COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

WATER QUALITY CONTROL COMMISSION

5 CCR 1002-33

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

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COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

WATER QUALITY CONTROL COMMISSION

5 CCR 1002-33

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

REGULATION NO. 33

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 33.6). 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 33.6. Any additions or revisions of classifications or numeric standards can be accomplished only after public hearing by the Commission and proper consideration of evidence and testimony as specified by the statute and the Basic 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) TEMPERATURE

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. This standard shall not be interpreted or applied in a manner inconsistent with section 25-8-104, C.R.S.

(2) QUALIFIERS

See Basic Standards and Methodologies for Surface Water for a listing of organic standards at 31.11 and metal standards found at 31.16 Table III. The column in the tables headed "Water Fish" are presumptively applied to all aquatic life class 1 streams and are applied to aquatic life class 2 streams on a case-by-case basis as shown in the tables in 33.6. The column in the tables at 31.11 headed “Fish Ingestion” is presumptively applied to all aquatic life class 1 streams which do not have a water supply classification, and are applied to aquatic life class 2 streams which do not have a water supply classification, on a case-by-case basis as shown in Tables 33.6.

(3) URANIUM

(a) All waters of the Upper Colorado River Basin, are subject to the following basic standard for uranium, unless otherwise specified by a water quality standard applicable to a particular segment. However, discharges of uranium regulated by permits which are within these permit limitations shall not be a basis for enforcement proceedings under this basic standard.

(b) Uranium level in surface waters shall be maintained at the lowest practicable level.

(c) In no case shall uranium levels in waters assigned a water supply classification be increased by any cause attributable to municipal, industrial, or agricultural discharges so as to exceed 30 ug/l or naturally-occurring concentrations (as determined by the State of Colorado), whichever is greater.

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

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 31.16. If additional numeric standards are found to be needed during future periodic reviews, they can be assigned by following the proper hearing procedures.

(2) Abbreviations:

(a) The following abbreviations are used in the attached tables:

ac	=	acute (1-day)
Ag	=	silver
Al	=	aluminum
As	=	arsenic
B	=	boron
Ba	=	barium
Be	=	beryllium

^{o}C	=	degrees celsius
Cd	=	cadmium
ch	=	chronic (30-day)
Cl	=	chloride
Cl_2	=	residual chlorine
CL	=	cold lake temperature tier
CLL	=	cold large lake temperature tier
CN	=	free cyanide
CrIII	=	trivalent chromium
CrVI	=	hexavalent chromium
CS-I	=	cold stream temperature tier one
CS-II	=	cold stream temperature tier two
Cu	=	copper
dis	=	dissolved
DM	=	daily maximum
D.O.	=	dissolved oxygen
F	=	fluoride
Fe	=	iron
Hg	=	mercury
mg/l	=	milligrams per liter
ml	=	milliliters
Mn	=	manganese
MWAT	=	maximum weekly average temperature
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
sc	=	sculpin
Se	=	selenium
SO_4	=	sulfate
sp	=	spawning
T	=	temperature
Tl	=	thallium
tr	=	trout
Trec	=	total recoverable
TVS	=	table value standard
U	=	uranium
ug/l	=	micrograms per liter
UP	=	use-protected
WAT	=	weekly average temperature
WL	=	warm lake temperature tier
WS-I	=	warm stream temperature tier one
WS-II	=	warm stream temperature tier two
WS-III	=	warm stream temperature tier three
WS-IV	=	warm stream temperature tier four
Zn	=	zinc

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

Fe(ch)	=	WS(dis)
Mn(ch)	=	WS(dis)
SO_4	=	WS

These abbreviations mean: For all surface waters with an actual water supply use, the less restrictive of the following two options shall apply as numerical standards, as specified in the Basic Standards and Methodologies at 31.16 Table II and III:

(I) existing quality as of January 1, 2000; or

(ii) Iron = 300 µg/l (dissolved)
Manganese = 50 µg/l (dissolved)
SO_4 = 250 mg/l

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

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

(3) Table Value Standards

In certain instances in the attached tables, the designation "TVS" is used to indicate that for a particular parameter a "table value standard" has been adopted. This designation refers to numerical criteria set forth in the Basic Standards and Methodologies for Surface Water. The criteria for which the TVS are applicable are on the following table.

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

PARAMETER(1)	**TABLE VALUE STANDARDS (2)(3)**
Ammonia (4)	Cold Water = (mg/l as N)Total $acute = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$ $chronic = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * MIN\left(2.85,\ 1.45*10^{0.028(25-T)}\right)$
	Warm Water = (mg/l as N)Total $acute = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$
	$chronic\ (Apr1-Aug31) = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * MIN\left(2.85,\ 1.45*10^{0.028(25-T)}\right)$ $chronic\ (Sep1-Mar31) = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * 1.45*10^{0.028*(25-MAX(T,\ 7))}$

NH_3 = old TVS	Cold Water Acute = 0.43/FT/FPH/2$^{(4\ old)}$ in mg/l (N)
	Warm Water Acute = 0.62/FT/FPH/2$^{(4\ old)}$ in mg/l (N)
Cadmium	Acute = (1.136672-[ln(hardness) x (0.041838)])x $e^{0.9151[ln(hardness)]-3.1485}$ Acute(Trout) = (1.136672-[ln(hardness)x (0.041838)])x $e^{0.9151[ln(hardness)]-3.6236}$ Chronic = (1.101672-[ln(hardness) x(0.041838)]) x $e^{0.7998[ln(hardness)]-4.4451}$
Chromium III[5]	Acute= $e^{(0.819[ln(hardness)]+2.5736)}$ Chronic=$e^{(0.819[ln(hardness)]+0.5340)}$
Chromium VI[5]	Acute = 16 Chronic = 11
Copper	Acute= $e^{(0.9422[ln(hardness)]-1.7408)}$ Chronic= $e^{(0.8545[ln(hardness)]-1.7428)}$
Lead	Acute= (1.46203-[(ln hardness)*(0.145712)])* $e^{(1.273[ln(hardness)]-1.46)}$ Chronic=(1.46203-[(ln hardness)* (0.145712)])* $e^{(1.273[ln(hardness)]-4.705)}$
Manganese	Acute= $e^{(0.3331[ln(hardness)]+6.4676)}$ Chronic= $e^{(0.3331\ [ln\ (hardness)]+5.8743)}$
Nickel	Acute= $e^{(0.846[ln(hardness)]+2.253)}$ Chronic= $e^{(0.846[ln(hardness)]+0.0554)}$
Selenium[6]	Acute = 18.4 Chronic = 4.6
Silver	Acute= 1/2$e^{(1.72[ln(hardness)]-6.52)}$ Chronic = $e^{(1.72[ln(hardness)]-9.06)}$ Chronic(Trout) = $e^{(1.72[ln(hardness)]-10.51)}$

Temperature	**TEMPERATURE TIER**	**TIER COD**	**SPECIES EXPECTED TO BE PRESENT**	**APPLICABLE MONTHS**	**TEMPERATURE STANDARD (^{O}C)**	
					(MWAT)	**(DM)**
	Cold Stream Tier I	CS-I	brook trout, cutthroat trout	June – Sept.	17.0	21.2
				Oct. – May	9.0	13.0

	TEMPERATURE TIER	TIER COD	SPECIES EXPECTED TO BE PRESENT	APPLICABLE MONTHS	TEMPERATURE STANDARD (^{O}C)	
					(MWAT)	(DM)
Temperature	Cold Stream Tier II	CS-II	brown trout, rainbow trout, mottled sculpin, mountain whitefish, longnose sucker, Arctic grayling	April – Oct.	18.2	23.8
				Nov. – March	9.0	13.0
	Cold Lake	CL	brook trout, brown trout, cutthroat trout, lake trout, rainbow trout, Arctic grayling, sockeye salmon	April – Dec.	17.0	21.2
				Jan. – March	9.0	13.0
	Cold Large Lake (>100)	CLL	brown trout, lake trout, rainbow trout, Arctic grayling, sockeye salmon	April – Dec.	18.2	23.8
				Jan. – March	9.0	13.0
	Warm Stream Tier I	WS-I	common shiner, Johnny darter, orangethroat darter	March – Nov.	24.2	29.0
				Dec. – Feb.	12.1	14.5
	Warm Stream Tier II	WS-II	brook stickleback, central stoneroller, creek chub, longnose dace, Northern redbelly dace, finescale dace, white sucker	March – Nov.	27.5	28.6
				Dec. – Feb.	13.7	14.3
	Warm Stream Tier III	WS-III	razorback sucker	March – Nov.	27.7	31.3
				Dec. – Feb.	13.9	15.2
	Warm Stream Tier IV	WS-IV	Other Warmwater Species	March – Nov.	28.7	31.3
				Dec. – Feb.	14.3	15.2
	Warm Lakes	WL	yellow perch, walleye, pumpkinseed, smallmouth bass, striped bass, white bass, largemouth bass, bluegill, spottail shiner, Northern pike, tiger muskellunge, black crappie, common carp, gizzard shad, sauger, white crappie, wiper.	April – Dec.	26.5	29.3
				Jan. – March	13.3	14.6

Uranium	Acute= $e^{(1.1021[\ln(hardness)]+2.7088)}$ Chronic= $e^{(1.1021[\ln(hardness)]+2.2382)}$
Zinc	Acute = $0.978\ e^{(0.8525[\ln(hardness)]+1.0617)}$ Chronic = $0.986\ e^{(0.8525[\ln(hardness)]+0.9109)}$ if hardness less than 113 mg/l $CaCO_3$ Chronic (sculpin) = $e^{(2.227[\ln(hardness)]-5.604)}$

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 percent confidence limit of the mean hardness value at the periodic low flow criteria as determined from a regression analysis of site-specific data. Where insufficient site-specific data exists to define the mean hardness value at the periodic low flow criteria, representative regional data shall be used to perform the regression analysis. Where a regression analysis is not appropriate, a site-specific method should be used. In calculating a hardness value, regression analyses should not be extrapolated past the point that data exist.

(3) Both acute and chronic numbers adopted as stream standards are levels not to be exceeded more than once every three years on the average.

(4) $FT = 10^{.03\,(20-TCAP)}$;

Where TCAP is $\leq T \leq 30$

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

Where 0 is $\leq T \leq TCAP$

TCAP = 20° C cold water aquatic life species present

TCAP = 25° C cold water aquatic life species absent

FPH = 1; Where 8 <pH < 9

$FPH = \frac{1 + 10^{(7.4-pH)}}{1.25}$;

Where $6.5 \leq pH \leq 8$

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

FT means the acute temperature adjustment factor, defined by the above formulas.

T means temperature measured in degrees celsius.

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

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

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

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

(4) Assessment Criteria

The following criteria shall be used when assessing whether a specified waterbody is in attainment of the specified standard.

(a) Yampa River Segment 13d, Dry Creek: Iron Assessment Thresholds and Locations

Mar-Apr , Fe(ch) = 3040(Trec), snowmelt season median values

May-Feb, Fe(ch) = 1110(Trec), no-snowmelt season median values

Assessment locations:

- Seneca II-W Stream Site 7 on Hubberson Gulch (WSH7): located in the middle reaches of Hubberson Gulch
- Seneca II-W Flume Site 1 on Hubberson Gulch (WSHF1): located on Hubberson Gulch just upstream of its confluence with Dry Creek
- Seneca II-W Stream Site 5 on Dry Creek (WSD5): located in the middle reaches of Dry Creek

(b) Yampa River Segment 13e, Sage Creek: Iron Assessment Thresholds and Locations

Fe(ch) = 1250(Trec), median of all data

Assessment locations:

- Yoast Stream Site 2 on Sage Creek (YSS2): located upstream of the west border of Section 18, T5N, R87W

Fe(ch) = 1000(Trec), median of all data

Assessment locations:

- Seneca II-W Stream Site 3 on Sage Creek (WSSF3): located downstream of the west border of Section 18, T5N, R87W

[INSERT TABLES]

33.7 - 33.9 RESERVED

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 transition 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)8, 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) 8 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 3.1.78 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 NH3 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 conflict in the evidence before 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, control 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 standard 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 water supply use. That standard 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 adopted 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 accurate 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.

F I S C A L S T A T E M E N T

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 regulation 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 enlargements;
- Cost of Operation & Maintenance of industrial enlargements; 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	AmmoniaConversion	$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	$600,000	$5,000 Total

	Ammonia Conversion		

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.

33.11 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 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 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
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.

33.12 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.

33.13 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.

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.

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.

33.15 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.

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.

33.16 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 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 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 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 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 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.

33.17 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

33.18 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

33.19 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 but are not limited to 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. Aquatic Life Class 1 with Table Values; New High Quality 2 Designations

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. Existing High Quality 2 Segments; New Classifications and Standards

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 Wastewater 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 standard, 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. <u>No Change in Classification; No Designations; Revised Numeric Standards</u>

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?

<u>Upper Colorado segment 2</u>

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 Colorado Water Conservation District and Municipal 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

33.20 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.

33.21 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, specifically 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.

33.22 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.

33.23 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.

33.24 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

33.25 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.

33.26 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

33.27 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

33.28 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 NO3, Cl, and SO4 and revision of As, Crlll, 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 (NH3) 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

33.29 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.

33.30 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 Colorado Council of Governments
3. Grand County Board of County Commissioners
4. U.S. EPA Region VIII

33.31 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.

33.32 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 (hardness)]+ 4.4995) and Chronic=e(.5434[ln(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 dissolve' 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

33.33 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; MAY, 2001 RULEMAKING

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 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

As a result of a July, 2000 rulemaking hearing the Commission adopted numerous revisions to the Basic Standards and Methodologies for Surface Water, Regulation #31 (5 CCR 1002-31). These revisions included revisions to the table values in Tables II and III, which are intended to apply to site-specific waters in the various river basins wherever the Commission has adopted “table value standards”. In this current rulemaking, the Commission adopted revisions to section 33.6(3) of this regulation to conform with the revisions to the Basic Standards.

33.34 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE, DECEMBER, 2001 RULEMAKING

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 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

In the spring of 2001, the Commission established a new schedule for major rulemaking hearings for each of its water quality classifications and standards regulations, as part of the triennial review process. As part of the transition to this new schedule, in order to facilitate an efficient and coordinated review of all water quality standards issues in this basin, in this hearing the Commission decided to extend the existing

temporary modifications of water quality standards previously adopted for segments in this basin, so that such temporary modifications will not expire prior to the next scheduled major rulemaking hearing for this basin.

33.35 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE, MARCH, 2002 RULEMAKING

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 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

In this hearing the Commission adopted a proposal by The Pittsburg and Midway Coal Mining Co. to modify the water supply standards for Yampa River segment 13c to conform with the revisions to the Basic Standards and Methodologies for Surface Water (Regulation #31) at 31.11(6) adopted in 2000.

P&M requested modification to the water supply standards of iron, sulfate and manganese, for Yampa River segment 13c. P&M has a permit to discharge to this segment and waiting to incorporate these changes until the next basin-wide review would result in a hardship.

By this action, Table 33.6(2) Abbreviations is modified to include the “WS(dis)” notation and the explanation from 31.11(6). In addition, the notation for Yampa River segment 13c for iron, sulfate and manganese is changed from numerical values to “WS(dis)”.

PARTIES TO THE RULEMAKING HEARING

1. The Pittsburg and Midway Coal Mining Co.

33.36 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JULY, 2003 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 River segment 5	expanded to include all lakes and reservoirs tributary to the Colorado River from Rocky Mountain National Park to the Roaring Fork River (previously Wolford Reservoir)
Upper Colorado River segment 7b	resegmented to remove Muddy Creek, Rock Creek, Deep Creek, Sheephorn Creek, Sweetwater Creek and

	the Piney River from Upper Colorado River segment 7a (new)
Blue River segments 2a and 2b	resegmented to divide existing segment 2 at a point one half mile below Summit County Road 3
North Platte River segment 5a and 5b	resegmented to divide existing segment 5 at the Colorado State Forest boundary
Yampa River segment 2b	expanded to include all lakes and reservoirs tributary to the Yampa River and Elkhead Creek (previously Stagecoach Reservoir)
Yampa River segment 13d	Sage Creek resegmented into Yampa River segment 13e
Yampa River segment 13e	Sage Creek resegmented from Yampa River segment 13d, Grassy Creek resegmented from Yampa River segment 12

B. Recreation Classifications/Fecal Coliform and E. Coli Standards

The biological standards were updated to include the dual standards for E. coli and fecal coliform, which were adopted by the Commission in the 2000 revisions to the Basic Standards. As stated in the statement of basis and purpose for the Basic Standards revisions, the Commission intends that dischargers will have the option of either parameter being used in establishing effluent limitations in discharge permits. In making section 303(d) listing decisions, in the event of a conflict between fecal coliform and E. coli data, the E. coli data will govern. The Commission believes that these provisions will help ease the transition from fecal coliform to E. coli 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 Recreation Class 1a, with the 200/100 ml fecal coliform and 126/100 ml E. Coli standard, and Class 1b with the 325/100 ml fecal coliform and 205/100 ml E. coli standard. Class 1a indicates waters where primary contact uses have been documented or are presumed to be present. Class 1b indicates waters where no use attainability analysis has been performed demonstrating that a recreation class 2 classification is appropriate, but where a reasonable level of inquiry has failed to identify any existing class 1 uses. To maintain the existing Recreation Class 2 with the 2000/100 ml fecal coliform and 630/100 ml E. coli standard on a segment, it must be shown that there is not reasonable potential for Recreation Class 1 uses to occur within the next 20-year period (e.g. ephemeral or small streams that have insufficient depth to support any type of Recreation Class 1 use or very restricted access).

A recreation class 1a classification of a segment is not intended to imply that the owner or operator of property surrounding and waterbody in a segment would allow access for primary contact recreation. The application of recreation classifications to state waters pursuant to these provisions does not create any rights of access on or across private property for the purposes of recreation in or on such waters. A recreation class 1a classification is intended to only affect the use classification and water quality standards of a segment, and does not imply public or recreational access to waters with restricted access within a segment.

For segments changing to recreation Class 1a because no information was available about actual recreational uses, the last paragraph of section 31.6(2)(b) will apply to future changes to the

recreation classification where a proper showing is made through a use attainability analysis that a recreation Class 2 classification is appropriate, without application of the other downgrading criteria in this section. Moreover, the Commission is relying in part on the testimony from EPA that completion of a use attainability analysis showing that a lower recreation classification is appropriate satisfies applicable downgrading criteria. Based on these factors, the Commission intends that in a future rulemaking hearing, the test for adopting a recreation Class 2 classification would be the same as if it had been considered in this hearing

The following segments with existing Recreation Class 1 classifications were changed to Recreation Class 1a and a 126/100 ml E. coli standard was added:

Upper Colorado River segments 1, 2, 3a, 4, 5, 8, 9 and 10
Blue River segments 1, 2a, 2b, 3, 6, 9, 10, 14, 15, 16, 17 and 18
Eagle River segments 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 12
Roaring Fork River segments 1, 2, 3, 5, 6, 7, 8 and 9
North Platte River segments 1, 3 and 4
Upper Yampa River segments 1, 2a, 2b, 3, 6, 8, 13a, 13b, 13c, 14 and 18

Based on the information received that showed Recreation Class 1a uses are in place or are presumed to be present in at least a portion of the segment, the Commission changed the following segments from Recreation Class 2 to Recreation Class 1a with a 200/100 ml fecal coliform and 126/100 ml E. coli standard:

Upper Colorado segment 7b (Deep and Sheephorn Creeks by default)
Blue River segments 5 and 8 (Chihuahua Creek by default)
Roaring Fork River segments 4 and 10
North Platte River segment 5a
Upper Yampa River segments 13d and 19

Based on evidence presented, the Commission has changed the following from Recreation Class 2 to Recreation Class 1b with a 325/100 ml fecal coliform and 205/100 ml E. coli standard:

Blue River segments 11, 12 and 13
Eagle River segment 11
North Platte River segment 2
Upper Yampa River segments 5 and 7

The following segments retained their Recreation Class 2 classification with 2,000/100mL fecal coliform and 630/100 ml E. coli standard after sufficient evidence was received that a Recreation Class 1a or 1b use was unattainable.

Upper Colorado River segments 6a, 6b, 6c and 7a
Blue River segments 7, 19 and 20
North Platte River segments 5b, 6 and 7
Upper Yampa River segments 4, 12 and 13e

Segment 3a of the Roaring Fork River retained a Recreation Class 2 classification after sufficient evidence was received that a Recreation Class 1a or 1b use was unattainable. However, a 200 fecal coliform was retained, and a 126/100 ml E. coli standard was added as per a stipulated agreement which was reached between the Division and Spring Valley Sanitation District.

C. Aquatic Life Segments without Full Standards

The Commission reviewed information regarding Aquatic Life Class 2 segments where the full set of inorganic aquatic life protection standards have not been applied. 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.

Segments where investigation showed that fish populations were present, or where fishery habitat improvement projects were completed or underway, were upgraded with the addition of the full suite of inorganic standards. These segments are:

Blue River segment 19
Yampa River segment 13e (Grassy Creek)

There are several segments in the Upper Colorado basin which had previously been assigned Aquatic Life Use classifications but lacked a complete suite of relevant standards. Aquatic life based standards were added to the following segments:

Eagle River segment 5	Cr+3

D. Revised Aquatic Life Use Classifications

The Commission reviewed information regarding existing aquatic communities. The following segment=s aquatic life classifications were upgraded from aquatic life class 2 to aquatic life class 1 based on information presented that showed diverse aquatic communities in these segments.

Blue River segments 13 and 19

E. Ambient Quality-Based Standards

There are several segments in the Upper Colorado River Basin that are assigned 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 that the Commission review the information that is the basis for these standards as well as any new information that would indicate whether they are still appropriate, need to be modified, or should be dropped.

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 segment 12	Cd(ch), Mn(ch)
Blue River segment 13	CN(ch)
Blue River segment 14	CN(ch)
Eagle River segment 5	Cd(ch)

F. Temporary Modifications

There were several segments where temporary modifications that reflect current ambient conditions were adopted or retained. Temporary modifications were generally set to expire on 2/28/09 to coincide with the next triennial review except as otherwise noted. The segments and the constituents are:

Blue River segment 6	Cd(ch), Cu(ch), Zn(ch)	
Blue River segment 7	Cd(ch), Cu(ch), Pb(ch), Zn(ch)	
Blue River segment 12	Zn(ch), Illinois Gulch	
Eagle River segment 5	Cd(ch), Cu(ch), Zn(ch)	2/28/06

Eagle River segment 7	Zn(ch)	2/28/06
Yampa River segment 13d	Se(ch)	

The Temporary Modification of the Yampa River segment 13d selenium standard is assigned on the basis of uncertainty as per the provisions of 31.7(3)(a)(iii) of the Basic Standards and Methodologies for Surface Waters, Regulation No. 31.

Temporary Modifications were also deleted from several segments, either because the segment is in attainment of new standards adopted by the Commission or because of improvements in water quality. These segments and constituents include:

Upper Colorado River segment 6c	NH3(ac/ch)
Blue River segment 2	Cd(ch), Zn(ch)
Blue River segment 6	Fe(ch), Mn(ch)
Blue River segment 11	Cd(ch), Pb(ch), Zn(ch)
Eagle River segment 5	Cd(ch)
Eagle River segment 7	Mn(ch)
Eagle River segment 9	Mn(ch)

G. Modification of Water Supply Standards

Water supply standards were modified to conform to the changes made by the Commission in the 2000 revisions to the Basic Standards (see Regulation No. 31 at 31.11(6)). The Commission modified the water supply standards for iron, manganese, and sulfate that are based on secondary drinking water standards (based on esthetics as opposed to human-health risks). The numeric values in the tables were changed to Fe(ch) = WS (dis), Mn(ch) = WS (dis), and SO4 = WS. These abbreviations mean that for all surface waters with an actual water supply use, the less restrictive of the following two options shall apply as numerical standards, as discussed in the Basic Standards and Methodologies at 31.11(6): either (i) existing quality as of January 1 2000; or (ii) Iron = 300 (g/L (dissolved); Manganese = 50 (g/L (dissolved); Sulfate = 250 mg/L (dissolved). For all surface waters with a “Water Supply” classification that are not in actual use as a water supply, no water supply standards are applied for iron, manganese or sulfate, unless the Commission determined as the result of a site-specific rulemaking hearing that such standards are appropriate.

There are several segments in the North Platte River basin which had previously classified for Water Supply Use, but which had not been assigned a complete suite of water supply based numeric standards. Water Supply standards for arsenic, chloride and sulfate, in addition to the water supply standards discussed above, were added to the following segments:

North Platte River segment 4
North Platte River segment 5

H. Agriculture Standards

Numeric Standards to protect Agricultural Uses were adopted for the following segments:

Upper Colorado River segment 6c
Eagle River segment 11
Yampa River segment 12

I. Other Site-Specific Revisions

The Commission corrected several typographical and spelling errors, and clarified segment descriptions.

In addition, the following site-specific issues were addressed:

Blue River segments 2a, 2b and 11: Surface water quality in these segments will be influenced by ongoing CERCLA cleanup at the Wellington-Oro mine. The mine discharges to French Gulch (segment 11) above its confluence with the Blue River. The Commission has promulgated site-specific cadmium and zinc standards for segments 2a and 2b, and segment 11. The standards are based upon zinc and cadmium toxicity to the different life stages of brown trout that are expected to occur in the Blue River below French Gulch.

Prior to the 2003 Hearing, segment 2 was defined as that portion of the Blue River from the confluence with the Swan River. Habitat in the upper portion of the segment has been modified as a result of historic instream mining and construction of a kayak course within the Town of Breckenridge. There is an absence of spawning and rearing habitat for aquatic species. Below the Town fishery habitat improves markedly. Additional habitat improvement projects are under consideration. The habitat variability within this reach of the Blue River forms the basis for re-segmentation into the new segments 2a and 2b. Because of the habitat differences in evidence, different life stages would be expected to be present in each. Consequently, different toxicity based cadmium and zinc standards have promulgated. These criteria will form the basis for treatment targets for the remediation effort.

The selected treatment alternative for the Wellington-Oro involves chemical precipitation accomplished via lime addition. The treatment plant discharge will consequently increase instream hardness over current ambient conditions. It is anticipated that some elevation of hardness levels will occur in the Blue River mainstem even after mixing. Increased hardness levels will ameliorate cadmium and zinc toxicity. Therefore, the zinc standards for the Blue River, and the proposed cadmium standard for the lower segment 2b, are expressed in terms of this hardness based relationship. The cadmium standard adopted for Blue River segment 2a is a technology-based criterion, however, the 4.0 ug/l standard only marginally exceeds the corresponding Table Value Standard.

Significant water quality improvement is anticipated in French Gulch itself with the initiation of treatment plant operations. However, the Commission has determined that attainment of Table Value Standards, or alternate site-specific standards intended to allow establishment of a viable aquatic population is not possible within the portion of French Gulch below the Wellington-Oro discharge. The Commission has determined that additional water quality improvement beyond that accomplished through collection and treatment of mine water at the Wellington-Oro site is infeasible. Therefore a finding has been made that post-remediation cadmium, lead and zinc levels will likely exceed Table Value Standards as a result of irreversible anthropogenic causes. On this basis, the Commission has adopted ambient based standards for these parameters which are defined as “existing quality”.

Blue River segment 8: - The Division and NWCCOG proposed to move Jones Gulch and Camp Creek from segment 6 and place them in this segment. Keystone Resort was opposed to this resegmentation. Prior to the hearing these proposals were withdrawn, as the result of a stipulated agreement between the Division and the other parties. Pursuant to this agreement, Keystone will complete an aquatic life use attainability analysis for these streams and no ski area development will occur in the Jones Gulch watershed before the issue of appropriate standards, classifications and designations is brought before the Commission for consideration.

Eagle River segment 11: The Commission opted to assign the Aquatic Life Use-based selenium standard to Eagle River segment 11. The Commission assigned Agriculture Use-based numeric standards for other parameters. The Aquatic Life based selenium standard was assigned

because the ambient selenium concentrations in Eagle River segment 11 (4.54 ug/l) approach the Aquatic Life Use-based numeric Table Value Standard of 4.6 ug/l (chronic). Section 303(c)(2)(B) of the federal Clean Water Act requires:

> "Whenever a State reviews water quality standards pursuant to paragraph (1) of this subsection, or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria for all toxic pollutants listed pursuant to section 307(a)(1) of this Act for which criteria have been published under section 304(a), the discharge or presence of which in the affected waters could reasonably be expected to interfere with those designated uses adopted by the State, as necessary to support such designated uses. Such criteria shall be specific numeric criteria for such toxic pollutants."

Yampa River segment 13b: The Commission adopted an ambient based iron standard of 1600 ug/L for Foidel and Middle Creeks in Segment 13b of the Yampa River. This ambient standard was adopted pursuant to Regulation 31.7(1)(b)(ii) and evidence presented by Twentymile Coal Company that the high levels of iron in those creeks are due to natural causes.

Yampa River segment 13d: The Commission changed the Aquatic Life Classification of Segment 13d from Warm 1 to Warm 2 and the Recreation Classification from Recreation 2 to 1a. It adopted a use protected designation, as well as the full set of water quality standards normally associated with Class 2 streams. The Aquatic Life Warm 2 classification was based on application of Regulation 31.13(1)(c) and evidence provided by Seneca Coal Company and the Division that showed that Dry Creek is not capable of sustaining a wide variety of biota, including sensitive species due to physical habitat and flows. The Commission adopted a temporary modification for selenium of 60 Fg/L based on uncertainty. (Reg. 31.7(3)(a)(iii).)

Yampa River segment 13e: The Commission moved Sage Creek from Segment 13d and Grassy Creek from Segment 12 into a new Segment 13e classified as Aquatic Life Warm 2, Recreation Class 2, Agriculture and Water Supply. It adopted a use protected designation as well as the full set of water quality standards normally associated with Class 2 streams. The Aquatic Life Warm 2 classification was based on application of Regulation 31.13(1)(c) and evidence provided by Seneca Coal Company and the Division that showed that Sage Creek and Grassy Creek are not capable of sustaining a wide variety of biota, including sensitive species due to physical habitat and water flows.

PARTIES/MAILING LIST STATUS FOR JULY, 2003 RULEMAKING HEARING

1. Colorado River Water Conservation District
2. Colorado Division of Wildlife
3. Jackson County Water Conservancy District
4. Keystone Resort
5. Northern Colorado Water Conservancy District
6. Northwest Colorado Council of Governments
7. Seneca Coal Company
8. Spring Valley Sanitation District
9. Twenty Mile Coal Company
10. U. S. EPA Region VIII
11. Viacom International, Inc.
12. Xcel Energy
13. Eagle Park Reservoir Company
14. Basalt Sanitation District
15. Climax Molybdenum
16. Eagle River Water and Sanitation District
17. Copper Mountain Resort

33.37 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (Rulemaking Hearing 6/13/2005, Effective date of 7/31/2005)

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:

Segments 13d and e of the Yampa River are classified Aquatic Life Warm Water 2. Metals standards apply to these segments, including the following standards that apply to trout: Cd (ac) = TVS (tr) and Ag (ch) = TVS (tr). It is not appropriate to apply trout standards to a warm water stream. These errors were apparently made in the 1999 basin rulemaking hearing when Dry Creek and Sage Creek were removed from Segment 12 (an all tributary segment) and included in new Segment 13d, which was classified as Aquatic Life Warm Water 1. Although the hearing notice for the 1999 proposal did not include the erroneous trout standards the final action did. These errors were duplicated in the 2003 basin rulemaking when the new Segment 13e (Sage Creek and Grassy Creek) was added. Accordingly, the Commission deleted reference to trout in the Segment 13d and e standards and adopted the following: Cd (ac/ch) = TVS and Ag (ac/ch) = TVS.

33.38 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 12, 2005 RULEMAKING EFFECTIVE DATE OF MARCH 2, 2006

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

In the process of digitally mapping the segments in the Upper Colorado Basin, the Division discovered errors and inconsistencies between segment descriptions. To resolve these issues the Commission adopted changes in the following segment descriptions:

Upper Colorado Segments 6a and 9
Blue River Segments 1, 8, 14 and 18
Yampa River Segment 2a

The Commission also deleted Yampa River segments 15, 16 and 17 because the segments, and assigned designations, uses and numeric standards are described in the Classifications and Numeric Standards for Lower Colorado River Basin, Regulation No. 37. This action removes any confusion which had been created as the result of inconsistent segment descriptions.

The Commission adopted a new segment, Yampa River segment 20, to describe the designations, uses and numeric standards assigned to waters tributary to the Yampa River which are located above the confluence with Elkhead Creek and lie within National Forest boundaries. These waters were not previously included in any described segments.

33.39 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 12, 2005 RULEMAKING EFFECTIVE MARCH 2, 2006

The provisions of sections 25-8-202; 25-8-204; 25-8-402, C.R.S., provide the specific statutory authority for adoption. 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 changes described below were adopted by the Commission from a joint proposal by the Hazardous Materials and Waste Management Division (HMWMD) and the U. S. Environmental Protection Agency (EPA). The joint proposal addressed segments 5 (mainstem of the Eagle River from the compressor house bridge at Belden to the confluence with Gore Creek) and segment 7 (Cross Creek).

A. History

Segments 5 and 7 are within the sphere of influence of a historic zinc-mining district, including the former Eagle Mine site. From 1980 until 1999, ambient quality-based standards for several metals had been in place on segments 5 and 7. In 1988, remediation of the Eagle Mine site began under Superfund. In the August 1999 rulemaking the Commission adopted new underlying standards (goals) and Temporary Modifications for cadmium and zinc to reflect existing water quality. The standards (goals) were based on ARARs established in the 1993 Eagle Mine Superfund Site Record of Decision (ROD). The ARARs are defined in the ROD as numerical remedial action goals subject to revision, and were based on table values in the Basic Standards. The Commission noted in the 1999 Statement of Basis and Purpose that, upon completion of remedial action or achievement of an agreed-upon acceptable level of recovery of aquatic biota in segments 5 and 7, the water quality data for the segments should be reviewed to ascertain the current levels of in-stream metals. Based on such findings, site-specific standards may be deemed appropriate for segments 5 and 7 for any metals still exceeding the underlying standards/goals.

B. Temporary Modifications

The Superfund remedial action requirements were completed in 2001, and have resulted in significant improvement in water quality in segments 5 and 7. Therefore, revision of the Temporary Modifications to reflect these water quality improvements is appropriate.

Because water quality data in these segments indicate very strong seasonal trends, seasonal Temporary Modifications have been established for these segments. The 85th percentile of the data for each season was used as the “chronic” value; the 95th percentile was used as the “acute”. The Temporary Modifications are set to expire January 1, 2009, coincident with the effective date of standards set at the June 2008 rulemaking hearing for the next triennial review for this basin. Pending the outcome of additional activities at the Superfund Site, changes to the underlying standards will be proposed during the triennial review process. The revised Temporary Modifications adopted in this rulemaking are based on the water quality measured at an integrator station located near the downstream end of each segment; therefore, mass balance calculations conducted for permitting of discharges within the segments and attainment determinations shall be based on attainment of the standards at the downstream end of the segment.

Remaining Uncertainty: Uncertainty still exists as to the appropriate underlying standards to apply to these segments. There is uncertainty regarding what aquatic life use is attainable, based in part on uncertainty regarding the potential for additional remediation and other activity in this watershed. There is also uncertainty regarding what water quality levels are necessary to protect a selected expected aquatic life use. It appears that zinc is the primary environmental variable that negatively influences aquati life. Prior to expiration of these Temporary Modifications, additional studies will be undertaken to address this uncertainty

Duration of the Temporary Modification: The Commission has set the Temporary Modification to expire on January 1, 2009. This coincides with the anticipated effective date of changes that will be made in the next basin-wide hearing (June, 2008) The Commission expects that the

above mentioned studies as well as the CERCLA process will reduce the uncertainty and provide a basis to move forward with underlying standards in the June 2008 hearing process.

C. Re-segmentation.

The Commission adopted re-segmentation of segments 5 and 7, based on recognized changes in water quality, hardness and use. Segments 5 and 7 have been subdivided into five sub-segments as described below:

5a Mainstem of the Eagle River from a point immediately above the compressor house bridge at Belden to a point immediately above the Highway 24 Bridge near Tigiwon Road.

5b Mainstem of the Eagle River from a point immediately above the Highway 24 Bridge near Tigiwon Road to a point immediately above the confluence with Martin Creek.

5c Mainstem of the Eagle River from a point immediately above Martin Creek to a point immediately above the confluence with Gore Creek.

7a Mainstem of Cross Creek from the source to a point immediately below the Minturn Middle School, except for those waters included in Segment 1.

7b Mainstem of Cross Creek from a point immediately below the Minturn Middle School to the confluence with the Eagle River, except for those waters included in Segment 1.

D. Antidegradation

Because remediation activities have improved water quality in segments 5a, 5b, 5c and 7b, since the September 30, 2000 date established in the Basic Standards as the default baseline, the Commission has included a note in the Designation column in the tables to indicate that the September 30, 2000 default baseline date does not apply to these specific segments. In accordance with the Basic Standards (section 31.8(3)(c)(ii)(B)), the appropriate baseline date and baseline water quality will be determined at the time that a new activity triggers an antidegradation review. It is anticipated that this will be the date upon which the antidegradation review commences. The City of Colorado Springs raised concerns that the antidegradation review process includes calculations of low-flow pollutant concentrations, and that the ultimate development of upstream water rights will decrease instream flows that currently provide dilution flow to these stream segments. The Commission clarifies that nothing in this Regulation is intended to or shall be construed as requiring the maintenance of instream flows for any purpose.

PARTIES TO THE RULEMAKING

1. Hazardous Materials and Waste Management Division
2. Viacom International Inc.
3. EPA Superfund Remedial Program
4. Vail Associates, Inc.
5. Eagle Park Reservoir Company
6. Eagle River Water and Sanitation District
7. Colorado Division of Wildlife,
8. City of Colorado Springs
9. Northwest Colorado Council of Governments
10. Eagle River Watershed Council
11. Town of Minturn
12. Kamlet Shepherd & Reichert
13. U.S. Environmental Protection Agency

33.40 STATEMENT OF BASIN SPECIFIC STATUTORY AUTHORITY AND PURPOSE DECEMBER 2006 RULEMAKING REGARDING TEMPORARY MODIFICATIONS, EFFECTIVE MARCH 4, 2007

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 recently restructured section 31.7(4) and established an annual rulemaking hearing to review temporary modifications (regardless of the basis) that are due to expire in the two years following the rulemaking hearing. In this hearing, the Commission considered evidence as discussed in subsections 31.7(3) (b) and (c) to determine whether the temporary modification should be modified, eliminated or extended.

The Commission deleted the temporary modifications for the following segments thereby allowing the underlying standards to go into effect:

Blue River segment 7: no Cd(ac), Cd(ch)=5.2, Cu(ch)=79, Pb(ch)=6.7, no Zn(ac), Zn(ch)=1,380
Blue River segment 12: Zn(ch) 850
Upper Yampa segment 13d: Se(ac/ch) 60

Because parties are working to resolve uncertainty and are on schedule to address these segments at the regularly scheduled basin-wide rulemaking (June 2008), the Commission took no action on the temporary modifications for the following segments, leaving their expiration dates unchanged.

Blue River segment 6: Cd(ch)=2.3, Cu(ch)=17, no Zn(ac), Zn(ch)=654
Eagle River segment 5a: seasonal temporary modification for zinc
Eagle River segment 5b: seasonal temporary modification for zinc
Eagle River segment 5c: seasonal temporary modification for zinc
Eagle River segment 7b: seasonal temporary modification for zinc

PARTIES TO THE RULEMAKING HEARING

1. Trapper Mining Inc.
2. The City of Grand Junction
3. Corrections Corporation of America
4. Keystone Resort
5. U.S. EPA Region VII
6. The City of Black Hawk and the Black Hawk/Central City Sanitation District
7. The City of Colorado Springs
8. Information Network for Responsible Mining
9. Seneca Coal Company

33.41 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: January 2007 Rulemaking Hearing; Final Action February 12, 2007; Revisions effective July 1, 2007

The provisions of section 25-8-202(1)(b), 25-8-204; 25-8-402, C.R.S., provide the specific statutory authority for adoption. 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 revised the basin-wide temperature standards as part of the 2007 rulemaking hearing. These changes clarify the numeric temperature standards that will be in effect until the basin-wide rulemaking hearing in June of 2008. At that time, the Commission intends to consider segment specific temperature standards for all segments with aquatic life uses.

The Commission applied 17 ºC as an interim chronic standard for small, high elevation streams that are likely to be habitat for brook trout and cutthroat trout. First, second and third order streams are defined at section 31.5 in the Basic Standards.

The Commission also applied 18.2 ºC as an interim chronic standard to waters designated by the Colorado Wildlife Commission as "Gold Medal Fisheries". The Commission agrees that it is important to protect these fisheries that provide important recreational and tourism opportunities in the headwaters of Colorado. This standard is based on a criterion to protect rainbow trout. The Colorado Division of Wildlife presented evidence that rainbow trout thrive in Gold Medal fisheries because they are provided the necessary forage base and thermal conditions to maximize their consumption and growth. Because these thermal conditions also represent the upper temperature tolerance range for this species, it was determined that an interim standard of 20°C would not be adequate to protect these fisheries.

For the remainder of the cold water segments, the Commission left the current 20 ºC in place as an interim standard with the clarification that it is a chronic standard. The existing 30 ºC criterion for warm water segments was left in place as an interim standard with the clarification that is also to be applied as a chronic standard.

PARTIES TO THE RULEMAKING HEARING

1. The Temperature Group (City of Aurora, City of Boulder, Colorado Springs Utilities, Littleton/Englewood Wastewater Treatment, The Metro Wastewater Reclamation District, Colorado Mining Association, Colorado Rock Products Association, Tri-State Generation & Transmission Assn., Xcel Energy, Denver Water, Northern Colorado Water Conservancy District, Southeastern Colorado Water Conservancy District)
2. City of Grand Junction
3. City of Loveland
4. City of Pueblo
5. Metro Wastewater Reclamation District
6. City of Aurora
7. City of Boulder
8. Colorado River Water Conservation District
9. Colorado Wastewater Utility Council
10. Bear Creek Watershed Association
11. Chatfield Watershed Authority
12. Mountain Coal Company, L.L.C.
13. Northern Colorado Water Conservancy District
14. Colorado Rock Products Association
15. Littleton/Englewood Wastewater Treatment Plant
16. Northwest Colorado Council of Governments
17. Southeastern Colorado Water Conservancy District
18. Colorado Mining Association
19. Colorado Division of Wildlife
20. South Platte Coalition for Urban River Evaluation
21. City and County of Denver
22. City of Colorado Springs and Colorado Springs Utilities
23. City of Westminster
24. Board of Water Works of Pueblo
25. Coors Brewing Company
26. City and County of Broomfield

27. Centennial Water and Sanitation District
28. Plum Creek Wastewater Authority
29. Climax Molybdenum Company
30. Cripple Creek & Victor Gold Mining Company
31. Tri-State Generation and Transmission Association
32. Xcel Energy
33. Sky Ranch Metropolitan District No. 2
34. Parker Water and Sanitation District
35. CAM-Colorado and CAM Mining LLC
36. Aggregate Industries – WCR, Inc.
37. Grand County Water and Sanitation District #1, Winter Park Water and Sanitation District, Winter Park West Water and Sanitation District and Fraser Sanitation District
38. Trout Unlimited and Colorado Trout Unlimited
39. Colorado Contractors Association
40. United States Environmental Protection Agency, Region 8
41. Hot Springs Lodge and Pool
42. Denver Regional Council of Governments

33.42 STATEMENT OF BASIN SPECIFIC STATUTORY AUTHORITY AND PURPOSE MARCH 2007 RULEMAKING REGARDING AMMONIA STANDARDSEFFECTIVE SEPTEMBER 1, 2007

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:

At the June 2005 Basic Standards rulemaking, the Commission adopted the 1999 Update of Ambient Water Quality Criteria for Ammonia (US EPA, Office of Water, EPA-822-R-99-014, December 1999) as the numeric ammonia criteria for Colorado. These new criteria are in the form of total ammonia rather than un-ionized ammonia. The Commission modified the ammonia equations in 35.6(3) and footnotes to conform to Regulation # 31.

Consistent with the approach outlined in the Basic Standards statement of basis and purpose, the Commission provided flexibility for dischargers faced with the possibility of new, more stringent effluent limits.

Temporary modifications were generally set to expire on 12/31/11. This date is set far enough in the future to allow facilities to consider their specific circumstances and to develop a plan regarding how to proceed, yet soon enough to assure that facilities are making progress in developing facility plans. For those that feel the underlying standards are inappropriate, time is allowed to study the receiving water and develop a proposal for an alternate standard. For those that need time to plan, finance or construct new facilities, time is allowed to develop that facility improvement plan.

The intent of the Commission is that in general, the permits for dischargers to warm water segments, that need time to achieve compliance, will contain schedules of compliance in the next renewal. The Commission understands that such a compliance schedule may include time to complete necessary sub-tasks or milestones. For example, this might include time to do facility planning, make financing arrangements, pre-design, design, construction, startup and commissioning.

There are several opportunities to revisit the duration of the temporary modifications before they expire on 12/31/2011. For those segments in the Upper and Lower Colorado Basins (Regulations # 33 and 37), persons can come forward at the Issues Formulation hearing in November 2007 with their intent to seek a site-specific adjustment in the June 2008 hearing. For those segments in the South Platte Basin (Regulation # 38), persons can come forward at the Issues Formulation hearing in November 2008 with

their intent to seek a site-specific adjustment in the June 2009 hearing. In addition, all of these temporary modifications will be subject to the Annual Temporary Review process which will have hearings in December 2009 and 2010.

The Commission intends that the temporary modifications adopted in this rulemaking are "type i" temporary modifications.

The issues raised in this rulemaking hearing have highlighted the need to clarify the relationship between the temporary modification tool and the compliance schedule tool in Colorado's water quality management program. The Commission requests that the Division consider this issue further, with input from interested stakeholders, and bring forth any suggested revisions/clarifications for the 2010 Basic Standards rulemaking.

In the meantime, because of the Commission's previously expressed concerns regarding the unique and widespread challenges associated with compliance with the new ammonia standards, the Commission's intent with respect to temporary modifications and compliance schedules regarding these new ammonia standards is as follows:

- Where a demonstration has been made that a period of time longer than the end of 2011 will be required for compliance with the new ammonia standards, the Commission has approved an appropriate site-specific temporary modification expiration date.

- For segments where the 12/31/11 expiration date applies, and for which discharge permit renewals may be issued prior to that date, it is the Commission's intent, consistent with section 31.14(15)(a), that the Division have the authority to issue compliance schedules that may not result in full attainment of the ammonia standard prior to expiration of the renewal permit. Such compliance schedules should be issued only where the Division determines that a specific demonstration has been made that additional time is needed to attain the standard. In such cases, the Commission anticipates that permits would include milestones that assure reasonable progress toward attainment of the standard.

PARTIES TO THE RULEMAKING

1. Boxelder Sanitation District
2. Estes Park Sanitation District
3. City of Pueblo
4. The City of Boulder
5. The Metro Wastewater Reclamation District
6. The Colorado Wastewater Utility Council
7. The Paint Brush Hills Metropolitan District
8. The Grand County Water & Sanitation District #1, the Winter Park West Water & Sanitation District, the Fraser Sanitation District and the Winter Park Water & Sanitation District
9. Mountain Water & Sanitation District
10. The Town of Gypsum
11. The City of Grand Junction
12. City and County of Broomfield
13. Centennial Water & Sanitation District
14. Town of Erie
15. The City of Fort Collins
16. Plum Creek Wastewater Authority
17. The City of Sterling
18. Eastern Adams County Metropolitan District
19. The City of Littleton
20. Two River Metro District
21. H Lazy F Mobile Home Park

22. Rock Gardens Mobile Home
23. Blue Creek Ranch
24. The City of Greeley
25. US EPA

33.43 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: DECEMBER 10, 2007 RULEMAKING REGARDING TEMPORARY MODIFICATIONS; EFFECTIVE MARCH 1, 2008

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

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the Commission reviewed the status of temporary modifications to determine whether the temporary modification should be modified, eliminated or extended.

Language was added to subsection 33.6(2) to explain the terms “type i” and “type iii” temporary modifications.

The following segment’s temporary modification was inadvertently left in the table after last year’s hearing. It was deleted in this hearing.

Yampa River segment 13d, temporary modification for selenium.

Parties are working to resolve uncertainty and are on schedule to address these segments at the regularly scheduled basin-wide rulemaking (June 2008), The Commission added "type iii", but took no action on the expiration date for the following segments.

Blue River segment 6: temporary modification for cadmium, copper and zinc
Eagle River segment 5a: seasonal temporary modification for zinc
Eagle River segment 5b: seasonal temporary modification for zinc
Eagle River segment 5c: seasonal temporary modification for zinc
Eagle River segment 7b: seasonal temporary modification for zinc.

PARTIES TO THE RULEMAKING

1. Big Dry Creek Cities (City of Westminster, City of Northglenn, and City and County of Broomfield)
2. Colorado Rock Products Association
3. City of Grand Junction
4. City of Colorado Springs and Colorado Springs Utilities
5. Upper Clear Creek Watershed Association
6. City of Black Hawk and Black Hawk / Central City Sanitation District
7. Department of Energy Office of Legacy Management
8. City of Aurora
9. Shell Frontier Oil & Gas, Inc.
10. City of Boulder
11. Tri-Lakes Wastewater Treatment Facility
12. Security Sanitation District
13. City of Fort Collins
14. Metro Wastewater Reclamation District
15. U.S. EPA

33.44 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 2008 RULEMAKING; FINAL ACTION AUGUST 11, 2008; EFFECTIVE DATE JANUARY 1, 2009

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

BASIS AND PURPOSE:

A. Waterbody Segmentation

The Commission decided to split lakes/reservoirs from segments that contain both streams and lakes/reservoirs so that new temperature standards could be adopted. Lakes and reservoirs were deleted from the following segments that previously encompassed both streams and lakes/reservoirs:

Upper Colorado River segments: 1, 2, 9.
Blue River segment: 16.
Roaring Fork River segment: 1.
North Platte River segments: 1, 2, 4a.
Yampa River segments: 1a, 19.

The following are newly created lakes/reservoirs segments:

Upper Colorado River segments: 11, 12.
Blue River segments: 21, 22.
Eagle River segments: 13, 14.
Roaring Fork River segments: 11, 12.
North Platte River segments: 8, 9.
Yampa River segment: 1b.

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

Upper Colorado River 1: The segment description was amended to exclude lakes and reservoirs. The alteration of this segment, and the resultant creation of Segment 11 were necessary to facilitate the adoption of appropriate temperature standards. Lakes and reservoirs found in this segment are now part of Segment 11.

Upper Colorado River 2: The segment description was amended to exclude lakes and reservoirs. The alteration of this segment, and the resultant creation of Segment 12 were necessary to facilitate the adoption of appropriate temperature standards. Lakes and reservoirs found in this segment are now part of Segment 12.

Upper Colorado River 6a: The segment description was amended to reflect the split of Segment 10 into Segments 10a-c; the additional exclusion of specific listings in Segments 1, 2, 4, 5 and 9; as well as the decision to move the endpoint of the segment from below to above the confluence of Muddy Creek and the Blue River. This alteration eliminated confusion regarding the segment associations pertinent to Muddy Creek and its tributaries. Muddy Creek and its tributaries are intended to be included in portions of segment 7a, 7b, and 7c. The alteration of this segment was necessary to facilitate the adoption of appropriate temperature standards.

Upper Colorado River 7a: The segment description was amended to exclude listings in Segment 7c and clarify the upper boundary of the segment as a point immediately above both the Blue River *and* Muddy Creek. The alteration of this segment, and the creation of Segment 7c were necessary to facilitate the adoption of appropriate temperature standards (CS-II).

Upper Colorado River 7b: The segment description was amended to include all wetlands within the existing segment.

Upper Colorado River 7c: This new segment was created to group similar streams formerly found within segment 7a. Muddy Creek from the source to a point immediately below the confluence with Eastern Gulch; all tributaries to and wetlands of Muddy Creek from the source to the outlet of Wolford Mountain Reservoir, except for listings in Segment 4. The mainstems of Derby, Blacktail, Cabin and Red Dirt Creeks (all below Wolford Mountain Reservoir), including all tributaries and wetlands, from their sources to their confluence with the Colorado River; except for specific listings in segment 4, were included in the newly created segment. The creation of this segment, and the resultant alteration of Segment 7a were based on geographic location and was necessary to facilitate the adoption of appropriate temperature standards (CS-I).

Upper Colorado River 9: The segment description was amended to exclude lakes and reservoirs and to include streams within the Vasquez Wilderness Area. The alteration of this segment, and the resultant creation of Segment 11 were necessary to facilitate the adoption of appropriate temperature standards. Lakes and reservoirs found in this segment are now part of Segment 11.

Upper Colorado River 10a: The segment description was amended to reflect a new endpoint of the mainstem portion of the segment. The mainstem portion of the segment now ends at a point immediately below the Rendezvous Bridge, while all tributaries to the Fraser, including wetlands, from the source to the confluence with the Colorado River are still found within this segment. The split of the mainstem, and the resultant creation of Segments 10b and 10c were necessary to facilitate the adoption of temperature standards. (See Section P)

Upper Colorado River 10b: This new segment was created for the mainstem of the Fraser River from a point immediately below the Rendezvous Bridge to a point immediately below the Hammond Ditch. The creation of this segment, and the alteration of Segment 10a were necessary to facilitate the adoption of temperature standards. This portion of the mainstem was previously part of Segment 10. (See Section P)

Upper Colorado River 10c: This new segment was created for the mainstem of the Fraser River from a point immediately below the Hammond Ditch to the confluence with the Colorado River. The creation of this segment, and the alteration of Segment 10a and 10b were necessary to facilitate the adoption of temperature standards. This portion of the mainstem was previously part of Segment 10. (See Section P)

Upper Colorado River 11: This new segment was created for lakes located in Rocky Mountain National Park as well as all Wilderness areas within the Upper Colorado River Basin. The creation of this segment, and the alteration of Segments 1 and 9 were necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously part of Segments 1 and 9.

Upper Colorado River 12: This new segment was created for lakes located in Arapahoe National Recreation Area. The creation of this segment, and the alteration of Segment 2 were necessary to facilitate the adoption of appropriate temperature standards. These lakes, including Grand Lake, Shadow Mountain Lake, and Lake Granby were previously part of Segment 2.

Blue River 3: The segment description was amended to include only lakes located in the Blue River Drainage above Dillon Reservoir with the exception of lakes located within Segment 21. The alteration of

this segment, and the resultant creation of Segment 4 were necessary to facilitate the adoption of appropriate temperature standards. Stream portions of the segment were moved to Segment 4.

Blue River 4a: This new segment was created for tributaries to Dillon Reservoir, including wetlands, except for specific listings in Segments 1, 2a, 2b, 4b, 5, 6, and 10-14. The creation of this segment, and the alteration of Segment 3 were necessary to facilitate the adoption of appropriate temperature standards and antidegradation designations. These streams were previously part of Segment 3. (See Section R)

Blue River 4b: This new segment was created for the North Fork of the Swan River, including all tributaries and wetlands, from the source to the confluence with the Swan River. The creation of this segment, and the alteration of Segment 4a, were necessary to facilitate the adoption of an outstanding waters antidegradation designation. (See Section R)

Blue River 6a: The segment description was amended to reflect the creation of segment 6b. A portion of this segment; Jones gulch, including all tributaries and wetlands; was also moved to Segment 8. The alteration of this segment, the creation of Segment 6b, and the inclusion of Jones Gulch (and tributaries and wetlands) in Segment 8 were necessary to facilitate the adoption of appropriate zinc standards.

Blue River 6b: This new segment was created for the mainstem of Camp Creek, including all tributaries and wetlands from the source to confluence with the Snake River. The creation of this segment and the alteration of Segment 6a were necessary to facilitate the adoption of appropriate zinc standards.

Blue River 8: The segment description was amended to reflect the inclusion of the mainstem of Jones gulch, including all tributaries and wetlands from the source to the confluence with the Snake River. The addition of these stream reaches, formerly found in segment 6, was necessary to facilitate the adoption of appropriate zinc standards.

Blue River 16: The segment description was amended to exclude lakes and reservoirs. The alteration of this segment, and the resultant creation of Segment 21 were necessary to facilitate the adoption of appropriate temperature standards. Lakes and reservoirs found in this segment are now part of Segment 21.

Blue River 21: This new segment was created for lakes located in Wilderness areas within the Blue River Basin. The creation of this segment, and the alteration of Segments 3 and 16 were necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously part of Segment 16.

Blue River 22: This new segment was created for lakes located in the Blue River drainage below Dillon Reservoir, except specific listings in Segment 21. The creation of this segment was necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously unassigned to a particular segment.

Eagle River 9a: The segment description was amended to reflect a new endpoint of the segment. The segment now ends at a point immediately below the confluence with Rube Creek. The split of the segment, and the resultant creation of Segment 9b were necessary to facilitate the adoption of appropriate temperature standards.

Eagle River 9b: This new segment was created for the mainstem of the Eagle River below the confluence with Rube Creek. The creation of this segment, and the alteration of Segment 9a were necessary to facilitate the adoption of appropriate temperature standards. This portion of the mainstem was previously part of Segment 9.

Eagle River 10a: The segment description was amended to exclude specific listings in segment 10b. The alteration of this segment and the creation of Segment 10b were necessary to facilitate the adoption of appropriate antidegradation designations. (See Section R)

Eagle River 10b: This new segment was created for Abrams Creek, including all tributaries and wetlands, from the source to the eastern boundary of the United States Bureau of Land Management lands. The creation of this segment, and the alteration of Segment 10a, were necessary to facilitate the adoption of an outstanding waters antidegradation designation. (See Section R)

Eagle River 13: This new segment was created for lakes located in Wilderness areas within the Eagle River Basin. The creation of this segment was necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously unassigned to a particular segment.

Eagle River 14: This new segment was created for lakes located in the Eagle River Basin, except for specific listings in Segment 13. The creation of this segment was necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously unassigned to a particular segment.

Roaring Fork River 1: The segment description was amended to exclude lakes and reservoirs. The alteration of this segment, and the resultant creation of Segment 11 were necessary to facilitate the adoption of appropriate temperature standards. Lakes and reservoirs found in this segment are now part of Segment 11.

Roaring Fork River 3a: The segment description was amended to reflect a new endpoint of the mainstem portion of the segment. The mainstem portion of the segment now ends at a point immediately below the confluence with the Fryingpan River. All tributaries to the Roaring Fork, including wetlands, from the source to the confluence with the Colorado River are still found within this segment, except for specific listings in Segment 1 and 3b-10. The split of the mainstem, and the resultant creation of Segment 3c were necessary to facilitate the adoption of appropriate temperature standards.

Roaring Fork River 3c: This new segment was created for the mainstem of the Roaring Fork below the confluence with the Fryingpan River to facilitate the adoption of appropriate temperature standards. The mainstem of Three Mile Creek, including all tributaries and wetlands, from the source to the confluence with the Roaring Fork River, is also included in this segment. The creation of this segment, and the alteration of Segment 3a were necessary to facilitate the adoption of appropriate temperature standards. These streams were previously part of Segment 3a.

Roaring Fork River 11: This new segment was created for lakes located in Wilderness areas within the Roaring Fork River Basin. The creation of this segment, and the alteration of Segment 1 were necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously part of Segment 1.

Roaring Fork River 12: This new segment was created for lakes located in the Roaring Fork River Basin, except specific listings in Segment 11. The creation of this segment was necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously unassigned to a particular segment.

North Platte River 1: The segment description was amended to also exclude lakes and reservoirs and to facilitate the adoption of appropriate temperature standards. Lakes and reservoirs found in this segment are now part of Segment 8.

North Platte River 2: The segment description was amended to exclude lakes and reservoirs. The alteration of this segment, and the resultant creation of Segment 9 were necessary to facilitate the adoption of appropriate temperature standards. Lakes and reservoirs found in this segment are now part of Segment 9.

North Platte River 4a: The segment description was amended to exclude lakes and reservoirs. The segment description was additionally amended to exclude listings in segment 4b. The alterations of this segment, and the resultant creations of Segments 4b and 9 were necessary to facilitate the adoption of

appropriate temperature standards. Lakes and reservoirs found in this segment are now part of Segment 9.

North Platte River 4b: This new segment was created to group similar streams formerly found within segment 4a. Included in this segment is the Illinois River and all tributaries and wetlands from a point immediately below the confluence with Indian Creek to the confluence with the Michigan River, except for specific listings in Segments 7a and 7b. The mainstem of the Canadian River below 12E Road to the confluence with the North Platte River, as well as all tributaries and wetlands which enter the Canadian River from the southwest side of the mainstem, were also included in the new segment.

North Platte River 5a: The segment description was amended to reflect a new endpoint of the segment. The segment now ends at a point immediately below the confluence with the North Fork Michigan River. The alteration of this segment, and the resultant change of Segment 5b were necessary to facilitate the adoption of appropriate temperature standards.

North Platte River 5b: The segment description was amended to reflect a new upper boundary of the segment. The segment now starts at a point immediately below the confluence with the North Fork Michigan River. The alteration of this segment, and the change of Segment 5a were necessary to facilitate the adoption of appropriate temperature standards.

North Platte River 7a: The segment description was amended to reflect a new endpoint of the segment. The segment now ends at the outlet of Spring Creek (Number 31) Reservoir. The alteration of this segment, and the resultant creation of Segment 7b were necessary to facilitate the adoption of appropriate temperature standards.

North Platte River 7b: The segment description was amended to reflect a new upper boundary of the segment. The segment now starts at the outlet of Spring Creek (Number 31) Reservoir. The creation of this segment, and the alteration of Segment 7a were necessary to facilitate the adoption of appropriate temperature standards.

North Platte River 8: This new segment was created for lakes located in Wilderness areas within the North Platte River Basin. The creation of this segment, and the alteration of Segment 1 were necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously part of Segment 1.

North Platte River 9: This new segment was created for lakes located in the North Platte River Basin, except specific listings in Segments 8. The creation of this segment, and the alteration of Segments 2 and 4a were necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously part of Segments 2 and 4a.

Yampa River 1a: The segment description was amended to also exclude lakes and reservoirs and to facilitate the adoption of appropriate temperature standards. Lakes and reservoirs found in this segment are now part of Segment 1b.

Yampa River 1b: This new segment was created for lakes located in Wilderness areas within the Yampa River Basin. The creation of this segment, and the alteration of Segment 1a were necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously part of Segment 1a.

Yampa River 2a: The segment description was amended to reflect a new endpoint of the segment. The segment now ends at a point immediately below the confluence with Oak Creek. The alteration of this segment, and the resultant creation of Segment 2c were necessary to facilitate the adoption of appropriate temperature standards.

Yampa River 2b: The segment description was amended to include all lakes and reservoirs tributary to the Little Snake River and to reflect the split of Segment 1 into Segments 1a and 1b. The segment

description was additionally amended to reflect the creation of Segment 1b. The alteration of this segment was necessary to facilitate the adoption of appropriate temperature standards. These lakes were previously part of Segment 19.

Yampa River 2c: This new segment was created for the mainstem of the Yampa River below the confluence with Oak Creek. The creation of this segment, and the alteration of Segment 2a were necessary to facilitate the adoption of appropriate temperature standards. This portion of the mainstem was previously part of Segment 2a.

Yampa River 3: The segment description was amended to exclude the new Segment 13f. The alteration of this segment, and the creation of Segment 13f were necessary to facilitate the adoption of appropriate temperature standards.

Yampa River 11: This new segment was created for Fish Creek, including all tributaries and wetlands, above Country Road 27, except for specific listings in Segment 20. The creation of this segment, and the alteration of Segment 12 were necessary to facilitate the adoption of appropriate temperature standards. These streams were previously part of Segment 12.

Yampa River 12: The segment description was amended to reflect the creation of Segment 11 which removed the Fish Creek, including all tributaries and wetlands, above County Road 27 from the segment. The alteration of this segment, and the resultant creation of Segment 11 were necessary to facilitate the adoption of appropriate temperature standards.

Yampa River 13a: The segment description was amended to reflect the creation of Segment 13f, which removed the portion of Trout Creek, including all tributaries and wetlands, below the confluence with Fish Creek from the segment. The alteration of this segment, and the resultant creation of Segment 13f were necessary to facilitate the adoption of appropriate temperature standards.

Yampa River 13d: The segment description was amended to clarify which Dry Creek is intended to be described for this segment. This segment is meant to describe the Dry Creek that has its confluence with the Colorado River immediately below the town of Hayden, Colorado.

Yampa River 13f: This new segment was created for Trout Creek, including all tributaries and wetlands, below the confluence with Fish Creek. The creation of this segment, and the alteration of Segment 13a were necessary to facilitate the adoption of appropriate temperature standards. These streams were previously part of Segment 13a.

Yampa River 14: The segment description was amended to reflect new endpoints of the segment. The segment now ends at points immediately below the confluence with Calf Creek and below 80A Road on the Dry Fork of Elkhead Creek. The alteration of this segment, and the resultant creation of Segment 15 were necessary to facilitate the adoption of appropriate temperature standards.

Yampa River 15: This new segment was created for Elkhead Creek, including all tributaries and wetlands, from a point immediately below the confluence with Calf Creek and below 80A Road on the Dry Fork of Elkhead Creek, to the confluence with the Yampa River. The creation of this segment, and the alteration of Segment 14 were necessary to facilitate the adoption of appropriate temperature standards. These streams were previously part of Segment 14.

Yampa River 19: The segment description was amended to exclude lakes and reservoirs. The alteration of this segment was necessary to facilitate the adoption of appropriate temperature standards. Lakes and reservoirs found in this segment are now part of Segment 2b.

Yampa River 20a: The segment description was amended to reflect new endpoints of the segment. The Elkhead Creek and First Creek portions of the segment now end at the eastern boundary of state lands in

California Park. The alteration of this segment, and the resultant creation of Segment 20b were necessary to facilitate the adoption of the appropriate recreation use classification. (See Section X)

Yampa River 20b: This new segment was created for portions of First Creek and Elkhead Creek below the eastern boundary of state lands in California Park. The creation of this segment, and the alteration of Segment 20a were necessary to facilitate the adoption of the appropriate recreation use classification. These streams were formerly part of Segment 20. (See Section X)

B. Revised Aquatic-Life Use Classifications

The Commission reviewed information regarding existing aquatic communities. The following changes to the existing aquatic-life use classifications were made.

Yampa River 14 was split and portions were moved to segment 15: a change from Cold 1 to Warm 1.

C. Recreation Classifications and Standards

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

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

Upper Colorado River segments: 1-5, 7b, 8-10a.
Blue River segments: 1-3, 5, 6, 8-10, 14-18.
Eagle River segments: 1-9a, 10, 12.
Roaring Fork River segments: 1-3a, 4-10.
North Platte River segments: 1, 3, 4a, 5a.
Yampa River segments: 1a, 2a, 2b, 3, 6, 8, 13a-d, 14, 18-20a.

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

Blue River segments: 11-13.
Eagle River segment: 11.
North Platte River segment: 2.
Yampa River segments: 5, 7.

Based on review of existing Use Attainability Analyses showing that primary contact recreation is not attainable, the following segments were converted from Recreation Class 2 to Recreation Class N classification with 630/100 ml *E. coli* standard:

Upper Colorado River segments: 6b, 6c, 7a.
Blue River segments: 7, 19, 20.
Roaring Fork River segment: 3b.
North Platte River segments: 5b-7a.
Yampa River segments: 4, 12, 13e.

D. Addition of Water Supply Use Classification and Standards

Based on review of information regarding the location of public water supplies, no additional Water Supply use classifications or standards were added to Regulation No. 33.

E. Agriculture Standards

A review of the standards associated with the Agriculture use classification showed that many segments were missing a nitrate standard protective of the use. A nitrate standard, NO_3=100, was added to the following segments with Agriculture use classification:

Upper Colorado River segments: 6b, 6c.
Blue River segments: 11, 13.
Roaring Fork River segment: 4.
Yampa River segments: 5, 7, 13b-e.

F. Changes to Antidegradation Designation

Decoupling Cold 2 and UP: As part of the Basic Standards hearing of 2005, the Commission eliminated the direct linkage between cold-water aquatic life class 2 and the use-protected designation. Therefore, all cold-water aquatic life class 2 segments that are use-protected were reviewed to determine if that designation is still warranted. The following segments are now reviewable:

Upper Colorado River segments: 6b, 6c.
Blue River segment: 12.
Eagle River segment: 11.
Roaring Fork River segments: 3b.
North Platte River segment: 7a.
Yampa River segments: 4, 12.

Decoupling Aquatic Life Warm 2 and UP: There was no decoupling of the segments with an Aquatic Life Warm 2 classification in the Basin.

Outstanding Waters: See Section R.

G. Ambient Quality-Based Standards

There is one segment in the Basin that has ambient metals standards. Ambient standards are adopted where natural or irreversible man-induced conditions result in exceedances of table value standards. The Commission reviewed the information that is the basis for these standards as well as any new information that would indicate whether they are still appropriate, need to be modified, or should be dropped. The following ambient based standards have been revised based on a recalculation using existing data:

Yampa River segment 13b: Middle Creek: Fe(ch)=1035(Trec).

The WAT standard is not attainable in the majority of large lakes (>100 acres in surface area) including many lakes with apparently healthy cold-water fish populations. Summertime temperature for large lakes and reservoirs (collectively referred to as lakes) is very well correlated to the lake's elevation. Since the thermal properties are natural or man-induced irreversible (in the case of reservoirs) the Commission adopted ambient temperature standards for large lakes wherever data were available to characterize a WAT. For lakes, the WAT is assumed to be equivalent to the average temperature of the mixed layer. If there were less than three years of data, the highest observed WAT was selected for the summertime ambient standard. If three to five years of data were available, the second highest observed WAT was

used as the ambient standard. Where temperature data from multiple stations in the same reservoir were collected on the same date, the Division used an average of those stations to calculate the WAT.

Upper Colorado River segment 5:	Wolford Mountain Res:	April-December $T_{(WAT)}$= 19.73^{o}C (See Section O.)
	Williams Fork Res:	April-December $T_{(WAT)}$= 21.55^{o}C
Upper Colorado River segment 12:	Shadow Mountain Res:	April-December $T_{(WAT)}$= 19.30^{o}C
	Granby Reservoir:	April-December $T_{(WAT)}$= 19.42^{o}C
Roaring Fork River segment 12:	Ruedi Reservoir:	April-December $T_{(WAT)}$= 20.33^{o}C
North Platte River segment 9:	Lake John:	April-December $T_{(WAT)}$= 20.77^{o}C
	North Delaney Lake:	April-December $T_{(WAT)}$= 20.14^{o}C
Yampa River segment 2b:	Stagecoach Reservoir:	April-December $T_{(WAT)}$= 21.40^{o}C
	Steamboat Reservoir:	April-December $T_{(WAT)}$= 21.60^{o}C

H. Aquatic Life Metals Standards

New Table Value Standards: As part of the Basic Standards hearing of 2005, new zinc and cadmium table values were adopted. The acute and chronic zinc and cadmium equations in 33.6(3) were modified to conform to Regulation No. 31.

Site-Specific Zinc Standards for Mottled Sculpin: In low hardness situations (hardness below 113 mg/L) the new zinc chronic equation is not protective of mottled sculpin (*Cottus bairdi*), a native west-slope fish species. The Commission adopted a mottled sculpin-specific chronic zinc equation as site-specific standards for the following segments that are inhabited by mottled sculpin and also have low hardness:

Upper Colorado River segments: 1-3, 7b, 8, 10a-c.
Blue River segments: 1, 4a, 4b, 8, 14, 17.
Eagle River segments: 1, 2, 4, 6, 7a, 8.
Roaring Fork River segments: 2, 5, 6, 10.
Yampa River segments: 2a, 2c, 3, 8, 13a, 18, 19.

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

Upper Colorado River segments: 1, 2, 8, 10a-c.
Blue River segments: 4a, 4b, 5, 8 - 10, 15, 18.
Eagle River segments: 1, 4, 6, 7a, 7b.
Roaring Fork River segments: 2, 5.
North Platte River segments: 1, 2, 4b.
Yampa River segments: 1a, 3, 8, 18.

I. Arsenic Standards

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

Most Limiting Arsenic Criteria
Depending on the Possible Combinations of Uses and Qualifiers

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

J. Uranium Standards

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

K. Temporary Modifications

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

Blue River segments: 6, 7, 12.

The following segments have temporary modifications for ammonia that were amended to clarify the chronic standard as 0.02, rather than just “TVS old”. As specified in 61.8(2)(c)(iii) (the Permit Rules, Regulation No. 61), where a temporary modification has been adopted, limits in permits are to be set based on the temporary modification and the provision strictly limiting the loading from the facility does not apply. These temporary modifications will be subject to review and rulemaking for the two years before their scheduled expiration in order to track progress towards the full attainment of water body standards and uses.

Yampa River segment: 13d.

In some cases the Commission adopted temporary modifications of underlying standards with the notation of "existing quality" rather than a numeric. This was done where it was not possible to derive an appropriate characterization of current instream concentrations or temperature conditions. The Commission's intent of using the notation "existing quality" is to preserve the status quo during the term of the temporary modification. Dischargers to those segments shall maintain the existing water quality or pollutant loading characteristics of their effluent with respect to the parameter that has the temporary modification. The Commission does not intend the temporary modifications to apply to new facilities or in Preliminary Effluent Limitations. The Commission adopted type iii temporary modifications of temperature standards equal to "existing quality," for the following segments:

Eagle River segments: 8 and 9a.

L. Temperature

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

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

Upper Colorado River segments: 1, 2, 4, 6a, 7b-10a.
Blue River segments: 1-2b, 4a-20.
Eagle River segments: 1-9a, 10a-12.
Roaring Fork River segments: 1-3a, 4-10.
North Platte River segments: 1, 2, 4a, 5a, 6, 7a.
Yampa River segments: 1a, 2a, 3, 5, 6, 8, 11, 13a,18-20b.

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

Upper Colorado River segments: 3, 6b-c, 7a, 10b-c.
Eagle River segment: 9b.
Roaring Fork River segments: 3b, 3c.
North Platte River segments: 3, 4b, 5b, 7b.
Yampa River segments: 2c, 4, 7, 12, 13b-c, 13f, 14.

The following segments are cold lakes or cold large lakes (CL,CLL):

Upper Colorado River segments: 5, 11, 12.
Blue River segments: 3, 21, 22.
Eagle River segments: 13, 14.
Roaring Fork River segments: 11, 12.
North Platte River segments: 8, 9.
Yampa River segments: 1b, 2b.

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

Yampa River segments: 13d, 13e, and 15.

The Commission recognizes that in some cases there is uncertainty about the temperature standards adopted in this hearing. The uncertainty stems from a lack of data about temperature or the aquatic community or where there is a conflict between the lines of evidence. It is the Commission's intent that the Division and interested parties work to resolve the uncertainty for the following segments by the next basin-wide review.

Upper Colorado River segment 10b and 10c: limited temperature data indicate that numeric attainment may be a problem but that brook and rainbow trout are present. (See Section P.)

Yampa River segment 13d and 13e: limited temperature data indicate that numeric attainment may be a problem and limited biological information was available. (See Section V.)

M. Other Site-Specific Revisions

Upper Colorado River 6b: The cyanide standard was revised to reflect that CN=0.2 is an acute standard. The standard now reads CN(ac)=0.2.

Upper Colorado River 6a: The recreation use classification was changed from Class 2 (Secondary Contact) to Class P (Potential Primary Contact) to reflect the operation of a guest ranch located on Willow Creek which features fishing and other access to the stream. There are also many other potential opportunities for public access to various stream reaches within this segment.

Upper Colorado River 9: The segment description was amended to include the Vasquez Wilderness Area, which had been previously unlisted within the Upper Colorado River Basin.

Eagle River 7a: The CrIII standard was revised to reflect that the 50(Trec) standard is acute rather than chronic.

North Platte 5b: The CrIII acute standard was revised to reflect that the acute standard is 50(Trec) rather than TVS.

North Platte River 7a/b: The "Water + Fish organics apply" qualifier was changed to "Fish Ingestion" to reflect an oversight from the 2003 hearing and the lack of a water supply use classifications for these segments.

Yampa River 13a: The temporary modification for NH_3 found on this segment was moved to Segment 13d. The Hayden treatment plant discharges to Segment 13d, thus prior assignment of this temporary modification to Segment 13a was incorrect.

N. Other Changes

The Commission corrected several typographical and spelling errors, and clarified segment descriptions.

O. Wolford Mountain Reservoir

The River District proposed site-specific D.O. and temperature standards for Wolford Mountain Reservoir. After discussions with the Division, EPA and the Division of Wildlife ("DOW"), the River District agreed to withdraw its proposal in order to further study the possible reasons for non-attainment of the D.O. standard in the reservoir. The Division, EPA, and DOW will assist the River District in developing a study to better understand the reasons for the non-attainment and provide assistance in their respective areas of expertise.

The River District and the Division determined that the WAT for Wolford Mountain Reservoir is 19.73^{o}C based on data collected between 2003 and 2007 and measured at the dam (USGS Station #09041395). When determining compliance with the temperature standard for Wolford Mountain Reservoir in the future, the temperature shall be measured at the dam.

P. Fraser River, Upper Colorado Basin—Temperature Standards

Grand County Water and Sanitation District #1, the Winter Park West Water and Sanitation District, the Fraser Sanitation District, the Winter Park Sanitation District (Grand County Districts) proposed resegmentation and temperature standards for waters in the Fraser River watershed.

The Commission determined that the physical conditions in the Fraser River basin warranted resegmentation based on the instream temperatures, habitat, and fish community composition. Based on instream temperature and fish population monitoring conducted by and for the Grand County Districts and the Grand County Water Information Network (GCWIN), the Commission concluded that a single segment and accompanying temperature standards is not appropriate for the Fraser River. The temperature data indicate a transition from very cold-to cold-to cool in a downstream direction, which is reflected in changes in the fish community with brook trout expected to occur in the upper reaches and a mixed cold water fishery of both game and non-game species in the lower reaches.

Based on these findings, the Commission determined that segment 10 would be split into three distinct segments at specific landmarks and hydrologic breaks that represent shifts in floodplain and stream characteristics. Segment 10a ends at the Rendezvous Bridge, located at or near the former confluence of Leland Creek and the Fraser River. It was determined that CS-I TVS for temperature were appropriate for this upper segment for protection of brook trout.

The rest of pre-existing segment 10 was split into two segments (10b and 10c) at the Hammond ditch, a major irrigation ditch located just north of County Road 8. Even though the classifications and standards are the same for both segments, the stream's physical and biological characteristics are substantially different. CS-II TVS for temperature were applied to both segments 10b and 10c reflecting the presence of rainbow and brown trout; however, the existing temperature data demonstrate a small number of exceedances of the CS-II TVS in segment 10b and numerous exceedances of the CS-II TVS in segment 10c, causing uncertainty regarding attainment of the CS-II TVS in these segments. The data also indicate no significant effect of discharges of municipal effluent on stream temperatures.

The Commission intends to revisit the temperature standards for segments 10b and 10c in 2013. It is anticipated that the ongoing biological and temperature monitoring will provide information to lessen the uncertainties regarding the appropriate long-term stream classifications and temperature standards. (See Section L)

Q. Grand Lake, Upper Colorado Basin—Clarity Standard

The Northwest Colorado Council of Governments, supported by Grand County and the Greater Grand Lake Shoreline Association, proposed a clarity standard for Grand Lake of 4 meter Secchi disk depth, effective July through September.

The Commission determined that it is appropriate to adopt water quality standards for the protection of Grand Lake's clarity because of Grand Lake's uniqueness as Colorado's largest natural lake. Grand Lake adjoins and complements Rocky Mountain National Park in the headwaters of the Colorado River and its social and economic importance is worthy of protection. Senate Document 80 (which recorded the legislative intent of the federal Congress in February 1937) provided in part that the Colorado Big-Thompson Project must be operated in a manner to preserve the scenic attraction of Grand Lake. Concern about the visible loss of transparency of Grand Lake has resulted in local, state and federal initiatives to address the changes in water quality. The earliest measurement of Grand Lake clarity is 9.2 meters (September 6, 1941). The 85th percentile of clarity measurements from 2006 is 2.7 meters.

The Commission recognizes that this is the first time that a clarity standard has been adopted in the Colorado. Clarity standards are being adopted pursuant to the Basic Standards at section 31.13(3), which states "In special cases where protection of beneficial uses requires standards not provided by the classification above, special standards may be assigned after full public notice and hearings." Improvement of clarity within Grand Lake is expected to improve the quality of recreational uses of this unique resource.

The Commission is adopting two clarity standards for Grand Lake. First, the Commission is establishing a narrative clarity standard, to take effect with the other revisions to this regulation. This standard is “the highest level of clarity attainable, consistent with the exercise of established water rights and the protection of aquatic life”. This standard is based on the Commission’s conclusion that improvement in the clarity of Grand Lake is necessary, while noting that efforts to improve clarity need to be undertaken in a manner consistent with established water rights and need to also consider the protection of the aquatic life use. In basing the standard on “attainability”, the Commission intends that attainability is to be judged by whether or not a clarity level can be attained in approximately twenty years by any recognized control techniques that are environmentally, economically, and socially acceptable.

An underlying assumption in setting this narrative standard is that clarity in Grand Lake needs to improve. However, the Commission is not determining in this hearing whether the current evidence of reduced clarity warrants inclusion of Grand Lake on Colorado’s Section 303(d) List or the Monitoring and Evaluation List. That issue can be addressed as appropriate in the 2010 hearing on Regulations #93 and #94, based on additional evidence and analysis developed prior to that time.

Second, the Commission is establishing a numerical clarity standard of 4 meter Secchi depth for the months of July through September, with an effective date of January 1, 2014. The intention is that for the

majority of the summertime days, the water of Grand Lake shall be clearer than 4 meter Secchi depth. Attainment of the 4 meter Secchi depth standard will be assessed by comparing the 85th percentile of available Secchi depth data collected during the months July through September to the 4 meter standard. Fifteen percent of the measurements may have Secchi depth shallower than 4 meters. When two samples are collected in different locations, or by different agencies on the same day, the Secchi depth value is the average of those samples.

The Commission has determined that the adoption of the 4 meter numerical standard with a delayed effective date is an appropriate policy choice to encourage cooperative efforts to improve Grand Lake clarity prior to the time that a specific numerical standard goes into effect, while assuring that a protective numerical standard will go into effect in 2014 if monitoring, assessment and water quality improvement efforts between now and then have not resulted in identification of a more appropriate numerical standard.

All parties agreed that improvement in Grand Lake water clarity is desirable. The Commission strongly encourages all interested stakeholders to work together to further identify the causes of reduced clarity and to explore options for identifying and implementing reasonable and effective measures to improve clarity, consistent with the other factors noted in the narrative standard. The Commission anticipates that these efforts may result in a proposal for a revised site-specific numerical clarity standard for Grand Lake at a later date.

Concerns have been raised regarding the potential impact of the proposed clarity standard on the exercise of water rights. The Commission recognizes that Section 25-8-104, C.R.S. states in part that "Nothing in this article [the Colorado Water Quality Control Act] shall be construed, enforced or applied so as to cause or result in material injury to water rights." If non-attainment of the numerical clarity standard is determined to be caused by the valid exercise of those water rights and the exceedance cannot be eliminated in a manner consistent with C.R.S. 25-8-104, the Commission would consider adoption of a revised site-specific standard as provided in section 31.7(1)(b)(ii). The Commission is hopeful that options can be identified to improve Grand Lake clarity in a manner consistent with section 25-8-104. The Commission is not determining in this hearing precisely what types of options and alternatives are or are not consistent with section 25-8-104. The Commission believes that that issue is better addressed in the course of a process that more fully examines the causes of current clarity limitations on Grand Lake and the options for mitigating identified impacts.

While stating that it did not oppose a 4 meter clarity standard for Grand Lake, the Colorado Division of Wildlife noted that it is important that efforts to improve clarity in Grand Lake consider potential effects on recreational fisheries. The Commission intends that potential positive or negative impacts on aquatic life in Grand Lake be taken into account in implementing the narrative standard now being adopted, and in any efforts to consider potential refinement of the numerical standard now being adopted with a delayed effective date.

The Commission believes that this is an appropriate first step toward protecting Colorado's high quality water resources in a manner consistent with law and regulation. As with all standards, the clarity standards for Grand Lake are subject to periodic review, and the Commission expects to revisit this issue in future review cycles.

R. Trout Unlimited, Blue and Eagle River Basins—Outstanding Water Designation

Based on evidence that shows that water quality meets the requirements of 31.8(2)a and the presence of Colorado River cutthroat trout, the Outstanding Water (OW) designation was added to the new Eagle River segment 10b: Abrams Creek, including all tributaries and wetlands, from the source to the eastern boundary of the United States Bureau of Land Management lands and the new Blue River Segment 4b: North Fork of the Swan River, including all tributaries and wetlands, from the source to the confluence with the Swan River. The Commission understands that existing land uses are in place in these watersheds. The evidence demonstrates that these existing land uses are compatible with the OW

designation since the current high level of water quality has been attained with these uses in place. It is the Commission's intent that this OW designation should not be used to establish additional permit requirements for existing uses within this area.

S. Keystone, Blue River Basin – Metals Standards

Keystone Resort (Keystone) proposed resegmentation of waters in the Snake River watershed and site-specific standards for Camp Creek and its tributaries.

Blue River segment 6: The Commission moved Jones Gulch from segment 6 to segment 8 based upon monitoring data collected by Keystone which showed that Jones Gulch meets table value standards for metals. The Commission adopted re-segmentation of segment 6 by renumbering segment 6 as segment 6a and establishing segment 6b based on recognized differences in water quality characteristics between the Snake River and the Camp Creek watershed which is located within the Keystone Ski Area. Segment 6b is now the mainstem of Camp Creek, including all tributaries and wetlands from the source to the confluence with the Snake River.

Site-specific standards for dissolved zinc were adopted for Camp Creek based upon the use of the recalculation procedure. Despite the habitat limitations in Camp Creek, and the fact that it currently does not support a fish population, under a modified recalculation approach the recalculation included species expected to occur in the Blue River Basin, including sensitive fish species such as mottled sculpin. The four most sensitive genera used to calculate the site-specific standards included *Cottus*, *Oncorhynchus*, *Salmo*, and *Ranatra*. The recalculated hardness-based equations are as follows:

$$\text{zinc (acute)} = 0.978*e^{0.8537(\ln \text{Hardness})+1.5227}$$

$$\text{zinc (chronic)} = 0.986*e^{0.8537(\ln \text{Hardness})+1.3519}$$

The recalculated standards for zinc are intended to be fully protective of the aquatic life use in Camp Creek. Keystone will implement drainage and snowmaking system improvements including plumbing modifications and changes in management practices to further reduce the amount of water transferred from the snowmaking system to Camp Creek. Keystone is also working with the NWCCOG and other interested stakeholders on the investigation and potential implementation of measures to reduce acid mine drainage impacts from the Peru Creek tributary of the Snake River which will reduce metals concentrations in the snowmaking water supply. If, after these measures have been implemented, it is determined that the recalculated standards are not attainable or if significant additional water quality improvement has been achieved, the Commission will revisit the appropriate standards for Camp Creek.

Blue River segment 8: Monitoring results for water samples collected from 2003 through 2007 show that Jones Gulch meets table value standards. The Commission therefore moved Jones Gulch from Segment 6 to Segment 8.

T. Eagle Mine, Eagle River Basin—Metals Standards

The Hazardous Materials and Waste Management Division and USEPA Superfund Program (Superfund Proponents) proposed site-specific zinc, copper and cadmium standards for segments on the Eagle River within the Eagle Mine Superfund Site. Similarly, CBS Operations Inc (CBS) (formerly Viacom International Inc) proposed a different set of site-specific zinc, copper and cadmium standards for segments on the Eagle River within the Eagle Mine Superfund Site.

After review of the evidence submitted, the Commission adopted the Superfund Proponents' modified proposal for site-specific standards for the Eagle River Segments 5a, 5b, 5c and 7b as described below. These segments are impacted by historical mining activities at the Eagle Mine Superfund Site.

Zinc**:** A recalculation procedure was used for the aquatic species expected to occur in these segments of the Eagle River. After extensive review of available biological data and toxicity information, the recalculation was based on the following four most sensitive species that are expected to occur in these segments of the Eagle River: *Cottus bairdi* (Mottled Sculpin), *Oncorhynchus* (Rainbow and Cutthroat Trout), *Salmo trutta* (Brown Trout) and *Ranatra elongata* (Water Scorpion). The resulting site-specific recalculated hardness-based equations are:

$$\text{Acute} = 0.978 * e^{0.8537[\ln(\text{hardness})]+1.4189}$$

$$\text{Chronic} = 0.986 * e^{0.8537[\ln(\text{hardness})]+1.2481}$$

Because these equations rely on Sculpin as the most sensitive species, they are referred to as "sculpin equations." An attainability analysis was conducted which showed that it is not feasible to achieve a level of cleanup that would result in attainment of the sculpin equations in Segments 5a, 5b and 7b on a year-round basis. Additional remediation projects have been identified that can be performed at the site. The analysis shows that the identified remediation projects can be expected to result in additional zinc load reduction during March and April, when metals' loading is at its peak. When compared with the species toxicity information, it is clear that the feasible reductions still result in zinc levels that would exceed the standards based on the sculpin equation at some locations during some months. A modified species list without sculpin provided an equation that is based on the following four most sensitive species: *Oncorhynchus* (Rainbow and Cutthroat Trout), *Salmo trutta* (Brown Trout), *Ranatra elongata* (Water Scorpion) and *Limnodrilus hoffmeisteri* (Worm). The resulting recalculated hardness-based equations are:

$$\text{Acute} = 0.978 * e^{0.8537[\ln(\text{hardness})]+2.1302}$$

$$\text{Chronic} = 0.986 * e^{0.8537[\ln(\text{hardness})]+1.9593}$$

Because these equations rely on rainbow trout as the most sensitive species, they are referred to as "rainbow equations."

The biological goal for the Eagle Mine Superfund Site is a healthy brown trout fishery. Concurrent biological and water quality monitoring has shown that to achieve that goal, zinc must be maintained at levels better than those indicated by laboratory-based zinc toxicity studies with brown trout, probably because of combined effects with copper. On-going monitoring suggests that zinc and copper levels currently achieved by the cleanup are too high in March and April to maintain a healthy brown trout population. The equations based on a modified species list (rainbow equations) are incrementally more stringent than the equations based on brown trout and, at this site, offer a way to address this uncertainty and provide an adequate buffer for brown trout. These levels cannot be attained without additional remediation at the Eagle Mine Superfund Site.

The equations which represent the highest attainable water quality were applied by the Commission when and where the attainability analysis indicated they could be met. The rainbow equations were applied by the Commission to Segments 5a year-round and to segments 5b and 7b from January 1 through April 30. The sculpin equations were applied by the Commission to segment 5c year-round and to segments 5b and 7b from May 1 through December 31.

Copper: Similar to zinc, a recalculation procedure was conducted based on the species that are expected to occur at the site. The resulting species list includes the following as the four most sensitive species: *Ephoron virgo* (Mayfly), *Tubifex tubifex* (Worm), *Plumatella emarginata* (Bryozoan), and *Oncorhynchus* (Rainbow and Cutthroat Trout). The resulting recalculated hardness-based equations are:

$$\text{Acute} = 0.96 * e^{0.9801[\ln(\text{hardness})]-1.5865}$$

$$\text{Chronic} = 0.96 * e^{0.5897[\ln(\text{hardness})]-0.4845}$$

Because these equations rely on *Ephoron virgo* as the most sensitive species, they are referred to as "Ephoron equations." These recalculated copper standards are attainable and were applied to Segments 5b, 5c and 7b.

For Segment 5a, an attainability analysis was conducted which showed that it is not feasible to reduce copper loads to a level that would result in attainment of the Ephoron equations. The majority of the copper load originates from upstream sources that cannot be controlled at the site. A modified species list, without Ephoron provided an equation that is based on the following four most sensitive species: *Tubifex tubifex* (Worm), *Plumatella emarginata* (Bryzoan), *Oncorhynchus* (Rainbow and Cutthroat Trout and *Lumbriculus variegatus* (Worm). The resulting modified hardness-based equations are:

$$\text{Acute}=0.96*e^{0.9801[\ln(\text{hardness})] - 1.1073}$$

$$\text{Chronic}=0.96*e^{0.5897[\ln(\text{hardness})] - 0.0053}$$

Because these equations rely on tubifex worms as the most sensitive species, they are referred to as "tubifex equations." The tubifex equations were applied to Segment 5a.

<u>Cadmium:</u> The Commission had previously established an acute cadmium equation "with trout" in Regulation 31. That standard already applies to Segments 5a, 5b, 5c and 7b and continues to be appropriate and attainable. Therefore, no changes were made to the acute cadmium standard. However, using a revised acute/chronic ratio that was previously approved by both EPA and the Colorado Division of Wildlife for the Arkansas River and adopted by the Commission, a revised chronic cadmium equation was derived, as follows:

$$\text{Chronic} = (1.101672-[(\ln(\text{hardness})*(0.041838)])* e^{(0.7998\ [\ln \text{hardness})]-3.1725)}$$

This site-specific chronic Cadmium equation was applied to Segments 5a, 5b, 5c and 7b.

U. <u>Jackson County, North Platte River Basin—Metals Standards</u>

Jackson County Water Conservancy District proposed an ambient quality-based total recoverable iron standard of 1,845 ug/L for North Platte River Basin segments 3, 4 and 5b. This proposal was withdrawn prior to the rulemaking hearing; however, the Commission does recognize that the Coalmont Formation that underlies the North Platte Basin is a source of geologic iron. However, there is a need for additional information to fully characterize current iron levels and establish what anthropogenic factors might be at play. The Commission urges the Jackson County Water Conservancy District to work with the Division to re-examine the segmentation and develop information to support a joint proposal for ambient quality-based total recoverable iron standards where appropriate for the next basin-wide review in 2013.

V. <u>Seneca Coal Company, Yampa River Basin</u>

The Commission adopted a CS-II temperature standard for Segment 13b. The Commission adopted WS-II temperature standards for Segments 13d and 13e, while recognizing that uncertainty remains due to limited data about temperature and the aquatic community. It is the Commission's intent that the Division, Seneca and other interested parties work to resolve the uncertainty for these segments by the next basin-wide review. (See Section L)

The Commission also granted type iii temporary modifications for total recoverable iron set at "existing quality" for Segments 13d and 13e (expiration: 5/31/2011). The uncertainty is based on whether the high ambient levels of iron in these segments are caused by natural or irreversible man-induced causes. It is the intention of the parties to preserve the status quo during the term of the temporary modification, *i.e.*, Seneca will not change its operations so as to adversely affect the quality of its discharges for total recoverable iron.

W. USFS, Yampa River Basin—Recreation Use Classification

The USFS conducted a reasonable level of inquiry to identify the recreational uses on First and Elkhead Creeks and presented their findings in a Recreation UAA. This information showed that no existing primary recreation uses are occurring on portions of segment 20, nor is there the potential for primary contact recreation uses to occur on these same reaches. Therefore, the Commission established a new segment 20b with a Recreation N classification (E. coli=630/100mL), based on changes in stream access and use characteristics. This new segment consists of the mainstem of First Creek from the eastern boundary of state lands in California Park to the confluence with Elkhead Creek as well as the mainstem of Elkhead Creek from the eastern boundary of state lands in California Park to the National Forest boundary. Consequently, the Commission revised the segment description of 20a, to exclude specific listings in segment 20b. In addition, the Commission revised the Recreation use classification of segment 20a from Class 1a to Recreation Class U (E. coli=126/100mL), due to the lack of a reasonable level of inquiry about existing recreational uses and a lack of a completed use attainability analysis having been completed for this segment.

PARTIES TO THE RULEMAKING

1. Jackson County Water Conservancy District
2. Medicine Bow-Routt National Forests
3. Seneca Coal Company
4. Northwest Colorado Council of Governments and Grand County
5. The Grand County Water and Sanitation District #1, the Winter Park West Water and Sanitation District, The Fraser Sanitation District and The Winter Park Sanitation District
6. Keystone Resort
7. Trout Unlimited and Colorado Trout Unlimited
8. Hazardous Materials and Waste Management Division and USEPA Superfund Program
9. CBS Operations Inc.
10. Shell Frontier Oil and Gas, Inc.
11. Tri-State Generation and Transmission
12. Town of Palisade
13. CAM-Colorado LLC and CAM Mining LLC
14. Public Service Company of Colorado, a Colorado corporation
15. Colorado River Water Conservation District
16. Trapper Mining, Inc.
17. Town of Minturn
18. Colorado Division of Wildlife
19. City of Grand Junction
20. Southeastern Colorado Water Conservancy District
21. Twenty Mile Coal Company
22. Eagle River Watershed Council, Inc.
23. ERWC Eagle Mine Ltd. and John Woodling
24. Ginn Entities (Ginn Battle North, LLC, Ginn Battle South, LLC, Ginn-LA Battle One, Ltd., LLLP, and Ginn-LA Battle One A, LLC)
25. Northern Colorado Water Conservancy District
26. Eagle River Water & Sanitation District
27. Upper Eagle Regional Water Authority
28. Eagle Park Reservoir Company
29. Vail Associates, Inc.
30. Black Diamond Minerals, LLC
31. U. S. Environmental Protection Agency (EPA), Region 8
32. United States Department of Agriculture Forest Service, Arapaho-Roosevelt National Forests, Sulphur Ranger District
33. Hot Springs Lodge and Pool
34. White River National Forest

35. U.S. Fish and Wildlife Service
36. City of Aurora

33.45 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE DECEMBER 2009 RULEMAKING REGARDING TEMPORARY MODIFICATIONS FINAL ACTION FEBRUARY 8, 2010; EFFECTIVE DATE JUNE 30, 2010

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

BASIS AND PURPOSE

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the Commission reviewed the status of temporary modifications to determine whether the temporary modification should be modified, eliminated or extended.

Ammonia: Temporary modification of the ammonia standard on Yampa River segment 13d was deleted because the Town of Hayden's permit had recently been reissued. Compliance schedules in recently issued permits are adequate to address any necessary treatment plant upgrade issues.

Other Parameters: The temporary modifications of the iron standard for Yampa River segments 13d and 13e were reviewed. The Commission took no action on these temporary modifications which will expire 12/31/2011 and will be reviewed again in the December 2010 Temporary Modification hearing.

PARTIES TO THE RULEMAKING

1. City of Grand Junction
2. City of Colorado Springs and Colorado Springs Utilities
3. Tri-Lakes, Upper Monument, Security and Fountain Wastewater Treatment Facilities
4. Paint Brush Hills Metropolitan District
5. Pueblo West Metropolitan District
6. City of La Junta
7. Seneca Coal Company
8. Tri-State Generation and Transmission Association
9. Plum Creek Wastewater Authority
10. Centennial Water and Sanitation District
11. City and County of Broomfield
12. City of Fort Collins
13. Metro Wastewater Reclamation District
14. City of Black Hawk and the Black Hawk/Central City Sanitation District

33.46 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JULY 2010 RULEMAKING REGARDING TEMPORARY MODIFICATIONS; EFFECTIVE DATE NOVEMBER 30, 2010

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

BASIS AND PURPOSE

The Commission has decided to delay the basin-wide review of water quality classifications and standards for this basin until June 2014, to accommodate an issue-specific rulemaking for nutrient criteria

in June 2011. Consistent with that decision, the Commission has also decided to extend the effective date for the Grand Lake clarity standard to January 1, 2015.

PARTIES TO THE RULEMAKING HEARING

1. Town of Avon
2. City of Black Hawk and Black Hawk/Central City Sanitation District
3. Northern Colorado Water Conservancy District and the Municipal Subdistrict, Northern Colorado Water Conservancy District
4. City of La Junta
5. XTO Energy, Inc.
6. City of Pueblo
7. City of Colorado Springs and Colorado Springs Utilities
8. U.S. Environmental Protection Agency

33.47 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE DECEMBER 2010 RULEMAKING REGARDING TEMPORARY MODIFICATIONS FINAL ACTION JANUARY 10, 2011; EFFECTIVE DATE JUNE 30, 2011

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

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the Commission reviewed the status of temporary modifications to determine whether the temporary modification should be modified, eliminated or extended.

Total Recoverable Iron

A. Dry Creek, Yampa River segment 13d

Seneca Coal Company proposed revisions to Yampa segment 13d. Based on information on the record that characterized the pre-mining condition, the Commission adopted ambient-based iron standards. The chronic ambient-based standard for Dry Creek was calculated considering pre-mining data collected by Seneca Coal Company from three available sites in the segment (WSH7, WSHF1, and WSD5). The Commission removed the temporary modification for iron for segment 13d and adopted a new seasonal ambient-based chronic standard for iron for segment 13d as follows:

Mar - Apr = 3040(Trec);

May - Feb = 1110(Trec)

In order to assure that the same methodology is used when assessing attainment of these standards in the future, Section 33.6(4) was added to the regulation to record the locations that are to be used. Subsection 33.6(4)(a) establishes the locations for Dry Creek. Approximately equal datasets from each of these sites is to be aggregated:

- Seneca II-W Stream Site 7 on Hubberson Gulch (WSH7): located in the middle reaches of Hubberson Gulch

- Seneca II-W Flume Site 1 on Hubberson Gulch (WSHF1): located on Hubberson Gulch just upstream of its confluence with Dry Creek

- Seneca II-W Stream Site 5 on Dry Creek (WSD5): located in the middle reaches of Dry Creek

B. Sage and Grassy Creeks, Yampa River segment 13e

Given the presence of two individual creeks in segment 13e, with different characteristics, the Commission took separate actions on each creek.

Sage Creek: Seneca Coal Company proposed revisions to Yampa segment 13e. Based on information on the record that characterized the pre-mining condition, the Commission bifurcated Sage Creek and adopted ambient-based iron standards for upper portion, with a dividing line at the west border of Section 18, T5N, R87W. The chronic iron ambient-based standard for upper Sage Creek was calculated to be 1250 ug/L(Trec). The iron standard for the lower portion remains 1000 ug/L (Trec).

In order to assure that the same methodology is used when assessing attainment of these standards in the future, Section 33.6(4) was added to the regulation to record the locations that are to be used. Subsection 33.6(4)(b) establishes the assessment location for upper Sage Creek.

- Yoast Stream Site 2 on Sage Creek (YSS2): located upstream of the west border of Section 18, T5N, R87W

Grassy Creek: Seneca also proposed ambient-based iron standards for Grassy Creek. The upper portion of this area was mined in the 1970's by the Rockcastle Coal Company (Grassy Gap Mine), which obtained bond release and terminated its NPDES permit in 1993. Seneca began its mining operation in the upper portion of the basin in 1998 and the site is currently in the reclamation process. Seneca proposed that the Commission establish ambient-based iron standards based on 1993-1998 water quality data. The Commission determined that Seneca's evidence was insufficient to characterize natural or irreversible man-induced conditions for Grassy Creek. As a result, the Commission declined to adopt ambient-based iron standards, but extended the temporary modification for iron to 12/31/2012. The Commission will consider Seneca's plan to eliminate the need for a temporary modification at the December 2011 temporary modification hearing.

PARTIES TO THE RULEMAKING HEARING

1. Paint Brush Hills Metropolitan District
2. Tri-State Generation and Transmission Association
3. Seneca Coal Company
4. Mountain Water and Sanitation District
5. City of Grand Junction
6. Colorado Division of Wildlife
7. City of Boulder
8. U. S. Environmental Protection Agency
9. City of Colorado Springs and Colorado Springs Utilities

33.48 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE JUNE 13, 2011 RULEMAKING REGARDING TEMPORARY MODIFICATIONS; EFFECTIVE DATE JANUARY 1, 2012

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's decision to delay consideration of nutrient criteria until March 2012 resulted in cancelation of the December 2011 review of temporary modifications. Accordingly, the Commission considered the expiration dates of all the temporary modifications expiring on or before December 31, 2012 in a written comment rulemaking. The Commission extended the expiration date of the following temporary modification to December 31, 2013. It will be reviewed again in a Temporary Modification hearing in December 2012.

Yampa River segment 13e (Fe).