COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION

5 CCR 1002-35

REGULATION NO. 35
CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
GUNNISON AND LOWER DOLORES RIVER BASINS

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35.1 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.

35.2 PURPOSE

These regulations establish classifications and numeric standards for the Gunnison River/Lower Dolores River Basins, including all tributaries and standing bodies of water. This includes all or parts of Gunnison, Delta, Montrose, Ouray, Mesa, Saguache and Hinsdale Counties. This also includes the lower Dolores River and its tributaries in Dolores, Montrose, Mesa and San Miguel Counties. 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 Regulation No. 31, 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.

35.3 INTRODUCTION

These regulations and tables present the classifications and numeric standards assigned to stream segments listed in the attached tables (See section 35.6(4)). 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 35.6(4). Any additions or revisions of classifications or numeric standards can be accomplished only after public hearing by the Commission and proper consideration of evidence and testimony as specified by the statute and the "basic regulations".

35.4 DEFINITIONS

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

35.5 BASIC STANDARDS

(1) TEMPERATURE

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

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

(2) QUALIFIERS

See Basic Standards and Methodologies for Surface Water for a listing of organic standards at 31.11 and metal standards found at 31.16 Table III. The column in the tables headed "Water + Fish" are presumptively applied to all aquatic life class 1 streams which also have a water supply classification, and are applied to aquatic life class 2 streams which also have a water supply classification, on a case-by-case basis as shown in the Tables 35.6(4). The column in the tables at 31.11 and 31.16 Table III 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 35.6(4).

(3) URANIUM

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

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

(c) In no case shall uranium levels in waters assigned a water supply classification be increased by any cause attributable to municipal, industrial, or agricultural discharges so as to exceed 16.8-30 µg/l or naturally-occurring concentrations (as determined by the State of Colorado), whichever is greater.

(i) The first number in the 16.8-30 ug/l range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.

35.6 TABLES

(1) Introduction

The numeric standards for various parameters in this regulation and in the tables in Appendix 35-1 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 Regulation No. 31. 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 this regulation and in the tables in Appendix 35-1:

^{o}C	=	degrees Celsius
ch	=	Chronic (30-day)
Cl	=	Chloride
CL	=	cold lake temperature tier
CLL	=	cold large lake temperature tier
CS-I	=	cold stream temperature tier one
CS-II	=	cold stream temperature tier two
D.O.	=	dissolved oxygen
DM	=	daily maximum temperature
E. coli	=	escherichia coli
Mg/l	=	milligrams per liter
MWAT	=	maximum weekly average temperature
OW	=	outstanding waters
sc	=	sculpin
sp	=	spawning
SSE	=	site-specific equation
T	=	total recoverable
t	=	total
tr	=	trout
TVS	=	table value standard
µg/l	=	micrograms per liter
UP	=	use-protected
WAT	=	weekly average temperature
WS	=	water supply
WS-II	=	warm stream temperature tier two
WS-III	=	warm stream temperature tier three
WL	=	warm lake temperature tier

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

Fe(ch) = WS
Mn(ch) = WS
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:

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

(2) 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) Temporary Modification for Water + Fish Chronic Arsenic Standard

(i) The temporary modification for chronic arsenic standards applied to segments with an arsenic standard of 0.02 μg/l that has been set to protect the Water+Fish qualifier is listed in the temporary modification and qualifiers column as As(ch)=hybrid.

(ii) For discharges existing on or before 6/1/2013, the temporary modification is: As(ch)=current condition, expiring on 12/31/2021.

(iii) For new or increased discharges commencing on or after 6/1/2013, the temporary modification is: As(ch)=0.02-3.0 μg/l (Trec), expiring on 12/31/2021.

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

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

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

(3) Table Value Standards

In certain instances in the tables in Appendix 35-1, the designation "TVS" is used to indicate that for a particular parameter a "table value standard" has been adopted. This designation refers to numerical criteria set forth in the Basic Standards and Methodologies for Surface Water. The criteria for which the TVS are applicable are on the following table.

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

PARAMETER(1)	TABLE VALUE STANDARDS (2)(3)
Aluminum (Trec)	Acute = $e^{(1.3695[\ln(hardness)]+1.8308)}$
	pH equal to or greater than 7.0
	Chronic=$e^{(1.3695[\ln(hardness)]-0.1158)}$
	pH less than 7.0
	Chronic= $e^{(1.3695[\ln(hardness)]-0.1158)}$ or 87, whichever is less

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 $acute = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$ $chronic\ (Apr1-Aug31) = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * MIN\left(2.85,\ 1.45 * 10^{0.028(25-T)}\right)$ $chronic\ (Sep1-Mar31) = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * 1.45 * 10^{0.028*(25-MAX(T,\ 7))}$
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 = ½$e^{(1.72[\ln(hardness)]-6.52)}$

Chronic = $e^{(1.72[\ln(hardness)]-9.06)}$

Chronic(Trout) = $e^{(1.72[\ln(hardness)]-10.51)}$

Temperature

TEMPERATURE TIER	TIER CODE	SPECIES EXPECTED TO BE PRESENT	APPLICABLE MONTHS	TEMPERATURE STANDARD (^{o}C)	
				MWAT	DM
Cold Stream Tier 1	CS-I	brook trout, cutthroat trout	June – Sept.	17.0	21.7
			Oct. – May	9.0	13.0
Cold Stream Tier 2	CS-II	all other cold-water species	April – Oct.	18.3	23.9
			Nov. – March	9.0	13.0
Cold Lakes	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 Lakes (>100 acres surface area)	CLL	rainbow trout, brown trout, lake trout	April – Dec.	18.3	23.8
			Jan. – March	9.0	13.0
Warm Stream Tier 2	WS-II	brook stickleback, central stoneroller, creek chub, longnose dace, Northern redbelly dace, finescale dace, razorback sucker, white sucker	March – Nov.	27.5	28.6
			Dec. – Feb.	13.8	14.3
Warm Stream Tier 3	WS-III	all other warm-water species	March – Nov.	28.7	31.8
			Dec. – Feb.	14.3	15.9
Warm Lakes	WL	black crappie, bluegill, common carp, gizzard shad, golden shiner, largemouth bass, Northern pike, pumpkinseed, sauger, smallmouth bass, spottail shiner, striped bass, tiger muskellunge, walleye, wiper, white bass, white	April – Dec.	26.3	29.5
			Jan. – March	13.2	14.8

			crappie, yellow perch			
Uranium	Acute = $e^{(1.1021[\ln(hardness)]+2.7088)}$ Chronic = $e^{(1.1021[\ln(hardness)]+2.2382)}$					
Zinc	Acute = $0.978 * e^{(0.9094[\ln(hardness)]+0.9095)}$ Chronic = $0.986 * e^{(0.9094[\ln(hardness)]+0.6235)}$ Where hardness is less than 102 mg/L $CaCO^3$ and mottled scuplin are expected to be present: Chronic (sculpin) = $e^{(2.140[\ln(hardness)]-5.084)}$					

TABLE VALUE STANDARDS - FOOTNOTES

(1) Metals are stated as dissolved unless otherwise specified.

(2) Hardness values to be used in equations are in mg/l as calcium carbonate and shall be no greater than 400 mg/L, except for aluminum for which hardness shall be no greater than 220 mg/L. The hardness values used in calculating the appropriate metal standard should be based on the lower 95 per cent confidence limit of the mean hardness value at the periodic low flow criteria as determined from a regression analysis of site-specific data. Where insufficient site-specific data exists to define the mean hardness value at the periodic low flow criteria, representative regional data shall be used to perform the regression analysis. Where a regression analysis is not appropriate, a site-specific method should be used. In calculating a hardness value, regression analyses should not be extrapolated past the point that data exist.

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

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

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

(7) *E.coli* criteria and resulting standards for individual water segments, are established as indicators of the potential presence of pathogenic organisms. Standards for *E. coli* are expressed as a two-month geometric mean. Site-specific or seasonal standards are also two-month geometric means unless otherwise specified.

(8) All phosphorus standards are based upon the concentration of total phosphorus.

(9) The pH standards of 6.5 (or 5.0) and 9.0 are an instantaneous minimum and maximum, respectively to be applied as effluent limits. In determining instream attainment of water quality standards for pH, appropriate averaging periods may be applied, provided that beneficial uses will be fully protected.

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(4) Reserved.

(5) Stream Classifications and Water Quality Standards Tables

The stream classifications and water quality standards tables in Appendix 35-1 are incorporated herein by reference.

35.7-35.10 RESERVED

35.11 STATEMENT OF BASIS AND PURPOSE

I. Introduction

These stream classifications and water quality standards for State Waters of the Gunnison River Basin including all tributaries and standing bodies of water in all or parts of the Gunnison, Delta, Montrose, Ouray, Mesa, Saguache, and Hinsdale Counties and the Lower Dolores River and its tributaries in Dolores and San Miguel Counties implement requirements of the Colorado Water Quality Control Act C.R.S. 1973, 25-8-101 et seq. (Cum. Supp. 1981). They also represent the implementation 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 Regulations")

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, the statement of basis and purpose (Section 3.1.16) of those regulations must be referred to for a complete understanding of the basis and purpose of the regulations adopted herein. Therefore, Section 3.1.16 of the Basic Regulations is incorporated by reference. The focus of this statement of basis and purpose is on the scientific and technological rationale for the specific classifications and standards in the Gunnison River Basin.

Public participation was a significant factor in the development of these regulations. A lengthy record was built through public hearings held on November 16-18, 1981. A total of 10 entities requested and were granted party status by the Commission in accordance with the Commission's Procedural Regulations (Cum. Supp. 1980). The record established in these hearings forms the basis for the classifications and standards adopted.

II. General Considerations

These regulation 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 they need not be adopted as control regulations pursuant to the statutory scheme.

III. Definition of Stream Segments

1. For purposes of adopting classifications and water quality standards, the streams and water bodies are identified according to river basin and specific water segments.

2. Within each river basin, specific water segments are defined, for which use classifications and numeric water quality standards, if appropriate, are adopted. These segments may constitute a specified stretch of a river mainstem, a specific tributary, a specific lake or reservoir, or a generally defined grouping of waters within the basin (e.g., a specific mainstem segment and all tributaries flowing into that mainstem segment).

3. Segments are generally defined according to the points at which the use, water quality, or other stream characteristics 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 data. In other cases the delineation of segments is based upon best judgments of the points where instream changes in uses, water quality, or other stream characteristics occur.

IV. Use Classifications and Standards -- Generally

1. Initially, recommendations for stream segmentation and use classifications are a result of input from 208 plans, water quality data and reports, the Division of Wildlife, and personal knowledge. After a basic outline of stream segments and use classifications was prepared, water quality data from a variety of sources was compared against the “table value” for the proposed use. “Table value” refers to the four tables attached to the “Basic Regulations”. In general, if the mean plus one standard deviation ($\bar{x}$ + s) of the available data for the segment indicated that a particular parameter did not exceed the “table value” for that recommended use, the “table value” was listed as the recommended standard for the parameter. If the $\bar{x}$ + s computation indicated that the instream concentrations of the parameter exceeded the “table value” and yet the use to be protected by that parameter was in place, then the $\bar{x}$ + s value was recommended as the standard for that parameter.

   Conversely, if the ambient quality ($\bar{x}$ + s) for a certain parameter exceeded the “table value” for the protection of a use, and there is information that the proposed use is not in place, the use classification was modified or temporary modifications to the parameters were established. Ambient quality is generally defined as the quality attributable to natural conditions and/or uncontrollable non-point sources.

2. The use classifications have been established in accordance with the provisions of Section 203 of the Water Quality Control Act and Section 3.1.6 and 3.1.13 of the Basic Regulations.

3. In most cases upstream segments of a stream are generally the same as, or higher in classification, than downstream segments in order to protect downstream uses. In a few cases, tributaries are classified at lower classifications than mainstems where flow from tributaries does not threaten the quality of mainstem waters where the evidence indicates that lower classification for the tributaries is appropriate. In either case, permits should be written to assure compliance with Water Quality Standards and any stream segment affected by a discharge.

4.

A. The Commission has determined that it has the authority to assign the classification "High Quality Waters - Class 1" and "High Quality Waters - Class 2" where the evidence indicates that the requirements of Sections 3.1.13(1)(e) of the basic regulations are met. A question exists as to whether existing diversion structures can be maintained consistent with a "High Quality - Class 1" designation. Because of the questions regarding authority to regulate diversions, 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. Streams have been classified "High Quality - Class 2" for one or more of the following reasons:

(a) to facilitate the enjoyment and use of the scenic and natural resources of the State in accordance with the Legislative Declaration of the Colorado Water Quality Control Act (25-8-102(1) C.R.S. 1973.

(b) to provide a high degree of protection deserving of wilderness areas which are a resource providing a unique experience.

(c) to protect threatened species or to protect wild scenic river study areas or wilderness areas.

The concern of the United States Forest Service that High Quality 2 classification will unduly burden their management of multiple use areas is not well founded. This is because activities on Forest Service land, i.e. grazing, mineral exploration, trail and road maintenance, are considered as a historical impact upon existing ambient water quality conditions and are non point sources which are presently not subject to any Water Quality Control Commission regulations.

B. The "High Quality - Class 2" classification was proposed by the Gunnison River Coalition and other witnesses for a number of segments. These proposals have been rejected, and the segments classified for specific uses, for the following reasons:

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

(b) 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.

5. In accordance with 25-8-104, C.R.S. 1973, the Commission intends that no provision of this regulation shall be interpreted so as to supercede, abrogate, or impair rights to divert water and apply water to beneficial uses.

6. 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 has a standard of 200 fecal coliform per 100 ml; Recreation - Class 2 generally has a standard of 2000 fecal coliform per 100 ml.

In accordance with the Colorado Water Quality Control Act, 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, regardless of water quality. The Commission has decided to classify as "Recreation - Class 1" only those stream segments

where primary contact recreation actually exists, or could reasonably be expected to occur. The reasons for the application of Recreation Class 2 are as follows:

(a) The mountain streams in this region are generally unsuitable for primary contact recreation because of low water temperature and low stream flows.

(b) Fecal coliform is an indicator organism. Its presence does not always indicate the presence of pathogens. This depends on the source of the fecal coliform. If the source is agricultural runoff as opposed to human sewage, there may 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.

(c) Treating sewage to meet the 200 per 100 ml. level generally means the treatment plant must heavily chlorinate its effluent to meet the limitation. The presence of chlorine in the effluent can be significantly detrimental to aquatic life. Post-treatment of effluent to meet the residual chlorine standard is expensive and often results in the addition of more chemicals which have a negative effect on water quality and can be detrimental to aquatic life. Therefore, reducing the need for chlorine is beneficial to aquatic life.

(d) 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.

(e) The fecal coliform standard of 2000 per 100 ml. has been established to provide general public health protection. There is no significant impact on domestic drinking water treatment plants because they provide complete disinfection. The standard of 200 per 100 ml. is not intended to protect the water supply classification.

7. Water Supply Classification

The Commission finds that Colorado is a water short state and that it is experiencing considerable growth which places additional burdens on already scarce water supplies. These considerations mitigate in favor of a conservative approach to protecting future water supplies. Where existing water quality is adequate to protect this use, and in the absence of dischargers to these segments or testimony in opposition to such classification, the water supply use has been assigned because it is reasonable to expect that it may exist in the future in such cases. For stream segments that flow through, or in the vicinity of, municipalities, this conclusion is further justified, since there is a reasonable probability that the use exists or will exist. Where the water supply classification has been opposed, the Commission has evaluated the evidence on a site specific basis, and in many cases the classification has been removed.

V. Water Quality Standards -- Generally

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

2. Not all of the parameters listed in the “Tables” appended to the Basic Regulations are assigned as water quality standards. This complies with Section 3.1.7(c) of the Basic Regulations.

Numeric standards have been assigned for the full range of parameters to a number of segments where little or no data existed specific to the segment. In these cases, there was reason to

believe that the classified uses were in place or could be reasonably expected, and that the ambient water quality was as good as or better than the numeric standards assigned.

3. A numeric standard for the temperature parameter has been adopted as a basic standard applicable to all waters of the region in the same manner as the basic standards in Section 3.1.11 of the Basic Regulations.

   The standard of a 3 C temperature increase above ambient water temperature as defined is generally valid based on the data regarding that temperature 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 C 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 discharges may be beneficial to aquatic life. It is the intention of the Commission in adopting the standard to prevent radical temperature changes in short periods of time which are detrimental to aquatic life.

4. Numeric standards for seventeen organic parameters have been adopted as basic standards applicable to all waters of the region in the same manner as the basic standards in Section 3.1.11 of the Basic Regulations. These standards are essential to a program designed to protect the waters of the State regardless of specific use classifications because they describe the fundamental conditions that all waters must meet to be suitable for any use.

   It is the decision of the Commission to adopt these standards as basic standards because the presence of the organic parameters is not generally suspected. Also, the values assigned for these standards are not detectable using routine methodology and there is some concern regarding the potential for monitoring requirements if the standards are placed on specific streams. 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 constituents 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.

5. 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 adequate to protect the classified uses.

   Consistent with the Basic Regulations, the Commission has not assumed that the table values have presumptive validity or applicability. This accounts for the extensive data in the record on ambient water quality. However, the Commission has found that the table values are generally sufficient to protect the use classifications. Therefore, they have been applied in the situations outlined in the preceeding 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.

6. In many cases, instream ambient water quality provides the basis for the water quality standards (See 7 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 corresponding water quality standard. (Goals are established for the appropriate classification affected by the parameter).

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 adjusted to the condition. In either case, the water quality standards are deemed sufficient to protect the uses that are present.

7. In those cases where there was no data for a particular segment, or where the data consists of only a few samples for a limited range of parameters, “table values” were generally recommended. Data at the nearest downstream point was used to support this conclusion. In some cases, where the limited data indicated a problem existed, additional data was collected to expand the data base. Additionally, where there may not be existing data on present stream quality, the Commission anticipates that if necessary, additional data will be collected prior to an economic reasonableness hearing required by C.R.S. 1973, 25-8-204(3), as amended.

8. In most cases in establishing standards based on instream ambient water quality, a calculation is made based upon the mean (average) plus one standard deviation ($\bar{x}$ + s) for all sampling points on a particular stream segment. Since a standard deviation is not added to the water quality standard for purposes of determining the compliance with the standard, 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 that 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.

   Metals present in water samples may be tied up in suspended solids 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, and the use of $\bar{x}$ + s, is further justified because it is unlikely that the total value in all samples analyzed is in available form.

   A number of different statistical methodologies could have been used where ambient water quality data dictates the standards. All of them have both advantages and disadvantages. It is recognized that the $\bar{x}$ + s methodology also has weaknesses, in that the standard may not reflect natural conditions in a stream 100 per cent of the time, even though the use of $\bar{x}$ + s already allows for some seasonal variability. However, the use of this methodology is justified since it provides a meaningful index of stream quality for setting stream standards.

   Since the $\bar{x}$ + s methodology is an index of existing conditions and is not a classical statistical description, use of a methodology which eliminates outlyers, i.e. unusually high or low data which may be in error, is acceptable in approximating an average condition. The practice of eliminating only extremely high recorded data points and not low recorded values may result in erring on the side of safety. High recorded values may be due to sampling, laboratory, or recording error. To a limited degree the high values may be due to seasonal variation in the data base.

   Finally, the fairness and consistency of the use of any methodology in setting standards must recognize the manner in which the standards are implemented and enforced. It is essential that there be consistency between standard setting and the manner in which attainment or non-attainment of the standards is established based on future stream monitoring data. In addition the Division must take this methodology into account in writing and enforcing discharge permits.

9. 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 and some inconvenience and expense as to monitoring is therefore justifiable.

Section 3.1.15(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 no requirement for monitoring unless a parameter is in the effluent guidelines for the relevant industry, or is deemed to be a problem as to a specific discharge.

Some of the data developed by AMAX for metals values were based on “direct aspiration” testing method. This testing method has a detection limit 100 times higher than the furnace method used by the Division. In using “direct aspiration”, detection limit is above some of the proposed metal values. Therefore, the Commission chose to disregard this data. Because water quality standards are set at levels of ten times below detection limits of the direct aspiration testing method, it is appropriate to use data based upon detection limits of the Health Department Laboratory. These detection limits for establishing water quality standards may be more restrictive than EPA detection limits for effluent monitoring.

10. The dissolved oxygen standard is intended to apply to the epilimnion and metalimnion strata of lakes and reservoirs. Respiration by aerobic micro-organisms, as organic matter is consumed, is the primary cause of a natural decrease in dissolved oxygen and anaerobic conditions in the hypolimnion. Therefore, this stratum is exempt from the dissolved oxygen standard.

11. Where numeric standards are established based on historic instream water quality data at the level of $\bar{x}$ + s, it is recognized by the Commission that measured instream parameter levels might exceed the standard approximately 15 percent of the time.

12. It is the Commission’s intention that the Division implement and enforce all water quality standards consistent with the manner in which they have been established.

13. Hardness/Alkalinity

    Where hardness and alkalinity numbers differed, the Commission elected to use alkalinity as the controlling parameter, in order to be consistent with other river basins and because testimony from the Division staff indicated that in most cases alkalinity has a greater effect on toxic form of metals than does hardness.

VI. <u>Water Quality Standards for Unionized Ammonia</u>

The Commission retains the use of unionized ammonia as a parameter rather than total ammonia because unionized ammonia is the toxic portion. Furthermore, the relationship of total ammonia as a function of temperature and pH is recognized.

On some Class 2 Warm Water Aquatic Life streams containing similar aquatic life communities to those found in the plains streams of the South Platte & Arkansas Basins, .1 mg/l ammonia was selected as being appropriate to protect such aquatic life.

The Commission has relaxed unionized ammonia standards to .1 mg/l or greater on several streams for the following reasons:

1. limited nature of the aquatic life present;

2. limited recreational value of species present;

3. habitat limitations, primarily flow and streambed characteristics, that impose significant limitations on the nature of aquatic life, even if ammonia reductions were attained;

4. rapid dissipation of ammonia in streams, reducing the impact of such discharges downstream; and

5. economic costs of ammonia removal, especially where such costs would fall primarily on publicly-owned treatment works, and while the availability of construction grant funds is questionable.

6. Biosurveys with support from a bioassay conducted on fathead minnows performed in the Cache la Poudre River show that a .1 mg/l standard is appropriate to protect existing biota in that stream. The results of these studies may be reasonably extrapolated to similar streams; i.e., those streams that demonstrate similar chemical, physical, and biological characteristics.

Not all warmwater streams are comparable in terms of flow and habitat, and types and numbers of species of aquatic life. Therefore, some variations in an appropriate ammonia standard must be tolerated, with the objective of protecting existing aquatic life. The Commission found this approach preferable to totally removing the aquatic life classification from impacted or marginal aquatic life streams.

VII. Water Quality Standards for Uranium

Given the threat that radioactivity from uranium may pose to human health, it is advisable to limit uranium concentrations in streams to the maximum extent practicable. For segments assigned a water supply classification the Commission has adopted a standard of 40 pCi/l or natural background where higher, for the following reasons:

1. 40 pCi/l generally reflects background concentrations of uranium that may be found in streams in Colorado and therefore this amount approximates routine human exposure.

2. The statistical risk of human health hazards is small at 40 pCi/l.

3. 40 pCi/l is an interim level, established now pending the outcome of further studies currently underway.

VIII. Water Quality Standards for Cyanide

The Commission acknowledges that total cyanide is to be used in State Discharge Permits until a method is authorized by EPA for measuring free cyanide, even though free cyanide is the parameter of concern.

IX. Water Quality Standards for Metals

Several parties were concerned about the methods that were employed to digest samples used to determine ambient metal values. The Commission heard testimony that when high suspended solids are present, the two methods of sample digestion could result in very different values, with the “total” method yielding the higher values. But when the suspended solids are low, the two digestion methods will result in similar values, Therefor, the Commission has incorporated data generated by the “total” method when it could be determined that the suspended solids in the water sample were low.

The Commission believes that the “total recoverable” or equivalent method should be used as a testing method for determining ambient metal values for streams. This method is a better indicator in determining the amount of metal available to aquatic life in a toxic form, particularly when the amount of suspended solids carried by the stream is high. However, with low suspended solids the two testing

methods should yield the same result. Therefore, before incorporating into stream standards data generated by the "total" method it must be verified that there are low suspended solids in the water samples tested.

The United States Geological Survey used the "total" method before 1978 and the "total recoverable" after 1978, and that because of this, there might be some inconsistency in the STORET data. The Commission believes that with the proper check on suspended solids, pre-1976 STORET data can be used to determine ambient stream values.

It was suggested by AMAX that since the "total" method is used in monitoring state discharge permits, then the "total" method should be used in setting stream standards. The Commission does not agree. For the reasons already stated, the Commission believes that the "total recoverable " is preferable for assigning water quality standards. And, since most state discharge permits limit suspended solids to 30 mg/l, effluent testing will be similar to the methods underlying stream standards.

X. Linkage of classifications and Standards

The Commission holds that the classifications which it adopts and the standards it assigns to them are linked. Disapproval by EPA of the standards may require reexamination by the Commission of the appropriateness of its original classification. The reason for the linkage is that the Commission recognizes that there is a wide variability in the types of aquatic life in Colorado streams which require different levels of protection. Therefore, the numbers were chosen in some cases on a site specific basis to protect the species existing in that segment. If any reclassification is deemed a downgrading, then it will be based upon the grounds that the original classification was in error.

XI. Economic Reasonableness

The Commission finds that these use classifications and water quality standards are economically reasonable. The Commission solicited and considered evidence of the economic impacts of these regulations. This evaluation necessarily involved a case-by-case consideration of such impacts, and reference is made to the fiscal impact statement for this analysis. Generally, a judgment was made as to whether the benefits in terms of improving water quality justified the costs of increased treatment. In the absence of evidence on economic impacts for a specific segment, the Commission concluded that the regulations impose no unreasonable economic burden.

XII. Classifications and Standards - Special Cases

1. Page 1, Segment 6(a), 6(b), and 6(c) (Proposed as page 1, segment 6)

   Segment 6(a) receives a discharge from the Roaring Judy fish hatchery. 6(a) contains the tributaries to the mainstem which are intermittent. The perennial tributaries to the mainstem are included in segment 6(b). The Commission found no evidence of water supply use associated with segment 6(b) which contains fisheries.

2. Page 2, Segments 7 and 8

   Water supply was retained for both segments because segment 8 is subject to conditional water rights held by the Town of Crested Butte. The agriculture classification was retained because the use it currently in place.

3. Page 2, Segment 9

   Segment 9 represents the mainstem of the Slate River from the point immediately above its confluence with Coal Creek to its confluence with the East River. The Division's initial

proposal was based on 17 samples taken during 1979 through 1981. These data were significantly influenced by heavy metals entering the Slate River from Coal Creek. In May of 1981 Amax commenced operation of the wastewater treatment facility treating discharges to Coal Creek, a tributary of the Slate River. By July, 1981 steady state operation had been achieved. In view of the significant change in ambient water quality resulting from the operation of the wastewater treatment plant, the Commission adopted the Division's suggestion that the record on this segment be kept open to receive more meaningful data. The water quality standards adopted by the Commission are based on combined Amax and Storet data during the period of record July, 1981 through June, 1982. The water quality standards adopted for this segment are table values from the 0-100 hardness/alkalinity column, with the exception of cadmium, copper, lead and zinc. The standards for these parameters were based on $\bar{x}$ + s values derived from the combined Amex and Storet data for the twelve month period of record. The Storet data was in terms of total recoverable while Amax data was in terms of total metals. The cadmium level of 0.03 mg/l taken on November 12, 1981 was discarded as an outlier. All Amax data used had total suspended solids of less than 30 milligrams per liter. The monitoring location for Segment 9 was at the wooden bridge on Highway 135, 0.25 miles below the Crested Butte domestic wastewater treatment plant.

Adoption of an aquatic life, class 1 classification with a 0.02 mg/l unionized ammonia standard presents the potential for economic impact upon the Town of Crested Butte. The Commission acknowledged the potential, for requirements necessitating nitrification facilities but found it justified for the following reasons: (1) There is no clear and present threat of immediate economic impact; (2) Future impact, if ammonia removal becomes necessary, will be spread among a substantial population base and thus per capita impact will be small; (3) Several interim options are available to the district to further postpone and reduce the probability of significant economic impact; and (4) The Town testified that it was willing to assume the potential for economic impact in order to protect the quality of this segment as it provides a significant contribution to the local recreational resources which account for a substantial portion of the economic base in the region.

In view of the factors that mitigate the near-term potential for economic impact and since the most likely impacted entity supports this classification, the Commission finds that the assignment of a class 1 designation is economically reasonable.

4. Page 2, Segment 10

This segment receives effluent from the Crested Butte Water and Sanitation District by way of Woods Creek. Existing aquatic life supports a class 1 cold water classification. A report by Camp, Dresser, and McKee describes a less expensive alternative to ammonia removal which could be implemented ammonia as an interim treatment to greatly delay the necessity of nitrification facilities. The Commission acknowledges that removal will probably be required for the Crested Butte W & S District's wastewater treatment plant as they reach the maximum population in their masterplan. Ammonia removal maybe required in the near future, but a report by Camp, Dresser, & McKee describes a less expensive alternative which could be implemented. Notwithstanding such improvements, ammonia removal may be required to provide services for the maximum population projected in the master plan. The Commission believes that the cost of ammonia removal when it is ultimately required is economically reasonable because of the large population base which will be available to support this requirement and the economic importance of recreational fisheries to communities in this area.

5. Page 3, Segment 12

In the initial proposal, Segment 12 included the mainstem of Coal Creek from a point immediately above the confluence with Elk Creek to a point immediately below the Crested Butte water supply intake. Elk Creek and its tributaries were added to this segment since water quality sampling indicated that the water quality of Elk Creek and Coal Creek are similar. Although a recreation class 2 was adopted for this segment a fecal coliform standard of 200 per 100 m/l was adopted by agreement of the interested parties and because the standards is currently met.

6. Page 3, Segment 13

The Division's initial proposal for this segment was based on four samples taken prior to the startup of the Amax wastewater treatment facility in July of 1981. This facility treats the discharge from the inactive Keystone Mine which is the principal point source discharger into Coal Creek. In view of the significant change in ambient water quality resulting from operation of the wastewater treatment plant, the Commission in effect adopted the Division's suggestion that the record on this segment be kept open to receive more meaningful data. The aquatic life cold water class 1 use classification for this segment is based on ambient flow (Q7-10 = 3.5 CFS), quality conditions with continuous operation of the Amax wastewater treatment facility, and presence of aquatic life. These standards include consideration of the existing discharge and it is not anticipated that additional treatment will be required. Where water quality data was available, the water quality standards adopted for this segment were developed based upon the ambient flow conditions and water quality in this segment for those parameters. Only cadmium and zinc were greater than table values in the 100-200 hardness/alkalinity range. If Crested Butte fully exercised its decreed water right in Segment 12, the flow in Segment 13 would essentially be the discharge from the Amax wastewater treatment facility. This flow is in the greater than 400 hardness/alkalinity range. If, changes in flow conditions occur or if data subsequently becomes available for water quality standards based on table values, these water quality standards should be reviewed for compatibility with ambient conditions. The water quality standards for cadmium and zinc are $\bar{x}$ + s values based on Amax data for the twelve month period of record of July, 1981 through June, 1982. This data is in terms of total metals. However, all data had suspended solids of less than 30 milligrams per liter. The November 12, 1981 samples for zinc, iron and manganese were determined to be outliers. The monitoring location for Segment 13 was on Coal Creek 30 meters upstream from its confluence with the Slate River and the water quality standards are specific to this location.

7. Page 3, Segment 14

An aquatic life classification has not been assigned to this segment because the presence of aquatic life is extremely limited, flow is intermittent, gradient is steep, and fish habitat is not present. The potential economic impact of standards to protect an aquatic life classification is therefore not justified.

8. Page 3, Segment 15

Water Supply and agriculture are existing uses. An aquatic life, class 1 classification may require occasional ammonia removal. The City of Gunnison supported aquatic life, class 1 classification.

9. Page 4, Segment 17

The Division's initial proposal for water quality standards for segment 17 was based on table values from 0-100 hardness/alkalinity column. The standards adopted are the same with the exception of zinc which represents the $\bar{x}$ + s of the Amax data for the

period of record. The Amax data was in terms of total metals. However, all data used had total suspended solids of less than 30 milligrams per liter.

10. Page 4, Segments 21(a) 21(b) and 22

Indian Creek has been resegmented into 2 segments, 21(a) and 21(b), to reflect variability's in water quality and aquatic life.

The uranium standard of 2.0 mg/l for Segment 21(a) is sufficient to protect the aquat65ic life in that segment. The standard is consistent with historic instream conditions and the existing discharge at SW33. The determination that this standard is sufficient to protect aquatic life is based upon bioassay and benthic studies which are included in the record (Homestake additional Exhibit A, Vol. II, pp. 232-235 and Homestake Exhibits H-N). This standard will adequately protect the classified uses assigned in Segment 21(b), and in Segment 22, Lower Marshall Creek.

The uranium standard of .3 mg/l for Segment 21(b) is sufficient to protect the aquatic life in that segment. The more stringent standard adopted here is consistent with historic instream conditions based upon data taken at both monitoring stations within the segment, namely SW3 and WQCD 149. The Division, in implementing and enforcing the standard for Segment 21(b), should recognize this fact that the standard reflects data from both stations. SW3 is located on Indian Creek approximately 660 feet below the confluence of Indian Creek and Bull Creek, and Station 149 is located in close proximity to Homestake sampling station SW4. The standard for segment 21(b) will adequately protect the classified uses assigned in segment 22, including the water supply use that exists there. It should be noted that there is not water supply use in either segment 21(a) or segment 21(b).

11. Page 6, Segments 29, 30, 31, and 33

A U.S. Forest Service letter dated December 9, 1981, provided water quality data for streams on segments 29, 30, 31, and 33 of the Upper Gunnison. It was considered unreliable because the reported concentrations were too hi9gh to support aquatic life on streams acknowledged by the U.S. Forest Service as good fisheries.

12. Page 7, Segment 5; North Fork of the Gunnison

Hubbard Creek was not separated from this segment as requested by the Blue Ribbon Coal Company as the presence of three species of trout justifies a class 1 aquatic life classification. The water supply use is also in place and the evidence indicated that uses in Hubbard Creek were compatible with the balance of the segment. In addition, although the Blue River Coal Company is a NPDES discharge permit holder there is currently no discharge and no current economic impact.

13. Page 9, Segment 5

An aquatic life classification of cold water, class 1 was requested for Wehauken Creek to protect an existing private trout hatchery on the creek. However, the majority of the tributary streams in this segment do not support fisheries because of steep gradients. The Commission elected to classify the segment as aquatic, cold water, class 2 with table values for cold water, class 1 to protect the fish hatchery on Wehauken Creek.

14. Page 9, Segment 6

The aquatic life classification was removed because the Commission found no evidence of aquatic life in this segment and determined that there was no expectation of such use in the future. The segment is badly degraded by mine drainage.

15. Page 12, Segment 2

The Commission assigned the segment a cold water, class 1, aquatic life classification having found: That the City of Delta would not be adversely impacted due to the dilution provided by large stream flows.

16. Page 14, Segment 5

An underlying standard for ammonia of .08 mg/l was adopted based upon the results of a bioassay conducted in 1975. Although this represents a relaxation of the proposed standard of .06 mg/l, this result is justified since the bioassay reflects site specific conditions for pH, temperature and TDS, which factors affect ammonia toxicity.

The temporary modification for ammonia reflects seasonal variations in ammonia levels based upon existing discharge permit conditions. Since the existing discharge will cease in 1986, the conditions causing exceedence of the underlying standard will be corrected within a 20 year period These facilities will be replaced by new facilities designed for zero discharge of ammonia. In view of the cost of the new facilities and the limited duration of the existing discharge, a standard necessitating additional interim treatment facilities would not be economically reasonable.

COLORADO DEPARTMENT OF HEALTH
Water Quality Control Division
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FISCAL IMPACT STATEMENT

Stream Classifications and Water Quality Standards for State Waters of the Lower Colorado Basin below Glenwood Springs; the Yampa River Basin below Elkhead Creek; the Green river; and the entire White River drainage including all tributaries and standing bodies of water associated with those rivers in all of Moffat, Rio Blanco, Garfield, and portions of Mesa and Routt Counties.

I. INTRODUCTION

The Water Quality Control Commission is charged with he 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 empowered and directed to classify waters of the State and to promulgate water quality standards for any measurable characteristic of the water in order to protect both the uses in place and those that can be reasonably expected in the future. (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 regulations are as follows:

- Cost of construction due to requirements for increased levels of treatment by municipal waste treatment facilities;

- Cost of construction due to requirements for increased levels of treatment by industrial/commercial waste treatment facilities;

- Cost of Operation and Maintenance associated with increased levels of treatment required of municipalities;

- Cost of Operation and Maintenance associated with increased levels of treatment required of industrial and commercial dischargers;

- Cost of instream monitoring and laboratory analysis for new parameters added by the standards.

Dischargers will not be required by the adoption of these regulations to do stream monitoring. 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 stream classifications and standards adopted by the Commission will protect the water uses primarily through control of point source pollution. Non-point source pollution will be controlled primarily through management practices which are in existence or which will be implemented in the future. Future management practices need careful consideration and may be the result of 208 area-wide wastewater management plans developed by regional planning agencies and being updated annually. These plans involve local governments with general assistance from state government. Some of the possible non-point 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 whose health benefit costs are reduced by having clean water, and are both economic and non-quantifiable 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 population growths or industrial enlargement. Industries are required by federal statute to meet effluent limitations described as “Best Available Technology Economically Achievable” (BATEA) by 1983 or 1984. For most major industries in this region, the water quality standards should not require treatment beyond these limitations.

The fiscal impact of any regulatory decision must take into account only the incremental costs explicitly associated with the regulations as finally promulgated. Costs and expenditures associated with the status quo, regulations of other regulatory agencies, or regulations already in effect should not be included in an assessment of the fiscal impact of the Gunnison River Basin Classifications.

In addition, a distinction must be made between actual expenditures or dislocations that will be immediately or unavoidable necessary upon promulgation of these classifications and standards, and those costs which are speculative in nature. In keeping with concepts of ‘Expected Value’, it is proper for the Commission to place more emphasis on definite impacts.

With the passage in 1981 of Senate Bill 10, amending the Colorado Water Quality Control Act, it becomes incumbent upon the Water Quality Control Commission to consider the economic impact of their decisions with more emphasis placed upon the concept of the "Economic Reasonableness". Charged with such a mandate, the Commission was quite sensitive to the objective of minimizing the socio-economic "price" of clean water while adhering to the anti-degradation policy that water quality be preserved and protected in all cases, and improved wherever feasible. The Gunnison River Basin was heard under the provisions of the Act.

The analysis and data which follow are derived primarily from testimony and exhibits offered by interested parties during the course of the rulemaking hearings. This was supplemented by staff assessments of potential impacts upon other major entities who were not formally represented. The impacts are separately presented for the public and private sectors. No attempt has been made to identify future development costs as this type of data is not readily available and estimation techniques are dependent upon many highly subjective assumptions.

II. FISCAL IMPACT: PUBLIC SECTOR

The primary fiscal impact to the public sector in this basin involves the potential domestic wastewater treatment costs associated with the stream classifications and water quality standards. Other costs, such as tax and employment base impacts due to forgone industrial development opportunities or mitigated growth potentials, can be theoretically postulated but are difficult to quantify. Generally, it is recognized that higher tap fees, service charges or property taxes associated with increased treatment costs can potentially affect industrial siting decisions. However, this is not as significant as increased levels of treatment that may be required of industries if they are dischargers. While the Commission acknowledges the existence of such potentials, the lack of firm evidence and actual tax base impact estimates make deliberative assessment impractical.

In this basin the Commission acknowledged four municipalities that may be impacted: Crested Butter Water and Sanitation District, The Town of Crested Butte, Delta, and The Gunnison Water and Sanitation District. In each case the standard for unionized ammonia was the factor of concern.

The Commission recognizes the probability of increased treatment costs to accrue to the town of Crested Butte to meet the ammonia standard but fund these costs to bear a reasonable relationship to the benefits to be derived. The essential rationale is the support for these standards by the Town of Crested Butte in order to maintain the lucrative tourism industry through preservation of premium fisheries. Crested Butte went on record to state that they felt the economic benefits would outweigh the costs to achieve them. In addition, the Commission finds that's: (1) There is no immediate potential for economic impact; (2) future economic impact, if nitrification becomes necessary, will be spread among a substantial population base thereby minimizing per capita burden; (3) several interim options are available to the City to postpone and reduce the probability of economic impact as detailed in the East River Valley Wastewater Facilities Plan prepared by Camp, Dresser & McKee which was submitted to the Commission as additional information; and (4 as evidenced by the plan, the City is planning and preparing for a twenty-year program to include nitrification facilities and is aware of the economic requirements to support the plan.

The Crested Butte Water and Sanitation District will most likely need ammonia removal as they approach the maximum population in their masterplan. As estimated for 1982 in the facilities plan, nitrification facilities will cost 1.168 million dollars. The Commission has determined this cost to be economically reasonable for many of the same reasons as for the Town of Crested Butte. The District and the Town ill most likely share in the costs of the facilities and thus there will be a large population base to support ammonia removal costs. Finally, the District's economic base is largely derived from the tourism and recreation industry of which the value is strongly related to the quality of the fisheries in the region.

The Town of Delta is recognized as facing a potential requirement for nitrification facilities but several mitigating factors lead the Commission to conclude that this potential was negligible. The Town offered

testimony indicating that they felt there would be no foreseeable impact and they are in the process of converting to a rotating biological disc (RBD) system which will lower the ammonia in their effluent. The Commission noted that Delta's discharge into the Gunnison River is at a point of high volume (Q710=210 CFS) and a wide channel which, in addition to a high dilution factor, leaves room for options such as mixing zones. Coupled with these factors, the Commission believes that provisions contained in the Colorado Water Quality Control Act as relating to advanced wastewater treatment requirements adequately protect the Town from any remaining potential for economic impact through the provisions of Section 204(3), C.R.S. 1973.

In the case of the Gunnison Water and Sanitation District, the District supports a class 1 cold water designation recognizing that there could be some economic impact. The District is strongly supported by the economic base of tourism and recreation of which excellent fisheries is important. Because of the District's support of the classification and thus their implicit willingness to accept the economic impact that could result, the Commission is compelled to conclude that the potential for economic impact bears a reasonable relationship to the benefits to be derived from the ammonia standard.

In summary, the public participation and careful deliberation have resulted in regulations that will protect the quality of the waters of the Gunnison River Basin through classifications and standards that are economically reasonable in terms of the costs to the municipalities lying with the region.

It must be noted that before advanced treatment can be required and the costs discussed herein incurred, a hearing is available pursuant to section 204(3), C.R.S. 1973.

III. FISCAL IMPACT: PRIVATE SECTION

Six private sector entities were identified concerning potential economic impacts as a result of the proposed standards in this basin: Homestake Mining Company, Blue Ribbon Coal Company, ARCO, the Idarado Mine, Union Carbide, and AMAX. All of these entities have been, are, or will be involved in mining and milling activities with the region.

The Homestake concern was with uranium limits. They indicated that they would be forced into a zero discharge situation if the standard for Indian Creek remained as proposed. This posed the potential of shutting down their operation entirely with the resultant loss of jobs and economic contribution to the region. The beneficial uses for the relatively short segment length for which Homestake claimed difficulty in meeting the standard were found to not bear a reasonable relationship to the economic consequences of the uranium standard. Thus the Commission adopted a proposal for resegmenting Indian Creek to accommodate both Homestake's concerns and the beneficial uses to be preserved by the uranium standard. This action was found to not significantly impact the beneficial uses of the stream while eliminating the potential economic cost of the proposed segmentation.

Blue Ribbon Coal Company was concerned with the accuracy of the proposal for Hubbard Creek. They do not currently, nor plan to, discharge into this segment and indicated no specific economic cost to be attributed to the proposed classifications. Because the Commission found the evidence to be supportive of the proposed classification, and because no specific economic consequences were in evidence to mitigate the benefits of the proposed classification, the Commission found the most economically reasonable position was to support the classification of Hubbard Creek as proposed.

ARCO was primarily concerned with the accuracy of the classifications and was interested in the controversy surrounding the different techniques for measuring the presence and concentration of heavy metals. No specific evidence was offered indicating economic costs to be associated with these standards. Because the Commission found compelling evidence to support the protection of beneficial uses through the proposed classifications and that there were no offsetting economic consequences, the most economically reasonable course of action was to retain the proposal.

The Idarado Mine ("project") currently is not in active operation but is permitted to discharge into the San Miguel River for which Cold Water, Class 1 Aquatic Life was retained as a classification. The Commission found this classification to the reasonable in respect to the Idarado Project for several reasons: one, the future of the project is uncertain both to its economic viability and whether and when it will start active operations; two, no specific economic impact evidence was offered to measure against the beneficial uses of the San Miguel as a fishery; and three, the Idarado Project has available to it the option of discharging into Red Mountain Creek which was found to be so severely impacted by past and current human activities that no metals numbers were assigned as standards and virtually no beneficial uses were in evidence to be protected. The Commission found this to be the most economically reasonable manner in which to deal with the concerns of the Idarado project.

Union Carbide indicated a potentially wasteful economic impact that would result from the ammonia standard proposed for the mainstem of the San Miguel River. They testified that they use ammonia to stabilize the pH of their process water and that while they could meet the standard for part of the year with their current operational scheme, they could not meet the standard on a year-round basis. Union Carbide stated that they are currently planning a treatment facility that would be of the no-discharge type at an estimated installed capital cost of around thirty million dollars but this facility would not be on line until sometime in 1986. Thus, if the standard was retained, they would be forced to build facilities in incorporate other pH stabilizing techniques in the interim at an installed capital cost of between $730,000 and $1, 000,000 with an annual operating cost of approximately $200,000. The Commission adopted a seasonal temporary modification until such time as the no-discharge facility will be operational. In light of the fact that the interim facility would be rendered useless after four years, the Commission found that cost to not be reasonable. The seasonal standard was adopted as economically reasonable since any exceedances of the underlying standards will be corrected when the no-discharge facility is operational and no permanent, uncorrectable damage to the fishery would result.

AMAX was concerned with issues relating to the procedures and methodology used to develop the proposals. They believed that the standards could result in treatment costs approaching several hundred million dollars assuming that technology was available which they content most likely is not. To avoid this potential, AMAX offered seasonal standards which they felt were more reflective of the ambient qualities of the mainstem of Ohio Creek. The Commission decided to keep the record open to allow the Division as well as AMAX to pool additional data for both Coal Creek and Ohio Creek in order to test AMAX's claim that their additional data and a change in the hardness/alkalinity would alter the standards and thus the potential for debilitating economic impact. The additional data from AMAX was folded into the Division's calculations and most of the metals of concern did evidence higher ambient levels. The standards were changed to reflect these higher levels. The Commission found these amended standards to be acceptable on economic terms because no clear and present threat of economic impact was in evidence and they there are administrative options available to consider future impact if they develop.

Through evaluation of expert testimony and careful deliberative consideration, the Commission has taken steps to minimize the economic impact of these classifications and standards upon the private sector. As adopted, these classifications and standards will have a negligible impact upon the private sector while protecting current and achievable beneficial uses.

It is concluded that the Commission has strenuously considered the economic factors at issue in this basin and that this regulation is economically reasonable both in terms of potential costs that may result, and in terms of the beneficial uses to be protected.

35.12 STATEMENT OF BASIS AND PURPOSE REGARDING THE ADOPTION OF MINOR CORRECTONS AND CLARIFICATIONS FOR THE BASIC STANDARDS AND METHODOLOGIES AND CORRECTIONS TO THE NUMERIC STANDARDS FOR THE SAN JUAN AND DOLORES, GUNNISON, AND LOWER DOLORES, RIO GRANDE, AND THE SOUTH PLATTE RIVER BASINS.

BASIS AND PURPOSE:

In accordance with the requirements of 24-4-103(4), C.R.S. 1973, the Commission makes these findings and adopts this Statement of Basis and Purpose. The Commission at a public rulemaking hearing November 14, 1983, and December 12, 1983, adopted minor and editorial corrections to clarify the Commission's current regulations numbered respectively 3.1.0, 3.4.0, 3.5.0, 3.6.0, and 3.8.0. These regulations are contained in Article 3, Water Quality Standards and Classifications, of the Policies, Regulations, and Guidelines of the Water quality Control Commission. (5 CCR 1002-8)

In adopting these corrections and clarifications, the Commission considered the economic reasonableness of its action. The scientific or technological rationale of the Commission in justifying the changes to its rules was that it made the classifications and standards which it had previously assigned more technically correct and accurate.

The consolidated changes adopted by the Commission are provided with this Basis and Purpose. The Secretary of State is being provided corrected pages for each of the regulations as replacements for pages previously published in those regulations.

An issue raised during the hearing, was whether or not the table or organic parameters should be moved from the Appendix to the text. The Commission included standards for organic parameters in the regulations it adopted for each of the River Basins of the State. Thus, standards for organic parameters were applicable Statewide, prior to the hearing to consider the changes to which this Statement of Basis and Purpose is applicable. This has had the same effect as would have a basic standard applicable to all waters of the state.

The Commission finds that it would be easier to make changes to one document, the Basic Standards and Methodologies, as future scientific information necessitates, than to make such changes in each basin. Thus it is more economically reasonable to deal with the organic substances in one regulatory document, rather than many. There was testimony that it was confusing to have the table of organic parameters as criteria guidance subject to change on a stream by stream basis when the parameters had been assigned and were merely to provide guidance. It was testified that it would be less confusing to have the table in the text of the regulation to provide basic standards.

The City of Loveland testified that if the table in question were move to the regulatory text there was the possibility of a basin standard differing from the general standard. The Commission found that its regulations enabled I to set site specific standards to stream segments as an exception to the basic standard, and that for the parameters in this table it was unlikely to have different basin standards.

The organic parameters in the table are not substances that form a naturally occurring background. They are toxics controlled at the point of sale or use. They are not ambient and subject to the same treatment as are other naturally occurring parameters. The Commission found it inappropriate to regulate these organic constituents in the same manner as are those that can be ambient or uncontrollable background parameters. Therefore, the Commission changed the guideline table to a basic standard in the body of the regulation.

35.13 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE:

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 consideration of the attached regulatory amendments and also the statements of Basis and Purpose and Fiscal Impact in compliance with 24-4-103(4) C.R.S.

BASIS AND PURPOSE:

At the triennial review conducted April 7, 1986, no recommendations were received from the public. Non-substantive amendments were recommended by the Water Quality Control Commission to correct clerical errors. In adopting these corrections, the Commission considered the economic reasonableness of its action. Except as specified, the corrections in no way change the classifications and numeric standards originally adopted by the Commission.

FISCAL IMPACT STATEMENT:

The Water Quality Control Commission found that the clerical corrections to its regulation 3.5.0 have no fiscal impact.

35.14 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; 1988 AMENDEMENTS REGARDING SAN MIGUEL RIVER SEGMENTS

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 the attached regulatory amendments. The Commission also adopted, in compliance with 24-4-103(4) and 24-4-103(8)(d) C.R.S., the following statements of basis and purpose and fiscal impact.

BASIS AND PURPOSE:

The hearing that resulted in these amendments was held as the result of a petition submitted by the Idarado Mining Company (Idarado). Idarado requested that the Commission, pursuant to 25-8-207 C.R.S., make a finding of inconsistency regarding certain use classifications and water quality standards in effect for the San Miguel River and related tributaries and that those classifications and standards be declared viod ab initio. Idarado also requested that the Commission establish and adopt revised segment boundaries, use classifications and water quality standards for those waters. The Idarado proposal was opposed by the Division of Wildlife (DOW), the Town of Telluride, and San Miguel County (who were also parties to the proceeding), and by the Water Quality Control Division (WQCD).

Idarado owns the Idarado Mine located, in part, approximately one-half mile east of the Town of Telluride, County of San Miguel, Colorado. That portion of the mine is located in the San Miguel river drainage basin which is a part of the Lower Dolores river Basin (3.5.0) 5 CCR 1002-8.

The headwaters of the San Miguel River, Formed by the confluence of Bridal Veil and Ingram Creeks, are located approximately one mile east of the Idarado mine and Pandora Mill site. The San Miguel River then flows past Idarado's properties, through the town of Telluride, and eventually to the Dolores River several miles downstream.

Idarado presently discharges water from the mine pursuant to a National Pollutant Discharge Elimination System permit (No. CO-0026956). Discharges from the mine are to the ground, not directly to surface waters.

The State of Colorado, in 1983, sued Idarado under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"), 42 U.S.C. & 9601 et seq. In that action, the State alleges that Idarado's operations have resulted in injury to the environment. Idarado has vigorously contested that allegations and that action is presently pending in federal district court. Much of the information presented in this proceeding originally was generated in connection with the State CERCLA litigation.

Summary of Action:

Segment 3 of the San Miguel is resegmented into segment 3a above Marshall Creek and segment 3b below. Marshall Creek and Ingram Creek are divided into separate segments segment 6a for Ingram Creek and segment 6b for Marshall Creek. The existing classifications are retained for all segments.

For new segment 3a, the existing numeric standards are retained except that the zinc standard is changed to 0.19 mg/l, a table value standard (for the 0 to 100 hardness range) is adopted for lead, and 6-year for Marshall Creek. The existing classifications are retained on all segments.

For new segment 3a, the existing numeric standards are retained except that the zinc standard is changed to 0.19 mg/l, a table value standard (for the 100 to 200 hardness range) is adopted for lead, the table value standard for nickel is revised, based on the new hardness range, and 6-year temporary modifications based on the existing ambient quality are adopted for cadmium, copper, lead and zinc.

For new segments 6 a and 6b, the existing numeric standards are retained except that the zinc standard is changed to 0.19 mg/l, table value standards (for the 0 to 100 hardness range) are adopted for cadmium, copper, and lead, and 6-year temporary modifications based on the existing ambient quality (except where it is already better than table values) are adopted for cadmium, copper, lead and zinc.

For the reasons elaborated below and in the Fiscal Impact Statement, the Commission has determined that these changes are economically reasonable. This is particularly the case since the costs that will be incurred by Idarado to achieve the revised standards are the result of a need to remedy prior impacts caused by Idarado.

Resegmentation:

The resegmentation of the San Miguel mainstem into segments 3a and 3b is warranted because water quality differs above and below Marshall Creek and significantly different aquatic life habitat is attainable above and below this point. Because of the influence of Marshall Creek, water quality in the San Miguel is significantly different below their confluence.

There was evidence that habitat limitations in the mainstem are significantly more pronounced above Bear Creek (downstream of Marshall Creek) due in part to rechannelization as the result of Idarado's operations and due to lower stream flows. The mainstem has been resegmented at Marshall Creek rather than Bear Creek because there was evidence that habitat limitations on the mainstem between those two creeks are largely correctable.

The resegmentation of Ingram and Marshall Creeks into segments 6a and 6b is warranted by the significantly different current water quality of those two streams

Idarado proposed the establishment of additional sub-segments on the San Miguel mainstem and of separate segments for several additional tributaries which currently are grouped together as part of segment 2. The additional mainstem resegmentation appears unnecessary at this time. While there is evidence of some variations in water quality and habitat in this stretch, they do not appear substantial enough to warrant further resegmentation. Also, there is not enough differences to warrant, separate segmentation for the other tributaries. Moreover, it is not apparent that further resegmentation would have significantly different regulatory impacts on potential affected entities.

Classifications:

Retention of the existing classifications is warranted by the evidence submitted. Marshall Creek and Ingram Creek retain their current cold water aquatic class 2 designation because of the evidence that they currently are, and are likely to remain, habitat-limited. No parties challenged this classification.

The other segments at issue retain their current cold water aquatic life class 1 designations. For the mainstem of the San Miguel, below Bear Creek all parties agreed that the class 1 designation is appropriate. From Bear Creek upstream to Marshall Creek, there was evidence of some degree of current habitat limitations, as well as water quality limitations on aquatic life. The Commission believes that any habitat limitations are correctable within a twenty year period.

For new segment 3a above Marshall Creek, there was some evidence that flows in this stretch are very limited, creating a significant habitat limitation. However, there was other evidence that there are substantial flows in this segment for significant parts of the year, adequate to support a variety of aquatic life.

For the other tributaries that were not resegmented or reclassified, there was some evidence that habitat limitations may be a significant factor on these streams, due primarily to flow and gradient conditions. However, the Commission does not believe this evidence was substantial enough to warrant reclassification. Moreover, it is not apparent that reclassification of these tributaries would have significantly different regulatory impacts on potentially affected entities.

Standards:

The revised metals standards for segments 3a, 3b, 6a and 6b have been adopted because the information currently available indicates that the more stringent levels should be attainable within a 20-year period. All parties agreed that significant improvement in water quality will occur as a result of the changes that will be implemented due to the legal actions that has been instituted under the Comprehensive Environmental Response, compensation and Liability Act (CERCLA). At a minimum, the cleanup plan proposed by Idarado Mining Company will result in some water quality improvement. The standards are consistent with levels found to be achievable by the Record of Decision prepared by the State in the CERCLA action.

The Commission recognizes that the evidence demonstrates some uncertainty as to exactly what water quality levels will be achievable following any cleanup of the site. However, in view of (1) the evidence submitted, (2) the desirability of establishing specific standards that can serve as a goal for regulatory and planning purposes, and (3) the Water Quality Control Act's policy of encouraging water quality improvement where feasible, the revised standards are appropriate at this time. If additional information developed in the future demonstrates that any of these standards are in fact not attainable within a 20-year period, the standards can be revised accordingly.

For those revised standards based on table values, for segment 3b the values associated with the 100 to 200 hardness range have been used because the data indicates that hardness for this segment typically is in this range. Although the Commission typically has used alkalinity levels instead of hardness where that would result in more protective standards, harness has been used here because of the greater quantity of hardness data available.

The Commission also has adopted temporary modifications for the metals for which standards have been revised, based on the current ambient quality, as calculated by the "mean plus one standard deviation: methodology. The adoption of these temporary modifications recognizes that cleanup of past mining-related impacts and resulting water quality improvement will take time. Thus, the temporary modifications recognize current conditions, while the revised standards establish goals that should be using for purposes of cleanup and other planning decisions. The temporary modifications have been adopted for six years because it appears from the evidence that completion of any site cleanup as a result of the CERCLA litigation will take at least that long. It is anticipated that the need for the temporary modifications would be reviewed in the 1992 triennial review of the Gunnison and Lower Dolores River Basin standards. At that time, the temporary modifications may be extended if new information then available demonstrates that the underlying standards cannot be attained by the expiration date of the current temporary modifications.

The Commission rejected the argument by Idarado that permanent standards should be set equal to the existing instream quality. The Commission Believes that water quality does act as a limiting factor with respect to aquatic life in these segments. Moreover, as a matter of policy the Commission does not believe that only those aquatic life currently present in these segments warrant protection.

Summary:

The Commission has determined that the "findings of inconsistency" requested by Idarado pursuant to 25-8-207, C.R.S. is not appropriate. Use classifications and water quality standards for aquatic life for the segment in question are not more stringent than is necessary to protect fish life, shellfish life, and wildlife in water body segments which are reasonably capable of sustaining such life. Moreover, use classification and water quality standards were not adopted based upon material assumptions that were ion error or no longer apply. Based on new developments and new information since the original classification and standard-setting proceeding, the Commission has adopted revisions to stream segmentation and standards, as described above.

35.15 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE: (1988 revisions regarding Canyon Creek, Sneffels Creek and Imogene Creek)

The provisions of 25-8-202 (1) (b) and (2); 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:

No change in the aquatic use classifications was requested, although aquatic uses are extremely limited in the new segment 9a. A water supply classification was included for the existing segment 5 within which the headwaters were previously included, and the ambient quality should be sufficient to support that use. No water supply uses exist or are anticipated in super Imogene and Sneffels Creeks and the existing quality is poorer than the dissolved manganese criterion for a water supply classification. Therefore, new segments 9a and 9b do not include a water supply use classification.

The changes in water quality standards are based upon a one-year sampling program conducted by Engineering Science, Inc., in consultation with the Division. The changes more accurately reflect existing stream quality, since the Commission's 1983 adoption of classifications and standards for these segments was based upon extremely limited data.

In determining appropriate standards based on the new data, the Commission applied the Division's established methodology for the rejection of certain data "outliers". The Commission felt that the inclusion of these outliers in the standards calculation would have resulted in standards that are not representative of water quality normally found in the segments in question. The adopted standards more accurately reflect existing ambient quality.

The temporary modification for mercury for segment 9b, adopted for one year, is based on the level necessary to protect aquatic life. The underlying standard for mercury is based on the level necessary to protect human health, assuming bioaccumulation of mercury in fish tissue. If a bioaccumulation study is completed on this segment by the Camp Bird Venture prior to the expiration of the temporary modification, the Commission will reconsider the appropriateness of the underlying standard.

The basis for the adoption of the temporary modification for lead in segment 9a is that imposition of the underlying standard at this time would likely result in substantial and widespread economic and social impact within the area in question, without corresponding environmental benefit. Evidence submitted indicates that construction of a treatment plant to meet the underlying standards could cost on the order

of one to two million dollars. A cost of this magnitude would put continuation of the current exploration activities at the Camp Bird Mine – which currently employees 97 people – at risk.

The Commission also decided that no permanent downgrading of the segments in question is necessary at this time. Within the time frame of the temporary modification, the Camp Bird exploration operations would be completed and the long-term economic impact of meeting the underlying standards should be known. If new information n economic impacts or ambient water quality becomes available prior to that time, those segments can be readdressed at the request of Camp Bird Venture. In any event, at the next triennial review, the pending revision to the Basic Standards and Methodologies, although it is not anticipated that new facts will be available by that time to warrant reconsideration of the temporary modifications.

Fiscal Impact:

Other than the rulemaking hearing, no increased regulatory costs will result from the changes. No change in existing mine discharge flows is contemplated, and existing treatment of the historic mining flows will continue during the life of the temporary modification for lead. Adoption of the temporary modification will avoid the potential for an adverse substantial and widespread economic and social impact that could result from requiring immediate compliance with the underlying standards.

The revised standards, based on more accurate data, generally are less stringent than the previous standards for these waters. This should help assure that discharge treatment requirements are not unnecessarily string, resulting in potential long-term cost savings for existing or future dischargers.

35.16 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; May, 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 3.5.6. The purpose of this language is to explain the new references to “table value standards” (TV) that are contained in the Tables. These provisions also include the adoption of new hardness equations for the 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. The other changes considered and adopted are addressed below by segment.

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. Although none of the initial documents submitted specifically asserted that the rulemaking proposal would cause material injury to these entities’ water rights, particula4rly because the Senate Bill 191 consolations process is new, the Commission transmitted these documents 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 through consultation with the State Engineer and Water Conservation Board.

The Commission received letters back from both the State Engineer and the Water Conservation Board, stating their agreement with the Commission's preliminary assessment. 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.

A. Overview of Segment-Specific Changes

Three 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 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 regulations, and consciously rejected that option. Rather, the Commission recognized that it would be necessary to reply on best professional judgment to determine what constitutes representative date 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 classifications 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 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 my 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 or 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 the Commission.

With respect to detection limits, the Commission has chosen to continue the same policy that it has followed for over ten 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 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 of 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 1 in such circumstances, unless there was also evidence submitted that class 1 use 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 Gunnison Basin. The Commission has received information regarding actual recreational uses. It has also received substantial input regarding the property (of 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 to begin in this basin 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. The Commission received substantial testimony that kayaking often results in water ingestion. In addition, the testimony presented, 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 applies, 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 was 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 decision were in error.

This action does not improperly exclude input from entities interested in other river basins. First, the Commission specifically reopened this hearing and received input from entities not specifically concerned with the Gunnison basin. 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 the hearing. Each of the segments for which the recreation classification is being changed from class 2 to class 1 based on rafting or kayaking uses were proposed to be changed to class 1 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 that the importance of recreational uses of surface waters in Colorado has increased over the last decade. Testimony 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 coliforms 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 was also 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 the approach now being adopted may result in increased economic impacts for some dischargers, to meet the class 1 classifications. The evidence submitted indicated that in many instances this will not be the case, because state-wide effluent limitations for fecal coliforms and chlorine standards to protect aquatic life will often drive the level of disinfection and dechlorination that are required. However, in some circumstances it may be possible for the Division to consider an ex0anded 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 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 some 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.

The third recurring issue was the proposal by several parties that the Commission substantially resegment several existing stream segments, creating additional segments. The Commission generally has declined to resegment where there was not information submitted justifying different water quality designations, classifications or standards within separate portions of existing segments. Where there is not such a basis for increasing the number of segments, the Commission believes that resegmentation would unnecessarily add additional complexity to the current system.

B. Aquatic Life Class 1 with Table Values; New High Quality 2 Designations

Upper Gunnison River segments 4, 5, 6a, 6c, 7, 8, 10, 15, 19, 20, 25, 26, 27, 30
Lower Gunnison River segment 1b
San Miguel River segments 7b, 9, 10
Lower Dolores River segments 1, 6

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 come of these segments whose previous standards were based in party 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.

Existing use classifications for these segments have been retained, with the following exceptions. A water supply classification has been added to Upper Gunnison segment 19 because the existing quality is adequate to protect these uses. In addition, the recreation classifications for Upper Gunnison segment 15 and Lower Gunnison segment 1b have been changed from class 2 to class 1. The Commission recognizes that this change could result in increased treatment costs for dischargers to segment 15. However, the evidence demonstrated that class 1 recreation uses –i.e. rafting—are present in this segment. Because their classifications, designations, and

standards will now be the same, Lower Gunnison segment 1b has now been combined with segment 1a (discussed in section C, below).

The descriptions of Upper Gunnison segments 20 and 23 have been revised, to consolidate several tributaries formally in segment 23 into segment 20. The same designation, classifications and standards are appropriate for all of the waters now in segment 20. Segment 23 is addressed under Paragraph F, below.

Finally, a high quality 2 designation has been established for each of 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.

C. Existing High Quality 2 Segments; New Classifications and Standards

Upper Gunnison River segments 1, 2, 3
North Fork of the Gunnison segment 1
Uncompahgre River segment 1'
Lower Gunnison segment 1a
San Miguel segment 1

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 except Lower Gunnison segment 1a are within wilderness areas. Lower Gunnison segment 1a is for the most part within the Black Canyon of the Gunnison National Monument and the entire segment is a renowned gold medal trout fishery. In addition, the following use classifications, and associated table value standards, were adopted for these segments:

Recreation – Class 1
Cold Water Aquatic Life – Class 1
Water Supply
Agriculture

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

The Commission rejected a proposal to resegment Lower Gunnison segment 1a into separate segments, because the evidence did not demonstrate that different designations, classifications, or standards are appropriate for different portions of this segment. The USGS data offered in support of resegmentation was unconvincing due to concerns regarding its reliability. Segment 1a has now been combined with segment 1b.

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

Upper Gunnison River segments 6a, 14, 16, 28, 32
North Fork of the Gunnison segments 6, 10
Uncompahgre River segments 10, 12
Lower Gunnison River segment 4
San Miguel River segment 12
Lower Dolores River segment 4

These segments all qualify for a use-protected designation based on their present classifications. All are aquatic class 2 streams except Upper Gunnison segment 14 which has no aquatic life classification. Existing standards are adopted because these segments have only a minimal number of standards with no metal or nutrient standards.

E. New Use-Protected Designations; Revised Numeric Standards

Upper Gunnison River segment 11, 18
Uncompahgre River segments 4, 5, 13
Lower Gunnison River segments 6, 7, 8
Lower Dolores River segment 5

All of these segments, with the exception of Upper Gunnison segment 11, are aquatic life class 2 streams with numeric standards to protect the existing aquatic life. The aquatic life classification for Upper Gunnison segment 18 has been changed from cold water class 1 to class 2. Numerical standards for metals 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 are adopted, except as specified below. 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. The one exception, Upper Gunnison segment 11, is a cold water class 1 stream that has three antidegradation parameters exceeding the table value criteria.

Table value standards are adopted for all parameters for all segments noted in Paragraph E except as follows:

Segment	Constituents, ug/l
Upper Gunnison 11	Cd(ch = 2.2, Cu(ch) = 20, Pb(ch) = 16, Zn(ch) = 400, No Acute standard for Cd, Cu or Zn/
Upper Gunnison 18	NH3(ch) = 0.05 mg/l NH3(ch) = 0.02 mg/l from Co. Rd. 17 to confluence with Gunnison River.).
Uncompahgre 4	Fe(ch) = 2,800 (Trec), Se(ch) = 35 (Trec)

The purpose of the qualifier on Upper Gunnison segment 18 is to provide additional protection for trout that are likely to use this reach for spawning or inhabit it during seasons when flow is present.

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

Upper Gunnison segments 9, 12, 13, 17, 21a, 21b, 22, 23, 24, 29, 33
North Fork Gunnison segments 2, 3, 4, 5, 7, 8, 9, 11
Uncompahgre River segment 11, 14
Lower Gunnison segments 3, 5
San Miguel River segment 11
Lower Dolores River segment 2

These are water bodies whose classifications and standards are appropriate for high quality 2 designation, but for which either: (1) the quality is not suitable for a water supply classification or 85th percentile values of one or two parameters exceed the criteria for class 1 aquatic life; or (2) the Commission has determined that there is currently inadequate information available upon which to base a high quality 2 designation.

The segments that fall in the latter category are Upper Gunnison segments 22 and 33; North Fork segments 7 and 9, and Lower Gunnison segments 3 and 5. For example, for Upper Gunnison segment 33 there is some data showing table value exceedances for two parameters. Although the Division questioned the reliability of this data, no alternative data is available at this time. However, the Commission also notes that table value standards, rather than ambient quality standards, have been established for this segment since the available data do not create a reliable basis for specific ambient quality standards at this time. For North Fork segment 9, not only is there limited data available on this segment, but available information regarding other waters in this subbasin does not support the conclusion that these are high quality waters. The Commission also rejected proposals to change the aquatic life classification of North Fork segment 7 to class 2 with a use-protected designation, and to resegment Lower Gunnison segment 3, because these proposals were not supported by the evidence.

For North Fork segment 5, the Commission has rejected a proposal to change the recreation classification from class 1 to class 2. This hearing was not noticed pursuant to section 25-8-207, C.R.S., which provides authority to revise classifications based on material assumptions that were in error or no longer apply. If one of the parties, or any other member of the public, believes that the current classification is in error and that it may have an adverse impact on their activities, such a hearing may be requested in the future to consider this issue.

The Division proposed that the recreation classification for North Fork segment 3 be changed from class 2 to class 1. The Commission rejected this proposal due to inadequate information that such uses are in place or likely.

Table value standards are adopted for all parameters for all segments noted in Paragraph F except as follows:

Segment	Constituent(s), ug/l
Upper Gunnison 9	Zn(ch) = 80
Upper Gunnison 17	Fe(ch) = 1,600 (Trec)
Upper Gunnison 21a	U(ch) = 2,000
Upper Gunnison 21b	U(ch) = 300
Upper Gunnison 22	Fe(ch) = 1,1,80 (Trec)
North Fork Gunnison 4	Fe(ch) = 1,500 (Trec)
North Fork Gunnison 5	Fe(ch) = 1,900 (Trec)
Uncompahgre River 11	Fe(ch) = 1,600 (Trec)
Lower Dolores 2	Fe(ch) = 2,600 (Trec)

In addition, three-year temporary modifications have been adopted for the following segments and parameters:

Segment	Constituent(s), ug/l
Upper Gunnison 12	Cd(ch) = 10 (Trec); Zn(ch) = 790 (Trec)
Upper Gunnison 13	Cd(ch) = 10 (Trec), Zn(ch) = 1,080 (Trec)
Upper Gunnison 23	Ag(ch)=0.5

G. Changes in Classification; No designations; Revised Numeric Standards

Lower Gunnison River segment 2
San Miguel River Segments 4, 5
Lower Dolores River segment 3

Review of available data and existing uses indicates that Lower Gunnison segment 2 and Lower Dolores segment 3 are appropriate to be upgraded to recreation class 1 with a corresponding fecal coliform standard of 200 MPN/100 ml. The agricultural use classification has been adopted to San Miguel segments 4 and 5. Table value standards have been adopted for all parameters on all segments except for ambient standards for iron of 2,300 ug/l on Lower Gunnison segment 2 and 2,800 ug/l on Lower Dolores segment 3.

H. No change in Classifications or Standards

Upper Gunnison segment 31
Uncompahgre River segments 2, 3, 6, 7, 8, 9a, 9b
San Miguel River segments 2, 3a, 3b, 6a, 6b, 7a, 8

Upper Gunnison segment 31 and San Miguel River segments 7a and 8 are segments with several ambient standards based on total recoverable data. No new data was available to indicate that table value standards are appropriate and/or make the conversion to a dissolved metals basis for the ambient standards.

The remainder of the segments on the Uncompahgre and San Miguel are either directly involved in CERCLA litigations or may be influenced by them. In view of the current status of these CERCLA actions, the Commission has agreed to address these segments in the next triennial review. The Commission has requested the Division to notify it if any new discharges are proposed for these segments prior to that time, so that an earlier hearing can be held.

35.17 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; NOVEMBER 2, 1992:

The provisions of 25-8-202; 204; and 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 adopted temporary modifications for Segments 12 and 13 as a result of its May 1990 hearing on the Gunnison and Lower Dolores River Basins. These temporary modifications are scheduled to expire July 1, 1993. A hearing for the Gunnison and Lower Dolores River Basins has been scheduled by the Commission for December 5, 1994. The Commission extended the expiration date of the temporary modifications to December 31, 1994, so that the Commission will have an opportunity to hear evidence as to whether these temporary modifications continue to be necessary.

35.18 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 3.5.6(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.

35.19 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE, September 7, 1993:

The provisions of 25-8-202(1)(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 a 1-day to a 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 segment 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 designations of the 10 ug/l 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 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 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.

35.20 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE (February, 1995 Rulemaking)

The provisions of 25-8-202(1)(b) and (2); 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 modifications addressed in this hearing for segments 12 and 13 of the Upper Gunnison River, for cadmium and zinc, were previously adopted with an expiration date of December 31, 1994. For efficient utilization of resources, the Commission has extended the temporary modifications to December 31, 1996, so that these temporary modifications can be considered along with other issues in the overall Gunnison River Basin rulemaking hearing.

35.21 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

35.22 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (December, 1995 Rulemaking)

The provisions of C.R.S. 25-8-202(1)(b), (2); 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 modifications addressed in this hearing for segments 12 and 13 of the Upper Gunnison river, for cadmium and zinc, were previously adopted with an expiration date of December 31, 1996. For efficient utilization of resources, the Commission has extended the temporary modifications to December 31, 1997, so that these temporary modifications can be considered along with other issues in the overall Gunnison River Basin rulemaking hearing, which is currently scheduled for June, 1997.

35.23 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (June, 1997 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 25-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE:

1. Resegmentation

   Extensive renumbering of segments was made throughout 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.

   c. Certain segments could be grouped together in one segment because they had similar quality and uses.

   d. Certain segments were originally listed under the incorrect basin and have now been listed in the appropriate basin.

2. 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 were 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 31.13(1)(e)(iv).

Information was submitted in the hearing that the Water Quality Control Division has been working with the Colorado Geological Survey to develop methodologies to measure the functions of wetlands. The development of such methodologies is an important implementation issue with respect to water quality standards for wetlands and the supports the Division's efforts in this regard.

3. Manganese Standards

On all segments classified for water supply and aquatic life uses, the total recoverable manganese standard of 1,000 ug/l was stricken. The aquatic life manganese criterion was changed in 1991 revisions to the Basic Standards from total recoverable to dissolved and on these segments a more stringent dissolved manganese water supply standard of 50 ug/l is in place. On segments classified for aquatic life and not water supply, the 1000 ug/l standard is designated as dissolved.

4. Mercury Standard

The Basic Standards include the note that the standard for mercury is based on the Final Residual Value (FRV), and that mercury in the total form is the proper way to express that value. Therefore, the Commission decided to change the (TREC) notation for mercury to (tot) in all cases where it appeared.

5. Conversion to Dissolved Metals

Several segments in the previous version of the classifications and standards for these basins contained standards for metals as "total recoverable". The Commission previously determined that standards for most metals should be expressed as dissolved, necessitating conversion of those metals standards for the following segments:

> Upper Gunnison Basin segments 11 and 12 (previously segments 12 and 13; temporary modifications for total recoverable metals deleted), 29 (previously segment 31).
>
> Uncompahgre River segments 2, 3, 7, 8, and 9. San Miguel River segments 2, 3a, 3b, 6a, 6b, 7a and 8.

6. Changes Necessary to Comply with "Swimmable" Requirements

The Commission has reached an understanding with EPA regarding the classification and standards necessary to comply with the goal established in the federal Clean Water Act that all waters of the nation be suitable for recreation in and on the water. In Colorado, that requirement translates into a Recreation, Class 1, with the 200 fecal coliform/100 ml standard wherever swimming, rafting, etc. are in place or have the potential to occur; Recreation, Class 2, with 200 fecal coliform/100 ml standard wherever secondary contact recreation only is practiced, and the existing quality supports a class 1 recreation use and with consideration of the lack of significant increased treatment costs; and Recreation, Class 2, with the 2000 fecal coliform/100 ml standard in most other situations. This policy has resulted in recreation classification and/or fecal coliform standard modifications to the following segments:

> Upper Gunnison Basin segments 4, 5, 6a and 6b (previously 6b and 6c), 7, segments 8 through 12 (previously 9 through 13), segments 16 through 19 (previously 17 through 20), segments 21 through 24 (previously 22 through 25), segment 26 (previously 27), segments 28 through 30 (previously 29 through 31), and segment 32 (previously 33).

North Fork Gunnison segment 2.
Uncompahgre River segments 3, 5, 7, 8, 9 (previously 9a), 13, and 15.
Lower Gunnison River segments 6, 7, 8, and segments 10 and 11 (previously North Fork segments 8 and 9).
San Miguel River segments 3b, 4, 5, and 8.
Dolores River segments 4 and 5 (previously 5 and 6).

Concerns were raised in this hearing regarding the potential impact of more stringent fecal coliform standards on agricultural and ranching practices. Ranching and agriculture have been extensive in the Upper Gunnison River Basin. The Upper Basin Parties submitted testimony that these uses date back to the late 1800s and have been a continuing integral economic and social factor in the basin. The Commission recognizes the extent of this use of land within the basin, and that ranching and agriculture have co-existed with a high level of water quality in the basin. The Commission summarizes the extent of agricultural and ranching use within the basin as a helpful baseline should issues involving compliance with fecal coliform standards in the future involve agricultural and ranching activities.

The testimony submitted indicates that the large majority of water rights and uses within the basin are decreed for agricultural uses. There are approximately 1,500 absolute ditch rights within the basin decreed only for agricultural and irrigation uses, representing total decreed diversions of more than 7,700 c.f.s. As of 1997, the following acreage was classified within the basin as agricultural for taxing purposes:

County	Acres
Gunnison	343,742
Hinsdale	7,292
Saguache	54,299

The testimony also indicated that the Colorado Agricultural Statistics Service census of 1992 shows the total number of cattle and calves in Gunnison County as 30,713 head, and the Service estimates the total number as of January 1, 1997, was 31,343. The BLM reports there are 85 grazing permeates and 45,133 AUMs within its Gunnison Resource Area. The Forest Service reports that within its Taylor River Ranger District, there are 29 active allotments, encompassing 688,260 Forest Service acres, and a total number of 9,119 permitted livestock, and 8,893 of authorized livestock. Within the Cebolla Ranger District, the Forest Service reports there are 36 active allotments encompassing 552,529 acres, and a total number of 12,662 permitted livestock, and 13,395 authorized livestock.

The Commission finds that this degree of agricultural activities in the Gunnison Basin has existed in this region while the fecal coliform levels have been maintained at lower concentrations than the more stringent fecal coliform standards being adopted for a number of stream segments, as described above.

The Commission has previously stated that the fecal coliform standard is to be implemented with a rebuttable presumption that high densities of fecal coliform identified in water quality samples are due to human fecal pollution. The focus of the existing regulatory system for bacteriological parameters is on identifying and controlling sources of human waste that may be discharged to waters of the state without adequate treatment.

Parties to the hearing also proposed that the Commission adopt “an additional indicator that would distinguish between human fecal coliform and animal fecal coliform.” Based on the information submitted, it does not appear that any such indicator is available at this time.

7. Upgrading of Class 2 Aquatic Life Segments

The Commission decided to adopt upgraded classifications and/or a more complete set of standards for several segments where the Division recommended such changes based on recent sampling of the biota by the Division of Wildlife (DOW) and the Water Quality Control Division. In general, these segments were previously thought to contain very little aquatic life, and were appropriate for the Class 2, minimal standards application found on most intermittent streams. However, the biological data referred to above indicated that a more diverse and rich aquatic life community existed, including threatened species. The Commission has chosen to recognize these facts by the adoption of a higher aquatic life classification and/or a complete set of protective standards. The segments/streams affected are:

Uncompahgre River segment 15.
Lower Gunnison River segment 9.

In addition, based on testimony by the Division of Wildlife, several specific creeks that had been included in segments with minimal standards were moved to segments with the usual aquatic life table value standards. These creeks are now located in:

Upper Gunnison segment 6b.
Uncompahgre segment 11.
San Miguel segment 10.
Lower Dolores segment 5.

8. Full Standards Not Applied to Aquatic Life Segments

EPA raised the issue of why the full set of inorganic aquatic life protection standards were not applied to various segments recommended for aquatic life class 2 classification. These segments typically were assigned only dissolved oxygen, pH, and fecal coliform standards. It was EPA's position that if there were dischargers located on the segments with the potential to produce toxic levels of one or more of the pollutants not contained in the abbreviated list of standards, the aquatic life in the segment could be jeopardized. Rather than adopt the full set of inorganic standards, the Commission was persuaded by the Division's arguments that the abbreviated list of standards was sufficient to protect the rudimentary aquatic life found in these intermittent streams, and that there was a very low probability that any of the few dischargers located on these segments would discharge toxic effluents. The segments where this policy was followed are:

Upper Gunnison Basin segments 6a, 13 (formerly 14), 15 (formerly 16), 27 and 31.
North Fork Gunnison segment 6.
Uncompahgre River segments 6, 10, and 12.
Lower Gunnison River segments 4, and 12.
San Miguel River segment 12.
Dolores River segment 3.

As noted above, where specific creeks within these segments were identified with aquatic life that warrants additional standards, they were moved into segments with the usual aquatic life table value standards.

9. Outstanding Waters Designations

The Commission followed the recommendations of the Division in assigning the Outstanding Waters (OW) designation to all waters covered by this regulation that are within the La Garita, West Elk, Collegiate Peaks, Maroon Bells, Ragged, Oh-Be-Joyful, Big Blue, Mt. Sneffels, and Lizard Head wilderness areas. Division water quality data indicated all antidegradation parameters to be well within table values and several of the wilderness waters provided habitat to ecologically significant specifies, i.e. Colorado River cutthroat trout and the boreal toad.

Uncompahgre River segment 1.
North Fork Gunnison segment 1.
San Miguel River segment 1. (Waters of the Sneffels Wilderness Area within the San Miguel watershed were added to Segment 1.)

The Commission also rejected a proposal by the High Country Citizens' Alliance (HCCA) and Western Slope Environmental Resource Council (WSERC) to adopt an outstanding waters designation for Upper Gunnison segment 25 and Lower Gunnison segment 1. These segments--which include Blue Mesa, Morrow Point and Crystal Reservoirs, as well as the Black Canyon of the Gunnison and the Gunnison Gorge--are located downstream of significant development in the Gunnison Basin and include reservoirs that are actively managed for a variety of purposes. The Commission does not believe that a showing has been made that adoption of the outstanding waters designation is necessary and appropriate for these waters at this time. The Commission is receptive to hearing future proposals regarding the adoption of outstanding waters designation or other forms of extra protection for these waters, supported by additional research and information regarding the implications of such protection for other activities in or upstream from such segments, particularly if broad support for any such proposals can be developed.

10. Use-Protected Designations

In a previous "Basic Standards" rulemaking, the Commission changed the basis for assigning the use-protected designation by eliminating the automatic assignment where recreation class 2 was a classified use. In this comprehensive review of the basin classifications, designations, and standards, the Commission removed one use-protected designation in order to be consistent with that Basic Standards revision. This segment is:

Upper Gunnison Basin segment 10 (previously segment 11).

In addition, the Commission added the use-protected designation to several segments that met the criteria for use-protected. These are:

Uncompahgre River segments 6, 7, 8, 9, and 15. Lower Gunnison River segment 9.

The Commission also rejected a proposal by HCCA and WSERC to remove the use-protected designations for several other stream segments. In each instance, the segments in question are classified as aquatic life class 2. The Basic Standards and Methodologies for Surface Water provide that this classification requires a use-protected designation, unless the Commission determines "that those waters with exceptional recreational or ecological significance should be undesignated, and deserving of the protection afforded by the antidegradation review provisions." Section 31.8(2)(b)(i). The evidence submitted in this hearing was not adequate to support such a finding.

11. Ambient Quality-Based Standards

The Division presented extensive information in its Exhibit 1 regarding ambient chemical quality of many segments in the basin. In most cases ambient quality was well within the "table value" limits prescribed by the Basic Standards for the protection of the various classified uses, prompting the Commission to assign those table values as segment standards. In a few cases, however, ambient quality exceeded the table values, yet there was information to suggest that the use was in place nonetheless. The available information lead to the conclusion that there was little hope of reversing the cause for degradation within twenty years. In those instances, the Commission followed the recommendation of the Division to adopt the 85th percentile of the ambient data as the standard (ambient quality-based standard). The following is a list of those segments where such standards have been adopted:

Upper Gunnison Basin segments 10, 11, 12 (formerly 11, 12, and 13) and 31.
North Fork Gunnison segment 4.
Uncompahgre River segments 2, 3, 4, and 7.

EPA expressed concern in the hearing regarding the basis for adopting ambient quality-based water quality standards. The Commission encourages the Division to work with EPA to explore the potential for developing more standardized criteria for determining that such standards are appropriate on a site-specific basis.

12. Temporary Modifications

In several instances, the Commission decided to establish temporary modifications to table value standards as an alternative to establishing an ambient-based standard. This practice was followed where these was information to suggest the underlying standard could be met within three years to five years, or where there were questions surrounding the data which could be clarified with additional sampling. Temporary modifications adopted for several segments for selenium standards are discussed separately below. The segments where other temporary modifications were established or modified are:

Upper Gunnison segment 8.
Uncompahgre segment 4.
Lower Gunnison River segment 9.
San Miguel River segments 3a and 3b. (See separate discussion below.)

13. Water + Fish Organics Applied to Aquatic Life Segments

It is the policy of the Commission to establish the water+fish organics standards found in the Basic Standards for those Class 2 aquatic life segments where fish of a catchable size and which are normally consumed are present and there is evidence that angling takes place on a recurring basis. Based on these criteria and the testimony submitted, the Commission has chosen to assign the water+fish organics standards to the following class 2 aquatic life segments:

Uncompahgre River segments 4, 9 and 13.
Lower Gunnison River segments 7 and 8.

14. Selenium Standards

In October of 1995, the Commission promulgated new aquatic life table value standards (TVS) for selenium, i.e., 20 ug/l acute and 5 ug/l chronic. At that time, the Commission adopted a footnote to the TVS which acknowledged that “selenium is a bioaccumulative metal and subject to a range of toxicity values depending upon numerous site-specific variables.” The simultaneously adopted Statement of Basis and Purpose further elaborated upon this point, indicating that there exists the opportunity to develop “ambient or site-specific water quality standards on a basin-by-basin or specific segment basis,” and identifying a number of site-specific factors that may be pertinent in the establishment of appropriate standards. Finally, the Commission noted that “a selenium standard need not be adopted during the course of triennial or segment specific rulemakings unless it is determined that the discharge or presence of selenium in the affected waters reasonably could be expected to interfere with the classified uses . . ..”

In this basin-specific rulemaking, the Commission has decided to adopt the selenium TVS for most segments in the Gunnison and Lower Dolores basins. Temporary modifications, however, based on the 85th percentile of ambient data with an underlying TVS of 5 ug/l chronic and 20 ug/l acute, have been adopted for the segments identified below.

Uncompahgre River Segment 4.
Uncompahgre River Segment 14 (Sweitzer Lake).
Lower Gunnison River Segment 2.
North Fork Gunnison River Segment 5.

The Commission may revisit the question of ambient standards at some point in the future.

The Commission is hopeful that adoption of temporary modifications for these four segments will assist in reducing the existing high selenium levels. This action will establish interim goal-based criteria for selenium on these segments, ensure that there will be no further increases in selenium concentration for these waters as a result of regulated sources, and provide a mechanism to spur progress in improving water quality and attaining the goal-based standard. Furthermore, the temporary modifications may assist the Division in writing NPDES permits for any point source discharges while restoration efforts for nonpoint sources of selenium are underway - the temporary modification will serve as the basis for calculating the interim effluent limits for such permits.

Most important, however, the temporary modifications provide a mechanism to address the existing high selenium concentrations in these segments. For example, adoption of temporary modifications will allow these segments to be listed pursuant to Clean Water Act (CWA) section 303(d) and section 305(b) - sections of the Act which require identification of water quality-limited segments. These listings, in turn, will increase the potential for funding for selenium control projects. Although it may become necessary to further revise the selenium numeric standards as additional information becomes available, it is hoped that this action will benefit efforts aimed at reducing the existing high selenium levels in these four segments.

In adopting the above standards and temporary modifications, the Commission took into consideration a number of factors, including statements from EPA and the USFWS that an ambient standard for the above-referenced segments may not be approved by EPA because of concerns over (i) the potential impacts of such an elevated concentration upon fish and wildlife, with specific reference to the federally listed endangered species in the Lower Gunnison River Segment 2; (ii) the need for EPA to meet its consultation responsibilities under Section 7 of the Endangered Species Act; and (iii) the uncertainty as to whether the present condition is reversible.

The Commission acknowledges that there is also uncertainty associated with what will eventually prove to be the appropriate selenium standard for segments in this basin. For example, EPA is currently reexamining its national criteria for selenium. The USFWS is completing additional work on the potential impact of selenium upon razorback suckers, with a final report due in early 1998. Additional work is also being performed upon perfecting site specific methods of standard determination, including a sediment-total organic carbon model and uptake of selenium in aquatic biota.

Additional uncertainties presently exist concerning (i) the relative contributions of varying sources to the existing high ambient levels; (ii) whether these levels can be significantly reduced within 20 years or, stated another way, the pace of restoration efforts; (iii) what BMPs or other treatment technology exists or may be developed in the near future to achieve such a reduction; and (iv) the extent of measurable improvements in the aquatic ecosystem if the underlying TVS of 5 ug/l chronic is achieved.

Furthermore, it is currently unknown whether adequate funds can be found to undertake prevention and remediation measures, with specific reference to the control of nonpoint sources of selenium loading. The interested parties, together with the EPA, USFWS, and the Division shall cooperate in identifying sources of funds and, to the extent possible, obtaining needed monies, including funds which may be available under Section 319 of the Clean Water Act, from

the US Department of Agriculture pursuant to the Environmental Quality Improvement Program (EQIP), the US Bureau of Reclamation through the Colorado River Salinity Control Program or the US Department of Interior through the Irrigation Drainage Program. The EPA, USFWS, and the Division, in their testimony, agreed to express to the Colorado River Basin Salinity Control Forum, in writing, their position that salinity control projects which simultaneously reduce loading should receive funding priority.

The interested parties to the hearing, the federal agencies, and landowners in the vicinity of the affected reaches have expressed an interest in employing voluntary, cooperative prevention and remediation practices for purposes of reducing selenium loading and improving water quality. The Commission encourages the formation of a Task Force for this purpose, and urges the Division to cooperate in such an effort. This Task Force could employ the TMDL concept in seeking to achieve the underlying TVS for selenium.

The Division has indicated to the Commission that it may take a minimum of five years to identify, fund and implement selenium control projects in these basins which may measurably improve water quality in the segments of concern. Thus, though the segments with a temporary modification will be reviewed at the end of three years, it is not anticipated that there will be any significant changes at that time.

15. Site-Specific Issues

a. Coal Creek

In response to a proposal by Climax Molybdenum Company (CMC), the Commission has adopted ambient quality-based standards for several metals for Coal Creek, segments 11 and 12 of the Upper Gunnison Basin (formerly segments 12 and 13). CMC submitted evidence that elevated metals levels in these segments are caused by “natural or irreversible man-induced” impacts. In adopting these standards, the Commission recognizes the following agreements between the parties with respect to these segments:

CMC agrees to assist HCCA in performing a reconnaissance study consisting of physical surveillance and high flow and low flow water quality monitoring in segment 11 with the objective of identifying sources of Cd, Fe, Mn and Zn.

CMC agrees to work with other parties, which may include the Town of Crested Butte and Gunnison County, to pursue development of a remedial project (or projects) to be funded by the section 319 nonpoint source grant program if such project (or projects) appear feasible.

HCCA agrees to support the adoption of the ambient based standards proposed by CMC for segments 11 and 12.

b. Indian Creek

Homestake Mining Company expressed concern about the Division’s initial proposal to eliminate separate segments for Indian Creek (formerly Upper Gunnison segments 21a and 21b) and to add these waters into the segment for Marshall Creek (formerly Upper Gunnison segment 22). Following consideration of the evidence, including an agreement between the Division and Homestake, the Commission has left the upper portion of Indian Creek (formerly segment 21a, now segment 20) as a separate segment. The lower portion of Indian Creek (formerly segment 21b) has been added to the Marshall Creek segment (formerly segment 22, now segment 21).

c. North Fork segments 2 and 3

The Commission considered a proposal by HCCA and WSERC to move the segment boundary between North Fork segments 2 and 3 further downstream, to account for primary contact recreation activities in the upper portion of segment 3 as previously defined. The evidence does demonstrate that primary contact recreation uses currently occur in these waters. Following an extensive discussion of alternative potential resegmentation options, the Commission has established the new segment boundary at the Black Bridge, on which 4175 Drive crosses the river. The evidence indicates that the majority of the primary contact recreation use occurs above that point.

d. Fruitgrowers Reservoir

In response to a proposal by the Division, the Commission has established a new segment for Fruitgrowers Reservoir--segment 9 in the Lower Gunnison Basin. The evidence demonstrates that aquatic life class 2, recreation class 1 and agriculture are appropriate classifications for this reservoir based on actual current or recent past uses of these waters. In view of the reservoir's current degraded quality, the Commission has adopted a goal qualifier for the recreation classification and temporary modifications for the un-ionized ammonia and fecal coliform standards. The Commission appreciates and wishes to encourage the efforts of interested entities in the area to undertake a cooperative, inter-governmental two-year study to better determine the cause of current water quality problems in the reservoir. The Commission requests that the Division provide to the Commission an update regarding the status of these study efforts in the fall of 1998.

e. San Miguel segments 3a and 3b

The extensive data submitted in evidence demonstrate that the zinc levels in San Miguel River segments 3a and 3b exceed the current numeric standard of 190 ug/l of dissolved zinc (chronic) applicable to both segments. It is unclear whether that standard can be met within 20 years. Under a 1992 Consent Decree with the State of Colorado, Idarado Mining Company is pursuing activities pursuant to a Remedial Action Plan ("RAP") to remediate historic mining impacts in the upper reaches of the San Miguel River and Red Mountain Creek drainages, in order to enhance water quality. One performance objective of the RAP is to reduce zinc levels at a compliance point within San Miguel River segment 3b to 276 ug/l of dissolved or 336 ug/l of total zinc, on an average annual basis. The Commission will review the appropriateness of the 190 ug/l dissolved zinc (chronic) standard for segments 3a and 3b in future rulemakings to assess whether it should be adjusted to reflect actual water quality achievable and the uses that are attainable in light of Idarado's remediation efforts. In addition, five-year temporary modifications of 410 ug/l and 640 ug/l for dissolved zinc in segments 3a and 3b, respectively, to reflect ambient water quality are justified in light of the anticipated water quality enhancement resulting from Idarado's actions, and to coincide with the start of the compliance period under the RAP. Nothing in this rulemaking is intended to adjust, modify, or abrogate the Consent Decree or RAP.

f. New Water Supply Segments

In response to a request by HCCA and WSERC, the Commission has added a water supply classification, and corresponding numerical standards, to the following three segments:

Upper Gunnison segments 8 (formerly 9) and 15 (formerly 16).
North Fork segment 6.

In each case, evidence was submitted that alluvial ground water hydrologically connected to these surface waters is used through domestic wells as a water supply. For Upper Gunnison segment 8, the Commission also adopted temporary modifications for iron and manganese, in view of evidence that current levels of these constituents are elevated above table values.

16. Other Proposals

EPA expressed concern in the hearing regarding whether documentation had been provided of an adequate "use attainability analysis" for segments whose classifications do not achieve the "fishable, swimmable" goals of the federal Clean Water Act. Based on the information provided, the Commission has adopted the Division's proposals for the waters in question. The Commission encourages the Division to work with EPA to assure that adequate documentation of the Division's use attainability analysis conclusions has been provided.

HCCA and WSERC requested that the Commission take action in this hearing to prohibit future in-stream gravel mining. The Commission has determined that this proposal is not relevant to the water quality designation, classification and standards issues raised in this hearing.

35.24 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.

35.25 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; APRIL, 1998 RULEMAKING

The provisions of sections 25-8-202(1)(b) and (2); 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for the adoption of these 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 the result of a June, 1997 rulemaking hearing considering numerous proposed revisions to Gunnison River Basin water quality standards, the Commission decided to apply recently revised aquatic life table value criteria for selenium (20 ug/l acute and 5 ug/l chronic) to many segments in the basin. The basis for this action is discussed in paragraph 14 of the Statement of Basis and Purpose for that rulemaking (section 35.21). However, it was later noticed that in that rulemaking the Commission inadvertently neglected to revise the listing of selenium table values contained in section 35.6(3) of the regulation. In this rulemaking, the Commission is correcting the listing of selenium table values in section 35.6(3). The Commission is also deleting reference to March 2, 1998 effective date for silver table values, since that date has now passed.

35.26 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER, 1998 RULEMAKING

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

35.71 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JULY, 2001 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 were adopted 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 Gunnison, Segment 13: Woods Creek was separated into segments 13a and 13b to reflect the differences in recreation use.

Upper Gunnison, Segments 20 and 21: Lower portion of Indian Creek was moved from Segment 21 to Segment 20 to reflect the correct Uranium standard for that segment and lack of water supply use.

Upper Gunnison, Segments 26, 27 and 28: The Commission has decided to revise the segmentation of Segments 26, 27 and 28 of the Upper Gunnison River Basin based on the following rationale:

- Existing ambient water quality conditions of waters flowing into or which are present within Curecanti National Recreation Area meet or are better than those required by The Basic Standards and Methodologies for Surface Water (5 CCR 1002-31) for Aquatic Life Cold 1.

- These waters support an abundance of aquatic life. Many waters support a fishery which includes but is not limited to Rainbow Trout and Brook Trout, and have been identified as a potential in supporting state threatened Colorado River Cutthroat trout.

- Blue Mesa, Morrow Point and Crystal reservoirs, as well as portions of the mainstem of the Gunnison River and Lake Fork of the Gunnison offer significant natural resource values dedicated to public use as Curecanti National Recreation Area. These waters are classified as Aquatic Life Cold 1, Recreation 1 and it follows that the tributaries to these significant economic and natural resources have classifications as good or better.

- This resegmentation provides a watershed approach to this portion of the Upper Gunnison basin.

North Fork, Segment 2: The segment description was modified to more accurately reflect the beginning of the mainstem of the North Fork of the Gunnison.

North Fork, Segment 5: The segment description was modified to include the entire Roatcap Creek system. This change better reflects the aquatic life cold 1 uses of Roatcap Creek.

Uncompahgre, Segment 3 and 4: The segment descriptions were modified to clarify the transition point in the Uncompahgre River between cold (segment 3) and warm (segment 4) water aquatic life uses.

Uncompahgre, Segment 4: This segment was resegmented into segments 4a, 4b and 4c to account for significant differences in recreational activities which occur along the mainstem of the lower Uncompahgre River. A UAA demonstrated that segment 4b (the Uncompahgre River from La Salle Road to Confluence Park) does not support recurring primary contact recreation.

Uncompahgre, Segment 6: Red Mountain Creek was separated into Segments 6a and 6b to reflect the differences in aquatic life uses.

Uncompahgre, Segment 15: Segment 15 was changed to 15a. The mainstem of Dry Creek from the confluence of the East and West Forks to the boundary of the BLM land was removed from Uncompahgre segment 15a and placed into a new Uncompahgre segment 15b based on significant differences in recreational usage. Dry Creek supports rafting and kayaking during some times of year; whereas. a UAA has demonstrated that primary contact recreation is unattainable in the rest of segment 15.

Lower Gunnison, Segment 4: The lakes and reservoirs from segment 4 were separated into a new segment 4b; along with Kannah Creek below the water supply diversion to reflect the recreation 1a uses of these waterbodies. The remainder of segment 4 was renamed segment 4a.

Lower Gunnison, Segment 11: Doug Creek was added to the segment description to better reflect its cold water class 1 aquatic life use.

B. <u>Manganese</u>

The aquatic life manganese criterion was initially changed in the 1997 revisions to the Basic Standards (5 CCR 1002-31) from a single chronic dissolved criterion to acute and chronic hardness-based equations. The equations were further modified in the 2000 revisions to the Basic Standards. The new manganese acute and chronic equations were added as table value standards in 35.6(3). As a result of the adoption of these new TVS, all segments classified for aquatic life use that had a chronic total recoverable manganese standard of 1,000 µg/L had the 1,000 standard stricken and replaced with Mn(ac/ch)=TVS.

C. Selenium

The regulation in 35.6 (3) listed the table value standards for selenium as Acute=20 µg/L and Chronic=5 µg/L. This was updated to reflect the existing acute and chronic criteria for selenium listed in the Basic Standards as Acute=18.4 µg/L and Chronic=4.6 µg/L which was adopted in 2000 by the Commission. This change means that all segments with standards for selenium given as TVS now have these lower acute and chronic standards.

The Commission adopted the table value standards for selenium and temporary modifications of existing ambient quality for selenium for Uncompahgre segment 12, Lower Gunnison segments 4a and 4b, and North Fork segment 6. The Commission also extended the temporary modifications for selenium for Uncompahgre segments 4a, 4b, 4c, and 14 Lower Gunnison segment 2, and North Fork segment 5. The temporary modifications were adopted or extended pursuant to section 31.7(3)(a)(iii) of the Basic Standards regulation, based on the fact that there is significant uncertainty as to the appropriate underlying selenium standard for these segments. The reason for the adoption of the temporary modifications is noted in temporary modifications and qualifiers column of the table.

Water quality monitoring has demonstrated a severe selenium problem in the Lower Gunnison and Uncompahgre River Basins. The Gunnison River Selenium Task Force has been working since 1998 to evaluate the sources of selenium loading to the mainstem of the Uncompahgre and Gunnison rivers and methods to reduce those loads. To date, the effort has focused on attempting to meet the standards in the Uncompahgre and Gunnison River mainstems. Much of this effort has involved evaluating opportunities to reduce the loading, but not necessarily the concentrations, in the tributaries to both the lower Uncompahgre and lower Gunnison Rivers.

Selenium reduction in the Uncompahgre and Gunnison River Basins is a very complex issue. The tributaries to the Uncompahgre and Gunnison River pass through selenium-laden Mancos shale soils, and the extent to which the current levels of selenium are the result of natural sources, reversible activities, and/or irreversible activities is unknown at this time. Therefore, it is not clear whether the table value standards are achievable in these segments. The Commission does not intend its actions to in any way impede the efforts of the Selenium Task Force to reduce selenium loading in the Uncompahgre and Gunnison Rivers. The Commission intends that the actions taken in this hearing will mark the beginning of a process to identify the appropriate long-term selenium standards for these segments. It is expected that the efforts of the Selenium Task Force and others may result in the adoption of site-specific standards for selenium in some or all of the affected segments.

D. Removal of Use Protected Designation

The Division proposed that a number of aquatic life class 2 waterbodies be assigned undesignated status under the state antidegradation regulation due to the presence of Colorado State species of special concern. State regulations governing the “use-protected” designation allow this exception if the Commission determines that the waters are of exceptional ecological significance. The Commission believes that a number of important issues have been raised in this hearing regarding when and how this exception should be applied, and that further examination of these issues should occur. Nevertheless, for purposes of this hearing, the Commission, based upon a concern over the protection of classified uses and the absence of evidence of potential injury to permitted entities, has decided to accept the change to reviewable water status for the following:

Lower Dolores, Segment 4

Based upon representations made by certain parties to this rulemaking, the Commission endorses the formation of a workgroup to address the following topics and develop recommendations to be submitted to the Commission

The relationship between the "exceptional ecological significance" exception to use-protected designations and the aquatic life class 2 basis for applying use-protected designations

The need for and content of guidance to determine what water bodies are exceptionally ecologically significant

The roles of a) water quality data; b) the nexus between water quality conditions and species decline, and c) other stressors, in using this exception

The need for and nature of any amendments to the state antidegradation regulation if the presence of species of special concern constitute a basis for modification to the antidegradation designation of a water body.

The above listed segments would then be reviewed in light of the work group recommendations in the next triennial review of these basins.

The Commission urges that the work group process to address these issues move forward as expeditiously as possible. The Commission intends that the actions taken in this rulemaking not serve in any way as a precedent with respect to decisions in future Commission rulemaking proceedings.

E. 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 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 for which no existing primary contact uses have been documented following a reasonable level of inquiry. A Recreation Class 2 classification must be supported by a use attainability analysis that shows that there is not a reasonable potential for primary contact uses.

There was considerable evidence and testimony submitted in this hearing regarding what activities should be considered primary contact recreation. Section 31.13(1)(a) of the Basic Standards provides a non-exclusive list of primary contact activities. In this hearing, much discussion focused on the issue of whether "child's play" in streams that are too shallow to accommodate the primary contact uses listed in the Basic Standards should be considered a

primary contact use. The Commission does not believe that a theoretical potential for child's play means that all streams should be classified Recreation Class 1a or 1b. However, the Commission concludes that the evidence submitted demonstrates that there is a potential risk of ingestion of small quantities of water by children playing in relatively shallow streams, based on the hand-to-mouth pathway, which warrants Recreation Class 1 protection in appropriate circumstances as elaborated below. Thus, such ingestion may occur in streams where whole body immersion is not likely.

This does not mean, as suggested by some, that all water bodies would be reclassified as Recreation Class 1a or 1b based on some potential for child's play. Rather, the Commission intends that a stream should be classified Recreation Class 1a or 1b due to the presence or potential for child's play only where the evidence demonstrates a likelihood of such activity on a frequently occurring basis. Therefore, child's play may be an appropriate basis for a Recreation Class 1a or 1b classification in a developed area where there is easy access to a stream for children and it is likely that children will desire to play in the stream; it may not be an appropriate basis for such classifications in areas where it is not expected that children will be playing in a stream on a frequently occurring basis. Factors such as lack of adequate flow, excessive flows, remoteness from developed areas, physical limitations to access, steep banks, and visibly poor water quality may make it unlikely that child's play will take place on a frequently occurring basis. The Commission anticipates that these classification decisions will require case-by-case judgments until more experience is gathered with this issue.

A recreation Class 1a or 1b classification of a segment is not intended to imply that the owner or operator of property surrounding any 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 evidence or inadequate evidence was submitted on the record about actual or potential 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.

<u>Upper Gunnison Basin</u>

Currently, there is a potentially explosive controversy escalating in the Upper Gunnison River Basin regarding public recreational floating use of waterways over private land. This controversy has greatly elevated the concern over consequences of some of the recreation use classifications being proposed in connection with this triennial review. The controversy also has greatly magnified the difficulty of conducting a water quality review process which is based on accurate, complete and neutral determinations of recreation uses of waterways.

The Commission recognizes the potential for being drawn into this non-water quality related issue through the process of the triennial review of recreational use classifications. The Commission intends that neither it nor the Division shall be drawn into the controversy.

The Commission has accomplished the majority of the current review in the Upper Gunnison Basin but has taken no action on the recreational use classification or standards for the following segments:

Upper Gunnison segments 5, 6a, 15, 16, 17, 18, 19, 21, 23, 24, and 26 (Under the National Park Service's proposal segments 27, and 28 have been combined into segment 26)

For these segments, the pre-existing recreation classifications and standards will continue. The Commission believes that these classifications and standards are protective of the current uses.

The Commission reiterates that a recreational use attainability analysis is required to support adoption of a Recreation 2 classification. Continuation of the current classification of Recreation 2, with a 200/100ml fecal coliform standard until the next triennial review does not represent a decision that Recreation 2 or 200 fecal coliform are the ultimate classification or standards for these stream segments, or eliminate the need to conduct recreational use attainability analyses for any Class 2 stream segments in the future. In addition, the Commission agrees that it would be appropriate for the Basic Standards Implementation work group to address these and similar issues before the next Basic Standards rulemaking.

Other Gunnison River Segments

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 Class 2 to Class 1a with a 200/100 ml fecal coliform and 126/100 ml E. coli standard:

Upper Gunnison, Segments: 11, 12, 13a, 20, 22, 31
Uncompahgre, Segments: 4a, 4c, 5,15b
Lower Gunnison, Segments: 3, 4b, 8, 11
San Miguel, Segments: 2, 3a, 6a, 6b, 7a, 7b, 12
Lower Dolores, Segments: 3, 4, 5

The following segments with existing Recreation Class 1 classifications were changed to Class 1a:

Upper Gunnison, Segments: 1, 2, 3, 4, 6b, 7, 8, 9, 10, 14, 25, 29, 30, 32
North Fork, Segments: 1, 2, 4, 7
Uncompahgre, Segments: 1, 3, 14
Lower Gunnison, Segments: 1, 2, 5, 6, 10, 13
San Miguel, Segments: 1, 3b, 4, 5, 8, 9, 10, 11
Lower Dolores, Segments: 1, 2

Based on the information received, where a reasonable level of inquiry failed to identify any existing class 1 uses of the waters in these segments, the Commission changed the following segments to Class 1b with a 325/100 ml fecal coliform and 205/100 ml E. coli standard:

Upper Gunnison, Segment: 13b
North Fork, Segments: 5, 6
Uncompahgre, Segments: 9
Lower Gunnison, Segments: 7, 12

For the following segments, the Commission adopted seasonal recreation classifications, based on evidence differences in actual or potential uses at different times of the year:

North Fork, Segment 3:	Class 1a, April 1 through September 30 Class 2, October 1 through March 31
Uncompahgre, Segments 10, 11:	Class 1b, May 1 through October 31 Class 2, November 1 through April 30
Lower Gunnison, Segment 9:	Class 1a, April 1 through October 31 Class 2, November 1 through March 31

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

Uncompahgre River, Segments: 2, 4b, 6a, 6b, 7, 8, 12, 13, 15a
Lower Gunnison, Segment: 4a

The classifications for Uncompahgre segments 2, 7 and 8 are based upon low flows, cold temperatures, limited access and streambed characteristics that prevent primary contact recreation. The classifications for Uncompahgre segments 12, 13 and 15a and Lower Gunnison segment 4a are based upon low flows, limited access and streambed characteristics that prevent primary contact recreation. The classification for Uncompahgre 4b is based upon low flows and the presence of numerous major irrigation diversion structures which are hazardous and preclude primary contact recreation. The classifications for Uncompahgre segments 6a and 6b are based upon the gradient and size of the streambed, cold temperatures, and the fact that the allowable pH in this segment precludes primary contact recreation.

F. 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 aquatic life was present were upgraded with the addition of the full suite of inorganic standards. These segments are:

Upper Gunnison, Segments: 13, 15, 27
North Fork, Segment: 6
Uncompahgre, Segments: 6a, 10, 12
Lower Gunnison, Segment: 4
San Miguel, Segment: 12

G. Ambient Quality-Based Standards

There are several segments in the Gunnison Basin that contain standards based on existing ambient quality. Ambient standards are adopted where natural or irreversible man-induced conditions result in water quality levels higher (i.e. worse) 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. The Division reviewed the reason for the ambient standards and provided testimony that justified ambient standards being retained without adjustment on the following segments:

Upper Gunnison, Segments: 10(Pb), 20
San Miguel, Segment: 10

The Division reviewed the information about ambient water quality levels and provided testimony that justified revising or adopting the ambient standards on the following segments:

Upper Gunnison, Segments: 11, 12, 15
Uncompahgre, Segments: 3, 4, 7, 11, 12
Lower Gunnison, Segment: 2
San Miguel, Segment: 8

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:

Upper Gunnison, Segments: 10(Zn), 12, 17, 18, 21, 30
North Fork Gunnison, Segment: 4
Uncompahgre, Segment: 2
Lower Gunnison, Segment: 2
San Miguel, Segment: 6b

H. Temporary Modifications

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

Upper Gunnison, Segment 8: Slate Creek: This segment had temporary modifications for iron and manganese set at existing ambient quality. The revisions to the Water Supply standards resolved this issue and therefore the temporary modification is no longer needed. The temporary modification was deleted.

North Fork, Segment 5: Tribs to North Fork: This segment has a temporary modification for selenium. The Selenium Task Force is studying this issue. The expiration date of the temporary modification was extended from 8/30/02 to 12/31/06 to coincide with the next triennial review.

Uncompahgre, Segment 4a, 4b, 4c: Uncompahgre River, Montrose to Gunnison River: This segment has a temporary modification for selenium. The Selenium Task Force is studying this issue. The expiration date of the temporary modification was extended from 8/30/02 to 12/31/06 to coincide with the next triennial review. This segment also had a temporary modification for fecal coliform which was deleted.

Uncompahgre, Segment 14: Sweitzer Lake: This segment has a temporary modification for selenium. The Selenium Task Force is studying this issue. The selenium temporary modification value was changed to reflect current conditions and the expiration date was extended from 8/30/02 to 12/31/06 to coincide with the next triennial review.

Lower Gunnison, Segment 2: Gunnison River, Uncompahgre to Colorado Rivers: This segment has a temporary modification for selenium. The Selenium Task Force is studying this issue. The selenium temporary modification value was changed to reflect current conditions and the expiration date was extended from 8/30/02 to 12/31/06 to coincide with the next triennial review.

Lower Gunnison, Segment 9: Fruitgrowers Reservoir: This segment has temporary modifications for fecal coliform and unionized ammonia. The Division and other agencies are studying the reservoir. Data indicates that the underlying standards are attained. The temporary

modifications were deleted. A temporary modification for dissolved oxygen was adopted with an expiration date of 12/31/06.

San Miguel, Segment 3a: San Miguel River, Upper portion to Marshall Creek: This segment has a temporary modification for zinc. Remedial work is currently conducted in the upper part of the basin. The expiration date of the temporary modification was extended from 6/30/02 to 12/31/06 to coincide with the next triennial review.

San Miguel, Segment 3b: San Miguel River, Marshall Creek to South Fork: This segment has temporary modifications for zinc, cadmium and manganese. Data indicates that the underlying standards are attained for cadmium and manganese. The temporary modifications for cadmium and manganese were deleted. The zinc temporary modification value was changed to reflect current conditions and the expiration date was extended from 6/30/02 to 12/31/06 to coincide with the next triennial review.

San Miguel, Segment 4, San Miguel River, South Fork to Naturita Creek: This segment has a temporary modification of the temperature standard from the Power Plant Bridge to Naturita Creek, of 28o C for July, August and September, which is set to expire 12/31/2006. The temporary modification is provided to allow time for Tri-State Generation and Transmission Association to participate in a work group to address the statewide implementation of the narrative and numeric temperature standards.

There were several segments where temporary modifications that reflect current ambient conditions were adopted. Temporary modifications were set to expire on 12/31/06 to coincide with the next triennial review. The segments and the constituents are:

Upper Gunnison, Segment 10: cadmium, copper, and zinc
Upper Gunnison, Segment 11: cadmium and zinc
Upper Gunnison, Segment 12: zinc
North Fork, Segment 6: selenium
Uncompahgre, Segment 12: selenium
Lower Gunnison, Segment 4: selenium
Lower Gunnison, Segment 7: selenium and iron
San Miguel, Segments 6a and 6b: zinc
San Miguel Segment 7b: lead

I. Organic Chemical Standards

The organic chemical standards were updated to include changes adopted by the Commission in the 2000 revisions to the Basic Standards (see 31.11 in Regulation No. 31). “Water + Fish” organic chemical standards are presumptively applied to all Aquatic Life Class 1 streams which also have a Water Supply classification, and are applied to Aquatic Life Class 2 streams which also have a Water Supply classification, on a case-by-case basis. The “Fish Ingestion” organic chemical standards are 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. Existing site-specific applications of additional organics (as noted in the Qualifier column of Table 35.7) were modified to conform to this change.

Information was reviewed regarding 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. That information showed that four additional segments had the potential for consumption of fish. These waterbodies were designated to receive the full protection of numeric Water + Fish or Fish Ingestion organic standards:

Fish Ingestion: Upper Gunnison Segment 13

Water + Fish: Upper Gunnison Segment 17, North Fork Segment 6, and Uncompahgre Segment 10

J. Water Supply Classification

These segments had the Water Supply classification added to them. The associated water supply standards will now apply to segments:

Upper Gunnison, Segments: 13a, 13b Uncompahgre, Segment: 10 Lower Gunnison, Segment: 4 San Miguel, Segment: 12

The Commission rejected a proposal by the High Country Citizens Alliance that a water supply classification be added to Upper Gunnison segment 12, based on the presence of a private water well near this segment of the stream. The Commission does not believe that adequate evidence was provided that the quality of water in segment 12 influences the quality of water in this well.

K. 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 section 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 aesthetics 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 section 31.11(6): either (i) existing quality as of January 1 2000; or (ii) Iron = 300 µg/L (dissolved); Manganese = 50 µg/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.

L. Agriculture Classifications

There is one segment in the Gunnison River Basin that was not correctly classified for Agricultural use. The Agricultural use classification was adopted for San Miguel, Segment 3b.

M. Agriculture Standards

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

Upper Gunnison, Segments: 6a, 31
Lower Gunnison, Segment 12
Lower Dolores, Segment 3

N. Other Site-Specific Revisions

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

The following aquatic life classifications were upgraded from class 2 to class 1 based on information presented that showed diverse aquatic communities in these segments.

Lower Gunnison, Segment 8

Lower Gunnison, Segment 6 was changed from aquatic life class 2 warm to class 1 cold, based on information received about the aquatic community that includes trout species.

Aquatic life cold 2 use classifications were added to Upper Gunnison Segment 13 and Uncompahgre Segments 6a and 6b, based on information that an aquatic community is in place in these segments.

PARTIES TO THE RULEMAKING HEARING

1. Animas River Stakeholders Group
2. Colorado Wild, San Juan Citizen's Alliance, Sierra Club-Rocky Mountain Chapter, Colorado Environmental Coalition and The Wilderness Society
3. U.S. Department of the Interior, Bureau of Land Management
4. Sunnyside Gold Corporation
5. The Southwestern Water Conservation District
6. Silver Wing Company, Inc.
7. U.S. Department of Agriculture Forest Service
8. Shenandoah Mining Company Incorporated
9. Town of Silverton
10. Pagosa Area Water and Sanitation District
11. Peter Butler
12. U.S. Department of the Interior National Park Service
13. Climax Molybdenum Company
14. Tri-State Generation and Transmission Association, Inc.
15. Town of Olathe
16. The Board of County Commissioners of the County of Gunnison
17. Gunnison County Stockgrowers Association, Inc.
18. High Country Citizens' Alliance and Western Slope Environmental Resource Council
19. The City of Grand Junction
20. Homestake Mining Company
21. The Board of County Commissioners of the County of San Miguel
22. Mt. Crested Butte Water and Sanitation District
23. Colorado River Water Conservation District
24. Town of Cedaredge
25. The Board of County Commissioners of the County of Mesa
26. The Uncompahgre Valley Water Users Association
27. Umetco Minerals Corporation
28. The Colowyo Coal Company, L.P.
29. The Uncompahgre Valley Association
30. Town of Crested Butte
31. The City of Delta
32. Trapper Mining, Inc.
33. The Colowyo Coal Company, L.P.
34. The City of Grand Junction
35. Colorado River Water Conservation District
36. Yellow Jacket Water Conservation District
37. The Town of Meeker
38. The City of Fruita
39. Exxon Mobil Corporation
40. Shell Frontier Oil & Gas Inc.
41. The Board of County Commissioners of the County of Mesa
42. American Soda, LLP
43. The Rio Blanco Water Conservancy District

44. Colorado Division of Wildlife
45. The Northern Colorado Water Conservancy District and its Municipal Subdistrict
46. Upper Gunnison River Water Conservancy District
47. U.S. EPA Region
48. Ralph E. Clark III
49. U.S. Department of the Interior, Fish and Wildlife Service

35.72 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 12, 2005 RULEMAKING EFFECTIVE 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 Gunnison and Lower Dolores River Basins, the Division discovered errors and inconsistencies between segment descriptions. To resolve these issues the Commission adopted changes in the following segment descriptions:

Upper Gunnison segments 3, 10 and 32
Lower Gunnison segments 11 and 12
San Miguel segments 2 and 10

Lower Gunnison segment 11 was split into segments 11a and 11b: Segment 11b was added to identify the portion of the segment within the West Elk Wilderness Area.

35.21 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 12, 2006 RULEMAKING; ADOPTED AUGUST 14, 2006; EFFECTIVE JANUARY 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:

A. Waterbody Segmentation

Some renumbering and/or creation of new segments in the basin 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. The following changes were made:

Upper Gunnison River Basin segment 29b was created for Lake San Cristobal.

Uncompahgre River Basin segment 3b was created for Ridgway Reservoir.

Waters within the Redwell Basin, tributary to Oh-Be-Joyful Creek, were moved to Upper Gunnison River Basin segment 10 to maintain water quality relationships of Oh-Be-Joyful Creek basin below the wilderness area boundary.

Red Mountain Creek tributaries Corkscrew and Champion basins were added to Uncompahgre River Basin segment 6b (Red Mountain Creek) to maintain water quality relationships of the drainage.

Pryor Creek and West Fork Spring Creek were added to Uncompahgre River Basin segment 13 because of similar water quality and uses with the existing segment.

San Miguel River Basin segment 4 was resegmented into segments 4a and 4b.

Lower Dolores River Basin segment 3b was created for the waters within the Sinbad Valley (Salt Creek).

B. Revised Aquatic Life Use Classifications

The Commission reviewed information regarding existing aquatic communities. The Aquatic Life Use classifications were changed for several segments based on the presence of Colorado Cutthroat Trout, current temperature data and deleted for one segment. The following changes were made:

Aquatic Life Use changed from Cold 2 to Cold 1 to reflect the presence of Colorado Cutthroat Trout, a species of special concern:

Upper Gunnison River Basin segment 17
Uncompahgre River Basin segment 13

Aquatic Life Use changed from Cold to Warm based on temperature data and aquatic life species present:

Lower Gunnison River Basin segment 2

Deletion of the Aquatic Life Use based on water quality and aquatic life sampling and the preparation of a use attainability analysis:

Uncompahgre River Basin segment 6b.

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 an 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 changed the following segments from Recreation Class1a to Recreation Class E with a 126/100 ml E. coli standard:

Upper Gunnison River Basin segments: 1, 2, 3, 4, 5, 6b, 7, 8, 9, 10, 11, 12, 13a, 14, 20, 22, 25, 29a, 29b, 30, 31 and 32
North Fork of the Gunnison River Basin segments: 1, 2, 4 and 7
Uncompahgre River Basin segments: 1, 3a, 4a, 4c, 5, 6b, 13, 14 and 15b
Lower Gunnison River Basin segments: 1, 2, 3, 4b, 5, 6, 8, 10, 11a, 11b and 13
San Miguel River Basin segments: 1, 2, 3a, 3b, 4, 5, 6a, 6b, 7a, 7b, 8, 9, 10, 11 and 12
Lower Dolores River Basin segments: 1, 2, 3a, 4 and 5

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

Upper Gunnison River Basin segment13b
North Fork of the Gunnison River segments 5 and 6
Uncompahgre River Basin segment 9
Lower Gunnison River Basin segments 7 and 12

The following segment was converted from Recreation Class 1 to Recreation Class U:

Upper Gunnison River Basin segment 6a

The following segments were converted from Recreation Class 2 to Recreation Class U. These segments include:

Upper Gunnison River Basin segments 16, 17, 18, 19, 21, 23, 24 and 26. The E. coli standard for these segments were 126/100 ml and were not changed.

Upper Gunnison River Basin segment 15 had a fecal coliform standard of 2000/100 ml and was changed to be consistent with the use at 126/100ml E. coli.

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

Uncompahgre River Basin segments 2, 4b, 6a, 7, 8, 12 and 15a
Lower Gunnison River Basin segment 4a

The following segments with seasonal Recreation Class 1a/Recreation Class 2 classification were converted to Class E/Class N:

North Fork of the Gunnison River Basin segment: 3
Lower Gunnison River Basin segment 9

The following segment with seasonal Recreation Class 1a/Recreation Class 1b classification was converted to Class E/Class P:

Uncompahgre River Basin segment 10

The following segment with seasonal Recreation Class 1b/Recreation Class 2 classification was converted to Class P/Class N:

Uncompahgre River Basin segment 11

D. Addition of Water Supply Use Classification and Standards

Based on review of information regarding the location of public water supplies, a water supply classification and standards were added Uncompahgre River Basin segment 3a.

E. Agriculture Standards

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

Uncompahgre River Basin segment: 6a
San Miguel River Basin segments: 3a, 6a and 6b

F. Changes to Antidegradation Designation

Outstanding Waters Designation: Based on evidence that shows the water quality meets the requirements of 31.8(2)a, the OW designation was added to the following segment: Upper Gunnison River Basin segment 1 was modified to incorporate the waters within the Powderhorn Wilderness Area.

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 Gunnison River Basin segments: 6a, 13a, 13b, 15 and 17
Uncompahgre River Basin segments: 6a, 7, 8, 9, 10, and 13
Lower Gunnison River Basin segment: 7.
San Miguel River Basin segment: 12.

Decoupling Aquatic Life Warm 2 and UP: Also as part of the Basic Standards hearing of 2005, the Commission decided that the presence of a warm water class 2 classification would still be a presumptive basis for applying a use-protected designation; however, that presumption can be overcome if there is data showing that the water is of high quality. Therefore, the Commission reviewed all warm water class 2 segments to determine if the use protected designation is still warranted. No Regulation 35 aquatic life warm 2 segments were changed from use-protected to reviewable.

G. Addition of Aquatic Life Standards

Based on water quality sampling data and aquatic life information, aquatic life numeric standards were added to Upper Gunnison River Basin segment 6a.

H. Ambient Quality-Based Standards

There are several segments in the Basins that are assigned standards based on existing ambient water quality. 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 Commission did not adopt any changes to the ambient quality-based standards.

I. Aquatic Life Ammonia Standards

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 No. 31. In cases where dischargers need time beyond one permit term to assure compliance with new permit limits, temporary modifications have been adopted. These are listed below in the temporary modification section.

J. 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 35.6(3) were modified to conform to Regulation No. 31.

Site-Specific Zinc Standards for Sculpin: In low hardness situations (hardness below 113 mg/l CaCO3) the new zinc equation is not protective of sculpin, a native west-slope fish species. The Commission adopted sculpin-specific zinc equation as site-specific standards for the following segments that are inhabited by sculpin that also have low hardness:

Upper Gunnison River Basin segments: 2, 3, 4, 6a, 7, 15, 16, 19, 22, 23, 29a, 30 and 32
North Fork of the Gunnison River Basin segments: 1, 2 and 4
Uncompahgre River Basin segments: 5 and 6a
Lower Gunnison River Basin segment: 8 |
San Miguel River Basin segments: 1 and 2

K. 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)

L. Uranium Standards

Uranium standards were added for segments that flow near uranium-bearing rock formations. The Uranium standard was added to:

Lower Gunnison River Basin segments: 5 and 6
San Miguel River Basin segments: 5 and 12
Lower Dolores River Basin segments: 1, 2, 3a, 4 and 5

M. 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 which are being removed because current ambient conditions are meeting the underlying standards:

Uncompahgre River Basin segment 4a (Selenium).

Temporary modifications were removed for the following segments though the water quality standards were not being met.

Upper Gunnison River Basin segment: 10
Lower Gunnison River Basin segment: 9
San Miguel River Basin segments: 6a, 6b and 7b.

The following segments have new or extended temporary modifications. 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.

Upper Gunnison River Basin segment 8: Cd(ch) = 0.4, expiration date of 12/31/2011. This temporary modification is intended to allow the Town of Crested Butte Wastewater Treatment Plant adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

Upper Gunnison River Basin segment 12: Cd(ch) = 2.3, Zn(ch)= 518, expiration date of 12/31/2011. This temporary modification is intended to allow the Keystone Mine adequate time to assess any potential changes to its discharge permit. The need for these temporary modifications will be reviewed in 2009 and 2010.

Upper Gunnison River Basin segment 16: Zn(ch) = 11.9, expiration date of 12/31/2011. This temporary modification is intended to allow the North Elk Meadows HOA Wastewater Treatment Facility adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

North Fork of the Gunnison River Basin segment 3: Se(ch) = 5.7, expiration date of 12/31/2011. This temporary modification is intended to allow multiple dischargers adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

North Fork of the Gunnison River Basin segment 5: Se(ch) = existing ambient quality, expiration date of 12/31/2011. This temporary modification is intended to allow multiple

dischargers adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

North Fork of the Gunnison River Basin segment 6b: Fe(ch)(Trec)= existing ambient quality, Se(ch) = existing ambient quality, expiration date of 12/31/2011. This temporary modification is intended to allow multiple dischargers adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

Uncompahgre River Basin segment 3a: Cd(ch)=1.1, Fe(Trec) = 1673, expiration date of 12/31/2011. This temporary modification is intended to allow multiple dischargers adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

Uncompahgre River Basin segment 4a: NH3(ac/ch)=TVS(old) expiration date of 12/31/2011. This temporary modification is intended to allow the City of Montrose and the West Montrose Sanitation District Wastewater Treatment Plant adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

Uncompahgre River Basin segment 4b: Se(ch) = 20, expiration date of 12/31/2011. This temporary modification is intended to allow multiple dischargers adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

Uncompahgre River Basin segment 4b: NH3(ac/ch)=TVS(old) expiration date of 12/31/2011. This temporary modification is intended to allow the Town of Olathe Wastewater Treatment Plant adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

Uncompahgre River Basin segment 4c: Se(ch) = 20, expiration date of 12/31/2011. This temporary modification is intended to allow the Gunnison Basin Selenium Task Force and the Colorado River Water Conservation District adequate time to assess any potential changes. This need for this temporary modification will be reviewed in 2009 and 2010.

Uncompahgre River Basin segment 12: Se(ch) = existing ambient quality, expiration date of 12/31/2011. This temporary modification is intended to allow the Gunnison Valley Selenium Task Force adequate time to assess any potential changes. This need for this temporary modification will be reviewed in 2009 and 2010.

Lower Gunnison River Basin segment 2: Se(ch) = 8.4, expiration date of 12/31/2011. This temporary modification is intended to allow the Gunnison Valley Selenium Task Force adequate time to assess any potential changes. This need for this temporary modification will be reviewed in 2009 and 2010.

Lower Gunnison River Basin segment 2: NH3(ac/ch)=TVS(old) expiration date of 12/31/2011. This temporary modification is intended to allow the City of Delta Wastewater Treatment Plant adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

Lower Gunnison River Basin segment 4a: Se(ch) = existing ambient quality, expiration date of 12/31/2011. This temporary modification is intended to allow the Gunnison Valley

Selenium Task Force adequate time to assess any potential changes. This need for this temporary modification will be reviewed in 2009 and 2010.

Lower Gunnison River Basin segment 4a: NH3(ac/ch)=TVS(old) expiration date of 12/31/2011. This temporary modification is intended to allow the Town of Cedaredge Wastewater Treatment Plant adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

Lower Gunnison River Basin segment 4b: Se(ch) = existing ambient quality, expiration date of 12/31/2011. This temporary modification is intended to allow the Gunnison Valley Selenium Task Force adequate time to assess any potential changes. This need for this temporary modification will be reviewed in 2009 and 2010.

Lower Gunnison River Basin segment 7: Se(ch) = 9.3 and Fe(ch)(Trec)= 2650, expiration date of 12/31/2011. This temporary modification is intended to allow the Gunnison Valley Selenium Task Force adequate time to assess any potential changes and to allow dischargers any potential changes to their permits. This need for this temporary modification will be reviewed in 2009 and 2010.

San Miguel River Basin segment 2: Cd(ch) = 0.6, expiration date of 12/31/2011. This temporary modification is intended to allow the Telluride Water Treatment Plant adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

San Miguel River Basin segment 3b: Cd(ch) = 0.7, Zn(ch) = 198 expiration date of 12/31/2011. This temporary modification is intended to allow the Telluride Wastewater Treatment Plant adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

San Miguel River Basin segment 4b: Temperature = 26.3°C MWAT below the mixing zone of the Tri-State Generation and Transmission Nucla Power Station from 6/1 to 9/30, expiration date of 12/31/2011. This temporary modification is intended to allow Tri-State Generation and Transmission adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010. Further discussion of this temporary modification is found in Section N. Other Site-Specific Revisions.

San Miguel River Basin segment 5: NH3(ac/ch)=TVS(old) expiration date of 12/31/2011. This temporary modification is intended to allow the Naturita Wastewater Treatment Plant adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

Lower Dolores River Basin segment 2: NH3(ac/ch)=TVS(old) expiration date of 12/31/2011. This temporary modification is intended to allow the Southwest Mesa County Rural Public Improvement District (Gateway) adequate time to assess any potential changes to its discharge permit. This need for this temporary modification will be reviewed in 2009 and 2010.

For segments with multiple streams or “all tributary” segments the Division in setting temporary modifications should use the narrative statement “existing ambient quality” to avoid confusion with multiple sampling locations.

N. <u>Other Site-Specific Revisions</u>

1. Lower Gunnison segment 4c: The Commission made the decision to resegment and change the recreation use of Red Rock Creek within the Black Canyon of the Gunnison National Park. This portion of Rock Creek was previously included in an all tributaries segment. The recreation use was changed from secondary contact to existing primary contact use. This change was based on evidence of greater public use to the area through recently opened public access.

2. North Fork segment 6: North Fork Segment 6 of the Gunnison River was refined to better define the "all tributaries" segment. Segment 6b was created with the existing use classifications based on 1) the presence of surface water and ground water under the influence of surface water that is used for water supply and 2) the presence of "fish of catchable size and that are normally consumed." Waterbodies with these uses were identified in this segment. The water supply use and the Water+Fish qualifier were removed from segment 6a since waterbodies with these uses were included in segment 6b.

3. San Miguel segment 4: The Commission resegmented San Miguel segment 4 into segments 4a and 4b with a new segment boundary at the CC Ditch. The decision was made to retain Cold Water Class 1 Aquatic Life in Segment 4a and to reclassify Segment 4b as Cold Water Class 2 based on dewatered conditions below the CC Ditch. The temperature standard of 20°C is applied to segments 4a and 4b. A new temporary modification has been applied to segment 4b, below the mixing zone of Tri-State Generation and Transmission Nucla Power Station.

The Commission adopted a temporary modification for temperature in the lower portion of Segment 4b of 26.3 °C, as a maximum weekly average temperature ("MWAT") from 6/1 to 9/30, to expire 12/31/2011. This temporary modification is adopted pursuant to Regulation 31.7(3)(a)(iii) because there is significant uncertainty regarding the appropriate long term underlying temperature standard.

There is uncertainty associated with the underlying standard in the lower portion of Segment 4b. This portion of the stream is a transition between cold and warm water. Based on the existing Basic Standards, the Commission adopted a temporary modification of 26.3°C and an underlying standard of 20°C, which raises uncertainty as to the appropriate underlying standard that should be applied to protect the aquatic life community.

A temporary modification has been adopted to provide time to address this uncertainty and recommend appropriate standards for these water bodies. During the effective period of this temporary modification, Tri-State, in coordination and collaboration with the Division and CDOW, will conduct cost-effective studies designed to address whether Tri-State's discharge has an adverse impact on the aquatic community.

The numeric value of this temporary modification was calculated using a mass-balance approach with the following assumptions: The upstream low-flow was estimated as the 7E3 generated from the amount of water measured at the Brooks Bridge minus the Tri-State cooling water withdrawal. The upstream temperature was an adjusted MWAT of 24°C which corresponds to the modeled MWAT of the San Miguel at the point of discharge. The discharge characteristics were the Power Station design flow and an effluent temperature of 30°C max.

It is the Commission's intent to preserve the status quo for Tri-State's discharge for the duration of the temporary modification. In a stipulation between Tri-State and the Division, Tri-State committed that it will not alter operations on a year round basis in a manner that would adversely affect effluent temperature for the duration of the temporary modification. The Division agreed that it will maintain the existing daily maximum permit limit of 30°C at the compliance point on a year round basis.

O. Other Changes

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

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

The Water and Fish Organics qualifier on the Uncompahgre River Basin segment 9 was corrected to Fish Ingestion since the segment does not have a Water Supply use.

The segment description for Upper Gunnison River Basin segment 2 was changed to reflect the incorporation of the Oh-Be-Joyful Wilderness Area into the Raggeds Wilderness Area.

The segment description for Upper Gunnison River Basin segment 4 was changed to include the Taylor Park Reservoir.

The segment description for Upper Gunnison River Basin segment 26 was changed to include the Silver Jack Reservoir.

The segment description for San Miguel River Basin segment 2 was changed to include the Trout Lake.

PARTIES TO THE RULEMAKING HEARING

1. San Juan Citizens Alliance
2. Tri-State Generation and Transmission Association
3. National Park Service
4. Mountain Coal Company
5. West Elk Mine
6. Homestake Mining Company of California
7. Umetco Minerals Corporation
8. Lee Mobile Home Park
9. The Southwest Mesa County Rural Services Public Improvement District
10. Animas River Stakeholders Group
11. Board of County Commissioners of the County of Gunnison, Colorado
12. The Town of Silverton
13. The Town of Cedaredge
14. The Town of Olathe
15. High Country Citizens Alliance
16. Upper Gunnison River Water Conservancy District
17. Colorado Trout Unlimited 18. The City of Grand Junction
19. Gunnison County Stockgrowers Association, Inc.
20. The Southwestern Water Conservation District
21. Vista Verde Village LLC
22. The Colorado Division of Wildlife
23. Nucla Sanitation District
24. Town of Naturita
25. The Pagosa Area Water and Sanitation District
26. The Boxelder Sanitation District
27. City of Ouray
28. Norwood Sanitation District
29. U.S. Environmental Protection Agency
30. Colorado River Water Conservation District

35.30 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 2011. 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

35.31 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 modifications of ammonia standards were reviewed.

Deleted: Ammonia temporary modifications were deleted on the following segments because permits had recently been reissued for dischargers on the segments. Compliance schedules in the permits are adequate to address any necessary treatment plant upgrade issues.

Uncompahgre River Segments 4a and 4b
Lower Gunnison River segments 2

Detail added: Lower Gunnison River segment 4a: The following details were added to the tables: the chronic ammonia temporary modification was modified to clarify that the chronic standard's value is 0.02 mg/l, rather than just "TVS old"; and an expiration date of 12/31/2011 was added to the ammonia temperature temporary modification.

Other Parameters: Temporary modifications of other parameters were also reviewed.

Deleted: temporary modifications were deleted on the following segments because no permitted discharge has been identified that needs a temporary modification

Uncompahgre segment 4c	selenium
Lower Gunnison segment 4b	selenium

Detail added: An expiration date was added to the temperature temporary modification on San Miguel River segment 4b

Extension of expiration dates: The Commission has decided to delay the basin-wide review of water quality classifications and standards for this basin until June 2012, to accommodate an issue-specific rulemaking for nutrient criteria in June 2011. Consistent with that decision, the expiration dates of the temporary modifications on the following segments that are currently scheduled to expire on 12/31/2011 are extended to 12/31/2012. These will be reviewed again in the December 2010 and December 2011 Temporary Modification hearing.

Upper Gunnison segments 8, 12, and 16
North Fork Gunnison segments 3, 5, and 6b
Uncompahgre segments 3a, 4b, and 12
Lower Gunnison segments 2, 4a (selenium only), and 7
San Miguel River segments 2, 3b and 4b

The Commission would like to emphasize that its intent and expectation is that the issues that necessitated adoption of these temporary modifications should be resolved as soon as possible and in a manner that takes full advantage of the opportunities provided by the December 2010 and December 2011 reviews of temporary modifications. The Commission recognizes that it is important to resolve uncertainty regarding the underlying standards so that temporary modifications can be eliminated and any needed pollution controls can be put in place in a timely manner.

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
15. Colorado Division of Wildlife
16. U.S. Environmental Protection Agency

35.32 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.

A. Ammonia: The type i temporary modifications of ammonia standards on 3 segments were reviewed. The Commission deleted the temporary modification on Lower Dolores segment 2 as it is no longer needed. The Commission took no action on San Miguel segment 5. The temporary modification will expire on 12/31/2011. On Lower Gunnison segment 4a, the Commission corrected the numeric value for the ammonia chronic temporary modification from 0.02 mg/L to 0.06 mg/L which had been modified in error in 2009. The temporary modification will expire on 12/31/2011.

B. Metals: Temporary modifications of the metals standards were reviewed. They will expire on 12/31/2012. When originally adopted, time was allotted to allow dischargers time to assess potential changes to their discharge permits. It is anticipated that these will be addressed as part of the basin-wide review in June 2012:

Upper Gunnison segments 8, 12, and 16
North Fork Gunnison segments 3, 5, and 6b
Uncompahgre segments 3a, 4b and 12
Lower Gunnison segments 2, 4a and 7
San Miguel segments 2, 3b, and 5

C. San Miguel River segment 4b: Tri-State Generation and Transmission Association, Inc. (Tri-State) proposed revisions to the Classifications and standards for San Miguel River segment 4b. The Commission found that the existing thermal discharge from Tri-State's Nucla power plant is not causing harm to the aquatic community based on fish and macroinvertebrate data collected in 2008 and 2009. Site-specific temperature standards were adopted to reflect the existing thermal conditions in San Miguel segment 4b. The summer temperature standards apply from March through October and are based on the maximum WAT and DM measured in Segment 4b (below Tri-State's mixing zone, 2,000 ft below the outfall) from April 16, 2008 through Oct 27, 2010. The winter temperature standards apply from November through February and are equivalent to the cold-stream tier-II winter temperature standards.

If no additional biological data is available in subsequent reviews, the site-specific summer temperature standards may be revised upwards using the following equations:

Summer DM above Tri-State Nucla plant discharge + 0.8 ^{o}C = revised DM for segment 4b

Summer MWAT above Tri-State Nucla plant discharge + 0.4 ^{o}C = revised MWAT for segment 4b

The 0.8 ^{o}C for DM and 0.4 ^{o}C for MWAT are the measured difference in temperature between the monitoring locations upstream and downstream of Tri-State's plant discharge on the days the maximum DM and MWAT were recorded. The biological data from 2008 and 2009 shows that this amount of warming does not cause harm to the biological community, and is protective of the Aquatic Life use. The temporary modification for temperature was deleted.

The Commission changed the use classification from Aquatic Life Cold 2 to Aquatic Life Warm 1 based on evidence presented by Tri-State of the overwhelming preponderance of warm water fish and macroinvertebrate species in segment 4b and no evidence of cold water fish reproduction. The more intensive sampling in 2008 and 2009 demonstrated that the segment supports a wide variety of warm water fish and macroinvertebrates, which supports the change to class 1 (warm).

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

35.33 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 and a three-month delay of the Regulation #35 basin-wide review. Accordingly, the Commission considered the expiration dates of temporary modifications expiring on or before December 31, 2012 in a written comment rulemaking. The Commission extended the expiration dates of the following temporary modifications to March 31, 2013. They would be reviewed during the September 2012 basin-wide rulemaking hearing.

Upper Gunnison segment 8 (Cd)
Upper Gunnison segment 12 (Cd, Zn)
Upper Gunnison segment 16 (Zn)
North Fork Gunnison segment 3 (Se)
North Fork Gunnison segment 5 (Se)
North Fork Gunnison segment 6b (Fe, Se)
Uncompahgre segment 3a (Cd, Fe)
Uncompahgre segment 4b (Se)
Uncompahgre segment 12 (Se)
Lower Gunnison segment 2 (Se)
Lower Gunnison segment 4a (Se)
Lower Gunnison segment 7 (Fe, Se)
San Miguel segment 2 (Cd)
San Miguel segment 3b (Cd, Zn)

The following temporary modifications were deleted because they will have expired as of the effective date of this revision:

Lower Gunnison segment 4a (NH_3)
San Miguel segment 5 (NH_3).

35.34 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; SEPTEMBER 10, 2012 RULEMAKING; FINAL ACTION NOVEMBER 5, 2012; EFFECTIVE DATE MARCH 30, 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:

A. Waterbody Segmentation

The Commission split lakes and reservoirs from segments that also contained streams, so that new temperature standards could be adopted. Lakes and reservoirs were deleted from the following segments that previously encompassed streams and lakes and reservoirs:

Upper Gunnison River segments: 1-5, 6b, 9-10, 15-17, 19, 21, 23, 25-26, 29a-b and 32
North Fork of the Gunnison River segments: 1, 4-5, 6a and 6b
Uncompahgre River segments: 1-2, 3b, 5, 10-12 and 14
Lower Gunnison River segments: 3, 4b, 8, 11a-b and 12
San Miguel River segments: 1-2, 6a-b, 7a-b, 9-11 and 12
Lower Dolores River segments: 3a and 3b

The following segments were created for lakes and reservoirs:

Upper Gunnison River segments: 33-38
North Fork of the Gunnison River segments: 8-11
Uncompahgre River segments: 16-21
Lower Gunnison River segments: 14-19
San Miguel River segments: 13-20
Lower Dolores River segments: 7-8

The following segments were deleted when the constituent waterbodies were merged with other segments:

Upper Gunnison River segments: 3 and 13b
San Miguel River segments: 7b

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) differences in 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 Gunnison River 1-3: The segment description was amended to include all tributaries to the Gunnison within the West Elk, Collegiate Peaks, Maroon Bells, Raggeds, Fossil Ridge, or Uncompahgre Wilderness areas. The streams in these wilderness areas were formerly split into Segments 1-3. These waters were combined into one segment because they had the same use classifications, and are all designated Outstanding Waters. The lakes and reservoirs within Segments 1, 2, and 3 were moved to a new Segment 33 to facilitate the adoption of appropriate temperature standards. A new segment description was created for Segment 2: All tributaries and wetlands from North Beaver Creek to Meyers Gulch, from the West Elk Wilderness boundary to their confluences with Blue Mesa Reservoir, Morrow Point Reservoir, or the Gunnison River, excluding Steuben Creek, North Willow Creek, and Soap Creek. These tributaries were moved from Segment 26 to facilitate an outstanding waters designation.

Upper Gunnison River 4: The lakes and reservoirs in this segment were moved to a new Segment 34, with the exception of Taylor Park Reservoir, which was moved to Segment 37 with other coldwater lakes larger than 100 acres surface area. These waters were split into different segments to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 5a-5b: The mainstem of the East River from the confluence with the Slate River to the confluence with the Gunnison River was moved to a new Segment 5b. The lakes and reservoirs in Segment 5 were moved to a new Segment 34. These waters were split into different segments to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 6b-6c: The lower portion of Cement Creek, including tributaries and wetlands, from the Horse Basin Creek confluence to the East River were moved to a new Segment 6c. The lakes and reservoirs in Segment 6b were moved to a new Segment 34. These waters were split into different segments to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 9: The lakes and reservoirs in this segment were moved to a new Segment 34. These waters were split into different segments to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 10a-10b: The tributaries and wetlands in Redwell basin were moved to a new Segment 10b. Redwell basin was split from the rest of the Oh-Be-Joyful watershed because the water quality in Redwell basin is significantly different than the rest of the segment, and the ambient lead concentration is higher. The lakes and reservoirs in Redwell Basin were moved to a new Segment 35, and the remaining lakes and reservoirs in Segment 10 were moved to a new Segment 34 to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 13: Segments 13a and 13b were combined to create one segment for Woods Creek. The Commission determined that the Recreation P Use classification should be upgraded to Recreation E. These waters were combined into one segment because they now have the same use classifications, antidegradation designation, and standards.

Upper Gunnison River 15a-15b: South Beaver Creek, including tributaries and wetlands, from the source to the Saguache/Gunnison County line was moved to a new Segment 15b. The downstream boundary of Segment 15a was changed from the inlet of Blue Mesa Reservoir to the County Road 32 crossing. This boundary was changed because the water levels in Blue Mesa Reservoir fluctuate, and the location of the inlet changes with these fluctuations. The lakes and reservoirs in Segment 15 were moved to a new Segment 36. These waters were split into different segments to facilitate the adoption of appropriate temperature standards, and to refine the application of ambient iron standards, which now apply only to Segment 15a.

Upper Gunnison River 16a-16b: The mainstem of Ohio Creek from a point immediately below 7 Road to the confluence with the Gunnison River was moved to a new Segment 16b. The lakes and reservoirs in this segment were moved to a new Segment 36. These waters were split into different segments to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 17a-17b: Antelope Creek, including all tributaries and wetlands, except for West Antelope Creek, was moved to a new Segment 17b. The lakes and reservoirs in this segment were moved to a new Segment 36. These waters were split into different segments to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 18a-18b: The mainstem of Tomichi Creek from the confluence with Porphyry Creek to the confluence with the Gunnison River was moved to a new Segment 18b. This segment was split to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 19: The lakes and reservoirs in this segment were moved to a new Segment 36 to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 21: The lakes and reservoirs in this segment were moved to a new Segment 36 to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 23: The lakes and reservoirs in this segment were moved to a new Segment 36 to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 25: Blue Mesa, Morrow Point, and Crystal Reservoirs were moved to a new Segment 38 with other coldwater lakes larger than 100 acres surface area to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 26: The lakes and reservoirs in this segment were moved to a new Segment 37 to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 29a-29b: Cebolla Creek, including tributaries and wetlands, from the source to the County Road 29 crossing near Powderhorn was moved from Segment 26 to Segment 29a. Powderhorn Creek, including tributaries and wetlands, from the source to the confluence with Cebolla Creek was also moved from Segment 26 to Segment 29a. The Lake Fork, including tributaries and wetlands, from the confluence with Eaton Creek to Blue Mesa Reservoir was moved from Segment 29a to a new Segment 29b. Lake San Cristobal was moved from Segment 29b to a new Segment 38 with other coldwater lakes larger than 100 acres surface area. The remaining lakes and reservoirs in Segment 29a were moved to a new Segment 37. These waters were split into different segments to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 32: The lakes and reservoirs in this segment were moved to a new Segment 37 to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 33: This segment was created to encompass the lakes and reservoirs in the La Garita, Powderhorn, West Elk, Collegiate Peaks, Maroon Bells, Raggeds, Fossil Ridge, and Uncompahgre Wilderness areas. This segment was created to facilitate the adoption of appropriate temperature standards formerly in Segments 1, 2 and 3.

Upper Gunnison River 34: This segment was created to encompass the lakes and reservoirs tributary to the Taylor River and the East River formerly in Segments 4, 5a, 6b, 9 and 10. This segment was created to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 35: This segment was created to encompass the lakes and reservoirs tributary to Redwell Basin, formerly in Segment 10. This segment was created to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 36: This segment was created to encompass the lakes and reservoirs tributary to the Gunnison River from its inception at the confluence of the East River and Taylor River, to the inlet of Blue Mesa Reservoir. These lakes and reservoirs were formerly in Segments 15, 16, 17, 19, 21 and 23. This segment was created to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 37: This segment was created to encompass the lakes and reservoirs tributary to Blue Mesa Reservoir, Morrow Point Reservoir, Crystal Reservoir, and the interconnecting segments of the Gunnison River, which were formerly in Segments 26, 29a and 32. This segment was created to facilitate the adoption of appropriate temperature standards.

Upper Gunnison River 38: This segment was created to encompass the coldwater lakes and reservoirs in the Upper Gunnison Basin that are larger than 100 acres in surface area. These reservoirs were formerly in Segments 4, 25 and 29b.

North Fork of the Gunnison River 1: The lakes and reservoirs in this segment were moved to a new Segment 8 to facilitate the adoption of appropriate temperature standards.

North Fork of the Gunnison River 4: The lakes and reservoirs in this segment were moved to a new Segment 9 to facilitate the adoption of appropriate temperature standards.

North Fork of the Gunnison River 5a-5b: Roatcap Creek, including all tributaries and wetlands, from the national forest boundary to the confluence with the North Fork of the Gunnison was moved to a new Segment 5b. The lakes and reservoirs in Segment 5 were moved to a new Segment 10. These waters were split to facilitate the adoption of appropriate temperature standards.

North Fork of the Gunnison River 6a-6b: Segment 6a encompasses the tributaries to the North Fork of the Gunnison below the confluence with Coal Creek that are not within national forest boundaries, and do not have a Water Supply Use. The tributaries within the same area, but with a Water Supply Use are described in Segment 6b.

Multiple alluvial wells that were being used as a drinking water source were discovered on unnamed tributaries described within Segment 6a. Rather than try to describe the locations of these unnamed tributaries and move them to Segment 6b, larger swaths of tributaries were moved to Segment 6b. On the north side of the North Fork of the Gunnison, all tributaries and wetlands from the confluence with Roatcap Creek to confluence with the Gunnison River were moved from Segment 6a to 6b. Love Gulch, Dever Creek, Cow Creek, Stingley Gulch and Big Gulch were formerly described individually, but were deleted from the Segment 6b segment description, since they are included in this northern swath of tributaries. On the south side of the North Fork of the Gunnison, all tributaries that flow into the North Fork of the Gunnison River from the confluence with Minnesota Creek to the confluence with the Gunnison River were moved to Segment 6b. Miller Creek, German Creek, Reynolds Creek, Bell Creek, McDonald Creek, Cottonwood Creek and Alum Gulch were formerly described individually, but were deleted from the Segment 6b segment description, since they are all included in this southern swath of tributaries.

The lakes and reservoirs in Segments 6a and 6b were moved to a new Segment 11 to facilitate the adoption of appropriate temperature standards.

North Fork of the Gunnison River 7: This segment was created to encompass coldwater lakes tributary to the North Fork of the Gunnison River that are greater than 100 acres in surface area. Overland Reservoir was moved to this segment with Paonia Reservoir to facilitate the adoption of appropriate temperature standards. Although Lake Irwin is large enough to qualify for this segment, it contains cutthroat trout and requires the lower temperature standard applied to smaller coldwater lakes to protect that species.

North Fork of the Gunnison River 8: This segment was created to encompass the lakes and reservoirs within the West Elk or Raggeds Wilderness areas, which were formerly in Segment 1. This segment was created to facilitate the adoption of appropriate temperature standards.

North Fork of the Gunnison River 9: This segment was created to encompass all the lakes and reservoirs tributary to Muddy Creek, Paonia Reservoir, Coal Creek, or the North Fork of the Gunnison from its inception at the confluence of Muddy Creek and Coal Creek to the confluence with the Gunnison River. This segment also includes lakes that are tributary to the North Fork of the Gunnison and within national forest boundaries. These lakes and reservoirs were formerly in Segment 4. This segment was created to facilitate the adoption of appropriate temperature standards.

North Fork of the Gunnison River 10: This segment was created to encompass the lakes and reservoirs tributary to Roatcap Creek and Jay Creek (in their entirety), and lakes and reservoirs tributary to Hubbard Creek, Terror Creek, Minnesota Creek, and Leroux Creek from the national forest boundary to the confluence with the North Fork of the Gunnison. The lakes and reservoirs in this segment were formerly in Segment 5. This segment was created to facilitate the adoption of appropriate temperature standards.

North Fork of the Gunnison River 11: This segment was created to encompass the lakes and reservoirs that are tributary to the North Fork of the Gunnison from its inception at the confluence of Muddy Creek and Coal Creek to the confluence with the Gunnison River, and are not within national forest boundaries. The lakes and reservoirs in this segment were formerly in Segments 6a and 6b. This segment was created to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 1: The lakes and reservoirs in this segment were moved to a new Segment 16 to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 2: Como Lake was moved to a new Segment 17 to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 3a-3f: The mainstem of the Uncompahgre River from the confluence with Cascade Creek to the Hwy 90 bridge in Montrose was broken into four new Segments: 3b, 3c, 3d, 3e, and 3f. These waters were split into several segments to facilitate the adoption of appropriate temperature standards, to reflect large changes in water quality, and to better describe the ambient iron conditions. Ridgway Reservoir was moved from Segment 3b to a new Segment 19. Segment 3b now encompasses the mainstem of the Uncompahgre River from the confluence with Cascade Creek to the confluence with Dexter Creek. Segment 3c was created to encompass the mainstem of the Uncompahgre River from the confluence with Dexter Creek to the confluence with Dallas Creek. Segment 3d was created to encompass the mainstem of the Uncompahgre River from the confluence with Dallas Creek to the inlet of Ridgway Reservoir. Segment 3e was created to encompass the mainstem of the Uncompahgre River from the outlet of Ridgway Reservoir to the outlet of the South Canal near Uncompahgre. Segment 3f was created to encompass the mainstem of the Uncompahgre River from the outlet of the South Canal to the Highway 90 bridge in Montrose.

Uncompahgre River 4a-4b: The boundary between Segment 4a and Segment 4b was moved downstream from La Salle Road to Gunnison Road. The Recreation and Aquatic Life Uses in the Uncompahgre River between La Salle Road and Gunnison Road are more similar to Segment 4a than to Segment 4b.

Uncompahgre River 5: The lakes and reservoirs in this segment were moved to a new Segment 17 to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 9: The segment description was amended to give a latitude and longitude location of "1.5 miles above the confluence with Imogene Creek", which is a somewhat indefinite boundary depending on how the stream length is measured.

Uncompahgre River 10: The lakes and reservoirs in this segment were moved to a new Segment 18 to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 11: The lakes and reservoirs in this segment were moved to a new Segment 18 to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 12 and 14: The lakes and reservoirs in this Segment 12 were moved to a new Segment 21 to facilitate the adoption of appropriate temperature standards. Sweitzer Lake was moved from Segment 14 to a new Segment 20. The East and West Forks of Horsefly Creek, including all tributaries and wetlands, and Happy Canyon Creek, including all tributaries and wetlands, from the source

to the most downstream national forest boundary were moved from Segment 12 to a new Segment 14. These waters were split to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 16: This segment was created to encompass the lakes and reservoirs in the Mt. Sneffels or Uncompahgre Wilderness areas, which were formerly in Segment 1. This segment was created to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 17: This segment was created to encompass the lakes and reservoirs tributary to the Uncompahgre River from the source to the confluence with Dexter Creek, which were formerly in Segments 2 and 5. This segment was created to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 18: This segment was created to encompass the lakes and reservoirs tributary to the Uncompahgre River from the confluence with Dexter Creek to the South Canal near Uncompahgre, which were formerly in Segments 10 and 11. This segment was created to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 19: This segment was created to encompass Ridgway Reservoir, which was formerly in Segment 3b. This segment was moved to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 20: This segment was created to encompass Sweitzer Reservoir, which was formerly in Segment 14. This segment was moved to facilitate the adoption of appropriate temperature standards.

Uncompahgre River 21: This segment was created to encompass all the lakes and reservoirs tributary to the Uncompahgre River from the South Canal to the confluence with the Gunnison River, which were formerly in segment 12. This segment was created to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 3: Island Lake, Eggleston Lake, and Trickle Park Reservoir were moved from this segment to a new Segment 15. The remaining lakes and reservoirs in this segment were moved to a new Segment 14 to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 4b: The lakes and reservoirs in this segment were moved to a new Segment 16 to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 7a-7b: Segment 7 was split in Segments 7a and 7b to facilitate the adoption of appropriate temperature standards. The mainstem of Ward Creek, from the national forest boundary to the confluence with Dirty George Creek was split and moved to new Segment 7a.

Lower Gunnison River 8: The Fruita Water Supply Reservoirs I and II were moved to a new Segment 14 to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 11a: The lakes and reservoirs in the segment were moved to a new Segment 17 to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 11b: The lakes and reservoirs in this segment were moved to a new Segment 18 to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 12: The lakes and reservoirs in this segment were moved to a new Segment 19 to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 14: This segment was created to encompass lakes and reservoirs tributary to the Gunnison River, from the outlet of Crystal Reservoir, to the confluence with the Colorado River, and that

are within national forest boundaries. These lakes and reservoirs were formerly in Segments 3 and 8. This segment was created to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 15: This segment was created to encompass large cold lakes and reservoirs tributary to the Gunnison River, from the outlet of Crystal Reservoir, to the confluence with the Colorado River. This segment includes Island Lake, Eggleston Lake, and Trickle Park Reservoir, which were formerly in Segment 3. This segment was created to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 16: This segment was created to encompass the lakes and reservoirs tributary to the Gunnison River from the outlet of Crystal Reservoir, to the confluence with the Colorado River, and not within national forest service boundaries. These lakes and reservoirs were formerly in Segment 4b. This segment was created to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 17: This segment was created to encompass the lakes and reservoirs tributary to the Smith Fork, and within national forest boundaries, and all lakes and reservoirs tributary to Doug Creek. These lakes and reservoirs were formerly in Segment 11a. This segment was created to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 18: This segment was created to encompass the lakes and reservoirs tributary to the Smith Fork, and within the West Elk Wilderness area, which were formerly in Segment 11b. This segment was created to facilitate the adoption of appropriate temperature standards.

Lower Gunnison River 19: This segment was created to encompass the lakes and reservoirs tributary to the Smith Fork, and not with national forest boundaries, which were formerly in Segment 12. This segment was created to facilitate the adoption of appropriate temperature standards.

San Miguel River 1: The lakes and reservoirs in this segment were moved to a new Segment 13 to facilitate the adoption of appropriate temperature standards.

San Miguel River 2: Trout Lakes was moved to a new Segment 20 with other coldwater lakes larger than 100 acres in surface area. The remaining lakes and reservoirs in this segment were moved to a new Segment 14 to facilitate the adoption of appropriate temperature standards.

San Miguel River 6a: The lakes and reservoirs in this segment were moved to a new Segment 15 to facilitate the adoption of appropriate temperature standards.

San Miguel River 6b: The lakes and reservoirs in this segment were moved to a new Segment 16 to facilitate the adoption of appropriate temperature standards.

San Miguel River 7: The lakes and reservoirs in this segment were moved to a new Segment 17 to facilitate the adoption of appropriate temperature standards. Waterfall Creek was moved into this segment from 7b, and this segment was renumbered as Segment 7.

San Miguel River 9: The lakes and reservoirs in this segment were moved to a new Segment 18 to facilitate the adoption of appropriate temperature standards.

San Miguel River 10: Gurley Reservoir was moved to a new Segment 20 with other coldwater lakes larger than 100 acres in surface area to facilitate the adoption of appropriate temperature standards.

San Miguel River 11a-11b: Miramonte Reservoir was moved from Segment 11 to a new Segment 20 with other coldwater lakes larger than 100 acres in surface area. The remaining lakes and reservoirs were moved to a new Segment 19. Saltado Creek, from the national forest boundary to the confluence with the

San Miguel River, was split to a new Segment 11b. These waters were split to facilitate the adoption of appropriate temperature standards.

San Miguel River 12a-12b: The lakes and reservoirs in Segment 12 were moved to a new Segment 19. The tributaries to the San Miguel from the confluence with Naturita Creek to the confluence with the Dolores River were moved to a new Segment 12b. These waters were split to facilitate the adoption of appropriate temperature standards.

San Miguel River 13: This segment was created to encompass the lakes and reservoirs within the Lizard Head or Mount Sneffels Wilderness areas, which were formerly in Segment 1. This segment was created to facilitate the adoption of appropriate temperature standards.

San Miguel River 14: This segment was created to encompass the lakes and reservoirs tributary to the San Miguel River from it source to the confluence with Leopard Creek, which were formerly in Segment 2. This segment was created to facilitate the adoption of appropriate temperature standards.

San Miguel River 15: This segment was created to encompass the lakes and reservoirs tributary to Ingram Creek, which were formerly in Segment 6a. This segment was created to facilitate the adoption of appropriate temperature standards.

San Miguel River 16: This segment was created to encompass the lakes and reservoirs tributary to Marshall Creek, which were formerly in Segment 6b. This segment was created to facilitate the adoption of appropriate temperature standards.

San Miguel River 17: This segment was created to encompass the lakes and reservoirs tributary to the Howard Fork from the confluence with Swamp Gulch to the confluence with the San Miguel River. These lakes and reservoirs were formerly in Segment 7a. This segment was created to facilitate the adoption of appropriate temperature standards.

San Miguel River 18: This segment was created to encompass the lakes and reservoirs tributary to the San Miguel River from the confluence with Leopard Creek to the confluence with the Dolores River that are within national forest boundaries. These lakes and reservoirs were formerly in Segment 9. This segment was created to facilitate the adoption of appropriate temperature standards.

San Miguel River 19: This segment was created to encompass the lakes and reservoirs tributary to the San Miguel from the confluence with Leopard Creek to the confluence with the Dolores River that are not within national forest boundaries. These lakes and reservoirs were formerly in Segments 11 and 12. This segment was created to facilitate the adoption of appropriate temperature standards.

San Miguel River 20: This segment was created to encompass the coldwater reservoirs tributary to the San Miguel River that are greater than 100 acres surface area. These reservoirs were formerly in Segments 2, 10 and 11. This segment was created to facilitate the adoption of appropriate temperature standards.

Lower Dolores River 1a, 1b and 2: Segment 1 was split into Segments 1a and 1b, and the Dolores River from the Highway 141 road crossing to the Little Gypsum Valley Bridge was moved to Segment 2. Segment 1a encompasses the Dolores River from the bridge at Bradfield Ranch to the confluence with Big Canyon Creek, and is a coldwater segment. Segment 1b encompasses the Dolores River from the confluence with Big Canyon Creek to the Highway 141 road crossing near Slick Rock, and this coldwater segment has an ambient-based MWAT temperature standard. The upstream boundary of Segment 2 was moved from the Little Gypsum Valley Bridge at the San Miguel/Montrose County line to the Highway 141 road crossing near Slick Rock. The Commission determined that the Dolores River from the Highway 141 road crossing to the Little Gypsum Valley Bridge had been misclassified as a coldwater river. These segment boundaries were moved to facilitate the adoption of appropriate temperature standards.

Lower Dolores River 3a-3c, 4-6: The lakes and reservoirs in Segment 3a were moved to new Segments 7 and 8. Segment 3a was split, and the tributaries to the Dolores River within national forest boundaries (excluding a small area of Uncompahgre National Forest in the Disappointment Valley) were moved to Segment 3b. Additionally, the North Fork of West Creek, including all tributaries and wetlands, and Granite Creek from the source to the Colorado/Utah border were moved from Segment 3a to a new Segment 6. Segment 3b, which formerly encompassed Salt Creek was renumbered 3c, and the lakes and reservoirs in that segment were moved to new Segment 8. These waters were split to facilitate the adoption of appropriate temperature standards.

Lower Dolores River 4: The mainstem of West Paradox Creek from the source to the Manti-La Sal National Forest boundary, and Blue Creek from the source to the Uncompahgre National Forest boundary were moved from Segment 4 to a new Segment 3b.

Lower Dolores River 5: Multiple changes were made to the new Segment 3b. Roc Creek, La Sal Creek, and Mesa Creek from the source to the national forest boundary were moved from Segment 5 to Segment 3b.

Lower Dolores River 6: This segment was created to encompass the North Fork of West Creek, including all tributaries and wetlands, from the source to the confluence with West Creek, and Granite Creek, including all tributaries and wetlands, from the source to the Colorado/Utah border. This segment was created to facilitate the adoption of appropriate temperature standards.

Lower Dolores River 7: This segment was created to encompass the lakes and reservoirs tributary to the Dolores River, and within national forest boundaries. These lakes and reservoirs were formerly in Segments 3a and 3b. This segment was created to facilitate the adoption of appropriate Aquatic Life Use classifications, and temperature standards.

Lower Dolores River 8: This segment was created to encompass the lakes and reservoirs tributary to the Dolores River, and not within national forest boundaries. The lakes and reservoirs in this segment were formerly in Segments 3a and 3b. This segment was created to facilitate the adoption of appropriate temperature standards.

The following segment descriptions were edited to improve clarity, correct typographical errors, and correct spelling errors:

Upper Gunnison River segments: 6a, 14, 15a, 19, 22 and 26
North Fork of the Gunnison River segments: 1, 2, 4, 5a and 6a
Uncompahgre River segments: 1, 4c, 5, 9, 11 and 15a
Lower Gunnison River segments: 3, 4a, 4b, 5, 6, 7b, 8, 11a and 12
San Miguel River segments: 1, 3a, 5, 6a, 6b, 7, 8, 10 and 11a
Lower Dolores River segments: 3c and 5

B. Revised Aquatic-Life Use Classifications

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

The following segments were upgraded from Warm 2 to Warm 1.

Uncompahgre River segments: 4a, 4c, 12 and 15a
Lower Gunnison River segment: 16
Lower Dolores River segment: 4

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

Uncompahgre River segment: 10
Lower Gunnison River segment: 7b

The following segment was upgraded from Warm 2 to Cold 1 based on biological data showing that the segment has a wide variety of cold-water species:

Lower Dolores River segment: 7

Fish Ingestion qualifiers were deleted for the following segment that was upgraded from Class 2 to Class 1, since fish ingestion is presumed for all Class 1 waters:

Lower Gunnison River segment: 7b

The following segments were upgraded from Warm 2 to Cold 2 based on biological data showing that cold-water species are present:

Uncompahgre River segments: 14 and 15b

A Use Attainability Analysis was prepared to downgrade the following segments, or portions of these segments, from Cold 1 to Warm 1.

Lower Gunnison River segment: 13
Lower Dolores River segment: 1

C. Recreation Classifications and Standards

Newly created segments were given the same Recreation Use classification as the segment from which they were split, unless there was insufficient evidence to support keeping that classification, or evidence to show that the use classification was inappropriate.

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

North Fork of the Gunnison River segment: 3
Uncompahgre River segments: 2, 4b, 7, 8, 10, 11, 12 and 15a
Lower Gunnison River segments: 4a and 9

The Towns of Hotchkiss and Olathe provided testimony expressing concerns about the potential cost of complying with new effluent limitations that could result from the adoption of revised Recreation standards for North Fork segment 3 and Uncompahgre segment 4b, respectively. The Commission notes that should compliance with such effluent limitations become an issue, several options may be available to help address the compliance burden, including the possibility of compliance schedules, Temporary Modifications or discharger-specific variances, if necessary and appropriate.

The following segment with year-round or seasonal Recreation N standards was upgraded to Recreation E.

Uncompahgre River segment: 17

D. Water Supply Use Classification and Standards

Based on review of information regarding the location of alluvial wells, where the evidence demonstrates a reasonable potential for a hydrological connection between the surface water and the wells, the Water Supply Use classifications and standards were added to the following segments:

Upper Gunnison River segment: 12
North Fork of the Gunnison River segments: 3 and 11
Uncompahgre River segments: 4a and 4b
Lower Gunnison River segments: 7b, 10 and 12
San Miguel River segments: 3b and 7a
Lower Dolores River segments: 2, 3a and 4

The Commission found that the information submitted by U.S. Energy is insufficient to demonstrate the lack of a hydrological connection between Upper Gunnison segment 12 and the existing wells located adjacent to that section of the stream.

The following segment with Fish Ingestion standards was upgraded to Water+Fish when the Water Supply Use was added:

Uncompahgre River segment: 9

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

Upper Gunnison River segment: 13
Uncompahgre River segments: 3a and 10
Lower Gunnison River segment: 4a
San Miguel River segment: 12a

E. Agriculture Standards

A review of the standards associated with the Agriculture Use classification showed that many segments were missing a chronic chromium III standard to protect the use. The chronic chromium III standard to protect the Aquatic Life Use classification may be not be protective of the Agriculture Use in some high hardness situations. A chromium III standard of CrIII(ch)=100(Trec), was added to the following segments classified for Agriculture Use, but not for Water Supply, which has a more restrictive chromium III standard:

Upper Gunnison River segments: 6a, 10a-b, 20, and 31
Uncompahgre River segments: 4c, 6a, 15b, 19-20 and 21
Lower Gunnison River segment: 13
San Miguel River segments: 3a, 5, 6a-b, 11a-b, 16 and 17
Lower Dolores River segments: 3c and 8

Molybdenum: In 2010, the Commission adopted a new standard for molybdenum to protect cattle from the effects of molybdenosis. The table value adopted at that time was 300 ug/l, but included an assumption of 48 mg/day of copper supplementation to ameliorate the effects of molybdenosis. State and local experts on cattle nutrition indicated that copper supplementation in region is common, but is not universal. Therefore, copper supplementation assumption was removed from the equation, which yields a standard of 160 ug/l. The Commission expects that this value may be revised when data on the copper and molybdenum content of local forage becomes available. The Commission also notes that in view of EPA's disapproval of the 300 ug/l table value in the Basic Standards and Methodologies for Surface Water, the Commission intends to review this value during the next Basic Standards triennial review.

The Agriculture table value assumes that the safe copper:molybdenum ratio is 4:1. Food and water intake is based on a 273 kg (600 lb) feeder steer consuming 6.8 kg/day of dry matter and 20% of its body weight in water per day. Total copper and molybdenum intakes are calculated from the following equations:

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

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

The assumed values for these equations are as follows:

[Cu] forage = 7 mg/kg, [Mo] forage = 0.5 mg/kg, forage intake = 6.8 kg/day, [Cu] water = 0.008 mg/L, [Mo] water = 0.375 mg/L, water intake = 54.6 L/day, Cu supplementation = 0 mg/day, Mo supplementation = 0 mg/day.

A molybdenum standard of 160 ug/l was adopted for the following segments in Regulation 35 that have an Agriculture Use classification, and where livestock or irrigated forage are present or expected to be present.

Upper Gunnison River segments: 1-4, 5a-b, 6a-b, 7-8, 10a-b, 12, 13a-b, 14, 15a-b, 16a-b, 17a-b, 6a, 18a-b, 19-26, 29a-b, and 30-36
North Fork of the Gunnison River segments: 1-4, 5a-b, 6a-b, and 7-11
Uncompahgre River segments: 1, 2, 3a-f, 4a-c, 5, 6a-b, 7-14, 15a-b, and 16-21
Lower Gunnison River segments: 1-3, 4a-c, 5, 6, 7a-b, 8-10, 11a-b, and 12-19
San Miguel River segments: 1, 2, 3a-b, 4a-b, 5, 6a-b, 7-10, 11a-b, 12a-b, and 13-20
Lower Dolores River segments: 1a-b, 2, 3a-c, and 4-8

The following segments have an Agriculture Use classification, but neither livestock nor irrigated forage are present, nor are they expected to be present. A molybdenum standard of 210 ug/L was applied to these segments to protect the Water Supply Use classification:

Upper Gunnison River segments: 9 and 11

F. Changes to Antidegradation Designation

Decoupling Cold 2 and Use-Protected designations: 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. The Commission reviewed all Cold 2 segments that were Use-Protected to determine if that designation was still warranted. The following segments are now Reviewable:

Uncompahgre River segments: 5 and 15b

Decoupling Aquatic Life Warm 2 and Use-Protected designations: As part of the Basic Standards hearing of 2005, the Commission decided that the presence of a Warm Water Class 2 classification would still be a presumptive basis for applying a Use-Protected designation; however, that presumption can be overcome if there is data showing that the water is of high quality. The Commission reviewed all Warm 2 segments to determine if the Use-Protected designation is still warranted. The following segment(s) are now Reviewable:

North Fork of the Gunnison River segments: 6a and 6b
Uncompahgre River segments: 4a, 4c and 15a
Lower Gunnison River segments: 4b-c and 12
Lower Dolores River segment: 3c

The Commission adopted an Outstanding Waters designation for Upper Gunnison Segment 2 based on ample evidence that water quality in Segment 2 meets the requirements of 31.8(2)(a). The Commission also notes that the outreach undertaken by the Park Service as proponent of this designation helps to demonstrate broad support for the conclusion that these waters constitute an outstanding natural resource and that the additional protection provided by this designation is appropriate.

The evidence demonstrates that existing uses such as cattle grazing/agriculture, recreation, forest practices, and year-round and seasonal residences, on public and private land are compatible with the new Outstanding Waters 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 Outstanding Waters designation should not be the basis upon which federal, state or local agencies place more onerous or costly conditions upon permits or approvals existing at the time of the designation, or upon any renewals thereof.

Further, acknowledging that the adoption of the Outstanding Waters designation for identified segments is a discretionary undertaking by the Commission, with such designations not being subject to federal approval or disapproval, the Commission may, in the future, remove the Outstanding Waters designation from any such segment in accordance with the state substantive and procedural rules then in effect.

The Commission has not adopted the Outstanding Waters designations proposed by WildEarth Guardians for multiple segments. The Commission is not persuaded that the fact of being located within an area identified as a “roadless area” is sufficient to demonstrate that the waters in question constitute an outstanding natural resource. Moreover, the proponents did not provide adequate data to persuasively demonstrate the current quality of the waters in question. Finally, the Commission notes that the proponents did not demonstrate a substantial level of public outreach that might have helped to demonstrate a consensus that the criteria in section 31.8(2)(a) are met.

G. Ambient Standards

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

Upper Gunnison River segments: 10a-b, 12, 15a, 16b and 20
Uncompahgre River segments: 1, 3a-b, 4b-c, 7 and 12
Lower Gunnison River segments: 2 and 8
San Miguel River segments: 3a-b, 4b, 6b, 8, 10 and 16
Lower Dolores River segment: 1a, 1b and 3c

H. Aquatic Life Metals Standards

New Table Value Standards: The zinc, zinc sculpin, and aluminum table values were revised in the 2010 Basic Standards hearing. The acute and chronic zinc, zinc sculpin, and aluminum equations in 35.6(3) were modified to conform to Regulation No. 31.

Site-Specific Zinc Standards for Mottled Sculpin: In low-hardness situations (hardness below 102 mg/L), the zinc equation is not protective of mottled sculpin (*Cottus bairdi*), a native west-slope fish species. The Commission added a sculpin-specific zinc equation as site-specific standard to the following segments where mottled sculpin are expected to be present, and hardness is low:

North Fork of the Gunnison River segment: 5a
Uncompahgre River segment: 10
Lower Gunnison River segments: 1 and 10

The Commission deleted the zinc scuplin standards from the following segments where mottled sculpin are not expected to be present:

Upper Gunnison River segments: 4, 6a, 7, 15a, 16a-b, 19, 22, 23, 29a, 30, 32-36 and 37
Uncompahgre River segments: 5, 6a, 16 and 17

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

Upper Gunnison River segments: 1, 4, 5a-b, 6a-c, 7-9, 11, 14, 15a-b, 16a-b, 17a-b, 18a-b, 19, 21-26, 29a-b, 30, 32, 33-36 and 37
North Fork of the Gunnison River segments: 1-2, 4, 5a-b, 6b, 7-10 and 11
Uncompahgre River segments: 1-2, 5, 7-8, 11, 16-17 and 18
Lower Gunnison River segments: 1-3, 5, 8, 11a-b, 12, 14-15, 17-18 and 19
San Miguel River segments: 1-2, 4a-b, 8-10, 13-14, 17-18 and 20
Lower Dolores River segments: 1a-b, 2, 3a and 5

I. Uranium Standards

At the 2010 Basic Standards rulemaking hearing, the Commission changed the Water Supply table value for uranium from 30 ug/L to a hyphenated standard of 16.8-30 ug/L. The Commission revised the language in 35.5(3)(c) to reflect the change to the basin-wide standard. A new section 35.5(3)(c)(i) was added to explain the hyphenated standard. Subsection 35.5(3)(d) was deleted because it was redundant with 35.5(3)(c).

Upper Gunnison Segment 20: The Commission changed the site-specific chronic uranium standard of 2000 ug/l, and the acute uranium standard of TVS, to narrative standards of “lowest practical level”.

J. Temporary Modifications

All existing Temporary Modifications were examined to determine if they should be allowed to expire or to extend them. Temporary Modifications were not automatically extended if non-attainment persisted due to revisions made to the Temporary Modification provisions in 2005 and 2010.

The following segments had Temporary Modifications that were not renewed:

Upper Gunnison River segments: 8 and 16
North Fork of the Gunnison River segments: 3, 5a and 6b
Uncompahgre River segments: 3a and 12
Lower Gunnison River segments: 4a and 7b
San Miguel River segments: 2 and 3b

In some cases, the Commission adopted Temporary Modifications with a narrative value of “current conditions”. It is the Commission’s intent to preserve the status quo during the term of the Temporary Modification. Existing discharges shall continue to be authorized to discharge parameters with a “current conditions” Temporary Modification at their current permitted concentration and flow levels, including a “report only” value. The Commission does not intend that Temporary Modifications set at "current condition" will apply to new or expanded facilities. Implementation of the underlying standard into existing permits is to take place as soon as feasible after the standard becomes effective in accordance with the Basic Standards and Methodologies for Surface Water.

New or extended Temporary Modifications were adopted for the segments below.

Upper Gunnison River Segment 12: The Commission adopted a Type A Temporary Modification for chronic arsenic with a narrative value of "current conditions", and an expiration date of June 30, 2014. U.S. Energy intends to participate in the April 2013 statewide rulemaking hearing on arsenic, which is the basis for a Type A Temporary Modification.

The Commission also adopted Type B Temporary Modifications for chronic cadmium, chronic copper, and chronic zinc with expiration dates of June 30, 2013. The Temporary Modification for cadmium and zinc have numeric values of 2.1 ug/l and 440 ug/l, respectively, based on ambient conditions that were calculated as the 85th percentile of a dataset that had been de-biased due to a preponderance of samples collected in the spring when water quality is poorest. The copper Temporary Modification has a value of current conditions. The Commission expects U.S. Energy to work with the Division and interested parties to develop a sampling plan to determine the natural and man-induced irreversible sources of cadmium, copper, and zinc in the Coal Creek watershed, which is the basis for a Type B Temporary Modification. The sampling plan will be reviewed in the annual Temporary Modification hearing in December 2013. Provided that the sampling plan is adequate, the expiration date will be extended to provide a reasonable amount of time to complete sampling and data analysis to set underlying standards.

Upper Gunnison Segment 20: The Commission adopted Type B Seasonal Temporary Modifications for chronic and acute uranium standards with an expiration date of June 30, 2015. The Temporary Modifications apply at sampling site SW-33, which is located just below the discharge from Homestake's Pitch Mine. The numeric values for the Temporary Modifications are based on ambient conditions at that sampling location, and are lower than the previous underlying uranium standards of 2000 ug/l for chronic uranium, and TVS for acute uranium. The Pitch Mine is being reclaimed, and this Temporary Modification will provide time to determine the "lowest practical level" of uranium that is achievable for this site. The progress to establish an appropriate underlying uranium standard for this segment will be reviewed in the annual Temporary Modification hearing in December 2013.

North Fork of the Gunnison Segment 2: The Commission adopted a Type B Temporary Modification for chronic arsenic with a narrative value of "current conditions", and an expiration date of July 1, 2015. Mountain Coal submitted evidence of natural sources of arsenic with the watershed, which is the basis for a Type B Temporary Modification. The progress on resolving the uncertainty with the arsenic standard will be reviewed in the annual Temporary Modification hearing in December 2013. During the Temporary Modification, a study will be completed that addresses watershed sources including the company's discharge.

Uncompahgre Segment 4b: The Commission adopted a Type A Temporary Modification for chronic selenium with a narrative value of "current condition", and an expiration date of December 31, 2017. The Town of Olathe wastewater treatment facility is currently discharging selenium at an average concentration of 7.8 ug/l. The Commission expects Olathe to make all reasonable efforts to identify the source of selenium to their wastewater treatment plant, and to make all reasonable efforts to reduce those sources for the duration of the Temporary Modification. There is significant uncertainty concerning the underlying selenium standard. Time is needed to wait for the EPA's new selenium criteria and implementation guidance, and to determine an appropriate underlying selenium standard for Uncompahgre Segment 4b. The progress on resolving the uncertainty with the selenium standard will be reviewed in the annual Temporary Modification hearing in December 2015.

Lower Gunnison Segment 2: The Commission adopted a Type A Temporary Modification for chronic selenium with a narrative value of "current condition", and an expiration date of December 31, 2017. The City of Delta wastewater treatment facility is currently discharging selenium at an average concentration of 8.3 ug/l, and is addressing the inflow and infiltration into their system that is the cause of elevated selenium in their effluent. There is significant uncertainty concerning the underlying selenium standard. Time is needed to wait for the EPA's new selenium criteria and implementation guidance, and to determine an appropriate underlying selenium standard for Lower Gunnison Segment 2. The progress on resolving the uncertainty with the selenium standard will be reviewed in the annual Temporary Modification hearing in December 2015.

K. Temperature

New table values were adopted for temperature in the 2007 Basic Standards hearing, and revised in the 2010 Basic Standards hearing. Temperature standards were applied to individual segments based upon the fish species expected to be present as provided by Parks and Wildlife, temperature data, and other available evidence.

The following segments have a Cold Stream Tier I temperature standard (CS-I):

Upper Gunnison River segments: 1, 4, 5a, 6a-b, 7-9, 10a-b, 11-13, 15b, 16a, 17a, 18a, 19-23, 26, 29a and 30-32.
North Fork of the Gunnison River segments: 1, 4 and 5a
Uncompahgre River segments: 1-2, 3a-b, 5, 6a, 7-8, 9, 11 and 13
Lower Gunnison River segments: 3, 7a, 11a and 11b
San Miguel River segments: 1-2, 3a-b, 6a, 6b, 7, 9 and 11b
Lower Dolores River segments: 3b and 6

The following segments have a Cold Stream Tier II temperature standard (CS-II):

Upper Gunnison River segments: 5b, 6c, 14, 15a, 17b, 18b, 24, 25 and 29b
North Fork of the Gunnison River segments: 2, 3 and 5b
Uncompahgre River segments: 3c-e, 10, 14 and 15b
Lower Gunnison River segments: 1, 5, 6, 7b, 8 and 10
San Miguel River segments: 4a, 8, 10, 11a, 12a and 12b
Lower Dolores River segments: 1a and 5

The following segments have a Warm Stream Tier II temperature standard (WS-II):

North Fork of the Gunnison River segment: 6a
Uncompahgre River segments: 4a-c, 12 and 15a
Lower Gunnison River segments: 2, 4a and 4b
San Miguel River segment: 5
Lower Dolores River segments: 2, 3a and 4

The following segments have a Warm Stream Tier III temperature standard (WS-III):

North Fork of the Gunnison River segment: 6b
Lower Gunnison River segments: 4c and 12
Lower Dolores River segment: 3c

The following segments have a Cold Lakes temperature standard (CL):

Upper Gunnison River segments: 33-37
North Fork of the Gunnison River segments: 8-10
Uncompahgre River segments: 16-18
Lower Gunnison River segments: 14, 17 and 18
San Miguel River segments: 13-18 and 19
Lower Dolores River segment: 7

The following segments have a Large Cold Lakes (greater than 100 acres surface area) temperature standard (CLL):

Upper Gunnison River segment: 38
North Fork of the Gunnison River segment: 7

Uncompahgre River segment: 19
Lower Gunnison River segment: 15
San Miguel River segment: 20

The following segments have a Warm Lakes temperature standard (WL):

North Fork of the Gunnison River segment: 11
Uncompahgre River segments: 20-21
Lower Gunnison River segments: 9, 13, 16 and 19
Lower Dolores River segments: 8 and 13

A temperature standard was not adopted for the following segment, which does not have an Aquatic Life Use classification:

Uncompahgre River segment: 6b

The following segments have ambient-based temperature standards:

Upper Gunnison River segment: 16b
Uncompahgre River segment: 3b
San Miguel River segment: 4b
Lower Dolores River segments: 1a and 1b

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, the aquatic community, or where there is a conflict between these two lines of evidence. It is the Commission's intent that the Division and interested parties work to resolve the uncertainty for the following segments:

Upper Gunnison River segment: 19
Uncompahgre River segments: 3b, 6, 11 and 13
Lower Gunnison River segments: 4c, 8 and 13
San Miguel River segments: 10 and 12b
Lower Dolores River segments: 3b and 5

L. Other Site-Specific Revisions

Upper Gunnison River 6a: This segment does not have a Water Supply Use, but had an acute chromium III standard associated with that use. The Water Supply standard was deleted and replaced with TVS.

Upper Gunnison River 12: An ambient-based chronic manganese standard of 191 ug/l was adopted to protect the Water Supply Use classification. Adequate data from 2000 were not available to calculate an ambient standard. Ambient conditions were calculated as the 85th percentile of a dataset using the most recent 5-years of data. The dataset was de-biased due to a preponderance of samples collected in the spring when water quality is poorest.

Upper Gunnison River 13a: The Fish Ingestion standards were replaced with Water+Fish since the Water Supply Use applies to this segment.

North Fork of the Gunnison River 6a: This segment does not have a Water Supply Use, but had several standards associated with that use. The nitrate standard was changed from 10 mg/l to 100 mg/l, the chloride standard was deleted, and the acute chromium III standard was replaced with TVS. Acute and chronic TVS lead standards were added.

North Fork of the Gunnison River 6b: This segment was missing acute and chronic lead standards. Acute and chronic TVS lead standards were added. The acute and chronic designations were deleted from the nitrate and chloride standards since those descriptions do not apply to those standards.

Uncompahgre River 8: This segment had outdated Drinking Water standards for cadmium, copper, lead, nickel, selenium, silver and zinc. Recent water quality data showed that the table value standards were exceeded for lead and copper only. Acute and chronic table value standards were added for all metals except for lead and copper, which were left unchanged. A mercury standard was also added to protect the Aquatic Life Use. This segment may be a candidate for ambient-based lead and copper values when more data become available about the sources of metals to Mineral Creek.

Lower Gunnison River 2: The Aquatic Life Use classification for this segment was downgraded from Cold 1 to Warm 1 in 2006. The dissolved oxygen standards were changed to reflect the Warm Use classification.

Lower Gunnison River 3: This segment had a typographical error in the pH standard. The pH standard was changed from 6.4-9.0 to 6.5-9.0.

Lower Gunnison River 9: This segment does not have a Water Supply Use, but had iron and manganese standards associated with that use. The iron and manganese Water Supply standards were deleted from this segment.

San Miguel River 3b: This segment was missing an acute lead standard. An acute TVS lead standard was added to this segment.

San Miguel River 4b: This Aquatic Life Use classification for this segment was changed from Cold 2 to Warm 1 in 2010. The dissolved oxygen and nitrite standards were changed to reflect the Warm Use classification.

San Miguel River 6a-b: These segments had the outdated chronic arsenic standards of 150 ug/L. The chronic arsenic standards were changed to 100 ug/L to protect the Agriculture Use classification.

San Miguel River 11a: This segment does not have a Water Supply Use, but had nitrate and chloride standards associated with that use. The nitrate standard was changed from 10 mg/L to 100 mg/L, and the chloride standard was deleted.

Lower Dolores River 3c: This segment had ambient selenium and zinc standards. Recent data showed that the selenium concentrations were lower than the ambient-based standard, so the acute selenium standard was changed from 23.4 ug/L to 18.4 ug/L, and the chronic selenium standard was changed from 21.4 ug/L to 6.6 ug/L. The data showed that Salt Creek was attaining the table value standards for zinc, so the ambient based acute and chronic standards were replaced with TVS.

PARTIES TO THE RULEMAKING HEARING

1. Trout Unlimited
2. WildEarth Guardians
3. National Park Service, Curecanti National Recreation Area
4. Mountain Coal Company
5. U.S. Energy Corp.
6. Climax Molybdenum Company
7. Gunnison County
8. Gunnison County Stockgrowers Association, Inc.
9. Homestake Mining Company of California
10. Colorado Parks and Wildlife

11. High Country Citizens' Alliance
12. Town of Crested Butte
13. Upper Gunnison River Water Conservancy District
14. Dolores Water Conservancy District
15. Town of Hotchkiss
16. Town of Olathe
17. Town of Silverton
18. Atlantic Richfield Company
19 City of Delta
20. Environmental Protection Agency
21 R Squared, Inc.
22. Wright Water Engineers, Inc.
23. San Juan Citizens Alliance
24. Colorado Sand and Gravel Association

35.35 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE DECEMBER 10, 2012 RULEMAKING; FINAL ACTION JANUARY 14, 2013 EFFECTIVE DATE JUNE 30, 2013

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

BASIS AND PURPOSE

Upper Gunnison River Basin Segment 12:

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the Commission reviewed the status of temporary modifications scheduled to expire before December 31, 2014, to determine whether the temporary modification should be modified, eliminated or extended.

During the September 10, 2012 Rulemaking, the Commission adopted Type B Temporary Modifications for chronic cadmium, chronic copper and chronic zinc with expiration dates of June 30, 2013. Since that time, U.S. Energy has worked with the Division and interested parties to develop a sampling plan to identify the natural and human-induced sources of cadmium, copper and zinc in the portion of the Coal Creek watershed affecting water quality in Segment 12 and to assess the extent to which human-induced sources are reversible, including measurable loads from wasterock piles and exploration shafts. U.S. Energy will evaluate a range of alternatives including treatment of contaminated water, whether surface or groundwater, including collection and treatment at the Keystone Mine site. Among other possible metals loading sources, the sampling plan includes a preliminary investigation of groundwater that may be originating from flooded workings within the historic Keystone Mine. The sampling plan includes efforts to evaluate the extent to which metals concentrations in groundwater within and immediately downgradient of the flooded mine workings are being affected by historic mining activity. If such effects are identified, or if preliminary results are inconclusive as to the effects of the flooded mine workings, U.S. Energy will develop plans for further investigation and characterization of metals loading to Segment 12 from the mine area. The Commission believes the sampling plan is sufficiently detailed and otherwise adequate to support extension of the Temporary Modifications until June 30, 2016. This should provide sufficient time to complete the proposed sampling and data analysis and to develop the other information needed (including a use attainability analysis) to set site specific water quality standards within a reasonable period. This will also ensure that progress towards (i) completing the initial investigation of the flooded mine workings, (ii) developing and implementing plans for further study of potential loading to Segment 12, and (iii) collecting sufficient information to support adoption of site-specific water quality standards in 2016 will be reviewed in the annual Temporary Modification hearings in December 2014 and December 2015.

PARTIES TO THE RULEMAKING HEARING

1. City of Pueblo
2. Seneca Coal Company
3. Tri-State Generation and Transmission Association
4. Eagle River Water and Sanitation District
5. Board of County Commissioners for the County of Gunnison, Colorado
6. Colorado Parks and Wildlife
7. High Country Citizens' Alliance
8. Bill Thiebaut, DA for 10th Judicial District and the Office of the DA for the 10th Judicial District
9. City of Colorado Springs
10. Town of Crested Butte
11. Upper Gunnison River Water Conservancy District
12. U.S. Energy Corp.
13. Gunnison County Stockgrowers Association, Inc.
14. Environmental Protection Agency
15. Cherokee Metropolitan District
16. Fountain Sanitation District
17. Lower Fountain Metropolitan Sewage Disposal District
18. Monument Sanitation District
19. Palmer Lake Sanitation District
20. Town of Monument
21. Academy Water and Sanitation District
22. Tri-Lakes Wastewater Treatment Facility
23. Town of Palmer Lake
24. Woodmoor Water and Sanitation District No. 1
25. Upper Monument Creek Regional Wastewater Treatment Facility

35.36 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE APRIL 8, 2013 RULEMAKING; FINAL ACTION MAY 13, 2013 EFFECTIVE DATE SEPTEMBER 30, 2013

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 August of 2005, the Commission adopted revisions to the Basic Standards and Methodologies for Surface Waters (Regulation #31) to add a Water + Fish (W+F) table value standard for chronic arsenic of 0.02 micrograms per liter (µg/L). W+F standards are numeric human health-based water quality standards that are calculated protective values that take into account the combined exposure from the pollutant in drinking water and the pollutant accumulated in fish flesh. This criterion automatically went into effect for Aquatic Life Class 1 waters which also have a Domestic Water Supply use, when the changes to the Basic Standards became effective. It was also adopted on a segment by segment basis for Aquatic Life class 2 waters with Domestic Water Supply where the Commission determined there are fish of a catchable size of species that are normally consumed. Because of the complicated nature of the arsenic standards, specific values were added to the basin tables in the basin hearings between 2006 and 2009.

In this hearing, the Commission adopted temporary modifications for W+F chronic arsenic where a permitted discharger with a water quality–based effluent limit compliance problem exists. The adopted temporary modification is listed in the regulation tables as "As(ch)=hybrid". An explanation of the temporary modification and its expected implementation into control requirements, such as Colorado Discharge Permit System (CDPS) effluent limitations, is described in 35.6(2)(d). The temporary modification was established by the Commission to allow for a temporarily less stringent application of the

chronic arsenic standard in control requirements for both existing discharges and new or increased discharges.

For discharges existing on or before 6/1/2013, the temporary modification adopted for W+F chronic arsenic is “current condition”, expiring on 12/31/2021. The Commission intends that, when implementing the temporary modification of “current condition” in a CDPS permit, the Division will assess the current effluent quality, recognizing that it changes over time due to variability in treatment facility removal efficiency and influent loading from natural or anthropogenic sources, and due to changes in the influent flow and concentration over time. Maintaining the current condition will include maintaining permitted total arsenic loading to a treatment facility from arsenic contributors at the levels existing on the effective date of the temporary modification, while expressly allowing for variability in such loading due to changes in effluent quality as described above and due to changes in the influent flow and concentration over time within the permitted design flow of that facility. The Commission understands that the Division's past practice implementing this requirement in permits has been through reporting regarding the arsenic loading to the facility, and not through numeric effluent limitations. The Commission intends that the Division will continue this practice. For facilities that lack enough representative data to quantify arsenic loading, the permittee may satisfy reporting requirements through narrative descriptions of potential sources of arsenic. No permit action shall be approved that allows an increase in permitted total arsenic loading to a treatment facility. The expiration date of the temporary modification was set at 12/31/21 to allow for CDPS permits that are issued prior to the effective date of anticipated changes to the chronic arsenic standard in the 2016 Basic Standards Rulemaking to not have the temporary modification expire within the term of a permit. The Commission adopted this temporary modification to allow time for the Division, dischargers and stakeholders to continue a workgroup process to resolve the uncertainty regarding the appropriateness of the W+F chronic arsenic standard of 0.02 µg/L with respect to a technologically feasible level of treatment.

For new or increased discharges that commence on or after 6/1/2013, the temporary modification adopted is As(ch) = 0.02–3.0 µg/L (Trec), expiring on 12/31/2021. The Commission decided that since the technologically achievable arsenic level is less stringent than the calculated W+F criterion, the temporary modification for new or increased discharges will be a range of 0.02-3.0 µg/L. The first number in the range is the health-based value, based on the Commission’s established methodology for human health-based standards that protect against the combined exposure of drinking water and eating fish. The second number in the range is the Commission’s initial determination of a technologically achievable value for arsenic, set at 3.0 µg/L. Control requirements, such as discharge permits effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an “end of pipe” discharge level more restrictive than the second number in the range during the effective period for this temporary modification. The expiration date of the temporary modification was set at 12/31/21 to allow for CDPS permits that are issued prior to the effective date of anticipated changes to the chronic arsenic standard in the 2016 Basic Standards Rulemaking to not have the temporary modification expire within the term of a permit. The Commission adopted this temporary modification to allow time for the Division, dischargers and stakeholders to continue a workgroup process to resolve the uncertainty regarding the appropriateness of the W+F chronic arsenic standard of 0.02 µg/L with respect to a technologically feasible level of treatment.

The technologically feasible level of 3.0 µg/L for arsenic is based upon testimony heard by the Commission at the December 13, 2011 Emergency Revisions to Regulation #38. At the December 13, 2011 hearing, the Commission determined, as a practical manner, that 3.0 µg/L is the lowest level that is technologically achievable for common types of water treatment facilities. At the April 8, 2013 Rulemaking, the Commission heard testimony that concurred with the finding from December 13, 2011 that an initial reasonable lower limit of treatment technology for arsenic is 3.0 µg/L, pending further investigation by the Division, dischargers and stakeholders. The Division intends to address the uncertainty of the W+F chronic arsenic standard with respect to a technologically feasible level of treatment through a continued workgroup process, and propose a revised W+F chronic arsenic standards as part of the 2016 Basic Standards Rulemaking Hearing

Temporary modifications were adopted on the following segments. The segments identified have the previously adopted W+F chronic arsenic standard of 0.02 µg/L and an identified CDPS permit or permits that discharge immediately to or directly above the identified segment.

Upper Gunnison River Basin 1
Upper Gunnison River Basin 2
Upper Gunnison River Basin 4
Upper Gunnison River Basin 5a
Upper Gunnison River Basin 5b
Upper Gunnison River Basin 6b
Upper Gunnison River Basin 8
Upper Gunnison River Basin 9
Upper Gunnison River Basin 12
Upper Gunnison River Basin 14
Upper Gunnison River Basin 18a
Upper Gunnison River Basin 18b
Upper Gunnison River Basin 19
Upper Gunnison River Basin 21
Upper Gunnison River Basin 22
Upper Gunnison River Basin 26
Upper Gunnison River Basin 29a
Upper Gunnison River Basin 30
North Fork of the Gunnison River 1
North Fork of the Gunnison River 2
North Fork of the Gunnison River 4
North Fork of the Gunnison River 5a
North Fork of the Gunnison River 5b
North Fork of the Gunnison River 6b
Uncompahgre River 3a
Lower Gunnison River 1
Lower Gunnison River 2
Lower Gunnison River 3
Lower Gunnison River 8
San Miguel River 2
San Miguel River 4b
San Miguel River 7
San Miguel River 9
San Miguel River 10
San Miguel River 12a
San Miguel River 12b
Lower Dolores River 1b
Lower Dolores River 5

PARTIES TO THE RULEMAKING HEARING

1. Colorado Mining Association
2. Union Gold, Inc.
3. Colorado Department of Transportation
4. City of Colorado Springs and Colorado Springs Utilities
5. Town of Crested Butte
6. Mountain Coal Company
7. Centennial Water and Sanitation District
8. MillerCoors, LLC
9. Plum Creek Wastewater Authority
10. Tri-State Generation & Transmission Association

11. Climax Molybdenum Company
12. Littleton/Englewood Wastewater Treatment Plant
13. Eagle River Water and Sanitation District
14. City of Boulder
15. City and County of Denver
16. Parker Water and Sanitation District
17. U.S. Energy Corp.
18. U.S. Environmental Protection Agency
19. City of Greeley

35.37 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; MAY 13, 2013 RULEMAKING; EFFECTIVE DATE SEPTEMBER 30, 2013

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

BASIS AND PURPOSE:

The Commission adopted revisions to Regulation #35 after a rulemaking hearing in September 2012. Changes to table value criteria for temperature Warm Stream Tier 2 subclass that were made in the 2010 Basic Standards hearing were inadvertently overlooked at the time the proposal for that rulemaking was developed. In today's action the Commission adopted the corrections to the table values for this parameter in section 35.6.

35.38 STATEMENT OF BASIS SPECIFIC STATUTORY AUTHORITY AND PURPOSE DECEMBER 9, 2013 RULEMAKING; FINAL ACTION MARCH 11, 2014, EFFECTIVE DATE JUNE 30, 2014

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 scheduled to expire before December 31, 2015, to determine whether the temporary modification should be modified, eliminated or extended.

No Action: Temporary modifications of the uranium standards on Upper Gunnison segment 20 were reviewed. Homestake Mining Company presented evidence that progress is being made on the plan to resolve uncertainty. Homestake is on schedule to make a water quality standards proposal for consideration by the Commission at the annual Temporary Modification hearing in December 2014.

PARTIES TO THE RULEMAKING HEARING

1. Rio Grande Silver, Inc.
2. Black Hawk/Central City Sanitation District and City of Black Hawk
3. Centennial Water & Sanitation District, City of Littleton, City of Englewood
4. Colorado Parks and Wildlife
5. Homestake Mining Company of California
6. Metro Wastewater Reclamation District
7. South Platte Coalition for Urban River Evaluation (SP CURE)
8. City of Boulder
9. Seneca Coal

10. Tri-State Generation and Transmission Association
11. City of Fort Collins
12. MillerCoors, LLC
13. Environmental Protection Agency
14. Barr Lake and Milton Reservoir Watershed Association
15. Plum Creek Water Reclamation Authority

35.39 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE: DECEMBER 8, 2014 RULEMAKING; EFFECTIVE DATE JUNE 30, 2015

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

BASIS AND PURPOSE

To remain consistent with the Commission's decisions regarding arsenic at Section 35.36, an arsenic temporary modification was added to Upper Gunnison segment 13a, which had an existing chronic arsenic standard of 0.02 ug/l and a permitted discharger with a predicted water quality–based effluent limit compliance problem.

35.40 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 8, 2014 RULEMAKING; FINAL ACTION JANUARY 12, 2015; EFFECTIVE DATE JUNE 30, 2015

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

BASIS AND PURPOSE

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the Commission reviewed the status of temporary modifications scheduled to expire before December 31, 2016, to determine whether the temporary modification should be modified, eliminated or extended. Temporary modifications of standards on 2 segments were reviewed.

No Action: The Commission took no action on the temporary modifications for the following segments.

> Upper Gunnisonn River segment 12, metals standards (type B): The Commission took no action on the existing Type B Temporary Modifications for cadmium, copper, and zinc, which were adopted for Upper Gunnison River Basin Segment 12 during the December 10, 2012 Rulemaking. These temporary modifications are scheduled to expire on June 30, 2016. U.S. Energy presented evidence that sufficient progress is being made on implementation of the Study Plan to Evaluate Metals Loading in the Coal Creek Watershed in the Vicinity of the Keystone Mine (the "Study Plan"). The Study Plan, as approved by the Commission, is intended to identify and quantify sources of cadmium, copper, and zinc that may be affecting water quality in Segment 12, including groundwater downgradient of the flooded Keystone Mine workings. U.S. Energy also informed the Commission of certain modifications to the sampling approach set forth in the Study Plan. Changes include: (1) adding three sampling locations to better capture additional loading sources that had not been identified at the time the Study Plan was prepared; (2) discontinuing sampling at five locations where access is restricted or prior sampling showed that metals loading is not significant; (3) eliminating one of the two low flow annual sampling events at several sampling locations, because results from the two events in September and November 2013 were similar at many locations; and (4) revising the approach for monitoring

groundwater quality within and downgradient of the historic Keystone Mine flooded mine workings. The Commission does not believe these modifications will materially affect U.S. Energy's ability to assess the extent to which existing water quality in Segment 12 is the result of natural or irreversible human-induced conditions or to collect the information needed to support adoption of site-specific water quality standards. These temporary modifications will be reviewed again at the annual temporary modification hearing in December 2015.

Upper Gunnison River segment 20, acute and chronic uranium standards (type B): Homestake Mining Company is currently conducting reclamation of the Pitch Uranium Mine in Saguache County and evidence was presented indicating progress is being made toward resolving uncertainty regarding the underlying standard in Upper Gunnison River segment 20. The Commission made no change to the expiration date of 6/30/2015 because the original time allotment was deemed adequate.

New Temporary Modifications: To remain consistent with the Commission's decisions regarding arsenic at 35.36, arsenic temporary modifications were added to the following two segments, which had an existing chronic arsenic standard of 0.02 ug/l and a permitted discharger with a predicted water quality–based effluent limit compliance problem:

San Miguel segment 3a
Uncompahgre segment 3b

PARTIES TO THE RULEMAKING HEARING

1. Pioneer Natural Resources USA, Inc. and XTO Energy, Inc.
2. U.S. Energy Corp.
3. Plum Creek Water Reclamation Authority
4, Upper Clear Creek Watershed Association
5. Upper Thompson Sanitation District
6. Colorado Parks and Wildlife
7. U.S. Environmental Protection Agency
8. High Country Conservation Advocates
9. Metro Wastewater Reclamation District
10. Climax Molybdenum Company
11. Rio Grande Silver, Inc.
12. City of Pueblo
13. Tri-State Generation and Transmission, Inc.
14. Centennial Water and Sanitation District
15. Xcel Energy
16. MillerCoors
17. Seneca Coal Company
18. Peabody-Sage Creek Mining, LLC
19. City of Boulder

35.41 STATEMENT OF BASIS AND PURPOSE REGARDING THE ADOPTION OF NON-SUBSTANTIVE CHANGES TO THE CLASSIFICATION AND NUMEIRC STANDARDS FOR GUNISON AND LOWER DOLORES RIVER BASINS, JANUARY 11, 2016 RULEMAKING; EFFECTIVE DATE MARCH 1, 2016

The provisions of C.R.S. 25-8-202(1)(i) and 25-8-401(2) 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

35.41STATEMENT OF BASIS AND PURPOSE REGARDING THE ADOPTION OF NON-SUBSTANTIVE CHANGES TO THE CLASSIFICATION AND NUMEIRC STANDARDS FOR GUNISON AND LOWER DOLORES RIVER BASINS, JANUARY 11, 2016 RULEMAKING; EFFECTIVE DATE MARCH 1, 2016

The Commission, in a public rulemaking hearing adopted extensive changes to the format of this regulation. The Commission does not intend to change any existing designations, use classifications or standards, or the implementation of any standards as the results of changing the format.

This rulemaking was in response to longstanding issues with managing the information contained in the standards tables. The changes made in this hearing reflect a change from storing the information in word processing documents to storing the information in a relational database. This change in platform will provide better consistency, facilitate error checking as well as a more readable format for the standards tables. Storing the information in a database allows it to be used more efficiently by other programs in the Division.

While it was the Commission's intent not to change the substantive meaning of the regulations in this rulemaking, in cases where there was ambiguity the revised regulation reflects the Commission's interpretation of the previous format based on Regulation #31 (the Basic Standards and Methodologies for Surface Water) and the experience of the Commission and its staff.

Overall format changes: The new format displays parameters by name, rather than by period table element abbreviations. The section formerly titled "Temporary Modifications and Qualifiers" does not appear in the new format. Instead, there is a separate section for qualifiers, and an "Other" section. Temporary modifications, variances and other footnotes are displayed in the "Other" section. Many items that were formerly in the "Temporary Modifications and Qualifiers" column will be displayed in the "Other" column and will have a different appearance or modified wording, although the information is substantively the same. Each footnote in the "Other" section is preceded by a heading that indicates where the footnote applies:

- Footnotes regarding a use classification will begin with the heading "Classification…"
- Footnotes regarding the antidegradation designation begin with the heading "Designation…"
- Footnotes that relate to a particular standard begin with the name of the parameter, for example "Selenium(chronic)= …"

Constraints of the new format: Some adjustments were made to the way that data is displayed in order to be compatible with the functions of the Standards Database. Database organization requires that information which relates to multiple standards must be attached to each individual parameter. For example, a segment with a temporary modification listed for "all parameters" in the old format will have a temporary modification listed for each individual parameter in the new format. There are also spacing constraints in the new format, which require some information to be moved either to the "other" box on the new format, or moved out of the segment entirely and into another location in the regulation.

Clarification of changes: The shift to a database organizational structure required consistency in the way each data element is addressed. To insure that data is stored and displayed correctly, the following changes were made

- The "type" of temporary modification is no longer displayed in the segment tables, since they have no regulatory effect and have been inconsistently displayed.
- In the old format, waters that had a reviewable antidegradation designation were identified by the absence of either "UP" or "OW" in the designation column. These segments now display the word "reviewable" under the designation heading. There needed to be a value in the designation column for every segment.

- Dissolved standards are not specifically noted as dissolved in the new format. All metals standards are dissolved unless noted with a "T" or a "t". For example, a manganese standard in the old format of "WS(dis") is displayed as "WS" in the new format.

- A new footnote 7 was added to clarify that although E. coli is listed in the "chronic" column, the standard is a two-month geometric mean rather than a 30-day average. The language of footnote 7 was taken from Regulation 31, Table 1, footnote 7.

- A new footnote 8 was added to indicate that all phosphorus standards are based upon the concentration of total phosphorus. In the old format, individual phosphorus standards were noted as "total" in some basins and not others.

- A new footnote 9 was added to clarify that although pH is listed in the "acute" column, the standard is not applied as a 1-day average. The language of footnote 7 was taken from Regulation 31, Table 1, footnote 3.

- Physical and Biological Parameters: Some parameters are not specifically identified in the old format segment tables as acute or chronic. The new format requires that each parameter is placed in either the acute or chronic column. Specifically, these parameters and the basis for being identified as acute or chronic are as follows:

    - pH (acute) – Regulation #31, Table 1, footnote 3

    - E. Coli (chronic) – Regulation #31, Table 1, footnote 7

    - D.O. (chronic) – Regulation #31, Table 1, footnote 1

    - cyanide (acute) – Regulation #31, Table 2

    - sulfide (chronic) - Regulation #31, Table 2

    - nitrate (acute) - Regulation #31, Table 2

    - nitrite (chronic) – not specified in Regulation #31. Nitrite has been implemented as a 30-day average standard in permits and assessments.

    - chloride (chronic) Regulation #31, Table 2

    - boron (chronic) - Regulation #31, Table 2

    - sulfate (chronic) Regulation #31, Table 2

- The previous format used Footnote 1 instead of Footnote A for the arsenic hybrid standard. The label for the footnote was changed from "1" to "A" but the text of the footnote did not change.

35.42 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 14, 2015 RULEMAKING; FINAL ACTION JANUARY 11, 2016; EFFECTIVE DATE JUNE 30, 2016

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 scheduled to expire before December 31, 2017, to determine whether the temporary modification should be modified, eliminated or extended. Temporary modifications of standards on four segments were reviewed.

The Commission took no action on the temporary modifications on the following segments.

> Uncompahgre segment 4b: Temporary modification of the selenium standards. The Commission took no action on the selenium temporary modifications on Uncompahgre segment 4b. The Town of Olathe did not participate in this rulemaking but the temporary modification will be reviewed in December 2016.

The Commission deleted the temporary modification on the following segment.

> Upper Gunnison River segment 20: Temporary modification of the acute and chronic uranium standards. These temporary modifications expired on 6/30/2015. The Commission authorized deletion of the temporary modification from the tables.

The Commission extended the temporary modifications on the following segments.

> Lower Gunnison segment 2: Temporary modification of the selenium standard. The Commission extended the temporary modification for chronic selenium with a narrative value of "current condition" to December 31, 2022 to coincide with the next basin review. The City of Delta wastewater treatment facility is currently discharging selenium at an average concentration of 8.45 ug/L and is addressing the inflow and infiltration into their collection system that is the cause of elevated selenium in their effluent. The City of Delta recently purchased a new wheeled collection system camera and has identified, with video and sampling a few sources of I & I (Inflow and Infiltration) and funds up to $150,000 for this year have been allocated for pipe replacement. There is also still significant uncertainty concerning the underlying selenium standard. Time is needed to wait for the EPA's new selenium criteria and implementation guidance, and to determine an appropriate underlying selenium standard for Lower Gunnison segment 2. The progress on resolving the uncertainty with the selenium standard will be reviewed at the annual temporary modification hearing December 2020.
>
> Upper Gunnison segment 12: Temporary modification of metals standards. The Commission extended the existing temporary modifications for cadmium, copper and zinc, which were adopted for segment 12 during the September 2012 rulemaking; these temporary modifications are now scheduled to expire on December 31, 2017. This extension will allow sufficient time to resolve the existing uncertainty regarding metals loading sources to segment 12 and develop site-specific standards. It will also reconcile the expiration date for the temporary modifications with the projected effective date for revised water quality standards adopted during the June 2017 Regulation #35 basin hearing. U.S. Energy presented evidence that progress is being made on implementation of the Study Plan to Evaluate Metals Loading in the Coal Creek Watershed in the Vicinity of the Keystone Mine (the "Study Plan"). The Study Plan, as approved by the Commission, is intended to identify and quantify sources of cadmium, copper and zinc loading that may be affecting water quality in segment 12, including groundwater down gradient of the flooded Keystone Mine workings. To address concerns regarding the groundwater portion of the study, U.S. Energy completed a longitudinal sampling event in November 2015. U.S. Energy identified activities it plans to complete over the next eighteen months to be ready to develop and propose site-specific water quality standards in June 2017, which includes continued data collection (if needed) and evaluation, report preparation, site-specific standards proposal development, and meetings with the agencies and stakeholders. The surface water data collected as part of the Study Plan and additional groundwater data as required by the groundwater portion of the plan will be used by U.S. Energy to develop site-specific standards for segment 12, if appropriate. Water quality improvements and seasonal variation evident from the

long-term water quality data collection effort in segment 12 will be evaluated throughout the remainder of the temporary modifications during the development and consideration of site-specific standards. These temporary modifications will be reviewed again at the annual temporary modifications hearing in December 2016.

PARTIES TO THE RULEMAKING HEARING

1. City of Delta
2. Resurrection Mining Company
3. U.S. Energy Corp.
4. City of Pueblo
5. Peabody Sage Creek Mining and Seneca Coal Company
6. Climax Molybdenum Company
7. Rio Grande Silver
8. City of Colorado Springs and Colorado Springs Utilities
9. Tri-State Generation and Transmission Association, Inc.
10. High Country Conservation Advocates
11. U.S. Environmental Protection Agency
12. Colorado Parks and Wildlife
13. Town of Crested Butte and Coal Creek Watershed Coalition
14. Public Service Company of Colorado