

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 feet 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 celsius</u> |
| Cd | = | Cadmium |
| ch | = | chronic (30-day) |
| <u>CL</u> | = | <u>cold lake temperature tier</u> |
| Cl | = | Chloride |
| <u>CLL</u> | = | <u>cold large lake temperature tier</u> |
| Cl ₂ | = | residual chlorine |
| CN | = | free cyanide |
| CrIII | = | trivalent chromium |
| CrVI | = | hexavalent chromium |
| <u>CS-I</u> | = | <u>cold stream temperature tier one</u> |
| <u>CS-II</u> | = | <u>cold stream temperature tier two</u> |
| Cu | = | Copper |
| dis | = | Dissolved |
| D.O. | = | Dissolved oxygen |
| <u>DM</u> | = | <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 |
| <u>MWAT</u> | = | <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)
SO₄ = 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)
SO₄ = 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⁾ | <p>Cold Water = (mg/l as N)Total</p> $acute = \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}}$ $chronic = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$ |
| | <p>Warm Water = (mg/l as N)Total</p> $acute = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$ |
| | $chronic (Apr1 - Aug31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$ $chronic (Sep1 - Mar31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * 1.45 * 10^{0.028 * (25 - MAX(T, 7))}$ |
| NH ₃ = old TVS | Cold Water Acute = 0.43/FT/FP/2 ^(4 old) in mg/l (N) |

| | | | | | | |
|-----------------------------|--|------------------|--|--------------------------|----------------------------------|-------------|
| | Warm Water Acute = $0.62/FT/FP/2^{(4 \text{ old})}$ in mg/l (N) | | | | | |
| Cadmium | <p>Acute = $(1.13667 - [\ln(\text{hardness}) * (0.04184)]) * e^{(1.128[\ln(\text{hardness})] - 3.6867)}$</p> <p>$(1.136672 - [\ln(\text{hardness}) * (0.041838)]) * e^{(0.9151[\ln(\text{hardness})] - 3.1485)}$</p> <p>Acute(Trout) = $(1.13667 - [\ln(\text{hardness}) * (0.04184)]) * e^{(1.128[\ln(\text{hardness})] - 3.828)}$</p> <p>$(1.136672 - [\ln(\text{hardness}) * (0.041838)]) * e^{(0.9151[\ln(\text{hardness})] - 3.6236)}$</p> <p>Chronic = $(1.10167 - [\ln(\text{hardness}) * (0.04184)]) * e^{(0.7852[\ln(\text{hardness})] - 2.715)}$</p> <p>$(1.101672 - [\ln(\text{hardness}) * (0.041838)]) * e^{(0.7998[\ln(\text{hardness})] - 4.4451)}$</p> | | | | | |
| Chromium III ⁽⁵⁾ | <p>Acute = $e^{(0.819[\ln(\text{hardness})] + 2.5736)}$</p> <p>Chronic = $e^{(0.819[\ln(\text{hardness})] + 0.5340)}$</p> | | | | | |
| Chromium VI ⁽⁵⁾ | <p>Acute = 16</p> <p>Chronic = 11</p> | | | | | |
| Copper | <p>Acute = $e^{(0.9422[\ln(\text{hardness})] - 1.7408)}$</p> <p>Chronic = $e^{(0.8545[\ln(\text{hardness})] - 1.7428)}$</p> | | | | | |
| Lead | <p>Acute = $(1.46203 - [\ln(\text{hardness}) * (0.145712)]) * e^{(1.273[\ln(\text{hardness})] - 1.46)}$</p> <p>Chronic = $(1.46203 - [\ln(\text{hardness}) * (0.145712)]) * e^{(1.273[\ln(\text{hardness})] - 4.705)}$</p> | | | | | |
| Manganese | <p>Acute = $e^{(0.3331[\ln(\text{hardness})] + 6.4676)}$</p> <p>Chronic = $e^{(0.3331[\ln(\text{hardness})] + 5.8743)}$</p> | | | | | |
| Nickel | <p>Acute = $e^{(0.846[\ln(\text{hardness})] + 2.253)}$</p> <p>Chronic = $e^{(0.846[\ln(\text{hardness})] + 0.0554)}$</p> | | | | | |
| Selenium ⁽⁶⁾ | <p>Acute = 18.4</p> <p>Chronic = 4.6</p> | | | | | |
| Silver | <p>Acute = $\frac{1}{2} e^{(1.72[\ln(\text{hardness})] - 6.52)}$</p> <p>Chronic = $e^{(1.72[\ln(\text{hardness})] - 9.06)}$</p> <p>Chronic(Trout) = $e^{(1.72[\ln(\text{hardness})] - 10.51)}$</p> | | | | | |
| <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>Temperature</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> |
| Uranium | Acute = $e^{(1.1021[\ln(\text{hardness})]+2.7088)}$ Chronic = $e^{(1.1021[\ln(\text{hardness})]+2.2382)}$ | | | | | |
| Zinc | Acute = $e^{(0.8473[\ln(\text{hardness})]+0.8618)}$ <u>0.978</u> $e^{(0.8525[\ln(\text{hardness})]+1.0617)}$ Chronic = $e^{(0.8473[\ln(\text{hardness})]+0.8699)}$ <u>0.986</u> $e^{(0.8525[\ln(\text{hardness})]+0.9109)}$ | | | | | |

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 $0 \leq T \leq TCAP$
 $TCAP = 20^\circ \text{ C cold water aquatic life species present}$

TCAP = 25° C cold water aquatic life species absent

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

$\text{FPH} = \frac{1 + 10(7.4 - \text{pH})}{1.25}$; 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 ~~s~~Segment 6b, Chatfield Reservoir: Assessment Thresholds

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

(b) Upper South Platte ~~s~~Segment 16h: Selenium Assessment Locations

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

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

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

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

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

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

Chlorophyll = 4.4 ug/L, Mar-Nov average, 1 in 5 yr allowable exceedance frequency

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: UPPER SOUTH PLATTE RIVER Stream Segment Description | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|-------|---|---|---|--|--|---|---|--|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| 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 | <u>T=TVS(CS-I) °C</u> <u>summer=April-Oct</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) 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 | <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) 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 2c. | | 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) <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 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 | <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) 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)= 283µg/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 | <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) 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 µg/l (dis), Zn(ch)=400 µg/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 | <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) 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 | <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) 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 | |
| 5a. Mainstem of Geneva Creek from the source to the confluence with Scott Gomer Creek. | | Aq Life Cold 1 Recreation 4aE Agriculture | <u>T=TVS(CS-I) °C</u> D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH = 3.5-9.0 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>NO₃=100</u> | As(ac)=340 As(ch)=400 <u>Zn=6(Trec)</u> Cd(ch)=2 CrIII(ch)=100 CrVI(ch)=25 Cu(ch)=18(dis) | Fe(ch)=1200 Pb(ch)=4 Mn(ch)=530(dis) Hg(ch)=0.05 Ni(ch)=50 | Se(ch)=4.6 Ag(ch)=1 Zn(ch)=190(dis) | All Metals Trec unless otherwise noted. |

REGULATION #38 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 µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 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 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(Trce) <u>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 | |
| 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 4aU Water Supply Agriculture | <u>T=TVS(CS-II) °C</u> D.O.=6.0 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(Trce) <u>340</u> <u>As(ch)=0.02-10(Trec)</u> <u>Cd(ac)=TVS(tr)</u> 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 12/31/2040 <u>11</u> . |
| 5d. Mainstem of Gooseberry Gulch and all tributaries from Sunset Trail to confluence with Elk Creek. | | Aq Life Cold 2 Recreation U Water Supply Agriculture | <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 | NH₃(ac/ch)=TVS Cl₂(ac)=0.019 Cl₂(ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO₂=0.05 NO₃=10 Cl=250 SO₄=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 | |
| 6a. Mainstem of the South Platte River from the <u>outlet of Cheesman Reservoir</u> 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 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(Trce) <u>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 | |
| 6b. Chatfield Reservoir | | Aq Life Cold 1 Recreation 4aE Water Supply Agriculture | <u>T=TVS(CLL) °C</u> <u>April-Dec</u> <u>T_{WAT}=23.5°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 <u>P(Tot)=0.030 mg/l</u> <u>chlorophyll = 10 µg/l measured through samples that are representative of the mixed layer during July-Sept. with an allowable exceedance frequency of 1 in 5 yrs.</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 | As(ac)=50(Trce) <u>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 | 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 P(Tot) and Chlorophyll 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 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(Trce)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)=90µg/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. |

REGULATION #38 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 µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 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 4aE Agriculture | <u>$T=TVS(CS-II)^{\circ}C$</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>NO₃=100</u> | As(ac)=340 As(ch)=100(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS Cr III(ac/ch)=TVS Cr VI(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 | |
| 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>$T=TVS(CS-II)^{\circ}C$</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>340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS Cr III(ac)=50(Trec) Cr VI(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>$T=TVS(CS-II)^{\circ}C$</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>340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS(tr) Cd(ch)=TVS Cr III(ac)=50(Trec) <u>Cr III(ch)=TVS</u> Cr VI(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. Mainstems of East Plum Creek, and West Plum Creek, and Plum Creek from the boundary of National Forest lands to Chatfield Reservoir, except for specific listings in Segment 10b, mainstems of Stark Creek and Gove Creek from the boundary of National Forest lands to their confluence. | UP | Aq Life Warm 1 Recreation 4aE Water Supply Agriculture | <u>$T=TVS(WS-II)^{\circ}C$</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) <u>340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac/ch)=TVS Cr III(ac)=50(Trec) Cr VI(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>Temporary modifications:</u> Cu (ac/ch) = TVS*2.4 on East Plum Creek and Plum Creek below the Plum Creek Wastewater Authority Discharge. (Type iii). <u>Expiration date of 12/31/2014.</u> <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. |
| 10b. Deleted Mainstem of West Plum Creek including all tributaries, lakes, reservoirs, and wetlands from its source to Perry Park Pond. | | Aq Life Cold 1 Recreation 4a 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 Cr III(ac)=50(Free) Cr VI(ac/ch)=TVS Cu(ac/ch)=TVS | Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/eh)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) | Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(eh)=TVS(tr) Zn(ac/eh)=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>$T=TVS(WS-II)^{\circ}C$</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 Cr III(ac/ch)=TVS Cr VI(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>$T=TVS(WS-II)^{\circ}C$</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 Cr III(ac/ch)=TVS Cr VI(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. |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: UPPER SOUTH PLATTE RIVER Stream Segment Description | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|---|--|---|---|---|---|--|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| 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 Warm1 Recreation 4aE Water Supply Agriculture | <u>T=TVS(WS-I) °C</u> D.O.=5.06.0 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 =0.50.05 NO ₃ =10 Cl=250 SO ₄ =WS | As(ac)=50(Free) 340 <u>As(ch)=0.02(Trec)</u> <u>Cd(ac)=TVS(tr)</u> Cd(ac)=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 | |
| 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 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)=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> <u>summer=14 Feb- Nov</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(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 (Type i).</u> <u>Applies below Bowles Ave.</u> Expiration date of 12/31/2011. <u>Cu(ac/ch)=TVSx2.7 (Type iii).</u> <u>Applies below the confluence</u> <u>with Marcy Gulch. Expiration</u> <u>date of 12/31/2014.</u> <u>T=current conditions (Type iii).</u> Expiration date of 12/31/2014. <u>Se(ac/ch)=current conditions</u> <u>(Type iii). Expiration date of</u> <u>12/31/2013.</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** 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(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*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(die) Hg(ch)=0.01(Tot)0- 4(die) | 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> <u>(Type i). Expiration date of</u> <u>12/31/2014.</u> <u>Cu(ac/ch)=TVSx2.3 (Type iii).</u> Expiration date of 12/31/2014. <u>T=current conditions (Type iii).</u> Expiration date of 12/31/2014. |

REGULATION #38 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 µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 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 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)=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) = TVSx2.6 below the Sand Creek Water Reuse Facility outfall. (Type iii). Expiration date of 12/31/2014. |
| 16b. Aurora Reservoir. | | Aq Life Warm 1 Recreation 4aE Water Supply Agriculture | <u>T=TVS(WL) °C</u> D.O.=5.06-0 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 =0.50-05 NO ₃ =10 Cl=250 SO ₄ =WS | As(ac)=50(Free) <u>340</u> <u>As(ch)=0.02(Trec)</u> Cd(ac)=TVS 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 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 16h, 17a, 17b, and 17e. | 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> | <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 | Fish Ingestion Organics Temporary Modification: NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch)=0.06 mg/l</u> (Type i). Expiration date of 12/31/2011. |
| 16d. Second Creek from the source to the O'Brian Canal. | UP | Aq Life Warm 2 Recreation 4aE Agriculture | <u>T=TVS(WS-IV) °C</u> D.O. ₁ (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 st 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 4aE Agriculture | <u>T=TVS(WS-IV) °C</u> D.O. ₁ (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 st 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(WS-IV) °C</u> D.O. ₁ (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. |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: UPPER SOUTH PLATTE RIVER Stream Segment Description | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|--|--|---|--|--|---|---|--|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| 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(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 CrVI(ac/ch)=TVS Cu(ac/ch)=TVS ^a | 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> 2Cu (ac/ch) = TVSg^a2.4 below the Centennial Wastewater Treatment Facility outfall. <u>(Type iii).</u> <u>Expiration date of 12/31/2014.</u> <u>Temporary modification:</u> NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch)=0.06 mg/l</u> (Type i). Expiration date of 12/31/2011. <u>T=current conditions</u> <u>(Type iii).</u> <u>Expiration date of 12/31/2014.</u> |
| 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(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)=400 <u>Z.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 | 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 Standards See section 38.6(4) for selenium assessment locations. |
| 17a. Washington Park Lakes, City Park Lakes, 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> | As(ac)=340 As(ch)=400 <u>Z.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 | |
| 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> | As(ac)=340 As(ch)=400 <u>Z.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 | |
| 17c. Bowles Lake, a.k.a. Patrick Reservoir or Bow Mar Lake. | | Aq Life Warm 1 Recreation 4aE Agriculture | <u>T=TVS(WL) °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 =0.5 <u>NO₃=100</u> | Al(ac/ch)=TVS As(ac)=340 As(ch)=400 <u>Z.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 | |
| 18. Lakes and reservoirs within the boundaries of the Lost Creek and Mt. Evans Wilderness areas. | OW | Aq Life Cold 1 Recreation F 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 | NH₃(ac/ch)=TVS Cl₂(ac)=0.019 Cl₂(ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO₂=0.05 NO₃=10 Cl=250 SO₄=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 | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|-------|---|--|---|--|---|---|---|--|
| BASIN: UPPER SOUTH PLATTE RIVER | | | PHYSICAL and BIOLOGICAL | INORGANIC | METALS | | | | |
| Stream Segment Description | | | | mg/l | µg/l | | | | |
| 19. <u>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.</u> | | Aq Life Cold 1 Recreation E Water Supply Agriculture | T=TVS(CI, CLI) °C Antero Reservoir April-Dec T _{WAT} =19.6°C Spinney Mt Reservoir April-Dec T _{WAT} =20.2°C Elevenmile Reservoir April-Dec T _{WAT} =19.8°C Cheesman Reservoir April-Dec T _{WAT} =21.9°C Strontia Springs Res April-Dec T _{WAT} =22.6°C Platte Canyon Res Mar-Dec T _{WAT} =25.0°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. <u>Lakes and reservoirs in the Plum Creek system within National Forest boundaries; and lakes and reservoirs in the Bear Creek drainage between the National Forest boundary and to the inlet of Perry Park Reservoir (Douglas County).</u> | | Aq Life Cold 1 Recreation E Water Supply Agriculture | T=TVS(CI) °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. <u>Lakes and reservoirs in the Plum Creek system except for specific listings in Segment 20.</u> | | Aq Life Warm 2 Recreation E Water Supply Agriculture | T=TVS(WI) °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)=0.02-0(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 | |
| 22. <u>Lakes and reservoirs in watersheds tributary to the South Platte River from the outlet of Chatfield Reservoir to a point immediately below the confluence with Big Dry Creek, except for specific listings in the subbasins of the South Platte River, and in Segments 16b, 17a, 17b, 17c, and 23.</u> | | Aq Life Warm 2 Recreation E Water Supply Agriculture | T=TVS(WI) °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 |
| 23. <u>Lakes and reservoirs in watersheds tributary to the Upper South Platte River and within the City and County of Denver, except for specific listings in the other subbasins of the South Platte River and in Segments 17a and 17b.</u> | | Aq Life Warm 2 Recreation E Agriculture | T=TVS(WI) °C D.O.=5.0 mg/l pH=6.5-9.0 E. Coli=126/100ml | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO ₂ =0.5 NO ₃ =100 | As(ac)=340 As(ch)=7.6(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS 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.

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

Footnotes

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

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

Ammonia:

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

| | |
|---------------------------|--|
| Ammonia | <p>Warm Water = (mg/l as N)Total</p> $acute = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$ $chronic (Apr 1 - July 31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$ $chronic (Aug 1 - Mar 31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * 1.45 * 10^{0.028 * (25 - MAX(T, 7))}$ |
| NH ₃ = old TVS | Warm Water Acute = 0.62/FT/FPH/2 ^(4 old) in mg/ (N) |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|--|---|--|--|---|---|--|--|
| BASIN: CHERRY CREEK | | | PHYSICAL and BIOLOGICAL | INORGANIC | METALS | | | | |
| Stream Segment Description | | | | mg/l | µg/l | | | | |
| 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 | T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml E.Coli=126/100ml | NH3(ac/ch)=TVS Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO2=0.5 NO3=10 Cl=250 SO4=WS | As(ac)=50(Trec) 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 | |
| 2. Cherry Creek Reservoir. | | Aq Life Warm 1 Recreation 4aE Water Supply Agriculture | T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml E.Coli=126/100ml Season mean chlorophyll a = 45 18 µg/l measured in the upper three meters of the water column for the months of July through September with an exceedance frequency of once in five years. | NH3(ac/ch)=TVS Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO2=0.5 NO3=10 Cl=250 SO4=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. 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 | T=TVS(WS-II) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml E.Coli=126/100ml | NH3(ac/ch)=TVS Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO2=0.5 NO3=10 Cl=250 SO4=WS | As(ac)=50(Trec) 340 As(ch)=0.02-10(Trec) Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Fe(ch)=WS(dis) | Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS | Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS | Temporary modification: NH3(ac/ch)=TVS(old); NH3(ch)=0.10 mg/l (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 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 | NH3(ac/ch)=TVS Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO2=0.5 NO3=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 modification: NH3(ac/ch)=TVS(old); NH3(ch)=0.10 mg/l (Type i). Expiration date of 12/31/2011. |
| 5. Lakes and reservoirs in the Cherry Creek system from the source of East and West Cherry Creeks to the confluence with the South Platte River, except for specific listings in Segments 2 and 6. | | Aq Life Warm 2 Recreation E Water Supply Agriculture | T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml | NH3(ac/ch)=TVS Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO2=0.5 NO3=10 Cl=250 SO4=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)=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 | |
| 6. Lakes and reservoirs in watersheds tributary to Cherry Creek within the City and County of Denver. | | Aq Life Warm 2 Recreation E Agriculture | T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml | NH3(ac/ch)=TVS Cl2(ac)=0.019 Cl2(ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO2=0.5 NO3=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 | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: BEAR CREEK Stream Segment Description | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|---|--|---|--|--|---|---|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| 1a. Mainstem of Bear Creek from the source boundary of the Mt. Evans Wilderness area 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(Free) 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 | |
| 1b. Mainstem of Bear Creek from Harriman Ditch to the inlet of Bear Creek Reservoir. | UP | Aq Life Cold 2 Recreation 4aE Water Supply Agriculture | <u>T=TVS(CS-II) °C</u> <u>April-Oct</u> <u>T_{WAT}=19.3 °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(Free) 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 | Water + Fish Organics Standards |
| 1c. Bear Creek Reservoir, and Soda Lakes. | | Aq Life Cold 1 Recreation 4aE Water Supply Agriculture | <u>T=TVS(CLL) °C</u> <u>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 <u>Mean chlorophyll =</u> <u>10 µg/l and mean</u> <u>total phosphorus = 32</u> <u>µg/l measured</u> <u>through collection of</u> <u>samples that are</u> <u>representative of the</u> <u>mixed layer during</u> <u>summer months</u> <u>(July, August,</u> <u>September) and with</u> <u>an exceedance</u> <u>frequency of once in</u> <u>five years.</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 | 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 | *See narrative phosphorus standard below. Temporary modification: Chlorophyll and total phosphorus equal to existing conditions (Type iii). Expiration date of 12/31/2014. |
| 1d. Evergreen Lake. | | Aq Life Cold 1 Recreation 4aE 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) <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 | |
| 1e. Mainstem of Bear Creek from the outlet of Evergreen Lake to the Harriman Ditch. | | Aq Life Cold 1 Recreation E Water Supply Agriculture | <u>T=TVS(CS-II) °C</u> <u>April-Oct</u> <u>T_{WAT}=19.3 °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(Free) 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 | |

*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.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|----------------------------|---|-------|--|---|---|--|--|---|---|--|
| BASIN: BEAR CREEK | | | | PHYSICAL and BIOLOGICAL | INORGANIC | METALS | | | | |
| Stream Segment Description | | | | | mg/l | µg/l | | | | |
| 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 | 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) 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 the outlet of Evergreen Lake 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 | 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(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 | |
| 4a. | All tributaries to Bear Creek, including all lakes, reservoirs and wetlands, from a point immediately below the confluence with Cub Creek the outlet of Evergreen Lake to the confluence with the South Platte River, except for specific listings in Segments 4b, 4c, 5, 6a, and 6b. | UP | Aq Life Warm 2 Recreation 4aE Water Supply 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 =10 Cl=250 SO ₄ =WS | As(ac)=50(Free) 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. | Deleted 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 | 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) 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. | Deleted 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 4a 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(Free) 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. | Swede, Kerr, Sawmill, Troublesome, and Cold Springs Gulches, and mainstem of Cub Creek 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 | 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=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 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 |
| 6a. | Turkey Creek system, including all tributaries and wetlands, from the source to the inlet of Bear Creek Reservoir, except for specific listings in Segment 6b. | | Aq Life Cold 2 Recreation E Water Supply Agriculture | T=TVS(CS-II) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml | NH ₃ (ac/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 |
| 6b. | Mainstem of North Turkey Creek, from the source to the confluence with Turkey Creek. | | Aq Life Cold 1 Recreation 4aE 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(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 | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: BEAR CREEK | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|---|--|---|--|--|---|---|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 7. <u>Mainstem and all A+ tributaries to Bear Creek, including lakes, reservoirs and wetlands, within the Mt. Evans Wilderness Area.</u> | OW | Aq Life Cold 1 Recreation E Water Supply Agriculture | T=TVS(CS-1) °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 | |
| 8. <u>Lakes and reservoirs in the Bear Creek system from the sources to the boundary of the Mt. Evans Wilderness area.</u> | 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) 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 | |
| 9. <u>Lakes and reservoirs in the Bear Creek system from the boundary of the Mt. Evans Wilderness area to the inlet of Evergreen Lake.</u> | | 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) 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 | |
| 10. <u>Lakes and reservoirs in drainages of Swede Gulch, Sawmill Gulch, Troublesome Gulch, and Cold Springs Gulch from source to confluence with Bear Creek.</u> | | Aq Life Cold 2 Recreation E Water Supply Agriculture | T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 Cl=250 SO ₄ =WS | As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=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 Standards |
| 11. <u>Lakes and reservoirs in the Bear Creek system from the outlet of Evergreen Lake to the confluence with the South Platte River, except as specified in Segments 1c, 10, and 12; includes Soda Lakes.</u> | | Aq Life Warm 2 Recreation E Water Supply Agriculture | T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO ₂ =0.5 NO ₃ =10 Cl=250 SO ₄ =WS | As(ac)=340 As(ch)=0.02(Trec) Cd(ac/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 Standards |
| 12. <u>Lakes and reservoirs in the Turkey Creek system from the source to the inlet of Bear Creek Reservoir.</u> | | Aq Life Cold 2 Recreation E Water Supply Agriculture | T=TVS(CL) °C D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 E.Coli=126/100ml | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 Cl=250 SO ₄ =WS | As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=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 |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|------------------------------------|---|--|---|--|--|---|--|---|
| BASIN: CLEAR CREEK | | | PHYSICAL and BIOLOGICAL | INORGANIC | | METALS | | | |
| Stream Segment Description | | | | mg/l | | µg/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 4a 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)- 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, <u>3a and 3b</u> . | 9/30/00 Baseline does not apply | Aq Life Cold 1 Recreation 4a 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(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) <u>Zn(ac)= 0.978e^{(0.8537[ln(hardness)]+1.9467)}</u> <u>Zn(ch)= 0.986e^{(0.8537[ln(hardness)]+1.8032)}</u> | 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)=264 353 µg/l (dis), Zn(ac)=586 µg/l (dis), (Type i) Cd(ch)=1.54(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 4a 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=126/100ml | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 SO ₄ =WS Cl=250 | As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS | Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) | Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac)=TVS Zn(ch)=TVS | |
| 2c. Mainstem of Clear Creek, including all tributaries and wetlands, from a point just below the confluence with Mill Creek to a point just above the Argo Tunnel discharge, except for specific listings in Segments 9a, 9b, and 10. | 9/30/00 Baseline does not apply | Aq Life Cold 1 Recreation 4a 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=126/100ml | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 SO ₄ =WS Cl=250 | As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS (tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS | Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) <u>Zn(ac)= 0.978e^{(0.8537[ln(hardness)]+1.9467)}</u> <u>Zn(ch)= 0.986e^{(0.8537[ln(hardness)]+1.8032)}</u> | Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) | Temporary modifications: Cu(ch)=11.4 µg/l (dis), (Type iii) Expiration date of 7/01/2014. |
| 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 4a 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)- 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)=TV | |
| 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 4a 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)- 340 <u>As(ch)=0.02-10</u> <u>(Trec)</u> As(ac)=50(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) <u>Zn(ac)= 0.978e^{(0.8537[ln(hardness)]+1.9467)}</u> <u>Zn(ch)= 0.986e^{(0.8537[ln(hardness)]+1.8032)}</u> | Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: CLEAR CREEK | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|--|---|---|---|--|--|--|--|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 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 | $T=TVS\ (CS-I)^{\circ}C$ 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(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 | |
| 5. Mainstem of West Clear Creek from the confluence with Woods Creek to the confluence with Clear Creek. | UP | 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)=4007.6(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 ^{0.6404[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(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 | |
| 7. Mainstem of Woods Creek from the outlet of Upper Urad Reservoir to the confluence with West Clear Creek, including Lower Urad Reservoir. | UP | Aq Life Cold 2 Recreation 2N | $T=TVS\ (CS-I/CL)^{\circ}C$ 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 | $WQS_{WC} = ((Q_{WC} + Q_{WFCC}) \times WQS_{WFCC} - (Q_{WFCC} \times C_{WFCC}))/Q_{WC}$ WQS _{WC} = Water Quality Standards for Woods Creek Q _{WC} = Flow for Woods Creek Q _{WFCC} = Flow for West Fork Clear Creek WQS _{WFCC} = Water Quality Standards for West Fork Clear Creek C _{WFCC} = Ambient Concentration in West Fork Clear Creek | | | 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(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 | Temporary modification: Cu(ch)=9.6 µg/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 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)=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(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 | |

*REFER TO STATEMENT OF BASIS AND PURPOSE

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: CLEAR CREEK | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|--|---|---|---|--|---|---|---|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 11. Mainstem of Clear Creek from <u>a point just above the Argo Tunnel discharge to the Farmers Highline Canal diversion in Golden, Colorado.</u> | UP | 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 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/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) <u>Zn(ac)= 0.978e^{(0.8537[ln(hardness)]+1.9467)}</u> <u>Zn(ch)= 0.986e^{(0.8537[ln(hardness)]+1.8032)}</u> | Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ch)=300 | Temporary modification: <u>Zn(ch)=325 µg/l (dis),</u> <u>Cd(ch)=1.42 µg/l (dis),</u> <u>(type iii)</u> 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 <u>9/30/00</u> <u>Baseline</u> <u>does not</u> <u>apply</u> | 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(Trec)-340 <u>As(ch)=0.02-</u> <u>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, <u>including all tributaries and wetlands, from its source to its confluence with Chase Gulch,</u> and Four Mile 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 <u>their</u> confluence with North Clear Creek <u>and Eureka Gulch, including all tributaries and wetlands, from its source to its confluence with Gregory Gulch.</u> | 9/30/00 Baseline does not apply | 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 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 | |
| 13b. Mainstem of North Clear Creek including all tributaries, lakes, reservoirs and wetlands from the <u>source - a point just below the confluence with Chase Gulch</u> to the confluence with Clear Creek, except for the specific listings in s Segment 13a. | UP | Aq Life Cold 2 Recreation 4aE 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 | As(ac)=340 As(ee ch)=100 (Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS | Cu(ch)=64 Fe(ch)=5400(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) | Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ch)=740 | Temporary modifications: Cd(ch)=4.7 µg/l (dis), Mn(ch)=3841 µg/l (dis), Zn(ch)=1582 µg/l (dis), Fe(tree ch)=7941 (<u>Trec</u>), <u>T=current condition</u> (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 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(Trec)-340 <u>As(ch)=0.02-</u> <u>10(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVSX3.6 6 ⁺ | Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)= 500 <u>244</u> Hg(ch)=0.01(tot) Ni(ac/ch)=TVS | Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSX ≥1.57 [*] | Temporary modifications: <u>Cu(ac/ch)=TVSX3.66*</u> <u>T=current condition</u> (type iii) Expiration date of 12/31/2014. |
| 14b. Mainstem of Clear Creek from the Denver Water conduit #16 crossing to <u>a point just below</u> 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 | As(ac)= 50(Trec)-340 <u>As(ch)=0.02-</u> <u>10(Trec)</u> Cd(ac/ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVSX Cu(ac/ch)=TVSX3.6 6 ⁺ | Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac)=TVS Mn(ch)= 500 <u>244</u> Hg(ch)=0.01(tot) Ni(ac/ch)=TVS | Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVSX ≥1.57 [*] | Temporary modifications: <u>Cu(ac/ch)=TVSX3.66*</u> <u>T=current condition</u> (type iii) Expiration date of 12/31/2014. |

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

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: CLEAR CREEK | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|-------|---|--|---|--|---|--|--|--|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 15. Mainstem of Clear Creek from 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 | 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)=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)=TVSx1.57* | Aquatic life warm 1 goal qualifier. Temporary Modifications: NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch)=0.06 mg/l</u> (Type i). Expiration date of 12/31/2011. <u>Cu(ac/ch)=TVSx3.66*</u> <u>T=current condition</u> (Type iii) <u>Expiration date of</u> <u>12/31/2014.</u> |
| 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-</u> <u>10(Trec)</u> Cd(ac/ch)=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 Hg(ch)=0.01(Trec) | Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS | |
| 17a. Arvada Reservoir. | UP | Aq Life Cold 2 Recreation 2N Water Supply Agriculture | <u>T=TVS(CLI)°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 Organies 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 4aU 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) <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/ch)=TVS Zn(ac/ch)=TVS | Water + Fish Organies 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-</u> <u>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-</u> <u>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 | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: CLEAR CREEK | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|---------------------------------|--|---|---|---|--|---|---|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 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 | 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 =250 | 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 | |
| 20. Lakes and reservoirs in the Clear Creek system that are within the boundary of the Mt. Evans Wilderness Area. | OW | Aq Life Cold 1 Recreation E Water Supply Agriculture | T=TVS(CL)°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)=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 | |
| 21. Lakes and reservoirs in the Clear Creek system from sources to the Farmer's Highline Canal diversion in Golden, CO., except as specified in Segments 7, 20, 22 and 25. Upper Long Lake. | 9/30/00 baseline does not apply | Aq Life Cold 1 Recreation E Water Supply Agriculture | T=TVS(CL)°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 | |
| 22. Lakes and reservoirs in the North Clear Creek drainage from a point just below the confluence with Chase Gulch to the confluence with Clear Creek. | 9/30/00 baseline does not apply | Aq Life Cold 1 Recreation E Agriculture | T=TVS (CL)°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 | As(ac)=340 As(ch)=7.6(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS | Cu(ac/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 | |
| 23. Ralston Reservoir | | Aq Life Cold 2 Recreation U 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)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 | Water + Fish Standards |
| 24. Lakes and reservoirs in the Clear Creek system from the Farmers Highline Canal diversion in Golden, Colorado to the confluence with the South Platte River, except for specific listings in Segment s 17a, 21 and 23. | | Aq Life Warm 1 Recreation U 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 Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) | Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Zn(ac/ch)=TVS | |
| 25. Guanella Reservoir | | Aq Life Cold 1 Recreation E 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 | As(ac)=340 As(ch)=7.6(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS | Cu(ac/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)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: BIG DRY CREEK | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|--|---|---|---|--|---|---|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/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 Segments 4a, 4b, 5 and 6. | UP | Aq Life Warm 2 Recreation 4a 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)=15* Se(ac)=19.1* | Temporary modifications: NH ₃ (ac/ch)=TVS(old); <u>NH₃(ch)=0.10 mg/l</u> (Type i). Expiration date of 12/31/2011. <u>*Refer to Section 38.6(4)(d).</u> |
| 2. Standley Lake. | | Aq Life Warm 1 Recreation 4a 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 <u>Chl a=4.0 µg/l*</u> <u>See ** below for narrative 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) <u>340</u> <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. <u>See * for narrative standard.</u> <u>*Refer to Section 38.6(4)(e).</u> |
| <u>** 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.</u> | | | | | | | | | |
| 3. Great Western Reservoir. | UP | Aq Life Warm 2 Recreation 4a 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)=100(Trec) <u>340</u> <u>As(ch)=0.02(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 4a 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) <u>340</u> <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(aech)=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 eastern edge of the Central Operable Unit on Rocky Flats Property to Indiana Street and North Walnut Creek from its source to the western edge of the Central Operable Unit. | UP | Aq Life Warm 2 Recreation 2P Water Supply Agriculture | <u>T=TVS(WS-I)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml E.Coli=630/205/100 ml | 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) <u>340</u> <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(aech)=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 Walnut Creek from the western edge of the Central Operable Unit and South Walnut Creek from its source, including all tributaries, lakes, reservoirs and wetlands, from their sources to the outlets of ponds A-4 and B-5, on Walnut Creek eastern boundary of the Central Operable Unit and Pond C-2 on Woman Creek. All three ponds are located on Rocky Flats property. | UP | Aq Life Warm 2 Recreation 2N Water Supply Agriculture | <u>T=TVS(WS-I)°C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml E.Coli=630/100ml | Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO ₂ =0.5 NO ₃ =10 | As(ac)=50(Trec) <u>340</u> <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. |
| 6. Upper Big Dry Creek and South Upper Big Dry Creek, from their source to Standley Lake. | UP | Aq Life Warm 2 Recreation 2N Water Supply Agriculture | <u>T=TVS(WS-I)°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(Trec) <u>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 | |

*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.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: BIG DRY CREEK | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS | |
|---|-------|---|--|---|---|--|---|--|--|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC | METALS | | | | |
| | | | | mg/l | µg/l | | | | |
| Stream Segment Description | | | | | | | | | |
| <u>7. Lakes and reservoirs in the Big Dry Creek system from the source to the confluence with the South Platte River, except for specific listings in Segments 2, 3, and 5.</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> | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|--|---|---|--|--|---|--|--|
| BASIN: BOULDER CREEK | | | PHYSICAL and BIOLOGICAL | INORGANIC | METALS | | | | |
| Stream Segment Description | | | | mg/l | µg/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 <u>E</u> 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> <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 <u>below</u> the confluence with South <u>North</u> Boulder Creek, except for the specific listings in Segment 3 and 42. | | Aq Life Cold 1 Recreation 4a <u>E</u> 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> <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 | |
| <u>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> | | <u>Aq Life Cold 1 Recreation E Water Supply Agriculture</u> | <u>T=TVS(CS-II) °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>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 <u>E</u> 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> <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 <u>E</u> 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> <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 <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 | As(ac)=50(Free) <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 <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 | As(ac)=50(Free) <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/ch)=TVS Zn(ac/ch)=TVS | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: BOULDER CREEK | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|---|---|---|---|--|--|---|--|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 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 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 | As(ac)=50(Free) <u>As(ac)=340</u> 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) 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 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 | As(ac)=50(Free) <u>As(ac)=340</u> 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) 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 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)=0.02-10(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 | |
| 7a. Mainstem of Coal Creek from Highway 93 to Highway 36 (Boulder Turnpike). | UP | Aq Life Warm 1 Recreation 4a E 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(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 | |
| 7b. Mainstem of Coal Creek from Highway 36 to the confluence with Boulder Creek. | 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 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(ch)=100(Free) <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/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 E 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 | As(ac)=50(Free) <u>As(ac)=340</u> As(ch)=100(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 | <u>Temporary modifications:</u> <u>Se(ch)=12.2 µg/l (dis)</u> (Type iii). <u>Expiration date of 12/31/2014.</u> |
| 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 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 | As(ac)=50(Free) <u>As(ac)=340</u> 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: type (iii) Cu (ac/ch)=Current Condition. (Type iii). Expiration date of 12/31/2014. NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.06</u> (Type i). Expiration date of 12/31/2011 |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: BOULDER CREEK Stream Segment Description | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|-------|--|---|---|--|---|--|---|--|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| 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 | <u>T=TVS(WS-II) °C</u> <u>D.O.=5.0 mg/l</u> <u>pH=6.5-9.0</u> <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 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: NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.06</u> (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 | <u>T=TVS(WS-II) °C</u> <u>D.O.=5.0 mg/l</u> <u>pH=6.5-9.0</u> <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 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/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. | QW | Aq Life Cold 1 Recreation E Water Supply Agriculture | <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>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)=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. All lakes and reservoirs tributary to Boulder Creek from the source to a point immediately above the South Boulder Creek confluence, except as specified in Segment 13. This segment includes Barker Reservoir. | | Aq Life Cold 1 Recreation E Water Supply Agriculture | <u>T=TVS(CL,CLL) °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>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)=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 | |
| 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 | <u>T=TVS(CL,CLL) °C</u> <u>Gross Reservoir</u> <u>April-Dec</u> <u>T_{WAT}=19.4 °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>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)=340</u> <u>As(ch)=0.02-10(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 | |
| 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 | <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> | NH ₃ (ac/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)=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 | |
| 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 | <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> | NH ₃ (ac/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)=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 | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: ST. VRAIN CREEK | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|---|--|---|--|---|---|--|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/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 <u>E</u> 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 <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(Tree)</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 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 <u>Hygiene Road the eastern boundary of Roosevelt National Forest.</u> | | Aq Life Cold 1 Recreation 4a <u>E</u> 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 <u>F.Coli=200/100</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(Tree)</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 | |
| <u>2b. Mainstem of St. Vrain Creek, including all tributaries and wetlands, from the eastern boundary of Roosevelt National Forest to Hygiene Road.</u> | | Aq Life Cold 1 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 <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) <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> | <u>Temporary modification:</u> <u>Cu(ch)=6.0 µg/l (dis)</u> <u>(Type iii).</u> <u>Expiration date of</u> <u>12/31/2014</u> |
| 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 <u>E</u> 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 <u>NO₃=100</u> | <u>As(ac)=100</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 | Temporary modifications: NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.06</u> (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 <u>a point immediately below the confluence with James Creek</u> , except for specific listings in Segment 4b. | | Aq Life Cold 1 Recreation 4a <u>E</u> 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 <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(Tree)</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 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 <u>E</u> 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 <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(Tree)</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 | |
| <u>4c. Mainstem of Left Hand Creek, including all tributaries and wetlands, from a point immediately below the confluence with James Creek to Highway 36.</u> | | Aq Life Cold 1 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 <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) <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> | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: ST. VRAIN CREEK | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|--|--|---|--|--|---|--|--|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/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 <u>E</u> 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 SO ₄ =WS | <u>As(ac)=50(Tree)</u> <u>As(ac)=340</u> <u>As(ch)=0.02-10(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 | |
| 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 s Segments 4a, 4b, <u>4c</u> and 5. | 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 <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 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) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011. |
| 7. Boulder Reservoir, Coot Lake, and Left Hand Valley Reservoir. | | Aq Life Warm 1 Recreation 4a <u>E</u> Water Supply Agriculture | <u>T=TVS(WL) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=200/100</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(Tree)</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 | |
| 8. <u>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.</u> | 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> <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> | |
| 9. <u>All lakes and reservoirs tributary to St. Vrain Creek from sources to Hygiene Road, including Button Rock Reservoir, except as specified in Segment 8.</u> | | Aq Life Cold 1 Recreation E Water Supply Agriculture | <u>T=TVS(CL, 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> <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> | |
| 10. <u>All lakes and reservoirs tributary to Left Hand Creek from sources to Highway 36.</u> | | 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> <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> | |
| 11. <u>Barbour Ponds.</u> | | Aq Life Warm 1 Recreation E Water Supply Agriculture | <u>T=TVS(WL) °C</u> D.O.=5.0 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=0.5</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/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> | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|-------|---|---|---|---|---|---|--|---|
| BASIN: ST. VRAIN CREEK | | | PHYSICAL and BIOLOGICAL | INORGANIC | | METALS | | | |
| Stream Segment Description | | | | mg/l | | µg/l | | | |
| <u>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.</u> | | <u>Aq Life Warm 2 Recreation E Water Supply Agriculture</u> | <u>T=TVS(WI) °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>NO₃=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)=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/ch)=TVS</u> <u>Zn(ac/ch)=TVS</u> | |
| <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 Recreation E Water Supply Agriculture</u> | <u>T=TVS(WI) °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>NO₃=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> | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|---|---|---|---|--|--|--|---|
| BASIN: MIDDLE SOUTH PLATTE RIVER | | | PHYSICAL and BIOLOGICAL | INORGANIC | | METALS | | | |
| Stream Segment Description | | | | mg/l | | µg/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 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 | As(ac)=50(Trec) <u>As(ac)=340</u> 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 x2.2 | 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 modifications: <u>Se(ch)=6.9 µg/l (dis) (Type iii)</u> <u>Expiration date of 12/31/2014</u> NH ₃ (ac/ch)=TVS(old) <u>NH₄(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 | As(ac)=50(Trec) <u>As(ac)=340</u> As(ch)=0.02(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 | Fish Ingestion Organics Standards 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> | As(ch)=100(Trec) <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 modifications: NH ₃ (ac/ch)=TVS(old) <u>NH₄(ch)=0.10</u> (Type i). Expiration date of 12/31/2011. |
| 3b. Haystack Tributaries including the Upper Haystack Tributary from the source to the confluence with Box Elder Creek and the Lower Haystack 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> | As(ac)=340 <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 | As(ac)=50(Trec) <u>As(ac)=340</u> As(ch)=0.02(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 | Fish Ingestion Organics Standards Temporary modification: <u>pH= existing quality (Type iii)</u> <u>Expiration date of 12/31/2014</u> |
| 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> | As(ac)=340 <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 | As(ac)=340 <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. |
| 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 | <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=100</u> | <u>As(ac)=340</u> <u>As(ch)=100(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> | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: MIDDLE SOUTH PLATTE RIVER Stream Segment Description | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|---|---|---|---|--|---|--|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| 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(W-S-IV) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml 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) | |
| 7. <u>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> | | Aq Life Warm 2 Recreation E Water Supply Agriculture | <u>T=TVS(WI) °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(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

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

Footnotes

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

Ammonia:

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

Ammonia

Warm Water = (mg/l as N)Total

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

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

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

NH₃ = old TVS

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

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: BIG THOMPSON RIVER Stream Segment Description | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|-------|---|---|---|--|---|--|---|--|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| 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 <u>E</u> 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) <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 <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 | 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) <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., <i>E. coli</i> , NH ₃ , NO ₃ , B, Cd, Cu, Pb, Hg, Ni, Se, Ag, Zn = <u>existing quality current condition</u> . Wapiti Meadow wetlands at the toe of Lake Estes Dam (<u>type iii</u>). Expiration date of 12/31/2014. |
| 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 <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 | 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) 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 <u>E</u> 10/16 – 4/30 Recreation 2 <u>N</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 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(Trec) <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 <u>E</u> 10/16 – 4/30 Recreation 2 <u>N</u> | <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(Trec) <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)=5.5µg/l (dis). (type iii) Expiration date of 2/28/10. |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: BIG THOMPSON RIVER | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|--|---|---|--|---|---|---|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 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> | <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 |
| 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-I) °C</u> D.O. = 5.0 mg/l pH = 6.5-9.0 5/1 – 10/15 F.Coli=325/100ml <u>E.Coli=205/100ml</u> 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> | <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: <u>Se(ch)=5.7 µg/l (dis).</u> <u>(Type iii).</u> <u>Expiration date of</u> <u>12/31/2014.</u> NH ₃ (ac/ch)=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-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 | Fish Ingestion Organics Standards Temporary modifications: NH ₃ (ac/ch)=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 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 | |
| 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 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 | |
| 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 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 | Temporary modifications: <u>Se(ch)=13.1 µg/l (dis).</u> <u>(Type iii).</u> <u>Expiration date of</u> <u>12/31/2014.</u> NH ₃ (ac/ch)=TVS(old) <u>NH₃(ch)=0.10</u> (Type i). Expiration date of 12/31/2011. |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: BIG THOMPSON RIVER | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|--|-------|--|--|---|--|--|---|--|--|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 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=200/100ml</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 modifications: NH ₃ (ac/ch)=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> E.Coli=126/100ml | NH ₃ (ac/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 | |
| 12. Lake Loveland, Horseshoe Lake, Boyd Lake. | | Aq Life Warm 1 Recreation 4a E 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 | NH ₃ (ac/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 | |
| 13. Berthoud Reservoir, Johnstown 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 <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(Trec)</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/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 | <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 | NH ₃ (ac/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 | |
| 15. All lakes and reservoirs tributary to the Big Thompson River within Rocky Mountain National Park. | QW | 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> | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | <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> | |
| 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 | <u>T=TVS(CL, CLL) °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> | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | <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> | |
| 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 | <u>T=TVS(WL) °C</u> D.O. = 5.0 mg/l pH = 6.5-9.0 <u>F.Coli=126/100ml</u> | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | <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> | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: BIG THOMPSON RIVER | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|-------|---|---|---|--|--|---|--|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| <u>18. All lakes and reservoirs tributary to the Little Thompson River from the source to the Culver Ditch diversion.</u> | | <u>Aq Life Cold 1</u> <u>Recreation E</u> <u>Water Supply</u> <u>Agriculture</u> | <u>T=TVS(CL) °C</u> <u>D.O.(sp)=7.0 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=0.05</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>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.</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> | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: CACHE LA POUDRE RIVER | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|-------|---|---|---|--|--|---|--|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 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 <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 (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(Free) <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 the Cache La Poudre River, including 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 <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 | As(ac)=50(Free) <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 the Cache La Poudre River, including all tributaries and wetlands , from a point immediately below the confluence with the South Fork Cache La Poudre River to the Monroe Gravity Canal/North Poudre Supply canal diversion. | | Aq Life Cold 1 Recreation E Water Supply Agriculture | <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>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 <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 | As(ac)=50(Free) <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 | |
| 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 <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 | As(ac)=50(Free) <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 Organisms 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 <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 | As(ac)=50(Free) <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 Organisms Standards |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|------------------------------|--|-------|---|---|---|--|--|--|---|---|
| BASIN: CACHE LA POUDRE RIVER | | | | PHYSICAL and BIOLOGICAL | INORGANIC | METALS | | | | |
| Stream Segment Description | | | | | mg/l | µg/l | | | | |
| 9. | Mainstem of Rabbit Creek and Lone Pine Creek from the source to the confluence with the North Fork of the Cache La Poudre River. | | Aq Life Cold 1 Recreation 4a 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=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 | |
| 10. | Mainstem of the Cache La Poudre River from the Monroe Gravity Canal/North Poudre Supply Canal diversion to Shields Street in Ft. Collins, Colorado. | UP | Aq Life Cold 2 Recreation 4a 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=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 | Water + Fish Organics Standards |
| 11. | Mainstem of the Cache La Poudre River from Shields Street in Ft. Collins to a point immediately above the confluence with Boxelder Creek. | UP | Aq Life Warm 2 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 =2.7 NO ₃ =100 | As(ch)=100(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 | 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. Se(ch)=5.4 µg/l (dis) (Type iii) - Expiration date of 12/31/2014. NH ₃ (ac/ch)=TVS(old) NH ₃ (ch)=0.10 (Type i). Expiration date of 12/31/2011. |
| 12. | Mainstem of the Cache La Poudre River from a point immediately above the confluence with Boxelder Creek to the confluence with the South Platte River. | UP | Aq Life Warm 2 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 =2.7 NO ₃ =100 | As(ch)=100(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 | 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. Se(ch)=7.1 µg/l (dis) (Type iii) - Expiration date of 12/31/2014. NH ₃ (ac/ch)=TVS(old) NH ₃ (ch)=0.10 (Type i). Expiration date of 12/31/2011. |
| 13a. | All tributaries to the Cache La Poudre River, including all lakes, reservoirs and wetlands, from a point immediately above the confluence with the North Fork of the Cache La Poudre River the Monroe Gravity Canal/North Poudre Supply canal diversion to the confluence with the South Platte River, except for specific listings in Segments 6, 7, 8, 13b, 14, 15 and 16 and 13c. | UP | Aq Life Warm 2 Recreation 4a E Agriculture Water Supply | 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 =10 Cl=250 SO ₄ =WS | As(ac)=340 As(ch)=100(Trec) 0.02-10(Trec) Cd(ac/ch)=TVS CrIII(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) NH ₃ (ch)=0.06 (Type i). Expiration date of 12/31/2011. |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS | |
|---|-------|--|---|---|--|--|---|---|--|
| BASIN: CACHE LA POUDRE RIVER | | | PHYSICAL and BIOLOGICAL | INORGANIC | | METALS | | | |
| Stream Segment Description | | | | mg/l | | µg/l | | | |
| 13b. Mainstem of Boxelder Creek from its source to the confluence with the Cache La Poudre River. | UP | Aq Life Warm 2 5/15-9/15 Recreation 4a E 9/16-5/14 Recreation 2 N Agriculture | T=TVS(WS-II) °C 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=2000/400ml E.Coli=630/100ml | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO ₂ =0.5 NO ₃ =100 | As(ac)=340 As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS | Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(Tot) Ni(ac/ch)=TVS | Se(ac/ch)=TVS Ag(ac/ch)=TVS Zn(ac/ch)=TVS | Temporary modifications: Se(ch)=13.0 µg/l (dis). (Type iii). Expiration date of 12/31/2014. NH ₃ (ac/ch)=TVS(old) NH ₃ (ch)=0.10 (Type i). Expiration date of 12/31/2011. |
| 13c. Mainstems of South Branch of Boxelder Creek, North Branch of Boxelder Creek and Sand Creek from their sources to their confluences with the mainstem of Boxelder Creek. | | Aq Life Cold 2 Recreation 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 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)=0.02-10(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 | |
| 14. Horsetooth Reservoir. | | Aq Life Cold 1 Recreation 4a E Water Supply Agriculture | T=TVS(CLL) °C Apr-Dec T _{WAT} =22.8°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(Free) 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. Watson Lake. | | Aq Life Cold 1 Recreation 4a E Water Supply Agriculture | T=TVS(CI) °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) 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)=100(Free) 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. 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. | OW | Aq Life Cold 1 Recreation F Water Supply Agriculture | T=TVS(CI) °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 | |
| 18. All lakes and reservoirs tributary to the Cache La Poudre River from the boundaries of Rocky Mountain National Park, and the Rawah, Neota, Comanche Peak and Cache La Poudre Wilderness Area to the Monroe Gravity Canal/North Poudre Supply canal diversion. | | Aq Life Cold 1 Recreation F Water Supply Agriculture | T=TVS(CI, CI 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 | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: CACHE LA POUFRE RIVER | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|----------------------------|---|---|---|--|---|--|---|--|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC | METALS | | | | |
| | Stream Segment Description | | | mg/l | µg/l | | | | |
| 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 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 ₃ =0.05 NO ₂ =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. <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> | | Aq Life Cold 2 Recreation E Water Supply Agriculture | T=TVS(CL,CLL) °C Seaman Reservoir Apr-Dec T _{WAT} =22.5°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 ₃ =0.05 NO ₂ =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 | <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, 20 and 22.</u> | | 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 ₃ =0.5 NO ₂ =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 | |
| 22. <u>Fossil Creek Reservoir.</u> | UP | Aq Life Warm 2 Recreation E Agriculture | T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 E.Coli=126/100ml | NH ₃ (ac/ch)=TVS Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=0.005 | S=0.002 B=0.75 NO ₃ =0.5 NO ₂ =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 | <u>Temporary modification:</u> NH ₃ (ac)=TVS(old) NH ₃ (ch)=0.06 (Type i). Expiration date of 12/31/2011. |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS | |
|--|-------|---|---|---|--|--|---|--|--|
| BASIN: LARAMIE RIVER | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | METALS µg/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-II) °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=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(Free)</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> | |
| 2a. Mainstem of the Laramie River from the source to the National Forest boundary, including and 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> <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(Free)</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> | |
| 2b. Mainstem of the Laramie River from the National Forest boundary to the Colorado/Wyoming border. | | Aq Life Cold 1 Recreation E Water Supply Agriculture | <u>T=TVS(CS-II) °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> | |
| 3. All lakes and reservoirs tributary to the Laramie River within the Rawah Wilderness Area. | OW | Aq Life Cold 1 Recreation E Water Supply Agriculture | <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>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)=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> | |
| 4. All lakes and reservoirs tributary to the Laramie River from the source to the Colorado/Wyoming border, except for specific listings in Segment 3. | | Aq Life Cold 1 Recreation E Water Supply Agriculture | <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>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)=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> | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|-------|---|--|---|---|---|--|--|--|
| BASIN: LOWER SOUTH PLATTE RIVER | | | PHYSICAL and BIOLOGICAL | INORGANIC | | METALS | | | |
| Stream Segment Description | | | | mg/l | | µg/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(Free) 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 | Temporary modifications: Se(ch)=12.3 µg/l (dis). (Type iii). Expiration date of 12/31/2014. 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=200/100ml 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, except for the portion of Beaver Creek from its source to the Fort Morgan Canal. | 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} =26.1° 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 specific listings in Segments 3 and 5. | | Aq Life Warm 2 Recreation U Water Supply Agriculture | T=TVS(WL) °C D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=126/100ml | 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(Trec) Be(ch)=100(Trec) Cd(ch)=10(Trec) CrIII(ch)=100(Trec) CrVI(ch)=100(Trec) | Cu(ch)=200(Trec) Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ch)=100(Trec) Mn(ac/ch)=TVS Mn(ch)=WS(dis) Hg(ch)=0.01(Tot) | Ni(ch)=200(Trec) Se(ch)=20(Trec) Zn(ch)=2000(Trec) | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS | |
|---|-------|---|---|---|---|---|---|--|--|--|
| BASIN: LOWER SOUTH PLATTE RIVER | | | PHYSICAL and BIOLOGICAL | INORGANIC | METALS | | | | | |
| Stream Segment Description | | | | mg/l | µg/l | | | | | |
| 5. <u>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.</u> | | <u>Aq Life Warm 2</u> <u>Recreation E</u> <u>Water Supply</u> <u>Agriculture</u> | <u>T=TVS(WI) °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> | | |

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

| REGION: 3 AND 4 BASIN: REPUBLICAN RIVER | DESIG | CLASSIFICATIONS | NUMERIC STANDARDS | | | | | | TEMPORARY MODIFICATIONS AND QUALIFIERS |
|---|-------|---|---|---|---|---|---|---|---|
| | | | PHYSICAL and BIOLOGICAL | INORGANIC mg/l | | METALS µg/l | | | |
| Stream Segment Description | | | | | | | | | |
| 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 <u>E</u> 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(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)=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 <u>E</u> 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 | NH ₃ (ac/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 <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 <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(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 <u>E</u> 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 <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 <u>E</u> 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(Trec)</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/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 3, 4 and 5. | UP | Aq Life Warm 2 Recreation 2 <u>N</u> Agriculture | <u>T=TVS(WS-I) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=2000/100ml</u> 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) | |
| 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 <u>N</u> Agriculture | <u>T=TVS(WS-IV) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>F.Coli=2000/100ml</u> 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. <u>All lakes and reservoirs tributary to the Republican and Smoky Hill Rivers in Colorado, except for specific listings in Segment 2.</u> | | Aq Life Warm 2 Recreation 1 Water Supply Agriculture | <u>T=TVS(WL) °C</u> D.O.=5.0 mg/l pH=6.5-9.0 <u>E.Coli=126/100ml</u> | <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. | |