COLORADO DEPARTMENT OF HEALTH
WATER QUALITY CONTROL COMMISSION
REGULATION NO. 33

CLASSIFICATIONS AND NUMERIC STANDARDS FOR UPPER COLORADO RIVER BASIN AND NORTH PLATTE RIVER (PLANNING REGION 12)

	ADOPTED:	April 7, 1980
	EFFECTIVE:	June 9, 1980
	AMENDED:	December 6, 1982
	EFFECTIVE:	January 30, 1983
	AMENDED:	June 12, 1984
	EFFECTIVE:	July 30, 1994
	AMENDED:	August 13, 1984
	EFFECTIVE:	September 30, 1984
	AMENDED:	February 4, 1985
	EFFECTIVE:	March 30, 1985
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TRIENNIAL	REVIEW:	September 12, 1986
	AMENDED:	June 2, 1987
	EFFECTIVE:	July 30, 1987
	AMENDED:	July 6, 1988
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TRIENNIAL	REVIEW:	September 5, 1989
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EMERGENCY	AMENDED:	September 9, 1991
	EFFECTIVE	September 9, 1991
	AMENDED:	January 6, 1992
	EFFECTIVE:	March 1, 1992
	AMENDED:	March 1, 1993
	EFFECTIVE:	April 30, 1993
	AMENDED:	September 7, 1993
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	AMENDED:	October 11, 1994
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	AMENDED:	July 10, 1995
	EFFECTIVE:	August 30, 1995
	AMENDED:	December 11, 1995
	EFFECTIVE:	January 30, 1996
	AMENDED:	December 9, 1996
	EFFECTIVE:	January 30, 1997
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	EFFECTIVE:	August 30, 1997
	AMENDED:	November 3, 1997
	EFFECTIVE:	December 30, 1997
	AMENDED:	November 9, 1998
	EFFECTIVE:	December 30, 1998
	AMENDED:	October 13, 1999
	EFFECTIVE:	November 30, 1999

STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director

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Colorado Department
of Public Health
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NOTICE OF FINAL ADOPTION

PURSUANT to the provisions of sections 24-4-103(5) and 24-4-103(11), C.R.S.

NOTICE IS HEREBY GIVEN that the Colorado Water Quality Control Commission, after public rulemaking hearing on August 9, 1999 and complying with the provisions of 24-4-103 C.R.S., amended on October 12, 1999, pursuant to 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; C.R.S., and Section 21.3 of the "Procedural Rules" the regulation entitled:

> "Classifications and Numeric Standards for Upper Colorado River Basin and North Platte River (Planning Region 12)" Regulation #33 (5 CCR 1002-33)

Providing for revisions to the water quality standards and classifications for the Upper Colorado River Basin and North Platte River.

Also, pursuant to 24-4-103(8)(b), C.R.S., this amended regulation was submitted to the Attorney General for review and was found to be within the authority of the Water Quality Control Commission to promulgate, and further that there are no apparent constitutional deficiencies in its form or substance. Furthermore, in adopting these amendments, the Commission also adopted a general Statement of Basis, Specific Statutory Authority, and Purpose in compliance with 24-4-103(4), C.R.S.

This amended regulation will be submitted to the Office of Legislative Legal Services within twenty (20) days after the date of the Attorney General's Opinion, pursuant to 24-4-103(8)(d), C.R.S., and to the Secretary of State in time for November, 1999 publication in the Colorado Register pursuant to 24-4-103(5) and (11)(d), C.R.S., and will become effective November 30, 1999.

A copy of this regulation is attached and made a part of this notice.*

Dated this 20th day of October, 1999 at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Diana Glaser

Diana Glaser, Program Assistant

*A copy of this regulation
is available at a charge of $5.00
pursuant to 24-4-103(9), C.R.S.

REGULATION NO. 33

CLASSIFICATIONS AND NUMERIC STANDARDS
COLORADO RIVER BASIN
(Region 12)

33.1 AUTHORITY

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

33.2 PURPOSE

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

33.3 INTRODUCTION

These regulations and tables present the classifications and numeric standards assigned to stream segments listed in the attached tables (See section 33.7). As additional stream segments are classified and numeric standards for designated parameters are assigned for this drainage system, they will be added to or replace the numeric standards in the tables in section 33.7. Any additions or revisions of classifications or numeric standards can be accomplished only after public hearing by the Commission and proper consideration of evidence and testimony as specified by the statute and the Basic Standards and Methodologies for Surface Water.

33.4 DEFINITIONS

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

33.5 BASIC STANDARDS

(1) All waters of Region 12 are subject to the following standard for temperature. (Discharges regulated by permits, which are within the permit limitations, shall not be subject to enforcement proceedings under this standard). Temperature shall maintain a normal pattern of diurnal and seasonal fluctuations with no abrupt changes and shall have no increase in temperature of a magnitude, rate, and duration deemed deleterious to the

resident aquatic life. Generally, a maximum 3°C increase over a minimum of a four-hour period, lasting 13 hours maximum, is deemed acceptable for discharges fluctuating in volume or temperature. Where temperature increases cannot be maintained within this range using Best Management Practices (BMP), Best Available Technology Economically Achievable (BATEA), and Best Practical Waste Treatment Technology (BPWTT) control measures, the Commission may determine by a rulemaking hearing in accordance with the requirements of the applicable statutes and the basic regulations, whether or not a change in classification is warranted.

(2) See Basic Standards and Methodologies for Surface Water, 31.11 for a listing of organic standards. The column in the tables headed "Water Fish" are presumptively applied to all aquatic life class 1 streams and are applied to aquatic life class 2 streams on a case-by-case basis as shown in the tables in 33.6.

33.6 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:

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
Cd	=	cadmium
ch	=	chronic (30-day)
Cl	=	chloride
Cl_2	=	residual chlorine

CN	=	free cyanide
CrIII	=	trivalent chromium
CrVI	=	hexavalent chromium
Cu	=	copper
dis	=	dissolved
D.O.	=	dissolved oxygen
F	=	fluoride
F.Coli	=	fecal coliforms
Fe	=	iron
Hg	=	mercury
mg/l	=	milligrams per liter
ml	=	milliliters
Mn	=	manganese
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_2S (hydrogen sulfide)
Sb	=	antimony
Se	=	selenium
SO_4	=	sulfate
sp	=	spawning
Tl	=	thallium
tr	=	trout
Trec	=	total recoverable
TVS	=	table value standard

U	=	uranium
ug/l	=	micrograms per liter
UP	=	use-protected
Zn	=	zinc

(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 ug/l unless noted)

PARAMETER[1]	TABLE VALUE STANDARDS [2][3]
Ammonia	Cold Water Acute = 0.43/FT/FPH/2[4] in mg/l Warm Water Acute = 0.62/FT/FPH/2[4] in mg/l
Cadmium	Acute = $e^{(1.128[\ln(hardness)]-2.905)}$ "(Trout) = $e^{(1.128[\ln(hardness)]-3.828)}$ Chronic = $e^{(0.7852[\ln(hardness)]-3.490)}$
Chromium III	Acute = $e^{(0.819[\ln(hardness)]+3.688)}$ Chronic = $e^{(0.819[\ln(hardness)]+1.561)}$
Chromium VI	Acute = 16 Chronic = 11
Copper	Acute =$e^{(0.9422[\ln(hardness)]-1.4634)}$ Chronic = $e^{(0.8545[\ln(hardness)]-1.465)}$

TABLE VALUE STANDARDS
(Concentrations in ug/l unless noted)

PARAMETER[1]	TABLE VALUE STANDARDS [2][3]
Lead	Acute = $e^{(1.6148[\ln(hardness)] - 2.8736)}$ Chronic = $e^{(1.417[\ln(hardness)] - 5.167)}$
Manganese	Acute = $e^{(0.7693n(hardness)]+4.4995}$ Chronic=$e^{(0.5434[\ln(hardness)]+4.7850)}$
Nickel	Acute = $e^{(0.76[\ln(hardness)]+3.33)}$ Chronic=$e^{(0.76[\ln(hardness)]+1.06)}$
Selenium	Acute = 20 Chronic =5
Silver	Acute = $e^{(1.72[\ln(hardness)]-7.21)}$ Chronic = $e^{(1.72[\ln(hardness)]-9.06)}$ "(Trout) = $e^{(1.72[\ln(hardness)]-10.51)}$
Uranium	Acute = $e^{(1.102[\ln(hardness)]+2.7088)}$ Chronic = $e^{(1.102[\ln(hardness)]+2.2382)}$
Zinc	Acute = $e^{(0.8473[\ln(hardness)]+0.8604)}$ Chronic = $e^{(0.8473[\ln(hardness)]+0.7614)}$

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. 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 onc every three years on the average.

(4) $FT = 10^{.03(20-TCAP)}$;
TCAP less than or equal to T less than or equal to 30

$FT = 10^{.03(20-T)}$;
0 less or equal to T less than or equal to TCAP

TCAP = 20° C cold water aquatic life species present

TCAP = 25° C cold water aquatic life species absent

FPH = 1; 8 less than pH less than or equal to 9

$FPH = \frac{1 + 10^{(7.4-pH)}}{1.25}$; 6.5 less than or equal to pH less than or equal to 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.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 12 BASIN: Upper Colorado River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC (mg/l)		METALS (ug/l)			TEMPORARY MODIFICATIONS AND QUALIFIERS
1. Mainstem of the Colorado River, including all tributaries, wetlands, lakes and reservoirs, within Rocky Mountain National Park, or which flow into Rocky Mountain National Park	OW	Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Colorado River, including all tributaries, wetlands lakes, and reservoirs within, or flowing into Arapahoe National Recreation Area, including Grand Lake, Shadow Mountain Lake and Lake Granby		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
3. Mainstem of the Colorado River from the outlet of Lake Granby to the confluence with Roaring Fork River.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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. All tributaries to the Colorado River, including all wetlands lakes and reservoirs, from the outlet of Lake Granby to the confluence with the Roaring Fork River, which are on National Forest lands, except for those tributaries included in Segments 1 and 2, and specific listings in Segments 8, 9 and 10.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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. Wolford Mountain Reservoir.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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. All tributaries to the Colorado River, including all wetlands, lakes and reservoirs, from the boundary of Rocky Mountain National Park and Arapahoe National Recreation Area to the confluence with the Blue River which are not on National Forest lands, except for specific listings in Segments 5, 6b, 6c, 8 and 10.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 NO_2=0.05 B=0.75 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS	Cu(ac/ch)=TVS Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
6b. Mainstem of un-named tributary from the headwaters (Sec 32, T3N, R76W) to Willow Creek Reservoir Road (Section 8, T2N, R76W).	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml						
6c. Mainstem of un-named tributary to Willow Creek from the Willow Creek Reservoir Rd (Sec 8, T2N, R76W) to the confluence Willow Creek (Sec 17, T2N, R76W)	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05	As(ch)=100(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	NH_3(ac/ch) = ambient (Effective until 12/30/00)

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 12 BASIN Upper Colorado River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
7. All tributaries to the Colorado River, including all wetlands, lakes and reservoirs, from the confluence with the Blue River to the confluence with the Roaring Fork River, which are not on National Forest lands, except for specific listings in the Blue River, Eagle River, and Roaring Fork River basins.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Williams Fork River, including all tributaries, wetlands, lakes and reservoirs, from the source to the confluence with the Colorado River, except for those tributaries listed in segment 9.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Point of compliance for Fe and Mn at Aspen Canyon Ranch well.
9. All tributaries to the Colorado and Fraser Rivers, including all wetlands, lakes and reservoirs, within the Never Summer, Indian Peaks, Ptarmigan Peak and Flat Tops Wilderness Areas.	OW	Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Fraser River, including all tributaries, wetlands, lakes and reservoirs, from the source to the confluence with the Colorado River, except for those tributaries included in Segment 9.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION 12 BASIN Blue River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
1 Mainstem of the Blue River from the source to Dillon Reservoir, except for specific listing in Segment 2		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Blue River from the confluence with French Gulch to a point one mile above the confluence with Swan River.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 NO_2=0.05	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrIII(ch)=50 CrVI(ac/ch)=TVS	Cu(ac/ch)=TVS Fe)(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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: Cd(ch)=4.0; no Zn(ac) Zn(ch)=1,700 Effective until 12/31/02.
3 Dillon Reservoir, including all direct tributaries and all tributaries, wetlands, lakes and reservoirs in the Blue River drainage above Dillon Reservoir, except for specific listings in Segments 1, 2, 5, 6, 10, 11, 12, 13 and 14.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Special standards for Dillon Reservoir only: Total Phosphorus as P=0.0074 mg/l in the top 15 meters of the water column for the months of July, August, September & October.
4 Deleted									
5 Mainstem of Soda Creek from the source to Dillon Reservoir.		Aq Life Cold 1 Recreation 2 Agriculture Water Supply	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_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(ch)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot)	Ni(ac/ch)=TVS Be(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
6 Mainstem of the Snake River, including all tributaries, lakes, wetlands and reservoirs, from the source to Dillon Reservoir, except for specific listings in Segments 7, 8 and 9	UP	Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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: Cd(ch=1.2 Cu(ch)=19 Fe(ch)=765(dis) Mn(ch)=570 no Zn(ac) Zn(ch)=430 Effective until 12/31/02
7 Mainstem of Peru Creek, including all tributaries, lakes, wetlands and reservoirs from the source to the confluence with the Snake River, except for specific listing in Segment 8	UP	Aq Life Cold 1 Recreation 2	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l Ph=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 NO_2=0.05	As(ch)=100(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	Temporary modifications no Cd(ac) Cd(ch)=5 Cu(ch)=8 Pb(ch)=5 no Zn(ac) Zn(ch)=1,300 Effective until 12/31/02

Ag

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 12

BASIN: Blue River

Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS: PHYSICAL and BIOLOGICAL	INORGANIC (mg/l)		METALS (ug/l)			TEMPORARY MODIFICATIONS AND QUALIFIERS
8 Mainstem of Keystone Creek, including all tributaries, wetlands, lakes, and reservoirs, from the source to the confluence with the Snake River. Mainstem of Chihuahua Creek including all tributaries, wetlands, lakes and reservoirs from the source to the confluence with Peru Creek. Mainstem of the North fork of the Snake River, including all tributaries, wetlands, lakes and reservoirs from the source to the confluence with the Snake River.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_3=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Deer Creek, including all tributaries, wetlands, lakes and reservoirs, from the source to the confluence with the Snake River.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_3=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 French Gulch including all tributaries, wetlands, lakes and reservoirs from the source to a point 1.5 miles below Lincoln.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_3=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
11 Mainstem of French Gulch from a point 1.5 miles below Lincoln to the confluence with the Blue River	UP	Aq Life Cold 1 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_3=0.05	Ac(ch)=100(Trec) CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac)=TVS	Cu(ch)=TVS Fe(ch)=1000(Trec) Mn(ac/ch)=TVS Hg(ch)-0.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr)	Temporary Modifications: Cd(ch)=7.7 Pb(ch)=6 no Zn(ac) Zn(ch)=4000 Effective until 12/31/02
						The Standards for cadmium, lead and zinc shall be either site-specific standards identified as a result of a use attainability analysis approved by the Commission by 12/31/02, or TVS after that date.			
12 Mainstem of Illinois Gulch and Fredonia Gulch from their source to their confluence with the Blue River	UP	Aq Life Cold 2 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_3=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=2 CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=190 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac)=TVS	
13. Mainstem of Tenmile Creek from the Climax Parshall Flume to a point immediately above the confluence of West Tenmile Creek and all tributaries, wetlands, lakes and reservoirs from the source of Tenmile Creek to a point immediately above the confluence with West Tenmile Creek, except for the specific listing in Segment 15	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.117	S=0.002 B=0.75 NO_3=0.05	As(ch)=100(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS Cr(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)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
14 Mainstem of Tenmile Creek, including all tributaries, wetlands, lakes and reservoirs, from a point immediately above the confluence with West Tenmile Creek to Dillon Reservoir		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.008	S=0.002 B=0.75 NO_3=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=180 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 Mainstem of Clinton Creek from the source to the confluence with Tenmile Creek		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_3=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION 12 BASIN Blue River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC (mg/l)		METALS (ug/l)			TEMPORARY MODIFICATIONS AND QUALIFIERS
16 All tributaries to the Blue River, including all wetlands, lakes and reservoirs, within the Eagles Nest and Ptarmigan Peak Wilderness Areas	OW	Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
17 Mainstem of the Blue River from the outlet of Dillon Reservoir to the confluence with the Colorado River including Green Mountain Reservoir.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 tributaries to the Blue River, including all wetlands lakes and reservoirs, from the outlet of Dillon Reservoir to the outlet of Green Mountain Reservoir		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
19 All tributaries to the Blue River, including all wetlands, lakes and reservoirs, from the outlet of Green Mountain Reservoir to the confluence with the Colorado River, except for specific listings in Segment 20.	UP	Aq Life Cold 2 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml						
20 Mainstems of Elliot Creek and Spruce Creek including all tributaries, reservoirs, wetlands, from their sources to the confluence with the Blue River.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 12 BASIN: Eagle River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC (mg/l)		METALS (ug/l)			TEMPORARY MODIFICATIONS AND QUALIFIERS
1 All tributaries and wetlands to the Eagle River system within the Gore Range - Eagles Nest Wilderness Area and Holy Cross Wilderness Area.	OW[1]	Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
	[1] Consistent with the provisions of section 25-8-104 C.R.S. the OW designation shall not apply with respect to the Homestake Water Project of the Cities of Aurora and Colorado Springs								
2. Mainstem of The Eagle River from the source to the compressor house bridge at Belden		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
3. All tributaries to the Eagle River, including all, wetlands lakes, and reservoirs, from the source to the compressor house bridge at Belden, except for the specific listing in Segment 4 and those waters included in Segment 1		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Homestake Creek from the confluence of the East Fork to the confluence with the Eagle River, except for those waters included in Segment 1		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 the Eagle River from the compressor house bridge at Belden to the confluence with Gore Creek		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_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(ch)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=1.1 CrIII(ch)=50(Trec) Cr(VI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50	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)=108	Seasonal temporary modifications. December 1 -April 30 Cd(ch) = 1.5 no Zn(ac) Zn(ch) = 740 Mn(ch) = 850 May 1 - November 30 no Zn(ac) Zn(ch) = 240 Mn(ch) = 355 Effective until 12/31/02
6 All tributaries to the Eagle River, including all wetlands, lakes and reservoirs, from the compressor house bridge at Belden to a point immediately below the confluence with Lake Creek, except for the specific listing in Segment 7, and those water included in Segment 1		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Cross Creek from the source to the confluence with the Eagle River, except for those waters included in Segment 1		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ch)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=0.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ch)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	Seasonal temporary modifications: May 1-Oct 31: Mn(ch)=165; Nov. 1-Apr 30 no Zn(ac) Zn(ch)=170 Mn(ch)=810 Effective until 12/31/02

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

GION: 12 SIN: Eagle River eam Segment Description	Desig	Classifications	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC (mg/l)		METALS (ug/l)			TEMPORARY MODIFICATIONS AND QUALIFIERS
Mainstem of Gore Creek from the confluence with Black Gore Creek to the confluence with the Eagle River		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
Mainstem of the Eagle River from Gore Creek to the confluence with the Colorado River.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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: May 1 to November 30 Mn(ch)=70 December 1 to April 30 Mn(ch)=100 Effective until 12/31/02
All tributaries to the Eagle River, including all wetlands, lakes and reservoirs, from a point immediately below the confluence with Lake Creek to the confluence with the Colorado River, except for specific listings in Segments 11 and 12, and those waters included in Segment 1.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
Mainstem of Alkali Creek from the source to the confluence with the Eagle River; mainstem of Milk Creek from the source to the confluence with the Eagle River.	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml						
Mainstem of Brush Creek, from the source to the confluence with the Eagle river, including the East and West Forks.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 12 BASIN: Roaring Fork River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC (mg/l)		METALS (ug/l)			TEMPORARY MODIFICATIONS AND QUALIFIERS
1. All tributaries to the Roaring Fork River system, including all wetlands, lakes and reservoirs, within the Maroon Bells/Snowmass, Holy Cross, Raggeds, Collegiate Peaks and the Hunter/Fryingpan Wilderness Areas.	OW	Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Roaring Fork River, including all tributaries, wetlands, lakes and reservoirs, from the source to a point immediately below the confluence with Hunter Creek, except for those tributaries included in Segment 1.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
3. Mainstem of the Roaring Fork River, including all tributaries, wetlands, lakes and reservoirs from a point immediately below the confluence with Hunter Creek, to the confluence with the Colorado River except for those tributaries included in Segment 1 and specific listings in Segments 3a through 10.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
3a. Mainstem of Red Canyon and all tributaries, wetlands, lakes and reservoirs from the source to the confluence with the Roaring Fork River, except for Landis Creek from its source to the Hopkins Ditch Diversion.	UP	Aq Life Cold 2 Recreation 2 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	NH_3(ac)=TVS NH_3(ch)=0.1 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Brush Creek from the source to the confluence with the Roaring Fork River.	UP	Aq Life Cold 1 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05	As(ch)=100(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	
5. Mainstem of the Fryingpan River from the source to the confluence with the North Fork.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
6. Mainstem of the Fryingpan River from the confluence with the North Fork to the confluence with the Roaring Fork River, including Ruedi Reservoir.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
7. All tributaries to the Fryingpan River system, including all wetlands, lakes and reservoirs, except for those tributaries included in Segment 1.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Crystal River, including all tributaries, wetlands, lakes and reservoirs, from the source to the confluence with the Roaring Fork River, except for specific listings in Segments 1, 9 and 10.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Coal Creek including all tributaries, wetlands, lakes and reservoirs from the source to the confluence with the Crystal River.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)-0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) U(ac/ch)=TVS Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION 12 BASIN Roaring Fork River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
10 Mainstem of North Thompson Creek, including all tributaries, wetlands, lakes and reservoirs from the source to the confluence with the Crystal River		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION 12

BASIN North Platte River

Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS: PHYSICAL and BIOLOGICAL	INORGANIC (mg/l)		METALS (ug/l)			TEMPORARY MODIFICATIONS AND QUALIFIERS
1 All tributaries to the North Platte and Encampment Rivers, including all wetlands, lakes and reservoirs, within the Mount Zirkle and New Summary Wilderness Areas.	OW	Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Encampment River, including all tributaries, wetlands, lakes and reservoirs from the source to the Colorado/Wyoming border, except for those tributaries included in Segment 1		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
3 Mainstem of the North Platte River from the confluence of Grizzly Creek and Little Grizzly Creek to the Colorado/Wyoming border.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 All tributaries to the North Platte River system, including all wetlands, lakes and reservoirs, except for those tributaries included in Segment 1, and specific listings in Segments 5, 6 and 7.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05	As(ch)=100(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=TVS(Trec) CrIII(ch)=TVS	CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Fe(ch)=1000(Trec) Mn(ch)=50 Pb(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	
5. Mainstem of the Michigan River from the source to the confluence with the North Platte River.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 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)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=TVS(Trec) CrIII(ch)=TVS CrVI(ac/ch)=TVS	Cu(ac/ch)=TVS Fe(ch)=1000(Trec) Mn(ch)=50 Pb(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	
6 Mainstem of Pinkham Creek from the source to the confluence with the North Platte River		Aq Life Cold 1 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05	As(ch)=100(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	
7 Mainstem of Government Creek from the boundary of the Colorado State Forest to the confluence with the Canadian River. Mainstem of Spring Creek from the source to the confluence with Illinois River.	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05	As(ch)=100(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	Water + Fish organics apply

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 12

BASIN: Yampa River

Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS: PHYSICAL and BIOLOGICAL	INORGANIC (mg/l)		METALS (ug/l)			TEMPORARY MODIFICATIONS AND QUALIFIERS
1 All tributaries to the Yampa River, including all wetlands, lakes and reservoirs, which are within the Mount Zirkel Wilderness Area.	OW	Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Yampa River from the confluence of the Bear River and Wheeler Creek to the confluence with Elkhead Creek, except for segment 2b.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Stagecoach Reservoir.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
3 All tributaries to the Yampa River, including all wetlands, lakes and reservoirs, from the source to the confluence with Elk River, except for specific listings in Segments 1, 4, 5, 6, 7, 8, 10, 13 and 19. Mainstem of the Bear River, including all tributaries, wetlands, lakes and reservoirs from the boundary of National Forest lands to the confluence with the Yampa River.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Little White Snake Creek from the source to the confluence with the Yampa River.	UP	Aq Life Cold 2 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	CN=0.005 S=0.002 B=0.75 NO_2=0.05	NO_3=10 Cl=250 SO_4=250	As(ac)=50 Cd(ac)=5 CrIII(ac)=50 CrVI(ac)=50 Cu(ch)=200	Fe(ch)=300(dis) Pb(ac)=50 Mn(ch)=50 Hg(ac)=2.0	Ni(ch)=100 Se(ch)=20 Ag(ac)=100 Zn(ac/ch)=2000	All metals are Trec unless otherwise noted.
5 Mainstem of Chimney Creek, including all tributaries, wetlands, lakes and reservoirs, which are not on National Forest lands, from the source to the confluence with the Yampa River.		Aq Life Cold 1 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05	As(ch)=100(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	
6 Mainstem of Oak Creek, including all tributaries, wetlands, lakes and reservoirs, from the source to the point of discharge of the Oak Creek wastewater treatment plant.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Oak Creek from the point of discharge of the Oak Creek wastewater treatment plant to the confluence with the Yampa River.		Aq Life Cold 1 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.05 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05	As(ch)=100(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	
8 Mainstem of the Elk River including, all tributaries, wetlands, lakes and reservoirs from the source to the confluence with the Yampa River, except for those tributaries included in Segment 1.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION 12 BASIN Yampa River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			TEMPORARY MODIFICATIONS AND QUALIFIERS
12. All tributaries to the Yampa River, including all wetlands, lakes and reservoirs, from the confluence with the Elk River to the confluence with Elkhead Creek, which are not on National Forest lands, except for specific listings in Segments 13a, 13b, 13c and 13d	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml						
13a Mainstem of Trout Creek, including all tributaries, wetlands, lakes and reservoirs, from the source to the confluence with the Yampa River, which are not on National Forest lands, except for specific listings in Segment 13b.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Foidel Creek, including all tributaries and wetlands. Mainstem Fish Creek, including all tributaries from County Road 27 downstream to the confluence with Trout Creek. Middle Creek and all tributaries, from County Road 27 downstream to the confluence with Trout Creek.		Aq Life Cold 1 Recreation 1 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05	As(ch)=100(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	
13c. Mainstem of Trout Creek from headgate of Spruce Hill Ditch (approximately 2,500 feet north of where County Road 27 crosses Trout Creek) to its confluence with Fish Creek. All tributaries to Trout Creek from the headgate of Spruce Hill Ditch (approximately 2,500 feet north of where County Road 27 crosses Trout Creek) to County Road 179.		Aq Life Cold 1 Recreation 1 Agriculture June through February Water Supply	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 June through February NO_3=10 Cl=250 SO_4=250	As(ch)=100(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS June through February As(ac)=50(Trec) CrIII(ac)=50(Trec)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ac/ch)=TVS Hg(ch)=0.01(tot) June through February Fe(ch)=300(dis) Mn(ch)=50	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS June through February Se(ch)=10(Trec)	
13d Mainstems of Sage Creek and Dry Creek, including all tributaries, reservoirs and wetlands from their source to the confluence with the Yampa River		Aq Life Warm 1 Recreation 2 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.06 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)=100(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	
14 Mainstem of Elkhead Creek, including all tributaries, wetlands, lakes and reservoirs, from the boundary of the National Forest lands, to the confluence with the Yampa River		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 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 Mainstem of the East Fork of the Williams Fork river from the Routt/Rio Blanco county line to the confluence with the South Fork.		SEE LOWER	COLORADO	REGULATION					
16 Mainstem of the South Fork of the Williams Fork River from the Routt/Rio Blanco county line to the confluence with the East Fork.		SEE LOWER	COLORADO	REGULATION					
17 All tributaries to the Williams Fork River system in Routt County, including all wetlands, lakes and reservoirs, which are not on National Forest lands.		SEE LOWER	COLORADO	REGULATION					

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 12 BASIN: Yampa River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
18. Mainstem of the Little Snake River, including all tributaries, wetlands, lakes and reservoirs, from the confluence of the Middle Fork and South Fork to the Colorado/Wyoming border, which are not on National Forest lands.		Aq Life Cold 1 Recreation 1 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	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	
19. All tributaries to the Little Snake River, including all wetlands, lakes and reservoirs, which are on National Forest lands in Routt County.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH_3(ac)=TVS NH_3(ch)=0.02 Cl_2(ac)=0.019 Cl_2(ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=250	As(ac)=50(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=0.01(tot) Ni(ac/ch)=TVS	Se(ac/ch) Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS	

33.10 STATEMENT OF BASIS AND PURPOSE

(1) Introduction

These stream classifications and water quality standards for state waters in Eagle, Grand, Jackson, Pitkin, Routt, and Summit Counties implement requirements of the Colorado Water Quality Control Act, C.R.S. 1973, 25-8-101 et seq. They also represent the implementation for Planning Region 12 of the Commission's Regulations Establishing Basic Standards and an Antidegradation Standard and Establishing a System for Classifying State Waters, for Assigning Standards, and for Granting Temporary Modifications (the "basic standards").

The basic regulations establish a system for the classification of state waters according to the beneficial uses for which they are suitable or are to become suitable, and for assigning specific numerical water quality standards according to such classifications. Because these stream classifications and standards implement the basic regulations, that statement of basis and purpose (Section 3.1.16) must be referred to for a complete understanding of the underlying basis and purpose of the regulations adopted herein; therefore, that statement of basis and purpose is addressed to the scientific and technological rationale for the specific classifications and standards developed from information in the record established in the administrative process. Public participation was a significant factor in the development of these regulations. A lengthy record has been built through public hearings, and this record establishes a substantial basis for the specific classifications and standards adopted. Public hearings were commenced on August 20, 1979, to receive a testimony, and were continued on September 5, October 9, October 10, and November 5, 1979. A total of twenty-two persons requested and were granted party status by the Commission in accordance with C.R.S. 1973, 24-4-101 et seq.

(2) General Considerations

(a) These regulations are not adopted as control regulations. Stream classifications and water quality standards are specifically distinguished from control regulations in the Water Quality Control Act and it is the view of the Commission that they need not be adopted as control regulations pursuant to the statutory scheme. The Commission has specifically endorsed the view of the attorney general on this issue, which is a part of the record of these hearings.

(b) The Commission was requested in the public hearings to rule on the applicability of these and other regulations to the operation of water diversion facilities, dams, transport systems, and the consequent withdrawal, impoundment, non-release and release of water for the exercise of water rights. The Commission has determined that any such broad ruling is inappropriate in the context of the present regulations. While the request raises significant issues that must be addressed, the Commission is aware of the current practices of the Division. In addition, these questions are currently the subject of litigation and involve complex legal issues. It is anticipated that the Commission will address these issues in the proper context and upon a review of relevant information. The request does not raise specific questions as to

proposed classifications and standards; however, the Commission has taken into account the fact that these issues are unresolved in assigning classifications and standards as is more fully discussed below.

(3) Definition of Stream Segments

(a) For purposes of assigning classifications and water quality standards, the streams and water bodies of Region 12 are identified according to river basin and specific water segments.

(b) Within each river basin, specific water segments are defined to which use classification and numeric water quality standards are assigned. These segments may constitute a specified lake or reservoir, or a generally defined grouping of waters within the basin (i.e., a specific mainstem segment and all tributaries flowing into that mainstem segment).

(c) Segments are generally delineated according to the points at which the use or water quality characteristics of a watercourse are determined to change significantly enough to require a change in use classification and/or water quality standards. In many cases, such transitiion points can be specifically identified from available water quality data. In other cases, however, the delineation of segments is based upon best judgments of where instream changes in uses of water quality occur, based upon upstream and downstream data.

(4) Use Classifications -- Generally

(a) The use classifications have been assigned in accordance with the provisions of Section 3.1.6 and 3.1.13 of the basic regulations. Each classification is based upon actual current uses or existing water quality. In the latter case, even though the use may not be in place, the classification is attached if existing water quality would allow that use.

(b) In all cases, the requirement of the basic regulations, Section 3.1.6(1)(c), that an upstream use cannot threaten or degrade a downstream use, has been followed. Accordingly, upstream segments of a stream are generally the same as or higher in classification than downstream segments. In a few cases, tributaries are classified at lower classifications than mainstems, where the flow from the tributaries does not threaten the quality of mainstem waters and where the evidence indicates that lower classifications for the tributaries is appropriate.

(c) The Commission has determined that it has the authority to assign classifications "High Quality Waters - Class 1" and "High Quality Waters - Class 2" where the evidence indicates that the requirements of Section 3.1.13(1)(e) has been determined on a case-by-case basis.

(d) The classification "High Quality Waters - Class 1" has been assigned where the following factors are present:

(i) waters are of a quality higher than necessary to protect specified uses;

(ii) waters constitute an outstanding state and national resource;

(iii) no known sources of pollution are present;

(iv) restrictions on use due to federal status are present; and

(v) waters are of a recreational and ecological significance.

(e) Not all segments located within wilderness areas have been classified "High Quality Waters - Class 1". In addition, rivers designated under the Wild and Scenic Rivers Act and streams providing unique habitats for threatened species of fish have not been classified "High Quality - Class 1". These segments have been classified "High Quality - Class 2", for the following reasons:

(i) waters are of a quality higher than necessary to protect specified uses;

(ii) evidence in the record indicates that presence of water diversions within these areas;

(iii) a question exists as to whether existing diversion structures can be maintained consistent with a "High Quality - Class 1) designation, due to the antidegradation requirement. Because of the questions regarding authority to regulate diversion, the Class 1 designation was deemed potentially too rigid. The Commission recognizes its authority to upgrade these segments if and when it is appropriate to do so.

(f) The "High Quality Class 2" classification was proposed for many segments located on National Forest Service lands and in other instances. These proposals have been rejected, and the segments classified for specific uses, for the following reasons:

(i) High quality classifications represent extraordinary categories, and their use is optional at the discretion of the Commission;

(ii) Due to the extraordinary nature of the classification, the Commission deems it appropriate to require more data on existing quality than present in the record to justify more extensive use of the classification;

(iii) Further monitoring may indicate in the future that many segments in this region should be upgraded to a high quality classification;

(iv) More reliable data is necessary with this classification in these cases because there are no guidelines other than instream values upon which to base water quality standards;

(v) It is important in these cases to assign specific water quality standards to protect the highest specific use classifications, and only specific use classifications provide the mechanism for assigning such standards.

(vi) Questions exist regarding "existing quality" in terms of historic activities that may have affected water quality;

(vii) Questions regarding the applicability of the high quality classification to diversions and the Commission's authority with regard to such diversions;

(viii) Questions exist as to whether the high quality classification applies only to point source discharges, or also to other activities;

(i) The Commission views the classification system as an ongoing process and recognizes its authority to upgrade specific stream segments. There is presently a need for the establishment of mechanisms for administering the "High Quality - Class 2" classification; and

(x) Location of a stream on national forest service lands provides no reason in and of itself to classify it as high quality.

(g) The Commission feels that the classifications are socially, economically, and technically justifiable.

(h) Qualifiers – "Goal"

The "goal" qualifier (Section 3.1.13(2)(a), basic regulations) has been used in specific cases where waters are presently not fully suitable for the classified use, but are intended to become so. In all such cases, water quality standards have been assigned to protect the classified uses and temporary modifications have been granted for specific parameters.

(i) Qualifiers – "Interrupted Flow"

The Commission has considered appending the "interrupted flow" qualifier to numerous stream segments in accordance with Section 3.1.13(2) (c) of the basic regulations; however, numerous questions have arisen as to its meaning and applicability. The intention of the provision is to allow the Commission to classify certain stream segments according to their water quality, despite the existence of flow problems. It has not been included in order to eliminate confusion as to its applicability to diminished, as opposed to interrupted, flows. It has also been eliminated in order to avoid any misimpression regarding benefits to dischargers. This qualifier is essentially a statement of the obvious, particularly in view of the provision regarding low flow exceptions (Section 3.1.9(1), basic regulations).

In addition, where flow characteristics permanently impair the suitability of the stream segment to provide a habitat for a wide variety of aquatic life, the "Class 2 - Cold Water Aquatic Life" classification has been assigned.

(j) Recreation - Class 1 and Class 2

In addition to the significant distinction between "Recreation - Class 1 and Recreation - Class 2" as defined in Section 3.1.13(1) of the basic regulations, the difference between the two classifications in terms of water quality standards is the fecal coliform parameter. "Recreation - Class 1" generally results in a standard of 200 fecal coliforms per 100 ml; "Recreation - Class 2" generally results in a standard of 2000 fecal coliforms per 100 ml.

The Commission has heard considerable testimony on the issue of applying these classifications and has deliberated on it at length. The Commission has decided to classify as "Recreation - Class 2" those stream segments where primary contact recreation does not exist and cannot be reasonably expected to exist in the future, and where municipal discharges are present which may be unnecessarily affected by the "Recreation - Class 1" classification, to their detriment and that of the aquatic life in the stream segment. The Commission has decided to classify as "Recreation - Class 1" those stream segments where primary contact recreation exists, or where the fecal coliform standard of 200 per 100 ml. is being met and no point source discharges exist, despite the absence of the primary contact use. The reasons for these decisions are as follows:

(i) The streams in this region are generally unsuitable for primary contact recreation because of water temperature and stream flows. The only known exception is stream segment 2 of the Upper Colorado River Basin.

(ii) Fecal coliform is an indicator organism. Its presence does not always indicate the presence of pathogens, depending on the source of the fecal coliform. If the source is agricultural runoff as opposed to human sewage, there my be no health hazard and therefore no significant need to reduce the presence of fecal coliform to the 200 per 100 ml. level. Also, control of nonpoint sources is very difficult.

(iii) Treating sewage to meet the 200 per 100 ml. level generally means the treatment plant must chlorinate its effluent to meet the limitation. The presence of chlorine in the effluent to meet the residual chlorine standard is expensive and often results in the addition of more chemicals which can be detrimental to aquatic life; therefore, reducing the need for chlorine is beneficial to aquatic life.

(iv) Even where a treatment plant in this region might treat its effluent to attain the standard of 200 per 100 ml., agricultural runoff and irrigation *return flows below* the plant may result in the rapid increase of fecal coliform levels; therefore, the benefits of further treatment are questionable.

(v) The fecal coliform standard of 2000 per 100 ml. has been established to protect water supplies. There is no significant difference in the two levels for water treatment plants because the conventional plant must provide the means for treatment at the higher level. The standard of 200 per 100 ml. is not intended to protect the water supply classification.

(5) Water Quality Standards – Generally

(a) The water quality standards for classified stream segments are defined as numeric values for specific water quality parameters. These numeric standards are assigned as the limits for chemical constituents and other parameters necessary to protect adequately the classified uses in all stream segments.

(b) Not all of the parameters listed in the "Tables " appended to the basic regulations are assigned as water quality standards for Region 12. This complies with Section 3.1.7(c) of the basic regulations. Numeric standards, in some cases, have not been assigned for parameters on which there is no data and no knowledge of the occurrence in Region 12.

(c) A numeric standard for the temperature parameter has been assigned as a basic standard applicable to all waters of the region in the regulations. The standard of a 3 degree temperature increase above ambient water temperature as defined is generally valid based on the data regarding what is necessary to support an "Aquatic Life - Class 1" fishery. The standard takes into account daily and seasonal fluctuations; however, it is also recognized that the 3 degree limitation as defined is only appropriate as a guideline and cannot be rigidly applied if the intention is to protect aquatic life. In winter, for example, warm water releases from reservoirs (which might not be subject to the standard in any case) may be beneficial to aquatic life. It is the intention of the commission in assigning the standard to prevent radical temperature changes in short periods of time, which are detrimental to aquatic life.

(d) Numeric standards for organic substances have been assigned as basic standards applicable to all waters of the region in the same manner as the basic standards in Section 3.3.5(2)(a) of the basic regulations. These standards are essential to a program designed to protect the waters of the state regardless of use classifications because they describe the fundamental conditions that all waters must meet.

It is the decision of the Commission to assign these standards as basic standards for Region 12 even though their presence is not generally suspected. Also, these numbers are not detectable using routine methodology, and there is some concern regarding the potential for monitoring requirements. This concern should be alleviated by Section 3.1.14(5) of the basic regulations, but there is uncertainty regarding the interpretation of those numbers by other entities. Regardless of these concerns, because these parameters are highly toxic, there is a need for regulating their presence in state waters. Because the Commission has determined that they have uniform applicability here, their inclusion as basic standards for the region accomplishes this purpose.

(e) In many cases, the numeric water quality standards are taken from the "Tables" appended to the basic regulations. These table values are used where actual ambient water quality data in a segment indicates that the existing quality is substantially equivalent to, or better than, the corresponding table values. This has been done because the table values are generally considered to protect the beneficial use classifications of the waters of the state.

Consistent with the basic regulations, the Commission has not assumed that the table values have presumptive validity or applicability in Region 12. This accounts for the extensive data in the record of ambient water quality; however, the Commission has found that the table values are generally sufficient to protect the use classifications. They have, therefore, been applied in the situations outlined in the preceding paragraph, as well as in those cases where there is insufficient data in the record to justify the establishment of different standards. The documentary evidence forming the basis for the table values is included in the record.

(f) In many cases, instream ambient water quality provides the basis for the water quality standards (See (g) below). In those cases where the classified uses presently exist or have a reasonable potential to exist despite the fact that instream data reflects ambient conditions of lower water quality than the table values, instream values have been used. In these cases, the evidence indicates that instream values are adequate to protect the uses. In those cases where temporary modifications are appropriate, instream values are generally reflected in the temporary modification and table values are reflected in the temporary modification and table values are reflected in the corresponding water quality standard. (The "goal" qualifier is then appended to the classification).

Cases in which water quality standards reflect these instream values usually involve the metal parameters. On many stream segments, elevated levels of metals are present due to natural or unknown causes, as well as mine seepage from inactive or abandoned mines. These sources are difficult to identify and impractical or impossible to control. The classified aquatic life uses may be impacted and/or may have acclimated to the condition. In either case, the water quality standards are deemed sufficient to protect the uses that are present.

(g) In assigning standards based on instream ambient water quality, a calculation is made based upon the mean (average) plus one standard deviation (x+s) for all sampling points used on a particular stream segment. Since a standard deviation is not added to the water quality standard for purposes of determining compliance, this is a fair method as applied to discharges.

Levels that were determined to be below the detectable limits of the sampling methodology employed were averaged in as zero rather than at the detectable limit. This moves the mean down; but since zero is also used when calculating wasteload allocations, this method is not unfair to dischargers. A number of different statistical methods could have been used. All of them have pros and cons and the approach used is reasonable.

Metals present in water samples may be tied up in turbidity when the water is present in the stream. In this form they are not "available" to fish and may not be detrimental to aquatic life. Because the data of record does not distinguish as to availability, some deviation from table values, as well as the use of (x+s) is further justified, because it is unlikely that the total value in the samples analyzed is in available form.

(h) No water quality standards are set below detectable limits for any parameter, although certain parameters may not be detectable at the limit of the standards using routine methodology; however, it must be noted that stream monitoring, as opposed to effluent monitoring, is generally not the responsibility of the dischargers but of the state. Furthermore, the purpose of the standards is to protect the classified uses, despite the inconvenience monitoring may impose.

Section 3.1.14(5) of the basic regulations states that "dischargers will not be required to regularly monitor for any parameters that are not identified by the division as being of concern". Generally, there is not requirement for monitoring unless a parameter is in the effluent guidelines for the relevant industry.

(6) Classification and Standards – Special Cases

Except as indicated above and below, the Commission accepts and incorporates herein the rationale for specific stream segments of the Water Quality Control Division developed in conjunction with the proposed classifications and standards, and made part of the record as Water Quality Control Division Exhibits 2 and 3 at the hearing on October 4, 1979. In order to properly correlate these documents with the proposals themselves, the Division's revised proposals must be consulted. This is Water Quality Control Division Exhibit 3 of the hearing on October 4, 1979 (23 pages).

In some instances not discussed below, the regulations adopted by the Commission include changes from the Division's proposals. In some of these cases, the alternative proposals of parties were adopted and the rationale therefor endorsed. In other cases, typographical and other errors, or further review of data in the record by the Division, resulted in changes adopted by the Commission. The record should be consulted for the rationales regarding the action taken by the Commission on those specific stream segments where the record discloses significant controversy regarding classifications and standards and/or the rationale for the Commission's action deviates in some respects from that outlined above.

(a) Mainstem of the Colorado River, including all tributaries, lakes, and reservoirs within, or flowing into, Arapahoe National Recreation Area, including Grand Lake, Shadow Mountain Lake, and Lake Granby. (Upper Colorado River Basin, page 1, segment 2).

This segment was originally proposed for a "High Quality - Class 2" classification and has been classified for specific beneficial uses. In addition to the reasons given below, those found at Section (4)(f) above apply.

This is the only stream segment in this region where primary contact recreation is known to exist; however, the standard for fecal coliform that is necessary to protect the "Recreation - Class 1" use is not being met consistently. The segment has been classified "Recreation - Class 1" and the appropriate standard for fecal coliform has been assigned, but a temporary modification for this parameter has also been assigned.

Because of significant fecal coliform and nutrient problems in this area, the segment is not of such consistently high quality to justify a "High Quality" classification. There is a high level of human activity including existing point source discharges in this area, and it is a changing situation deserving of additional study, in view of continuing land and water resource development.

Downstream data indicates that the water quality is generally sufficient to support the use classifications. It is extremely important in this area to adopt water quality standards sufficient to protect these uses, and therefore, table values are assigned. A"High Quality" classification would not provide for this kind of protection at this time, since high quality waters are not being assigned specific numeric standards, in the absence of more complete data.

(b) Mainstem of the Blue River from the point of discharge of the Breckenridge Sanitation District wastewater treatment plant to Dillon Reservoir (Blue River Basin, page 3, segment 2).

The mainstem of the Blue River has been broken down into two segments because of current problems associated with the Breckenridge treatment plant. The Commission endorses the rationale of the staff located at pages 10 and 11 of the Water Quality Control Division Exhibit 2, except as to fecal coliform and ammonia. The change as to fecal coliform conforms to the reasoning outlined above.

The evidence is compelling regarding the need for a temporary modification for ammonia. The standard for unionized ammonia of 0.02 mg/l may be met now, but not consistently. Because of growth pressures in the area, more consistent violations of the standard in the near future are imminent.

A new plant is coming on line in the fall of 1981 or the winter of 1982. Significant questions presently exist regarding the location of the discharge and the kind of treatment that will be installed to meet the ammonia standard. Pending the completion of the new facility, a temporary modification is appropriate. The Breckenridge Sanitation District has recommended a temporary modification to 0.05 mg/l NH_3 on the basis that phosphorus removal is presently capable of reducing the ammonia to this level. The Commission accepts this alternative proposal.

Because of the importance of this segment as a spawning area, close monitoring of these waters is necessary, and the Commission may have to re-examine this decision in the near future.

At the very least, the Commission recognizes its obligation to re-examine its decision with regard to the temporary modification within three years.

(c) Mainstem of Tenmile Creek, including all tributaries, lakes, and reservoirs, from the source to a point immediately above the confluence with West Tenmile Creek, except for the specific listing in Segment 14 (Blue River Basin, page 4, segment 12).

The reasoning contained in Water Quality Control Division Exhibit 2 on this stream segment is generally acceptable. Instream values in this segment are deemed sufficient to protect the classified uses. In assigning instream values, the staff used its own data plus that of the Division of Wildlife and Amax, Inc. Although the Climax discharge was not factored entirely, high numbers from samples taken during periods of bypass and high runoff were thrown out as being unrepresentative of ambient conditions. In stream values calculated without these high numbers are sufficient to protect the uses, and bypasses cannot be anticipated in the future.

The staff has recommended standards based on instream values and "goals" based on the "pilot plant data"' i.e., data accumulated during the first six months of operation of the new treatment plant, while it was operating at the 50 percent of rated capacity. The staff's opinion is that these "goals" should be met with operation of the new plant. If the Commission were to adopt this approach, it would use the recommended "goals" as the standards, and set the recommended standards as temporary modifications (for copper, lead, and zinc); however, this approach was not taken because the data with respect to the new plant is not wholly adequate in determining what it will produce. This is an important concern since a significant portion of the flow of the stream goes through the plant. Therefore, instream values sufficient to protect the uses have been established and no temporary modifications have been granted.

The standards for metals are based on a hardness of less than 100 derived from the water quality data measured downstream. Basing the standards on a hardness of 400 which derives from effluent data would be unreasonable since ambient water quality for purposes of these standards is not to be measured at the point of discharge.

The water supply classification has been removed because there is not water supply use, and standards have been assigned from table values in accordance with the appropriate classifications, except in the metals categories.

(d) Mainstem of Tenmile Creek, including all tributaries, lakes, and reservoirs, from a point immediately above the confluent with West Tenmile Creek to Dillon Reservoir (Blue River Basin, page 5 segment 13).

The reasoning contained in the Water Quality Control Division Exhibit 2 on this stream segment is generally acceptable.

The water supply classification has been included because water quality is sufficient to protect this use.

The standards reflect instream water quality. Only cadmium and zinc represent values higher than the table values.

The Commission takes the same approach here with respect to the possibility of improved water quality as it does for the upper segment of Tenmile Creek.

(e) Mainstem of the Eagle River from the compressor house bridge at Belden to the confluence with Gore Creek (Eagle River Basin, page 6, segment 5).

This segment has been separated from the upper mainstem because instream monitoring indicates decidedly poorer water quality below Belden, although the uses are the same.

Although there is confluct in the evidence befor the Commission regarding the "Aquatic Life - Class 1 - Cold" use, the Commission finds that the evidence is sufficient to show the presence of a variety of cold water aquatic life, although their numbers may be impacted. In addition, flow and streambed characteristics indicate that a variety of aquatic life can be supported and that the "Class 1" category is appropriate.

The "Water Supply" classification has been included because even though such use is not present within this segment, the classification is necessary to protect the Eagle-Vail water supply downstream, immediately below Gore Creek.

Inactive mines are at least partially responsible for water quality degradation in this segment. Some of these sites are of undermined ownership, and therefore, ocntrol of these sources cannot be predicted with any certainty. The control of some sources of pollution on this segment and the planned removal of the Cross Creek discharge by the New Jersey Zinc Company is expected but the extent of favorable impact of these efforts on water quality is unknown. Under no circumstances is water quality expected to improve beyond upstream quality, and therefore, some stnadards reflect those values (cadmium, copper, lead and zinc), and temporary modifications are not assigned.

Manganese and iron levels are set to protect the downstream water supply, and reflect table values.

(f) Mainstem of the Eagle River from Gore Creek to the confluence of the Colorado River (Eagle River Basin, page 7, segment 9).

The manganese problem on the Eagle River originates upstream of Gore Creek. For the reasons indicated above, the standard reflects the value necessary to protect the wter supply use. That stnadard is not currently being met; however, control measures by the New Jersey Zinc Company are deemed sufficient to allow

the standard to be met in the future. Therefore, a temporary modification has been granted. Standards for the other metals reflect instream values.

(g) Mainstem of Cross Creek from the source to the confluence with the Eagle River (Eagle River Basin, page 6, segment 7)

The record shows a conflict in the evidence concerning the data on ambient water quality which is the basis for the standards here. New Jersey Zinc Company presently discharges into Cross Creek, although an NPDES permit application is currently pending to move the discharge point to the Eagle River. The company's data indicates higher instream values than found by the Division. The Commission has adotped the Division's recommended standards because its analysis includes the most recent data, which was not used by the company. Also, difference sampling methods currently in use are found to be more accurante and they indicate lower values.

(h) Mainstem of Brush Creek from the source to the confluence with the Roaring Fork River (Roaring Fork River Basin, page 8, segment 4).

Although there is a conflict in the evidence regarding the existence of aquatic life downstream of th Snowmass Sanitation District discharge, the record supports the finding that a fishery is present. However, because the discharge sometimes constitutes the entire flow of the stream in the summer months, it is considered intermittent and assigned an "Aquatic Life - Class 2" classification. Nevertheless, standards have been assigned to protect the existing fishery.

The Snowmass Sanitation District has been funded for tertiary treatment but the technology is untested; therefore, a temporary modification has been assigned for ammonia.

Otherwise, ambient water quality data indicates that the table values are bing met and standards have been assigned accordingly.

(i) Mainstem of Oak Creek from the point of discharge of the Oak Creek wastewater treatment plant to the confluence with the Yampa River (Yampa River Basin, page 11, segment 7).

Although the "Aquatic Life - Class 1 - Cold" classification is appropriate, there is a limited variety of aquatic life below Oak Creek Drain. Because of this and because of the short distance between the Oak Creek discharge and the Oak Creek Drain, it is inappropriate to establish an ammonia standard at this time.

FISCAL STATEMENT

Stream Classifications and Water Quality Standards for the Upper Colorado River, the headwaters of the North Platte River, and the Upper Yampa River (Essentially those streams and water bodies in Eagle, Grand, Jackson, Pitkin, Routt and Summit Counties)

The Water Quality Control Commission is charged with the responsibility to conserve, protect, and improve the quality of state waters pursuant to C.R.S. 1973, 25-8-101 et seq.

The Commission is further charged to classify all waters of the State and to promulgate standards for any measurable characteristic of the water. (25-8-203 and 25-8-204). The above-titled document assigns use classifications and standards for the state waters in the listed areas in accordance with the "basic regulations" adopted May 22, 1979.

The measurable fiscal impacts which may be caused by these regualtions are as follows:

- Cost of construction of increased capacity of municipal waste treatment facilities;
- Cost of construction of increased capacity of industrial waste treatment facilities;
- Cost of Operation & Maintenance of municipal enlargments;
- Cost of Operation & Maintenance of industrial enlargments; and
- Cost of instream monitoring and lab analysis for new parameters added by the standards.

Dischargers will not be required to do stream monitoring. Only those parameters which are limited by a discharge permit will be monitored. The state, federal, and local agencies now doing instream monitoring will have some increased cost; however, any additional frequency should be done to improve state surveillance and would be needed regardless of standard changes.

The Division has reviewed these regulations and determined that the following municipalities may need to construct additional facilities because of more stringent water quality standard and may have additional annual operation costs in the amounts shown:

MUNICIPALITIES	NEEDED FACILITY	ESTIMATED COST (1980 Dollars)	ESTIMATED ANNUAL OPERATING COSTS
Copper Mountain	Dechlorination and Ammonia Conversion	$900,000	$7,000 Total
Town of Frisco	Ammonia Conversion	$1,000,000	$8,500 Total
Snowmass	Dechlorination	$45,000	$5,000 Total

The following industries or commercial establishments may have to construct and operate additional facilities to meet more stringent water quality standards and the additional costs are shown below:

INDUSTRY OR COMMERCIAL ESTABLISHMENT	NEEDED FACILITY	ESTIMATED COST	ESTIMATED ANNUAL OPERATING COSTS
A-Basin Ski Area	Dechlorination and Ammonia Conversion	$600,000	$5,000 Total

The stream classifications and standards adopted by the Commission will protect the water uses primarily through control of potential point source pollution. Nonpoint source pollution from precipitation runoff will be controlled primarily from management practices which are in existence or will be implemented in the future. Future management practices need careful consideration and will be the result of 208 area-wide wastewater management plans developed by regional planning agencies and being updated annually. These plans involve local general purpose governments with general assistance from state government. Some of the possible nonpoint source pollution may be controlled through "Control Regulations" yet to be promulgated by the Commission. These types of controls could involve runoff from construction, mining activities, and urban areas. It is not certain what controls are needed at this time and there is no way that possible costs can be identified at this time.

Persons who benefit from standards which will protect existing and future anticipated uses can be identified as all persons benefiting from recreation, municipal water supply, and agriculture. These benefits are directly economic for agriculture, industry and municipalities who health benefit costs are reduced by having clean water, and are both economic and nonquantifiable for some uses such as fishing, recreation, and the aesthetic value of clean waters. Furthermore, benefits will result from human health protection and lack of debilitating disease. Figures have been developed for a recreation/fishing day which can be applied to that aspect of a water use; however, figures which have been developed for total recreation/fishing day uses have been developed statewide and could not be applied region-by-region or stream-by-stream.

The uses of water in this region are adequately protected by these standards. Most municipal treatment facilities and industrial facilities are currently adequate, or are already being upgraded, in order to meet previous requirements. Any additional facilities or expansions in this region will generally be caused by increased capacity required because of pollution growths or industrial enlargement. Industries are required by federal statute to meet effluent limitations described as "best available technology" by 1983 or 1984. For all major industries in this region, the water quality standards should not require treatment beyond these limitations.

No attempt can be made to identify future development costs as this type of data is not readily available.

STATEMENT OF BASIS AND PURPOSE FOR SEGMENT 13 and 14, TEN MILE CREEK

Use Classification

The evidence in this proceeding as well as prior proceedings have established that the Climax discharge, Segment 13, does not have sufficient flow to sustain a classification of aquatic life, Cold Water Class 1 on a year round basis. It is contemplated that Climax will not discharge during the period December 25 through February 28. These months are generally low flow months of the year. Hence, the flow conditions are not present to support an aquatic life, Cold Water Class 1 designation on a year round basis on Segment 13.

The Commission has received testimony and exhibits in this and previous hearings concerning Ten Mile Creek which establish that the number and kind of aquatic species in Segment 13 is limited and that few, if any, sensitive species are found in Segment 13. The Commission believes that the Water Quality standards for Segment 13 that it is adopting today will protect existing species and encourage the establishment of more sensitive species which are compatible with the flow and streambed characteristics of Segment 13.

Testimony has also been presented in a previous hearing on Ten Mile Creek as to the cost of achieving a Class 1 Classification for Segment 13. In weighing these costs together with the cost already expended to improve the water quality of Ten Mile Creek against the low flow and limited aquatic life conditions presently found in Segment 13, the Commission concludes that it would not be economically reasonable to retain a classification of aquatic life, Cold Water Class 1 for Segment 13. Hence, the Commission adopts aquatic life, Cold Water 2 to apply to Segment 13 of Ten Mile Creek. The Commission does not find that classifying this Segment with a goal of aquatic life is appropriate. The Segment does contain aquatic life and any upgrading from Class 2 to Class 1 could proceed during periodic review to reflect any possible improvements.

Segmentation

The evidence in these proceedings on Ten Mile Creek have shown that Ten Mile Creek for all intents and purposes begins at Climax property boundary at a place designated as the "Parshall Flume". It is at this point that the natural flows that are intercepted by Climax in the Ten Mile Creek Basin are channelled together and form the source of Ten Mile Creek. Hence, the Commission believes Parshall Flume to be the source of the mainstem of Ten Mile Creek. Also, included in this segment are all tributaries to Ten Mile Creek including those natural tributaries intercepted by Climax.

Water Quality Standards

The evidence of Climax and the Division in this proceeding has shown that water quality standards in Ten Mile Creek vary considerably during certain periods of the year. The principal cause of this variation is the hydrological condition, mainly the spring run-off (snowmelt bypass). During this period it becomes economically unreasonable, if not impossible, to provide treatment for the large flow of runoff water that comes into contact with the Tailings Ponds located in the Ten Mile Creek Basin. Hence, the Commission has adopted seasonal water quality standards for both Segments 13 and 14 of Ten Mile Creek.

Segment 13

The Commission has been presented with Climax data and calculations of such data for various pollutants during the period November, 1979 thru April, 1982. No STORET exists for Segment 13, hence only the Climax data was used. All Climax data was analyzed according to the total method.

The water quality standards for the non-runoff period are based on data including all ambient data obtained during the time the Climax Wastewater Treatment facility was operating with the exception of the bypass periods associated with the runoff in the months of January and February during which Climax will not discharge in the future. The Commission recognizes that this period varies from year to year and that it will be determined annually by the Division and Climax. This period shall generally commence not earlier than May 1 and extend approximately 60 days as more specifically defined by the Climax water balance computer model. Historically a bypass has not been necessary every year and may not always be necessary in the future.

The Commission has also been presented with Climax data covering the snowmelt bypass periods of 1980 and 1982. In view of a seasonal variability of the ambient water quality, the Commission adopts $\bar{x}$+s of the snowmelt bypass data as water quality standards to apply during this period.

In adopting the above water quality standard for Segment 13, the Commission is mindful of its goals to protect the use classifications in Segment 14. The Commission finds that the water quality standards it has adopted for Segment 13 are based on historical data gathered during a period when there was general improvement in stream quality. Hence, the water quality standards based on such data should be sufficient to protect and maintain the uses assigned to both Segments 13 and 14, including water supplies in Segment 14.

Segment 14

The Commission has been presented with STORET and Climax data and calculations for various pollutants during the period November, 1979, through April, 1982. As with Segment 13 data, these have been split according to the snowmelt bypass and non-runoff periods. Climax data was analyzed by the total method. The State data was analyzed according to the State methodology. For the snowmelt bypass period the Commission adopts the $\bar{x}$+s of the combined non-runoff data.

Evidence indicates the standards as adopted do not require additional technoloby, and are economically reasonable.

FISCAL IMPACT STATEMENT
Revision of Aquatic Life Classification and Certain Numeric Standards
Segments 13 and 14 of Ten Mile Creek

The principle fiscal impact of the adoption of the aquatic life class 2 classification and revised water quality standards is a significant potential cost savings to be realized by Climax

Molybdenum Company. Evidence submitted by Climax Molybdenum Company suggests that without these modifications, Climax would be faced with a strong probability of additional treatment to cost from $8.2 million to $14.6 million in capital expenses and from $3.8 million to $6.6 million in annual operating and maintenance costs. Because evidence suggests that the beneficial uses that are identified and in place will be adequately protected and possibly enhanced with these changes, and because potential beneficial use improvements to be realized by additional treatment do not bear a reasonable relationship to the costs to attain them at this time, the Commission concludes that it is economically reasonable to support the change of the aquatic life classification and revision of certain numeric standards on these segments.

33.11 STATEMENT OF BASIS AND PURPOSE

The proposed phosphorus (P) standard for Dillon Reservoir, Segment 3 of the Blue River in Summit County was 0.010 mg/l in the top five meters, as an annual average. Based on the record, the Commission found that the summer beneficial uses were those that should be protected by the phosphorus standard. Therefore, the adopted standard of 0.0074 mg/l total phosphorus as P measured in the top 15 meters of water is for the months July through October. The standard as proposed in the notice of rulemaking and that which was adopted are based on the same set of phosphorus sampling, but the adopted standard is based only on the July to October data.

In adopting the alternate proposal of 0.0074 mg/l P, the Commission reduced the four inorganic numeric special standards for phosphorus assigned only for the Dillon Reservoir portion of Segment 3 of the Blue River. The Commission took this action to maintain the chlorophyll a in the Dillon Reservoir at a level which will protect presently classified beneficial uses.

The Commission found there were no significant differences in the phosphorus levels among the areas encompassed by the Reservoir. Maintaining the 0.0074 mg/l of phosphorus should limit chlorophyll a to the 1982 level.

The Commission found that the assignment of a single phosphorus standard to the Dillon Reservoir was economically reasonable.

FISCAL IMPACT STATEMENT
Regulations for Control of Water Quality in Dillon Reservoir

The fiscal impacts of these control regulations are an extension of the fiscal impacts associated with the phosphorus standards set by the Commission for the Dillon Reservoir. As the phosphorus standards drive the control regulations, the essential economic analysis is more properly attributed to the standards regulation. The Fiscal Impact Statement for the phosphorus standard regulations is attached and linked to this Statement by reference. The Commission is aware of and takes active notice of these impacts in passing these control regulations. Thus, the benefits associated with this regulation are the benefits that surround the

phosphorus limits set by the Commission. Likewise, the majority of the costs are linked to the standard.

A unique fiscal impact that is solely a result of these regulations is that which falls on Summit County local government to manage and enforce the phosphorus limits in regard to point/non-point source trade-offs. There was no specific testimony or evidence that put firm figures into the record for the Commission's consideration regarding these costs but the Commission recognizes several important ideas in passing these regulations. As the regional 208 authority is at the planning and management region level, the Northwest Colorado Council of Governments (NWCCOG), the Commission is aware that much of the administrative costs will fall upon this entity. Because the NWCCOG recommended and supported the adopted standards in full awareness of the likely impacts, the Commission concludes that the associated costs are deemed to be reasonable by the NWCCOG. Secondly, the NWCCOG testified that they did not expect these costs to be out of line with the expected benefits of the regulations. Therefore, even in the absence of final estimates of the costs to local government, the Commission must conclude that the costs are reasonable because those that would bear the costs are in support of the regulations that would impose them.

The Commission actively sought and evaluated economic reasonableness testimony regarding the phosphorus standard and found the final adopted standard to be reasonable on economic grounds. Because these control regulations are inextricably linked to the phosphorus standards and because the unique costs that these regulations impose upon local governments are considered reasonable by those that would bear them, the Commission concludes that it has acted in an economically reasonable and responsible manner in passing these regulations.

33.12 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE FOR TENMILE CREEK

The Water Quality Control Commission supports the request to set seasonal standards of 2.1 mg/l for total iron and 1.6 mg/l for total manganese for Segment 13 of Tenmile Creek. Segment 13 is defined as the mainstem of Tenmile Creek from the Climax Parshall Flume to a point immediately above the confluence of West Tenmile Creek and all tributaries, lakes and reservoirs from the source of Tenmile Creek to a point immediately above the confluence with West Tenmile Creek except for specific listing in Segment 15.

The current water quality standards for iron and manganese during the snowmelt bypass period in Segment 13 of Tenmile Creek are based on "Table Value" water quality standards of 1.0 mg/l whereas the actual ambient water quality of iron and manganese during the snowmelt bypass is 2.1 mg/l and 1 6 mg/l. respectively based on a calculation of x+s. Hence, assuming zero low flow, as was done by the Division in the discharge permit under which AMAX is operating, the effluent limitations for iron and manganese cannot be met during the snowmelt bypass period. The snowmelt bypass period is defined as any contiguous period of time not to exceed 60 days commencing not earlier than May 1 and terminating not later than July 31.

Seasonal standards for cyanide, cadmium, copper, lead, and zinc were set for Segment 13 in December, 1982. Those standards were proposed after lengthy discussions between Climax

Molybdenum, Colorado Division of Wildlife and Water Quality Control Division. At that time the attention was focused on those parameters that are specified in the BAT requirements for the ore mining and dressing industry, the reasoning being that a minimum of BAT limits would be required for any snowmelt bypass. Iron and manganese, which are not included in BAT requirements and are also in exceedence of the stream standards during snowmelt bypass periods (attachment), were inadvertently neglected in the proposal for seasonal standards.

Discussions between the Water Quality Control Division and the Colorado Division of Wildlife concluded that the proposed seasonal standards for iron and manganese which are only applicable during the snowmelt bypass period would have no significant impact on the aquatic life use classification of Segment 13. Also, the Commission is convinced that downstream water supplies will not be impacted by this action. The snowmelt bypass period is defined as any continuous period of time not to exceed 60 days commencing not earlier than May 1 and terminating not later than July 31.

These standards are consistent with the Commission's practice of adopting water quality standards based on instream quality where the data indicates that Table Values are exceeded, but existing uses are nevertheless adequately protected.

During this period (snowmelt bypass) it becomes economically unreasonable, if not impossible, to provide treatment for the large flow of runoff water that comes into contact with the Tailings Ponds located in the Tenmile Basin. Evidence indicates the standards adopted do not require additional technology and are economically reasonable.

> The discharge permit issued by the Division includes effluent limitations for iron and manganese during the snowmelt bypass period that cannot be met. As recognized in the Statement of Basis and Purpose, it is economically unreasonable, if not impossible, to provide treatment to achieve the iron and manganese limits during this time.

The specific statutory authority for these amendments is C.R.S. Section 25-8-204.

33.13 FISCAL IMPACT STATEMENT

As in the 1982 rulemaking proceedings, the principal fiscal impact of the adoption of the revised water quality standards is a significant potential cost savings to be realized by AMAX. Evidence submitted by AMAX in the 1982 proceedings suggests that without the proposed modifications, AMAX would be faced with additional treatment costs from $8.2 million to $14.6 million in capital expenses and from $3.8 million to $6.6 million in annual operating and maintenance costs. Because the evidence in this proceeding, as well as that of the 1982 proceeding, suggests that the beneficial uses that are identified and in place will be adequately protected with these changes, and because potential beneficial use improvements to be realized by the additional treatment do not bear a reasonable relationship to the costs to attain them, the Commission concludes that it is economically reasonable to support the revision of the iron and manganese standards for the snowmelt bypass period on Segment 13.

33.14 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE - OAK CREEK

The provisions of 25-8-202(1)(b) and (2), and 25-8-204, C.R.S., provide the specific statutory authority for this amendment.

After hearings held in late 1979, the Commission classified Oak Creek, from the point of discharge of the Oak Creek wastewater treatment plant to the confluence with the Yampa River, as Aquatic Life Class 1 - Cold. At that time, the Commission also adopted an array of numeric standards to protect aquatic life. No ammonia standard was designated for the segment because available evidence indicated that not only was there a limited variety of aquatic life below the Oak Creek drain, but the short distance between the treatment plant and drain in relation to the total segment made it inappropriate to establish an ammonia standard at that time.

In reviewing Colorado's water quality standards, the U.S. Environmental Protection Agency (EPA) noted the lack of an ammonia standard on this segment of Oak Creek and withheld approval of the segment until the Commission either reviewed this segment to determine an appropriate ammonia standard of more fully documented the justification for no standard. The purpose of this hearing is to satisfy EPA's concerns and gain approval of the classifications and standards for the segment.

Fisheries data which was not available at the 1979 hearing indicate that the fishery in Oak Creek is more extensive than originally thought. The data indicates numerous sculpin, dace, and suckers present in the stream. Rainbow trout have been stocked at times in the past by the Colorado Division of Wildlife. The evidence indicates that this stocking is not likely to occur in the future.

In order to protect the resident fish, i.e. sculpin, dace, and suckers, an unionized ammonia standard of .05 mg/l is proposed. This level is based on a site-specific calculation of the 30-day average criterion which should protect the resident species. This calculation is provided in the Site-Specific Criteria Guidelines, U.S. Environmental Protection Agency 1982b. The 30-day criterion was calculated seasonally by a Region VIII EPA computer program using seasonal mean temperature and pH, the reproducing species present in the Creek, and the national acute to chronic ratio of 16. For comparative purposes, the 30-day seasonal criteria calculated for Oak Creek, Segment 7 using combinations of species is given below:

Season	Oak Creek with Rainbow Trout Acute = 16 Chronic	Oak Creek with Salmonids Acute = 16 Chronic	Oak Creek without Rainbow Trout Acute = 16 Chronic	Oak Creek without Rainbow Trout Acute = 25* Chronic
Nov.-Feb.	.020	.027	.046	.028
Mar.-Jun.	.034	.046	.075	.048
Jul.-Oct.	.034	.046	.075	.048

* 25 is acute/chronic for White Sucker which is higher than national value of 16.

It should be noted that the species of suckers present in Oak Creek is the Bluehead for which there is no ammonia toxicity data available and, for that reason, the Division believes that using the national acute-chronic ratio of 16 is probably most appropriate to Oak-Creek. However, it is felt that a .05 mg/l unionized ammonia standard should be applied year-round to insure protection of all the reproducing species present in the Creek. This would provide protection to the Bluehead sucker during the critical season (low-flow, temperature, pH) of July-October should the acute-chronic ratio for that species be nearer 25 than 16.

33.15 FISCAL IMPACT STATEMENT, OAK CREEK

The beneficiaries of this regulation will be those persons who enjoy the recreation and aesthetic values of Oak Creek and the upper reaches of the Yampa River that these ammonia limits are designed to preserve. While a monetary value has not been estimated for these beneficial uses, past experience has demonstrated them to be quite substantial.

The proposed ammonia limitations are not likely to result in higher costs to the users of the Oak Creek wastewater system, because it is anticipated that good secondary treatment processes should be sufficient to achieve these limits as translated into the Town's permit. Though it is therefore highly unlikely that system users would have to bear the significant costs associated with installing ammonia removal equipment, the Town may have to utilize a higher technology, short of ammonia removal, with the associated initial capital costs. If any, these costs would be manifest as increased user fees, but it is possible that a portion of such expenditures would be offset by a federal construction grant.

33.16 BASIS AND PURPOSE SEGMENT 13, YAMPA RIVER:

The proponent stated that its discharge permit requires that sampling be on a total metals basis whereas compliance is based on a total recoverable standard. The proponent believed that such a situation creates a "double standard" that poses an unnecessary and unreasonable burden.

The proponent requested the standards for manganese and copper be changed to reflect ambient water quality in segment 13. The data supporting this request were collected from undisturbed sites adjacent to the proponents mine area. On sites that have been disturbed by mining subsequent to site installation, only data collected in the natural state were used. Since the tributaries of Fish Creek, Foidel Creek, and Middle Creek drain the proponents mine properties, preference was given to data from these tributaries in the calculation of a revised standard.

The proponent contended in its petition for (207) review that:

1. New evidence indicates that concentrations of copper and dissolved manganese in the ambient streamflow exceed the current stream standards in Segment 13;

2. Ambient stream water quality should provide the basis for the standards in Segment 13. In that Segment, the classified uses presently exist despite the fact that ambient conditions reflect lower water quality than the standards or the "tables" appended to the basic regulations. Further, metals present in the water samples may be tied up in suspended solids when water is present in the stream. In this form, they are not "available" to fish and may not be detrimental to aquatic life. See CDOH, Water Quality Standards and Stream Classification, 5 CCR-1002-8, Section 3.3.7(5)(f) and (g);

3. There exists a clear and present potential for inequity or unreasonable economic impact because ambient water quality exceeds the current standards.

4. The existing standards materially affect the proponents present decision making, regarding treatment alternatives and requirements;

5. There exist evident errors in the standards which the Commission should rectify before its three-year periodic review; and

6. Segment 13 may require more attention than it likely would receive during the triennial review of the entire basin.

33.17 FISCAL IMPACT STATEMENT:

Introduction

This assessment of economic impacts addresses the concerns associated with modification of the present stream standards to more practically reflect the ambient standards of the receiving stream. Colorado Yampa Coal Company (CYCC) believes that the present effluent limitations, based on stream standards, should be modified in accordance with the ambient conditions of the receiving stream. CYCC has initiated monitoring programs to determine ambient conditions of the receiving stream. Data from the monitoring program will be utilized to evaluate and perform alternative treatability studies, if such studies are necessary to meet the ambient effluents limitation standards.

Costs

No costs are anticipated to be necessary since the petition only requests that the present stream standard limitations be modified to reflect ambient conditions of the receiving stream.

If alternative treatment and disposal methods are ultimately required to comply with ambient stream standards, costs associated with the development, operation, and maintenance of the alternative treatment and disposal methods would be born by the consumer as pass-through costs. Where pass-through costs are not appropriate, it is assumed that the company would carry the financial burden as operations and/or in maintenance costs.

SEGMENT 13, YAMPA RIVER

Benefits

Approval of the petition would benefit the State of Colorado, the electrical consumer, the citizens of Routt County, and Colorado Yampa Coal Company (CYCC). The State of Colorado would benefit by relieving the Department of Health, Water Quality Control Division (DOH, WQCD) of enforcement responsibilities of certain stream standards which presently may exceed ambient conditions of the receiving stream, while ensuring that the receiving stream quality is not negatively impacted by the mining operation. The electrical consumer would benefit due to the most practical production of coal to generate electricity in an environmentally sound manner. The citizens of Routt County would benefit by the approval of this petition by maintaining direct and indirect employment opportunities for the local population associated with CYCC, attributable to the CYCC operations. CYCC will benefit from the approval of this petition by being able to mitigate potential environmental degradation, due to its mining operations, in the most practicable manner.

Conclusions

Considering the cost/benefit analysis above, it is evident that the benefit derived from the approval of this petition are vast and far-reaching in both number of people and areas of the country. It is also evident that this petition, when approved, would not, in any way, reduce the ambient receiving stream quality and as such would have no potential for environmental degradation.

33.18 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE (JUNE, 1987 REVISIONS)

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

BASIS AND PURPOSE:

The changes considered and adopted in this hearing result from recommendations made by the Water Quality Control Division at a September, 1986 triennial review informational hearing. After review of the available data, the Division recommended that no change be made for three segments included in the hearing notice (Page 6, Segment 5; Page 7, Segment 9; and Page 9, Segment 9). The Commission agreed with this recommendation. The hearing notice also addressed additional changes recommended by AMAX Inc. However, AMAX's petition and proposal were withdrawn prior to the hearing.

The action taken and the rationale therefor for each applicable segment are described below.

Page 1, Segment 2:

The "goal" qualifier for the Recreation Class 1 classification and the temporary modification for fecal coliform are removed. The Recreational Class 1 classification is therefore in effect, with an accompanying 200/100 ml fecal coliform standard.

During the 1979 hearing, data was presented that showed some exceedances of the 200 mpn/100 ml criterion for Recreation Class 1 in some of the lakes. This was determined to probably be due to failing septic systems. Since that hearing two new treatment plants which serve the problem areas have gone on line and the Grand Lake wastewater treatment plant has been phased out. Both plants discharge outside of the lakes' drainage basin. Swimming is a documented use of these lakes and the 200 mpn/100 ml standard is necessary to protect this use. The limited data for Lake Granby shows fecal coliform levels significantly below the 200 mpn/100 ml standard.

Page 2, Segment 9:

The description for this segment is revised to read:

All tributaries to the Colorado and Fraser Rivers, including all lakes and reservoirs, within the Never Summer and Indian Peaks Wilderness Areas.

The Never Summer Wilderness Area was designated subsequent to prior hearings on the Upper Colorado Basin. The change classified waters in the Wilderness Area as High Quality-Class 2 which is consistent with Commission policy and past actions.

Page 3, Segment 2:

The temporary modification for the unionized ammonia standard is removed. The adopted standard of 0.02 mg/l therefore is in effect.

A temporary modification of 0.05 mg/l unionized ammonia was placed on this segment of the Blue River into which Breckenridge discharges because of the possibility of the 0.02 mg/l standard not being met with future growth. Since then, the Breckenridge discharge point has been moved and the effluent goes to a canal that bypasses the River and discharges directly to Lake Dillon. The temporary modification is no longer needed by Breckenridge and there are no other dischargers that will be affected by a 0.02 mg/l standard. The Blue River is a high quality trout stream that also is used as a source for a majority of the Brown trout spawn used in Division of Wildlife hatcheries. The 0.02 mg/l standard for unionized ammonia is needed if the use is to be protected.

Page 4, Segment 7:

The following revised standards and temporary modifications (all in mg/l) are adopted:

	Standard	Temporary Modification
Cadmium (Cd)		0.0085

Copper (Cu)	0.016	0.165
Lead (Pb)	0.016	0.021
Zinc (Zn)	0.29	1.6
Manganese (Mn,Tot)		1.2

The changes adopted for the underlying standards and/or temporary modifications are based on the use of recently available 1986 data contained in a Mined Land Reclamation Division report entitled "Documentation and Analysis of the Effects of Diverted Mine Water on a Wetland Ecosystem." The data from this report and the data from 1978, which is in the 1979 hearing record and was used to calculate the original set of standards, was combined to arrive at the revised standards and temporary modifications. The MLRD report relates to an experimental treatment system intended to remove the influence of the Pennsylvania Mine drainage on the metals levels in Peru Creek (i.e., clean up Peru Creek to levels equal to or better than those upstream). The data from Station PC-6 which is upstream of the Pennsylvania Mine drainage was used to derive the above standards (or underlying goals). For the temporary modifications, the data from the stations downstream of the Pennsylvania Mine were used (PC-5, PC-4, PC-3, PC-1). These stations reflect the existing quality of Peru Creek with the influence of the Pennsylvania Mine drainage. Both the standards and temporary modifications were derived using the $\bar{x}$+s methodology, with outliers screened by Chauvenet's criterion.

Page 8 Segment 4:

The temporary modification for the unionized ammonia standard is removed. The adopted standard of 0.02 mg/l therefore is in effect.

At the time of the 1979 hearing, Snowmass Water and Sanitation District had been funded for but had not begun construction of a tertiary treatment plant to remove ammonia. It was also felt that tertiary treatment plant to remove ammonia. It was also felt that the treatment technology was untested for the climatic conditions that would be encountered. Therefore, a temporary modification for unionized ammonia was adopted. The plant has been built and is operating efficiently and removing ammonia to levels that indicate operating efficiently and removing ammonia to levels that indicate the 0.02 mg/l standard can be met. The Snowmass discharge permit rationale also recognizes that the temporary modification is no longer needed.

At the following the hearing, Snowmass Water and Sanitation District submitted comments, and related information, requesting that the temporary modification be retained due to uncertainty whether the 0.02 mg/l standard can be met consistently. The Commission did not fee that this information demonstrated that the standard could not be met, and the temporary modification was therefore removed.

Page 10, Segment 2:

The following sentence is added to the description of this segment:

All tributaries to the North Platte River, including all lakes and reservoirs *within the Never* Summer Wilderness Area.

The Never Summer Wilderness Area was designated subsequent to prior hearings on the North Platte Basin. The change classifies waters in this Wilderness Area as High Quality-Class 2 which is consistent with Commission policy and past actions.

Page 13, Segments 15, 16, 17:

The notation for these three segments is revised to read:

Classified under segments 9 through 13(b), Lower Yampa/Green River, Lower Colorado Basin, 3.7.0.

Because these waters overlapped Routt and Moffat Counties and the majority of the activity and data was in Moffat County, the Commission deferred hearing these segments until the Lower Colorado hearings. This change clarifies where the classifications and standards for these waters may be found.

Segments 13 and 14, Ten Mile Creek:

The following Statement of Basis and Purpose for segments 13 and 14, Ten Mile Creek of the Blue River, which was originally adopted December 6, 1982, effective January 30, 1983, is readopted so that it will appear in the published version of the regulations:

Use Classification

The evidence in this proceeding as well as prior proceedings have established that the Climax discharge, Segment 13, does not have sufficient flow to sustain a classification of aquatic life, Cold Water Class 1 on a year round basis. It is contemplated that Climax will not discharge during the period December 25 through February 28. These months are generally low flow months of the year. Hence, the flow conditions are not present to support an aquatic life, Cold Water Class 1 designation on a year round basis on Segment 13.

The Commission has received testimony and exhibits in this and previous hearings concerning Ten Mile Creek which establish that the number and kind of aquatic species in Segment 13 is limited and that few, if any, sensitive species are found in Segment 13. The Commission believes that the Water Quality standards for Segment 13 that it is adopting today will protect existing species and encourage the establishment of more sensitive species which are compatible with the flow and streambed characteristics of Segment 13.

Testimony has also been presented in a previous hearing on Ten Mile Creek as to the cost of achieving a Class 1 Classification for Segment 13. In weighing these costs together with the cost already expended to improve the water quality of Ten Mile Creek against the low flow and limited aquatic life conditions presently found in Segment 13, the Commission concludes that it would not be economically reasonable to retain a classification of aquatic life, Cold Water Class 1 for Segment 13. Hence, the Commission adopts aquatic life, Cold Water Class 2 to apply to Segment 13 of Ten Mile Creek. The Commission does not find that classifying this Segment with a goal of aquatic life is appropriate. The Segment does contain aquatic life and any

upgrading from Class 2 to Class 1 could proceed during periodic review to reflect any possible improvements.

Segmentation:

The evidence in these proceedings on Ten Mile Creek have shown that Ten Mile Creek for all intents and purposes begins at Climax property boundary at a place designated as the "Parshall Flume". It is at this point that the natural flows that are intercepted by Climax in the Ten Mile Creek Basin are channelled together and form the source of Ten Mile Creek. Hence, the Commission believes Parshall Flume to be the source of the mainstem of Ten Mile Creek. Also, included in this segment are all tributaries to Ten Mile Creek including those natural tributaries intercepted by Climax.

Water Quality Standards

The evidence of Climax and the Division in this proceeding has shown that water quality standards in Ten Mile Creek vary considerably during certain periods of the year. The principal cause of this variation is the hydrological condition, mainly the spring run-off (snowmelt bypass). During this period it becomes economically unreasonable, if not impossible, to provide treatment for the large flow of runoff water that comes into contact with the Tailings Ponds located in the Ten Mile Creek Basin. Hence, the Commission has adopted seasonal water quality standards for both Segments 13 and 14 of Ten Mile Creek.

Page 4, Segment 13

The Commission has been presented with Climax data and calculations of such data for various pollutants during the period November, 1979 thru April, 1982. No STORET exists for Segment 13, hence only the Climax data was used. All Climax data was analyzed according to the total method.

The water quality standards for the non-runoff period are based on data including all ambient data obtained during the time the Climax Wastewater Treatment facility was operating with the exception of the bypass periods associated with the runoff and in the months of January and February during which Climax will not discharge in the future. The Commission adopts the $\bar{x}$ + s of these values as water quality standards to apply during the snowmelt bypass period. The Commission recognizes that this period varies from year to year and that it will be determined annually by the Division and Climax. This period shall generally commence not earlier than May 1 and extend approximately 60 days as more specifically defined by the Climax water balance computer model. Historically a bypass has not been necessary every year and may not always be necessary in the future.

The Commission has also been presented with Climax data covering the snowmelt bypass periods of 1980 and 1982. In view of a seasonal variability of the ambient water quality, the Commission adopts $\bar{x}$ + s of the snowmelt bypass data as water quality standards to apply during this period.

In adopting the above water quality standard for Segment 13, the Commission is mindful of its goals to protect the use classifications in Segment 14. The Commission finds that the water quality standards it has adopted for Segment 13 are based on historical data gathered during a period when there was general improvement in stream quality. Hence, the water quality standards based on such data should be sufficient to protect and maintain the uses assigned to both Segments 13 and 14, including water supplies in Segment 14.

Page 5, Segment 14

The Commission has been presented with STORET and Climax data and calculations for various pollutants during the period November, 1979, through April, 1982. As with Segment 13 data, these have been split according to the snowmelt bypass and non-runoff periods. Climax data was analyzed by the total methodology. The State data was analyzed according to the State methodology. For the snowmelt bypass period the Commission adopts the $\bar{x} + s$ of the combined snowmelt bypass data as the snowmelt bypass water quality standards with the exception of sulphate which is a table number. For the non-runoff period the Commission adopts the $\bar{x} + s$ of the combined non-runoff data.

Evidence indicates the standards as adopted do not require additional technology, and are economically reasonable.

FISCAL IMPACT STATEMENT:

Removal of the temporary modification for unionized ammonia assigned to the mainstem of Brush Creek, segment 4, table page 8, may require the Snowmass Water and Sanitation District to provide additional treatment for ammonia at some future date, if future operation indicates that the ammonia standard cannot be met consistently with existing treatment and if the standard remains unchanged. However, the data currently available indicates that the standard is being met at this time and will probably be met until plant flows exceed the design capacity of the plant.

The remaining changes adopted in this hearing are not expected to result in substantial costs for any existing dischargers. The additional water quality protection provided by these changes benefits the public at large.

The following Fiscal Impact Statement for segments 13 and 14, Ten Mile Creek of the Blue River, which was originally adopted December 6, 1982, effective January 30, 1983, is readopted so that it will appear in the published version of the regulations:

The principle fiscal impact of the adoption of the aquatic life class 2 classification and revised water quality standards is a significant potential cost savings to be realized by Climax Molybdenum Company. Evidence submitted by Climax Molybdenum Company suggests that without these modifications, Climax would be faced with a strong probability of additional treatment to cost from $8.2 million to $14.6 million in capital expenses from $3.8 million to $6.6 million in annual operating and maintenance costs. Because evidence suggests that the beneficial uses that are identified and in place will be adequately protected and possibly enhanced with these changes, and because potential beneficial use improvements to be

realized by additional treatment do not bear a reasonable relationship to the costs to attain them at this time, the Commission concludes that it is economically reasonable to support the change of the aquatic life classification and revision of certain numeric standards on these segments.

Dated this 2nd day of June, 1987, at Denver, Colorado.

33.19 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE: July 6, 1988 Hearing on Little White Snake Creek

The provisions of 25-8-202(1)(a),(b) and (2); 25-8-203; 25-8-204; and 25-8-207 C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with 24-4-103(4), and 24-1-1-3(8)(d), C.R.S., the following statement of basis and purpose and fiscal impact.

BASIS AND PURPOSE:

The Division had no water quality or flow data for the Little White Snake Creek, and made no field inspections prior to the establishment of existing classifications. The Aquatic Life Class 1 and Recreation Class 1 designations are based upon incorrect assumptions made by Division personnel.

The purpose for the rulemaking is to correct the designated classifications and standards to reflect actual natural conditions and to preclude the community of Phippsburg from unnecessarily expending funds for dechlorination and ammonia nitrogen removal.

The basis for the rulemaking follows:

Aquatic Life - The existing Class 1 (cold) classification is not now being attained, nor can it be reasonably attained in the near future due to existing natural conditions such as annual low flow of zero, a silt bottom, lack of spawning beds, and lack of benthic organisms.

The Colorado Division of Wildlife has made a site inspection of the stream segment and has concluded that the stream is not a fishery.

It is obvious that this stream segment is more accurately described by the Aquatic Life Class 2 (cold) definition because "the potential variety of life forms is presently limited primarily by flow and stream bed characteristics". The conditions which presently limit aquatic life forms are natural and are believed "uncorrectable" within a twenty year period.

Recreation - This intermittent stream segment is also unsuitable for Class 1 Recreational activities due to its extremely low flows and drainage ditch character. It is obvious that prolonged intimate contact with the body typical of Class 1 Recreational activities is unlikely.

This rationale is supported in the Colorado Water Quality Control Commission Document entitled "Classifications and Numeric Standards Upper colorado River Basin and North Platte River (Planning Region 12)." Specifically on page 23 where a discussion of the Recreation

Class 1 and Class 2 classifications takes place. "The Commission has decided to classify as Recreation Class 2 those stream segments where primary human contact recreation does not exist and cannot be reasonably expected to exist in the future, and where municipal discharges are present which may be unnecessarily affected by the Recreation Class 1 classification."

This segment from the Phippsburg Sewage Treatment Plant to the Yampa River is better suited for Class 2 Recreation uses.

The Northwest Colorado Council of Governments has voted to change the regional 208 plan to reflect the above conditions and to recommend the Class 2 designations for both Recreation and Aquatic Life classifications.

FISCAL IMPACT:

No costs are anticipated since the petition only requests that the present stream standard classification be modified to reflect ambient conditions of the receiving stream. If the petition had been acted upon unfavorably additional unnecessary expenses would have placed upon the community of Phippsburg under requirements of its discharge permit which is based upon Class 1 standards for recreation and aquatic life.

Parties to the hearing:

Routt County

33.20 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE: July 6, 1988 Hearing on Segment 13 of the Yampa River

The provisions of 25-8-202(1)(a),(b) and (2); 25-8-203; 25-8-204; and 25-8-207 C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with 24-4-103(4), and 24-4-103(8)(d), C.R.S., the following statement of basis and purpose and fiscal impact.

BASIS AND PURPOSE:

The purpose of this rule is to remove the water supply classification from portions of Segment 13 in which there are no domestic users, and in which the classification is not necessary to protect downstream domestic uses. This result is accomplished by separating these portions of Segment 13 into a separate new segment and removing the water supply classification from the new segment.

The basis for the rulemaking follows:

A. There is no domestic water use on Fish, Foidel and Middle Creeks.

B. Domestic use is unlikely to occur in the foreseeable future on Fish, Foidel and Middle Creeks because virtually all adjoining property is owned or controlled either by the Forest Service or by Colorado Yampa Coal Company (CYCC), and is used for coal mining

purposes. Additionally, the intermittent nature of the natural streamflow makes use of water in these creeks for domestic purposes impractical.

C. Removing the water supply use classification from resegmented Fish, Foidel and Middle Creeks will not degrade water quality, cause exceedances of applicable water quality standards to protect aquatic life (if any) in the new segment or in Trout Creek or impair existing water supply uses in Trout Creek downstream. In fact, the reclassification and resegmentation would recognize the existing situation and the reality that downstream domestic users are not being impaired at current treatment levels. Extensive and sound data was submitted establishing that no unacceptable degradation will occur. Downstream domestic water users will not be adversely impacted by the change.

D. The petitioner asserted that an additional basis for the rule is that the previous classification would have resulted in areawide adverse social and economic impacts. Studies indicate that it would cost CYCC $1,670,000.00 to construct a treatment plant to remove dissolved manganese from its discharges to levels previously mandated by the water quality standards and classifications. In addition, the treatment plant would cost approximately $596,000.00 annually to operate and maintain. The costs do not include the cost of disposal of 7,900 cubic years per year of sludge which would result from the treatment. The cost of this disposal is not estimated here because the sludge cannot be characterized conclusively in advance, and correspondingly it cannot be said with certainty what regulatory requirements might apply to its disposal.

These unreasonable costs are wholly out of proportion to any benefit provided by the current stringency of the standards. These costs, if CYCC were required to incur them, raise the question whether the mine can continue to operate. The impact on the area, socially and economically, of mine closure, including loss of jobs, salaries, tax revenues, and other economic benefits, would be severe, and is not justified by the negligible benefit (if any) to water quality effected by the current standard and use classification.

A study conducted from CYCC by the Center for Economic Analysis at the University of Colorado at Boulder concludes that closure of the mine, in addition to causing the loss of jobs of 43 CYCC employees, could also be expected to result in the loss of 58 additional jobs in the region and throughout the State. The lost wages would total $2,870,000. 70% of these impacts would be felt in the region where the mine is located.

FISCAL IMPACT:

The regulation will have no adverse fiscal impacts on the public sector. The proposed changes actually represent existing water usage patterns. There is no danger to aquatic life populations in the new segment or downstream. Additionally, the rule will not fiscally adversely affect downstream water users. However, the negative impact on CYCC would be great, including $1,670,000 of capital investment and approximately $596,000 a year in operation and maintenance cost.

The rule will have a fiscally positive impact both on CYCC and the area in which it operates. CYCC may continue to operate and need not expend prohibitive sums on treatment. In turn the

area will continue to benefit from the economic effects on the community of continued operation, including jobs, salaries, disposable income for the local economy and tax revenues.

Parties to the hearing:

Colorado Yampa Coal Company

33.21 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER, 1990 HEARING ON SEVERAL SEGMENTS:

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

Basis and Purpose:

First, the Commission has adopted new introductory language for the tables in section 3.3.6. The purpose of this language is to explain the new references to "table value standards" (TVS) that are contained in the Tables. These provisions also include the adoption of new hardness equations for acute and chronic zinc standards throughout the basin. Based on information developed since the "Basic Standards" were revised, these new equations have been determined to represent more appropriate zinc criteria. New information contained in a 1987 EPA zinc criteria document indicates Colorado's zinc criteria is overly restrictive, especially at hardness in the range of 50 to 200 mg/l. Adoption of the Colorado zinc criteria as site-specific TVS standards may potentially cause undue treatment costs to dischargers who would be regulated by those standards until they could be adjusted through a section 207 hearing or during the next round of basin hearings.

The existing criteria for zinc contained in the "Basic Standards" was developed by the Commission's Water Quality Standards and Methodologies Committee. At the time of development, the EPA zinc criteria document was not available. Because of some limited data indicating a consistent chronic toxicity level at water hardnesses of 200 mg/l or less, the Commission adopted a chronic criteria of 45 ug/l for hardness of 0 to 200 mg/l. This is much more stringent than EPA criteria which, as an example, specifies chronic zinc levels of 59 ug/l and 190 ug/l at hardness of 50 mg/l and 200 mg/l, respectively.

The Commission also has adopted additional organic chemicals standards for certain aquatic life segments. The standards added in section 3.3.5(2)(e) are based on water and fish ingestion criteria contained in the U.S. Environmental Protection Agency's Quality Criteria for Water, 1986 and updates to this document through 1989, which is commonly referred to as the "Gold Book". The standards are being applied to all Class 1 aquatic life segments. The standards are based on a 10^{-6} risk factor.

The application of these standards to waters where actual or potential human ingestion of fish is likely is important in assuring that Colorado achieves full compliance with the toxics requirement of section 303(c)(2)(B) of the federal Clean Water Act. It is reasonable to assume that most

Class 1 aquatic life segments, because of their variety of fish species and/or suitable habitat, have the potential for fishing and the resultant human consumption of the fish or other aquatic life.

One other general issue should be addressed at the outset. Several parties to this proceeding submitted documents expressing concern regarding the adoption of high quality 2 designations because of potential impact on water rights held by these entities. The Commission transmitted these document to the State Engineer and the Colorado Water Conservation Board to solicit any comments that they might have. In its transmittal letter, the Commission stated its preliminary assessment that the proposed adoption of high quality 2 designations did not present the potential to cause material injury to water rights.

The high quality designation merely indicates that an antidegradation review will be required for certain activities. In its regulations, the Commission has specifically provided that in an antidegradation review "any alternatives that would be inconsistent with section 25-8-104 of the Water Quality Control Act shall not be considered available alternatives." If an issue should arise as to whether the antidegradation review criteria prohibiting material injury are being applied correctly to a specific proposed activity, that issue would be considered during that specific review process, including going through consultation with the State Engineer and the Water Conservation Board.

The Commission received a letter back from the State Engineer, stating his agreement with the Commission's preliminary assessment. No letter was received from the Water Conservation Board, although the Board had previously indicated its agreement with a similar conclusion when this issue was raised in an earlier rulemaking hearing. Upon consideration of all of the available information, the Commission has determined that the adoption of high quality 2 designations in this proceeding does not cause material injury to water rights.

The other changes considered and adopted are addressed below by segment.

A. Overview of Segment-Specific Changes

Two principal issues were in controversy for several of the segments addressed in this hearing. The most controversial was whether to apply a high quality 2 designation to certain waters. In several instances, designations proposed by the Water Quality Control Division were opposed on the basis that there was inadequate information to support such a designation. The three most common challenges to the adequacy of the information were: (1) detection limits for some data were too high to determine whether ambient quality was better than "table values;" (2) for some segments there was not adequate data for some or all of the twelve parameters referenced in section 3.1.8(2)(b)(i)(C); (3) for some segments the sample location(s) of available data were too limited to generalize the results to the whole segment.

The Commission explicitly considered establishing minimum data requirements when it adopted the current antidegradation regulation, and consciously rejected that option. Rather, the Commission recognized that it would be necessary to rely on best professional judgment to determine what constitutes representative data in a specific situation. These issues are not new, or unique to high quality designations. The Commission has for years been required to

make water quality classification and standards decisions in the absence of perfect information. Requiring substantial, recently acquired data for all parameters from multiple locations in each segment before establishing high quality designations would assure that very few waters in Colorado would receive this protection for many years to come. As a policy matter, the Commission has determined that high quality designations may appropriately be established based on a lower threshold of available data than that suggested by several parties to this proceeding.

The Commission acknowledges that the data base for the key parameters on a number of segments that were considered for high quality designation is less than ideal. On some segments, there is no specific data available from points within the segments for some of the key parameters. In addition, some of the data represents the results of a small number of locations on the segments. In light of this fact, the Commission continues to encourage all interested parties to participate in efforts to improve the data base, and thereby further strengthen the decision-making process.

The Commission also notes that having adequate information upon which to base a high quality designation is not dependent solely on the availability of specific data for a particular segment. Relevant information may include data from downstream segments, comparison of available data with that for similar streams, and information regarding the presence or absence of activities likely to adversely impact the quality of the segment in question.

Where there is a substantial basis for considering a high quality 2 designation, in the face of some residual uncertainty the Commission has chosen to err in the direction of providing the protection. This policy decision is strongly influenced by the ease with which designations can be changed if better data is developed in the future. Unlike classifications, downgrading restrictions do not apply to water quality designations. If new site-specific data is developed that demonstrates that a particular high quality designation is improper, it can and should be removed by the Commission.

With respect to detection limits, the Commission has chosen to continue the same policy that it has followed for over then years--i.e. to treat data reported as below detection limits as being equivalent to zero. While other methodologies have been proposed and may be defensible, the Commission has determined that this approach is reasonable and appropriate. Requiring routine analysis to below table value standard levels for all constituents would substantially increase monitoring costs for the state and the public. Moreover, the Commission believes that the "zero" assumption is fair, so long as it is applied consistently throughout the water quality regulatory system.

Use of zeros in the water quality designation or standard-setting process may marginally err in the direction of increased protection. However, when zeros are used in applying standards to specific dischargers, those dischargers benefit by the assumption that there is more assimilative capacity available in the stream (allowing higher levels of pollutants to be discharged) since the existing pollution is considered to be zero rather than some level between zero and the detection limit.

The second recurring issue addressed for multiple segments in this hearing was whether to establish a recreation class 1 classification wherever a high quality 2 designation is established. The Division proposed this classification change for applicable segments, since the high quality 2 designation indicates that such segments have adequate water quality to support the recreation class 1 use. However, the Commission generally has declined to change the recreation classification from class 2 to class 2 uses in such circumstances, unless there was also evidence submitted that class 1 uses were present or likely for the waters in question. Unless the use is present or likely, application of use-protection-based water quality standards does not appear appropriate. At the same time, the Commission notes that this approach does not diminish application of antidegradation protection requirements for high quality waters. Where the existing quality is adequate, a high quality 2 designation has been established, requiring antidegradation requirements to be met before any degradation is allowed, even though the recreation classification is class 2.

A related issue is the determination of which uses warrant the class 1 recreation classification. The recreation classification definition in section 3.1.13 (1)(a)(i) of the Basic Standards and Methodologies for Surface Water refers to "activities when the ingestion of small quantities of water is likely to occur," and states that "such waters include <u>but are not limited to</u> those used for swimming." In the past the Commission often has applied the class 1 classification only when swimming occurs, and not where other recreational uses that may result in ingestion of small quantities of water occur. The Commission now believes it is appropriate for the class 1 classification also to be applied for uses such as rafting, kayaking, and water skiing.

The appropriateness of recreation class 1 versus class 2 classifications was debated for several segments in the Upper Colorado Basin. The Commission has received information regarding actual recreational uses. It has also received substantial input regarding the propriety (or lack thereof) of broadening the application of the class 1 recreation classification, based upon an evolving interpretation of the Basic Standards language. After lengthy discussion, the commission has decided that it is appropriate as a matter of policy in this proceeding to apply the recreation class 1 classification for all uses that involve a significant likelihood of ingesting water, including but not necessarily limited to rafting, kayaking, and water skiing. In particular, the uses at issue for segments in this basin were kayaking and rafting. The Commission has received substantial testimony that kayaking often results in water ingestion. In addition, the testimony presented in this and prior proceedings, as well as the personal experience of individual Commissioners, indicates that rafting--white water or otherwise--also presents a significant potential for water ingestion.

Section 3.1.6(1)(d) of the Basic Standards and Methodologies for Surface Water requires the Commission to establish classifications to protect all actual uses. Therefore, for waterbodies where rafting and kayaking is an actual use, the recreation class 1 use classification should be applied, since ingestion of water is likely to occur. The Commission sees no reason to distinguish between ingestion that may result from swimming and ingestion that may result from rafting or kayaking. In fact, there has been some testimony indicating that ingestion is more likely to result from the latter activities.

The Commission wishes to emphasize that the action that it is now taking is consistent with the existing definition of class 1 recreation uses. Some of the comments submitted stated or

suggested that the action now being taken by the Commission would constitute a "definitional change" that should be addressed only in a review of the Basic Standards and Methodologies for Surface Water. No change in the regulatory definitions of the classifications is being considered or adopted at this time. Rather, the Commission is applying what it believes to be the proper interpretation of the existing definition.

The Commission believes that as a matter of policy it is not necessary or appropriate to wait until the July, 1991 rulemaking hearing regarding the Basic Standards and Methodologies for Surface Water to implement its current interpretation of the class 1 recreation classification. Over the last decade, there have been many instances when arguments and facts presented in basin-specific rulemaking hearings have resulted in an evolving interpretation of the provisions of the Basic Standards and Methodologies for Surface Water. This Commission is not bound by interpretations made by its predecessors in other basin-specific hearings. To the degree that the class 1 recreation classification in the past has not been applied for some existing activities that involve a likelihood of ingesting water, the Commission now believes that such decisions were in error.

This action does not improperly exclude input from entities interested in other river basins. First, the Commission specifically reopened an earlier hearing on the Gunnison Basin and received input from entities not specifically concerned with that basin. This issue has now received extensive consideration in three separate basins. Moreover, the Commission can further modify its policy if in other basin-specific reviews, or in the upcoming review of the Basic Standards and methodologies, parties that did not participate in this proceeding bring forth new considerations that the Commission believes warrant a modification in the approach to recreation classifications that is now being adopted. The Commission also does not believe that there was any problem with the notice provided for the specific segments at issue in this hearing. Each of the segments for which the recreation classification is being changed from class 2 to class 2 in the original hearing notice. Although the basis for this proposal evolved during the hearing, any parties potentially concerned with a recreation class 1 classification were on notice that this change would be considered in this hearing.

In applying the interpretation of the existing recreation class 1 definition that has been described, the Commission is also influenced by the fact the importance of recreational uses of surface waters in Colorado has increased over the last decade. Testimony in this and prior proceedings indicated that uses such as rafting and kayaking have expanded substantially, and it is therefore even more important that adequate water quality protection now be provided.

Some of the testimony submitted addressed the appropriateness of the current fecal coliform standards that are applied in association with recreation classifications. The Commission believes that the appropriateness of the existing standards can and should be addressed, when and if there is new evidence available indicating that the current standards are not appropriate. However, changes in such standards were not at issue in this hearing. The Commission believes that questions regarding the appropriate numerical standards should not interfere with its obligation to establish appropriate classifications to protect existing uses. If members of the public have information indicating that a different indicator parameter should be used, or that different fecal coliform levels are appropriate for the respective recreation classifications, that

issue can and should be considered in the upcoming review of the Basic Standards and Methodologies for Surface Water.

Comment also has been submitted to the Commission expressing concern regarding the potential effect of downgrading restrictions, should the Commission now adopt class 1 recreation classifications for certain waters and later change its views regarding the appropriate approach to recreation classifications. The Commission does not believe that this presents a substantial problem. Downgrading is appropriate only when a use is not in place. So long as the class 1 recreation classification is defined as including activities that involve ingestion, applying that classification to waters where uses involving ingestion are present should not present a downgrading issue in the future. If the Commission at some later date should completely revise its approach to, and definition of, recreation classifications, application of the new system would involve a set of "de novo" determinations, and not questions regarding upgrading or downgrading.

The Commission recognizes that the approach now being adopted may result in increased economic impacts for some dischargers, to meet the class 1 classifications. The evidence that has been submitted to the Commission indicates that in many instances this will not be the case, because state-wide effluent limitations for fecal coliform and chlorine standards to protect aquatic life will often drive the level of disinfection and dechlorination that are required. Moreover, in some circumstances it may be possible for the Division to consider an expanded use of seasonal effluent limitations that take low flow or high flow circumstances into account. However, irrespective of these considerations, a potential increase in treatment requirements for some dischargers cannot eliminate the Commission's obligation to classify state waters to protect actual uses.

Finally, concern was expressed that the approach now taken by the Commission will result in inconsistency regarding recreation classifications for different waters throughout the state. Anytime a policy interpretation changes or evolves in any significant way, the first time the change is applied to specific state waters there will be come inconsistency among individual water bodies, since site-specific classifications and standards are addressed on a basin-by-basin basis. However, it is the Commission's intention to apply its policy interpretations consistently as individual basins are addressed. This is now the third basin in which this approach has been applied.

B. <u>Aquatic Life Class 1 with Table Values; New High Quality 2 Designations</u>

Upper Colorado River segments 3, 4, 5, 7a, 8

Blue River segments 1, 3, 8, 10, 15, 17, 18

Eagle River segments 2, 3, 4, 6, 8, 12

Roaring Fork River segments 2, 3, 5, 6, 7, 8, 10

North Platte River segment 3

Yampa River segments 2a, 3, 9, 10, 11, 18

Numerical standards for metals for these segments have in most instances been based on table values contained in Table III of the previous Basic Standards and Methodologies for Surface Water. Table III has been substantially revised, effective September 30, 1988. From the information available, it appears that the existing quality of these segments meets or exceeds the quality specified by the revised criteria in Table III, and new acute and chronic table value standards based thereon have therefore been adopted. There are also some of these segments whose previous standards were based in part on ambient quality, since their quality did not met old table values based on alkalinity ranges. However, these segments generally have much higher hardness than alkalinity, and the new table values (based on hardness-dependent equations) are now appropriate as standards.

One exception to the adoption of table value standards is Blue River segment 1, for which the standards have been left unchanged. There is an insufficient data base to convert this segment to new standards based on dissolved data.

A High Quality 2 designation has been established for each of these segments. Generally for these segments, the best available information in each case indicates that the existing quality for dissolved oxygen, pH, fecal coliform, cadmium, copper, iron, lead, manganese, mercury, selenium, silver and zinc is better than that specified in Tables I, II, and III of the Basic Standards and Methodologies for Surface Water, for the protection of aquatic life class 1 and recreation class 1 uses.

Dillon Reservoir, segment 3 of the Blue River is included in this group. In addition to new TVS, the special total phosphorus standard in effect for this segment is retained. Upper Colorado segment 7a is the same as old segment 7 with Rock Creek segmented out as segment 7b, since the Commission did not find that a high quality designation is appropriate for Rock Creek at this time. Blue River segment 1 has been combined with former segment 2 since the reason for separate segments no longer exists. (A new segment 2 has been established, as described below.) Blue River segment 3 has been combined with former segment 4, and Blue River segment 17 has been combined with former segment 19, since in each case there is currently no reason for different standards, classifications or designations on the segments that were combined. Yampa river segment 2a is the same as old segment 2 with Stagecoach Reservoir carved out as a new segment 2b, due to its differing water quality characteristics.

C. <u>Existing High Quality 2 Segments; New Classifications and Standards</u>

Upper Colorado River segment 9

Blue River segment 16

Eagle River segment 1

North Platte River segment 2

Yampa River segments 8, 19

These segments were already described as High Quality class 2, and available information indicates that the parallel new High Quality 2 designation continues to be appropriate for each. All are within wilderness areas. In addition, the following use classifications, and associated table value standards, have been adopted for these segments:

Recreation - Class 2

Cold Water Aquatic Life - Class 1

Water Supply

Agriculture

These classifications and standards are appropriate based on the best available information regarding existing quality and uses. These provisions would apply in the event that degradation is determined to be necessary following an activity-specific antidegradation review.

D. Existing High Quality 1 Segments; New Designations

Upper Colorado River segment 1

Roaring Fork River segment 1

North Platte River segment 1

Yampa River segment 1

These segments were already described as High Quality Class 1, and available information indicates that the parallel new High Quality 1 designation continues to be appropriate for each. All are within wilderness areas.

E. New Use-Protected Designations; No Change in Numeric Standards

Blue River segment 20

Eagle River segment 11

North Platte River segment 7

Yampa River segments 4b, 12

These segments all qualify for a use-protected designation based on their present classifications. All are aquatic class 2 streams. Existing standards are recommended because these segments, except Yampa segment 4b, have only a minimal number of standards, with no metal or nutrient standards. For Yampa segment 4b there is no water quality data to support changing to the new dissolved standards.

F. New Use-Protected Designations; Revised Numeric Standards

Upper Colorado River segments 6b, 6c

Blue River segments 5, 6, 7, 11, 12

Eagle River segment 5

Roaring Fork River segment 4

North Platte River segments 4, 5

All of these segments (except Eagle river segment 5, which is addressed separately below) are aquatic life class 2 streams with numeric standards to protect the existing aquatic life. Except as specified below, numerical standards for metals have been based on table values contained in Table III of the previous Basic Standards and Methodologies for Surface Water. Table III has been substantially revised, effective September 30, 1988. From the information available, it appears that the existing quality of these segments meets or exceeds the quality specified by the revised criteria in Table III, and new acute and chronic table value standards based thereon have been adopted. There are also some of these segments whose previous standards were based in part on ambient quality, since their quality did not meet old table values based on alkalinity ranges. However, these segments generally have much higher hardness than alkalinity, and the new table values (based on hardness-dependent equations) are now appropriate as standards.

Ambient quality-based standards:

Segment	Constituents, ug/l
Blue River segment 6	Cd(ch) = 1.5 Cu(ch) = 9 Pb(ch) = 3 Zn(ch) = 210 Mn(ch) = 170 (dis)
Blue River segment 11	Cd(ch) = 4 Zn(ch) = 1980
North Platte segment 4	Mn(ch) = 100 (dis)
North Platte segment 5	Mn(ch) = 100 (dis)

In addition, only minimal standards, without metal or nutrient standards, are established for Upper Colorado segment 6b. Former Upper Colorado segment 6 has been resegmented into segments 6a, 6b, and 6c, due to differing water quality conditions in the three new segments. A temporary modification for ammonia, set at ambient to reflect existing conditions of discharge and agricultural activities, has been established on segment 6c. This will allow the Three-Lakes

Sanitation District time to conduct monitoring of the segment and determine the existing ammonia levels and possible treatment required to meet underlying TVS. Minimal standards remain in place for Blue River segment 5. The pH range for the latter has been changed to 6.0-9.0. Phosphorus removal at the Summit County Snake River Wastewter Treatment Plant has the potential to violate the 6.5 unit lower limit. Changing the lower limit to 6.0 should not impact the aquatic life in this class 2 cold water stream.

For Eagle River segment 5 the Commission has retained the existing stnadards, except that zinc has been changed to a dissolved standard of 400 ug/l.

Finally, expiration dates have been added for the temporary modification for Blue River segment 7 and Eagle River segment 5. The existing standards for Blue River segment 7 (Peru Creek) have been left unchanged, pending new data reflecting the results of an inactive mine drainage treatment project that is now in place.

G. No Change in Classification; No Designations; Revised Numeric Standards

Upper Colorado segments 2, 6a, 7b, 10

Blue River segments 2, 13, 14

Eagle River segment 10

Roaring Fork segment 9

North Platte segment 6

Yampa River segments 2b, 4a, 5, 6, 7, 13a, 13b, 14, 15?, 16?, 17?

Upper Colorado segment 2

Segment 2 of the Upper Colorado includes Grand Lake, Shadow Mountain Lake and Lake Granby. These lakes and reservoirs form part of the Colorado-Big Thompson Project. Lake Granby and Shadow Mountain Lake are located within the Arapahoe National Recreation Area, which is adjacent to Rocky Mountain National Park and the Indian Peaks Wilderness Area. Grand Lake is adjacent to the National Park and the Recreation Area, and receives natural tributary flows from Rocky Mountain National Park. Because of the locations of these reservoirs, the Commission preliminarily determined that exceptional reasons existed to designate Segment 2 as High Quality 2. The Northern Coloradfo Water Conservation District and Numicipal Subdistrict (the "District") thereafter moved the Commission to reconsider this designation, in part because of the perceived potential interference with the District's water rights. The District also argued that the data for this segment indicated that the water quality is worse than table values for lead, cadmium, and silver, and therefore the segment should be designated use-protected.

The Commission agreed to reconsider its preliminary designation, and reopened the record to allow interested parties to submit written comments, and to comment orally at the Commission's

April meeting. As a result of this reconsideration, the Commission changed its preliminary decision, and has decided to leave Segment 2 undesignated.

Taking into account all of the available information, including (1) the authorized uses of the waters in this segment, (2) the available data for this segment, and (3) the potential for interference with water rights if other agencies apply the high quality designation in a manner inconsistent with section 25-8-104, the Commission has determined that the provisions of section 3.1.8(2) do not warrant a High Quality 2 designation for this segment at this time. In addition, the Commission recognized that the antidegradation review is already presumptively applicable to this segment because of its current classification as cold water aquatic life 1. Because Segment 2 is presumptively subject to an antidegradation review without the High Quality 2 designation the Commission does not believe designating segment 2 High Quality 2 provides any significant additional protection. By finding that segment 2 should not be designated High Quality 2, the Commission is not determining that the location of a segment within a National Recreational Area, or within or adjacent to a National Park or Forest could not be an exceptional reason for designation as High Quality 2. The Commission is only stating that in this particular case the Commission has determined that the facts do not support a designation as High Quality 2 at this time. The Commission encourages the collection of additional data so that the appropriate designation of this segment can be reassessed with more complete information in the future.

Other Segments

These are water bodies whose classifications are appropriate for HQ2 designation (CW1 or WW1 and Rec 1) but had quality not suitable for a water supply classification or 85th percentile values of one or more parameters exceeding the criteria for class 1 aquatic life. Table value standards have generally been adopted for these segments, except as indicated below.

Due to uncertainties about the aquatic life class 1 classification in Willow Creek below the Bunte Ditch Diversion, segment 6a, the existing classification was retained but the segment was left undesignated. It is anticipated that a use attainability study will be completed on this reach by the next triennial review.

A temporary modification for mercury has been adopted for new segment 7b (Rock Creek), pending further evaluation of mercury levels in this stream. For new Blue River segment 2, the reach below French Gulch, 5 year temporary modifications have been established based on existing ambient quality. For Blue River segments 13 and 14, the following ambient quality-based standards have been established:

Segment	Constituents, ug/l
Blue River segment 13	CN(total) = .117 Mn(ch) = 1.2 (Trec)
Blue River segment 14	CN(total) = .008 S = 320 Mn(ch) = .18 (dis)

For Roaring Fork segment 9, a three year temporary modification for iron, Fe(ch) = 2000 ug/l (Trec) has been established.

H. Changes in Classification; No Designations; Revised Numeric Standards

Eagle River segment 9

Review of available data and existing uses indicates that this segment is appropriate to be upgraded to Recreation class 1 with a corresponding fecal coliform standard of 200 MPN/100 ml. Table value standards are adopted for this segment, except that the dissolved manganese temporary modification has been left in place for six years.

I. No Changes in Classifications or Standards; No Designations

Blue River segment 9

Eagle River segment 7

No data are available on Blue River segment 9 to warrant revising the standards at this time. Variable data during Eagle Mine cleanup efforts make any change in standards for Eagle River segment 7 premature, although the description of this segment has been revised to exclude certain waters that are now included in Eagle River segment 1.

Parties to the December, 1990 Hearing

1. Summit County Government through its Snake River Sewer Fund
2. Copper Mountain Inc.
3. Copper Mountain Water & Sanitation District
4. Breckenridge Ski Corporation
5. Breckenridge Sanitation District
6. AMAX Inc.
7. The Winter Park Water & Sanitation District
8. The Granby Sanitation District
9. The Fraser Sanitation District
10. The Grand County Water & Sanitation District
11. Division of Wildlife
12. Pitkin County Board of County Commissioners
13. Upper Colorado River Lake Production Association
14. Colorado River Water Conservation District
15. Eagle Sanitation District
16. Three Lakes Water & Sanitation District
17. Upper Eagle Regional Water Authority
18. Upper Eagle Valley Consolidated Sanitation District.
19. Vail Valley Consolidated Water District
20. The Town of Gypsum
21. City & County of Denver acting by and through its Board of Water Commissioners
22. The City of Colorado Springs Water Department

23. Mid-Continent Resources, Inc.
24. Winter Park Recreational Association
25. Keystone Resorts Management, Inc.
26. The Northern Colorado Water Conservancy District
27. Morrison Creek Metropolitan Water & Sanitation District
28. The City of Steamboat Springs
29. Routt County
30. Aspen Consolidated Sanitation District
31. The Town of Frisco
32. Summit County
33. Grand County
34. The Town of Montezuma
35. The Town of Grand Lake
36. Eagle County
37. The Town of Vail
38. Summit Water Quality Committee
39. East Dillon Water District
40. Upper Yampa Water Conservancy District
41. Lake Catamount No. 1 Metro District
42. Paramount Communications Inc.
43. Silverthorne/Dillon Joint Sewer Authority

FINDINGS REGARDING BASIS FOR EMERGENCY RULE SEPTEMBER 9, 1991:

The Commission held this emergency rulemaking hearing to readopt the numerical standards for one segment of the Upper Colorado River Basin to correct clerical errors in the original filing. The affected regulation was amended on May 8, 1991, and was filed within the required timeframes with the Secretary of State's Office and the Office of Legislative Legal Services. The Commission learned recently that there were errors in the published version of the numerical standards for segment 5 of the Eagle River, page 8 of the tables.

The Commission finds that the immediate adoption of the revised regulation is imperatively necessary for the preservation of public health, safety, or welfare and that compliance with normal notice requirements would be contrary to the public interest. Emergency adoption is necessary to assure that the published regulation is consistent with the regulation that the Commission adopted, to avoid confusion for the public and to assure than an anticipated request for permit revisions for a discharge by Paramount Communications Inc. to this segment is processed in a manner consistent with the Water Quality Control Commission's water quality standards decisions.

33.22 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JANUARY, 1992 HEARING:

The provisions of 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission

also adopted in compliance with 24-4-103(4), C.R.S., the following statement of basis and purpose.

Basis and Purpose:

On May 8, 1991, following a rulemaking hearing on December 3, 1990, the Commission took final action to adopt numerous revisions to water quality classifications and standards throughout the Upper Colorado River Basin. On September 9, 1991 the Commission held an emergency rulemaking hearing to correct certain clerical errors in the revisions as filed following May 8 action, specificlaly relating to segment 5 of the Eagle River. To reflect the proper classifications and standards for this segment, the correction of these clerical errors has now been made permanent.

In addition, clerical errors for segment 7 of the Eagle River have also been corrected in this hearing.

PARTIES TO THE JANUARY 6, 1992 HEARING

1. Paramount Communications, Inc.

33.23 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; MARCH 1, 1993 HEARING:

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

BASIS AND PURPOSE:

The changes to the designation column eliminating the old High Quality 1 and 2 (HQ1, HQ2) designations, and replacing HQ1 with Outstanding Waters (OW) designation were made to reflect the new mandates of section 25-8-209 of the Colorado Water Quality Act which was amended by HB 92-1200. The Commission believes that the immediate adoption of these changes and the proposals contained in the hearing notice is preferable to the alternative of waiting to adopt them in the individual basin hearings over the next three years. Adoption now should remove any potential for misinterpretation of the classifications and standards in the interim.

In addition, the Commission made the following minor revisions to all basin segments to conform them to the most recent regulatory changes:

1. The glossary of abbreviations and symbols were out of date and have been replaced by an updated version in section 3.3.6(2).

2. The organic standards in the Basic Standards were amended in October, 1991, which was subsequent to the basin hearings. The existing table was based on pre-1991 organic

standards and are out of date and no longer relevant. Deleting the existing table and referencing the Basic Standards will eliminate any confusion as to which standards are applicable.

3. The table value for ammonia and zinc in the Basic Standards was revised in October, 1991. The change to the latest table value will bring a consistency between the tables in the basin standards and Basic Standards.

4. The addition of acute un-ionized ammonia is meant to bring a consistency with all other standards that have both the acute and chronic values listed. The change in the chlorine standard is based on the adoption of new acute and chronic chlorine criteria in the Basic Standards in October, 1991.

Finally, the Commission confirms that in no case will any of the minor update changes described above change or override any segment-specific water quality standards.

33.24 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: AUGUST 2, 1993 RULEMAKING HEARING:

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

BASIS AND PURPOSE:

The temporary modification for the un-named tributary near Willow Creek, Segment 6c, would have expired before either the ongoing studies were completed, or the next rulemaking hearing was held. The short-term extension granted here will allow for a 207 hearing to proceed with the benefit of a complete data set late in 1994.

The Eagle River temporary modifications were established to accommodate a Superfund cleanup schedule. It was not possible to simple reaffirm the originally scheduled expiration data because that would have resulted in a greater than three year duration, a practice contrary to Commission policy. The expiration date selected will not extend beyond three years, and will allow the temporary modification to be reconsidered factoring in recent data at the basin rulemaking anticipated mid to late 1995.

33.25 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE, SEPTEMBER 7, 1993:

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

BASIS AND PURPOSE:

On November 30, 1991, revisions to "The Basic Standards and Methodologies For Surface Water",. 3.1.0 (5 CCR 1002-8), became effective. As part of the revisions, the averaging period for the selenium criterion to be applied as a standard to a drinking water supply classification was changed from 1-day to 30-day duration. The site-specific standards for selenium on drinking water supply segments were to be changed at the time of rulemaking for the particular basin. Only one river basin, the South Platte, has gone through basin-wide rulemaking since these revisions to the "Basic Standards". Through an oversight, the selenium standards was not addressed in the rulemaking for this basin and has since become an issue in a wasteload allocation being developed for segments 15 and 16 of the South Platte. Agreement on the wasteloads for selenium is dependent upon a 30-day averaging period for selenium limits in the effected parties permits. Therefore, the parties requested that a rulemaking hearing be held for the South Platte Basin to address changing the designation of the 1- ug/l selenium standard on all water supply segments from a 1-day to a 30-day standard. The Water Quality Control Division, foreseeing the possibility of a selenium issue arising elsewhere in the state, made a counter proposal to have one hearing to change the designation for the selenium standard on all water supply segments statewide. The Commission and the parties concerned with South Platte segments 15 and 16 agreed that this would be the most judicious way to address the issue.

The change in the averaging period may cause a slight increase in selenium loads to those segments which have a CPDS permits regulating selenium on the basis of a water supply standard. However, these segments are only five in number and the use will still be fully protected on the basis that the selenium criterion is based on 1975 national interim primary drinking water regulations which assumed selenium to be a potential carcinogen. It has since been categorized as a non-carcinogen and new national primary drinking water regulations were promulgated in 1991 that raised the standard to 50 ug/l.

The Commission also corrected a type error in the TVS for Silver by changing the sign on the exponent for the chronic standard for Trout from + 10.51 to - 10.51

33.26 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE:

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

BASIS AND PURPOSE:

The Commission has extended the temporary modification for un-ionized ammonia on stream segment 6c in the Upper Colorado River Basin until March 1, 1996. This extension is to allow the Three Lakes Water and Sanitation District to continue sampling and collecting data on stream segment 6c through the fall, winter, and spring seasons, 1994-1995. This data will be analyzed and, if deemed necessary by the District, presented in a formal petition for revisions to the use classifications and/or water quality standards, to be considered in a November, 1995 rulemaking hearing.

33.27 PROPOSED STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (1995 Silver hearing)

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

BASIS AND PURPOSE

The changes described below are being adopted simultaneously for surface water in all Colorado river basins.

This action implements revisions to the Basic Standards and Methodologies for Surface Water adopted by the Commission in January, 1995. As part of a July, 1994 rulemaking hearing, the Commission considered the proposal of various parties to delete the chronic and chronic (trout) table values for silver in Table III of the Basic Standards. As a result of that hearing, the Commission found that the evidence demonstrated that ionic silver causes chronic toxicity to fish at levels below that established by the acute table values. It was undisputed that silver is present in Colorado streams and in the effluent of municipal and industrial dischargers in Colorado. The evidence also demonstrated that the removal of silver from wastewater can be costly. However, there was strongly conflicting scientific evidence regarding the degree to which silver does, or could in the absence of chronic standards, result in actual toxicity to aquatic life in Colorado surface waters. In particular, there was conflicting evidence regarding the degree to which the toxic effects of free silver are mitigated by reaction with soluble ligands to form less toxic compounds and by adsorption to particulates and sediments.

The Commission concluded that there is a need for additional analysis of the potential chronic toxicity of silver in streams in Colorado. The Commission encouraged the participants in that hearing, and any other interested parties, to work together to develop additional information that will help resolve the differences in scientific opinions that were presented in the hearing. The Commission believes that it should be possible to develop such information within the next three years.

In the meantime, the Commission decided as a matter of policy to take two actions. First, the chronic and chronic (trout) table values for silver have been repealed for the next three years. The Commission is now implementing this action by also repealing for the next three years, in this separate rulemaking hearing, all current chronic table value standards for silver previously established on surface waters in Colorado. Any acute silver standards and any site-specific silver standards not based on the chronic table values will remain in effect. The Commission intends that any discharge permits issued or renewed during this period will not include effluent limitations based on chronic table value standards, since such standards will not currently be in effect. In addition, at the request of any discharger, any such effluent limitations currently in permits should be deleted.

The second action taken by the Commission was the readoption of the chronic and chronic (trout) table values for silver, with a delayed effective date of three years from the effective date of final action. The Commission also is implementing this action by readopting chronic silver

standards with a corresponding delayed effective date at the same time that such standards are deleted from the individual basins. The Commission has determined that this is an appropriate policy choice to encourage efforts to reduce or eliminate the current scientific uncertainty regarding in-stream silver toxicity, and to assure that Colorado aquatic life are protected from chronic silver toxicity if additional scientific information is not developed. If the current scientific uncertainty persists after three years, the Commission believes that it should be resolved by assuring protection of aquatic life.

In summary, in balancing the policy considerations resulting from the facts presented in the July 1994 rulemaking hearing and in this hearing, the Commission has chosen to provide relief for dischargers from the potential cost of treatment to meet chronic silver standards during the next three years, while also providing that such standards will again become effective after three years if additional scientific information does not shed further light on the need, or lack of need, for such standards.

Finally, the Division notes that arsenic is listed as a TVS standard in all cases where the Water Supply classification is not present. This is misleading since Table III in the Basic Standards lists an acute aquatic life criterion of 360 ug/l and a chronic criterion of 150 ug/l for arsenic, but a more restrictive agriculture criterion of 100 ug/l. It would be clearer to the reader of the basin standards if, for each instance where the standard "As(ac/ch)=TVS" appears, the standard "As=100(Trec)" is being inserted as a replacement. This change should make it clear that the agriculture protection standard would prevail in those instances where the more restrictive water supply use protective standard (50 ug/l) was not appropriate because that classification was absent.

The chemical symbol for antimony (Sb) was inadvertently left out of the "Tables" section which precedes the list of segments in each set of basin standards. The correction of this oversight will aid the reader in understanding the content of the segment standards. Also preceding the list of segment standards in each basin is a table showing the Table Value Standards for aquatic life protection which are then referred to as "TVS" in the segment listings. For cadmium, two equations for an acute table value standard should be shown, one for all aquatic life, and one where trout are present. A third equation for chronic table value should also be listed. The order of these three equations should be revised to first list the acute equation, next the acute (trout) equation, followed by the chronic equation. This change will also aid the reader in understanding the intent of the Table Value Standards.

PARTIES TO THE PUBLIC RULEMAKING HEARING
JUNE 12, 1995

1. Coors Brewing Company
2. The Silver Coalition
3. Cyprus Climax Metals Company
4. The City of Fort Collins
5. The City of Colorado Springs

33.28 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE (SEGMENT 6c, UPPER COLORADO RIVER BASIN)

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

BASIS AND PURPOSE:

A. Summary

In this rulemaking proceeding, the Commission (1) reaffirmed the existing acute and chronic un-ionized ammonia standards for Segment 6c of the Upper Colorado River Basin and (2) extended the temporary modification for un-ionized ammonia for that segment. With respect to the temporary modification, the Commission understands that existing quality is based on instream monitoring data collected by the District from 1992 through 1995, at the upper boundary of Segment 6c and reflects the District's existing monthly average discharge levels up to 15 mg/l total ammonia.

B. Background

In December, 1990, former Upper Colorado River Basin Segment 6 was resegmented into Segments 6a, 6b and 6c, due to differing water quality conditions in the three new segments. A temporary modification for un-ionized ammonia, set at ambient to reflect existing conditions of discharge and agricultural activities, was established for Segment 6c to allow Three Lakes Water and Sanitation District ("Three Lakes") time to conduct water quality monitoring and aquatic biological surveys of the segment, for the purpose of consideration of site-specific standards. In 1993 and 1994, the temporary modification was extended to allow Three Lakes to continue sampling and collecting data on Segment 6c. When the temporary modification was extended in 1994, the Commission also scheduled a rulemaking hearing for November, 1995, to consider revisions to the use classifications and/or water quality standards for Segment 6c based on the data collected by Three Lakes.

C. Commission Decision

The results of Three Lakes water chemistry monitoring and aquatic biological surveys of Segment 6c indicate that its habitat substantially limits any resident population or natural reproduction of fish species; most of the fish found in the segment are transient from water diversion structures. The Division and EPA remain concerned about the potential impact of un-ionized ammonia contained in the Three Lakes's effluent on aquatic life in the segment. Three Lakes presented evidence and testimony that the cost of providing capital improvements sufficient to meet the underlying standards for the benefit of the few transient fish found in the segment was estimated at 4 million dollars. Three Lakes District is a rural public entity with a limited tax and revenue base to finance any needed capital improvements.

The Commission in this rulemaking hearing approved a five year temporary modification, subject to review at approximately a three year interval into such modification. The parties to

this rulemaking have entered into a stipulation which forms the basis for the action now being taken by the Commission. The Commission understands that under the stipulation Three Lakes shall comply with the following terms: (1) during the first three years of the temporary modification, Three Lakes shall enter into a contract with a consulting engineering firm for a study of the alternative facilities necessary to meet the underlying ammonia standards; (2) no later than the end of the fourth year of the temporary modification Three Lakes shall begin exploring financial arrangements for any necessary facilities or improvements to meet the underlying standards; (3) Three Lakes shall not object if its discharge permit is reopened to include the underlying ammonia standards and the five year temporary modification, and it is expected that Three Lakes' permit eventually will include a compliance schedule of approximately three years to begin after expiration of the five year temporary modification so as to allow time for the construction of any improvements or facilities and (4) Three Lakes will continue to monitor for ammonia, pH, temperature and flow in Segment 6c and its effluent.

The Commission has determined that the temporary modification is consistent with Colorado's Basic Standards and EPA's recent policy statement on variances from water quality standards (October 18, 1995 letter from EPA). The underlying ammonia standards which are adopted as part of this rulemaking are adequate to protect public health and the limited aquatic environment of the unnamed tributary and the aquatic life in Willow Creek. Nothing in this Statement of Basis and Purpose shall be construed as prohibiting any person, including the parties to this rulemaking, from requesting review or revision of these underlying standards at some future time.

PARTIES TO THE RULEMAKING

1. Three Lakes Water and Sanitation district
2. Northern Colorado Water Conservancy District and Municipal Subdistrict
3. Northwest Colorado Council of Governments

33.29 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE (1996 RULEMAKING HEARING)

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

BASIS AND PURPOSE:

The changes described below were adopted by the Commission as proposed by the Water Quality Control Division during the rulemaking hearing:

Corrected several errors in the tables for segments not classified for water supply use. The action entailed deletion of NO_3, Cl, and SO_4 and revision of As, CrIII, and Se of certain standards applied to these segments that reflected protection of a water supply use. The segments whose standards were modified are: Upper Colorado segment 6c, Blue River segments 11 and 13, North Platte River Segment 6, and Yampa River segments 5, 7, and 13b.

The chronic ammonia (NH_3) standard in the Yampa River Basin segment 7 was raised from 0.02 to 0.05 to correct a typographical error. The Commission had adopted the 0.05 standard for the segment in 1985 and it was subsequently inadvertently dropped from the table.

On all segments classified for water supply and aquatic life uses, the total recoverable manganese standard of 1000 ug/l is stricken. On segments classified for aquatic life and not water supply the 1000 ug/l standard is designated as dissolved. The aquatic life manganese criterion was changed in 1991 revisions to the Basic Standards from total recoverable to dissolved and on these segments classified for water supply and aquatic life, a more stringent dissolved manganese water supply standard of 50 ug/l is in place.

Mercury standards designated as total recoverable (Trec) are changed to Total (tot). This change reflects the Basic Standards designation of total mercury as the appropriate form of mercury for final residual value (FRV) standards.

The following Water Quality Control Division and Northwest Colorado Council of Governments (NWCCOG) joint proposals were adopted by the Commission.

Upper Colorado segment 7b(Rock Creek) was deleted. Segment 7a was renumbered as segment 7. This segment was no longer requires separate segment designation due to elevated mercury.

Extended (reestablished) the temporary modifications for Blue River segments 2 (Blue River below French Gulch) and 7 (Peru Creek) which had expired on April 30, 1996 in anticipation of improved water quality in these segments in the future as existing or proposed project are fully implemented. These temporary modifications were given a new expiration date of December 31, 1998.

At the request of Viacom International, Inc. the Commission extended (reestablished) the temporary modifications of the numeric standards for dissolved manganese on segments 5 and 9 of the Eagle River for an additional three-year period, from May 1, 1996 until December 31, 1998. The Commission found that the underlying numeric standard for dissolved manganese is not being met in these segments, largely as a result of the effects of past mining in the area, now mostly inactive. The former Eagle Mine and its associated tailings disposal areas have been, and continue to be the subject of remediation actives being implemented under the terms of two consent decrees by Viacom International Inc., the successor to the mine's former owner. The remediation is still in progress, and while continued water quality improvement is expected, both the extent and the timing of such improvement are unknown at this time.

The Water Quality Control Division is planning to perform water quality measurements in the Eagle River as part of a basin-wide water quality monitoring effort during 1996 and data collected by Viacom, EPA, and the State of Colorado, and others, will be used in a comprehensive review of the classifications and standards for these segments in a rulemaking now anticipated to occur in 1998, at which time these temporary modifications can be reconsidered. Therefore, the Commission has determined that it is appropriate to retain the temporary modifications for dissolved manganese on the affected segments.

In response to the petition of Pittsburg & Midway Coal Mining Company (P&M), the Commission decided to revise the segmentation and classifications of Yampa River 13a, by adding a new segment 13c. P&M had asked the Commission to remove the water supply designation for these waters. P&M argued that there is no water supply use currently in place for this segment, that such use is unlikely in the future, that existing quality does not meet water supply standards, and that water supply standards would result in unreasonable treatment costs for P&M. NWCCOG argued that the legal requirements for downgrading had not been met, and instead recommended that a temporary modification of sulfate standard be adopted.

The Commission decided to retain the water supply classification for this segment for the period June through February annually, while removing this classification and corresponding numerical standards on a seasonal basis, for the period March through May. The evidence presented indicated that P&M should not have a problem meeting the effluent limitations associated with a seasonal sulfate standard, so long as that standard is properly implemented as a 30-day average concentration.

Finally, the Commission notes that its decision to remove the water supply classification on a seasonal basis is influenced by the fact that the critical standard at issue--sulfate--is based on a secondary drinking water standard rather than a health-based primary standard.

The Commission agreed to consider a proposal by the Water Quality Control Division for a proposed designation of outstanding waters for Upper Colorado segment 9 in the scheduled basin-wide rulemaking in 1998.

Climax Molybdenum Company withdrew their proposal to bifurcate Upper Colorado River segment 8. The concerns with manganese and iron standards will be addressed in a request for a rulemaking hearing on this segment next year.

PARTIES TO THE RULEMAKING HEARING
1996

1. Northwest Colorado Council of Governments
2. Pittsburg & Midway Coal Mining Company
3. Viacom International, Inc.
4. State of Colorado, Division of Wildlife, Department of Natural Resources
5. City of Colorado Springs, Water Resources Department
6. Climax Molybdenum
7. Northern Colorado Water Conservancy District

33.30 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JULY, 1997 RULEMAKING

The provisions of sections 25-8-202 and 25-8-401, C.R.S., provide the specific statutory authority for adoption of the attached regulatory amendments. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Commission has adopted a revised numbering system for this regulation, as a part of an overall renumbering of all Water Quality Control Commission rules and regulations. The goals of the renumbering are: (1) to achieve a more logical organization and numbering of the regulations, with a system that provides flexibility for future modifications, and (2) to make the Commission's internal numbering system and that of the Colorado Code of Regulations (CCR) consistent. The CCR references for the regulations will also be revised as a result of this hearing.

33.31 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; OCTOBER, 1997 RULEMAKING

The provisions of sections 25-8-202, 25-8-204 and 25-8-401, C.R.S., provide the specific statutory authority for adoption of the attached regulatory amendments. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

A stipulation was presented by the parties to the Commission at the hearing whereby Climax Molybdenum Company withdrew its proposal to adopt seasonal iron and manganese standards for the Williams Fork River. The parties agreed to the adoption of temporary modifications for iron and manganese with an expiration of December 31, 1999. During the term of the temporary modifications, the parties will identify a well as a potential point of compliance and Climax will monitor the iron and manganese levels in the well to obtain baseline water quality data. Assuming that the iron and manganese levels are below the water supply standards, it is expected that the well will be proposed at a subsequent hearing as a point of compliance and that the temporary modifications will be deleted. Any discharge of iron or manganese from the Climax facility during the term of the temporary modification will be regulated based on the 1000 ug/l aquatic life standards.

Parties to the Hearing

1. Climax Molybdenum Company
2. Northwest ColoradoCouncil of Governments
3. Grand County Board of County Commissioners
4. U.S. EPA Region VIII

33.32 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; NOVEMBER, 1998 RULEMAKING

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

BASIS AND PURPOSE

The Commission has recently approved a new schedule for triennial reviews of water quality classifications and standards for all river basins in Colorado. In this hearing the Commission has extended the expiration dates of temporary modifications [and, for the Animas Basin, the effective dates of underlying standards] without substantive review, so that the next substantive review of the temporary modifications can occur as part of the overall triennial review of water quality standards for the particular watershed. This will avoid the need for multiple individual hearings that would take staff resources away from implementation of the new triennial review schedule.

33.33 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; AUGUST, 1999 RULEMAKING

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

BASIS AND PURPOSE

A. Resegmentation

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

Upper Colorado segments 3 and 5 - combined into one segment 3. Past data showed water quality differences, more recent data shows there is no significant difference in water quality.

Upper Colorado segment 5 - now consists of Wolford Mountain Reservoir which was bifurcated from Upper Colorado segment 6a due to its supporting a Recreation Class 1 use.

Yampa River segments 8, 9, 10 and 11 combined into one segment 8. With the change to recreation class 1 on segment 8, all four segments had identical classifications and standards.

B. Wetlands

In March 1993, the Commission amended the Basic Standards and Methodologies for Surface Water , Regulation #31 (5 CCR 1002-31) to include wetlands in the stream classification and standards' system for the state. Due to that action, it became necessary to revise the segment description for all segments of the "all tributary" type to clarify that wetlands are also part of the tributary system for a given mainstem segment. All tributary wetlands now clearly carry the same classifications and standards as the stream to which they are tributary as provided for in 3.1.13(1)(e)(iv).

C. Manganese

The aquatic life manganese criterion was changed in 1997 revisions to the Basic Standards (5 CCR 1002-31) from a single chronic dissolved criterion to acute and chronic hardness-based equations, i.e., Acute=$e^{(0.7693[\ln(\text{hardness})]+4.4995)}$ and Chronic=$e^{(.5434[\ln(\text{hardness})]+4.7850)}$. These manganese equations were added as table value standards in 33.6(3). As a result of the adoption of these new TVS, all segments classified for aquatic life use that had a chronic dissolved manganese standard of 1,000 ug/l had the 1,000 standard stricken and replaced with Mn(ac/ch)=TVS.

D. Selenium

The regulation in 33.6 (3) listed the table value standards for selenium as Acute=135 ug/L and Chronic=17ug/L. This was updated to reflect the existing acute and chronic criteria for selenium listed in the Basic Standards as Acute= 20 ug/L and Chronic= 5 ug/L which was adopted in 1995 by the Commission. This change means that all segments with standards for selenium given as TVS now have these lower acute and chronic standards. Because of this change, on all segments classified for a water supply use, the chronic total recoverable selenium of 10 ug/L was stricken and replaced with Se(ac/ch)=TVS.

E. Outstanding Waters Designations

Several segments or waterbodies were designated outstanding waters (OW) due to their meeting certain criterion pursuant to section 31.8(2)(a). Other segments that already had the OW designation but whose classifications and/or standards were inconsistent with the those prescribed by the Commission for OW waters in other basins in Colorado were corrected. These changes are discussed below for each segment.

(1) The following segments were already designated outstanding waters (OW) but needed classifications (Rec 1, Aq CW 1, WS, and Ag) and table value standards added to the tables to be consistent with Commission actions in other basins.

Upper Colorado segment 1. The Colorado River and tributaries in Rocky Mountain National Park.

Roaring Fork River segment 1. Tributaries to the Roaring Fork River within the Maroon Bells/Snowmass, Hunter/Fryingpan, Holy Cross, Raggeds and Collegiate Peaks Wilderness Areas.

North Platte River segment 1. All tributaries to the North Platte and Encampment Rivers within the Mount Zirkle and Never Summer Wilderness Areas.

Yampa River segment 1. All tributaries to the Yampa River which are within the Mount Zirkel Wilderness Area.

(2) Segments that were based on their waters being in wilderness areas but were not designated outstanding waters. All these waters met the following criteria for OW designation: (1) their existing water quality is better than the quality criteria specified in the 31.8(2); (2) they are designated wilderness areas; and (3) they have ecological significance (all the wilderness areas had streams containing Colorado River cutthroat trout, a state species of special concern, and Holy Cross and Mt. Zirkel W.A.'s had populations of Boreal toads, a state endangered species).

Upper Colorado segment 9 - All tributaries to the Colorado and Fraser Rivers, within the Never Summer, Indian Peaks and Flat Tops Wilderness Areas.

Blue River segment 16 - All tributaries to the Blue River within the Gore Range - Eagles Nest Wilderness Area.

Eagle River segment 1 - All tributaries to the Eagle River system within the Gore Range - Eagles Nest Wilderness Area and Holy Cross Wilderness Area.

North Platte River segment 2 - deleted reference to waters in Never Summer W.A. which were moved into North Platte segment 1

With respect to Eagle River segment 1, the Commission is aware of the fact that the Homestake Water Project of the Cities of Aurora and Colorado Springs predated the Holy Cross Wilderness designation and that the Project obtained a Congressional exemption which provided that the wilderness designation would not adversely impact the exercise of the Project's water rights. Act of December 19, 1980, Public Law No. 96-50, Section 102(a)(5), 94 Stat: 3265, 3266. Having taken into account the Congressional exemption, the location of the Project and its associated water rights, the potential impact of an OW designation on future project activities, the basis for the Commission's adoption of an OW designation for the segment, and the language of CRS 24-4-104, the Commission has decided to grant a project specific exemption form the OW designation to the Homestake Project as specified in footnote 1 to Eagle River segment 1. For purposes of the Project, the affected stream segment will remain "reviewable water." This project specific exemption should ensure the future protection of water quality within the segment, while recognizing legitimate pre-existing rights. The project exemption may be revisited once the project has finalized its development plans for the remaining project water rights in the area.

(3) Segments that needed descriptions of wilderness areas added. This addresses wilderness areas that were designated after the rulemaking hearing that originally established the segment. In this hearing, the only segments affected were Upper Colorado segment 9 and Yampa segment 1 which had the Flat Tops Wilderness Area added to their descriptions and Roaring Fork segment 1 which had the Holy Cross, Collegiate Peaks and Raggeds Wilderness Areas added to its description.

F. Temporary Modifications

There were several segments which had temporary modifications that were reviewed and decisions made as to delete them or to extend them, either as is or with modification of the numeric limits.

Upper Colorado segment 6c - Mainstem of un-named tributary to Willow Creek from the Willow Creek Reservoir Rd to the confluence Willow Creek.

This segment had 5-year temporary modification for un-ionized ammonia that will expire in 12/30/2000, but under the terms of a stipulation entered into at the 1995 rulemaking the temporary modification is "subject to review at approximately a three-year interval into the modification". The Commission determined that after review of information submitted by the Division and Three Lakes Water and Sanitation District that the present expiration date provided sufficient time for Three Lakes to develop and implement its plan for meeting the unionized ammonia standard in this segment.

Upper Colorado segment 8 - Mainstem of the Williams Fork River.

The Commission reviewed the need for the existing temporary modifications to the manganese and iron water supply standards and determined that their removal would not pose a significant hardship to Climax's ability to meet its permit limits and manage the water in its facility provided that a point of compliance is adopted. As noted in the Basis and Purpose for the October 1997 rulemaking, Climax, with the participation of Grand County and the Northwest Colorado Council of Governments, identified a well as a potential point of compliance. Climax monitored the iron and manganese levels in a well at the Aspen Canyon Ranch. The data from March 1998 through February 1999 showed that the existing water quality was well below the water supply standards for iron and manganese. In view of the above, the temporary modifications for iron and manganese are deleted and a point of compliance at the Aspen Canyon Ranch well is adopted.

Blue River segment 2 - Mainstem of the Blue River from the confluence with French Gulch to a point one mile above the confluence with Swan River.

The temporary modifications were reviewed and revised to reflect data collected from the segment in 1996-98. It was determined that an expiration date of 12/31/2002 would provide sufficient time for the French Gulch Opportunity Group (FROG) to determine the appropriate steps to address the source of the high metals in this segment which derive from French Gulch (Blue River segment 11) and complete a use attainability analysis on segment 2 which should determine the proper classifications and standards for the segment.

Blue River segment 6 - Snake River

The Commission has adopted underlying TVS with temporary modifications that reflect the existing ambient conditions to expire 12/31/02, with the understanding that at the future triennial reviews, additional changes may be necessary. Based on information in the record, the Commission suspects that ambient standards may be appropriate in the upper basin. The local

stakeholders and the NWCCOG, with assistance by the WQCD, have agreed to gather data over the next few years to determine the sources of metals in the watershed and the remediation potential for those sources. This information will be used to determine if ambient standards and/or resegmentation is appropriate. In addition, a TMDL is planned for segment 7 (Peru Creek) and the lower portion of segment 6. This will help determine what degree of cleanup is possible for the lower Snake River.

Blue River segment 7 - Peru Creek.

The temporary modifications were reviewed and revised to reflect data collected from the segment in 1996-98 and they and the underlying standards were adjusted to reflect dissolved metals standards rather than the total recoverable that have been in place since 1980.

Eagle River segment 5 - Mainstem of the Eagle River from the compressor house bridge at Belden to the confluence with Gore Creek.

Several ambient standards for metals and a temporary modification for manganese were in place on segment 5 since 1980. The ambient standards and temporary modification were based on limited data and the metal standards were based on the total recoverable form which the Commission had specified for standards prior to 1987. In 1987, Colorado's Basic Standards prescribed dissolved metals as the standard of choice for all metals standards that are based on toxicity to aquatic life. Also, since the adoption of the standards in 1980, the Eagle Mine and mill area has been declared a Superfund site with remediation begun in 1988. Viacom International, Inc., the responsible party for the remediation, has collected an extensive record of water quality data throughout segment 5 that documents the improvements in quality to date.

The purpose of adopting new underlying standards and temporary modifications is to reflect the existing water quality, establish underlying standards (goals) based on ARAR's established for the Eagle Superfund site, and make the standards consistent with the dissolved criteria established in the 1987 Basic Standards. The underlying numeric standards for cadmium and zinc of 1.1 ug/L and 106 ug/L, respectively, are the ARAR's established by the U. S. Environmental Protection Agency. The underlying manganese standard of 50 ug/L was the existing standard which was adopted in 1980 to protect the water supply classification. The temporary modifications are adopted for two seasons, May 1 through November 30 and December 1 through April 30, because of the extreme seasonal variation shown by the data. The temporary modifications for chronic cadmium, zinc and manganese are based on the 85th percentile values of the water quality data collected in segment 5 from 1996 through 1998.

It is anticipated that at the next triennial rulemaking for the Upper Colorado River Basin the temporary modifications will be reviewed and adjusted, if necessary, to reflect the most recent instream quality of segment 5. At the time of completion of the remediation (estimated to be 10 years) or achievement of an agreed upon acceptable level of recovery of the aquatic biota, should that happen sooner, the water quality data for the segment should be reviewed to ascertain what the levels of instream metals are at that time. Based on those findings, the Commission may determine that ambient standards are appropriate for segment 5 for any metals still exceeding the underlying standards.

The previous use-protected designation for this segment has been removed, since there are now only two parameters (cadmium and zinc) which exceed table values for all or part of the year.

Eagle River Segment 7 - Mainstem of Cross Creek from the source to the confluence with the Eagle River.

The lower reach of Cross Creek, like segment 5 of the Eagle River, is part of the Eagle Mine Superfund site. It is still undergoing remediation and at one time the Creek was the receiving stream for the treated wastes from the Eagle Mine. The standards in place were, as in segment 5, based on outdated data, information and criteria in place in the early 80's. As a result of this hearing, temporary modifications to underlying table value standards were adopted for zinc and manganese to reflect the current instream water quality based on samples collected from 1996 through 1998. Because of the seasonality shown by the data, the temporary modifications were adopted for two periods, May 1 through October 31 for manganese (165 ug/L) and November 1 through April 30 for zinc (170 ug/L) and manganese (840 ug/L).

Eagle River segment 9 - The existing temporary modification for manganese was reviewed and renewed for three years. Review of the most recent data from this segment indicated that there had not been a significant lowering of the manganese from the existing temporary modification of 85 ug/l. Since the manganese levels in this segment may be related to the remediation underway at the Eagle Mine Superfund site modification it was felt that the temporary modification date should track those established for Eagle River segment 5.

G. Recreation Classifications/Fecal Coliform Standards

In a continuation of the Commission's efforts to comply with the requirements contained in the federal Clean Water Act that all waters of the nation should be suitable for recreation in and on the water (known as the "swimmable" goal), the Commission reviewed all Recreation Class 2 segments. In Colorado, the "swimmable" goal translates into a Recreation Class 1, with the 200/100 ml fecal coliform standard (assigned wherever swimming, rafting, kayaking, etc. are in place or have the potential to occur). In some river basins, the Commission has adopted a Recreation Class 2 classification, with 200/100 ml standard, where only secondary contact recreation is practiced, and the existing quality supports a Class 1 Recreation use and little or no impact to dischargers will result. However, the current Basic Standards and Methodologies for Surface Water do not address this option. To maintain the existing Recreation Class 2, with the 2000/100 ml standard on a segment, it must be shown that there is minimal chance that a Recreation Class 1 activity could exist (e.g. intermittent or small streams that have insufficient depth to support any type of Recreation Class 1 use or very restricted access).

Based on the information received that showed Recreation Class 1 uses are in place, the Commission upgraded the following Recreation Class 2 segments to Class 1 with a 200/100 ml standard:

Upper Colorado segment 10.
Blue River segments 1, 2, and 14.

Eagle River segment 4, 5, and 8.
Yampa River segments 2a (was already Class 1 but had 2,000/100ml standard) and 8.
Upper Colorado segment 9, Blue River segment 16, and Eagle River segment 1 were also upgraded to Recreation Class 1, but because of their being designated outstanding waters.

The following segments retained their Recreation Class 2 and 2,000 fecal coliform standard based on the evidence submitted in this rulemaking hearing, including the segment-specific information in the Division's Rationale and testimony from the parties. No evidence was submitted indicating that these segments have a reasonable potential to support Recreation Class 1 uses.

Upper Colorado segments 6a, 6b, 6c and 7c.
Blue River segments 5, 7, 8, 11, 12, 13 and 20.
Eagle River segment 11.
North Platte River segments 2, 5, 6 and 7.
Roaring Fork segments 4, and 10.
Yampa River segments 4, 5, 7, 8, 12, 13d and 19.

The recreation classifications and standards for each of these segments will be reviewed by the Commission in each future triennial review. The Commission encourages all interested persons to submit any available information regarding the potential uses of these segments. In addition, the Commission notes that the system for adopting recreation use classifications and standards will be reviewed in the upcoming triennial review of the Basic Standards and Methodologies for Surface Water.

H. Full Standards Not Applied to Aquatic Life Segments

The Commission reviewed information regarding Aquatic Life Class 2 segments where the full set of inorganic aquatic life protection standards have not been applied. EPA is concerned that this be done on those segments that are receiving waters for wastewater treatment plant discharges. Generally, these are dry segments with only rudimentary aquatic life. The Commission's policy has been that rather than adopt the full set of inorganic standards for these segments, standards for dissolved oxygen, pH and fecal coliform provide sufficient protection. The segments which were reviewed in this hearing and for which sufficient evidence was received for them to retain their present classifications and standards are:

Upper Colorado segment 6b
Blue River segment 20.
Eagle River segment 11.
North Platte River segment 7.
Yampa River segments 4b and 12.

Yampa River segment 4b (Little White Snake River) had, in a 1987 hearing, been determined to not be suitable for an aquatic life class 1 or in need of the protection of aquatic life inorganic standards. The basis and purpose of this decision is detailed in 33.19 of this regulation. In this hearing, the Commission did review the numeric standards for metals on this segment which

are based on water supply and agriculture criterion. These standards were revised as appropriate to reflect any amendments to the Basic Standards that occurred since the 1987 hearing.

One segment, Blue River segment 5 (Soda Creek), was found to support a sizeable population of brook trout and was given an Aquatic Life Cold 1 classification with a full set of numeric standards. Summit County's Snake River WWTF discharges at the mouth of this stream where it enters Dillon Reservoir and it is unlikely that they will be affected by the new standards. A site-specific pH standard of 6.0, which was established in 1990, was retained.

I. Ambient Quality-Based Standards

There are several segments in the Upper Colorado and North Platte River Basins that contained ambient standards. Ambient standards are adopted where natural or irreversible man-induced conditions result in water quality levels higher than table value standards. EPA had requested the Commission review the information that are the basis for these standards as well as any new information that would indicate whether they are still appropriate, need to be modified or should be dropped. The Division reviewed the reason for the ambient standards and provided testimony that justified ambient standards being retained on the following segments:

Blue River segments 11, 12, and 14.

Ambient standards were removed from the following segments due to new data and/or changes to the basic standards which indicated ambient standards were no longer appropriate:

Blue River segments 7, 9, and 13.
Eagle River segments 5 and 7.

J. Water + Fish Standards

One other issue that EPA has requested be addressed in the hearing was the justification for not having the water + fish organic basic standards applied to Aquatic Life Class 2 streams. Prior to the hearing, the Division contacted DOW fisheries personnel and other locals with extensive knowledge of sport fishing in the Upper Colorado and North Platte basins and requested information that would pinpoint any streams or lakes in Aquatic Life Class 2 segments that have fish that are presently being taken for human consumption or have fisheries that would indicate the potential for human consumption. Information received indicated only two additional waterbodies that had the potential for consumption of fish. Blue River segment 5, was reclassified as Aquatic Life Class 1 and thus received the full protection of numeric and water + fish organic basic standards. The "water + fish organics" modifier was added to North Platte segment 7.

K. Other Site-Specific Revisions

Eagle River Ammonia Standards

Corrections were made to the formatting of the un-ionized ammonia standards for Eagle River segments 1 through 10. These corrections which do not alter the adopted standards on the segments merely correct typographical errors that occurred when routine revisions were made to the Upper Colorado basin standards in 1998.

Roaring Fork Segment 3a

At the request of the Spring Valley Sanitation District, the Commission reviewed the classifications and standards for Roaring Fork segment 3 and determined that reclassification of a portion of this segment is appropriate. The Commission has established a new segment 3a, consisting of the mainstem of Red Canyon and all tributaries, wetlands, lakes and reservoirs from the source to the confluence with the Roaring Fork River, except for Landis Creek from its source to the Hopkins Ditch Diversion. Based upon a use attainability analysis prepared by the Spring Valley District, the Commission has adopted an aquatic life cold water class 2 classification for this new segment. There was considerable debate in the testimony presented in this hearing as to whether this segment should be aquatic life class 1 or class 2. The dewatering effects of the Hopkins Ditch Diversion are a major consideration in the Commission's decision that class 2 is appropriate. The Commission does not intend this site-specific change to be viewed as a precedent for headwaters streams generally.

The usual set of numerical standards has been applied to this new segment, except for a 0.1 mg/l chronic unionized ammonia standard, which is based upon a site-specific recalculation procedure analysis submitted by Spring Valley. The evidence indicates that this ammonia standard should be protective of the aquatic life present in this segment.

In addition, in accordance with the stipulation between the Division and interested parties, the Commission adopted a recreation class 2 classification with a 200 per 100 ml fecal coliform standard for this new segment.

Roaring Fork Segment 4

The aquatic life classification for this segment has been changed from cold water class 2 to cold water class 1, based on biological data that supports this change. In addition, the testimony indicated that habitat issues are being addressed to improve channel stability. The Commission has retained the use-protected designation for this segment based on evidence that it is subject to significant point source discharges and the quality currently is maintained better than standards only because the treatment achieved by the existing discharger exceeds requirements of federal and state law and might not be maintained at that level in the future.

PARTIES/MAILING LIST TO THE RULEMAKING HEARING

1. Viacom International
2. Climax Molybdenum Company
3. Spring Valley Sanitation District
4. Spring Valley Development, Inc.

5. Colorado Division of Wildlife
6. Northwest Colorado Council of Governments
7. The Northern Colorado Water Conservancy District
8. The Cities of Aurora and Colorado Springs through the Homestake Project
9. The Three Lakes Water and Sanitation District
10. Colorado River Water Conservation District
11. Trout Unlimited
12. United States Department of the Interior, Fish and Wildlife Service
13. United States Environmental Protection Agency