, different values become the most limiting. In order to eliminate the confusion, the Commission added the operative value to the individual segments. The following matrix displays the most limiting arsenic criteria.

If the Use Classifications were:	These Arsenic Standards were Applied (dissolved unless otherwise noted)
Class 1 aquatic life, water supply	As(ac) = 340, As(ch) = 0.02(Trec)
Class 2 aquatic life (water + fish standards), water supply	As(ac) = 340, As(ch) = 0.02(Trec)
Class 2 aquatic life (no fish ingestion standards), water supply	As(ac) = 340, As(ch) = 0.02 - 10(Trec)
Class 1 aquatic life	As(ac) = 340, As(ch) = 7.6(Trec)
Class 2 aquatic life (fish ingestion standards)	As(ac) = 340, As(ch) = 7.6(Trec)
Class 2 aquatic life (no fish ingestion standards), agriculture	As(ac) = 340, As(ch) = 100(Trec)
Agriculture only	As(ch) = 100(Trec)

Most Limiting Arsenic Criteria Depending on the Possible Combinations of Uses and Qualifiers	
If the Use Classifications were:	These Arsenic Standards were Applied (dissolved unless otherwise noted)
Water supply only	As(ch) = 0.02 - 10(Trec)

K. Uranium Standards

At the 2005 Basic Standards rulemaking hearing, the Commission changed the drinking water supply table value for uranium from 40 pCi/L to 30 ug/L.

L. Temporary Modifications

All temporary modifications were re-examined to determine whether to delete or extend them, either as existing or with modifications of the numeric standards. Because of the June 2005 changes to Regulation No. 31, temporary modifications were not automatically extended if non-attainment persisted.

The following segments had temporary modifications that were allowed to expire:

- Boulder Creek Segment 9: copper
- Cache la Poudre River Segments 11, 12: copper
- Big Thompson River Segment 2: D.O., *E. coli*, NH₃, NO₃, B, Cd, Cu, Pb, Hg, Ni, Se, Ag, Zn

The following segments have temporary modifications for chronic ammonia that were amended to clarify the chronic standard's value as either 0.06 or 0.10 mg/l, rather than just "TVS old." As specified in 61.8(2)(c)(iii) (the Permit Rules, Regulation No. 61), where a temporary modification has been adopted, limits in permits are to be set based on the temporary modification and the provision strictly limiting the loading from the facility does not apply. These temporary modifications will be subject to review and rulemaking for the two years before their scheduled expiration in order to track progress towards the full attainment of water body standards and uses.

Segments amended to read NH₃(ch)=0.06 mg/L:

- Upper South Platte River Segments 10a, 11b, 14, 16c, and 16g
- Clear Creek Segment 15
- Boulder Creek Segments 7b, 9, and 10
- St. Vrain Creek Segment 3
- Cache La Poudre River Segment 13a
- Lower South Platte River Segment 2b

Segments amended to read NH₃(ch)=0.10 mg/L:

- Upper South Platte River Segments 15 and 16a
- Cherry Creek Segments 3 and 4
- Bear Creek Segment 4a
- Big Dry Segments 1 and 3
- St. Vrain Creek Segment 6
- Middle South Platte River Segments 1a and 3a
- Big Thompson River Segments 5, 6, 9, and 10
- Cache La Poudre River Segments 11, 12, and 13b
- Lower South Platte River Segment 1

A new temporary modification was added where the numeric standards are not being met at the present time and there is significant uncertainty regarding the appropriate long-term underlying standard.

- Middle South Platte River Segment 4

M. Temperature

As part of the Basic Standards hearing of 2007, new table values were adopted for temperature. Temperature standards were applied to individual segments based upon the distribution of fish species, as provided by the CDOW, temperature data, and other available evidence.

The following segments are cold stream tier one (CS-I):

- Upper South Platte River Segments 1a, 1b, 2a, 2b, 2c, 3, 4, 5a, 5b, 5c, 8, 9, and 10b
- Clear Creek Segments 1, 2a, 2b, 2c, 3a, 3b, 4, 5, 6, 7, 8, 9a, 9b, 10, 11, 13a, 13b, 14a, and 19
- Bear Creek Segments 1a, 3, 4b, 4c, 6, and 7
- Boulder Creek Segments 1, 2a, 3, and 4a
- St. Vrain Creek Segments 1, 2a, 4a, and 4b
- Big Thompson River Segment 1
- Cache La Poudre River Segments 1, 2a, 6, and 13c
- Laramie River Segment 1

The following segments are cold stream tier two (CS-II):

- Upper South Platte River Segments 6a, 7, and 13
- Bear Creek Segments 1b and 5
- Clear Creek Segments 12 and 17b
- Boulder Creek Segments 2b, 4b, and 6
- St. Vrain Creek Segments 2b and 4c
- Big Thompson River Segments 2, 3, 4a, 7, and 8
- Cache La Poudre River Segments 2b, 7, 8, 9, and 10
- Laramie River Segment 2
- Republican River Segment 3

The following segments are warm stream tier one (WS-I):

- Upper South Platte River Segments 10a, 11b, 12, 14, and 15
- Bear Creek Segment 4a
- Big Dry Creek Segments 1, 4a, and 6
- St. Vrain Creek Segments 3 and 5
- Middle South Platte River Segments 3a and 5a
- Big Thompson River Segments 4b, 4c, 5 and 6
- Cache La Poudre River Segments 11, 12, and 13a
- Republican River Segments 1, 4, 5, and 6

The following segments are warm stream tier two (WS-II):

- Upper South Platte River Segments 11a, 16a, 16c, and 16g
- Bear Creek Segment 2
- Cherry Creek Segments 1, 3, and 4
- Clear Creek Segments 14b, 15, 16a, 16b, 18a, and 18b
- Big Dry Creek Segments 4b and 5
- Boulder Creek Segments 4c, 4d, 5, 7a, 7b, 8, 9, 10, and 11
- St. Vrain Creek Segment 6
- Middle South Platte River Segments 1a, 1b, and 5c
- Big Thompson River Segments 9 and 10
- Cache La Poudre River Segment 13b
- Lower South Platte River Segments 1, 2a, and 2b

The following segments are warm stream tier four (WS-IV):

- Upper South Platte River Segments 16d, 16e, and 16f
- Middle South Platte River Segments 3b, 5b, and 6

Republican River Segment 7

The following segments are cold lakes (CL):

Upper South Platte River Segments 18, 19, and 20
Clear Creek Segments 20, 21, and 22
Bear Creek Segments 8, 9, and 10
Boulder Creek Segments 13, 14, and 15
St. Vrain Creek Segments 8, 9, and 10
Big Thompson River Segments 15, 16, and 18
Cache La Poudre River Segments 15, 17, 18, 19, and 20
Laramie River Segments 3 and 4

The following segments are cold lakes larger than 100 acres surface area (CLL):

Upper South Platte River Segments 6b and 19
Clear Creek Segments 17a and 23
Boulder Creek Segments 14 and 15
Boulder Creek Segment 9
Big Thompson River Segments 11 and 16
Cache La Poudre River Segments 14, 18, and 20

The following segments are warm lakes (WL):

Upper South Platte River Segments 16b, 17a, 17b, 17c, 21, and 22
Cherry Creek Segments 2 and 5
Bear Creek Segment 11
Clear Creek Segment 25
Big Dry Creek Segments 7 and 5
Boulder Creek Segments 16 and 17
St. Vrain Creek Segments 7, 11, 12, and 13
Middle South Platte River Segments 4 and 7
Big Thompson River Segments 12, 13, 14, 17, and 19
Cache La Poudre River Segments 16 and 21
Lower South Platte River Segments 3, 4, and 5
Republican River Segments 2 and 8

Ambient-based summer temperature standards were adopted for several large lakes and reservoirs (collectively referred to as lakes). The table value WAT standard is not attainable in many large lakes (>100 acres in surface area) including many lakes with apparently healthy fish populations. Summertime temperature for large lakes and reservoirs (collectively referred to as lakes) is very well correlated to the lake's elevation. Since the thermal properties are natural or man-induced irreversible (in the case of reservoirs) the Commission adopted ambient temperature standards for large lakes wherever data were available to characterize a WAT. For lakes, the WAT is assumed to be equivalent to the average temperature of the mixed layer.

Upper So. Platte segment 6b	Chatfield Res.	April-December T(WAT)= 23.5°C
Upper So. Platte segment 19	Spinney Mt. Res.	April-December T(WAT)= 18.5°C
	Eleven Mile Res.	April-December T(WAT)= 18.7°C
	Cheesman Res.	April-December T(WAT)= 21.3°C
	Strontia Spr. Res.	April-December T(WAT)= 22.6°C
Bear Creek segment 1c	Bear Cr Res.	April-December T(WAT)= 23.3°C
Bear Creek segment 9	Evergreen Lake	April-December T(WAT)= 21.0°C

Boulder Creek segment 15	Gross Res.	April-December T(WAT)= 20.8°C
Big Thompson segment 11	Carter Lake	April-December T(WAT)= 22.7°C
Cache La Poudre segment 14	Horsetooth Res.	April-December T(WAT)= 22.1°C
Cache La Poudre segment 20	Seaman Res.	April-December T(WAT)= 22.5°C
Lower So. Platte segment 3	Jackson Res.	April-December T(WAT)= 28.1°C
	No. Sterling Res.	April-December T(WAT)= 28.1°C
	Jumbo Res.	April-December T(WAT)= 27.0°C

N. Other Site-Specific Revisions

Upper South Platte River Segment 15: Existing site-specific standards for mercury are removed in absence of recent data to support maintaining them. Standard is changed to Hg(ch)=0.01(Tot).

Boulder Creek 8: To reflect the Agriculture use classification and absence of a Water Supply use classification, NO₃=10 was changed to NO₃=100.

Cache La Poudre 13a: To reflect the addition of the Water Supply use classification, CrIII(ac/ch)=TVS was changed to CrIII(ch)=TVS and NO₃=10, Cl=250, SO₄=WS, CrIII(ac)=50(Trec), Fe(ch)=WS(dis), Mn(ch)=WS(dis) and Ag(ch)=TVS(tr) were added.

O. Other changes

The Commission corrected several typographical and spelling errors, and clarified segment descriptions. The abbreviation for chlorine was changed from Cl2 to Cl₂, and the (ac) and (ch) designations were removed from the inorganic standards where that designation was not appropriately applied.

The reference to "Water+Fish *Organics*" was corrected to "Water+Fish *Standards*" to incorporate the appropriate standards from both the organics table and the metal parameter table in Regulation No. 31.

The Commission made the following segment-specific typographical corrections:

Upper South Platte Segment 5a: added B=0.75, which is present for all other comparable segments

Upper South Platte Segment 7: added CrIII(ch)=TVS to complete the standard for aquatic life

Upper South Platte Segment 14: added Mn(ch)=TVS to complete the standard for aquatic life

Upper South Platte Segment 16b: changed the following standards, which were inconsistent with the aquatic life classification of this segment: changed standards for D.O.=5.0 mg/L and NO₂=0.5; added Cd(ac)=TVS and Ag(ch)=TVS to replace existing salmonid equation; removed D.O.(sp)=7.0 mg/L.

Big Dry Segments 4a and 4b: changed Hg(ac)=0.01(Tot) to Hg(ch) = 0.01(Tot)

Clear Creek Segment 9a: replaced "to" with "of" in the segment description. Added "20" to expiration date of "2014."

Clear Creek Segment 13b: replaced “(trec)” with “(ch)” in temporary modification for iron and added “(Trec)” at the end for consistent nomenclature.

Clear Creek Basin footnotes: deleted “* REFER TO STATEMENT OF BASIS AND PURPOSE” because it did not appear to have a reference. Deleted “site-specific standard” from WER footnote for Segments 14a and 14b because that portion of the footnote is no longer accurate.

Middle South Platte Segment 1b: deleted the temporary modification for ammonia in order to reflect changes that were made as a part of the December 10, 2007 temporary modifications Rulemaking Hearing.

The Commission clarified segment descriptions through the following changes:

Clear Creek Segment 3a: Added “Segments” to the description preceding 3b and 19 for clarification.

Clear Creek Segment 11: Added “a point just above” to clarify the segment description.

Clear Creek Segment 13a: Revised description to include North Clear Creek from its source to Chase Gulch and all of Four Mile Gulch. The terminal points on this new segment approximately coincide with the lowest water supply intakes located on each of these streams.

Clear Creek Segment 13b: Added “a point just below the confluence with Chase Gulch” to clarify the origin of the segment in relation to Segment 13a.

Clear Creek Segment 15: Added “a point just below” to the segment description in order to clarify that the segment originates at a point just below Youngfield Street.

Clear Creek Segment 16a: replaced “outlet” with “inlet” for clarity because Maple Grove Reservoir is no longer part of the segment.

Boulder Creek Segment 6: Revised “highway” to read “Highway”.

Boulder Creek Segment 7a: Revised “highway” to read “Highway”.

St. Vrain Creek Segment 5: Revised “highway” to read “Highway”.

St. Vrain Creek Segment 6: Added Segment “4c” to clarify the segment exceptions.

Middle South Platte River Segment 3a: Deleted Segment “4” from the list of exceptions because lakes and reservoirs were removed from this segment.

Big Thompson River Segment 1: This segment description was clarified to include the mainstem of Big Thompson River from its source to the boundary of Rocky Mountain National Park. The Commission clarified this description because the previous description excluded the mainstem of the Big Thompson River while including only streams and wetlands tributary to the Big Thompson River within the boundaries of Rocky Mountain National Park.

Big Thompson River Segment 10: Added “confluence with the” to clarify the segment description.

Cache La Poudre River Segment 13a: Deleted Segments “14”, “15” and “16” and added Segments “6”, “7”, “8” and “13c” to clarify the segment exceptions. Modified the segment description to include tributaries and wetlands to the Cache La Poudre from the Monroe Gravity Canal/North Poudre Supply canal diversion to a point immediately above the confluence with the North Fork of the Cache La Poudre River.

Lower South Platte River Segment 2a: Deleted Segment "3" from the list of exceptions because lakes and reservoirs were removed from this segment.

EXHIBIT 2

PARKER WATER AND SANITATION DISTRICT

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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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 AND 4 BASIN: CHERRY CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS					TEMPORARY MODIFICATIONS AND QUALIFIERS	
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS ug/l				
Stream Segment Description									
4. All tributaries to Cherry Creek, including all lakes, reservoirs and wetlands, from the source of East and West Cherry Creeks to the confluence with the South Platte River, except for specific listings in Segment 2. [*]	UP	Aq Life Warm 2 Recreation 1a Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	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 modification: NH ₃ (ac/ch)=TVS(old) (Type i). Expiration date of 12/31/2011. <u>*These classifications and standards do not apply to Rueter-Hess Reservoir.</u>

PARKER WATER AND SANITATION DISTRICT **PROPOSED**

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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

During the 2009 hearing, Rueter-Hess Reservoir, with a storage capacity of 70,000 acre feet, was under construction. This will be a water supply reservoir, but certain recreational use (excluding motorized boats) will likely be allowed.

PWSD sought to re-segment portions of Cherry Creek and to identify Rueter-Hess Reservoir as a separate water quality segment. It is impossible to know what water quality standards will be appropriate for Rueter-Hess Reservoir until the construction is completed, users are determined and data is obtained after the Reservoir is filled and operational. Accordingly, the Commission acknowledges that it is premature to set standards for Rueter-Hess Reservoir, but that those standards will be considered during the subsequent triennial reviews after Rueter-Hess Reservoir has been filled and operations undertaken for several seasons.

EXHIBIT 3 MOUNTAIN WATER AND SANITATION DISTRICT

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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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 ug/l		
5c. Mainstem of Gooseberry Gulch and all tributaries from source to confluence with Elk Creek <u>Sunset Trail.</u>	UP	Aq Life Cold 2 Recreation 4aE Water Supply Agriculture	<u>T=TVS (CS-II)</u> D.O.=6.0 mg/l pH=6.5-9.0 F.Coli=200/100ml E. Coli=126/100ml	<u>NH₃(ac/ch)=TVS</u> <u>Site-Specific*</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>S₀=WS</u>	<u>As(ac)=50(Trec)</u> <u>Cd(ac)=TVS(tr)</u> <u>Cd(ac/ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac/ch)=TVS</u> <u>Ag(ch)=TVS(tr)</u> <u>Zn(ac/ch)=TVS</u>	Temporary modification: NH ₃ (ac/ch)=Existing Quality (Type iii). Expiration date of 12/31/2040. <u>*Ammonia</u> <u>Acute: [0.6215 / (1+10^(7.204-pH))] + [88.33 / (1+10^(pH-7.204))]</u> <u>Chronic: [0.2538 / (1+10^(7.204-pH))] + [36.07 / (1+10^(pH-7.204))]</u>
5d. Mainstem of Gooseberry Gulch and all tributaries from Sunset Trail to confluence with Elk Creek.	UP	Aq Life Cold 2 Recreation E Water Supply Agriculture	<u>T-TV S (CS-II)</u> <u>D.O.=6.0 mg/l</u> <u>D.O.(sp)=7.0 mg/l</u> <u>pH=6.5-9.0</u> <u>F.Coli=200/100ml</u> <u>E. Coli=126/100ml</u>	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>S₀=WS</u>	<u>As(ac)=50(Trec)</u> <u>Cd(ac)=TVS(tr)</u> <u>Cd(ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac)=TVS</u> <u>Ag(ch)=TVS(tr)</u> <u>Zn(ac/ch)=TVS</u>	

MOUNTAIN WATER AND SANITATION DISTRICT **PROPOSED**

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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 created a new segment by splitting Gooseberry Gulch, Segment 5c, into two parts representing differential ability to support fish populations. The finding that upper Gooseberry Gulch cannot support reproducing fish populations, nor would be expected to support fish, is based on a use-attainability analysis (UAA) conducted by Mountain Water & Sanitation District (MWSD). The primary reason for the inability to support fish communities in upper Gooseberry Gulch is related to low to non-existent flows in much of this portion of the creek, even with the input of discharges from the MWSD treatment plant. Upper Gooseberry Gulch, from the source downstream to Sunset Trail, retained the Segment 5c designation, while lower Gooseberry Gulch downstream of Sunset Trail to the confluence with Elk Creek became Segment 5d.

Using information from the UAA, the Commission adopted site-specific ammonia standards for the newly defined Segment. These standards were derived using the EPA recalculation procedure and an updated ammonia criteria evaluation conducted by the Arid West Water Quality Research Project. While the recalculation did not include fish (since they would not be expected in Segment 5c), the site-specific equations are expected to be protective of sensitive invertebrate species resident to this segment. While only a very limited fishery can be supported in the new Segment 5d, the Commission adopted table value standards for ammonia for this segment to be protective of any potential future increase in fish populations.

EXHIBIT 4 PLUM CREEK WASTEWATER AUTHORITY

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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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2,3 & 4 BASIN: UPPER SOUTH PLATTE RIVER Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l			METALS ug/l		
10a. Mainstem of East and West Plum Creek and Plum Creek from the boundary of National Forest lands to Chatfield Reservoir, except for specific listings in Segment 40b.	UP	Aq Life Warm 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS (WS-II)</u> D.O.= 5.0 mg/l pH = 6.5-9.0 F. Coli=200/100ml 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)=50(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) = TVS *2.4 on East Plum Creek and Plum Creek below the Plum Creek Wastewater Authority Discharge. Temporary modification: NH ₃ (ac/ch)=TVS(old) (Type i). Expiration date of 12/31/2011.
10b. Mainstem of West Plum Creek including all tributaries, lakes, reservoirs, and wetlands from its source to Perry Park Pond.		Aq Life Cold 1 Recreation 4aE Water Supply Agriculture	<u>T=TVS (CS-II)</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml 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)=50(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	
10c. Mainstem of West Plum Creek including all tributaries, lakes, reservoirs, and wetlands from Perry Park Pond to the confluence with East Plum Creek.		<u>Aq Life Warm 1 Recreation E</u> <u>Water Supply</u> <u>Agriculture</u>	<u>T=TVS (WS-I)</u> D.O.= 5.0 mg/l pH=6.5-9.0 F. Coli=200/100ml E. Coli=126/100ml	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=50(Trec)</u> <u>Cd(ac/ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac/ch)=TVS</u> <u>Zn(ac/ch)=TVS</u>	

PLUM CREEK WASTEWATER AUTHORITY PROPOSED

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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 created a new segment in the Plum Creek basin by splitting off West Plum Creek downstream of Perry Park Pond from Segment 10a and placing it in a new Segment 10c. This decision was necessary for the appropriate application of temperature standards. Based on a use-attainability study provided by Plum Creek Wastewater Authority (PCWA), the habitat and fish communities of West Plum Creek downstream of Perry Park Pond are different from those found in East Plum Creek or the mainstem of Plum Creek. Specifically, West Plum Creek has a fish community comprised almost exclusively of native warm water fish species, including the common shiner (*Luxilus cornutus*). As a result, application of Warm Stream Tier I temperature standards is appropriate for this new Segment 10c. In contrast, while many of the same native warm water fish species are also present in the remaining portions of Segment 10a, common shiners are not resident and other introduced warmwater fish are commonly found throughout the segment, including fish species moving upstream into the mainstem from Chatfield Reservoir. This fish community is more closely aligned with a Warm Stream Tier II temperature standard.

Accordingly, the Commission adopted Warm Stream Tier II temperature standards in Segment 10a and Warm Stream Tier I temperature standards in Segment 10c. All of the classifications and water quality standards that currently apply in Segment 10a are adopted in Segment 10c with the exception of the existing site-specific copper standard on Segment 10a, which is based on use of a water effects ratio, which would not be applied to the new Segment 10c. However, it would remain in effect on Segment 10a as currently noted – specifically applicable downstream of the PCWA effluent discharge

EXHIBIT 5
CHATFIELD WATERSHED AUTHORITY
 (Note: proposal reflects November 2008 Chatfield Reservoir revisions)
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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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 ug/l		
6a. Mainstem of the South Platte River from a point immediately above the confluence with the North Fork of the South Platte River to the inlet of Chatfield Reservoir confluence with the Platte Canyon Ditch Headgate.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F. Coli=200/100ml 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)=50(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	
6a.i Mainstem of the South Platte River from a point immediately downstream of the confluence with the Platte Canyon Ditch Headgate to the inlet of Chatfield Reservoir.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F. Coli=200/100ml 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)=50(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	Temporary Modification: Temperature: May-Sept., T = 24° C (ch); Oct.-April, T = 17° C (ch). Expiration date of 6/8/2012.
6b. Chatfield Reservoir.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	May-Sept. T=24° C (ch); Oct-Apr T=17° C (ch) D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F. Coli=200/100ml 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)=50(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	Mean total phosphorous P=0.030 mg/L and mean chlorophyll = 10 µg/L measured through the collection of samples that are representative of the mixed layer during summer months (July, August, September) and with an allowable exceedance frequency of once in five years. See section 38.6(4) for assessment thresholds.

CHATFIELD WATERSHED AUTHORITY PROPOSED

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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

Chatfield Reservoir Site Specific Temperature Standard

When the Commission adopted basic standards for temperature, interim standards were applicable subject to review and site specific data presented at the next South Platte triennial review. This mechanism allows for consideration of the wide variation of temperature that exists in Colorado, even within the same stream segment depending upon elevation and inflow sources. The primary determinant of the temperature of the mixed layer of large lakes is the lake elevation. According to the Division, elevation alone explains more than 92% of the variation of in-lake temperature. Adopting these site-specific standards reflects that the existing temperature conditions have supported the uses for Chatfield Reservoir ("Reservoir").

Fisheries data and sampling and stocking reports compiled by the Colorado Division of Wildlife (DOW), confirm the abundant cold and warm water fishery supported by the Reservoir. Since 1974 the DOW has stocked the Reservoir with warm and cold water species; brown trout, rainbow trout, snake river cutthroat, largemouth bass, small mouth bass, walleye, tiger muskie, yellow perch, spottail shiner, and channel catfish. Fisheries population data, sampled since 1986 by the DOW, highlight the variety of warm and cold water species the reservoir supports including black croppie, blue gill, channel catfish, carp, gizzard shad, largemouth bass, small mouth bass, spottail shiner, and rainbow trout.

The database of the Chatfield Watershed Authority ("Authority") includes extensive profile temperature data from the Reservoir, Segment 6b, which has been collected and analyzed since 1986. This database shows the Reservoir cannot meet either the 20 degrees Celsius interim temperature standard or the underlying temperature standard. The temperature in the mixed layer of the water column frequently reaches a weekly average maximum temperature (MWAT) of 24 degrees Celsius during summer months, May through September. Accordingly, the May through September site specific temperature standard was set at 24 degrees Celsius. The data also supported lowering the temperature standard for October through April to 17 degrees Celsius to reflect the lower temperatures during these cooler months.

Temporary Modifications to the Temperature Standard for South Platte River

The Authority has collected monthly and bi-monthly data on the South Platte River upstream of Chatfield Reservoir since 1986. In that time period the river has exceeded the interim standard of 20 degrees Celsius numerous times with a peak measured temperature of 22 degrees Celsius. The Authority's database does not represent the daily maximum temperature of the river, which could be several degrees higher on rare occurrences. This stream segment also has a good population of rainbow (stocked) and brown trout.

Denver Water also collects comparable temperature data at the South Platte River upstream of the Reservoir. Seasonal temperatures are in the same range as that collected by the Authority, with a peak measured temperature of 24 degrees Celsius in August 2005. Including the Denver Water temperature

data in the analysis there is not enough data at this time for the MWAT or daily maximum (DM) analysis preferred by the Division and Commission to support a change in temperature standard.

This is an important trout fishery and the Authority supports this continued use. However, it is evident from the collected data at that portion of stream segment 6.a below the confluence of the South Platte with the Platte Canyon Ditch Headgate that the interim temperature standard should be 24 degrees Celsius for the summer months and 17 degrees Celsius for the remainder of the year. A new stream segment 6.a.i. was developed to account for the changes in lower elevation and higher temperatures, as the South Platte River conveys flows to Chatfield Reservoir.

While there is a significant database there is insufficient data for supporting a new temperature standard at stream segment 6.a.i at this time. Accordingly, a temporary modification of 24 degrees Celsius for the summer months May through September and 17 degrees Celsius for October through April shall expire on June 8, 2012.

EXHIBIT 6

CENTENNIAL WATER AND SANITATION DISTRICT

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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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 ug/l			
....									
6c. <u>(Reserved)</u> Mainstem of the South Platte River from the outlet of Chatfield Reservoir to Bowles Avenue.		Aq Life Cold 4 Recreation 1a Water Supply Agriculture	D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml E. Coli=126/100ml	NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.014 CN=0.005	S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 Cl=250 SO ₄ =WS	As(ac)=50(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)=TVS Mn(ch)=90ug/l(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	*Cu (ac/ch) = TVS *2.7 below the confluence with Marcy Gulch to Bowles Avenue.
....									
14. Mainstem of the South Platte River from the <u>outlet of Chatfield Reservoir</u> <u>Bowles Avenue in Littleton, Colorado</u> , to the Burlington Ditch diversion in Denver, Colorado.		Aq Life Warm 1 Recreation 1a Water Supply Agriculture	<u>T=TVS(WS-II)**</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS*2.8 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 modification: NH ₃ (ac/ch)=TVS(old) (Type I). Expiration date of 12/31/2011. <u>*Cu(ac/ch)=TVS*2.8 below the confluence with Marcy Gulch</u> <u>**Temperature: Winter=Dec 21-Feb 8; Summer=Feb 9-Dec 20.</u>

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 ug/l		Stream Segment Description	
....									
16g. Marcy Gulch from, including all lakes, reservoirs, and wetlands from the source to the confluence with the South Platte.	UP	Aq Life Warm 2 Recreation 1a Agriculture	<u>I=Site-Specific</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	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	*Cu (ac/ch) = TVS *2.4 below the Centennial Wastewater Treatment Facility outfall. Temporary modification: NH ₃ (ac/ch)=TVS(old)(Type i). Expiration date of 12/31/2011. <u>Temperature:</u> <u>Winter: DM=16.7°C.</u> <u>MWAT=14.1°C: Jan-Feb:</u> <u>Summer: DM=28.6°C.</u> <u>MWAT=27.5°C: Mar-Dec.</u>

CENTENNIAL WATER AND SANITATION DISTRICT **PROPOSED**

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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

Segment 6c deleted and added to Segment 14

The Commission deleted Segment 6c and revised the description for Segment 14, incorporating the section of the mainstem South Platte River currently in Segment 6c into Segment 14. This change was necessary for the purpose of setting appropriate temperature standards. The basis for this change was a use-attainability analysis provided by Centennial Water & Sanitation District (Centennial), which indicated this portion of the South Platte River has temperature and fish communities more appropriately classified as warm water aquatic life, with Warm Stream Tier II as the appropriate temperature standard. This finding is based on fish community sampling conducted over a 20-year period - and temperature data collected for nearly 9 years, providing substantial evidence of the need to change the aquatic life use classification. Similar to other information provided in this hearing, the Commission agreed that while application of WS-II temperature standards were appropriate, the effluent dominated nature of this segment produced potential issues with the transition between the summer and winter "seasons" - i.e., the "shoulders". Consistent with other Segment 14 decisions, the seasons were adjusted for the portion of the South Platte River formerly in Segment 6 c such that Winter=Dec 21-Feb 8, and Summer = Feb 9-Dec 20. These slight modifications in seasonal temperature standards are protective of the fish community found in this portion of the South Platte River.

Segment 16g – Marcy Gulch

The Commission determined that Marcy Gulch is effluent-dominated, bordering on effluent-dependent. Historically low flows, presence of physical barriers, and limited habitat have resulted in a very limited potential to support fish populations in the segment. The combination of effluent dominance and the expected minimal fish community supported application of site-specific temperature standards for the segment. These standards were based on summer daily maximum (DM) and maximum weekly average (MWAT) temperature standards from Warm Stream Tier II, with a winter DM standard slightly warmer than WS-II, but still representative of seasonal variation. The "shoulders" were also adjusted such that Winter = Jan - Feb and Summer = Mar - Dec to reflect the expected seasonal temperature shifts in this effluent-dominated segment.

EXHIBIT 7 LITTLETON/ENGLEWOOD WASTEWATER TREATMENT PLANT

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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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2,3 & 4 BASIN: UPPER SOUTH PLATTE RIVER Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
14. Mainstem of the South Platte River from Bowles Avenue in Littleton, Colorado, to the Burlington Ditch diversion in Denver, Colorado.		Aq Life Warm 1 Recreation 1a Water Supply Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml E. Coli=126/100m <u>Temp (*C)</u> <u>Feb 9 - Dec 20</u> <u> =27.5 (ch)</u> <u> =28.6 (ac)</u> <u>Dec.21 - Feb. 8</u> <u> =13.7 (ch)</u> <u> =14.3 (ac)</u>	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)=50(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS*2.8 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 modification: NH ₃ (ac/ch)=TVS(old) (Type i). Expiration date of 12/31/2011.

LITTLETON/ENGLEWOOD WASTEWATER TREATMENT PLANT

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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 another Segment 14 discharger (Xcel Energy) and 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 appropriate site-specific temperature standard for Segment 14. In-river temperature was continuously monitored at 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 never exceeded the current Tier II acute or chronic criteria during the period of record. However, downstream temperatures did approach the criteria limits at the "shoulders" of the seasons in late February and early December, and statistically predicted temperature values show a likelihood to exceed in the future. This likelihood to exceed is a function of the abrupt 50% change in the current temperature criteria values at March 1 and November 30, as presented in Regulation 31, and is not a reflection of any sudden increase in in-stream temperature related to wastewater discharges.

Accordingly, the site-specific standard uses the current Regulation 31 chronic (27.5°C / 13.7°C) and acute (28.6°C / 14.3°C) temperature criteria values for Tier II fish species (brook stickleback, central stoneroller, creek chub, longnose dace, northern redbelly dace, finescale dace, and white sucker). These temperatures are protective of spawning and preferred water temperatures for the fish species present in Segment 14. In addition, the site-specific standard modifies the current Regulation 31 standard by adjusting the seasonal definitions by 20 days in both spring and fall. The current Regulation 31 criteria seasonal definition is adjusted from March 1 – November 30 to February 9 – December 21 (chronic: 27.5°C, acute: 28.6°C), and from December 1 – February 29 to December 21 – February 9 (chronic: 13.7°C, acute: 14.3°C). These revised seasonal definitions for Segment 14 of the South Platte River were developed based on analysis of seasonal patterns in the 22-year temperature data record. This analysis also took into consideration fish spawning temperature requirements to ensure that adjustment of the temperature criteria seasonal definitions would not force early spawning or shortened spawning seasons. The Commission finds that the proposed site-specific standard is protective of the fish species observed in Segment 14 of the South Platte River.

EXHIBIT 8 BEAR CREEK WATERSHED ASSOCIATION

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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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: BEAR CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l			METALS ug/l		
Stream Segment Description									
1a. Mainstem of Bear Creek from the source boundary of the Mount Evans Wilderness to Harriman Ditch the intake of Evergreen Lake, including all mainstem reservoirs.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	"not sensitive" temperature standard. Apr.-Oct. = 18.2 (ch), 23.8 (ac); Nov.-Mar. = 9.0 (ch), 13.0 (ac)
1d. Evergreen Lake along the mainstem of Bear Creek from the intake of Evergreen Lake above the wetlands to the outlet of Evergreen Lake.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	"not sensitive" temperature standard. Apr.-Dec. = 18.2 (ch), 23.8 (ac); Jan.-Mar. = 9.0 (ch), 13.0 (ac)
1e. Mainstem of Bear Creek from the outlet of Evergreen Lake to the Harriman Ditch.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	"not sensitive" temperature standard. Apr.-Oct. = 20.0 (ch), 23.8 (ac); Nov.-Mar. = 9.0 (ch), 13.0 (ac)

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: BEAR CREEK	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
1b. Mainstem of Bear Creek from Harriman Ditch to the inlet of Bear Creek Reservoir.	UP	Aq Life Cold 2 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	Water + Fish Organics <u>"not sensitive" temperature standard: Apr.-Oct. = 21.2 (ch), 24.8 (ac); Nov.-Mar. = 9.0 (ch), 15.0 (ac)</u>
1c. Bear Creek Reservoir, and Soda Lakes.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	*See narrative phosphorus standard below. <u>"not sensitive" temperature standard: Apr.-Dec. = 24.0 (ch), 26.0 (ac); Jan.-Mar. = 9.0 (ch), 15.0 (ac)</u>
2. Mainstem of Bear Creek from the outlet of Bear Creek Reservoir to the confluence with the South Platte River.	UP	Aq Life Warm 1 Recreation 1a Water Supply Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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. All tributaries to Bear Creek, including all lakes, reservoirs and wetlands, from the source <u>Mount Evans Wilderness boundary</u> to a point immediately below the confluence with Cub Creek. Except for specific listings in Segment 7.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	<u>"not sensitive" temperature standard: Apr.-Oct. = 18.2 (ch), 23.8 (ac); Nov.-Mar. = 9.0 (ch), 13.0 (ac)</u>
4a. All tributaries to Bear Creek, including all lakes, reservoirs and wetlands, from a point immediately below the confluence with Cub Creek to the confluence with the South Platte River, except for specific listing in Segments 4b, 4c, 5, and 6a and 6b.	UP	Aq Life Warm 2 Recreation 1a Water Supply Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	Water + Fish Organics Temporary modification: NH ₃ (ac/ch)=TVS(old) (Type I). Expiration date of 12/31/2011.
4b. Swede Gulch, including all ponds, lakes, reservoirs and wetlands, from its headwaters to its confluence with Kerr Gulch.		Aq Life Cold 2 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	Water + Fish Organics
4c. Swede Gulch, including all ponds, lakes, reservoirs and wetlands, from its confluence with Kerr Gulch to its confluence with Bear Creek.		Aq Life Cold 2 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	Water + Fish Organics
5. Sawmill, Troublesome, and Cold Springs Gulches, and mainstem of Turkey Creek, including all tributaries, lakes, reservoirs and wetlands, from the source to the confluence with Bear Creek, except for specific listing in Segment 6.	UP	Aq Life Cold 2 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	Water + Fish Organics

*Narrative Phosphorus Standard for Segment 1c of Bear Creek Reservoir only. Concentrations of total phosphorus in Bear Creek Reservoir shall be limited to the extent necessary to prevent stimulation of algal growth to protect beneficial uses. Sufficient dissolved oxygen shall be present in the upper half of the reservoir hypolimnion layer to provide for the survival and growth of cold water aquatic life species. Attainment of this standard shall, at a minimum, require shifting the reservoir trophic state from a eutrophic and hypertrophic condition to a eutrophic and mesotrophic condition.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: BEAR CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
6a. Mainstem of North Turkey Creek, from the source to the confluence with crossing with North Turkey Creek Road.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	"not sensitive" temperature standard: June-Sept = 17.0 (ch), 21.2 (ac); Oct.-May = 9.0 (ch), 13.0 (ac)
6b. Mainstem of South Turkey Creek from the source to Bear Creek Reservoir inlet and North Turkey Creek, except for specific listing in segment 6a.		<u>Aq Life Cold 2</u> <u>Recreation 1a</u> <u>Water Supply</u> <u>Agriculture</u>	<u>D.O.=6.0 mg/l</u> <u>D.O.(sp)=7.0 mg/l</u> <u>pH=6.5-9.0</u> <u>F.Coli=200/100ml</u> <u>E.Coli=126/100ml</u>	<u>NH₃(ac/ch)=TVS</u> <u>Cl₂(ac)=0.019</u> <u>Cl₂(ch)=0.011</u> <u>CN=0.005</u>	<u>S=0.002</u> <u>B=0.75</u> <u>NO₂=0.05</u> <u>NO₃=10</u> <u>Cl=250</u> <u>SO₄=WS</u>	<u>As(ac)=50(Trec)</u> <u>Cd(ac)=TVS(tr)</u> <u>Cd(ch)=TVS</u> <u>CrIII(ac)=50(Trec)</u> <u>CrVI(ac/ch)=TVS</u> <u>Cu(ac/ch)=TVS</u>	<u>Fe(ch)=WS(dis)</u> <u>Fe(ch)=1000(Trec)</u> <u>Pb(ac/ch)=TVS</u> <u>Mn(ac/ch)=TVS</u> <u>Mn(ch)=WS(dis)</u> <u>Hg(ch)=0.01(Tot)</u>	<u>Ni(ac/ch)=TVS</u> <u>Se(ac/ch)=TVS</u> <u>Ag(ac)=TVS</u> <u>Ag(ch)=TVS(tr)</u> <u>Zn(ac/ch)=TVS</u>	"not sensitive" temperature standard: Apr.-Oct. = 20.0 (ch), 23.8 (ac); Nov.-Mar. = 9.0 (ch), 13.0 (ac)
7. All tributaries to Bear Creek, including lakes, reservoirs and wetlands, within the Mt. Evans Wilderness Area.	OW	Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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	

BEAR CREEK WATERSHED ASSOCIATION PROPOSED

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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 changes for this regulation, which include descriptive changes to existing segment descriptions, subdividing Bear Creek Segment 1a into three segments; segment 1a (From Mt. Evans Wilderness boundary to Evergreen Lake), segment 1d (Evergreen Lake), and segment 1e (lower mainstem of Bear Creek from Evergreen Lake to Harriman Ditch). with site-specific temperature standards for segments 1d and 1e, creating two new Turkey Creek to protect a trout fishery on the upper portion of North Turkey Creek, and setting site-specific temperature standards on the new Turkey Creek Segment 6b.

Bear Creek Segment 1a, which extends from the boundary of the Mt. Evans Wilderness to the inlet of Evergreen Lake (at road crossing to Lake House), has no reported Brook or Cutthroat Trout as shown by multiple Colorado Division of Wildlife fishery surveys, and these trout species are not expected to occur in this segment. As such, the temperature standards for segment 1a of Bear Creek were based on a fishery classification of "not sensitive".

Evergreen Lake is a 40-acre reservoir located along the mainstem of Bear Creek in Evergreen. This waterbody had been classified part of Bear Creek segment 1a. The Commission made Evergreen Lake a standalone segment that can be better managed as a small reservoir. The Bear Creek Watershed Association has over 5-years of site-specific chemistry data and temperature record showing Evergreen Lake behaves limnological like a medium sized reservoir system. The temperature data record supports a site-specific temperature standard for the period from April-December of 18.2 (chronic) and 23.8 (acute).

The Bear Creek Watershed Association collected an extensive 8-year temperature data set for most watershed segments and an 11-year data set for Bear Creek Reservoir. These temperature data sets coupled with fishery data collected by the Colorado Division of Wildlife and other biological macroinvertebrate data support the site-specific temperature standards and new segmentation for the mainstem of Bear Creek. The new segment 1e subdivision, from a fishery management perspective, allows for improved fishery protection by focusing on a critical mountain to plains transitional zone along the mainstem of Bear Creek below Evergreen Lake. This segment is a class 1 cold water, which supports healthy Rainbow and Brown Trout populations, as demonstrated by multiple fishery survey done by the CDOW. The temperature data record shows this segment has and will frequently exceed the adopted underlying temperature standard of 18.2 degrees Celsius (chronic). This segment will meet the acute temperature standard of 23.8 degrees Celsius. In 2005-07, the 30-minute temperature measurements used to calculate the MWAT values in segment 1e resulted in attainment with a standard criteria of 20°C MWAT, utilizing the 85th percentile qualifier. In 2003-2004, the temperature measurements used to calculate daily 4-hour values in segment 1e resulted in about 99% attainment with a standard criteria of 20°C MWAT, utilizing the 85th percentile qualifier. The long-term temperature data record, including low flow years, shows this segment should meet a chronic temperature standard of 20.0 degrees Celsius over 95% of the time and an acute standard of 23.8 degrees Celsius over 98% of the time during the period from April to October. As such, the Commission adopted a site-specific temperature standard of 20.0

degrees Celsius (chronic) for the period from April to October, and 23.8 degrees Celsius (acute). Since the CDOW has determined the fishery in Bear Creek is stable under existing conditions, the Commission concluded that these site-specific temperature standards are protective of the fish populations in segment 1e of Bear Creek. Although the 20°C MWAT temperature criteria was met in 2005-07, this assumption of compliance with a 20 degree Celsius standard may not be made during low flow conditions associated with a drought, as evident from previous Association temperature data collected for this stream reach during the 2002 drought. As such, the Association was directed by the Commission to evaluate and help implement watershed management efforts directed at helping the stream segment meet the site-specific temperature standards under future low flow conditions. The Association remains dedicated to supporting the trout fishery in segment 1e.

Turkey Creek is no longer tributary to Bear Creek Segment 1a, rather it directly discharges into Bear Creek Reservoir segment 1c. As such, the Commission converted the Turkey Creek drainage into two distinct stream segments that discharge into Segment 1c. A survey conducted by the CDOW on the upper portions of North Turkey Creek demonstrated a healthy population of Brook Trout. The Commission established a new North Turkey Creek segment 6a to protect this fishery. This class 1 Cold Water Biota segment has temperature standards protective of "sensitive' water". The remainder of North Turkey Creek, South Turkey Creek and the mainstem of Turkey Creek to the inlet with Bear Creek Reservoir was designated new_segment 6b. This class 2 cold water segment has a site-specific temperature standard of 20.0 degrees Celsius (chronic) and 23.8 (acute) for the period April to October, based on the temperature record for lower Turkey Creek and site-specific surveys collected by the Bear Creek Watershed Association.

The site-specific temperature standard for Bear Creek Reservoir was based on the temperature record from 1997 through 2008. The maximum monthly temperature measured at the reservoir during the normal morning sampling event is 24.3 degrees Celsius in the top 2-meters of the water column in the central pool of the reservoir. Temperatures along the shoreline of Bear Creek Reservoir can reach over 25.0 degrees Celsius in the summer months. The monthly average in the top 4-meters of the water column from 1997-2008 in July and August exceeds 20 degrees Celsius 75% of the time, and exceeds 22 degrees Celsius 25% of the time. Bear Creek Reservoir is a mixed fishery supporting both cold and warm water species. The CDOW intends to manage this reservoir as a mixed-use system. Consequently, Bear Creek Reservoir remains as a Class 1 Cold Water Biota large reservoir. The Commission adopted a site-specific temperature standard of 24.0 degrees Celsius (chronic) and 26.0 degrees Celsius (acute) for the period April to December, and 9.0 degrees Celsius (chronic) and 15.0 degrees Celsius (acute) for the period January to March.

Soda Lakes (Little Soda and Big Soda Lakes) within Bear Creek Park are currently included as part of Bear Creek Segment 1c. The footnote in Regulation #38 that defines the narrative phosphorus standard for Bear Creek Reservoir was corrected to exclude Soda Lakes. Soda Lakes are filled only once per year from the Bear Creek drainage. These standing waterbodies are agricultural supplies, used for augmentation and there is a recreational uses lease by the City of Lakewood. These waterbodies can be completely drained in any given year and they are not considered as a fishery.

EXHIBIT 9 METRO WASTEWATER RECLAMATION DISTRICT

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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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2,3 & 4 BASIN: UPPER SOUTH PLATTE RIVER Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/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 1a Water Supply Agriculture	D.O.* pH = 6.5-9.0** F.Coli=200/100ml 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)=50(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS*2.3 Fe(ch)=WS(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=400(dis) Mn(ac/ch)=TVS Hg(ac)=2.4(dis) Hg(ch)=0.4(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 and Temperature standards. **pH=6.0-9.0 from 64 th Ave. downstream 2 miles. Temporary modifications: NH ₃ (ac/ch)=TVS(old) (Type i). Expiration date of 12/31/2014. <u>Hg=existing quality (Type iii).</u> <u>Expiration date of 12/31/2011.</u>

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.~~

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 and upstream of the Fulton Ditch diversion (Fulton Pool), the ELS 7-Day average standards for the period July 1 – ~~June~~ July 31 shall be 4.65 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.

Metro

Segments: Upper South Platte 15; Middle South Platte 1a; Lower South Platte 2a, 2b

Ammonia:

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

Ammonia

Warm Water = (mg/l as N) Total

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

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

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

NH₃ = old TVS

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

Temperature:

Dec – Feb = 20.0(ch), 22(ac)

Mar – Nov = 27.7(ch), 28.6(ac)

....

REGION: 2 BASIN: MIDDLE SOUTH PLATTE RIVER Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
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 1a Water Supply Agriculture	D.O.* pH=6.5-9.0 F.Coli=200/100ml 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)=50(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS*2.2	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. Fish Ingestion Organics Temporary modification: NH ₃ (ac/ch)=TVS(old) (Type i). Expiration date of 12/31/2011.

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REGION: 1 BASIN: Lower South Platte River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
2a. All tributaries to the South Platte River, including all lakes, reservoirs and wetlands, from the Weld/Morgan County line to the Colorado/Nebraska border, except for the specific listings in Segments 2b and 3.	UP	Aq Life Warm 2 Recreation 2N Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml E.Coli=630/100ml	CN=0.2 NO ₂ =10 NO ₃ =100	B=0.75	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)	Ni(ch)=200(Trec) Se(ch)=20(Trec) Zn(ch)=2000(Trec)	
2b. All tributaries to the South Platte River, including all lakes, reservoirs and 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 <u>except for the portion of Beaver Creek from its source to the Fort Morgan Canal.</u>	UP	Aq Life Warm 2 Recreation 1a Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	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: NH ₃ (ac/ch)=TVS(old) (Type i). Expiration date of 12/31/2011.

METRO WASTEWATER RECLAMATION DISTRICT **PROPOSED**

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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 Segment 15 - Site-specific ELS dissolved oxygen standard (Fulton Pool)

At the 2009 rulemaking hearing, the Commission adopted site-specific early life stage dissolved oxygen standards for a short reach of Segment 15 of the South Platte River located upstream of the Fulton Ditch diversion (the Fulton Pool) at the request of the Metro Wastewater Reclamation District consistent with action previously taken by the Commission with regard to the Lupton Bottoms pool further downstream.

The Metro District's South Platte Water Quality Model indicates a small deficiency in dissolved oxygen at this location that may persist even after all planned ammonia removal upgrades are completed at the Robert W. Hite Treatment Facility and other publicly owned treatment works. This dissolved oxygen deficiency could possibly affect the Johnny darter, the most sensitive species present in the Segment. However, evidence presented at the hearing by the Metro District demonstrated that the Fulton Pool is not typical habitat for the Johnny darter and fish sampling activities in this location have never produced any Johnny darters, while twelve other native species have been found there. The Commission determined that structural or mechanical options to increase dissolved oxygen levels in the Fulton Pool, such as additional drop structures or mechanical mixing were not feasible.

In addition, typographical errors in the Footnote 4 ELS 7-Day average dissolved oxygen standard were corrected. Obsolete temporary modification language also was deleted.

Upper South Platte Segment 15 - Temperature

Upper South Platte Segment 15: In 2007, the Commission determined that municipal wastewater treatment plant discharges pose a relatively low risk of causing adverse temperature impacts to aquatic life uses. Accordingly, in this rulemaking hearing the Metro Wastewater Reclamation District proposed site-specific temperature standards for Upper South Platte Segment 15 after determining that during the winter months and certain summer months its effluent can exceed the chronic-only or chronic and acute Warm Stream Tier I temperature criteria. The site-specific temperature standards for this effluent dominated Segment are based upon the existing thermal conditions throughout the Segment. The Commission agreed that these site-specific standards are fully protective of Segment 15's normal pattern of diel and seasonal fluctuations, spatial diversity, and do not cause an increase in temperature (thermal shock) that could be deleterious to the resident aquatic life. After considering various technology-based alternatives to cool the Metro District's effluent to achieve the underlying temperature Table Value Standards, the Commission determined that these alternatives are not environmentally or financially feasible. Data presented on resident fish populations (both the number of species and relative abundance) provided substantiation that the Segment 15 site-specific temperature standards are well within the summer and winter thermal tolerance ranges of the most sensitive species expected to be present in the Segment (the Johnny darter) as well as other native fish species populations.

Upper South Platte Segment 15 - Mercury

As a result of this hearing, the Commission adopted a Type iii temporary modification of “existing quality” for mercury in Upper South Platte Segment 15. This temporary modification will expire on 12/31/2011, and is based upon uncertainty with respect to the amount of available low-level mercury analytical data for Metro Wastewater Reclamation District effluent, in-stream water quality in Segment 15, and possible seasonal variations of in-stream mercury levels. It is the intention of the parties to preserve the status quo during the term of the temporary modification and during this time the Metro District will maintain the existing quality and pollutant loadings of its effluent discharge with respect to mercury.

While the temporary modification is in effect, the Metro District will conduct low-level mercury monitoring of its effluent as well as in-stream within Upper South Platte Segment 15 to determine compliance with the underlying table value chronic standard for mercury to protect human health. Because pollution prevention may be an appropriate control mechanism, the Metro District also will investigate possible source controls for discharges to the Robert W. Hite Treatment Facility from dental offices and other identified sources.

Middle South Platte Segment 1a – Removal of Fish Ingestion Organics Qualifier

In 2000, the Commission applied “Water+Fish” organic standards to Middle South Platte Segment 1 based upon evidence that fish were being taken or had the potential to be taken for human consumption in the Segment and that fishing takes place on a recurring basis. However, in 2004, the Commission re-segmented Middle South Platte Segment 1 into two separate segments: Segment 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) and Segment 1b (Mainstem of the South Platte River from a point immediately below the confluence with St. Vrain Creek to the Weld/Morgan County Line). This decision was made to recognize that the South Platte River upstream of the confluence with the St. Vrain Creek is effluent-dominated with periodic very low flow conditions and to accommodate the site-specific dissolved oxygen standard in that reach of the South Platte River.

Aquatic life sampling data presented by the Metro Wastewater Reclamation District provided evidence that the fish assemblage in Middle South Platte Segment 1a is dominated by small, native minnow species that do not reach a catchable size. In addition, the Metro District’s routine, biweekly sampling of Segment 1a has not found evidence that fishing occurs on a recurring basis. Accordingly, the Commission found it appropriate to remove the “Fish Ingestion Organics” qualifier for Segment 1a to reflect actual conditions in the Segment (no fish ingestion).

Lower South Platte Segments 2a and 2b - Re-segmentation of Beaver Creek

Based upon the results of a Use Attainability Analysis prepared by the Metro Wastewater Reclamation District, the Commission determined that it is appropriate to re-segment the portion of Beaver Creek beginning at its source to the Fort Morgan Canal from Lower South Platte Segment 2b to Lower South Platte Segment 2a. Segment 2a has standards necessary to protect the following uses: Aquatic Life Class 2 (Warm Water Aquatic Life without full standards for the protection of rudimentary aquatic life), Recreation Class N (Not Primary Contact Recreation Use), and Agriculture. Evidence presented showed that this is a naturally ephemeral reach of Beaver Creek, consistent with the other tributaries included in Lower South Platte Segment 2a.

EXHIBIT 10
SUNCOR ENERGY (U.S.A.), INC
 (Note: proposal reflects December 2008 temporary modifications revisions)

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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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 ug/l			
16a. Mainstem of Sand Creek from the confluence of Murphy and Coal Creek in Arapahoe County to the confluence with the South Platte River.	UP	Aq Life Warm 2 Recreation 1a Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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	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)=TVS Se(ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS	Temporary modifications: Se(ch)= current condition type iii Expiration date of 12/31/2014. NH ₃ (ac/ch)=TVS(old)(Type i). Expiration date of 12/31/2011. *Cu (ac/ch) = TVS *2.6 below the Sand Creek Water Reuse Facility outfall. <u>Hg = current condition (type iii)</u> Expiration date of 12/31/2011.

SUNCOR ENERGY (U.S.A.), INC PROPOSED

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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 this hearing, the Commission adopted a Type iii temporary modification of "current quality" for mercury in Upper South Platte Segment 15. This temporary modification will expire on 12/31/2011, and is based upon uncertainty as to the appropriate criteria and its implementation, including the amount of available low-level mercury analytical data for in-stream water quality and fish flesh concentrations in Segments 15 and 16. EPA published in 2001 new methylmercury criteria for human health protection for people who eat fish by setting a criterion for fish flesh of 0.3 mg/kg of wet-weight fish tissue and withdrew the previous ambient human health water quality criterion for mercury as the recommended section 304 (a) water quality criterion for mercury. In late January 2009, EPA published its "Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion." Data gathered by the Colorado Department of Health & Environment for lakes and reservoirs downstream of Sand Creek evidence concentrations below the 0.3 mg/kg fish flesh concentration criteria. It is anticipated that the current criteria will be reconsidered in the Basic Standards Triennial review in June 2010. It is the intention of the parties to preserve the status quo during the term of the temporary modification and during this time the Suncor Energy, Inc. will maintain the existing quality and pollutant loadings of its effluent discharge with respect to mercury.

While the temporary modification is in effect, Suncor Energy, Inc. will conduct fish flesh and low-level mercury monitoring in-stream within Sand Creek as well as Upper South Platte Segment 15, in cooperation with Denver Metro, to determine compliance with the current underlying table value chronic standard for mercury to protect human health and the potential fish flesh based criterion. Because pollution prevention may be an appropriate control mechanism under the new Implementation Guidance, Suncor Energy, Inc. also will investigate a possible "mercury minimization plan (MMP).

EXHIBIT 11

PUBLIC SERVICE COMPANY OF COLORADO

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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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2,3 & 4 BASIN: UPPER SOUTH PLATTE RIVER Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l			METALS ug/l		
14. Mainstem of the South Platte River from Bowles Avenue in Littleton, Colorado, to the Burlington Ditch diversion in Denver, Colorado.		Aq Life Warm 1 Recreation 1a Water Supply Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F. Coli=200/100ml 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)=50(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS*2.8 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 modification: NH ₃ (ac/ch)=TVS(old) (Type i). Expiration date of 12/31/2011. <u>Se (ac/ch)=current condition (Type iii). Expiration date of 12/31/2015.</u>

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REGION: 2 AND 3 BASIN: BOULDER CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l			METALS ug/l		
5. Mainstem of South Boulder Creek from South Boulder Road to the confluence with Boulder Creek.	UP	Aq Life Warm 1 Recreation 1a Water Supply Agriculture	I=TVS(WSII) D.O.=5.0 mg/l pH=6.5-9.0 F. Coli=200/100ml 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)=50(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) 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	

PUBLIC SERVICE COMPANY OF COLORADO PROPOSED

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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 Segment 14

Public Service Company of Colorado (PSCo) requested that the Colorado Water Quality Control Commission (Commission) adopt a temporary modification pursuant to section 31.7(3)(a)(iii) of the Basic Standards for selenium on Segment 14 of the South Platte River. There is significant uncertainty concerning the long-term underlying selenium standard. Time is needed to: (1) determine the source of upstream selenium, which exceeds the underlying selenium standard of 4.6 µg/L; (2) determine a standard that will protect the aquatic life use in Segment 14; and (3) evaluate selenium treatment options.

As part of the South Platte Coalition for Urban River Evaluation (SP CURE), PSCo is collecting water quality and biological data to characterize the existing conditions for Segment 14, including elevated selenium levels upstream of PSCo's intake. This effort will lead to a better understanding of the appropriate selenium standard for Segment 14. In addition, PSCo will explore whether a proven treatment technology exists and, if so, options for wastewater treatment alternatives, including identifying a reliable method of selenium treatment that will allow PSCo to meet the appropriate selenium standard.

For Upper South Platte River Segment 14, the Commission adopted a selenium temporary modification of "current condition" rather than a numeric value. The temporary modification expires 12/31/2015. The Commission's intent of using the notation "current condition" is to preserve the status quo during the term of the temporary modification. Dischargers to this segment shall maintain the existing selenium water quality and loading characteristics of their effluent, as reflected in current permits. The Commission does not intend the temporary modifications to apply to new facilities or in Preliminary Effluent Limitations.

Boulder Creek Segment 5

The Commission adopted temperature standards for this segment of Warm Stream Tier II (WS-II). This tier is appropriate based on temperature and fish data provided by Public Service Company of Colorado (PSCo) as part of a Use Attainability Analysis for this segment. The Commission notes this is a significantly hydrologically-modified segment, affected by the exercise of water rights through multiple diversions, including a major diversion to provide water for the Valmont Power Station cooling reservoirs and irrigation storage for other downstream users. It was also noted that some degree of uncertainty underlies these temperature standards, since during the period of record for instream temperature there were only limited instances where significant outflows from these reservoirs occurred, and only for relatively short durations. Downstream water users determine when water is released from the reservoirs when they want to exercise their water rights, or if Valmont is required to pass water through the reservoir when downstream senior water rights are in priority. As such, current information on temperature is based solely on diversion-affected stream flows, with little influence from added flows from the reservoir outlet. Additional temperature monitoring by PSCo is expected and the Commission will review those data in the context of appropriate temperature standards at subsequent hearings.

EXHIBIT 12

UPPER CLEAR CREEK WATERSHED ASSOCIATION

(Note: proposal reflects December 2008 temporary modifications revisions)

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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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: CLEAR CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS ug/l				
....									
2. Mainstem of Clear Creek, including all tributaries, lakes, reservoirs and wetlands, from the I-70 bridge above Silver Plume to the Argo Tunnel discharge, except for specific listings in Segments 3 through 10.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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(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)=TVS <u>Zn(ac)=0.978e0.8537[ln(hardness)]+1.9467</u> Zn(ch)=200 <u>Zn(ch)=0.986e0.8537[ln(hardness)]+1.8032</u>	Temporary modifications: Cu(ch)=7.4 µg/l (dis), Zn(ch)=257 µg/l (dis), type iii Expiration date of 7/01/2014.
3a. Mainstem of South Clear Creek, including all tributaries, lakes, reservoirs and wetlands, from the source to the confluence with Clear Creek, except for the specific listing in 3b and 19.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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 <u>Zn(ac)=0.978e0.8537[ln(hardness)]+1.9467</u> <u>Zn(ch)=0.986e0.8537[ln(hardness)]+1.8032</u>	

REGION: 3 BASIN: CLEAR CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS ug/l				
3b. Mainstem of Leavenworth Creek from source to confluence with South Clear Creek.		Aq Life Cold 2 Recreation 1a Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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 <u>Zn(ac)=0.978e0.8537[ln(hardness)]+1.9467</u> <u>Zn(ch)=0.986e0.8537[ln(hardness)]+1.8032</u>	
....									
11. Mainstem of Clear Creek from the Argo Tunnel discharge to the Farmers Highline Canal diversion in Golden, Colorado.	UP	Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(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)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac)=300 <u>Zn(ac)=0.978e0.8537[ln(hardness)]+1.9467</u> <u>Zn(ch)=0.986e0.8537[ln(hardness)]+1.8032</u>	Temporary modification: Zn(ch)=325 µg/l (dis), type iii Expiration date of 7/01/2014.
....									

UPPER CLEAR CREEK WATERSHED ASSOCIATION **PROPOSED**

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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 this hearing, the Commission decided to revise the water quality standards for several segments, as enumerated below.

Clear Creek Segments 2, 3a, 3b, and 11: The underlying chronic and acute standards for zinc were deleted and revised standards based on recalculation were adopted. The recalculation was based on the four most sensitive species: brown trout, white and flannelmouth sucker, rainbow and cutthroat trout and copepod.

EXHIBIT 13 STANDLEY LAKE CITIES

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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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 3 BASIN: BIG DRY CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
2. Standley Lake.		Aq Life Warm 1 Recreation 1a Water Supply Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml E.Coli=126/100ml <u>Chl a = ≤4.7 ug/l goal*</u> <u>Chl a = 5.0 ug/l standard*</u>	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)=50(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 Be(ch)=4	See attached Table 2 for additional standards for segment 2. See * for <u>chlorophyll a</u> narrative standard.

* This standard will apply at the sampling point identified as 10-PZ. A 5 year rolling average will be calculated using the Standley Lake Year averages. A Standley Lake Year average will be calculated using averaged monthly chlorophyll a values from March through February. Where less than 10 months of data are available due to unsafe sampling conditions, data collected from the raw water pipeline (Location 24) will be used in calculating the monthly averages for the missing months.

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. Implementation of this narrative standard shall only be by Best Management Practices and controls implemented on a voluntary basis.

STANDLEY LAKE CITIES' PROPOSED

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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 has the authority to adopt classifications and standards applicable to the Waters of the State. *See generally*, C.R.S. §§ 25-8-202, 25-8-203 and 25-8-204. In connection with this authority, the Commission has adopted Basic Standards and Methodologies (the "Basic Standards") that, among other things, set forth criteria for the adoption of a numeric standard. *See* Section 31.7(1)(b) of the Basic Standards. The Cities of Westminster, Northglenn, and Thornton, (the "Standley Lake Cities"), requested the adoption of a site specific numeric standard for chlorophyll *a* applicable to Big Dry Creek Segment 2 Standley Lake (Standley Lake).

The Standley Lake Cities presented evidence that the site-specific water quality levels for chlorophyll *a* in Standley Lake represent the status quo, and that a site specific standard, calculated in a manner consistent with Basic Standards requirements, is adequate to protect classified uses. The Commission accepts the Standley Lake Cities' evidence as accurate. The proposed site specific chlorophyll *a* water quality based standard is adequate to protect the water supply use classification, based on analysis of available data.

The current narrative standard for Standley Lake states: "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. Implementation of this narrative standard shall only be by Best Management Practices and controls implemented on a voluntary basis." (Reg. 38) The Standley Lake Cities and the Upper Clear Creek Watershed Association have agreed that the lake has been mesotrophic over the past 10 years, and have presented data to support defining this status quo with a chlorophyll *a* standard. As a result, the Commission adopts a site specific chlorophyll *a* standard of 5.0 ug/L, and a ≤ 4.7 ug/L goal, applicable to Standley Lake. This standard will apply at the sampling point identified as 10-PZ. A 5 year rolling average will be calculated using the Standley Lake Year averages. A Standley Lake Year average will be calculated using averaged monthly chlorophyll *a* values from March through February. Where less than 10 months of data are available due to unsafe sampling conditions, data collected from the raw water pipeline (Location 24) will be used in calculating the monthly averages for the missing months.

Assessment of the ≤ 4.7 ug/L chlorophyll *a* goal will be a comparison to the 5 year rolling average. If this goal is exceeded, the Standley Lake Cities will work with the Upper Clear Creek Watershed Association to identify probable causes, and possible responses. If the rolling average exceeds the 5.0 ug/L standard, Standley Lake would not be in attainment, and placed on the 303d list.

This approach was jointly developed by the Standley Lake Cities and the Water Quality Control Division as a reasonable method to establish the site specific numeric chlorophyll *a* standard and goal, and to assess attainment of future stream standards for Standley Lake. The Commission also removes the narrative standard currently in place for Big Dry Creek Segment 2.

EXHIBIT 14 CITY OF BOULDER

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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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 AND 3 BASIN: BOULDER CREEK Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS					TEMPORARY MODIFICATIONS AND QUALIFIERS	
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/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 1a Water Supply Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml 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)=50(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: type (iii) Cu (ac/ch)=Current Condition. Expiration date of 12/31/2009 ¹¹ . NH ₃ (ac/ch)=TVS(old) (Type i). Expiration date of 12/31/2011

CITY OF BOULDER PROPOSED

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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

BASIS AND PURPOSE

Pursuant to the requirements in the Basic Standards (at section 31.7(3)), the Commission reviews the status of temporary modifications to determine whether the temporary modification should be modified, eliminated or extended. The City of Boulder ("Boulder") proposed extending the temporary modification for Boulder Creek, Segment 9 for copper for two years. Due to the uncertainty surrounding the appropriate mechanism to utilize in determining the copper standard for Boulder Creek, segment 9, the Commission believes it is appropriate to extend the temporary modification for copper until December 31, 2011.

Boulder is evaluating the biotic ligand model (the "BLM") for possible development of a site-specific copper standard for Boulder Creek, segment 9 and evaluating a copper translator to apply to the current wastewater treatment facility copper effluent limit. The purpose is to determine the appropriate method to address site-specific conditions in Boulder Creek, segment 9. The Water Quality Control Division and the US Environmental Protection Agency have been evaluating and updating the process of developing appropriate copper standards in Colorado, which has resulted in the need for additional monitoring of Boulder Creek. Although Boulder has been engaged in this process, and specifically engaged in monitoring since 2005, additional monitoring is required, thus necessitating the extension of the temporary modification. To date, Boulder has expended \$ 45,000 on this process, and it is anticipated that the additional monitoring and evaluation will cost approximately \$ 25,000. Boulder will update the Commission in 2010 on its progress towards developing a copper standard or translator.

EXHIBIT 15

UPPER THOMPSON SANITATION DISTRICT/BUREAU OF RECLAMATION

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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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 2 BASIN: BIG THOMPSON RIVER Stream Segment Description	DESIG	CLASSIFICATIONS	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
2a. Mainstem of the Big Thompson River, including all tributaries, lakes, reservoirs, and wetlands from the boundary of Rocky Mountain National Park to the Home Supply Canal diversion, except for the specific listing in Segments <u>2b</u> and <u>7</u> ; mainstem of Black Canyon Creek and Glacier Creek below Estes Park water treatment plant.		Aq Life Cold 1 Recreation 1a Water Supply Agriculture	D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml 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)=50(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	Temporary modifications: D.O., F. coli, NH ₃ , NO ₂ , B, Cd, Cu, Pb, Hg, Ni, Se, Ag, Zn = existing quality. Wapiti Meadow wetlands at the toe of Lake Estes Dam type-iii Expiration date of 12/31/2009
<u>2b. Wapiti Meadows Tributary Wetland</u>	<u>UP</u>	<u>Aq Life Cold 2 Recreation P Wetlands</u>	<u>D.O. = 6.0 mg/l pH = 6.5-9.0 E.Coli=205/100ml</u>	<u>NH₃(ac)=25 NH₃(ch)=15 Cl₂(ac)=0.019 Cl₂(ch)=0.011</u>	<u>S=1.41 B=75 NO₂=25 NO₃=50 Cl=250 SO₄=250</u>	<u>As(ac)=100 Cd(ac)=50 Cd(ch)=10 CrIII(ac)=150 CrIII(ch)=100 CrVI(ac)=150 CrVI(ch)=100 Cu(ac)=150 Cu(ch)=100 CN(ac)=0.2</u>	<u>Fe(ch)=300(dis) Fe(ch)=200(Trec) Pb(ac)=100 Pb(ch)=50 Mn(ac)=200 Mn(ch)=50 Hg(ac)=0.28</u>	<u>Ni(ac)=200 Ni(ch)=100 Se(ac)=50 Se(ch)=20 Ag(ac)=150 Ag(ch)=100 Zn(ac)=200 Zn(ch)=150</u>	

UPPER THOMPSON SANITATION DISTRICT/BUREAU OF RECLAMATION PROPOSED

38.74 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JUNE 8-9, 2009 RULEMAKING; FINAL ACTION AUGUST 10, 2009; EFFECTIVE JANUARY 1, 2010

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

Big Thompson River, Segment 2 - Mainstem of the Big Thompson River: Resegmentation

The Commission determined that the water quality and biological evaluation conducted in the Wapiti Meadows (SW¼ NE¼, Section 29, T5N, R72W) warranted resegmentation of the Big Thompson River. The Wapiti Meadows, which is fed by the Upper Thompson Sanitation District's Wastewater Treatment Facility, differ from the rest of the Big Thompson River and its tributaries through the presence of standing water and warmer temperatures and is predominantly a created wetland. As a result, the Commission determined this segment met the definitions of Class 2 aquatic life use.

Based on these findings, the Commission determined that Segment 2 should be split into two distinct segments, with use classifications as described below:

Segment 2a:

Mainstem of the Big Thompson River, including all tributaries, lakes, reservoirs, and wetlands from the boundary of Rocky Mountain National Park to the Home Supply Canal diversion, except for the specific listing in Segments 2a and 7; mainstem of Black Canyon Creek and Glacier Creek below Estes Park water treatment plant - Aquatic Life Cold 1, Recreation 1a, Water Supply, Agriculture.

Segment 2b:

Wapiti Meadows Tributary Wetlands – Aquatic Life Cold 2, Recreation P, Wetlands.

Water Quality Standards Issues

The lack of perennial water in the Wapiti Meadows precludes survival of fish. Additionally, the manmade fluctuations in water level resulting from the daily operation and discharge from the wastewater treatment facility preclude the long-term survival of fish. The Commission determined that continued discharge of wastewater effluent to the Wapiti Meadows that meets the minimum discharge limits during low flow from the WWTF has no negative impact on the Wapiti Meadows and that the natural conditions for this segment improved as a result of the discharge of wastewater effluent. The Commission determined that the natural conditions resulting from the discharge of wastewater effluent to the Wapiti Meadows is protective of the attainable aquatic life use.