WATER QUALITY CONTROL COMMISSION
LONG-RANGE SCHEDULE 2001-2002

June, 2001

DATE, TIME AND SUBJECT OF HEARING	NOTICE APPROVED	NOTICE FILED	PUBLISHED IN COLO. REG.	MONTHLY BULLETIN	PARTY STATUS REQUESTS DUE	EVIDENCE DUE	PREHEARING CONFERENCE	WRITTEN REBUTTALS DUE
August 13, 2001; 10:00 a.m. 303(d) listing criteria IH{SJ}				July				
August 13, 2001; 1:00 p.m. Ground Water Q. Classif. and Stds., Reg. #42 WCRM [PK]{GM}	04-09-01	04-30-01	05-10-01	May		Initial written comments: June 26, 2001 Rebuttal statements: August 1, 2001		
August 13, 2001; 1:30 p.m. WQCD Mixing Zone Guidance IH {DA}				July				
August 14, 2001								
September 10, 2001; 9:00 a.m. Chatfield Control Reg., Reg. #73 TRIH {DP}				August				
September 10, 2001; 9:30 a.m. Bear Creek Control Reg., Reg. #74 TRIH {DP}				August				
September 10, 2001; 10:00 a.m. WQCD Antidegradation Significance Test Guidance IH {SJ}				August				
September 10, 2001; 1:00 p.m. Basic Stds., South Platte corrections, Regs. #31, 38 WCRM	05-14-01	05-31-01	06-10-01	June		Initial written comments: July 18, 2001 Rebuttal statements: August 22, 2001		
September 10, 2001; 1:05 p.m. 401 Certification, Reg. #82 TRIH {GP}				August				
September 10, 2001; 1:30 p.m. Procedural Rules, Reg. #21 RRIH				August				
September 11, 2001								
October 9, 2001; 9:00 a.m. FY02 Intended Use Plan, Reg. #52 WCRM; FY02 Domestic WWT Grant IUP, Reg. #54 WCRM [AQ]{DS}	07-09-01	07-31-01	08-10-01	August		Initial written comments: September 5, 2001 Rebuttal Statements: September 26, 2001		
October 9, 2001; 1:00 p.m. Continuing Planning Process, Reg. #23, RRIH				September				

ABBREVIATIONS FOR HEARINGS: RMH-Rulemaking; WCRM-Written Comment Only Rulemaking; AH-Adjudicatory Hearing; IH-Informational Hearing; TRIH-Triennial Review Informational Hearing; RRIH-Routine Review Informational Hearing; ISH – Issues Scoping Hearing; IFH – Issues Formulation Hearing.

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October 9, 2(Discharges t(#65, TRIH {D	May 13, 2002; 9:00 a.m. HB01-1032 Discharge Permit provisions Reg. #61 RMH ( ) [ ] {SN}	01-14-02	01-31-02	02-10-02	February				
October 9, 2(Public IH for (pollution prob	May 14, 2002								
	June 10, 2002	WQCC Annual Retreat							
	June 11, 2002								
October 9, 2(Div. of Minera Annual SB 89	**Pueblo** July 8, 2002; 10:00 a.m. Arkansas/Rio Grande W.Q. Classif. and Stds., Regs. #32, 36 RMH (BN) [ ] {SJ}	03-11-02	03-29-02	04-10-02	April				
October 9, 20 Oil Inspection Annual SB 89	July 8, 2002; 1:00 p.m. Biosolids Regulation, Reg., #64 TRIH {LT}				June				
	July 9, 2002								
October 10, 2 Ground Wate Reg. #41 RM	August 12, 2002 9:00 a.m. Microsemi Ground Water Quality Stds. Reg. #42, RMH (CW) [AQ]{ }	04-08-02	04-30-02	05-10-02	May				
October 10, 2 Upper/Lower and Stds., Re	August 13, 2002								
Lamar November 13 Arkansas/Rio and Stds., Re	September 9, 2002; 1:00 p.m. Colo. W.Q. Management and Drinking Water Prot. Handbook, Policy 98-2, IH				August				
November 13 Arequa Gulch Reg. #32, RM	September 10, 2002								
November 13 Multiple-Regu Regs. #21, 31	October 14, 2002; 9:00 a.m. FY03 Intended Use Plan, Reg. #52 WCRM; FY03 Domestic WWT Grant IUP, Reg. #54 WCRM {DS}	07-08-02	07-30-02	08-10-02	August				
November 14,	October 14, 2002; 9:30 a.m. Nonpoint Source Funding IH {LF}				September				
December 10, Oil and Gas C Annual SB 89	October 14, 2002; 1:30 p.m. Public IH for comment on Water pollution problems in Colorado				September				
December 10, Hazardous Ma Management I Annual SB 89	October 14, 2002; 2:30 p.m. South Platte W.Q. Classif. and Stds. Reg. #38 ISH {SJ}				September				
	October 15, 2002								

ABBREVIATIC Triennial Revi

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November 12, 2002; 10:00 a.m. Upper/Lower Colorado W.Q. Classif. and Stds., Reg. #33, 37 IFH {SJ}				October				
November 13, 2002								
December 9, 2002; 1:00 p.m. Colorado River Salinity Stds., Reg. #39 TRIH {SJ}				November				
December 10, 2002								
April 14, 2003; 9:00 a.m. Reg. for Effluent Limitations, Reg. #62 RMH (CW) [ ] {DA}	12-09-02	12-31-02	01-10-01	January				

ABBREVIATIONS FOR HEARINGS: RMH-Rulemaking; WCRM-Written Comment Only Rulemaking; AH-Adjudicatory Hearing; IH-Informational Hearing; TRIH-Triennial Review Informational Hearing; RRIH-Routine Review Informational Hearing; ISH – Issues Scoping Hearing; IFH – Issues Formulation Hearing.

WATER QUALITY LIMITED SEGMENTS

STILL REQUIRING TMDLs

Colorado's 1998 303(d) List and

Related Water Quality Management Lists

Colorado Department
of Public Health
and Environment

Water Quality Control Division
Final - March 24, 1998

WATER QUALITY LIMITED SEGMENTS STILL REQUIRING TMDLs

Colorado's 1998 303(d) List and Related Water Quality Management Lists

Table of Contents

I. INTRODUCTION

The 303(d) List identifies water quality limited segments still requiring Total Maximum Daily Loads ("TMDLs") within Colorado. This list was prepared to fulfill section 303(d) of the federal Clean Water Act ("Act") which requires that states submit to the U.S. Environmental Protection Agency ("EPA") a list of those waters for which technology-based effluent limitations and other required controls are not stringent enough to implement water quality standards.

Once listed, the State is required to prioritize these water bodies or segments (rivers, streams, lakes reservoirs) based on the severity of pollution, and then to determine the causes of the water quality problem and to allocate the responsibility for controlling the pollution. This analysis is called the TMDL Process, and results in the determination of: 1) the amount of a specific pollutant that a segment can receive without exceeding a water quality standard (the TMDL), and 2) the apportionment to the different contributing sources of the pollutant loading (the allocation). The TMDL must include a margin of safety, waste load allocation (for point sources) and a load allocation (for non-point sources and natural background). The TMDL must include upstream loads in the assessment and apportionment.

The Water Quality Control Division ("Division") has overall responsibility to complete TMDLs for all segments on the 303(d) List. However, the Division will rely heavily upon local watershed groups and entities to participate and even conduct TMDLs for their segments. TMDLs must ultimately be submitted to EPA for review and approval.

As well as the actual 303(d) List, this report presents the information sources and methodology used by the Division to develop the List. It also includes the prioritization of the listed segments for TMDL work, a schedule for completion of the TMDLs, and the TMDLs targeted for completion in the next two years. A final section of the report presents the Monitoring and Evaluation List; this includes segments for which uncertainty exists regarding their status.

II. PUBLIC PARTICIPATION

Through public participation, Colorado's 303(d) List will more accurately identify water quality limited segments within the State. Public participation requirements for the TMDL program, which includes 303(d) List development, is described in the Act as well as in federal regulations. The State is directed to solicit information from other agencies, the public and academic institutions. In addition,

public notice is required when a proposed list has been submitted.

The Division has solicited public participation to develop the 1998 303(d) List through several means. Beginning in June of 1997, monthly briefings were held at the Water Quality Control Commission ("Commission") public meetings, and at the Colorado Water Quality Forum monthly meetings. Periodically, news items were published in the monthly Water Quality Bulletin. Specific mailings were made to over 120 individuals and entities throughout the state distributing drafts of criteria for listing and delisting segments, criteria for credible evidences, determining use support categories, and protocols for setting priorities. Letters of comment responding to these mailings are on file at the Division office.

A. TMDL Advisory Committee

Late in the fall of 1996, Colorado's Water Quality Forum ("Forum") formed a broad-based TMDL Subcommittee to begin a monthly dialogue on TMDLs in Colorado and provide thoughtful public input to the 1998 303(d) List. During the summer of 1997, the Commission widened the participation and asked TMDL Subcommittee to act as a formal Advisory Committee to the Division and renamed the group as the "TMDL Advisory Committee" ("TAC"). The TAC has met approximately 12 times between June 1, 1997 and January 8, 1998, to discuss such issues as criteria for listing and delisting segments; criteria for determining credible evidence; determination of the degree of designated use support; protocols for prioritization of TMDL development; and targeting and scheduling. There are currently 35 members on the TAC mailing list; generally, 12 to 17 members attend the meetings.

The Colorado Water Quality Forum is an informal advisory organization that plays an important role in the water quality management process in Colorado. Created in 1992, the Forum provides an opportunity for ongoing informal dialogue among diverse parties representing a broad spectrum of stakeholder interests in water quality management. Participants include water suppliers; industrial and municipal dischargers; environmental groups; and federal, state, and local governmental agencies.

B. Public Notice

Notice of the Commission's intent to hold an informational hearing on March 10, 1998, regarding the 1998 303(d) List was published in the January Water Quality Bulletin and a separate mailing was made to additional entities who have expressed interest in the List development process. The draft was prepared on January 16, 1998 and widely distributed. Written comments were accepted by the Division through February 17, 1998. These comments were considered when the Division

prepared the Proposed List which is part of this document (dated February 26, 1998). The Division's response to these comments can be found at Section VII at the end of this report. Written comments directly to the Commission were accepted through February 26, 1998. Oral testimony was presented by the Division and the public on March 10, 1998 at the Commission hearing. Minor changes were made as a result of the Commission hearing.

III. LIST DEVELOPMENT

The Division, in conjunction with the TAC, discussed the List development process and determined that there was need for an ancillary list in addition to the 303(d) List. The Monitoring and Evaluation List was devised to identify segments where there is reason to suspect water quality problems on stream segments, but uncertainty exists regarding one or more factors. The Monitoring and Evaluation List is discussed and presented in Appendix C.

To develop the 303(d) List, criteria regarding listing, de-listing, and what constitutes credible evidence were established.

A. Listing Criteria

Segments are *included* on the 1998 303 (d) List if they meet one of the following listing criteria.

1. Segments which have temporary modifications of standards.
2. Segments which are shown to have designated use impairment (Not Supporting, Partially Supporting, or Potentially Impaired, [see Appendix A]) based on review of Credible Evidence (see below).

B. Delisting Criteria

Segments which met the above criteria have been *removed* from the 303(d) List if the following conditions apply:

1. Segments where federal, State, or local requirements are stringent enough to attain water quality standards.
2. Segments where approved TMDLs address all the pollutants of concern.

C. Information Considered

The Division has attempted to use all the existing and readily available water quality-related information. Both administrative records and water quality data were reviewed. The major sources of information are described below:

Water Quality Classifications and Numeric Standards - This source contains the information regarding standards for specific segments within river basins which acts as the bench mark against which a segment's water quality data is compared. This is also the source of information regarding temporary modifications to standards. Water quality standards hearing files, which contain data from numerous sources, were also consulted.

Colorado Discharge Permit System (CDPS) discharge permits - Information regarding permits, expiration dates, and permit effluent limits were obtained through review of both hard copy permit files and records in PCS (the EPA national permit database).

STORET - This EPA national water quality database is used by the Division for storage and retrieval of stream water quality data generated by Division monitoring. This database also contains data from other agencies (e.g., USGS) water quality monitoring sites.

Beyond these three major sources of information, the Division reviewed information from the following entities:

Bureau of Land Management
CDPHE HMWMD Remedial Programs
Cyprus Climax
Colorado Division of Wildlife River Watch Program
Colorado Division of Wildlife
Colorado Natural Heritage Foundation
Coors Brewing Company
Denver Environmental Health Department
Denver Regional Council of Governments
Denver Water Board
EPA CERCLA Program
Littleton-Englewood Joint Sewerage Agency
Metro Reclamation District
Natural Resources Conservation Service
Non-Point Source Project Files
U.S. Fish and Wildlife Service
U.S. Forest Service
U.S. Geological Survey Special Studies

D. Assessment Methodology

The determination of the degree of use support for a given segment is based on several types of assessments. The most common method is based upon a comparison of the segment's water quality data with the appropriate stream standards for that segment. Where the data shows evidence of no numeric standard exceedance (e.g. the 85th percentile data point is below the applicable chronic stream standard and there are no exceedances of the acute water quality standard) the segment is said to be "fully supporting" its designated uses. The Designated Use Support Matrix, which describes this and other criteria and support categories is presented in Appendix A. A comparison of the physical and/or biological assessments of a water body with the narrative standards may be used to determine degrees of impairment.

Biological assessments by the Colorado Division of Wildlife (CDOW) were utilized in developing the List. These consist of fish surveys performed by CDOW staff using both seining and electrofishing. The results of these assessments were compared with the Standards and Classification System in the following manner. For segments that are designated as Aquatic Life Class 1, evidence of a decline over time from a healthy and diverse fish community or the absence of a Species of Critical Concern[1] (SCC) constitutes an impairment of the use. For segments that are designated as Aquatic Life Class 2, evidence of significant reduction of the species composition of a fish community over time constitutes an impairment of the use. The Division limited the time frame for comparison of fish communities as shown by fish surveys, to only the late 1970's (when aquatic life classes were established) through more recent conditions.

Assessments conducted by US Forest Service Hydrologists were also utilized in developing the List. The assessment methodologies used included Tarzwells Substrate Ratio, macroinvertebrate surveys, Pfankuch stability rating, USFS Stream Health Assessment protocols, T-walk, recording temperature sensors, fish surveys, and water chemistry information.

Where determinations were made regarding the degree of attainment of narrative and temperature standards, it is important to note that there is a two-tiered test implicit in these standards. A determination of impairment requires that the adverse condition is present, but also that there is an adverse effect on the beneficial use. For example, the sediment standard states specifically that state waters shall be free from "...bottom deposits detrimental to beneficial use." [Basic Standards and

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[1] Species of Critical Concern includes native fish species observed to be in decline and rare in abundance or limited in distribution (as identified by CDOW in the Inventory and Status of South Platte River Native Fishes in Colorado, CDOW, 1997).

Methodologies for Surface Waters (5CCR 1002-8) at 31.11]. The Division has only listed segments where both the harmful condition is present, and there is evidence that the aquatic life use is adversely effected.

E. Credible Evidence

Segments are included on the 303(d) List based on an evaluation of biological, chemical or physical data demonstrating numeric or narrative standards violations, use impairment or a declining trend in water quality or biotic community such that standards could be exceeded prior to the next listing cycle. However, it is important that the decision to list a water body be based on "credible evidence," rather than anecdotal information. The following guidelines were developed to assist during evaluation of water quality information.

- Information is available to describe the methods used for sample collection and field or laboratory analysis.

- Sufficient information and data are available to indicate that the measurements represent existing conditions.

- In general, information and data should be no older than 5 years. Older data may be used on a case-by-case basis if the Division believes conditions have not changed and this older data is still representative or the older data is used with newer data to determine trends.

- Physical and biological assessments are performed by an observer who has training and experience in performing such observations, and recorded observations adequately account for seasonal variation.

IV. PRIORITIZATION FOR TMDL DEVELOPMENT

The Water Quality Control Division ("Division") must ensure that TMDLs are developed for all water bodies and pollutants on the 303(d) List. Recognizing that all TMDLs cannot be completed at once, the Clean Water Act (CWA) directs the Division to prioritize the waters on the 303(d) List. The Division will use the prioritized 303(d) List to focus resources to support the development of TMDLs.

A. Prioritization Objective

The segments on the 303(d) List will be at different stages on the path to an approved TMDL: some will need to have more data collected, some will need outreach to increase stakeholder involvement, some will need scoping, additional data and problem identification. Some TMDLs are complex, multi-task problems, some are simpler effluent limits. The development of these TMDLs may proceed at different rates. *Implementation* of approved TMDLs is a separate process with separate authorities and time frames.

The objective of the prioritization is to identify where the Division should concentrate its resources. It will also provide useful information to other stakeholders when deciding how to focus their resources. The identification of a high priority segment does not necessarily mean that the TMDL will be developed before any lower priority segments. For some high priority TMDLs, the development may have to await data collection or stakeholder outreach.

B. Assigning Priorities

Priorities are initially based on consideration of the severity of impairment to the use classifications for the segment [2]. Secondary factors can be used to modify the initial prioritization to an overall or final prioritization. Secondary factors may either elevate a water body into a higher priority group (e.g., endangered or declining native species, public interest, administrative needs) or reduce the priority ranking (e.g., pace of stakeholder group development, CERCLA cleanup action in progress).

1. Severity of Water Quality Impairment

High Priority: Non-supporting or partially supporting for primary drinking water standards; non-supporting for Class I aquatic life, cold or warm; non-supporting for Class I recreation or agriculture.

Medium Priority: Potentially impaired for primary drinking water standards; non-supporting for secondary drinking water standards; partially supporting or potentially impaired for Class I aquatic life cold or warm; partially supporting for Class I recreation or agriculture.

Low Priority: Partially supporting or potentially impaired for secondary drinking water standards; partially supporting or potentially impaired for Class II aquatic life cold or

2 Use Classifications are described in "Basic Standards and Methodologies for Surface Water" 31 (5 CCR 1002-8, sec. 31.13).

warm, or Class II recreation; or potentially impaired for Class I recreation or agriculture; for all uses: fully supporting or fully supporting, allocated.

2. Secondary Considerations

- Division action can support a local, regional or federal stakeholder group that is ready to move on to the next step of TMDL development, or there is substantial public interest and support.

- The water body is vulnerable or fragile as an aquatic habitat, or there are aquatic species of special concern present.

- The water body is of particular importance for recreational, economic and aesthetic uses.

- The Division can realize efficiency savings (for example: synchronizing permits, linking segments within a watershed).

- There are immediate programmatic needs such as waste load allocations for permits that are due to expire or for new or expanding discharges.

- There is a court ordered cleanup or CERCLA action in progress which will change the contribution of pollutants (this consideration could reduce priority ranking).

V. The 1998 303(d) List

The 1998 303(d) List is presented in Table 1. Segments are presented in Water Body Identification number order. Segments are frequently listed more than once, especially if there are multiple dischargers on the segment. The following paragraphs describe the columns in the List.

WBID is the Water Body Identification number. This number is assigned by the Division and is used to group and identify water bodies with the same classifications and standards. Appendix B describes the WBID system in more detail.

Segment Name describes the location and the extent of the segment. This is an abbreviated version of the official segment name that can be found in the Classification and Numeric Standards for each basin

Portion describes the portion of the segment that is impaired or impacted.

Status describes the Designated Use Support Status, as discussed in Appendix A. FS = Fully Supporting, FS,A = Fully Supporting, Allocated, PI = Potentially Impaired, PS = Partially Supporting, NS = Not Supporting. When more than one parameter is listed as impairment, the status represents the most limiting of these parameters.

Basis indicates the reason the segment was included in the List. For example "Water Qual Data" indicates that it was included based on an assessment of the water quality data; "Temp Mods" indicates that it was included because of the existence of temporary modifications to standards.

Impairment contains a listing of the parameters for which assessments have shown that standards are not attained in some manner or where beneficial uses have some degree of impairment. (Also see Appendix A)

Additional Information is included to convey more information about the segment, the stressors, the pollution, or the temporary modifications. If CDPS permit discharge to the segment, expire before April 1, 2000, and have discharge limitations for parameters included in the impairment column, they are listed in this column. The term "mining activities" is use to indicate active, inactive or abandoned mines in the area. These categories were not differentiated. This column only reflects relevant information currently available to the Division, and is only intended to supply background information to the reader. It is not intended to identify all sources that may contribute pollutants of concern into the segment, nor does it assign relative contributions between sources.

Div Res indicates the final priority (High, Medium, or Low) assigned to the segment according to the prioritization criteria discussed above for the expenditure of Division resources. The priority listed is based on the highest priority constituent in the stream; other constituents may have a lower priority based on applying the criteria.

TAR indicates TMDLs targeted for completion. As requested by EPA, the Division has identified the TMDLs it has targeted for completion in the 1998-2000 biennium. Targeting decisions were based on a combination of the severity of the water quality problem, the availability of sufficient data and the administrative needs for the TMDL (e.g. WLA for expiring permits).

Table 1 Colorado 1998 303(d) List

WBID	Segment Name	Portion	Status	Basis	Impairment	Additional Information	Div. Res.	TAR
COAR	ARKANSAS RIVER BASIN	----------	---	----------	--------	----------	----	
COARLA01	Arkansas R. from abv Fountain Cr. to stateline	All, problems increase downstream	PS	Water Qual. Data	Se, Fe, Mn, SO4	NPS significant. CDPS: CF&I STEEL, L.P.	Low	
COARMA04L1	Teller Resv.	All	PS	Fish Consump. Adv.	Hg	Still posted, Hg source unknown.	High	
COARUA01B	E. Fk. Arkansas R., abv. Birdseye Gul	AMAX property and below	NS	AMAX Data	Pb, Mn, Zn	Temp. Mods. for Pb, Mn, Zn Exp. 12/31/97. Historic Mining	High	
COARUA02B	Arkansas R., abv. Lake Fork	All	PS	WQ Data	Cd, Zn	Temp. Mods. for Cd, Zn Exp. 12/31/97. - Impacted by Calif. Gul.	Low	
COARUA02C	Arkansas R., Lake Fork to Lake Ck.	All	PS	Temp.Mods.	Zn	Temp. Mods. for Zn Exp. 12/31/97. - Impacted by Calif. Gul. CERCLA	Low	
COARUA09	Iowa Gul., Paddock Ditch 1 to Arkansas R.	All	PS	Temp. Mods.	Zn	Temp. Mods. for Zn Exp. 12/31/97. Mining impacted	Med	
COARUA11	Sayres G., & S. Fk. Lake Ck., Sayres G to Lake Cr.	All	PS	Water Qual. Data	Al, Cu, Fe, pH	Data older than 5 yrs, but conditions unchanged	Med	
COARUA12	Cottonwood Cr, Chalk Cr.& S. Fk Arkansas & tribs	Chalk Ck	PS	Water Quality Data	Zn	Mining impacted	Med	
COARUA21	Cripple Ck., Arequa Gul. to Fourmile Ck.	All	PS	Temp. Mods.	Mn, Fe,	Mining impacted.	High	X
COARUA22	Arequa Gul., source to Cripple Ck.	All	PS	Temp. Mods.	pH,Al,Mn,CN, Fe, Zn	Mining impacted.	High	X
COGU	GUNNISON AND LOWER DOLORES RIVER BASIN	----------	---	----------	--------	----------	----	
COGULG02	Gunnision R., Uncompaghre R. to Colorado R.	All	PS	Temp. Mods.	Se	Temp. Mods. for Se Exp. 8/30/02, CDPS: DELTA, CITY OF	Med	
COGULG09	Fruit Growers Resv.	All	PS	Temp. Mods.	F. Coli, NH3	Temp. Mods. for F. Coli, NH3 Exp. 8/30/00	High	
COGUNF05	Various tribs to N Fk Gunnison R, USFS boundary to N Fk.	especially tribs in and d/s of Mancos shale	PS	Temp. Mods.	Se	Temp. Mods. for Se Exp. 8/30/02	Med	

WBID	Segment Name	Portion	Status	Basis	Impairment	Additional Information	Div. Res. TAR
COGUSM03A	San Miguel R., BridalVeil & Ingram Ck to Marshall	Below historic mining(Idarado)	PS	Temp. Mods.	Zn	Temp. Mods. for Zn Exp. 6/30/02 - Impacted by Idarado CERCLA Site	Low
COGUSM03B	San Miguel R. Marshall Cr. S Fk San Miguel	Below historic mining(Idarado)	PS	Temp. Mods.	Cd, Mn, Zn, sediment	Temp. Mods for Zn, Mn, Cd Exp. 6/30/02 - Impacted by Idarado CERCLA Site, CDPS: TELLURIDE, TOWN OF	Low
COGUSM06B	Marshall Ck., source to San Miguel R.	All	PS	Water Qual. Data	Zn	Mining impacted, by Idarado CERCLA Site	Low
COGUUG08	Slate R., Coal Ck. to East R.	All	PS	Temp. Mods.	Fe, Mn	Temp. Mods for Fe, Mn Exp. 8/30/00	Med
COGUUN04	Uncompaghre R., US Hwy. 550 to Gunnison R.	All	PS	Temp. Mods.	F. Coli, Se	Temp. Mods. F. Coli Exp. 8/30/00, Se Exp. 8/30/02; CDPS: OLATHE, TOWN OF; MONTROSE, CITY OF; WEST MONTROSE SANITATION	High
COGUUN14	Sweitzer Lk.	All	PS	Temp. Mods.	Se	Temp. Mods. for Se Exp. 8/30/02	Med
CORG	RIO GRANDE RIVER BASIN	----------	---	----------	---------	----------	
CORGAL03A	Alamosa R., Alum Ck. to Wightman Fork	All	PS	WQ Data	pH,Al,Fe,Cu,Mn	Natural and mining impacts, by Summitville CERCLA Site.	Low
CORGAL03B	Alamosa R., Wightman Fk. to Terrace Res.	All	PS	WQ Data	pH,Al,Cu,Fe	Mining impacted, by Summitville CERCLA Site	Low
CORGAL05	Wightman Fk. & Tribs., source to S30,T37N, R4E	All	PS	Temp.Mods.	Fe, Zn	Mining impacted, by Summitville CERCLA Site	Low
CORGAL08	Terrace Res	All	NS	WQ Data	pH,Cu,Mn,Zn	Mining impacted, by Summitville CERCLA Site	Low
CORGAL09	Alamosa R., Terrace Res. to CO Hwy. 15	All	NS	WQ Data	pH,Cu,Fe,Mn,Zn	Mining impacted, by Summitville CERCLA Site	Low
CORGAL10	Alamosa R., blw. CO Hwy. 15	All	NS	WQ Data	Cu,Mn,Fe	Mining impacted, by Summitville CERCLA Site	Low
CORGCB09A	Kerber CK. abv Brewery Cr and tribs exc 8	All	NS	Temp.Mods.	Cd,Cu,Mn,Ag,Zn	Mining impacted, by Bonanza cleanup, underway	High
CORGCB09B	Kerber Ck., Brewery Ck. to San Luis C	All	NS	Temp.Mods.	Cd,Cu,Zn	Mining impacted, by Bonanza cleanup, underway	High

WBID	Segment Name	Portion	Status	Basis	Impairment	Additional Information	Div. Res. TAR
CORGCB12	Saguache Ck and Tribs abv Ford Ck	Big Springs Ck, in Houselog Ck Watershed	PS	Assess	Sediment	Identified by USFS	Med
CORGRG04	Rio Grande R., Willow Ck to Alamosa County line	Upper 5 miles	PS	Water Qual. Data	Cd,Zn	Mining impacted, no NPS cleanup yet.	Med
CORGRG30L1	Sanchez Resv.	All	PS	Fish Consump. Adv.	Hg	Still posted, additional data needed.	High
COSJ	SAN JUAN RIVER AND DOLORES RIVER BASIN	----------	---	----------	----------	----------	----
COSJAF02	Animas R. & Tribs., Denver Lk. to Maggie G.	All	NS	Temp. Mods.	Al, Cd, Cu, Fe, Pb	Mining impacted. Temp. Mods. for Al, Cd, Cu, Fe, Pb, Mn, Zn starts 3/2/01	High
COSJAF03B	Animas R., Cement Ck. to Mineral Ck.	All	NS	Temp. Mods.	Al, Cd, Cu, Fe, Pb	Additional data needed. Temp. Mods. for Al, Cd, Cu, Fe, Pb, Mn, Zn starts 3/2/01	High
COSJAF04A	Animas R., Mineral Ck. to Elk Ck.	All	NS	Temp. Mods.	pH, Cu, Fe, Zn	Mining impacted. Temp. Mods. for Fe, Zn, Ag starting 3/2/01	High
COSJAF04B	Animas R., Elk Ck. to Junction Ck.	All	NS	Temp. Mods.	Zn	Mining impacted. Temp. Mods. for Zn, Ag starting 3/2/01	High
COSJAF07	Cement Ck., source to Animas R.	All	NS	Temp. Mods.	Al, Cd, Cu, Fe, Pb	Mining impacted. Temp. Mods. for Al, Cd, Cu, Fe, Pb, Mn, Zn starting 3/2/01	High
COSJAF08	Mineral Ck., source to S. Mineral Ck.	All	NS	Temp. Mods.	Al, Cd, Cu, Fe, Pb	Mining impacted. Temp. Mods. for Al, Cd, Cu, Fe, Pb, Mn, Zn starting 3/2/01	HIgh
COSJAF09B	Mineral Ck., S. Fk. Mineral Ck. to Animas R.	All	NS	Temp. Mods.	pH, Cu, Fe, Zn	Mining impacted. Temp. Mods. for Zn, Cd, Cu, Fe, Ag starting 3/2/01	High
COSJDO03	Dolores R., Horse Ck. to Bear Ck.	All	NS	WQ Data\Reported Impact	Mn	Mining impacted.	Low
COSJDO04L	Dolores R., Bear Cr to Bradfield Ranch Bridge	McPhee Resv.	PS	Fish Consump. Adv.	Hg	Still posted. Additional data needed.	High
COSJDO05	Tribs. to Dolores R., abv. W. Dolores	Silver Ck. abv. Rico H2O	PS	Water Qual. Data	Cd, Mn, Zn	Affects Rico DW supply	High
COSJDO09	Silver Creek from Rico's diversion to Dolores R		PS	Water Quality Data	Cd	Exceeds standard	Med

WBID	Segment Name	Portion	Status	Basis	Impairment	Additional Information	Div. Res. TAR
COSJLP04	Mancos R. and tribs abv Hwy 160	Box Canyon	PS	Assess	Sediment	Identified by USFS, data available	Med
COSJLP08L	Narraguinnep, Puett, and Totten Resv.	Narraguinnep Resv.	PS	Fish Consump. Adv.	Hg	Still posted. Additional data needed.	High
COSJSJ03	L Navajo R & Navajo R & tribs, blw SanJuan-Chama Div	Lower Rio Blanco R	PS	Assess	Sediment	Documentation in 319 project files	Med
COSP	SO PLATTE RIVER BASIN	----------	---	----------	---------	----------	----
COSPBO09	Boulder Ck., S. Boulder Ck. to Coal Ck.	All	PS	W Q Data, Bio Assess	NH3, Aq Life	Impacted by municipal WWTP, DOW surveys show decline in native species. CDPS: BOULDER, CITY OF-75TH ST	Med
COSPBO10	Boulder Ck., Coal Ck. to St. Vrain Ck	All	PS	W Q Data, Bio Assess	NH3, Aq Life	Impacted by municipal WWTPs, DOW surveys show decline in native species	Med
COSPBT05	Big Thompson R., I-25 to S. Platte R.	All	PS	Water Qual. Data	Mn, F. Coli	Probable, NPS sources, DOW surveys suggest reduced fish community, especially native species. CDPS: WASTE MGMT DISP SERVICES	Low
COSPBT09	Little Thompson R., Culver Ditch to Big Thomp. R.	All	PS	W Q Data	Mn, F. Coli	Impacted by municipal WWTP, and probable NPS.	Low
COSPCL02	Clear Ck., I-70 Brdg. at Silver Plum to Argo Tunnel	All	PS	Water Qual. Data	Cu, Zn	Mining impacted.	Med
COSPCL11	Clear Ck., Argo Tunnel to Farmers Highline Canal	All	PS	WQ Data	Fe, Mn, Zn	Mining impacted, by Argo CERCLA Site	Med
COSPCL13	N. Clear Ck. & Tribs., source to Clear Ck.	All	PS	W Q Data, Bio Assess	Cd, Mn, Zn, Cu, Aq Life	Mining impacted. Black Hawk and Central City CERCLA Site, DOW surveys show heavy impact to fish. CDPS: HUNTER GOLD MINING, INC; SOLUTION GOLD, LTD-DRUID; BLACK HAWK-CENTRAL CITY; COLORADO GAMING/ENTERTAIN.	Low
COSPCL14	Clear Ck., Farmers Highline Canal to Youngfield St	All	PS	Temp. Mods.	Cd, Mn	Temp. Mods. for Cd, Mn Exp. 6/30/00. - Impacted by upstream CERCLA Sites	Low

WBID	Segment Name	Portion	Status	Basis	Impairment	Additional Information	Div. Res.	TAR
COSPCL15	Clear Ck., Youngfield St. to S. Platte R.	All	PS	Water Qual. Data	Mn	Urban and upstream impacts. CDPS: DENVER BD OF WATER COMMIS.;SUNDSTRAND AEROSPACE DIVISION; WESTERN MOBILE DENVER, INC; CLEAR CREEK VALLEY W&S DIST; BRODERICK INVESTMENT COMP.	Med	
COSPCP07	N. Fk. Cache La Poudre R., Hall. Resv.to Poudre R.	3.2 miles below Halligan Res	NS	Bio Assess	Sediment	sediment releases from reservoir resulted in loss of fisheries	Med	
COSPRE03	N. Fk. Republican R. source to CO/NE Line	all	PS	Bio Assess	Aq Life	DOW surveys show reduced fish community, especially native species	Med	
COSPSV03	St. Vrain Ck., Hygiene Rd. to S. Platte R.	All	PS	W Q Data, Bio Assess	NH3, Aq life	Impacted by municipal WWTP, DOW surveys show decline of fish community, especially native species. CDPS: LONGMONT, CITY OF; ST. VRAIN SANITATION DIST.	Med	
COSPSV04	Little James & Left Hand Ck.'s	Little James Ck. Watershed	NS	Water Qual. Data	pH, Cd, Fe, Mn, Zn	Mining Site Assessment by EPA underway.	High	
COSPUS01A	S. Platte R.'s, sources to N. Fk. S. Platte R.	S Platte R, from 11-mile Dam to Cheesman Res	PS	Assess	Sediment	Identified by USFS	Med	
COSPUS02B	Mosquito Ck., source to Mid. Fk. S. Platte R.	All	PS	Temp. Mods.	Zn,Cd, Pb	Temp. Mods. for Zn Exp. 6/30/00, Impacted by mining	Med	X
COSPUS02C	S. Mosquito Ck., abv. Mosquito Ck.	Below historic mining (London Mine)	NS	Temp. Mods.	Cd, Fe, Zn, Mn	Temp. Mods. for Cd, Fe, Zn, Mn Exp. 6/30/00, Impacted by mining	High	X
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Trout Ck and Tribs, on NF Land	PS	Assess	Sediment	Identified by USFS, data available	Med	
COSPUS04	N. Fk. S. Platte R. & Tribs., source to S.Platte R	Hall Valley area to Geneva Ck	PS	1991 Water Qual. Data	Al, Cd, Cu, Fe, Pb	Mining impacted, additional WQCD monitoring underway	Med	
COSPUS05B	Geneva Ck., Scott Gomer Ck. to N. Fk. S. Platte R	All	PS	Water Quality Data	Zn	Mining impacted, additional USGS monitoring	Med	

WBID	Segment Name	Portion	Status	Basis	Impairment	Additional Information	Div. Res.	TAR
COSPUS14	S. Platte R., Bowles Ave. to Burlington Ditch	All	PS	Water Qual. Data	Mn, NO3, F. Coli,	TMDLs are currently underway, urban impacts. CDPS: PUBLIC SERVICE CO-ARAPAHOE; LITTLETON/ENGLEWOOD, CITIES OF; GATES RUBBER COMPANY;	High	X
COSPUS15	S. Platte R., Burlington Ditch to Big Dry Ck.	All (Cd u/s of Metro)	PS	Water Qual. Data	DO, NO3, Cu, Cd	TMDLs are currently underway, urban impacts. CDPS: BRIGHTON, CITY OF; METRO WASTEWATER RECLAM DIST.; SOUTH ADAMS COUNTY W&S DIST;	High	X
COSPUS16L1	Mary Lake	All	PS	Fish Consump. Adv.	Hg, Aldrin, Dieldrin	Impacted by Rocky Mtn. Arsenal CERCLA Site.	Low	
COSPUS16L2	Ladora Lake	All	PS	Fish Consump. Adv.	Hg, Aldrin, Dieldrin	Impacted by Rocky Mtn. Arsenal CERCLA Site.	Low	
COSPUS16L3	Lower Derby Lake	All	PS	Fish Consump. Adv.	Hg, Aldrin, Dieldrin	Impacted by Rocky Mtn. Arsenal CERCLA Site.	Low	
COUC	UPPER COLORADO AND NO PLATTE RIVER BASIN	----------	---	----------	---------	----------	----	
COUCBL02	Blue R., French Gul. to Swan R.	All	PS	Temp. Mods., WQ Data	Cd, Zn	Temp. Mods. for Cd, Zn Exp. 12/31/98, mining impacted.	Med	
COUCBL06	Snake R., source to Dillon Resv.	Below Peru Ck.	PS	Water Qual. Data	Cd,Cu,Pb,Mn,Zn	Water quality of Snake depends on Peru Creek improvements.	Med	
COUCBL07	Peru Ck., source to Snake R.	All	NS	Temp. Mods., WQ Data	Cd, Cu, Mn	Temp. Mods. for CD, Cu, Pb, Mn Exp. 12/31/98, mining impacted.	Med	
COUCBL11	French Gul., 1.5 mi blw. Lincoln to Blue R.	All	NS	WQ Data	pH, Cd, Zn	Mining impacted. UAA currently underway	High	
COUCBL18	All tribs to Blue R. Dillon Res to Green Mtn Res.	Straight Ck., source to Blue R.	PS	Bio Assess	Sediment	Highway runoff	Med	
COUCEA05	Eagle R., Belden to Gore Ck.	All	PS	WQ Data	Cd,Zn,Mn	Mining impacted, by Eagle Mine CERCLA Site	Low	
COUCEA07	Cross Ck., source to Eagle R. exc seg 1	Lower portion nr. mouth	NS	WQ Data	Cd,Zn,Mn	Mining impacted, by Eagle Mine CERCLA Site	Low	

WBID	Segment Name	Portion	Status	Basis	Impairment	Additional Information	Div. Res. TAR
COUCEA09	Eagle R., Gore Ck. to Colorado R.	All	PS	Temp. Mods., WQ Data	Mn	Mining impacted, by Eagle Mine CERCLA Site	Low
COUCRF09	Coal Ck., source to Crystal R.	All	PS	WQ Data	Fe	Mid-Continent Mine in litigation	Med
COUCUC06C	Trib. to Willow Ck., Willow Ck. Resv.	Un-named Trib. to Willow Ck	PS	Temp.Mods.,WQCD study	NH3	Temp. Mods. for NH3 Exp. 12/31/00, impacted by municipal WWTP	Low
COUCUC08	Williams Fork R., source to Colorado	All	PS	Temp. Mods.	Mn	Seasonal Temp. Mods. for Fe, Mn Exp. 12/31/00, mining impacted.	Med

VII. SCHEDULE FOR COMPLETION OF TMDLs

As requested by EPA, the Division has developed the following schedule for completion of TMDLs for the segments and parameters on the 1998 303(d) List. The following table (Table 2) presents the anticipated schedule of TMDL completion. "Percentage" indicates the cumulative percentage of total TMDLs from the 1998 List. As indicated, the 1998 TMDLs are to be completed in 12 years. (The State fiscal year runs from July 1 to June 30; fiscal year 1999 runs from July 1, 1998 to June 30, 1999) There are approximately 200 (total) TMDLs that will need to be developed for stream segments on the 1998 303(d) List. While TMDLs will generally be segment and parameter specific, stream segments listed in the 1998 303(d) List may be part of a larger watershed level TMDL effort. Development of these TMDLs will be very complex and time consuming requiring such things as data collection, stakeholder group development and consensus building.

The following table presents only the schedule for completing the TMDLs which relate to the 1998 303(d) List. The Division anticipates that other TMDLs will be done in order to develop waste load allocations for CDPS permits. Appendix D presents a list of stream segments with CDPS permits which may need waste load allocations.

This schedule was developed under current federal regulation and EPA guidance. In the event that regulations or guidance are changed to require TMDL implementation plans, this schedule will be revised.

Table 2 Schedule of TMDL Completion

State Fiscal Year	Cumulative Percentage	State Fiscal Year	Cumulative Percentage	State Fiscal Year	Cumulative Percentage
1999	3	2003	39	2007	85
2000	8	2004	51	2008	92
2001	17	2005	63	2009	97
2002	28	2006	75	2010	100

VII. SUMMARY OF RESPONSE TO PUBLIC COMMENT

The Water Quality Control Division (Division) published its draft 303(d) List on January 16th 1998. Interested parties were encouraged to provide comments to the Division on the draft by February

13th 1998 for consideration in the preparation of a final proposed list for the Water Quality Control Commission (Commission) informational hearing on March 10th 1998. Twenty- five letters of comments were received by the Division. The following is a list of the parties submitting comments.

Colorado Trout Unlimited
Vranesh and Raisch, LLC
City and County of Denver
US Department of Energy Rocky Flats Field Office
Petrock & Fendel
Metro Wastewater Reclamation District
Coors Brewing Company
Pike and San Isabel National Forest
US Forest Service, Rocky Mountain Region
Northwest Colorado Council of Governments
Earthjustice Legal Defense Fund
City of Thornton
City of Boulder
Climax Molybdenum Company
City of Colorado Springs Utility Department
Cherry Creek Basin Water Quality Authority
City of Broomfield
Cyprus Yampa Valley Coal Mine
Kodak Colorado
Hendricks Mining Company
Cripple Creek and Victor Gold Mining Company
City of Ft. Collins
City of Sterling
City of Louisville
Breckenridge Sanitation District

The comments received were varied and ranged from philosophical and legal issues involved in the preparation of the draft list, to very specific comments about individual listings of stream segments, and impairments to waters in Colorado. This summary will be in two sections and will first, present what the Division understands to be the major philosophical and legal concerns raised by the commentors, and second, will provide a list of the types of concerns raised by commentors about specific listings. This second group of comments will not include every individual comment, but will reflect categories of concern and the Division's approach to responding to these categories. Each summarized comment is numbered and followed by a Division response.

A. Major Issues

Issue 1: Many commentors stated that it is inappropriate to list segments which receive point source discharges solely because the permits for such discharges contain water quality-based effluent limits and the permits have either expired or will expire within the next two years.

Response 1: Many of the commentors expressed concerns about this proposed basis for listing. Such concerns included legal analyses which purported that such listings were unwarranted and improper under the Clean Water Act (CWA), existing federal regulations and published guidance. There was a view, shared by many, that such listings result in an unnecessarily lengthy 303(d) List which would have the effect of diverting the resources of the Division away from truly impaired waters, especially those impacted predominantly by non-point sources. Permitees also expressed concern about potential increased costs and delays due to being included on the 303(d) List and the unwarranted implication that their existing permits were not adequately protective.

On the other side, early in the 303(d) List development process, the Division received verbal and written guidance from Region VIII EPA (also based upon the CWA, regulations and guidance), that listing of such segments is proper and appropriate. The basic rationale for the Region's position is that if the assimilative capacity of a water body has been allocated through one or more water quality-based permits and any of the assumptions included in the rationale or basis for such permits have changed (e.g. discharge flow or load, background quality or flow, stream standards, modeling assumptions, etc.) then a new or renewed TMDL would be needed and the segment should be included on the 303(d) List.

A key legal issue revolves around whether segments should be listed in all cases where water quality standards will be met only if controls beyond technology based limits are imposed, or just in cases where *TMDLs are still needed* to meet water quality standards even after water quality-based effluent limits and other legally-based pollution control mechanisms have been imposed. Upon further review, the Division has concluded that while new or renewed TMDLs are needed prior to issuing permits with water quality based effluent limits, a water body need not be included on the 303(d) List if it currently meets and is expected to continue to meet its water quality standards.

The two way regulatory test for determining whether a water body must be listed is: (1) there is existing and readily available ambient data or information indicating the water body is impaired (i.e. not meeting or partially meeting one or more water quality standards) or threatened; and (2) there is information, again readily available, derived from dilution calculations or predictive models indicating non-attainment of applicable water quality standards. This interpretation (based upon 40 CFR 130.7(b)(5) and EPA's Guidance for Water Quality-based Decisions: The TMDL Process 440/4-91

p.11) means that only a *subset* of the state's water quality limited water bodies must be listed pursuant to section 303(d). The gist of this guidance is that segments must be listed only in cases *where it is known* that water quality standards are not being attained or are not expected to be maintained (e.g. threatened waters) even after water quality-based effluent limits and other legally-based pollution control mechanisms have been imposed. It is possible that during the permit reissuance process, when dilution calculations are performed and predictive models are utilized, it may be determined, i.e. *become known,* that current water quality based limits are no longer adequate to implement water quality standards on a particular water quality limited segment. Then a renewed TMDL would be necessary.

Therefore, segments which receive point source discharges will not be listed *solely* because the permits for such discharges contain water quality-based effluent limits and the permits have either expired or will expire within the next two years. The 303(d) List will include all impaired water bodies as well as water quality limited segments which still need TMDLs even though water quality-based effluent limits and other legally-based pollution control mechanisms have been imposed in the past. The permits for discharges of pollutants of concern to such water quality limited segments which have either expired or will expire within the next two years, will be noted as additional information relevant to the listed segment. Also, it should be noted that other permits for discharges to such segments may be reopened at the conclusion of the TMDL process in order to address water quality impairments in the most timely and equitable manner using a watershed approach to permitting.

A separate list of water quality limited segments with expiring water quality-based permits will be added as an appendix to the 303(d) List (see Appendix D). It is commonly the case that when permits are renewed TMDLs, waste load allocations and effluent limits must be adjusted in order to provide adequate water quality protection. These segments are classified as water quality limited because they would not attain the applicable water quality standards if only technology-based effluent limitations were required. TMDLs will be developed as a separate but integral part of the CDPS permit reissuance process for the segments on this list. It should be noted that the need to reissue expiring permits may raise the priority of proximate segments on the 303(d) List for TMDL development.

Issue 2. The 303(d) List is a list of streams which require implementation activities in order to attain standards, what will the Division do to insure that standards are attained? A number of commentors raised questions about what the Division will do about the impairments recognized by the 303(d) List, and in particular how certain difficult water quality problems, i.e. historic mining problems, or atmospheric deposition of pollutants will be solved.

Response 2: The Division realizes that implementation of TMDL's is a big challenge, but implementation is not the focus of the 303(d) listing process. The List identifies those stream segments which are not or are not expected to attain water quality standards even after the application of technology based and other controls [40CFR130.7(b)(1)], and still require new or updated TMDLs. The process involved in preparing a TMDL will lead to the formulation of an acceptable load for a given pollutant, the identification of specific pollution sources, and the need for reduction in pollutant loadings. Once a TMDL, is approved the process for implementing necessary controls will begin.

Issue 3: Relocation of previously listed waters to the "Monitoring and Evaluation List" (Appendix C) will create delays in developing needed TMDLs and cannot be justified because the state should use existing and readily available data and compensate for any lack of information by incorporating a margin of safety in translating standards into effluent limits .

Response 3: In the course of developing the 1998 303(d), the Division actively solicited water quality information from a broad array of sources including local, state and federal agencies and individuals involved in water quality monitoring activities. This effort was productive and helpful in the list development process. We also carefully reviewed the information and data supporting the listing of segments on the 1996 303(d) List and the 1996 305(b) Report. Although the 1996 303(d) and 305(b) submissions are "existing and readily available", after consideration of the information it was determined that in some cases the supporting information is not appropriate to rely upon for listing in the 1998 effort. Specifically, information did not meet the Credible Evidence criteria developed by the Division and the TMDL Advisory Committee.

Due to the major commitment of financial and human resources that will be needed from the Division and many other parties to develop TMDLs for listed waters, we have concluded that the evidence of impairment must meet the criteria outlined in section III.E above. The criteria for credible evidence are by no means so restrictive as to require "perfect water quality information". Rather, the criteria presented in the discussion of credible evidence in the proposed 1998 303 (d) list submittal, are fairly minimal informational qualifications intended to enable people with potentially different interests to establish a shared, albeit preliminary, understanding of a water quality problem. This will often be needed in order make further progress delineating loading sources and identifying types of impacts in specific terms as well as ultimately determining waste load and load allocations.

While it is important to move expeditiously to restore impaired water bodies, imposing potentially costly pollution control requirements based on old or anecdotal information with arbitrarily large margins of safety will only lead to delays because of inevitable conflict and litigation. It is our

intent to prioritize the segments we have moved to the Monitoring and Evaluation list and to develop an aggressive schedule for accomplishing the necessary monitoring work.

Issue 4: Water quality based permits are not the same as TMDLs.

Response 4: We agree. However, practically speaking TMDLs must be done on a parameter by parameter basis prior to issuance of any water quality-based permit and TMDLs frequently must be renewed at the time permits are being processed for reissuance. The appropriate way to develop legitimate water quality-based effluent limits. is through the TMDL process. Standards are the basis of TMDLs, which include waste load allocations. These become the basis for specific effluent limitations. Where it is determined water quality standards can continue to be met through relatively minor adjustments to existing waste load allocations, such TMDLs are generally not time consuming or very complicated to develop. The TMDL for the water quality-based permit must go through a public notice process independently from the related permit. TMDLs developed for all water quality limited waters are submitted to EPA for approval (See EPA Guidance 440/4-91 April 1991 p.9 and p.23).

Issue 5:. Several comments were received which questioned whether or not it was appropriate to list stream segments which are not attaining standards, but the impairment is caused by "naturally-occurring" sources. In these cases some commentors have suggested that the problems are best handled through adjusting water quality standards rather than doing a TMDL.

Response 5: The regulations promulgated under Section 303(d) require listing when water quality standards are not met or are not expected to be met even after the implementation of technology based and other controls, included where "naturally-occurring" sources impair water quality. As a result, some segments on the List, may be failing to attain standards due to "naturally-occurring" sources of pollution.

The Division recognizes that "naturally-occurring" impairments may best be resolved through the standards setting process. However, a use attainability study would be necessary for such a change in standards to be considered by the WQCC. A use attainability analysis has some similarity to a TMDL in that such a study would consider the sources of loading, and the ability to attain adopted standards. The Division recommends that in cases where specific information suggests that "naturally occurring" pollution prevents the attainment of the standards for listed segments, that such information be brought forward for consideration during the triennial review of standards. The WQCC can then consider if it is appropriate to consider such a change.

Issue 6. One commentor questioned the appropriateness of listing the impairment of the aquatic life use under Section 303(d). The commentor noted that the 303(d) List is intended to identify pollutants which lead to exceedances of standards, and to allocate acceptable loads of such pollutants through a TMDL.

Response 6: Section 303(d) requires that States identify waters that do not, or are not expected, to meet applicable water quality standards with technology-based controls alone. The standards are not defined narrowly by Federal Regulations as including only the numerical limits for pollutants, but instead are much broader and include numeric and narrative criteria, the use classifications (which include aquatic life), and antidegradation requirements [see 40 CFR 130.7(b)(3)]. The Division has chosen to list segments where the aquatic life use is impaired as determined through biological assessments made by the Colorado Division of Wildlife. The assessment methodology for such listing is discussed in Part III of the 1998 Proposed List.

Issue 7. Several commentors requested that the Division explicitly identify those waters that have been delisted, and the basis for such a delisting. Such an identification would avoid any potential confusion regarding the status of previously listed waters, and would provide a public record of delisted waters.

Response 7: The 303(d) List identifies segments which still require TMDL's. The Division believes that the 303(d) List is not the right place to account for streams which have been delisted. However, the Division does believe that it is important to have a process which identifies delisted streams which are removed from the list for any reason. The Division will supply the basis for removing segments in a letter of submittal to EPA for the 1998 list. The Division also believes that such a list is an appropriate item to be included in the 305(b) Status of Water Quality Report.

Issue 8. One commentor expressed many concerns about the protection of drinking water supplies through the TMDL program. The commentor criticized the lack of timeliness of TMDL efforts which has resulted in the delay of implementation of controls to improve water quality, and drinking water supplies, specifically in the Denver metropolitan area. The commentor further questioned the priority accorded to segments with exceedances of the Drinking Water Supply Classification. Additionally, the commentor stated that nonpoint sources as well as point sources must be examined in any true TMDL effort. Finally, the commentor stressed the need for additional permit limitations for constituents which are found in discharges to waters that are used for drinking water supplies.

Response 8: The Division agrees with many of the points expressed by this commentor, and supports the establishment of TMDL's which will protect drinking water supplies. Prioritization of TMDL's is described in, Part IV of the 1998 List and assigns high priority to segments with non-support or partial support for primary drinking water standards. The South Platte segment 14 TMDL effort is a targeted high priority, which means it is to be completed in the next two years. This is the highest priority accorded to segments for completion of a TMDL. Segments 13, 14, and 15 in the Clear Creek Basin have been listed as medium and low priorities. These priorities are due to the clean-up efforts that are already underway with CERCLA projects in the Upper Clear Creek basin. The objective of prioritization is to identify where the Division should concentrate its resources. Since clean up efforts are already underway in the Clear Creek Basin, and should result in improved water quality conditions, a medium or low priority is appropriate.

Please refer to comment Response 2 for a discussion about implementation of TMDL's to achieve standards.. The Division agrees that TMDL's must account for nonpoint source loads, and recognizes the importance of the load allocation portion of TMDL's. Finally, this commentor recommended that the Division include Total Organic Carbon (TOC) limits in discharge permits. The commentor stated that TOC serves as an indicator of unmeasured, and unregulated organic compounds, and to a lesser extent as an indicator of disinfection byproduct compounds (DBP). The Division notes that the WQCC currently has no standard for TOC. Therefore, if the commentor is interested in having the WQCD develop permit limitations for TOC it would be appropriate to petition the WQCC to consider adopting a standard for TOC.

Issue 9: The Division has included segments on the 1998 303(d) List based on recommendations of the US Forest Service.

Response: The Division was gratified to receive the extensive submission of identified segments from the US Forest Service. Clearly, the District and Regional Offices did a great deal of work to assemble the information on short notice. This information, which for most segments was highly summarized, was received only a matter of days before the Division's proposed 303(d) submission was due to the Commission for inclusion in its March Hearing Packet. The Division has placed most of these segments on the Monitoring and Evaluation List, as recommended by the Forest Service. Of the 25 segments recommended by the Forest Service to be placed on the 303(d) list, the Division, at least for purposes of the proposed list, has only included 4 segments. This is because detailed technical assessment information was provided as a basis for listing those segments. The Division is actively engaged in further discussions with the Forest Service to elicit additional assessment information, where

it is available. Therefore, several additional segments may be proposed for listing before the Commission adopts the 1998 303(d) List and it is possible that the list may be amended following its submission and approval by EPA.

The Division is particularly concerned about listing for sediment impairment. We believe that segments that are included on the list because of sediment impacts, must actually have been shown to be *not* in attainment of the narrative "free from settleable solids" standard which is inherently a two tiered test. The standard requires that (tier 1) state waters must be free from settleable solids that are (tier 2) harmful to aquatic life. The first tier of the test involves direct measurements of sediment for purposes of comparison between identified segments and appropriate reference segments. Similarly, the second tier of the test involves direct measurements of aquatic life for purposes of comparisons. While the Division (with a great deal of external assistance) has prepared specific guidance for assessing whether the "sediment narrative standard" is being attained, there are alternative methods presently in use by agencies like the Forest Service which are also valid, provided both tiers of the test are addressed. It is clear that the first tier of the test has been performed by the Forest Service for all segments which have been recommended for inclusion on the 303(d) List. It is not clear, but early indications are, that biological information is not available for most of these segments. If, indeed, this is the case, it is appropriate that they be included on the Monitoring and Evaluation List with a high priority for further assessment. Finally, several segments have been recommended for listing because of temperature impacts. The Division is also seeking clarifying information about the data pertaining to these segments.

B. Other Concerns

Several commentors questioned specific segments or listings. As a result of their questions and internal review, many discharge permit listings were corrected to reflect current segmentation. Several listings were deleted due to such things as discharges being to ground water and not surface water or where only technology limits apply to the discharges. The Rocky Flats site segments were deleted since the federally enforceable cleanup agreement establishes the state water quality standards as the goal. In addition, where additional information became available, segments were re-assessed. In some cases, parameters were added and in other cases deleted from the "Impairment" column.

The List of Segments with CDPS Permits Which Expire in the Next Two Years was modified. Several of the parameters (e.g. Flow, Oil &Gas, Turbidity) listed in the "Additional Information" column in the Draft List were removed from the listings since these will not receive TMDLs. This is now Appendix D. The Division also made other minor changes to the Lists and text to improve the clarity and to correct typographical errors.

APPENDIX A

Designated Use Support Matrix		
Degree of Designated Use Support	**Water Chemistry Information**	**Physical and Biological Information**
FULLY SUPPORTING: Designated uses have been attained and are supported.	The 85th percentile [1] data point is below the applicable chronic stream standard [2]. No exceedances of the acute water quality standard.	Results of physical and biological assessments indicate the use is not impaired.
FULLY SUPPORTING, ALLOCATED: Designated uses have been attained and are supported but the assimilative capacity of the segment has been allocated.[3]	The 85th percentile data point is below the applicable chronic stream standard [2]. No exceedances of the acute water quality standard.	Results of physical and biological assessments indicate the use is not impaired.
POTENTIALLY IMPAIRED: Designated uses are not materially impaired, but assessment information or segment specified water quality-based controls indicate the potential for impairment within two years.	The 85th percentile data point equals or approaches the chronic water quality standard [2] and data indicate a trend of deteriorating water quality which could impair uses within two years. No exceedances of the acute water quality standard.	Results of physical and biological assessments indicate the use is not impaired, but also indicate a trend of deteriorating water quality which could impair uses within two years.
PARTIAL SUPPORT: At least one designated use exhibits some interference, but use is not precluded.	The 85th percentile data point exceeds the chronic water quality standard [2]. No more than one exceedance of the acute water quality standard.	Results of physical and biological assessments indicate partial use impairment.
NOT SUPPORTING: At least one designated use is materially impaired. Use may be present but at significantly reduced levels from full support in all or some portions of the segment.	The 75th percentile data point exceeds the chronic water quality standard [4]. Occasional or frequent exceedances of the acute water quality standard.	Results of physical and biological assessments indicate use impairment.

Notes: [1] "Percentile" The values obtained by (m÷n) x 100, where m = the rank of observation in the data set ordered from high (m=n) to low (m=1); and n = the number of data points.

[2] The 50th percentile point is used for metals in the total recoverable form (eg Iron).

[3] For segments which have domestic WWTP discharges, this full allocation may occur some time in the 20-yr planning horizon. Current discharges may not reach their full allocation.

[4] The 45th percentile point is used for metals in the total recoverable form (eg Iron).

APPENDIX B

Explanation and Key to the Water Body Identification (WBID) System

The WBID system is the primary way the WQCD identifies and segregates differing water bodies (steams, lakes, and wetlands) from each other in the State of Colorado. Within the 8-10 character alpha-numeric WBID are included the state, major river basin, minor river basin, and segment number. In the state of Colorado all WBIDs start out with the letters CO signifying Colorado. The third and forth letters signify the major stream basin (i.e. Arkansas, Rio Grande, Colorado, South Platte, etc..). The fifth and sixth letters signify the minor stream basin (i.e. Upper, Middle or Lower part, Clear Ck., Cherry Ck., Boulder Ck., etc.). The seventh through tenth numbers, and sometimes letters (L = lakes, S = streams, or A, B, and C), designate the specific segment number. These segment numbers are the same as those found in the Classifications and Numeric Standards for each basin.

Example: COARUA01A = Colorado, Arkansas Basin, Upper Arkansas River Basin Segment # 1A

The names of the tributaries of the minor stream basins do not utilize their water body names in the WBID, and the segment number is used to delineate these water bodies. The description of the water bodies identified by each WBID are also the same as the Segment Descriptions in the Classifications and Numeric Standards. Below is a key to the WBIDs used by the WQCD.

A) Letters one and two

B) Letters two and three

C) Letters four and five

A) CO = Colorado Basin

B) **SP** = South Platte Basin

C)
- **US** = Upper South Platte River Basin
- **BE** = Bear Creek Basin
- **CL** = Clear Creek Basin
- **BD** = Big Dry Creek Basin
- **BO** = Boulder Creek Basin
- **SV** = St Vrain Creek Basin
- **MS** = Middle South Platte River Basin
- **BT** = Big Thompson River Basin
- **CP** = Cache La Poudre River Basin
- **LA** = Laramie River Basin
- **LS** = Lower South Platte River Basin
- **RE** = Republican River Basin

B) UC = Upper Colorado and North Platte Basin
- C) UC = Upper Colorado River Basin
  BL = Blue River Basin
  EA = Eagle River Basin
  RF = Roaring Fork River Basin
  NP = North Platte River Basin
  YA = Yampa River Basin

B) LC = Lower Colorado Basin
- C) LY = Lower Yampa/Green River Basin
  WH = White River Basin
  LC = Lower Colorado river Basin

B) AR = Arkansas Basin
- C) UA = Upper Arkansas River Basin
  MA = Middle Arkansas River Basin
  FO = Fountain Creek Basin
  LA = Lower Arkansas River Basin
  CI = Cimarron River Basin

B) RG = Rio Grande Basin
- C) RG = RioGrande River Basin
  AL = Alamosa River/LaJara Creek/Conejos Creek Basin
  CB = Closed Basin - San Luis Valley Basin

B) GU = Gunnison and Lower Dolores River Basins
- C) UG = Upper Gunnison River Basin
  NF = North Fork of the Gunnison River Basin
  UN = Uncompahgre River Basin
  LG = Lower Gunnison River Basin
  SM = San Miguel River Basin
  LD = Lower Dolores River Basin

B) SJ = San Juan River and Dolores River Basins
- C) SJ = San Juan River Basin
  PI = Piedra River Basin
  PN = Los Pinos River Basin
  AF = Animas and Florida Rivers Basin
  LP = La Plata River, Mancos River, McElmo Creek and San Juan River Basins in Montezuma and Dolores Counties
  DO = Dolores River Basin

Appendix C

MONITORING AND EVALUATION LIST

During the development of the 1998 303(d) List, the Division found that there numerous cases where there is reason to suspect water quality problems on stream segments, but uncertainty exists regarding one or more factors. In some cases, segments identified in the 1996 303(d) List lacked information to support the reason for requiring a TMDL. In other situations, reports of water quality problems did not meet the credible data criteria for the 1998 List. A Monitoring and Evaluation List was developed as an administrative tool to keep track of these segments; preserve and acknowledge the suspicions; and over time, address the uncertainty.

The Monitoring and Evaluation List includes segments with a number of kinds of uncertainty. The first situation is where there is a need to evaluate the effectiveness of control measures to determine if water quality standards will be met in the future (this is particularly the case for CERCLA sites).

The second situation is where there is a need to evaluate data or current conditions to determine whether standards are exceeded or uses are not supported. For example, in the So. Platte basin, a number of class 2 aquatic life segments no longer support one or two sensitive native fish species which were present in the past when these segments were classified. However, the division does not interpret this situation as use impairment. This is because of the manner in which the "class 2" classification is defined in the Basic Standards regulations. Class 2 streams are not expected to support a wide variety of biota, including sensitive species. However, it has become a matter of state interest to focus attention and resources on areas where native species are known to be in decline.

The Division will enlist the help of other agencies and entities to collect information and work towards resolving the uncertainty about the listed segments as resources allow. The Colorado Division of Wildlife, U. S. Forest Service, Denver Regional Council of Governments and Bureau of Land Management have all indicated some willingness to participate in this effort. The Monitoring and Evaluation List is presented as Appendix C. The column headings are described in the text preceding the 303(d) List (Table 1) in the body of the text

Appendix C Colorado 1998 Monitoring and Evaluation List

WBID	Segment Name	Portion	Status	Basis	Impairment ?	Additional Information
COAR	ARKANSAS RIVER BASIN	----------	---	----------	----------	----------
COARCI02	N, E, & W Carrizo, Carrizo, Cottonwood & Tecolote Cks	Carrizo Ck, on N F Land	??	Assess	Nutrients	Identified by USFS
COARFO01	Fountain Ck and Tribs above Monument Ck	Crystal Ck on Nat. For. Land	??	Assess	Sediment	Identified by USFS
COARFO01	Fountain Ck and Tribs above Monument Ck	N Catamount Ck on Nat. For. Land	??	Assess	Sediment	Identified by USFS
COARFO01	Fountain Ck and Tribs above Monument Ck	So. Catamount Ck on Nat. For. Land	??	Assess	Sediment	Identified by USFS
COARFO03	Tribs Fountain C on NF lands or AFA, Monument to ArkansasR	Bear Ck on N F Land	??	Assess	Sediment	Identified by USFS
COARFO03	Tribs Fountain C on NF lands or AFA, Monument to ArkansasR	Cheyenne Ck, on NF Land	??	Assess	Sediment	Identified by USFS
COARFO03	Tribs Fountain C on NF lands or AFA, Monument to ArkansasR	Fourmile Ck, on N F Land	??	Assess	Sediment	Identified by USFS
COARLA07	Purgatoire R., I-25 to Arkansas R.	All (sediment), Upper 5 mi (NH3)	??	1989 NPS Report	NH3, Sed.	Additional data needed. Sed. standard implememtation guidance
COARMA05	St Charles R and Tribs, source to CF&I canal	Snow Slide Creek	??	Assess	Sediment	Identified by USFS
COARUA10	Lake Cr and Tribs, exc S Fk Lake Cr	Lake Creek blw S Lake Ck, on NF Land	??	Assess	Sediment	Identified by USFS
COARUA10	Lake Cr and Tribs, exc S Fk Lake Cr	N Fk Lake Ck, diversion tunnel to confl w/ S Fk	??	Assess	Sediment	Identified by USFS
COARUA13	Tribs Arkansas R on NF Land, Browns Ck to Pueblo Res	E Beaver Cr on N F Land, blw Penrose-Rosemont Res	??	Assess	Sediment	Identified by USFS
COARUA15	Grape Ck., abv. DeWeese Resv.	All	??	NRCS Studies	Sed.	Bio. data shows impairment. Additional data needed.

WBID	Segment Name	Portion	Status	Basis	Impairment ?	Additional Information
COARUA19	Fourmile Ck., abv. Cripple Ck.	All	??	Water Qual. Data	Trec Fe	Additional data needed.
COARUA20	Fourmile Ck., below Cripple Ck.	All	??	Water Qual. Data	Trec Fe	Additional data needed.
COGU	GUNNISON AND LOWER DOLORES RIVER BASIN	----------	---	----------	---------	----------
COGULG02	Gunnision R., Uncompaghre R. to Colorado R.		??	1996 303(d) List	Sediment	Additional data needed
COGUNF02	N. Fk. Gunnison R., Paonia Resv. to Black Bridge	All	??	WQ Data, Insp. Rep	Mn, Se, NH3, F. Co	Info suggests sewage discharges. Data shows Se, Mn problems at
COGUSM06	Ingram Ck., source to San Miguel R.	All	??	Limited WQ Data	Cd, Mn, Zn	Additional data needed. - Impacted by Idarado CERCLA Site
COGUUG09	Tribs to Slate River exc in wilderness areas	Lunch Ck	??	Assess	Sediment	Identified by USFS
COGUUG09	Tribs to Slate River exc in wilderness areas	Redwell Basin	??	Assess	Chemical	Identified by USFS
COGUUG26	Tribs to Gunnison R btn Blue Mesa & Crystal Res on NF Land	Soap Ck	??	Assess	Sediment	Identified by USFS
COGUUN03	Uncompaghre R., Red Mtn. Ck. to US HWY 550	Upper Reaches	??	Water Qual. Data	Cd, Cu, Zn	Additional data needed.
COGUUN04	Uncompaghre R., US Hwy. 550 to Gunnison R.		??	1996 303(d) List	Sediment	Additional data needed
COGUUN15	Portions of Happy Canyon, Horsefly Ck, and Dry Ck	Dry Creek Watershed	??	Assess	Sediment	Documentation in 319 project files
COLC	LOWER COLORADO RIVER BASIN	----------	---	----------	---------	----------
COLCLC01	Colorado R., Roaring Fork R. to Parachute Ck.	All	??	1989 NPS Report	Sed.	Additional data needed.
COLCLC02	Colorado R., Parachute Ck. to Gunnison R.	All	??	1989 NPS Report	Sed.	Additional data needed.
COLCLC03	Colorado R., Gunnison R. to Stateline	Lower portion near Stateline	??	Water Qual. Data	Se	Additional data needed.

WBID	Segment Name	Portion	Status	Basis	Impairment ?	Additional Information
COLCLC13	Tribs to Colorado R. blw Parachute Cr.exc named segs.	All	??	1989 NPS Report	Sed.	Additonal data needed.
COLCLC14	Roan Ck. & Tribs., source to Clear Ck	Roan Ck.	??	1989 NPS Report	Sed.	Additonal data needed.
COLCLY02	Yampa R. Lay Cr. to Green R.		??	1996 303(d) List	Sediment	Additional data needed
COLCLY16	Little Snake R., Powder Wash to Yampa	All	??	WQ Data, 1989 NPS	Sed.	Additional data needed. Sed. standard implementation guidance
COLCWH12	White R., Piceance Ck. to Douglas Ck.	All	??	WQ Data, 1989 NPS	Sed.	Additional data needed. Sed. standard implementation guidance
COLCWH13	Tribs. to White R., Piceance Ck. to Douglas Ck.	Red Wash, Wolf Ck.	??	1989 NPS Report	Sed.	Additional data needed. Sed. standard implementation guidance
COLCWH21	White R., Douglas Ck. to Stateline	All	??	1989 NPS Report	Sed.	Additional data needed. Sed. standard implementation guidance
COLCWH22	Tribs. to White R., Douglas Ck. to St	Evac.Wash, Soldier &Douglas Cks	??	WQ Data, 1989 NPS	Sed.	Additional data needed. Sed. standard implementation guidance
CORG	RIO GRANDE RIVER BASIN	----------	---	----------	-------	----------
CORGRG13	Rio Grande R., Conejos Cnty Rd G to Stateline	All	??	1989 NPS Report	Sed.	Additional data needed. Sed. standard implementation guidance
COSJ	SAN JUAN RIVER AND DOLORES RIVER BASIN	----------	---	----------	-------	----------
COSJAF03A	Animas R., Maggie Gul. to Cement Ck.	All	??	Water Qual. Data	Al, Cd, Cu, Fe, Pb	Additional data needed. Seg.s abv. & bel. have Temp. Mods for Al, Cd, Cu, Fe, Pb, Mn, Zn
COSJDO03	Dolores R., Horse Ck. to Bear Ck.	All	??	WQ Data\Reported Impact	NH3, F. Coli	Additional data needed.
COSJLP01	LaPlata R., abv. Hay Gul.	All	??	1989 NPS Report	Metals	Additional data needed.
COSJLP04	Mancos R. and tribs abv Hwy 160	E Mancos R and S Fk W Mancos R	??	Assess	Sediment	Identified by USFS
COSP	SO PLATTE RIVER BASIN	----------	---	----------	-------	----------

WBID	Segment Name	Portion	Status	Basis	Impairment ?	Additional Information
COSPBT04	Big Thompson R., Big Barnes Ditch to I-25	below Hwy 287	??	Bio Assess	Aq Life	DOW surveys suggest reduced fish community, especially native species
COSPBT09	Little Thompson R., Culver Ditch to Big Thomp. R.	downstream of Berthoud	??	Bio Assess	Aq Life	DOW surveys suggest reduced fish community, especially native species
COSPCL09	Silver Ck., blw Alice Townsite to Fall R.	Silver Ck. blw Alice Townsite	??	1988 DOW Report	Cu, Fe	Additional data needed, mining impacted. (incorrect segment on 1996 list)
COSPCP03	Cache La Poudre R. Joe Wright Ck. to Monroe Canal	below conflu. with N Fork	??	Bio Assess		fish surveys suggest reduced fisheries below Seaman Res.
COSPCP10	Cache La Poudre R., Monroe Canal to Sheilds St.	all	??	Bio Assess		DOW surveys suggest reduced fish community, especially native species
COSPLS01	S. Platte R., Weld Morgan Line to CO/NE Line	all	??	Bio Assess	Aq. Life	DOW surveys suggest reduced fish community, especially native species
COSPLS03	Jackson, Prewitt, N Sterling, Jumbo, Riverside, Empire Res	Prewitt Reservoir	??	Bio Assess	Color, Aq Life	Recurrent red algae bloom
COSPMS01	S Platte R., Big Dry Ck. to Weld/Morgan Co Line	all	??	Bio Assess	Aq Life	DOW surveys suggest reduced fish community, especially native species
COSPMS04	Barr Lake	Barr Lake	??	Water Qualiity		Reports of problems
COSPRE03	N. Fk. Republican R. source to CO/NE Lne		??	1996 303(d) List	Sediment	Additional data needed
COSPRE06	Tribs. to Republican R. system in Colorado	Chief Creek	??	Bio Assess	Aq Life	DOW surveys suggest reduced fish community, especially native species
COSPUS01A	S. Platte R.'s, sources to N. Fk. S. Platte R.	All	??	1989 NPS Report	Sediment	Additional data needed. Sed. standard implementation guidance
COSPUS01A	S. Platte R.'s, sources to N. Fk. S. Platte R.	S Platte R, Spring Ck to N Fk S Platte R	??	Assess	Sediment	Identified by USFS, Buffalo Ck Fire
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	Balm of Gilead Ck, on NF Land	??	Assess	Sediment, temp	Identified by USFS
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	Cross Ck. on NF Land	??	Assess	Sediment, temp	Identified by USFS
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	Fish Ck, on NF Land	??	Assess	Sediment, temp	Identified by USFS

WBID	Segment Name	Portion	Status	Basis	Impairment ?	Additional Information
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	Ranger Station Ck, on NF Land	??	Assess	Sediment, temp	Identified by USFS
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	Salt Ck, d/s of N Fk, on NF Land	??	Assess	Sediment, temp	Identified by USFS
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	Sims Ck, on NF Land	??	Assess	Sediment, temp	Identified by USFS
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	Tarryall Creek, on NF Land	??	Assess	Sediment	Identified by USFS
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	Threemile Ck.	??	1991 BLM/DOW ReporT	Sediment, temp	Additional data needed. 1991 BLM/DOW report shows Sed. problem. Temp identified by USFS
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	Twin Ck, on NF Land	??	Assess	Sediment, temp	Identified by USFS
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	Union Ck, on NF Land	??	Assess	Sediment, temp	Identified by USFS
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Buno Ck and Tribs, on NF Land	??	Assess	metals	Identified by USFS, mine survey
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Goose Ck, Lost Valley Ranch to Cheesman Res	??	Assess	Sediment, temp	Identified by USFS
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Horse Ck, on NF Land	??	Assess	Sediment, temp	Identified by USFS
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Indian Ck, on FS Land	??	Assess	Sediment	Identified by USFS
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Pine Ck, on NF Land	??	Assess	Sediment	Identified by USFS
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Russell Gulch, on NF Land	??	Assess	Sediment	Identified by USFS
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	S Fk Lost Ck	??	Assess	Sediment	Identified by USFS
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Spring Ck and Tribs, on NF Land	??	Assess	Sediment	Identified by USFS, Buffalo Ck Fire
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Sugar Ck, on FS Land	??	Assess	Sediment	Identified by USFS

WBID	Segment Name	Portion	Status	Basis	Impairment ?	Additional Information
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Trail Ck, on NF Land	??	Assess	Sediment, temp	Identified by USFS
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	Wigwam Ck, Flying G Ranch to S Platte R	??	Assess	Sediment	Identified by USFS
COSPUS04	N. Fk. S. Platte R. & Tribs., source to S.Platte R	Buffalo Ck, Indian Ck to S Platte R	??	Assess	Sediment	Identified by USFS, Buffalo Ck Fire, DOW surveys show fisheries decimated in affected area
COSPUS04	N. Fk. S. Platte R. & Tribs., source to S.Platte R	N Fk S Platte R, Buffalo Cr to S Platte R	??	Assess	Sediment	Identified by USFS, Buffalo Ck Fire, DOW surveys show fisheries decimated in affected area
COSPUS05A	Geneva Ck above Scott Gomer Ck	All	??	Water Quality Data	Zn	Mining impacted, investigation underway
COSPUS06	S. Platte R., N. Fk. S. Platte R. to Bowles Ave.	below Strontia Springs Res	??	Bio Assess	sediment, Aq Life	DOW surveys suggests reduced fish community
COSPUS06	S. Platte R., N. Fk. S. Platte R. to Bowles Ave.	S Platte R, N Fk S Platte to Strontia Sp. Res	??	Assess	Sediment	Identified by USFS, Buffalo Ck Fire
COSPUS08	E & W Plum Ck on NF Lands exc Bear Ck abv Perry Park Res	Plum Ck and Tribs, on NF Land	??	Assess	Sediment, temp	Identified by USFS
COSPUS11B	Tribs to W. Plum Ck., not on Nat. Forest Land	Sprng Cr, Bear Cr,	??	Bio Assess	Aq Life	DOW surveys suggest reduced fish community, especially native species
COSPUS16	Tribs. to S. Platte R., Chatfield Resv. to Big Dry	Lower portion of Sand Ck.	??	WQ data of effluent	Toxicity	Additional data needed.
COUC	UPPER COLORADO AND NO PLATTE RIVER BASIN	----------	---	----------	----------	----------
COUCEA03	Tribs to Eagle R. source to Belden, exc specific segs	Black Gore Ck, adjacent to I-70	??	Assess	Sediment	Identified by USFS, highway runoff
COUCNP04	All tribs, to N Platte River Systems exc 1,5,6,7	4 Counties Ditch in Grizzly Cr Watershed	??	Assess	Sediment	Identified by USFS
COUCNP04	All tribs, to N Platte River Systems exc 1,5,6,7	Grassy Run, Buffalo Cr Watershed	??	Assess	Sediment	Identified by USFS
COUCNP04	All tribs, to N Platte River Systems exc 1,5,6,7	Grizzly Cr and Little Grizzly Cr	??	Bio Assess		DOW surveys suggest compromised fisheries
COUCNP04	All tribs, to N Platte River Systems exc 1,5,6,7	Newcomb Creek	??	Assess	Sediment	Identified by USFS

WBID	Segment Name	Portion	Status	Basis	Impairment ?	Additional Information
COUCNP04	All tribs, to N Platte River Systems exc 1,5,6,7	Ninegar Creek	??	Assess	Sediment	Identified by USFS
COUCNP04	All tribs, to N Platte River Systems exc 1,5,6,7	Republic Creek	??	Assess	Sediment	Identified by USFS
COUCNP04	All tribs, to N Platte River Systems exc 1,5,6,7	Snyder Ck, Parkview Cr Watershed	??	Assess	Sediment	Identified by USFS
COUCNP06	Pinkham Cr, source to N Plattte R	Pinkham Cr	??	Assess	Sediment	Identified by USFS
COUCRF08	Crystal R., source to Roaring Fork R.	Below Coal Ck.	??	1989 NPS Report	Sed.	Additional data needed.
COUCRF09	Coal Ck., source to Crystal R.	All	??	1989 NPS report.	Sed.	Sed. standard implementation guidance pending. Additional data needed
COUCUC04	Tribs. to Colorado R., Lk. Granby to Roaring Fork	All	??	1989 NPS Report	Sed.	Additional data needed.
COUCUC04	Tribs. to Colorado R., Lk. Granby to Roaring Fork	Corral Ck	??	Assess	Sediment	Identified by USFS
COUCUC04	Tribs. to Colorado R., Lk. Granby to Roaring Fork	Gore Ck, Upper Rock Ck Watershed	??	Assess	Sediment	Identified by USFS
COUCUC04	Tribs. to Colorado R., Lk. Granby to Roaring Fork	Little Rock Ck, Upper Rock Ck Watershed	??	Assess	Sediment	Identified by USFS
COUCUC04	Tribs. to Colorado R., Lk. Granby to Roaring Fork	Smith Ditch, Red Dirt Cr Watershed	??	Assess	Sediment	Identified by USFS
COUCUC05	Colorado R., State Bridge to Roaring Fork R.	All	??	1989 NPS Report	Sed.	Sed. standard implementation guidance pending. Additional data needed
COUCUC07	Muddy Ck., source to Colorado R.	All	??	1989 NPS Report	Sed.	Additional data needed.
COUCYA02	Yampa R., Bear R. to Elkhead Ck.	Below Stagecoach Resv.	??	Resv. Release WQ Data	DO	Additional data needed. Former problem related to reservoir releases.
COUCYA02	Stagecoach Resv.	All	??	Water Qual. Data	DO	Additional data needed.
COUCYA03	All tribs to Yampa R. exc specific listings, on USFS land	Beaver Ck	??	Assess	Sediment	Identified by USFS

WBID	Segment Name	Portion	Status	Basis	Impairment ?	Additional Information
COUCYA03	All tribs to Yampa R. exc specific listings, on USFS land	Fisrt Ck in Elkhead Watershed	??	Assess	Sediment	Identified by USFS
COUCYA03	All tribs to Yampa R. exc specific listings, on USFS land	Muddy & Brush Cks, Morrison Ck Watershed	??	Assess	Sediment	Identified by USFS
COUCYA03	All tribs to Yampa R. exc specific listings, on USFS land	Puppy Dog Ck. in Fish Cr Watershed	??	Assess	Sediment	Identified by USFS
COUCYA03	All tribs to Yampa R. exc specific listings, on USFS land	S Fk Slater Ck	??	Assess	Sediment	Identified by USFS
COUCYA03	All tribs to Yampa R. exc specific listings, on USFS land	Spronks Ck, Middle Hunt Cr Watershed	??	Assess	Sediment	Identified by USFS
COUCYA19	All tribs to L Snake R on NF lands in Routt County	Johnson Ck	??	Assess	Sediment	Identified by USFS
COUCYA19	All tribs to L Snake R on NF lands in Routt County	Oliver Ck	??	Assess	Sediment	Identified by USFS
COUCYA19	All tribs to L Snake R on NF lands in Routt County	S Fk Little Snake	??	Assess	Sediment	Identified by USFS
COUCYA19	All tribs to L Snake R on NF lands in Routt County	Silver City Ck, U Mid Fk Little Snake Watershed	??	Assess	Sediment	Identified by USFS

Appendix D

SEGMENTS WITH CDPS PERMITS WHICH EXPIRE IN THE NEXT TWO YEARS

The following list contains water segments with expiring water quality-based permits which are expected to be reissued in the next two years. The segments contained in this Appendix are *not* part of the 1998 303(d) List of segments still requiring TMDLs (Table 1). This Appendix D is intended for informational purposes only and does not trigger any federal or state requirements. For some of the segments listed, it is possible that when the Division renews a permit associated with a particular segment, the Division will find that the segment is not impaired or that an adequate, approved TMDL is already in place, and therefore, that a WLA/TMDL analysis is *not* required to recalculate permit limits. For other segments, information may become available, such as through dilution calculations or predictive modeling, that standards for a segment may be exceeded *and* that no adequate, approved TMDL exists. In these cases of non-attainment coupled with no existing TMDL, waste load allocations and effluent limits must be established or modified in order to provide adequate water quality protection. These TMDLs will be submitted to EPA for review and approval.

Appendix D Segments with CDPS Permits Which Expire in the Next Two Years

WBID	SEGMENT NAME	PERMIT NAME	PERMIT NO	PARAMETERS WHICH MAY NEED WLAs
COAR	ARKANSAS RIVER BASIN	----------	-------	----------
COARFO02	Fountain Cr. from abv Monument Cr. to Arkansas R.	COLORADO SPRINGS, CITY OF	CO0026735	TSS, CL2, FECAL, BOD, TSS, N, CN, SE, MN, CD, PB, CR, CR6, ZN, AG, CU, HG, NI, NH4,
COARFO02	Fountain Cr. from abv Monument Cr. to Arkansas R.	FOUNTAIN SANITATION DISTRICT	CO0020532	DO, TSS, NH4, CL2, FECALS, BOD, CN, AS, CR, SE, ZN, AG, CU, CD,PB,NI, PHENOLS, HG,
COARFO02	Fountain Cr. from abv Monument Cr. to Arkansas R.	GARDEN VALLEY WATER & SAN	CO0029360	BOD, TSS, CL2, FECALS
COARFO04	Tributaries to Fountain Creek not on federal land	DIAMOND SHAMROCK REF&MKT	CO0043541	BOD, TSS, BTEX, CL2
COARFO04	Tributaries to Fountain Creek not on federal land	Broadmoor Park Properties	COG582006	FECALS
COARFO04	Tributaries to Fountain Creek not on federal land	Academy W&S Dist	COG582005	FECALS
COARFO04	Tributaries to Fountain Creek not on federal land	CHEYENNE MOUNTAIN ZOO	CO0031917	BOD, TSS, CL2, FECALS
COARFO06	W Monument Creek	Colo. Springs, City of	COG640060	CL2
COARFO06	Monument Cr. from USFS lands to Fountain Ck.	DONALA WATER & SANITATION	CO0042030	TSS, NH4, N, CL2, FECALS, BOD,
COARLA01	Arkansas R. from abv Fountain Cr. to stateline	LAMAR, CITY OF-UTILITIES	CO0000949	TEMP, C-CL4, CL2
COARLA01	Arkansas R. from abv Fountain Cr. to stateline	MANZANOLA, TOWN OF	CO0023825	BOD, TSS, CL2, FECALS
COARLA01	Arkansas R. from abv Fountain Cr. to stateline	FOWLER, TOWN OF	CO0021571	BOD, TSS, CL2, FECALS
COARLA01	Arkansas R. from abv Fountain Cr. to stateline	LAS ANIMAS, CITY OF	CO0040690	BOD, TSS, NH4, CL2, FECALS
COARLA01	Arkansas R. from abv Fountain Cr. to stateline	LAMAR, CITY OF	CO0023671	BOD, TSS, NH4, CL2, FECALS,
COARLA01	Arkansas R. from abv Fountain Cr. to stateline	NORTH LA JUNTA SANITATION	CO0039519	BOD, TSS, CL2, FECALS
COARLA01	Arkansas R. from abv Fountain Cr. to stateline	LA JUNTA, CITY OF - WWTP	CO0021261	BOD, TSS, NH4, CL2, FECALS,
COARLA02	Tribs to Arkansas R. from Colo C to stateline	CROWLEY, TOWN OF - WWTP	CO0041599	BOD, TSS, CL2, FECAL
COARLA02	Tribs to Arkansas R. from Colo C to stateline	LAS ANIMAS, CITY OF - WTP	CO0043907	TSS, TDS
COARLA02	Tribs to Arkansas R. from Colo C to stateline	CARLSON, STENER III	CO0027898	BOD, TSS, CL2, FECALS

WBID	SEGMENT NAME	PERMIT NAME	PERMIT NO	PARAMETERS WHICH MAY NEED WLAs
COARLA02	Tribs to Arkansas R. from Colo C to stateline	Limon, Town of	COG582016	FECALS
COARLA02	Tribs to Arkansas R. from Colo C to stateline	SIMLA, TOWN OF	CO0023817	BOD, TSS, CL2, FECALS
COARLA02	Tribs to Arkansas R. from Colo C to stateline	Eads, Town of	COG582013	FECALS
COARLA02	Tribs to Arkansas R. from Colo C to stateline	Calhan San. Dist	COG582015	FECALS
COARLA05A	Monument Lake	Monument Lake WTP	COG640035	CL2
COARLA06	Tribs to Purgatoire R. abv I-25 exc 5a & 5b	EVERGREEN OPERATING CORP.	CO0043940	TSS, FE, TDS, CL2
COARLA06	Tribs to Purgatoire R. abv I-25 exc 5a & 5b	Trinidad, Town of	COG640018	CL2
COARLA06	Tribs to Purgatoire R. abv I-25 exc 5a & 5b	AMOCO PROD. CO. - RATON BASIN	CO0041246	TDS,
COARLA06	Tribs to Purgatoire R. abv I-25 exc 5a & 5b	STROUD OIL PROPERTIES, INC	CO0042978	TSS, FE, MN, PB, BENZENE, TDS,
COARLA07	Purgatoire R., I-25 to Arkansas R.	TRINIDAD, CITY OF	CO0031232	BOD, TSS, NH4, CL2, FECALS
COARLA07	Purgatoire R., I-25 to Arkansas R.	TRINIDAD, CITY OF-POWER PLANT	CO0000914	TEMP, CR, ZN, TSS
COARLA10AL	Lake Meredith	SUGAR CITY, TOWN OF	CO0023183	BOD, TSS, NH4, CL2, FECALS
COARMA02	Arkansas R Pueblo Res to Wildhorse Cr.	Pueblo Bd of Water Works	COG640025	CL2
COARMA04	Tribs to Arkansas R,. Pueblo Res to Colo C.	AVONDALE WATER & SAN DIST	CO0021075	BOD, TSS, CL2, FECALS
COARMA04	Tribs to Arkansas R,. Pueblo Res to Colo C.	RENTECH, INC.- SYNHYTECH	CO0042684	TSS, NH4, CL2, TDS,
COARMA04	Tribs to Arkansas R,. Pueblo Res to Colo C.	PUEBLO WEST METRO DISTRIC	CO0040789	BOD, TSS, CL2, FECALS
COARMA04	Trib to Black Squirrel Cr	Paint Brush Hills Metro D	COG582010	FECALS
COARMA13	Mainstem Cucharas R. incl Tribs.abv Walsenburg PWS	LA VETA, TOWN OF	CO0032409	BOD, TSS, NH4, CL2, FECALS
COARMA14	Cucharas R. from Walsenburg PWS to Cucharas Res.	WALSENBURG, CITY OF	CO0020745	BOD, TSS, NH4, CL2, FECALS
COARMA15	Cucharas R. from outlet Cucharas to Huerfano R.	CUCHARAS SAN & WATER DIST	CO0043745	BOD, TSS, NH4, CL2, FECALS
COARUA02B	Arkansas R., abv. Lake Fork	HARVEST GROUP, LTD.	CO0021661	BOD, TSS, CL2, FECALS
COARUA03	Arkansas R. from abv Lake Cr to Pueblo Res.	HOLNAM, INC.	CO0000671	BOD,TSS, NH4, AL, CL2, FECALS, COD

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COARUA06	St. Kevins G. & California G.	LEADVILLE SANITATION DIST	CO0021164	BOD, TSS, NH4, CL2, FECAL, ZN, AG, CU, CR, AS, CD, PB, HG, NI
COARUA07	Evans Gulch	Parkville Water Dist	COG640042	CL2
COARUA08A	Iowa G., source to ASARCO Intake	LEADVILLE CORPORATION	CO0027014	TSS, S-, AG, ZN, CD, PB, CU, HG,
COARUA08B	Iowa G. from blw ASARCO intake to blw Paddock #1 D	RES-ASARCO JOINT VENTURE	CO0000591	TSS, NH4, CN, CD, ZN, PB, CU, MN, HG,
COARUA12	Cottonwood Cr, Chalk Cr.& S. Fk Arkansas & tribs	CHRISTIAN MISSION CONCERN	CO0040185	BOD, TSS, CL2, FECALS
COARUA12	Cottonwood Cr, Chalk Cr.& S. Fk Arkansas & tribs	SALIDA, CITY-HOT SPRINGS	CO0034118	TSS, CL2, FECALS
COARUA12	Cottonwood Cr, Chalk Cr.& S. Fk Arkansas & tribs	YOUNG LIFE CAMPAIGN, INC.	CO0034304	TSS, CL2, FECALS, BOD
COARUA12	Cottonwood Cr, Chalk Cr.& S. Fk Arkansas & tribs	SKI MONARCH, LLC	CO0028444	BOD, TSS, NH4, CL2, FECALS
COARUA14	All tribs to Arkansas R. not on USFS lands	ROYAL GORGE COMPANY OF CO	CO0029033	BOD, TSS, CL2, FECALS
COARUA14	All tribs to Arkansas R. not on USFS lands	CELTIC MINERALS U.S.A. IN	CO0041122	TSS, CD, CU, PB, ZN, HG
COARUA15	Grape Ck., abv. DeWeese Resv.	ROUND MOUNTAIN WTR & SAN	CO0028819	BOD, TSS, N, CL2, FECALS
COARUA21	Mainstem Cripple Creek, source to Fourmile Ck.	CRIPPLE CR &VICTOR GOLD MINING CORP	CO0024562	TSS, CN, ZN, AG, CU, PB, CD, HG,
COARUA21	Mainstem Cripple Creek, source to Fourmile Ck.	CRIPPLE CREEK, CITY OF	CO0039900	BOD, TSS, NH4, CL2, FECALS, CN, AS, CD, CR, CU, PB, NI, AG, ZN, SE, PHENOLS, HG
COARUA23	Mainstem Wilson Cr (Teller County) abv Fourmile Cr	VICTOR, CITY OF	CO0024201	BOD, TSS, NH4, CL2, FECALS
COGU	GUNNISON AND LOWER DOLORES RIVER BASIN	----------	-------	----------
COGULG04	Tribs to Gunnison R. Crystal Res to Colorado R.	CEDAREDGE, TOWN OF - WWTF	CO0031984	BOD, TSS, CL2, TDS, FECALS
COGULG06	Named tribs to Gunnison R.	COLO DEPT CORRECTIONS-DELTA	CO0043389	BOD, TSS, TDS, FECALS
COGUNF03	N. Fk. Gunnison R. Black Br. to Gunnison R.	PAONIA, TOWN OF	CO0021709	BOD, TSS, NH4, CL2, TDS, FECALS
COGUNF03	N. Fk. Gunnison R. Black Br. to Gunnison R.	HOTCHKISS, TOWN OF	CO0021415	BOD, TSS, NH4, TSS, NH4, CL2, TDS, FECAL
COGUSM02	Cornet Creek	Telluride, Town of	COG640024	CL2
COGUSM04	San Miguel R., S Fk San Miguel to Naturita Cr.	TRI-STATE GENERATN &TRANSMISSION	CO0000540	TEMP, TSS, CR, FE, ZN, CU, CL2, TDS, HG, NH4, TL, SB, AL, BENZENE, PHENOLS,

WBID	SEGMENT NAME	PERMIT NAME	PERMIT NO	PARAMETERS WHICH MAY NEED WLAs
COGUSM05	San Miguel R., from Naturita Cr. to Dolores R.	NATURITA, TOWN OF	CO0024007	BOD, TSS, CL2, TDS, FECALS, BOD
COGUSM12	All tribs San Miguel R blw Leopard Ck. exc 9,10,11	NORWOOD SANITATION DISTRICT	CO0032191	TSS, CL2, TDS, FECALS, BOD
COGUSM12	All tribs San Miguel R blw Leopard Ck. exc 9,10,11	WESTERN FUELS	CO0000213	TSS, SETTLES, FE, TDS,
COGUSM12	All tribs San Miguel R blw Leopard Ck. exc 9,10,11	Nucla San Dist	COG582002	FECALS
COGUUG05	East R & tribs exc segs 2, 6a,6b	EAST RIVER REGIONAL SAN.	CO0040720	BOD, TSS, NH4, CL2, TDS, FECALS
COGUUG05	East R & tribs exc segs 2, 6a,6b	CRESTED BUTTE SOUTH METRO DIST	CO0031836	BOD, TSS, CL2, TDS, FECALS
COGUUG08	Slate R., Coal Ck. to East R.	CRESTED BUTTE, TOWN OF	CO0020443	BOD, TSS, NH4, CL2, TDS, FECALS
COGUUG12	Coal Ck., Crested Butte H2O intake to Slate R.	CLIMAX MOLYBDENUM CO.-KEYSTONE	CO0035394	TSS, ZN, CD, AG, CU, CR6, CD, PB, TDS,
COGUUG13	Woods Ck abv Washington Gulch	MT. CRESTED BUTTE W&S DIST	CO0027171	BOD, TSS, NH3, CL2, TDS, FECALS
COGUUG14	Gunnison R. abv Blue Mesa Res.	GUNNISON, CITY OF	CO0041530	BOD, TSS, NH4, CL2, TDS, FECAL, CN, AS, CR, SE, ZN, AG, CU, CD, PB, NI, PHENOLS, HG
COGUUN03	Uncompaghre R., Red Mtn. Ck. to US HWY 550	OURAY, CITY OF - HOT SPGS	CO0043222	TEMP, TSS, NH4, CL2, TDS, BR-
COGUUN03	Uncompaghre R., Red Mtn. Ck. to US HWY 550	RIDGWAY, TOWN OF	CO0029106	BOD, TSS, CL2, TDS, FECALS
COGUUN03	Uncompaghre R., Red Mtn. Ck. to US HWY 550	OURAY, CITY OF	CO0043397	BOD, TSS, NH4, CL2, TDS, FECALS, NO3
COGUUN05	All tribs to Unc. R. Abv Dexter Ck. exc 1, 6 -10	WALKER RUBY MINING COMPANY	CO0037206	TSS, PB, ZN, AG,CU,CD, TDS, HG,
COGUUN05	All tribs to Unc. R. Abv Dexter Ck. exc 1, 6 -10	SILVER EAGLE COMPANY	CO0037460	TSS, AG, PB, ZN, CU, CD, TDS, HG
COLC	LOWER COLORADO RIVER BASIN	----------	----------	----------
COLCLC01	Colorado R., Roaring Fork R. to Parachute Ck.	RIFLE, CITY OF - SOUTH WWTP	CO0030970	BOD, TSS, CL2, TDS, FECALS
COLCLC01	Colorado R., Roaring Fork R. to Parachute Ck.	COCA COLA BOTTLING COMPANY	CO0041076	BOD, TSS, TDS
COLCLC01	Colorado R., Roaring Fork R. to Parachute Ck.	SILT, TOWN OF	CO0029181	BOD, TSS, CL2, TDS, FECALS
COLCLC01	Colorado R., Roaring Fork R. to Parachute Ck.	REDSTONE CORP-GEOTHERMAL	CO0039551	FLOW, CL2, TDS, FECALS
COLCLC01	Colorado R., Roaring Fork R. to Parachute Ck.	ROARING FORK RESOURCES	CO0039209	BOD, COD, TSS, NH4, NO2, AS, ZN, RA226, RA228, U, TDS,
COLCLC02	Colorado R., Parachute Ck. to Gunnison R.	DE BEQUE, TOWN OF	CO0023418	BOD, TSS, CL2, TDS, FECALS

WBID	SEGMENT NAME	PERMIT NAME	PERMIT NO	PARAMETERS WHICH MAY NEED WLAs
COLCLC02	Colorado R., Parachute Ck. to Gunnison R.	CLIFTON SANITATION DISTRICT	CO0033260	BOD, TSS, NH4, CL2, TDS, FECALS
COLCLC02	Colorado R., Parachute Ck. to Gunnison R.	POWDERHORN COAL COMPANY	CO0027146	WET, TSS, FE, TDS, SETTLEABLE SOLIDS
COLCLC03	Colorado R., Gunnison R. to Stateline	FRUITA, TOWN OF	CO0020257	TSS, CL2, TSS, FECALS, BOD
COLCLC03	Colorado R., Gunnison R. to Stateline	FRUITA MARKETING & MGMNT.	CO0000078	BOD, TSS, NH4, S, CR6, CR, PHENOLICS, BENZENE, CL2, TDS, COD
COLCLC11C	Middle Fk. Parachute Cr abv S19,T5S,R95W	EXXON COMPANY, USA	CO0038270	TSS, FE, TDS
COLCLC13	Tribs to Colorado R. blw Parachute Cr.exc named segs.	PABCO	CO0034193	TEMP, BOD, TSS, FE, TDS,
COLCLC13	Tribs to Colorado R. blw Parachute Cr.exc named segs.	OCCIDENTAL OIL SHALE, INC	CO0029947	COD, TSS, NH4, NO3, SO4, F-, B, PHENOLS, TDS, AS, PB, CU,
COLCLC13	Tribs to Colorado R. blw Parachute Cr.exc named segs.	MESA CO./GRAND JUNCTION	CO0040053	DO, BOD, TSS, NH3, CL2, TDS, HG, FECALS,
COLCLC13	Tribs to Colorado R. blw Parachute Cr.exc named segs.	Mobile City MHP	COG582021	FECALS
COLCLC13	All tribs to the Colorado R, Parachute Ck to Stateline	PUBLIC SERVICE CO-CAMEO STA	CO0000027	TEMP, TDS, TSS, CU, NI, ZN, COD
COLCLC13	Tribs to Colorado R. blw Parachute Cr.exc named segs.	POWDERHORN METRO DISTRICT	CO0023485	BOD, TSS, CL2, TDS, FECALS
COLCLC15	Plateau Cr. sources to Colorado R.	COLLBRAN, TOWN OF	CO0040487	BOD, TSS, NH4, CL2, TDS, FECALS
COLCLC17	Rapid Creek	Palisade, Town of - WTP	COG640037	CL2
COLCLC17	Rapid Creek	Ute Water Conserv Dist	COG640070	CL2
COLCLY01	Yampa R., Elkhead Cr. to Lay Cr.	CRAIG, CITY OF - WWTP	CO0040037	BOD, TSS, NH4, AG, CU, PB, CL2, TDS, HG, FECALS, CN, AS, CD, CR, NI, ZN, SE, CU, PB, PHENOLS,
COLCLY02	Yampa R. Lay Cr. to Green R.	MOFFAT COUNTY IMPROVEMT DIST	CO0037621	BOD, TSS, CL2, TDS, FECALS
COLCLY03A	Tribs to Yampa R. btwn Elkhead Cr. & Lay Cr.	SAMSON RESOURCES COMPANY	CO0000051	TSS, TDS
COLCLY13B	Williams Fk. R. Hamilton To Yampa R.	CYPRUS EMPIRE CORP. EAGLE MINE	CO0034142	TSS, FE, ZN, TDS, SS,
COLCWH07	White R., Miller Cr. to Piceance Cr.	RIVERSIDE SANITATION, INC	CO0038075	BOD, TSS, CL2, TDS, FECALS
COLCWH07	White R., Miller Cr. to Piceance Cr.	MEEKER SANITATION DISTRICT	CO0022781	BOD, TSS, CL2, TDS, FECALS
COLCWH13A	Tribs. to White R., Piceance Ck. to Douglas Ck.	ANDRIKOPOULOS, A.G., RESOURCES	CO0039683	TSS, TDS, CL2, BENZENE,

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COLCWH13A	Tribs. to White R., Piceance Ck. to Douglas Ck.	BLUE MOUNTAIN ENERGY, INC	CO0038024	TSS, TDS, FE, SETTLEABLE SOLIDS, CL2, FFECALS,
COLCWH16A	Tribs to Piceance Cr exc specific listings	OCCIDENTAL OIL SHALE	CO0033961	TSS, TDS, NH4, F-, B, ZN, PB, TDS, BOD, CL2, FECALS
COLCWH21	White R., Douglas Ck. to Stateline	RANGELY, TOWN OF	CO0026972	BOD, TSS, CL2, TDS, FECALS
CORG	RIO GRANDE RIVER BASIN	----------	----------	----------
CORGAL14	Conejos R., including all tribs abv Fox Cr.	PLATORO MINING CO&UNION GOLD	CO0038954	TSS, AS, AG, ZN, CD, PB, CU, HG, MN,
CORGAL16	Conejos R. from San Antonio R. to Rio Grande.	SANFORD, TOWN OF	CO0032107	BOD, TSS, CL2, FECALS
CORGCB03	All tribs to Closed Basin exc 2, 4-13	Baca Grande W&S Dist	COG582008	FECALS
CORGCB03	All tribs to Closed Basin exc 2, 4-13	Saguache, Town of	COG582007	FECALS
CORGRG04	Rio Grande R., Willow Ck to Alamosa County line	MONTE VISTA, CITY OF	CO0036927	BOD, TSS, NH3, CL2, FECALS
CORGRG07	W. Willow Cr. blw Park Regent, E. Willow Ck., Will	CREEDE, CITY OF	CO0040533	BOD, TSS, CL2, FECALS
CORGRG09	South Fork Rio Grande, source to Rio Grande exc 1	SOUTH FORK WATER & SAN DIST	CO0033235	BOD, TSS, CL2, FECALS
CORGRG09	South Fork Rio Grande, source to Rio Grande exc 1	WOLF CREEK SKI CORPORATION	CO0041785	BOD, TSS, NH4, CL2, FECALS
CORGRG15	All tribs to Rio Grande below Hwy 112 Br	DEL NORTE, TOWN OF	CO0020281	BOD, TSS, CL2, FECALS
CORGRG15	All tribs to Rio Grande below Hwy 112 Br	LA JARA, TOWN OF	CO0020150	BOD, TSS, CL2, FECALS
CORGRG15	All tribs to Rio Grande below Hwy 112 Br	MONTE VISTA, CITY OF	CO0023132	BOD, TSS, CL2, FECALS
COSJ	SAN JUAN RIVER AND DOLORES RIVER BASIN	----------	----------	----------
COSJAF02	Animas R. & Tribs., Denver Lk. to Maggie G.	SILVERTON, TOWN OF	CO0020311	BOD, TSS, CL2, TDS, FECALS
COSJAF04B	Animas R., Elk Cr. to Junction Cr.	BEAR, RUEDI	CO0042111	TSS, CL2, TDS, BR, FECALS
COSJAF05A	Animas R. Junction Cr to Southern Ute Boundary	DURANGO SCHOOL DISTRICT 9	CO0041181	BOD, TSS, NH4, CL2, FECALS, TDS,
COSJAF05A	Animas R. Junction Cr to Southern Ute Boundary	DURANGO, CITY OF	CO0024082	TSS, NH4, CL2, TDS, FECALS, BOD, CN, AS, CR, ZN, AG, CU, PB, NI, PHENOLS, HG
COSJAF12A	Tribs to Animas & Florida Rivers exc spec listings	EDMUNDS, GEOFFREY H/JL INC	CO0039691	BOD, TSS, CL2, TDS, FECALS
COSJAF12B	Lemon Res.	SIERRA VERDE ESTATES, INC	CO0036978	BOD, TSS, NH4, CL2, TDS, FECALS

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COSJAF13B	Tribs to Animas R blw Hermosa Cr, tribs to Florida	ELLIS, JAMES M., III	CO0031551	BOBD, TSS, CL2, TDS, FECALS
COSJAF13B	Tribs to Animas R blw Hermosa Cr, tribs to Florida	LOMA LINDA SANITATION DIST	CO0041408	BOD, TSS, CL2, TDS, FECALS
COSJAF13B	Tribs to Animas R blw Hermosa Cr, tribs to Florida	SOUTH DURANGO SANITATION	CO0041262	BOD, TSS, CL2, TDS, FECALS
COSJDO02	Dolores R. abv Horse Cr	RICO DEVELOPMENT CORP	CO0029793	TSS, AG, ZN, CD, PB, CU, TDS
COSJDO04	Dolores R., Bear Cr to Bradfield Ranch Bridge	COTTER CORP (JD-7, JD-9 MINES)	CO0036251	COD, TSS, ZN, RA, U, TDS,
COSJDO04	Dolores R., Bear Cr to Bradfield Ranch Bridge	KURPIUS, THOMAS E.&SHARON	CO0042561	BOD, TSS, CL2, TDS, FECALS
COSJDO04	Dolores R., Bear Cr to Bradfield Ranch Bridge	DOLORES, TOWN OF	CO0040509	BOD, TSS, NH4, CL2, TDS, FECALS,
COSJLP01	LaPlata R., abv. Hay Gul.	SHALAKO INTERNATIONAL, INC	CO0036781	TSS, ZN, PB, CU, AG, CD, HG,
COSJLP04	Mancos R. and tribs abv Hwy 160	Mancos Rural Water Co.	COG640065	CL2
COSJLP07	McElmo Cr. Source to stateline	AIRCO INDUSTRIAL GASES	CO0039993	CL2, TDS,
COSJLP07	McElmo Cr. Source to stateline	CORTEZ SAN DIST - SOUTH W	CO0027880	BOD, TSS, NH4, CL2, TDS, FECALS
COSJLP07	McElmo Cr. Source to stateline	DOSH, JOHN C., SR. DBA	CO0037702	BOD, TSS, NH4, CL2, TDS, FECALS
COSJLP07	McElmo Cr. Source to stateline	CORTEZ SAN DIST - SW WWTF	CO0027545	BOD, TSS, NH4, CL2, TDS, FECALS
COSJLP08	Tribs to McElmo Cr.	DOVE CREEK, TOWN OF	CO0023434	BOD, TSS, CL2, TDS, FECLAS
COSJLP08	Tribs to McElmo Cr.	CORTEZ SAN DIST - NORTH WWTP	CO0020125	BOD, TSS, CL2, TDS, FECALS
COSJLP08	Tribs to McElmo Cr.	Lee Mobile Home Park	COG582023	FECALS
COSJPI06A	Tribs to Piedra R.	PAGOSA AREA W&SD-STEVENS	CO0041343	TSS, MN, AL, CL2, TDS
COSJPI06A	Tribs to Piedra R.	PAGOSA AREA W&SD-VISTA WWTP	CO0031755	BOD, TSS, TDS, CL2, FECALS
COSJPI06A	Tribs to Piedra R.	PAGOSA AREA W&SD-HIGHLAND	CO0038032	BOD, TSS, CL2, TDS, FECALS
COSJPI07	Hatcher Lake	Pagosa Area W&S Dist	COG640007	CL2
COSJPN02B	Los Pinos R. abv Southern Ute Boundary	BAYFIELD SANITATION DISTR	CO0020273	BOD, TSS, NH4, CL2, TDS, FECALS
COSJPN03	Vallecito Res.	PINE-ANIMAS SEWER MGMT CO	CO0031402	BOD, TSS, CL2, TDS, FECALS

WBID	SEGMENT NAME	PERMIT NAME	PERMIT NO	PARAMETERS WHICH MAY NEED WLAs
COSJPN03	Vallecito Res.	DAVIS, JR., ROBERT H. DBA	CO0031445	BOD, TSS, CL2, TDS, FECALS
COSJSJ05	San Juan, E. San Juan, W. San Juan abv Fourmile Cr	KING, WILLARD	CO0035319	BOD, TSS, CL2, TDS, FECALS
COSP	SO PLATTE RIVER BASIN	----------	----------	----------
COSPBD01	Big Dry Ck., source to S. Platte R.	BROOMFIELD, CITY OF	CO0026409	DO, TSS, CL2, FECALS, BOD,
COSPBD01	Big Dry Ck., source to S. Platte R.	HENNINGS, STEVE & CHRIS	CO0035793	BOD, TSS, CL2, FECALS
COSPBD05	N.&S. Walnut Ck.&Tribs., source to Ponds A-4, B-5	US ENERGY, DEPT OF, - ROCKY FLATS AREA OFFICE	CO0001333	BOD, TSS, FECALS, NO3, CR, CL2, P, TOC
COSPBE01A	Bear Ck., source to Harriman Ditch	WEST/BRANDT FOUNDATION	CO0035971	BOD, TSS, NH4, P, CL2, FECALS
COSPBE01A	Bear Ck., source to Harriman Ditch	MORRISON, TOWN OF - WWTP	CO0041432	BOD, TSS, NH3, P, CL2, FECALS
COSPBE02	Bear Ck., Bear Ck. Resv. to S. Platte R.	ATENCIO, RUBEL & BETTY	CO0030261	BOD, NH4, TSS,P, CL2, FECALS
COSPBE04A	Tribs. to Bear Ck., Cub Ck. to S. Platte R.	FOREST HILLS METRO DIST	CO0037044	BOD, P, CL2, FECAL
COSPBE04A	Tribs. to Bear Ck., Cub Ck. to S. Platte R.	Genesee W&S Dist	COG640069	CL2
COSPBE05	Tribs. to Turkey Ck., source to Bear Ck.	CONIFER SANITATION ASSN	CO0040096	BOD, TSS, NH4, P, CL2, FECALS
COSPBE2A	Cold Spring Gulch, source to Bear Ck.	Genesee W&S Dist	COG640069	CL2
COSPBO02	Boulder Ck., Indian Pks. Wild. to S. Platte R.	Boulder, City of Betasso	COG640064	CL2
COSPBO02	Boulder Ck., Indian Pks. Wild. to S. Platte R.	5005 PROPERTIES	CO0020184	BOD,TSS, NH4, CL2, FECALS
COSPBO02	Boulder Ck., Indian Pks. Wild. to S. Platte R.	MUELLER, CHRISTOPHER & HEIDI	CO0027260	BOD, TSS, CL2, FECALS
COSPBO03	Mid. Boulder Ck.and tribs, source to Barker Resv.	LAKE ELDORA WATER & SAN DIST	CO0020010	BOD, TSS, NH4, CL2, FECALS
COSPBO03	Mid. Boulder Ck.and tribs, source to Barker Resv.	NEDERLAND, TOWN OF	CO0020222	BOD, TSS, NH3, CL2, FECALS
COSPBO04B	S. Boulder Ck., Gross Resv. to S. Boulder Rd.	COWAN, KEITH	CO0020061	BOD, TSS, NH4, CL2, FECALS
COSPBO05	S. Boulder Ck., S. Boulder Rd. to Boulder Ck.	PUBLIC SERVICE CO-VALMONT	CO0001112	TEMP, TSS, NH4, FE, ZN, CU, CL2
COSPBO07B	Coal Ck., Hwy. 36 to Boulder Ck.	LOUISVILLE, CITY OF	CO0023078	BOD, TSS, NH3, CN, CR, ZN, CU, PB, CL2, FECALS, FE, AS, CR, AG, CD, NI, SE, MN, HG,
COSPBO07B	Coal Ck., Hwy. 36 to Boulder Ck.	ERIE, TOWN OF	CO0021831	BOD, TSS, NH4, CL2, FECALS

WBID	SEGMENT NAME	PERMIT NAME	PERMIT NO	PARAMETERS WHICH MAY NEED WLAs
COSPBO08	Tribs. to S. Boulder Ck., S. Bldr Rd. to Bldr Ck	SUPERIOR METRO DISTRICT NO 1	CO0043010	BOD, TSS, NH4, CL2, FECALS
COSPBO14C	Cowdery Ditch, source to Coal Ck.	Lousiville, City of	COG640036	CL2
COSPBT02	Big Thompson R. & tribs, RMNP to Home Supply Canal	ESTES PARK SAN DISTRICT	CO0020290	BOD, TSS, NH4, ZN, CU, PB, CL2, CN, AS, CD, CR, NI, AG,SE, PHENOLS, HG
COSPBT02	Big Thompson R. & tribs, RMNP to Home Supply Canal	Estes Park, Town of	COG640063	CL2
COSPBT02	Big Thompson R. & tribs, RMNP to Home Supply Canal	Estes Park, Town of	COG640030	CL2
COSPBT09	Little Thompson R., Culver Ditch to Big Thomp. R.	RIVER GLEN HOMEOWNERS ASSN	CO0029742	BOD, TSS, CL2, FECALS
COSPBT09	Little Thompson R., Culver Ditch to Big Thomp. R.	GTC NUTRITION COMPANY	CO0001058	BOD, TSS, NH4, CL2, XYLENE
COSPBT10	Tribs. to Little Thompson R., Culver Dtch to Big T	Berthoud Estates Comm Ass	COG582009	FECALS
COSPBT10	Tribs. to Little Thompson R., Culver Dtch to Big T	WESTERN MINI-RANCH/VAQUERO	CO0043311	BOD, TSS, CL2, FECALS
COSPBT10	Tribs. to Little Thompson R., Culver Dtch to Big T	BERTHOUD, TOWN OF	CO0021083	BOD, TSS, CL2, FECALS,
COSPBT12	Boyd Lake	Greeley, City of - Boyd L	COG640062	CL2
COSPCH01	Cherry Ck., source to Cherry Ck. Resv.	LINCOLN PARK METRO DISTRICT	CO0040291	BOD, TSS, NH4, NO3, CL-, SO4, CH-CL3, CL2, FECALS
COSPCH03	Cherry Ck., Cherry Ck. Resv. to S. Platte R.	GLENDALE, CITY OF	CO0020095	DO, BOD, TS, NH4, CL2, FECALS
COSPCH03	Cherry Ck., Cherry Ck. Resv. to S. Platte R.	COLO DEPT OF TRANSPORTATION	CO0043664	TSS, PB, BETX, ORGANICS
COSPCL02	Clear Ck., I-70 Brdg. at Silver Plum to Argo Tunnel	CENTRAL CLEAR CREEK SAN DIST	CO0030121	BOD, TSS, CL2, FECALS
COSPCL02	Clear Ck., I-70 Brdg. at Silver Plum to Argo Tunnel	GEORGETOWN, TOWN OF	CO0027961	BOD, TSS, NH4, CL2, FECALS
COSPCL09	Fall R., source to Clear Ck.	ST. MARY'S GLACIER W&SD	CO0023094	BOD, TSS, CL2, FECALS
COSPCL12	Tribs. to Clear Ck., Argo Tunn. to Highline Canal	EL RANCHO WWTF	CO0026522	BOD, TSS, CL2, FECALS
COSPCL17	Ralston Ck. source to outlet of Arvada Resv.	COTTER CORPORATION	CO0001244	BOD, COD, TSS, AG, ZN, CD, PB, CU, TR, U, HG, FECALS, N, CN, F, SE, TA, CR,
COSPCL18A	Leyden Ck., source to Highline Canal	PUBLIC SERVICE CO-LEYDEN	CO0001279	TSS, NO2, NO3, CN, SO4, F-, AS, SE, FE, MN, ZN, CD, PB, CR, CU, HG,, AG
COSPCP08	Tribs. to N.Fk.Cache La Poudre, Hall. Resv. to mainstem	FOX ACRES COMMUNITY SVCS	CO0041050	BOD, TSS, CL2, FECALS

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COSPCP10	Cache La Poudre R., Monroe Canal to Sheilds St.	Greeley, City of - Bellvue	COG640061	CL2
COSPCP11	Cache La Pouder R., Shields St. to Box Elder Ck.	FORT COLLINS, CITY OF	CO0026425	TSS, NH4, CN, FE, SE, MN, CR6, ZN, AG,CU, AL, AS, CD, PB, HG, NI, CL2, FECALS, BOD,
COSPCP12	Cache La Poudre R., Box Elder Ck. to S. Platte R.	WESTERN SUGAR CO, THE-GREELEY	CO0041360	TEMP, DO, BOD, TSS, NH4, CL2, FECALS
COSPCP12	Cache La Poudre R., Box Elder Ck. to S. Platte R.	GREELEY, CITY OF	CO0040258	TSS, NH4, MN, CR6, ZN, AS, CU, AS, CD, PB, HG, NI, SE, CL2, BOD, HG,
COSPCP12	Cache La Poudre R., Box Elder Ck. to S. Platte R.	EASTMAN KODAK COMPANY	CO0032158	BOD, TSS, NH4, CN, CR6, CR, AG, ZN, AL, CU, ORGANICS
COSPCP12	Cache La Poudre R., Box Elder Ck. to S. Platte R.	MONFORT, INC.	CO0001261	TEMP, TSS, NH3
COSPCP12	Cache La Poudre R., Box Elder Ck. to S. Platte R.	WINDSOR, TOWN OF	CO0020320	BOD, TSS, NH4, CL2, FECALS, CN, AS, FE, SE, CR, NI, ZN, CU, AL, CD, PB, MN, PHENOLS, HG,WET
COSPCP12	Cache La Poudre R., Box Elder Ck. to S. Platte R.	DUGGAN, ED-GREELEY WASHOUT	CO0042153	BOD, TSS, NH4, FECALS
COSPCP13	Tribs. to CacheLaPoudre R., N. Fk. to S. Platte R.	WOODWARD GOVERNOR COMPANY	CO0043338	TEMP, TSS, CL2
COSPCP13	Tribs. to CacheLaPoudre R., N. Fk. to S. Platte R.	COLO DIV OF WILDLIFE-AQUATIC	CO0043524	TSS, ZN, AG, SU, CD, PB, MN
COSPCP13	Tribs. to CacheLaPoudre R., N. Fk. to S. Platte R.	ANHEUSER-BUSCH, INC.	CO0039977	BOD, TSS
COSPCP13	Tribs. to CacheLaPoudre R., N. Fk. to S. Platte R.	SOUTH FORT COLLINS SAN DIST	CO0020737	BOD, TSS, NH4, CL2, FECALS
COSPCP13	Tribs. to CacheLaPoudre R., N. Fk. to S. Platte R.	BOXELDER SANITATION DISTR	CO0020478	BOD, TSS, NH4 CN, AS, FE, SE, NI,CR, CR6, ZN, AG, CU, AL, CD, PB, HG, MN, PHENOLS, CL2, FECALS,
COSPCP13	Tribs. to CacheLaPoudre R., N. Fk. to S. Platte R.	WELLINGTON, TOWN OF	CO0021032	BOD, TSS, CL2, FECALS
COSPCP14	Hanson Canal, source to Horsetooth Resv.	Spring Canyon W&S Dist	COG640039	CL2
COSPCP16	Claymore Lake	Fort Collins, City of	COG640076	CL2
COSPLS01	S. Platte R., Weld Morgan Line to CO/NE Line	WESTERN SUGAR CO, THE-FT MORGAN	CO0041351	TEMP, DO, BOD, TSS, NH4, FECALS
COSPLS01	S. Platte R., Weld Morgan Line to CO/NE Line	STERLING, CITY OF - WWTP	CO0026247	TSS, NH4, CL2, FECALS, BOD,NO2, NO3, TDS, FECALS
COSPLS01	S. Platte R., Weld Morgan Line to CO/NE Line	CROOK, TOWN OF	CO0020460	BOD, TSS, CL2, FECALS
COSPLS01	S. Platte R., Weld Morgan Line to CO/NE Line	FORT MORGAN, CITY OF	CO0020397	BOD, TSS, NH4, CN, AS, CD, CR,CU, FE, PB, MN, NI, AG, ZN, SE, HG, CL2, FECALS,
COSPLS02	Lodgepole Ck., source to S. Platte R.	Ovid, Town of	COG582019	FECALS

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COSPLS02	Tribs. to S. Platte R., Weld/Morgan Line to CO/NE	KIOWA, TOWN OF - WWTP	CO0033405	TSS, CL2, FECAL, BOD
COSPLS02	Kiowa Creek, source to S. Platte R.	Elbert W&S Dist	COG582001	FECALS
COSPLS03L4	Jumbo Resv.	MONAHAN, REX-MERINO OIL FIELD	CO0001325	TSS, B, TDS, BENZENE
COSPMS01	S Platte R., Big Dry Ck. to Weld/Morgan Co Line	GILCREST, TOWN OF - WWTP	CO0041653	BOD, TSS, CL2, FECALS
COSPMS01	S Platte R., Big Dry Ck. to Weld/Morgan Co Line	FORT LUPTON, CITY OF	CO0021440	BOD, TSS, NH4, HG, FECALS, CN, FE, CR6, ZN, AG, CU, AS, CD, PB, NI, SE, MN, PHENOLS,
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	Hill N Park San Dist	COG582012	FECALS
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	EVANS, CITY OF	CO0020508	BOD, TSS, NH4, CL FECALS
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	EATON, TOWN OF	CO0023116	BOD, TSS, CL2, FECALS
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	Bennett, Town of	COG582018	FECALS
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	PUBLIC SERVICE CO-FT ST VRIAN	CO0001121	TEMP, CL2, TSS, NH4, P, CR, ZN
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	ELIZABETH, TOWN OF - WWTP	CO0020818	BOD, TSS, CL2, FECALS
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	CON/AGRA POULTRY COMPANY	CO0043257	BOD, NH4, N, TDS
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	HUDSON, TOWN OF	CO0029581	BOD, TSS, CL2, FECAL
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	WARD, ALFRED & SON	CO0039179	TSS, TDS,
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	GALETON WATER & SAN DIST	CO0043320	BOD, TSS, CL2, FECALS
COSPMS03	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	LONE TREE WWTF	CO0027707	BOD, TSS, NH3, CL2, FECALS
COSPMS03L	Tribs. to S. Platte R., Big Dry Ck. to Weld/Morgan Co Line	KEENESBURG, TOWN OF	CO0041254	BOD, TSS, CL2, FECALS
COSPMS03L	Lake Thomas	Harbor American Hlth Care	COG582017	FECALS
COSPRE03	N. Fk. Republican R. source to CO/NE Lne	WRAY, CITY OF	CO0023833	BOD, TSS, NH4, CL2, FECALS

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COSPRE06	Tribs. to Republican R. system in Colorado	Seibert, Town of	COG582022	FECALS
COSPRE06	Tribs. to Republican R. system in Colorado	FLAGLER SANITATION DIST	CO0037095	BOD, TSS, CL2, FECALS
COSPRE06	Tribs. to Republican R. system in Colorado	BURLINGTON, CITY OF - WWTP	CO0020613	BOD, TSS, SE, FECALS, N
COSPRE07	Smoky Hill R., source to CO/KS Line	CHEYENNE WELLS SAN DIST #1	CO0041386	BOD, TSS, CL2, FECALS
COSPSV02	St Vrain Ck and Tribs, RMNP to Hygiene Rd.	Allenspark W&S Dist - WTP	COG640021	CL2
COSPSV02	St Vrain Ck and Tribs, RMNP to Hygiene Rd.	Lyons, Town of	COG640046	CL2
COSPSV06	Tribs. to St. Vrain Ck., Hwy 36 to S. Platte R.	BEECH AIRCRAFT CORPORATION	CO0043451	BOD, TSS, NH4, FE, MN, RA, BETX, ORGANICS, H2S, HG
COSPSV06	Tribs. to St. Vrain Ck., Hwy 36 to S. Platte R.	WELD COUNTY TRI-AREA SAN DIST	CO0021580	BOD, TSS, CL2, FECALS, CN, AS, CD, CR, CU, PB, NI, AG, ZN, SE, PHENOLS, HG
COSPSV06	Tribs. to St. Vrain Ck., Hwy 36 to S. Platte R.	MEAD, TOWN OF	CO0023060	BOD, TSS, CL2, FECALS
COSPSV06	Tribs. to St. Vrain Ck., Hwy 36 to S. Platte R.	SOUTHDOWN, INC.	CO0043656	TSS, FLOW
COSPSV06	Tribs. to St. Vrain Ck., Hwy 36 to S. Platte R.	NIWOT SANITATION DISTRICT	CO0021695	DO, BOD, TSS, CL2, FECALS
COSPUS01A	S. Platte R.'s, sources to N. Fk. S. Platte R.	ALMA, TOWN OF	CO0035769	BOD, TDS, NH4, CL2, FECALS
COSPUS01A	S. Platte R.'s, sources to N. Fk. S. Platte R.	FAIRPLAY SANITATION DIST	CO0040088	BOD, TSS, NH4, CL2, FECALS
COSPUS02A	Tribs. to S. Platte R., source to Tarryall Ck.	FLORISSANT WATER & SAN DIST	CO0041416	BOD, TSS, NH4, CL2, FECALS
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	LOST VALLEY RANCH CORP	CO0027219	BOD, TSS, NH3, CL2, FECALS
COSPUS03	Tribs. to S.Platte R., Tarryall Ck. to N.Fk.S.Platte R	WOODLAND PARK, CITY OF	CO0043214	BOD, TSS, NH4 P, CL2, FECALS
COSPUS04	N. Fk. S. Platte R. & Tribs., source to S.Platte R	BAILEY WATER & SANITATION	CO0020605	BOD, TSS, CL2, FECALS
COSPUS04	N. Fk. S. Platte R. & Tribs., source to S.Platte R	WILL-O-WISP METRO DISTRICt	CO0041521	BOD, TSS, NH4, CL2, FECALS
COSPUS04	N. Fk. S. Platte R. & Tribs., source to S.Platte R	MOUNTAIN WATER & SAN DIST	CO0022730	BOD, TSS, CL2, FECALS
COSPUS06	S. Platte R., N. Fk. S. Platte R. to Bowles Ave.	ROXBOROUGH PARK WWTF	CO0041645	BOD, TSS, P, CL2, FECALS, NH4, O&G
COSPUS06	S. Platte R., N. Fk. S. Platte R. to Bowles Ave.	LOCKHEED MARTIN TECHNOLOGY	CO0001511	ORGANICS, TEMP, BOD, TSS, NH3, P, TOC, CN, CL-, SO4, F-, AS, BA, B, CR, MN, NI, AG, ZN, AL, CD, PB, CU, SE, CL2, NO3, NO2, H2S, HG, FECALS,

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COSPUS06	S. Platte R., N. Fk. S. Platte R. to Bowles Ave.	CENTENNIAL WATER & SAN. Dist	CO0037966	DO, BOD, TSS, NH4, CN, MN, CR6, ZN, AG, CU, CD, PB, CL2, HG, FECALS,
COSPUS07	Trib. to Willow Ck., source to Willow Ck.	Roxborough Park Metro Dist	COG640056	CL2
COSPUS10A	E.&W. Plum Ck.'s & Plum Ck., Nat.For.Land to Chtfld.Res.	UNOCAL/MOLYCORP, INC.	CO0028932	TSS, NO3, P,
COSPUS10A	E.&W. Plum Ck.'s & Plum Ck., Nat.For.Land to Chtfld.Res.	SACRED HEART RETREAT	CO0041874	P, FLOW
COSPUS10A	E.&W. Plum Ck.'s & Plum Ck., Nat.For.Land to Chtfld.Res.	PLUM CREEK WW AUTH PLANT	CO0020265	BOD, TSS, NH4, NO2, NO3, P, HDNS, CL2, FECALS
COSPUS10A	E.&W. Plum Ck.'s & Plum Ck., Nat.For.Land to Chtfld.Res.	WESTERN TELE-COMMUNICATION	CO0043532	TSS, P, S-, CL-,SO4, CR3, CR6, ZN, CL2
COSPUS10A	E.&W. Plum Ck.'s & Plum Ck., Nat.For.Land to Chtfld.Res.	LOUVIERS MUTUAL SERV CO	CO0027359	BOD, TSS, NH3, P, CL2, FECALS
COSPUS10A	E.&W. Plum Ck.'s & Plum Ck., Nat.For.Land to Chtfld.Res.	PLUM CREEK WASTEWATER AUTH	CO0038547	BOD, TSS, NH4, NO2, NO3, CL2, P, FECALS
COSPUS11B	Tribs to W. Plum Ck., not on Nat. Forest Land	PERRY PARK W&SD	CO0022551	BOD, TSS, NH4, P, CL2, FECALS
COSPUS14	S. Platte R., Bowles Ave. to Burlington Ditch	PUBLIC SERVICE CO-ZUNI PLANT	CO0001139	TEMP, CL2, P, TSS, CR, ZN,
COSPUS16	Tribs. to S. Platte R., Chatfield Resv. to Big Dry	COLORADO REFINING COMPANY	CO0001210	DO, BOD, COD, TSS, N, S, SE, CR6, CR, ZN, METHYL TERT-BUTYL ETHER, PHENOLICS, CL2, FECALS,
COSPUS16	Tribs. to S. Platte R., Chatfield Resv. to Big Dry	Centennial W&S Dist	COG640054	CL2
COSPUS16	Tribs. to S. Platte R., Chatfield Resv. to Big Dry	ARAPAHOE ESTATES WATER DIST	CO0043265	TSS, F, CL2, TDS
COSPUS16	Tribs. to S. Platte R., Chatfield Resv. to Big Dry	CONOCO, INC.	CO0001147	DO, BOD, COD, TSS,NH4, S, SE, CR6, CR, ZN, METHYL TERT-BUTYL, PHENOLICS, CL2,, FE, BETX, BENZENE, TOC, MN
COSPUS16	Tribs. to S. Platte R., Chatfield Resv. to Big Dry	DENVER WATER DEPARTMENT	CO0043761	TSS, CL2
COSPUS16	Tribs. to S. Platte R., Chatfield Resv. to Big Dry	AURORA, CITY OF	CO0026611	DO, BOD, TSS, CN, AS, CD, CR,CU, PB, NI, AS, ZN, CL2,HG, FECALS,
COUC	UPPER COLORADO AND NO PLATTE RIVER BASIN	----------	-------	----------
COUCBL01	Blue River abv Dillon Res.	Breckenridge, Town of	COG640053	CL2
COUCBL03	Tribs to Blue River	Breckenridge, Town of	COG640053	CL2

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COUCBL03	N Fk S Barton Cr	Breckenridge, Town of	COG640020	CL2
COUCBL03L	Dillon Reservoir	Breckenridge San Dist	CO0021539	P, N, TDS, FECALS
COUCBL08	Keystone Ck, Chicuahua Ck to Peru Ck, & N Fk Snake River	KEYSTONE RESORTS MGMT, INC	CO0023876	BOD, TSS, NH4, P, CL2, TDS, FECALS
COUCBL11	French Gul., 1.5 mi blw. Lincoln to Blue R.	Breckenridge, Town of	COG640053	CL2
COUCBL12	Illinois & Fredonia Gulches	Breckenridge, Town of	COG640053	CL2
COUCBL14	Tenmile Cr. and tribs blw W. Tenmile Cr.	COPPER MTN. CONSOLIDATED	CO0021598	BOD, TSS, NH4, P, CL2, TDS, FECALS
COUCBL17S	Blue R., Dillon Resv. to Colorado R.	EVERIST, L.G., INC.	CO0038229	TSS, TDS
COUCBL17S	Blue R., Dillon Resv. to Colorado R.	SILVERTHORNE/DILLON JT SEWER	CO0020826	BOD, TSS, NH4, P, CL2, TDS, FECALS, CN, AS, CD, CR, CU, PB, NI, ZN, SE, PHENOLS, HG
COUCBL18	All tribs to Blue R. Dillon Res to Green Mtn Res.	Dillon, Town of	COG640006	CL2
COUCEA02	Eagle R. source to Belden	RED CLIFF, TOWN OF	CO0021385	BOD, TSS, NH4, CL2, TDS, FECALS
COUCEA08	Gore Cr. blw Black Gore Cr.	EAGLE RIVER WATER & SAN.	CO0021369	DO, BOD, TSS, NH4, AG, CU, CD, PB, CL2, TDS, HG, FECAL, CN, AS, CR, NI, ZN, SE, PHENOLS
COUCEA09	Eagle R., Gore Ck. to Colorado R.	EAGLE RIVER WATER & SAN.	CO0037311	BOD, TSS, NH4, CL2, TDS, FECALS, AS, MN, SE, CR6, ZN,AG, CU, CD, PB, NI, HG,
COUCEA09	Eagle R., Gore Ck. to Colorado R.	EAGLE, TOWN OF	CO0021059	BOD, TSS, NH4, CL2, TDS, FECALS
COUCEA09	Eagle R., Gore Ck. to Colorado R.	Upper Eagle Reg Wtr Auth	COG640058	CL2
COUCEA09	Eagle R., Gore Ck. to Colorado R.	EAGLE RIVER WATER & SAN.	CO0024431	BOD, TSS, NH4, AS, CD, CR, CU, PB, AG, NI, ZN, SE, CL2, TDS, FECALS,
COUCNP05	Michigan R. abv N. Platte R.	WALDEN, TOWN OF - WWTP	CO0020788	BOD, TSS, NH4, CL2, FECALS
COUCRF02	Roaring Fork R. abv Hunter Cr.	ASPEN CONSOLIDATED SAN DIST	CO0026387	BOD, TSS, NH4, CL2, TDS, FECALS, CN, AS, CD, CR, CU, PB, NI, AS, ZN, SE, PHENOLS, HG,
COUCRF03	Roaring Fork, Hunter Cr to Colorado R.	LAZY GLEN HOMEOWNER'S ASSN	CO0020303	BOD, TSS, CL2, TDS, FECALS
COUCRF03	Roaring Fork, Hunter Cr to Colorado R.	MOBILE HOME MANAGEMENT ASSN	CO0038806	BOD, TSS, CL2, TDS, FECALS
COUCRF03	Roaring Fork, Hunter Cr to Colorado R.	SOPRIS VILLAGE HOA, INC.	CO0031810	BOD, TSS, TDS, CL2, FECALS
COUCRF03	Roaring Fork, Hunter Cr to Colorado R.	Aspen, City of Water Dept	COG640066	CL2

WBID	SEGMENT NAME	PERMIT NAME	PERMIT NO	PARAMETERS WHICH MAY NEED WLAs
COUCRF03	Roaring Fork, Hunter Cr to Colorado R.	SKI SUNLIGHT, INC.	CO0038598	BOD, TSS, NH4, CL2, TDS, FECALS
COUCRF03	Roaring Fork, Hunter Cr to Colorado R.	CARBONDALE, TOWN OF - WWTP	CO0026751	BOD, TSS, CL2, TDS, FECALS
COUCRF03	Roaring Fork, Hunter Cr to Colorado R.	BASALT SANITATION DISTRICT	CO0021491	BOD, TSS, CL2, TDS, FECALS
COUCRF03	Roaring Fork, Hunter Cr to Colorado R.	RANCH AT ROARING FORK	CO0028525	BOD, TSS, CL2, TDS, FECALS
COUCRF08	Crystal R., source to Roaring Fork R.	REDSTONE WATER & SAN DIST	CO0023922	BOD, TSS, CL2, TDS, FECALS
COUCRF08	Crystal R., source to Roaring Fork R.	ASPEN VILLAGE, INC.	CO0022721	BOD, TSS, CL2, TDS, FECALS
COUCRF08	Crystal R., source to Roaring Fork R.	Carbondale, Town of	COG640027	CL2
COUCRF10	N. Thompson Cr	MINREC, INC.	CO0029599	TSS, CD, FE, TDS, TSS, STTLS,
COUCUC03	Colorado R. Lk. Granby to State Bridge	OURAY RANCH HOMEOWNERS ASSN	CO0028860	BOD, TSS, CL2, FECALS
COUCUC03	Colorado R. Lk. Granby to State Bridge	HOT SULPHUR SPRINGS, TOWN	CO0024350	BOD, TSS, CL2, TDS, FECALS
COUCUC06A	Tribs to Colorado R. Abv Blue R. not on USFS lands	THREE LAKES W&SD-WILLOW CK	CO0037681	BOD, TSS, NH4, CL2, TDS, FECALS
COUCUC06A	Tribs to Colorado R. Abv Blue R. not on USFS lands	KREMMLING SANITATION DIST	CO0021636	BOD, TSS, NH4, CL2, TDS, FECALS
COUCUC08	Williams Fork R., source to Colorado	CLIMAX MOLYBDENUM COMPANY	CO0000230	FE, MO, ZN, AG, CU, CR6, AL, AS, CD, PB, NI, U, MN, RA, HG, CN, SO4, SE
COUCUC10	Fraser R. and tribs	Y.M.C.A. OF THE ROCKIES	CO0023442	BOD, N, CL2, FECALS
COUCUC10	Fraser R. and tribs	GRAND COUNTY W&S DISTRICT	CO0032964	BOD, TSS, NH4, CL2, TDS, FECALS
COUCUC10	Fraser R. and tribs	WINTER PARK WATER & SAN DIST	CO0026051	BOD, TSS, NH4, TDS, CL2,
COUCUC10	Fraser R. and tribs	GRANBY SANITATION DISTRICT	CO0020699	BOD, TSS, NH4, CL2, TDS, FECALS AS, CD, CR, CU, PB, NE, AG, ZN, SE, HG
COUCUC10	Fraser R. and tribs	FRASER SANITATION DISTRICT	CO0040142	BOD, TSS, NH4, CL2, TDS, FECALS
COUCUC10	Vasquez Creek	Grand Co W&S Dist	COG640044	CL2
COUCUC10	Fraser R. and tribs	CONRAD, JOHN J.	CO0038440	BOD, TSS, CL2, TDS, FECALS
COUCY0A4B	Little White Snake R abv Yampa R.	Routt Co, Phippsburg	COG582020	FECALS
COUCYA02A	Yampa R., Bear R. to Elkhead Ck.	YAMPA, TOWN OF	CO0030635	BOD, TSS, CL2, TDS, FECALS

WBID	SEGMENT NAME	PERMIT NAME	PERMIT NO	PARAMETERS WHICH MAY NEED WLAs
COUCYA02A	Yampa R., Bear R. to Elkhead Ck.	ROUTT CO. FOR MILNER COMMUNITY	CO0039705	BOD, TSS, CL2, TDS, FECALS
COUCYA02A	Yampa R., Bear R. to Elkhead Ck.	STEAMBOAT SPRINGS, CITY OF	CO0020834	BOD, TSS, NH4, CL2, TDS, FECALS, SE, ZN, AG, CU, CD, PB, NI, HG,
COUCYA02A	Yampa R., Bear R. to Elkhead Ck.	STEAMBOAT HEALTH & REC ASSN	CO0032280	TSS, CL2, TDS, FECALS
COUCYA02BL	Stagecoach Resv	MORRISON CREEK METRO W&SD	CO0022969	BOD, TSS, CL2, TDS, FECALS
COUCYA04A	All tribs to Yampa R. abv Elk R.not on USFS land	WHITEMAN SCHOOL	CO0031062	BOD, TSS, NH4, CL2, CL2, TDS, FECALS
COUCYA04A	All tribs to Yampa R. abv Elk R.not on USFS land	Mount Werner W&S Dist	COG640049	CL2
COUCYA06	Oak Creek& tribs abv Oak Creek WWTP	PITTSBURG & MIDWAY COAL MINE	CO0032638	TSS, SETTLES, FE, TDS, SO4, AS, SE, CR3, ZN, AG, CU, CR, PB, NI, HG,CR6, CD, MN also discharges to other drainages
COUCYA06	Oak Creek& tribs abv Oak Creek WWTP	Oak Creek, Town of - WTP	COG640057	CL2
COUCYA07	Oak Creek blw Oak Creek WWTP	OAK CREEK, TOWN OF - WWTP	CO0041106	BOD, TSS, NH4, CL2, TDS, FECALS
COUCYA11	All tribs to Elk R. not on USFS lands	STEAMBOAT LAKE SAN DIST	CO0035556	BOD, TSS, CL2, TDS, FECALS
COUCYA12	Yampa R., Bear R. to Elkhead Ck.	PUBLIC SERVICE CO-HAYDEN	CO0000523	TSS, TDS
COUCYA12	Tribs to Yampa R. Elk R. to Elkhead Cr not on USFS	HAYDEN, TOWN OF	CO0040959	BOD, TSS, NH4, CL2, TDS, FECALS
COUCYA12	Tribs to Yampa R. Elk R. to Elkhead Cr not on USFS	SENECA COAL COMPANY	CO0037656	TSS, TDS
COUCYA13A	Trout Cr. & tribs not on USFS land exc 13b	SUNLAND MINING CORP APEX	CO0036668	TSS, TDS
COUCYA13B	Foidel Cr. & Fish Cr blw CR 27 & Middle Cr.	TWENTYMILE COAL COMPANY	CO0042161	TSS, NH4, FE, AL, TDS
COUCYA13B	Foidel Cr. & Fish Cr blw CR 27 & Middle Cr.	CYPRUS YAMPA VALLEY COAL	CO0027154	TSS, FE, AG, CU, MN

Table 1 Colorado 1998 303(d) List

WBID	Segment Name	Portion	Status	Basis	Impairment	Additional Information	Div. Res.	TAR
COAR	ARKANSAS RIVER BASIN	----------	---	----------	---------	----------	----	
COARLA01	Arkansas R. from abv Fountain Cr. to stateline	All, problems increase downstream	PS	Water Qual. Data	Se, Fe, Mn, SO4	NPS significant. CDPS: CF&I STEEL, L.P.	Low	
COARMA04L1	Teller Resv.	All	PS	Fish Consump. Adv.	Hg	Still posted, Hg source unknown.	High	
COARUA01B	E. Fk. Arkansas R., abv. Birdseye Gul	AMAX property and below	NS	AMAX Data	Pb, Mn, Zn	Temp. Mods. for Pb, Mn, Zn Exp. 12/31/97. Historic Mining	High	
COARUA02B	Arkansas R., abv. Lake Fork	All	PS	WQ Data	Cd, Zn	Temp. Mods. for Cd, Zn Exp. 12/31/97. - Impacted by Calif. Gul.	Low	
COARUA02C	Arkansas R., Lake Fork to Lake Ck.	All	PS	Temp.Mods.	Zn	Temp. Mods. for Zn Exp. 12/31/97. - Impacted by Calif. Gul. CERCLA	Low	
COARUA09	Iowa Gul., Paddock Ditch 1 to Arkansas R.	All	PS	Temp. Mods.	Zn	Temp. Mods. for Zn Exp. 12/31/97. Mining impacted	Med	
COARUA11	Sayres G., & S. Fk. Lake Ck., Sayres G to Lake Cr.	All	PS	Water Qual. Data	Al, Cu, Fe, pH	Data older than 5 yrs, but conditions unchanged	Med	
COARUA12	Cottonwood Cr, Chalk Cr.& S. Fk Arkansas & tribs	Chalk Ck	PS	Water Quality Data	Zn	Mining impacted	Med	
COARUA21	Cripple Ck., Arequa Gul. to Fourmile Ck.	All	PS	Temp. Mods.	Mn, Fe,	Mining impacted.	High	X
COARUA22	Arequa Gul., source to Cripple Ck.	All	PS	Temp. Mods.	pH,Al,Mn,CN, Fe, Zn	Mining impacted.	High	X
COGU	GUNNISON AND LOWER DOLORES RIVER BASIN	----------	---	----------	-------	----------	----	
COGULG02	Gunnision R., Uncompaghre R. to Colorado R.	All	PS	Temp. Mods.	Se	Temp. Mods. for Se Exp. 8/30/02, CDPS: DELTA, CITY OF	Med	
COGULG09	Fruit Growers Resv.	All	PS	Temp. Mods.	F. Coli, NH3	Temp. Mods. for F. Coli, NH3 Exp. 8/30/00	High	
COGUNF05	Various tribs to N Fk Gunnison R, USFS boundary to N Fk.	especially tribs in and d/s of Mancos shale	PS	Temp. Mods.	Se	Temp. Mods. for Se Exp. 8/30/02	Med	

WBID	Segment Name	Portion	Status	Basis	Impairment	Additional Information	Div. Res. TAR
COGUSM03A	San Miguel R., BridalVeil & Ingram Ck to Marshall	Below historic mining(Idarado)	PS	Temp. Mods.	Zn	Temp. Mods. for Zn Exp. 6/30/02 - Impacted by Idarado CERCLA Site	Low
COGUSM03B	San Miguel R. Marshall Cr. S Fk San Miguel	Below historic mining(Idarado)	PS	Temp. Mods.	Cd, Mn, Zn, sediment	Temp. Mods for Zn, Mn, Cd Exp. 6/30/02 - Impacted by Idarado CERCLA Site, CDPS: TELLURIDE, TOWN OF	Low
COGUSM06B	Marshall Ck., source to San Miguel R.	All	PS	Water Qual. Data	Zn	Mining impacted, by Idarado CERCLA Site	Low
COGUUG08	Slate R., Coal Ck. to East R.	All	PS	Temp. Mods.	Fe, Mn	Temp. Mods for Fe, Mn Exp. 8/30/00	Med
COGUUN04	Uncompaghre R., US Hwy. 550 to Gunnison R.	All	PS	Temp. Mods.	F. Coli, Se	Temp. Mods. F. Coli Exp. 8/30/00, Se Exp. 8/30/02; CDPS: OLATHE, TOWN OF; MONTROSE, CITY OF; WEST MONTROSE SANITATION	High
COGUUN14	Sweitzer Lk.	All	PS	Temp. Mods.	Se	Temp. Mods. for Se Exp. 8/30/02	Med
CORG	RIO GRANDE RIVER BASIN	----------	---	----------	---------	----------	
CORGAL03A	Alamosa R., Alum Ck. to Wightman Fork	All	PS	WQ Data	pH,Al,Fe,Cu,Mn	Natural and mining impacts, by Summitville CERCLA Site.	Low
CORGAL03B	Alamosa R., Wightman Fk. to Terrace Res.	All	PS	WQ Data	pH,Al,Cu,Fe	Mining impacted, by Summitville CERCLA Site	Low
CORGAL05	Wightman Fk. & Tribs., source to S30,T37N, R4E	All	PS	Temp.Mods.	Fe, Zn	Mining impacted, by Summitville CERCLA Site	Low
CORGAL08	Terrace Res	All	NS	WQ Data	pH,Cu,Mn,Zn	Mining impacted, by Summitville CERCLA Site	Low
CORGAL09	Alamosa R., Terrace Res. to CO Hwy. 15	All	NS	WQ Data	pH,Cu,Fe,Mn,Zn	Mining impacted, by Summitville CERCLA Site	Low
CORGAL10	Alamosa R., blw. CO Hwy. 15	All	NS	WQ Data	Cu,Mn,Fe	Mining impacted, by Summitville CERCLA Site	Low
CORGCB09A	Kerber CK. abv Brewery Cr and tribs exc 8	All	NS	Temp.Mods.	Cd,Cu,Mn,Ag,Zn	Mining impacted, by Bonanza cleanup, underway	High
CORGCB09B	Kerber Ck., Brewery Ck. to San Luis C	All	NS	Temp.Mods.	Cd,Cu,Zn	Mining impacted, by Bonanza cleanup, underway	High

WATER QUALITY INFORMATION BULLETIN

MISSION STATEMENT

Water Quality Control Commission

To establish a comprehensive and effective program to protect, maintain and improve Colorado surface and ground water quality, through an open process that fully involves the public.

VISION STATEMENT

Water Quality Control Division

The Water Quality Control Division is recognized as Colorado's leading agency for monitoring and reporting on the quality of state waters, preventing water pollution, protecting, restoring and enhancing the quality of surface and groundwater, and assuring that safe drinking water is provided from all public water systems. The Division is also committed to continuously enhancing and improving service to all segments of the public.

JULY, 2001

If you have any questions pertaining to the bulletin, please contact Kathy Grange in the Water Quality Control Division Administrative Unit at (303) 692-3568.

Colorado Department of Public Health and Environment

4300 Cherry Creek Drive South
Denver, CO 80246-1530

WQCD-DO-B2 2000

WATER QUALITY INFORMATION BULLETIN

Colorado Department of Public Health and Environment

HIGHLIGHTS for JULY, 2001

PAGE

PUBLICATION DATE: June 29, 2001

A. PERMIT ACTIONS

1. PERMITS SENT TO PUBLIC NOTICE ON JUNE 29, 2001 – COMMENTS DUE BY JULY 29, 2001

PERMITTEE	PERMIT NO.	COUNTY	RECEIVING WATER
Stormwater Discharges Associated with Metal Mining Activity	COR-040000	Statewide	Statewide
Phillips Petroleum Company	COG-900008	Routt	Dry Fork of Elkhead Creek and Morgan Creek
City of Creede (A)	CO-0040533	Mineral	ditch which is tributary to Willow Creek
YMCA of the Pikes Peak Region, Camp Shady Brook (A)	CO-0045993	Douglas	Four Mile Creek
Parker Water & Sanitation District (A)	CO-0040797	Douglas	Sulphur Gulch
City of Steamboat Springs	CO-0020834	Routt	Yampa River or land application
Town of Le Veta	CO-0032409	Huerfano	Cucharas River
Teller County	CO-0044211	Teller	Rule Creek

(A) Denotes Amendment

2. DISCHARGE PERMITS ISSUED – MAY, 2001

PERMITTEE	PERMIT NO.	COUNTY	DATE ISSUED
Las Animas, City of	CO-0043907	Bent	05/07/2001
Colorado Springs, City of (A)	CO-0026735	El Paso	05/08/2001
Berthoud, Town of	CO-0021083	Larimer	05/09/2001
Sunnyside Gold Corporation	CO-0027529	San Juan	05/09/2001
Acrew, LLC	CO-0030261	Jefferson	05/15/2001
Sunnyside Gold Corporation	CO-0036056	San Juan	05/15/2001

(A) Denotes Amendment

3. GENERAL PERMIT CERTIFICATIONS – MAY, 2001

PERMITTEE	PERMIT NO.	COUNTY	DATE ISSUED
Seneca Coal Company	COG-0071221	Routt	05/01/2001
2nd & Josephine, LLC	COG-0071126	Denver	05/05/2001
RA & T Enterprises, LLC	COG-0600346	Weld	05/07/2001
Aspen, City of	COG-0600350	Pitkin	05/07/2001
Comello Electric, Inc.	COG-0600349	Denver	05/08/2001
Rocky Mountain Septic & Excavating	COG-0071225	Alamosa	05/08/2001
Drahota Construction Co.	COG-0071226	Larimer	05/08/2001
Public Service Company of Colorado	COG-0600349	Mesa	05/09/2001
PCT, Inc. (A)	COG-0310120	Arapahoe	05/10/2001
Corner, The (A)	COG-0310135	Arapahoe	05/10/2001
Big Elk Meadows (A)	COG-0640080	Larimer	05/14/2001
Geologic Services & Consultants, Inc. (A)	COG-0310138	Montrose	05/14/2001
Shell Frontier Oil & Gas Inc. (A)	COG-0600343	Rio Blanco	05/14/2001

A. PERMIT ACTIONS (cont.)

3. GENERAL PERMIT CERTIFICATIONS – MAY, 2001, (cont.)

PERMITTEE	PERMIT NO.	COUNTY	DATE ISSUED
Commercial Rock Products, Inc.	COG-0500406	Archuleta	05/14/2001
Arapahoe Utilities & Infrastructure	COG-0071227	Douglas	05/14/2001
Geologic Services & Consultants, Inc. (A)	COG-0310121	Montrose	05/15/2001
Golden Concrete, LLP (A)	COG-0500337	Boulder	05/15/2001
Delhur Industries, Inc. (A)	COG-0071184	Larimer	05/15/2001
Pioneer Sand Company, Inc. (A)	COG-0071185	Douglas	05/15/2001
Tri-State Power, LLC (A)	COG-0600337	Lincoln	05/15/2001
Commercial Rock Products, Inc.	COG-0500407	Archuleta	05/15/2001
Lawrence Construction Company	COG-0071231	Douglas	05/29/2001

(A) Denotes Amendment

B. STORMWATER DISCHARGE GENERAL PERMIT CERTIFICATIONS – MAY, 2001

Light Industrial Activities	6
Heavy Industrial Activities	0
Construction Activities	61
Sand and Gravel Mining	11
State Highway Sand & Gravel	0
Metal Mining	0
Recycling	0

The Metal Mining general permit will expire on September 30, 2001. The renewal applications have been sent to the permittees, and are due back in our office by June 30, 2001. The draft renewal permit will be public noticed on June 29. No substantive changes are planned.

To find out more about the regulation, to be added to the Phase II mailing list, or for more information about the Stormwater Program, including Phase II, please contact Nathan Moore at (303) 692-3555; email: nathan.moore@state.co.us; or Kathy Dolan at (303) 692-3596; email: kathy.dolan@state.co.us.

C. ENFORCEMENT/CIVIL PENALTIES/CONSENT OR SETTLEMENT AGREEMENTS

1. ENFORCEMENT – NEW ACTION

None

2. CONSENT OR SETTLEMENT AGREEMENTS TO PUBLIC NOTICE

RESPONSIBLE PARTY	ACTION	DATE
The City of Aspen	Settlement Agreement and Stipulated Order	06/08/2001

D. CONSTRUCTION ACTIONS

1. Site Applications

APPLICANT	TYPE	FACILITY DESCRIPTION	ACTION	COUNTY
City of Montrose	Amendment SA #3462	Addition of headworks with grit removal and flow measurement for the aerobic digester decant line and replace existing secondary clarifier mechanisms – no capacity changes	Approved 05/29/2001	Montrose
Mt. Elbert Mobile Home Park, LLC	Site Application #4536	Septic tanks, recirculation tank, recirculating sand filter and soil absorption field – 0.084/0.126 mgd average/peak daily flow	Approved 05/31/2001	Lake
Black Hawk/Central City Sanitation District	Interceptor Certification	24-inch sanitary sewer interceptor line from existing treatment plant site to new treatment plant site	Acknowledged 05/31/01	Gilpin
Highline Meadows Condo Association	Site Application #4537	Highline Meadows/Rampart Sewer Lift Station and force main to serve the Highline Meadows/Rampart Condominiums – 0.087 mgd average/0.267 mgd peak daily flow capacity	Approved 06/04/2001	Arapahoe
Aspcol Corporation, N.V.	Extension SA #4488	One year extension of approval expiration date to June 9, 2002	Approved 06/07/2001	Pitkin
Holland Creek Metro District/Red Sky Ranch Metro District	Site Application #4538	Three ISDS systems to serve two golf course clubhouses (4,000/6,000 gpd average/maximum daily flow capacity each) and a 27-residence cluster (5,832/8,775 gpd average/maximum capacity)	Approved 06/08/2001	Eagle
Meridian Metropolitan District	Site Application #4539	Bradbury/Meridian Northwest Lift Station and force main to serve Meridian International business Center – 0.794 mgd design capacity	Approved 06/11/2001	Douglas

2. Plans and Specifications

APPLICANT	SITE APPLICATON #	FACILITY DESCRIPTION	ACTION	COUNTY
Tabernash Meadows Water & Sanitation District	4407	Sequencing Batch Reactor (SBR) with chlorination. Hydraulic capacity – 0.10 mgd/organic capacity – 209 lbs BOD/day	Approved 05/10/2001	Grand

D. CONSTRUCTION ACTIONS

2. Plans and Specifications (cont.)

APPLICANT	SITE APPLICATON #	FACILITY DESCRIPTION	ACTION	COUNTY
Town of Telluride	4535	Extended Aeration – oxidation ditch, secondary clarification with UA disinfection – Capacities 2.0 mgd and 7,000 lbs BOD	Approved 05/22/2001	San Miguel
Ellicott Springs Resources, LLC	4525	Plans & Specs for a Domestic Wastewater Lift Station and force main	Approved 05/09/2001	El Paso
Lake Fork Mobile Home Park	No site approval	Plans & Specs to line and upgrade sewer system	Approved 05/31/2001	Lake
Aspcol Corporation, N.V.	Extension SA #4488	One year extension of approval expiration date to June 9, 2002	Approved 06/07/2001	Pitkin
City of Montrose	Amendment SA #3462	Addition of headworks with grit removal and flow measurement for the aerobic digester decant line and replace existing secondary clarifier mechanisms – no capacity changes	Approved 06/14/2001	Montrose

E. WATER QUALITY CERTIFICATIONS (Section 401)

Water Quality Certifications, under Section 401 of the Clean Water Act, provide for Division determinations that federally issued permits and licenses will comply with the Basic Standards and Methodologies for Surface Water, the Basic Standards for Ground Water, surface and ground water classifications and water quality standards, and all other applicable water quality requirements for the affected waters.

1. ***For the purposes of the antidegradation requirements found in Section 31.8 of the Basic Standards and Methodologies, the following projects have been reviewed to make a preliminary determination of the significance of such projects. Public comment on these preliminary determinations will be received for thirty days following the date of publication of this newsletter. More information on the specific projects can be obtained from Andrew Ross (andrew.ross@state.co.us (303) 692-3540) or Aimee Majewski (aimee.majewski@state.co.us, (303) 692-3530). The U.S. Army Corp of Engineers also reviews these projects, under Section 404 of the Clean Water Act, and a list of their current public notice can be found on their web site.***

APPLICANT	PERMIT or LICENSE	ACTIVITY	COUNTY	WATERBODY	DETERMINATION
Traer Creek LLC/ The Village (at Avon)	404	create mixed use development	Eagle	Eagle River, Traer Creek, Nottingham Gulch & wetlands, Upper Colorado Basin, Seg. COUCEA09 & 06 of Eagle River Subbasin	only temporary impacts

E. WATER QUALITY CERTIFICATIONS (Section 401), (cont.)

1. Preliminary Determination (cont.)

APPLICANT	PERMIT or LICENSE	ACTIVITY	COUNTY	WATERBODY	DETERMINATION
Mr. Rex Tippetts, Manager, Gunnison County Airport	404	road relocation and runway improvements	Gunnison	wetlands near Tomichi Creek, Gunnison & Lower Dolores River Basin, Seg. COGUUG of Upper Gunnison River Subbasin	only temporary impacts
Durango Mountain Resort	404	expansion of resort	La Plata and San Juan	wetlands near Purgatory Creek, San Juan and Dolores River Basin, Seg. COSJAF12a of Animas and Florida River Subbasins	only temporary impacts
Town of Lyons/ North St. Vrain River Whitewater Improvement Project	404	increase recreational activities	Boulder	North St. Vrain Creek, South Platte River Basin, Seg. COSPSV02 of St. Vrain River Subbasin	only temporary impacts
City of Colorado Springs Parks and Recreation	404	construct multi-use trail and three stream crossings	El Paso	Fountain Creek and Sand Creek, Arkansas River Basin, Seg. COARFO02a & Seg. COARFO04 of Fountain Creek Subbasin	no further antidergadation review required
KB Home Colorado Inc./ Horizon Village Subdivision	404	housing development	Adams	wetlands near two unnamed tributaries to Branter Gulch, South Platte River Basin, Seg. COSPUS16 of Upper South Platte River Subbasin	no further antidergadation review required
Richard Lirtzman	404	create an impoundment and incorporate habitat improvement	Boulder	Sixmile Creek, South Platte River Basin, Seg. COSPSV04 of St. Vrain River Subbasin	only temporary impacts

E. WATER QUALITY CERTIFICATIONS (Section 401), (cont.)

2. The following projects have received a certification determination from the Division. For further information regarding these projects, please call the Division at (303) 692-3500.

APPLICANT	PERMIT or LICENSE	ACTIVITY	COUNTY	WATERBODY	DETERMINATION
Mount Powell Ranch	404	instream channel improvements and restoration	Summit	Blue River, Upper Colorado River Basin, Seg. COUCBL17 of Blue River Subbasin	Regular
Village Homes	404	realign creek channel & install 2 culverts & 1 drop structure below residential development	Jefferson	Van Bibber Creek, South Platte River Basin, Seg. COSPCL18b of Clear Creek Subbasin	Regular
WP Carey & Company/ Flatirons Gateway Project	404	construct industrial business park, detention pond & forebay, & road work	Boulder	2 unnamed tributaries of Rock Creek, South Platte River Basin. Seg. COSPBO11 of Boulder Creek Subbasin	Regular & Special
Elk Creek Village, LLC	404	commercial & residential development	Grand	Elk Creek, Upper Colorado River Basin, Seg. COUCUC10 of Upper Colorado River Subbasin	Regular
Copper Ridge Business Park, LLC	404	commercial / industrial development	Routt	unnamed tributaries & wetlands of the Yampa River, Upper Colorado River Basin, Seg. COUCYA03 of Yampa River Subbasin	Regular
Concord Capital Corp. / Rockrimmon Vist Residential	404	residential development	El Paso	tributary of Monument Creek, Arkansas River Basin, Seg. COARFO04 of Fountain Creek Subbasin	Regular
Arapaho National Wildlife Refuge	404	create 3 shallow ponds to benefit wildlife	Jackson	Soap Creek, South Platte River Basin, Seg. COSPUS04 of Upper South Platte River Subbasin	Regular

E. WATER QUALITY CERTIFICATIONS (Section 401), (cont.)

2. ***The following projects have received a certification determination from the Division. For further information regarding these projects, please call the Division at (303) 692-3500.***

APPLICANT	PERMIT or LICENSE	ACTIVITY	COUNTY	WATERBODY	DETERMINATION
Arthur Dubs / Alford Lakes PUD Project	404	street crossings & stormwater detention pond for subdivision	Larimer	wetlands near Big Thompson River, South Platte River Basin, Seg. COSPBT06 of Big Thompson River Subbasin,	Regular
Tallyn's Reach Metropolitan District	404	construct a master planned community	Arapahoe	Sampson Gulch, Robinson Gulch & Tallyn's Reach, South Platte River Basin, Seg. COSPCH04 of Cherry Creek Subbasin	Regular
City of Steamboat Springs	404	in-channel features to improve recreational uses including fisheries	Routt	Yampa River, Upper Colorado River Basin, Seg. COUCYM02a of Yampa River Subbasin	Regular
Sun Communities, Operating Limited Partnership, Eagle Crest PUD	404	construct a commercial & residential development	Weld	Godding Hollow, South Platte River Basin, Seg. COSPSV06 of St. Vrain River Subbasin	Regular
Silverthorne/ Dillon Joint Sewer Authority	404	Wastewater Treatment Plant – 20 year expansion	Summit	Blue River Upper Colorado Basin, Seg. COUCBL17 of Blue River Subbasin	Regular

SPECIAL NOTES

Draft Guidance: Antidegradation Significance Determination Available for Review and Comment

The draft procedural guidance for determination of significant discharges under the Antidegradation Rules (regulation No 31 at 31.8) is available for review and comment. This guidance sets forth the procedures that the Water Quality Control Division will follow to determine whether a new or increased discharge from a regulated activity to a reviewable water are of a magnitude to be considered "significant."

Copies of the draft guidance are available from Kathy Grange at (303) 692-3568, via email at: *kathleen.grange@state.co.us,* or from the Water Quality Control Commission website.

Comments regarding the draft guidance will be accepted by the Division until **July 23, 2001**. Please address comments to Colorado Department of Public Health and Environment, Water Quality Control Division, 4300 Cherry Creek Drive South, Denver, CO 80246-1530, Attn: Sarah Johnson.

The WQCD has been developing this guidance over the past year in conjunction with a stakeholder workgroup. The workgroup will meet to discuss the draft and the comments on August 2, 2001 form 10:00 am to 12 noon at CDPHE. In response to the comments received by July 23, 2001, and the discussion at the meeting, the Division will prepare a revised draft, which will be available on August 16, 2001. An informational hearing in front of the Water Quality Control Commission regarding the guidance is scheduled for September 10, 2001.

Development of the 2002 303(d) List

The WQCD has initiated development of the 2002 list of impaired waterbodies. Waterbodies are considered impaired if they do not meet the water quality uses and standards assigned to them. The development of this list is a requirement of Section 303(d) of the federal Clean Water Act.

The WQCD is soliciting information concerning waterbodies in the state which are actually or potentially impaired and, as such, are candidates for inclusion on the 2002 303(d) List. The WQCD has proposed listing and delisting criteria which are contained in the draft document Year 2002 303(d) Listing Methodology. This document will be posted on the Water Quality Control Commission website at http://www.cdphe.state.co.us/op/wqcc/wqcchom.asp. Alternately, hard copies of the Year 2002 303(d) Listing Methodology may be obtained from the WQCD.

An attachment to the previous (1998) list included waterbodies for which there was reason to believe impairment might exist, but for which adequate supporting documentation was not available. The WQCD proposes to retain this list, the Monitoring and Evaluation List, as a component of the 2002 list package. Should adequate data not be available to support inclusion of a waterbody on the 303(d) list itself, the WCQD will consider inclusion of a waterbody on the M&E List subject to the criteria contained in the Year 2000 303(d) Listing Methodology.

Information regarding the specific numeric and narrative standards assigned to a given waterbody may be found at http://www.cdphe.state.co.us/op/waterqualitycontcommregs.asp.

The WQCD asks that all submittals be received no later than August 31, 2001. Please direct any comments and information to the Colorado Department of Public Health and Environment, Water Quality Control Division, 4300 Cherry Creek Drive South, Denver, Colorado, 80246-1530, Attn. Phil Hegeman.

This is not the formal Public Comment Period concerning the 303(d) list. The WQCD anticipates that the formal Public Comment Period will occur in February, 2002. An informational hearing on the 2002 list will occur before on March 11, 2002.

Thank you for your interest and participation in the development of the 2002 303(d) list. If you have any questions regarding the development process, please contact Phil Hegeman at (303) 692-3518 or E-mail at *philip.hegeman@state.co.us*.

STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director

WATER QUALITY CONTROL COMMISSION
http://www.cdphe.state.co.us

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Denver, Colorado 80246-1530
Phone (303) 692-3469
Fax (303) 691-7702

Colorado Department
of Public Health
and Environment

RULEMAKING HEARING
AND
BUSINESS MEETING

Monday and Tuesday, ***July 9 and 10, 2001****, City Hall Auditorium, 250 North 5th Street, Grand Junction, Colorado.*

AGENDA

Monday, July 9, 2001:

9:00 a.m. *I. Call to Order – Determination of Quorum:*

II. Approval of Agenda:

III. Administrator's Items:
- *A. Approval of May 14 and 15, 2001 Summary of Proceedings/Motions.*
- *B. Review of Draft 2001 Retreat Summary.*
- *C. Final action regarding issues raised in May Cherry Creek Control Regulation rulemaking hearing.*
- *D. Draft notice and proposal for October Intended Use Plans WCRM.*
- *E. Draft notice and proposal for November Arequa Gulch standards RMH.*
- *F. Draft notice and proposal for November multiple regulation corrections WCRM.*
- *G. Individual Sewage Disposal System Steering Committee update.*
- *H. For information – no action required:*
  1. *Draft August, 2001 Agenda.*
  2. *Revised long-range schedule.*

IV. Division Director's Report:

V. Attorney General's Report:
- *A. HB01-1359 regarding executive session procedures.*

10:00 a.m. *VI. Lower Colorado, Gunnison, San Juan Standards Rulemaking: (Hearing Chairs: Brice Lee and Lori Satterfield)*
for consideration of the adoption of revised water quality classifications, standards, and designations for multiple segments in the San Juan and Dolores River Basins, Regulation #34 (5 CCR 1002-34), the Gunnison and Lower Dolores River Basins, Regulation #35 (5 CCR 1002-35), and the Lower Colorado River Basin, Regulation #37 (5 CCR 1002-37).

Noon *VII. Lunch:*

1:00 p.m. *VIII. Continuation of Item VI:*
Lower Colorado, Gunnison, San Juan Standards Rulemaking.

Tuesday, July 10, 2001:

9:00 a.m. *IX.* *Continuation of Item VI:*
Lower Colorado, Gunnison, San Juan Standards Rulemaking.

Noon *X.* *Lunch:*

1:00 p.m. *XI.* *Continuation of Item VI:*
Lower Colorado, Gunnison, San Juan Standards Rulemaking.

THE WATER QUALITY CONTROL COMMISSION WELCOMES PUBLIC INPUT AT ITS MEETINGS REGARDING ANY ISSUES RELATED TO COLORADO WATER QUALITY. ANYONE WHO WISHES TO PROVIDE COMMENT ON ANY TOPIC NOT SPECIFICALLY IDENTIFIED ON THE PUBLISHED AGENDA SHOULD CONTACT THE COMMISSION'S ADMINISTRATOR, PAUL FROHARDT, AT 303-692-3468, TO MAKE ARRANGEMENTS.

NOTE: Any portion of the business meeting may be taken up any time after the call to order; hearings may be reconvened at such time and places as the Commission may determine.

STATE OF COLORADO

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Colorado
Department
of Public Health
and Environment

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

SUBJECT:

At the date, time and location listed below, the Water Quality Control Commission will hold a public informational hearing to receive public comment regarding the Water Quality Control Division's proposed Colorado Mixing Zone Guidance, to help implement the new mixing zone provisions, added last year to section 31.10 of the Basic Standards and Methodologies for Surface Water, Regulation #31 (5 CCR 1002-31). Copies of the proposed guidance document will be available from the Commission Office as of June 29, 2001.

HEARING SCHEDULE:

DATE:	Monday, August 13, 2001
TIME:	1:30 p.m.
PLACE:	Florence Sabin Conference Room Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, Colorado

PUBLIC PARTICIPATION ENCOURAGED:

The Commission encourages all interested persons to provide their opinions or recommendations orally or in writing as to the appropriateness of the proposed guidance document..

AUTHORITY FOR HEARING:

The provisions of 25-8-202(1)(g), (h) and (i), C.R.S. and Section 21.5B of the "Procedural Rules: (5 CCR 1002-21) provide the authority for this hearing.

PARTY STATUS:

This is not a rulemaking hearing; therefore, party status provisions of 25-8-101 et. seq., and 24-4-101 et. seq., C.R.S. do not apply. Party status requests shall not be considered by the Commission.

PROCEDURAL MATTERS:

Oral or written comments will be accepted at the hearing. The Commission encourages the submission of written recommendations which should be received at the Commission Office by August 1, 2001, if feasible, so that they can be distributed to the Commission for review prior to the hearing. The Commission requests that fifteen (15) copies of all written statements be submitted and suggests that additional copies be made available at the hearing for attendees. Anyone for whom the expense of providing these copies presents an economic hardship should contact the Commission Office to make alternative arrangements.

Dated this 6th day of June, 2001 at Denver, Colorado

WATER QUALITY CONTROL COMMISSION

Diana Glaser, Program Assistant

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STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director

WATER QUALITY CONTROL COMMISSION
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Colorado Department of Public Health and Environment

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

SUBJECT:

At the date, time and location listed below, the Water Quality Control Commission will hold a public informational hearing to consider approval of section 303(d) listing methodology. The listing methodology approved will be used for the development of the updated section 303(d) list of impaired waters in Colorado, which is due to EPA April 1, 2002, and the accompanying monitoring and evaluation list. Copies of the proposed listing methodology will be available from the Commission Office after July 1, 2001.

HEARING SCHEDULE:

DATE:	Monday, August 13, 2001
TIME:	10:00 a.m.
PLACE:	Florence Sabin Conference Room Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, Colorado

PUBLIC PARTICIPATION ENCOURAGED:

The Commission encourages all interested persons to provide their opinions or recommendations orally or in writing as to whether the proposed projects list should be approved by the Commission and forwarded to EPA.

AUTHORITY FOR HEARING:

The provisions of 25-8-202(1)(g), (h) and (i), C.R.S. and Section 21.5B of the "Procedural Rules: (5 CCR 1002-21) provide the authority for this hearing.

PARTY STATUS:

This is not a rulemaking hearing; therefore, party status provisions of 25-8-101 et. seq., and 24-4-101 et. seq., C.R.S. do not apply. Party status requests shall not be considered by the Commission.

PROCEDURAL MATTERS:

Oral or written comments will be accepted at the hearing. The Commission encourages the submission of written recommendations which should be received at the Commission Office by August 1, 2001, if feasible, so that they can be distributed to the Commission for review prior to the hearing. The Commission requests that fifteen (15) copies of all written statements be submitted and suggests that additional copies be made available at the hearing for attendees. Anyone for whom the expense of providing these copies presents an economic hardship should contact the Commission Office to make alternative arrangements.

Dated this 4th day of June, 2001 at Denver, Colorado

WATER QUALITY CONTROL COMMISSION

Diana Glaser

Diana Glaser, Program Assistant

STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director

WATER QUALITY CONTROL COMMISSION
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Colorado Department of Public Health and Environment

SUMMARY OF UPCOMING
PUBLIC RULEMAKINGS

PUBLIC RULEMAKING PROCEEDING TO BE HELD BEFORE THE COLORADO WATER QUALITY CONTROL COMMISSION WILL BE HELD AS FOLLOWS:

PUBLIC RULEMAKING

SUBJECT:

For consideration of revisions to the Basic Standards for Ground Water, Regulation #41 (5 CCR 1002-41), to address issues raised in the last triennial review informational hearing. Revision proposed by the Division as staff to the Commission and Climax Molybdenum Company.

HEARING DATE:	Wednesday, October 10, 2001
PARTY/MAILING LIST STATUS DUE:	Tuesday, August 7, 2001
PREHEARING STATEMENTS:	August 28, 2001
PREHEARING CONFERENCE:	Thursday, September, 13, 2001
REBUTTAL STATEMENTS:	September 26, 2001

WRITTEN COMMENT ONLY RULEMAKING:

SUBJECT:

For consideration of permanent adoption of corrections to the Basic Standards and Methodologies for Surface Water, Regulation #31 (5 CCR 1002-31) and to the Classifications and Numeric Standards for South Platte River Basin; Laramie River Basin; Republican River Basin; and Smoky Hill River Basin, Regulation #38 (5 CCR 1002-38).

DELIBERATION DATE:	Monday, September 10, 2001
INITIAL WRITTEN COMMENTS:	July 18, 2001
WRITTEN REBUTTAL STATEMENTS:	August 22, 2001

Copies of the full text of the notice are available in the Water Quality Control Commission Office at a charge of $.25 per page pursuant to 24-4-103(b). The full text of this notice is also available on the World Wide Web at http://www.cdphe.state.co.us/op/wqcc/wqwcrnot.html.

STATE OF COLORADO

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Colorado
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NOTICE OF FINAL ADOPTION

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

NOTICE IS HEREBY GIVEN that the Colorado Water Quality Control Commission, after an public rulemaking proceeding and complying with the provisions of 25-8-202(1) and (2); 25-8-203; 25-8-204; and 25-8-402; and Section 21.3 of the "Procedural Rules" adopted on May 14, 2001, amendments to the Commission regulation entitled:

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

Providing for adoption of water quality standards that will be consistent with The Basic Standards and Methodologies for Surface Water, Regulation #31 that was amended during a July, 2000 rulemaking hearing.

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

This action will be submitted to the Office of Legislative Legal Services within twenty (20) days after the date of the Attorney General's Opinion, pursuant to 24-4-103(8)(d), C.R.S., and to the Secretary of State in time for June, 2001 publication in the Colorado Register pursuant to 24-4-103(5) and (11)(d), C.R.S., and will become effective June 30, 2001.

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

Dated this 21st day of May, 2001, at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Diana Glaser

Diana Glaser, Program Assistant

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

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NOTICE OF FINAL ADOPTION

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

NOTICE IS HEREBY GIVEN that the Colorado Water Quality Control Commission, after an public rulemaking proceeding and complying with the provisions of 25-8-202(1) and (2); 25-8-203; 25-8-204; and 25-8-402; and Section 21.3 of the "Procedural Rules" adopted on May 14, 2001, amendments to the Commission regulation entitled:

> "Classifications and Numeric Standards for Rio Grand Basin", Regulation #36 (5 CCR 1002-36)

Providing for adoption of water quality standards that will be consistent with The Basic Standards and Methodologies for Surface Water, Regulation #31 that was amended during a July, 2000 rulemaking hearing.

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

This action will be submitted to the Office of Legislative Legal Services within twenty (20) days after the date of the Attorney General's Opinion, pursuant to 24-4-103(8)(d), C.R.S., and to the Secretary of State in time for June, 2001 publication in the Colorado Register pursuant to 24-4-103(5) and (11)(d), C.R.S., and will become effective June 30, 2001.

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

Dated this 24 day of May, 2001, at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Diana Glaser

Diana Glaser, Program Assistant

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

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Colorado Department of Public Health and Environment

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NOTICE IS HEREBY GIVEN that the Colorado Water Quality Control Commission, after an public rulemaking proceeding and complying with the provisions of 25-8-202(1) and (2); 25-8-203; 25-8-204; and 25-8-402; and Section 21.3 of the "Procedural Rules" adopted on May 14, 2001, amendments to the Commission regulation entitled:

> "Classifications and Numeric Standards for Arkansas River Basin", Regulation #32 (5 CCR 1002-32)

Providing for adoption of water quality standards that will be consistent with The Basic Standards and Methodologies for Surface Water, Regulation #31 that was amended during a July, 2000 rulemaking hearing.

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

This action will be submitted to the Office of Legislative Legal Services within twenty (20) days after the date of the Attorney General's Opinion, pursuant to 24-4-103(8)(d), C.R.S., and to the Secretary of State in time for June, 2001 publication in the Colorado Register pursuant to 24-4-103(5) and (11)(d), C.R.S., and will become effective June 30, 2001.

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

Dated this 24th day of May, 2001, at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Diana Glaser, Program Assistant

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Colorado Department of Public Health and Environment

NOTICE OF FINAL ADOPTION

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

NOTICE IS HEREBY GIVEN that the Colorado Water Quality Control Commission, after an emergency public rulemaking proceeding and complying with the provisions of 25-8-202(1) and (2); 25-8-203; 25-8-204; and 25-8-402; and Section 21.3 of the "Procedural Rules" adopted on May 14, 2001, amendments to the Commission regulation entitled:

> "The Basic Standards and Methodologies for Surface Water", Regulation #31 (5 CCR 1002-31)

Providing for emergency adoption of water quality standards that had previously contained typographical errors.

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

This action will be submitted to the Office of Legislative Legal Services within twenty (20) days after the date of the Attorney General's Opinion, pursuant to 24-4-103(8)(d), C.R.S., and to the Secretary of State in time for June, 2001 publication in the Colorado Register pursuant to 24-4-103(5) and (11)(d), C.R.S., and will become effective immediately.

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

Dated this 24th day of May, 2001, at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Diana Glaser, Program Assistant

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NOTICE IS HEREBY GIVEN that the Colorado Water Quality Control Commission, after an emergency public rulemaking proceeding and complying with the provisions of 25-8-202(1) and (2); 25-8-203; 25-8-204; and 25-8-402; and Section 21.3 of the "Procedural Rules" adopted on May 14, 2001, amendments to the Commission regulation entitled:

> "Classifications and Numeric Standards for South Platte River Basin; Laramie River Basin; Republican River Basin; Smoky River Basin", Regulation #38 (5 CCR 1002-38)

Providing for emergency adoption of water quality standards that had previously contained typographical errors.

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

This action will be submitted to the Office of Legislative Legal Services within twenty (20) days after the date of the Attorney General's Opinion, pursuant to 24-4-103(8)(d), C.R.S., and to the Secretary of State in time for June, 2001 publication in the Colorado Register pursuant to 24-4-103(5) and (11)(d), C.R.S., and will become effective immediately.

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

Dated this 24 day of May, 2001, at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Diana Glaser, Program Assistant

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

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Colorado Department of Public Health and Environment

MAJOR ISSUES SUMMARY
June, 2001

Introduction

This summary describes major issues recently addressed by the Water Quality Control Commission, currently pending before the Commission, or scheduled for consideration in the coming months. It also describes a few other selected water quality issues of general interest. It is not intended to be comprehensive, but rather to highlight a few of the issues considered to be of greatest significance and widespread interest. For more information regarding any of these issues, please contact the Commission's Administrator, Paul Frohardt at 303-692-3468. Copies of documents referenced in this summary can generally be obtained from Diana Glaser at 303-692-3469. Additional information regarding the Water Quality Control Commission is available on its web site, which can be accessed from the Colorado Department of Public Health and Environment's web site, at www.cdphe.state.co.us or directly at www.cdphe.state.co.us/op/wqcc/wqcchom.asp

1. New Commission Officers

At the Water Quality Control Commission's annual retreat on June 6, 2001, the following officers were elected for the upcoming year:

Chair:	Robert Sakata
Vice-Chair:	Chris Wiant
Secretary:	Brian Nazarenus

2. Individual Sewage Disposal Systems Steering Committee

The Department, in conjunction with the Board of Health and the Water Quality Control Commission, has established a steering committee to address important issues that have been raised regarding individual sewage disposal systems (ISDS). The Steering Committee has now held three meetings. The next meeting is scheduled for June 20, 2001, from 1:00 p.m. to 4:00 p.m. in the Sabin Room at the Department of Public Health and Environment. The Steering Committee is developing a Summary Characterization of Onsite Wastewater System Impacts that it hopes to finalize at the June meeting.

In addition, at that meeting the Steering Committee will brainstorm a list of options to address each of the five principal risk factors identified in the Summary Characterization, with respect to new onsite wastewater systems. At the July meeting, the Steering Committee will review this list and attempt to identify which items on the list seem be to appropriate and feasible options that might form the basis for eventual Steering Committee recommendations. At the August and September meetings, respectively, the Steering Committee will repeat these steps to begin to identify potential recommendations for options to address the risk factors relative to existing onsite wastewater systems. The Department has requested that the Steering Committee transmit its responses and recommendations no later than March, 2002. Information regarding the activities of the steering committee is maintained on the Commission's web site.

3. Triennial Review Process Options

After substantial discussion and public input, at its April, 2001 meeting the Commission approved a revised triennial review process and schedule for water quality standards reviews. The key elements of the option adopted are (1) the addition of a new, earlier step in the triennial review process, referred to as an "issues scoping informational hearing", and (2) moving to a five-year cycle for major rulemaking hearings on each regulation, while assuring that there is a review that allows pressing issues to be raised and addressed at least once every three years. The updated triennial review schedule is posted on the Commission's web site.

Three follow-up actions to this discussion and decision have been identified: (1) a written comment rulemaking will be scheduled for later this year, to extend existing temporary modifications so that they will not expire prior to the next scheduled major rulemaking hearing for a particular basin; (2) the Commission staff will develop informational materials to make the public aware of the new triennial review process and schedule; and (3) the Commission staff will pursue a process, likely through the Water Quality Forum, to explore other issues raised regarding potential improvements to the Commission's rulemaking process related to water quality classifications and standards.

Jan 24 : copies to Colo Compact.

STATE OF COLORADO

Colorado Water Conservation Board
Department of Natural Resources

721 State Centennial Building
1313 Sherman Street
Denver, Colorado 80203
Phone (303) 866-3441
FAX (303) 866-4474

December 5, 1994

Colorado River Policy Advisory Council

Dear Council Members:

A meeting of the Policy Advisory Council has been scheduled for 1:00 to 5:00 p.m., on January 24, 1995, Room 719 of the State Centennial Building at 1313 Sherman Street, Denver, Colorado.

The following issues will be on the agenda:

1. Status of Seven Basin States Negotiations:
   - Lower Basin Water Bank Proposals;
   - Tribal Water Bank Proposal;
   - Utah's Proposal to lease water to Nevada;

2. Glen Canyon Dam EIS:
   - Beach/Habitat Building Flows;
   - Flood frequency reduction options;
   - Adaptive Management Process

3. Reclamation's proposal to revise cost-sharing arrangement for the Endangered Fish Recovery Program;

4. Colorado River Basin Legislation; and,

5. Strategy Directions.

We will be providing you with briefing papers on these issues prior to the meeting. Please contact Gene Jencsok or myself if you have any questions regarding the meeting.

Sincerely,

Chuck

Daries C. Lile, P.E.
Director

DCL:sls

sls16.mem

Colorado Department of Public Health and Environment
WATER QUALITY CONTROL COMMISSION

M E M O R A N D U M

TO: Persons Interested in Human Health-Based Criteria and Standards Policy

FROM: Paul Frohardt, Administrator

DATE: December 20, 1994

SUBJECT: Draft Written Policy Statement

Enclosed for your review is an initial draft of a proposed Human Health-Based Criteria and Standards Policy, which will be the subject of a February 13, 1995 Informational Hearing. As stated in the hearing notice, the goal of this initial draft is preparation of an accurate and understandable statement of the Commission's practice to date in adopting human health-based table values and standards.

An informal meeting with all interested persons to discuss the draft policy will be held on **Wednesday, January 18, 1995, starting at 1:30 p.m. in conference room A5A,** the Board Room, on the fifth floor of the A building at the Department of Public Health and Environment. **PLEASE NOTE: this is a different date, time and location for this meeting than stated in the hearing notice.**

Should anyone have additional questions regarding this matter, please call me at (303) 692-3526.

PRELIMINARY DRAFT

NO 1 DATE 12/20/94

Water Quality Control Commission Policy Statement regarding Human Health-Based Criteria and Standards

For those pollutants identified as priority toxic pollutants under section 304(a) of the Clean Water Act, promulgated as primary drinking water standards under the Safe Drinking Water Act, or any other pollutants identified as presenting a risk to human health, it is the policy of the Commission to establish water quality criteria and standards which will provide a reasonable certainty of protecting the public from adverse risks to their health based upon the best currently available scientific information. To accomplish this, the Commission has established statewide basic standards for non-naturally occurring organic toxics. For those toxics which may occur naturally (e.g.metals), criteria protective of the public's health will be adopted as "table values" in the Basic Standards regulations and standards will be established on a site-specific basis after rulemaking hearigs. Both statewide standards and criteria to protect human health will be implemented for water supply (drinking water only) and water + fish (drinking water and eating fish) uses. In order to provide those levels deemed to be protective and scientifically supported, the Commission has adopted the following policies to be applied when establishing the numerical human health-based standards or criteria.

1. Criteria (Table Values) and Statewide Standards

   a. All human health-based table values and statewide basic standards are to be adopted as chronic (30-day) limits.

   b. **Table values** will be adopted for **naturally** occurring toxics for both drinking water supply and water + fish ingestion uses as information becomes available.

   c. **Statewide basic standards** will be adopted for **non-naturally** occurring toxics for both drinking water supply and water + fish ingestion uses as information becomes available.

   d. **Carcinogens** are considered those pollutants that are classified as Group A (known carcinogens) or Group B (probable carcinogens) by EPA.

   e. The **drinking water supply** table values and statewide basic standards will be based on the following:

      i. For **non-carcinogens**, the National Primary Drinking Water Regulation's MCLG (maximum contaminant level

goal). The MCLG is defined as the concentration of contaminant in water at which no known or anticipated adverse effects on the health of persons occur and which allow an adequate margin of safety. It is calculated by the following procedure which is specified in the national regulations:

$$\text{MCLG, ug/l} = \frac{\text{RfD} \times 70 \times 1000 \text{ ug/mg}}{2} \times \text{RSC}$$

where:

- Rfd[1] = verified reference dose for non-carcinogens, mg/kg-day
- 70 = weight of an adult, kg
- 2 = daily drinking water consumption, liters/day
- RSC[2] = relative source contribution(0.2 is default value)

ii. For **carcinogens**, a 10^{-6} cancer risk level was specified by the Commission in 1988 to be used in calculating table values and statewide basic standards. The 10^{-6} values for cancer risk from drinking water contained in IRIS and/or EPA Health advisories will be the basis for the table values or standards. The Commission has opted not to set table values and statewide basic standards equal to zero which is EPA policy for setting MCLG's for carcinogens classified A, B1 or B2. (There has been some inconsistency over time as to the methods used to set water supply values for carcinogens and this is reflected by some of the values in Basic Standards for Organic Chemicals table).

iii. Drinking water supply table values and statewide basic standards will be based on **MCLs** (maximum contaminant levels) or less restrictive risk levels only where information necessary to calculate a health-based standard is absent or information is provided which shows the compound is pervasive statewide and costs associated with treatment required to meet human health-based levels outweigh the incremental improvements to the health of the general population. An MCL is the maximum permissible level of a contaminant in water which

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[1] RfD is an estimate of the daily exposure to human population that is likely to be without an appreciable risk of deleterious effect during a lifetime; derived from nonobserved adverse effect level or lowest observed adverse effect level.

[2] The percentage of the total daily exposure to the contaminant contributed by drinking water.

is delivered to any user of a public water system and are promulgated in the National Primary Drinking Water Regulations.

f. The **water+fish ingestion** table values and statewide basic standards will be based on the procedures specified by EPA section 304(a) criteria guidance which are formulated below.

i. For **non-carcinogens,**

$$W+F,\ ug/l = \frac{RfD \times 70 \times 1000\ ug/mg}{2 + (0.0065 \times BCF)}$$

where:
- RfD = verified reference dose for non-carcinogens, mg/kg-day
- 70 = weight of an adult, kg
- 2 = daily drinking water consumption, liters/day
- 0.0065 = daily fish consumption, kg/day
- BCF[3] = bioconcentration factor, liters/kg

ii. For **carcinogens,**

$$W+F,\ ug/l = \frac{RF \times 70 \times 1000\ ug/mg}{q1^{*}[2 + (0.0065 \times BCF)]}$$

where:
- RF = incremental lifetime cancer risk factor
- 0.0065 = daily fish consumption, kg/day
- $q1^{*}$[4] = cancer slope factor, kg-day/mg
- BCF = bioconcentration factor, liters/kg

An incremental lifetime cancer risk factor of one-in-one million (10^{-6}) will be used in the derivation of the table value or statewide basic standard.

iv. When a calculated water + fish table value or statewide basic standard is greater than the water supply MCLG, the water+fish table value or standard will be set equal to the water supply table value or standard for the parameter.

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[3] BCF is the ratio of a substances concentration in tissue versus its concentration in water, in situations where the food chain is not exposed or contaminated.

[4] $q1^{*}$ is an estimate of carcinogenic potency derived from animal studies or epidemological data of human exposure.

v. Where a chronic table value to protect aquatic life is more stringent than the water+fish table value or statewide standard, no water+fish table value or statewide standard will be adopted.

why not say don't use chronic

2. Site-specific Standards

a. Site-specific surface or ground water quality standards for **naturally** occurring toxics will be based on the table values unless the 85th percentile of ambient water quality data for a parameter exceeds the table value, or site-specific information (e.g., economic impacts of compliance, site-specific risk analysis) warrants Commission adoption of different standards.

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b. Site-specific surface or ground water quality standards for **non-naturally** occurring toxics that differ from (and will override) the statewide standards for these toxics, will only be considered where site-specific information (e.g., economic impacts of compliance, site-specific risk analysis) demonstrates that different standards are warranted.

PRELIMINARY DRAFT
NO 1 DATE 12/20/94

Rationale and History for Commission Policy
on
Human Health-Based Criteria and Standards

In the first Basic Standards (1979), the Commission adopted a limited suite of basic standards applicable to all state waters for radioactive chemicals only. The organic chemicals that later became part of these basic standards were addressed in a Table V as criteria (table values) to be applied to segments during the basin hearings, based upon the specific classifications of the segment (like the existing Tables I, II and III). These organic chemical values were based on the EPA criteria documents for aquatic life and/or the federal drinking water standards available at the time. In 1980, the Commission adopted the criteria in Table V as basic standards applicable to all waters of the South Platte Basin and continued this practice in subsequent basin hearings until a 1984 revision of the Basic Standards where they were adopted as basic standards applicable to all waters of the State. The basis and purpose (3.1.18) for adopting these organics as state-wide standards states that "The organic parameters in the table are not substances that form a naturally occurring background. They are toxic 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 organic constituents in the same manner as are those that can be ambient or uncontrollable background parameters."

In 1989, the Commission made the first major revisions to these organic chemical standards. It adopted basic standards for organics which were categorized as water supply standards for both carcinogens (Table A) and non-carcinogens (Table B) and aquatic life standards (Table C). The basis given for this revision in 3.1.22 was "These standards are being adopted in part in response to new requirements in the 1987 amendments to the federal Clean Water Act (CWA) to adopt water quality standards for toxic pollutants, 'the discharge or presence of which in the affected waters could reasonably be expected to interfere with' classified beneficial uses. CWA, section 303(c)(2)(B). Although toxic organic pollutants generally are not a major problem in Colorado surface waters at present, the Commission believes that the best policy option is to adopt numerical standards now, to help assure that these pollutants do not become a problem."

The carcinogen standards were based on maximum contaminant levels (MCLs) if available or 10^{-6} risk levels if no MCL had been promulgated. The Commission in adopting the 10^{-6} level, stated "Recognizing that there is no scientifically "correct" risk level, the Commission has selected this level as a matter of policy,

because it believes this is an appropriately conservative and protective level for human health risks." The Commission did not specify any methods for developing a 10^{-6} risk level standard but, beginning in 1989, the Division based its recommendations for standards on 10^{-6} cancer risk levels for drinking water taken from IRIS or EPA drinking water health advisories.

The non-carcinogens were also based on MCL's if available, but for constituents for which no MCLs had been adopted they were based on EPA drinking water health advisories or reference dose information from IRIS. The Commission "determined that this is the best information currently available to derive appropriate criteria for protection of human health from non-carcinogens." The application of this policy for non-MCL pollutants was to calculate a standard using the same procedure used to calculate maximum contaminant level goals (MCLGs) in the National Primary Drinking Water Regulations.

Both the carcinogen and non-carcinogen standards were to be applied as chronic or 30-day standards rather than acute or 1-day standards because the assumptions in their derivation that two liters of water containing the organic chemical would be consumed over a 70 year period.

The Table C standards were aquatic life toxicity standards taken from EPA criteria documents.

In 1991, these organic chemical standards were revised and consolidated into one table which categorized them as water supply standards, water + fish (W+F) standards and aquatic life standards. Besides addressing the issue of bioaccumulation in fish for the first time by adopting the water + fish standards, the Commission made a major policy decision in deciding that all water supply basic standards would now be based on human health criteria, with MCL's only being used when information was not available to calculate the health-based standard. The reasoning behind this latter decision is documented in 3.1.23 (pp. 100 and 101) wherein the Commission states "The vast majority of the standards adopted in 1989 were already set equal to health-based criteria. MCLs generally are more lenient than health-based criteria, and have been developed taking into account laboratory detection limits and the economic ability of water suppliers to treat for removal of these constituents. For most dischargers, the availability of low flow dilution credits in calculating effluent limitations has resulted in a second level of relaxation--i.e. movement away from underlying health-based levels--when applying non-health-based MCL standards. The Commission already has attempted to temper the application of stringent health-based standards for non-MCL organic pollutants by providing for the application of the practical quantitation limit (PQL) concept in determining compliance with the standards. Use of low flow dilution credits in calculating effluent limitations provides for a further tempering of these very stringent standards in application. Therefore, the Commission has

determined that it is a more appropriate policy to base these water quality standards on health-based criteria, rather than MCLs." It should be noted that the Commission has recently approved the concept that the application of PQLs belong in the permit regulations rather than in stream or groundwater standards. This is especially relevant when considering the use of MCLs as water quality standards. All MCLs in the IRIS data base for the parameters that are listed under the water supply category in the Basic Standards for Organic Chemicals are based on either the PQL (in some cases the term detection limit is used) or the MCL being equal to the MCLG. The use of MCLs as standards would only duplicate the protection dischargers are already receiving and would, in most cases, bear no relationship to the levels needed to protect the public from adverse health effects.

Where the MCLG was more stringent than the W+F calculation, the MCLG was also adopted as the W+F standard. This is logical in that the MCLG assumes sources of the contaminant from other sources in addition to drinking water, i.e. the greater the percentage of contaminant intake from sources other than water, the more stringent the drinking water standard. For example, the default relative source contribution (RSC) of 0.2 that is specified in federal regulation for calculating a MCLG assumes that 80 percent of a humans daily intake is from sources other than drinking water. The pathway of these sources may include, in addition to fish consumption, the ingestion of other foods, inhalation, and dermal absorption. This policy also alleviates the fact that the cancer risk level is determined by two separate methods for carcinogens under EPA regulations or guidance. The drinking water regulations specify the use of uncertainty factors while 304(a) guidance use cancer slope factors which are do not equate to numerically equivalent standards.

Section 3.1.11(4) clarifies the Commission's ability to adopt site-specific standards to apply in lieu of the statewide basic standards where appropriate.

Section 3.1.7 delineates the procedures for deviating from table values by setting ambient based or site specific standards.

PRELIMINARY DRAFT
NO 1 DATE 1/10/95

Proposed Silver Issue
Statement of Basis and Purpose

The Commission considered the proposal of various parties to delete the chronic and chronic (trout) table values for silver. The evidence demonstrated that free silver is toxic 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 believes strongly that there is a need for additional analysis of the potential chronic toxicity of silver in streams in Colorado. The Commission encourages the participants in this 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 this hearing. The Commission believes that it should be possible to develop such information within the next three years.

In the meantime, the Commission has decided as a matter of policy to take two actions. First, the chronic and chronic (trout) table values for silver are repealed for the next three years. The Commission intends to implement this action by also repealing for the next three years, in a separate rulemaking hearing to be held later this year, 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 would 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 would 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 being taken by the Commission is 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 this final action. The Commission also intends to implement this action by readopting chronic silver standards with a three-year delayed effective date at the same time that such standards are deleted from the individual basins as described above. 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, 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 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.

PRELIMINARY DRAFT
NO 1 DATE 1/10/95

TABLE III

METAL PARAMETERS
(Concentration in ug/l)

METAL[1]	AQUATIC LIFE [1][3][4][J]		AGRICULTURE[2]	DRINKING WATER-SUPPLY[2]	WATER + FISH[7]
	ACUTE	CHRONIC			
Lead	$\frac{1}{2}e^{(1.6148[\ln(\text{hardness})]-2.1805)}$	$e^{(1.417[\ln(\text{hardness})]-5.167)}$	100[B] (30-day)	50[E] (1-day)	
Manganese		1,000[C]	200[B] (30-day)	50(dis)[F] (30-day)	
Mercury	2.4	0.1 FRV(fish)[6] = 0.01 (Total)		2.0[E] (1-day)	
Nickel	$\frac{1}{2}e^{(0.76[\ln(\text{hardness})]+4.02)}$	$e^{(0.76[\ln(\text{hardness})]+1.06}$	200[B] (30-day)	100[E] (30-day)	
Selenium	135	17	20[B,D] (30-day)	50[E] (30-day)	
Silver	$\frac{1}{2}e^{(1.72[\ln(\text{hardness})]-6.52)}$	Effective March 2, 1998: $e^{(1.72[\ln(\text{hardness})]-9.06)}$ (Trout) = $e^{(1.72[\ln(\text{hardness})]-10.51)}$		100[F] (1-day)	
Thallium		15[C]		0.5 (30-day)	0.5
Uranium	$e^{(1.1021[\ln(\text{hardness})]+2.7088)}$	$e^{(1.1021[\ln(\text{hardness})]+2.2382)}$			
Zinc	$e^{(0.8473[\ln(\text{hardness})]+0.8604)}$	$e^{(0.8473[\ln(\text{hardness})]+0.7614)}$	2000[B] (30-day)	5,000[F] (30-day)	

NOTE: Capital letters in parentheses refer to references listed in Section 3.1.16(3); Numbers in parentheses refer to Table III footnotes.

Need WQCC 1-10-95

Source Availability for Funding Monitoring Activities

Sources Potentially Available for Watershed or Ambient Monitoring:

G.F. 106	616156	
F.F. 106	739716	
G.F. Permits	217843	
Permits Cash	892198	
G.F. Non-match	109000	
F.F. 604(b)	100000	(40% has to go to planning agencies)
Total	2674913	

Sources Restricted to Specific Program Requirements:

Nonpoint Source	1602943	(Majority goes to demonstration projects - 82%)
Lakes	25000	
Biosolids	189923	
Pesticides	118275	(Lab work now done at DOA)
Stormwater Cash	226186	
Federal Groundwater	186544	
Clear Creek	53842	
Construction Grants	394794	
Revolving Fund	432771	
F.F. Drinking Water	916100	
G.F. Drinking Water	274696	
G.F. Groundwater	91702	
Pretreatment	142447	
Chalk Creek	8227	
Total	4663450	

Potentially Available	2634913	36.10%	**Balance**	5131
Not Available	4663450	63.90%		63982
Total	7298363	100.00%	**Total**	69113

recd WQCC 1-10-95

	ITEM & SUBTOTAL $	TOTAL $	APPROPRIATION FROM: GENERAL FUND $	GENERAL FUND EXEMPT $	CASH FUNDS $	CASH FUNDS EXEMPT $	FEDERAL FUNDS $
(6) WATER QUALITY CONTROL DIVISION							
(A) Administration							
Personal Services	3,071,703		1,089,139 (M) (25.2 FTE)		646,944[a] (15.6 FTE)	161,137[b]	1,174,483[c] (22.8 FTE)
Operating Expenses	195,505		31,762 (M)		17,476[a]		146,267[c]
Grants	7,877						7,877[c]
Indirect Cost Assessment	713,051				219,252[d]	51,087[b]	442,712[c]
	3,988,136						

[a] These amounts shall be from the Water Quality Control Fund.
[b] These amounts shall be from reserves in the Water Quality Control Fund.
[c] These amounts shall be from the Environmental Protection Agency.
[d] This amount shall be from various sources of cash funds.

	ITEM & SUBTOTAL $	TOTAL $	GENERAL FUND $	GENERAL FUND EXEMPT $	CASH FUNDS $	CASH FUNDS EXEMPT $	FEDERAL FUNDS $
(B) Special Purpose							
Construction Management Assistance Grant	575,570						575,570 (8.4 FTE)
Water Pollution Control							
Revolving Fund	263,560						263,560 (4.9 FTE)
Water Planning Grant	1,400,580						1,400,580 (4.9 FTE)
Groundwater Protection	439,174		85,554 (M) (2.0 FTE)			107,457 (T)[a] (2.5 FTE)	246,163 (1.6 FTE)
Sludge Management Program	177,147				177,147[b] (3.0 FTE)		
Special Studies	153,775						153,775 (3.2 FTE)
Industrial Permitting Program	141,876				115,288[c] (1.6 FTE)	26,588[d]	
Stormwater Permitting Program	295,537				295,537[e] (6.0 FTE)		
	3,447,219						

[a] This amount shall be from the Department of Agriculture's Groundwater Protection Fund.
[b] This amount shall be from the Sludge Management Fund.
[c] This amount shall be from the Industrial Pretreatment Account.
[d] This amount shall be from reserves in the Industrial Pretreatment Account.
[e] This amount shall be from the Water Quality Control Fund.

FY 95 Funding Summary
Colorado Water Quality Control Division

Source	General Fund	Cash Fund	Federal Fund
106 Match	616,156		
Drinking Water Match	274,696		
Permits G.F.	217,843		
Groundwater G.F.	91,702		
Source 1000	109,000		
Subtotal	1,309,397		
Sludge		189,923	
Permits		892,198	
Pretreatment		142,447	
Stormwater		226,186	
SB 126		118,275	
Remedial Programs		8044	
Subtotal		1,577,073	
106			739,716
Drinking Water			916,100
Ground Water			186,544
604(b) Planning			100,000
Construction Grants			394,794
Revolving Fund			432,771
Lakes Assessment			25,000
Rocky Flats			242,609
201g(1)b Nonpoint			390,828
319 Nonpoint			1,212,115
Clear Creek			53,842
Chalk Creek			8,227
Stormwater Start-up			119,375
Subtotal			4,821,921
Total Funding			7,708,391
External Expenditures:			
Office of Environment			44,082
Laboratory			92,650
Data Services			7,503
Additional Kleros			7,487
Total			151,722
Total Expenditures:			7,639,278
Balance Remaining:			69,113
Balance Available for Lab:			5,131
Difference:			63,982

Funding Distribution:			
Source	Total	%	FTE
General Fund	1,257,488	17%	23.09
Cash Fund	1,544,671	20%	25.53
Federal Fund	4,685,397	63%	51.25
Total	7,487,556	100%	99.87

FY 95 WQCD Unit Specific Budgets

Unit: **Water Quality Control Commission**

Personal Services		157,332 (3.00 FTE)
Operatring & Travel		29,611
Contracts		0
Per Diem		10,800
Capital		0
	Subtotal	197,743
	Indirect	9,301
	Total	**207,044**

Sources:

G.F. - 106 Match	150,592
F.F. - 106	33,211
F.F. - Stormwater	11,698
C.F. - Stormwater	11,543
Total	**207,044**

Unit: **Directors Office /Administration & Budget Unit**
(Director, Rocky Flats staff, and Administration & Budget Unit including CPOCB staff and clerical support for 73% of the Division)

Personal Services		546,017 (12.00 FTE)
Operatring & Travel		38,827
Contracts		0
Capital		0
	Subtotal	584,844
	Indirect	47,336
	Total	**632,180**

Sources:

G.F. - 106 Match	210,780
F.F. - 106	83,037
F.F. - DW	5,458
G.F. - DW Match	80,258
C.F. - Permits	587
G.F. - Permits	25,411
F.F. - Const. Grants	49,835
F.F. - Rocky Flats	137,552
F.F. - 319 Nonpoint	14,828
G.F. - Source 1000	24,434
Total	**632,180**

FY 95 WQCD Unit Specific Budgets

Unit: **Drinking Water Section**

Personal Services	710,850	(15.0 FTE)
Operatring & Travel	16,511	
Contracts	0	
Capital	0	
Subtotal	727,361	
Indirect	111,326	
Total	**838,687**	

Sources:

G.F. - DW Match	153,517
F.F. - Drinking Water	685,170
Total	**838,687**

Unit: **Financial Assistance Program**

Personal Services	380,397	(8.0 FTE)
Operatring & Travel	37,025	
Equipment	10,000	
Capital	0	
Subtotal	427,422	
Indirect	82,920	
Total	**510,342**	

Sources:

F.F. - Const. Grants	179,814
F.F. - Revolving Fund	330,528
Total	**510,342**

FY 95 WQCD Unit Specific Budgets

Unit: Permits Adminstration and Data

Personal Services	300,689	(8.0 FTE)
Operatring & Travel	0	
Contracts	0	
Capital	0	
Subtotal	300,689	
Indirect	60,947	
Total	**361,636**	

Sources:

G.F. - 106	4,891
C.F. - Permits	269,410
F.F. - Stormwater	80,552
F.F. - 106	6,783
Total	**361,636**

Unit: Domestic Permits

Personal Services	307,278	(5.0 FTE)
Operating & Travel	11,500	
Contracts	0	
Capital	0	
Subtotal	318,778	
Indirect	45,216	
Total	**363,994**	

Sources:

G.F. - 106 Match	4,349
F.F. - 106	29,279
G.F. - Permits	97,234
C.F. - Permits	233,132
Total	**363,994**

FY 95 WQCD Unit Specific Budgets

Unit: **Industrial Permits**

Personal Services	329,287	(6.0 FTE)
Operatring & Travel	9,900	
Contracts	0	
Capital	0	
Subtotal	339,187	
Indirect	57,174	
Total	**396,361**	

Sources:

G.F. - 1000	2,702
F.F. - 106	40,736
G.F. - Permits	61,623
C.F. - Permits	291,300
Total	**396,361**

Unit: **Pretreatment and Sludge**

Personal Services	208,304	(4.00 FTE)
Operatring & Travel	33,495	
Contracts	0	
Capital	0	
Kleros	3,000	
Subtotal	244,799	
Indirect	51,407	
Total	**296,206**	

Sources:

C.F. - Pretreatment	135,805
C.F. - Sludge	160,401
Total	**296,206**

FY 95 WQCD Unit Specific Budgets

Unit: Stormwater Permitting

Personal Services		176,966	(4.00 FTE)
Operatring & Travel		13,550	
Contracts		0	
Capital		0	
Kleros		15,000	
	Subtotal	205,516	
	Indirect	42,618	
	Total	**248,134**	

Sources:

F.F. - Stormwater	40,291
C.F. - Stormwater	207,843
Total	**248,134**

Unit: Nonpoint Source Control

Personal Services		290,759	(5.22 FTE)
Operatring & Travel		13,200	
Contracts		1,360,051	
Capital		0	
	Subtotal	1,664,010	
	Indirect	110,668	
	Total	**1,774,678**	

Sources:

G.F. - 106 Match	10,606
F.F. - NPS 319	1,179,825
F.F. - NPS 201g(1)b	389,696
F.F. - 106	86,324
F.F. - Chalk Creek	8,227
F.F. - 604(b) Planning	100000
Total	**1,774,678**

FY 95 WQCD Unit Specific Budgets

Unit: Standards

Personal Services	294,344	(5.00 FTE)
Operatring & Travel	61,581	
Contracts	0	
Capital	0	
Subtotal	355,925	
Indirect	59,207	
Total	**415,132**	

Sources:

G.F. - 106 Match	10,825
G.F. - D.W. Match	1,688
G.F. - 1000	41,177
C.F. - Permits	69,400
F.F. - MSCA	2,302
F.F. - 106	200,732
F.F. - Lakes	14,834
F.F. - Clear Creek	53,842
F.F. - Rocky Flats	11,174
F.F. - 604(b) Planning	9158
Total	**415,132**

Unit: GroundWater

Personal Services	388,172	(7.00 FTE)
Operatring & Travel	9,082	
Contracts	0	
Capital	0	
Kleros	4,000	
Subtotal	401,254	
Indirect	61,198	
Total	**462,452**	

Sources:

G.F. - G.W.	89,763
F.F. - 106	15,561
F.F. - G.W.	175,988
F.F. - Rocky Flats	64,312
C.F. - Pesticides	111,678
C.F. - MSCA	5,150
Total	**462,452**

FY 95 WQCD Unit Specific Budgets

Unit: Northeast Field Support Unit

Personal Services	306,608	(6.00 FTE)
Operatring & Travel	46,701	
Contracts		
Capital		
Subtotal	353,309	
Indirect	41,852	
Total	395,161	

Sources:

G.F. - 106	89,733
G.F. - DW	22,564
G.F. - Permits	16,402
G.F. - 1000	9,150
C.F. - Stormwater	2,372
C.F. - Pretreatment	2,134
F.F. - 106	86,708
F.F. - DW	89,400
F.F. - Lakes	597
F.F. - Const. Grants	19,982
F.F. - SRF	24,399
F.F. - 319 NPS	2,149
F.F. - Rocky Flats	29,571
Total	395,161

Unit: Southeast Field Support Unit

Personal Services	193,217	(4.00 FTE)
Operatring & Travel	8,862	
Contracts	0	
Capital	0	
Subtotal	202,079	
Indirect	20,978	
Total	223,057	

Sources:

G.F. - 106	17,388
G.F. - DW	7,566
G.F. - 1000	12,610
C.F. - Permits	19,222
C.F. - Stormwater	1,762
C.F. - Pretreatment	4,696
F.F. - 106	42,860

1994 Colo Water Q

p. 2 Rio Grand 1st Basin to be assessed on watershed basis — good
good representation of eco regions by sampling sites

6 Headwaters subject to intense year-round recreation – even snow making requires Rec 1
Not just don't eat yellow snow

30 quality of State Coal Creek better below Amax Treatment than above all benefit from expenditure
Special phosphorous standards for Dillon Res sensitive to nutrient loading
Trade non-point source controls for higher phosphorous

[Effort made by UMTRA] and Amax

50 Most waters in Rio Grand Basin too shallow or too cold for Rec 1, Documented use a factor
Class 1 standards for fecal adopted for all class 2 unless costs incurred in meeting — check
No Class 1 for ephemeral streams

p51 Ground Water – [in and out]
Water Supply – [direct draw
Rarely unsuited for ag use.
TVS – applied where quality is better
ambient – where man-made or natural problem not correctable — Key
fecal coliform.

p52 Basin Wide Quality Assessment for Rio G.
Reference – conditions given

p60 Streams are not too cold a shallow to support Rec 1 children paddling at campsites, fishing by wading –
Tubing
Not order of Stream that supports use

COLORADO FARM BUREAU
2211 WEST 27th AVE. P.O. BOX 5647 DENVER, CO 80217
(303) 455-4553 FAX (303) 964-2430

September 11, 1995

TO: COLORADO WATER QUALITY CONTROL COMMISSION

FROM: RAY C. CHRISTENSEN, DIRECTOR, PUBLIC AFFAIRS

RE: SITE-SPECIFIC GROUNDWATER QUALITY CLASSIFICATIONS AND STANDARDS FOR CONFINED AND UNCONFINED GROUNDWATERS IN THE AQUIFERS UNDERLYING THE SOUTHWEST WATER PROTECTION AREA IN KIT CARSON COUNTY

On behalf of Colorado Farm Bureau, the state's largest farm and ranch organization, I would like to express our position on the proposed adoption of site-specific ground water quality classifications and standards for confined and unconfined ground water in the aquifers underlying an identified area in Kit Carson referred to as Southwest Water Protection Area.

The proposal requests the Commission to lower the current nitrate standard of 10 mg/l down to 4.25 mg/l. It is our understanding that the current U.S. Environmental Protection Agency nitrate standard is also 10 mg/l. Colorado Farm Bureau policy recommends that Colorado water quality standards not be more stringent than EPA standards.

There is scientific documentation which shows that nitrate levels as high as 10 mg/l do not pose risks to human health. In fact, according to a July 28, 1995 report by the National Academy of Sciences National Research Council and requested by the U.S. Environmental Protection Agency, nitrates and nitrites found in drinking water in the United States "is unlikely to contribute to human cancer risk." The report also said that the current maximum-contaminant-level goals of nitrate are adequate to protect human health.

The establishment of a separate ground water quality standard for a specific area (Southwest Water Protection Area) in a county sets a bad precedent and is unworkable for the agricultural industry. Farmers and ranchers may own or rent tracts of land which cross specific area boundary lines. It would be extremely difficult a farmer or rancher who owns or rents farm land which crosses in and out of any specific protection area to be in compliance with a variety of nitrate standards. It would increase costs for farmers and ranchers and create a burdensome approach when applying best management practices on the land. Implementation of a uniform standard statewide, which is also scientifically safe for water quality, is a much preferable

method to reduce nitrate levels and protect water quality rather than imposing a variation of stricter standards at different locations.

Another problem with a lowering of the nitrate standard is the impact on smaller farming operators. Larger operations may have the economic capability to implement more expensive land treatment measures which smaller operators do not. The bottom line is that it places more economic burdens on the smaller operations.

Furthermore, Colorado Farm Bureau policy opposes the arbitrary setting of numerical standards for water quality due to the extreme variation in the natural conditions of many Colorado streams.

Colorado Farm Bureau is supportive of groundwater quality baseline establishment, including periodic retesting. Farm Bureau is also supportive of implementing voluntary best management practices that have been jointly developed by producers and others who have a direct effect on water resources. These BMP's should be based on good science.

In conclusion, Colorado Farm Bureau is opposed to the proposal to lowering the nitrate standard below 10 mg/ and urges the Commission to reject it.

Thank you for your consideration.

/rc

pork The Other White Meat.

September 6, 1995

Colorado Water Quality Control Commission
WQCC-CC-B2
4300 Cherry Creek Drive South
Denver, CO 80222-1530

Dear Commissioners:

The Colorado Pork Producers Council (CPPC) is an organization representing approximately three hundred pork producers located throughout Colorado and is affiliated with the National Pork Producer's Council (NPPC). The NPPC in cooperation with all state councils has become proactive in the environmental arena and has instituted an Environmental Quality Assurance program which is similar to our Pork Quality Assurance program that has been in effect for several years. The CPPC has a significant interest in water quantity and water quality issues, similar to those interests of the Colorado Cattle Feeders and the Colorado Corn Growers. Therefore, the CPPC is writing to comment on the site-specific ground water classification and water quality standards which have been proposed for the Southwest Water Protection Area, Kit Carson County. The CPPC is opposed to the standard as presently proposed for the following reasons:

1. The standard as written is vague. The lack of a definitive standard will cause uncertainty for all water users within the subject area. The uncertainty will result because the standard, if adopted, does not set a specific ceiling concentration for water quality parameters to which a water user can look for purposes of planning for the future. Real estate developers, commercial enterprises, livestock agriculture, crop agriculture, and municipalities will most likely delay any development plans or even be moved to inaction, when it comes to expanding their operations or locating new operations in the subject area. The one thing all businesses and municipalities need before expanding or relocating (and making the large capital spending decisions associated with expansion and relocation) is certainty that their capital expenditures will not be rendered valueless or diseconomic as a result of governmental regulation. In addition, a non-definitive standard creates the possibility of subsequent, inconsistent enforcement measures.

2. The CPPC feels that there is little need for a site-specific standard in this area. The entire state is already covered by the interim narrative standard which addresses all areas not covered by site specific standards. In addition, almost all of the areas which have already adopted site-specific standards use the same set of standards, found in Tables 1-4 of the Basic Standards for Ground Water, 3.11.0 (5-1002-8). These water quality standards are national standards set by the Environmental Protection Agency and recognized across the nation as abundantly safe standards by most respected scientists. Consequently, if the Commission feels a site-specific standard is in order for the subject area, the CPPC suggests that the Commission use Tables 1-4 of the Basic Standards for Ground Water, 3.11.0 (5-1002-8).

Colorado Pork Producers Council
11990 Grant • Suite 402 • Denver, CO 80233-1136 • Phone or Fax (303) 254-8607

3. By adopting what amounts to an anti-degradation standard, the Commission may be impairing existing water rights. All existing water users, whether they be an irrigator watering corn, a commercial well owner watering livestock, or a family using a domestic well with subsequent disposal through a leach field, will, over time, degrade the water quality to some degree. The mere presence of human beings leads to a certain amount of degradation. If the new standard is adopted virtually all holders of water rights in the area will have no choice but to adopt expensive and burdensome ground water management plans which will greatly increase the cost of exploiting their water rights. In many cases this cost will be so great as to effectively result in a condemnation of water rights. Therefore, adopting the proposed standard would result in a material impairment of water rights. This in turn would constitute a violation by the Commission of 25-8-104 C.R.S., which states in part, *"Nothing in this article shall be construed, enforced, or applied so as to cause or result in material injury to water rights."*

4. The CPPC is disappointed in the way the proposed site-specific standard was conceived. The existing water quality in the area resulted from the traditional uses made of water, primarily crop agriculture. For years upon years there has been no question raised as to the suitability of the statewide standard for the purpose of maintaining water quality in light of the traditional water uses in the area. The sole and exclusive reason this Commission has been petitioned to have an anti-degradation, site-specific standard is because a group of people are wishing to keep out an out-of-state swine producer who desires to locate a production facility in the area. The CPPC regrets that the Commission is being put in the position of a de facto zoning board. We strongly urge the Commission to not allow itself to be used in this fashion.

The CPPC thanks the Commissioners for their time and effort when considering all the facts in this very important matter.

Respectfully submitted,

Elena Metrokroll

Colorado Pork Producers Council

Colorado Cattle Feeders Association

11990 Grant St., Suite 402, Denver, CO 80233, (303) 457-2232, Fax (303) 457-4609

September 11, 1995

Colorado Water Quality Control Commission
WQCC-CC-B2
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

Re: The adoption of ground water quality classifications and standards for an identified area in Kit Carson County, 3.12.0, (5 CCR 1002-8).

Dear Commissioners:

The Colorado Cattle Feeders Association (CCFA) wishes to be put on record as supporting the practices and regulations that protect the quality of our natural resources, particularly water. As the Commission knows, CCFA has been actively involved in working directly with this Commission and other regulatory bodies to develop and implement regulations which preserve and protect Colorado's environment and promote agricultural interests. This association worked as part of a task force directly with this Commission in adopting the Confined Animal Feeding Operation Regulation (CAFO) which regulates the disposal of effluent and waste water from every confined animal feeding operation in Colorado. This regulation has just gone through its tri-anneal review in November, 1994 and, with one exception which will be discussed below, the only testimony was in support of continuing the regulation both from the agricultural industry and from your staff.

CCFA enjoys its position as a leader in the agricultural industry in promoting preservation and protection of our environment. CCFA has made promises to this commission which it has kept. As part of the CAFO task force suggestions, CCFA has now hired and has on staff an Environmental Services Director who works with CCFA members and, upon request, non-members to ensure proper environmental protection is being taken at confined animal feeding facilities around the state. CCFA has also begun work on an environmental handbook which will be distributed to members and, upon request, to non-members addressing the issues of preservation and protection, particularly with regard to water.

In developing any new regulation, the regulatory body must consider not just the proponent's position, but must look at what the true benefits of the regulation are, the cost of those benefits when weighed against the benefit itself, and must determine who the beneficiaries of the regulation will be. Every regulation must

have a public benefit, and not be adopted at the behest and for the sole benefit of a restricted class. Such a spot regulation would completely take away the efficiency and effectiveness of the total regulatory scheme and could result in favoritism and/or cronyism in the worst sense. With regard to the proposed standard, CCFA would like to address three points that have been raised by the proponents. CCFA asserts that the application is without merit and is based largely on unsupported and/or over-reactive sources and fails to acknowledge the existing national health standards which result from work done by not just our governmental agencies, but from the best science available in our country.

The three points involve the health issues, the time of remediation, and then what CCFA feels is the sole issue of this application, the desire of a certain small population to prohibit the installation of a pork production facility within the confines of the proposed regulated area.

With regard to the health issues, the studies that have been cited by proponents are studies carried out in Australia or Denmark. Proponents attempt to some how "legitimize" the studies by having them "confirmed" by Dr. Burton C. Kross, however Dr. Kross gives only his personal opinion which, obviously, is skewed based upon his review of the biased data that was given him to review and by his own personal views. The Commission on Life Sciences, National Research Council, through it's sub-committee on Nitrate and Nitrite in Drinking Waters, Committee on Toxology issued it's report dated 1995, which supports the current national standard in effect in our state today. Further, that report points out that there are no links between human cancer and nitrate levels in drinking water. Further, that report points out that 97% of nitrate intake comes from the diet, and not drinking water. Although there has been reports of methemoglobinemia in infants as a result of excess nitrate ingestion, the report states that "results of epidemiologic studies are inadequate to support an association between high nitrate or nitrite exposure from drinking water in the United States and increased cancer rates in humans." This report supports the current level that has been adopted in our state of 10 ppm. It is urged that the commission should not consider fear based hyperbole on supposed studies from Australia and Denmark for which no basis is known nor are the parameters of the study known. Further, it is unclear from a reading of the various reports who the organizations are that support the reports and whether or not the science that is offered to support those reports is valid science or simply someone's personal political opinion adjusted to science.

The second point that the Commission must consider is the time and cost of enforcing the proposed regulation. If the Commission

lowers the standard to an anti-degradation level as requested, then the Commission must understand that, in effect, it is requiring every property owner, resident, future business owner, or other entity operating within the boundaries of this protected district to assume a huge cost of remediation and potentially years and years of monitoring, and/or other steps necessary to bring any increased nitrate level at all back to the base level which is sought. Real life does not operate in a vacuum. The mere fact that there are people living within the defined area who use water every day, go to the bathroom and flush their toilets every day, take showers every day, water livestock every day, and irrigate crops which have been fertilized during the growing season all point to the fact that there is going to be a continuing degradation from this rigid standard that is sought. The Commission must consider the effect of its action.

The third point that needs to be addressed and which we feel is the most important is the fact that this application is directed towards the stopping of the construction of a pork production facility within the confines of the area. CCFA acknowledges that confined animal operations, like most other human activities from driving a car to taking a shower to operating a manufacturing facility, have impacts upon the environment. The State of Colorado adopted the CAFO referenced above to regulate <u>all</u> facilities where there are confined animals for periods of time of 45 days or more as stated in the regulation. As this commission knows, the requirements of that regulation are strenuous and do not allow for more than 1/32 inch of seepage during any given day from a lagoon and/or other effluent storage facility. This regulation was developed specifically to meet current health standards and prevent pollution of the environment from runoff. The 1/32 inch seepage provision was put in as a result of, as the commission staff particularly knows, heated negotiation within the task force to adopt a workable regulation. The fact is, Colorado already has the CAFO in place and it addresses specifically the concerns that are raised by the proponents of this regulation.

In summary, CCFA urges the Commission to look at this proposal as the next step in a long term, well financed effort to limit and/or eliminate pork production in Colorado. If the Commission will recall, at the CAFO tri-anneal review, the only negative comments were presented by the attorneys representing this proponent, and were addressed specifically at an existing hog facility along the South Platte River. CCFA asserts that if the Commission does not act on this proposal, and CCFA urges the Commission <u>not to act</u>, this same historical effort will make another approach in the near future on some other basis, not to protect the health and environment of Colorado, as this proposal is couched, but specifically to stop the building of pork productions

triennial

facilities in our state.

As a final note, CCFA is on record with the Commission, and reiterates it's position that it supports the safe use of our environment and the protection of our natural resources, particularly water. CCFA also supports health safety, as is evidenced by it's award winning Beef Safety Program which has been used as a model throughout the United States. CCFA is not a reactionary or radical self-involved group, however represents the interests of the agricultural industry in Colorado and works hard to implement practices, procedures, and regulations which will ensure both the quality of our environment and our citizen's health. The proposal before this Commission has nothing to do with those issues. It is a personal, historical effort to stop pork production facilities from being built.

Thank you for your time. Best personal regards.

Very truly yours,

BRAD ANDERSON,
Executive Director
Colorado Cattle Feeders Association

BA/er

1993-94 Water Quality Monitoring Plan
Water Quality Control Division

INTRODUCTION

The federal Clean Water Act has many reporting, monitoring, prioritizing, and control requirements that rely heavily on water quality data that the State is obligated to meet on an ongoing basis. These are shown in Figure 1. In addition to federal requirements, the Colorado Water Quality Control Act dictates the Water Quality Control Division (Division) shall sample as necessary "to determine the quality of every reasonably accessible segment of state waterwaters, wherever practical." The state Act also gives responsibility to the Colorado Water Quality Control Commission (Commission) for setting water quality use classifications and standards. The Commission, particularly with regards to the implementation of the antidegradation rule, is demanding that up-to-date information on ambient water quality and attainable uses of the State's waters be made available on a larger number of stream segments.

BACKGROUND

The Divison has been collecting data on the quality of the state's waters via a routine monitoring network and special studies since 1967. These data are used to determine water quality standards and use classifications, to establish permit limits, to identify the need for total maximum daily loads for point sources, best management practices for nonpoint source control, prepare reports on the status of water quality for the U. S. Environmental Protection Agency, the Colorado Water Quality Control Commission, state legislature, and the public in Colorado.

In addition to the above, the Division collects effluent samples on approximately 300 permitted discharges per year.

The federal Act requires that the chemical, physical, and biological criteria be included in the states' water quality standards, however most of the emphasis has focused on the chemical component. The U. S. Environmental Protection Agency, however is now moving in the direction of requiring states to adopt sediment and biological standards. Because of this shift in direction and the Commission's desire for coverage on a wider variety of streams, the Division, in 1992, shifted their emphasis from statewide

monitoring to a watershed-specific approach in which the majority of the monitoring resources would be concentrated in one major river basin each year. The benefit of a basin or watershed approach is to provide more comprehensive information about the water quality and associated issues within any one basin by focusing the majority of the Division's monitoring resources in the basin of concern and identifying and filling information gaps which may have gone unaddressed under past monitoring practices. It is felt that this approach makes more efficient use of the Division's increasingly limited monitoring resources even though water quality information concerning the rest of the state as a whole will be restricted over the next few years. Each of the major basins in Colorado will be revisited on a six-year cycle which somewhat corresponds to discharge permit cycles of five years.

WATER QUALITY OBJECTIVES

The monitoring program has several objectives. The main objectives are: (1) To ensure that there is an adequate data base to identify and evaluate long term changes in water quality especially in relation to anthropogenic causes; (2) To ensure the data base to implement current use classifications and water quality standards adequately represents the temporal and spatial variation in water quality; (3) To evaluate the impacts of point and nonpoint sources on the waters in relation to the Division's ongoing programs for water quality management in Colorado; and (4) To develop a data base for biological water quality criteria (biocriteria).

Constituents Monitored

Revision to state regulations in 1988 mandated twelve key indicator parameters to be used in antidegradation reviews to characterize the quality of water. The 12 parameters which were changed in 1993 have become the basic set of parameters for all ambient monitoring undertaken by the Division. These 12 parameters are dissolved oxygen, pH, fecal coliform, un-ionized ammonia, nitrate, cadmium, copper, lead, manganese, selenium, silver and zinc. Other constituents are selectively monitored, dependent upon site-specific factors which are or might effect the water quality. Of the 12 parameters, dissolved oxygen, un-ionized ammonia, nitrate and fecal coliform, are found in all waters but usually at concentrations much lower than table value standards (TVS). Exceedences of TVS for these parameters are almost certainly due to man-induced problems, e.g. sewage, feedlots, poor fertilization practices. pH rarely violates TVS in Colorado unless associated with highly eutrophic waters or abandoned mine drainages. The occurance of elevated levels of dissolved cadmium, copper, lead, manganese, and zinc are unusual outside of the Colorado mineral belt, although occasionally found downstream of major metropolitan areas. When these metals are found, exceedances of TVS are usually in conjunction with waters that have low hardness. The occurance

of selenium is restricted to areas of Colorado where surface waters drain Cretaceous shales. These geologic formations are common on the eastern plains and Colorado plateau regions, but are rare at the higher elevations. Silver is highly toxic to aquatic life at low concentrations and where it is routinely found at concentrations above detection levels it is probably indicative of problems associated with inactive mines in mountainous areas or pretreatment practices in urban areas.

Ammonia, Kjehldahl nitrogen, arsenic, biochemical oxygen demand, boron, chromium, cyanide, molybdenum, mercury, nickle, phosphorus, sulfate, total alpha, total beta, and uranium and several others are monitored in selected locations. The presence of these constituents as well as the presence of other parameters listed in Table III of the Basic Standards and Methodologies are most directly related to specific types of point sources. Unique, site specific geologic conditions also account for several occurances. Monitoring for these constituents is determined on a case by case basis.

Water quality monitoring for trends or changes is one type of data collection program. Data collected for the analysis of trends is usually obtained at regular intervals over a long period of time. Trend analyses is the primary reason for maintaining the 36 station statewide routine monitoring network. Trend sites are usually located on streams that are affected by point or nonpoint pollution sources, however a few trend sites are allocated to pristine waters to aid in identifying unsuspected sources or activities that may be affecting the waters. Regular intervals are used so that differences due to seasons or flows may be quantified.

Watershed Monitoring

The watershed baseline monitoring program has two objectives. The first is to acquire an adequate, representative water chemistry basis to support water quality standards for classified surface water segments in the basin. The second objective is to obtain reference data for aquatic life biocriteria (i. e. fish and macrobenthos) and to determine the relationship of the observed biota to the chemical and physical nature of the surface waters of the basin. These data will be used as a basis for identifying the best biological indicators for water quality from which selected measures (metrics) may be adopted as stream standards (biocriteria) in the future. The data will also be used to verify existing stream classifications, particularly for surface water segments reviewable under the antidegradation rule.

A central issue is to determine which stream segments should be subject to the antidegradation rule. This rule, adopted by the Water Quality Control Commission, applies to all aquatic life class 1 (cold and warm) waters whose quality is better than aquatic life table value standards (TVS) for 10 of 12 indicator constituents. The present rule does not consider biologic or physical criteria,

only existing classification and water chemistry. Whether or not the quality is better than TVS is determined by comparing the 85th percentile of available water chemistry data for 12 indicator parameters to the TVS for each parameter.

Baseline water chemistry data will be obtained from each classified surface water segment. Class I aquatic life streams, excluding segments in wilderness areas, will be sampled at least ten times over the year, and will include at a minimum the 12 antidegradation parameters. Class II aquatic life streams which are limited by flow or habitat will be sampled at least once in conjunction with biological-physical assessments.

In considering the question of adequate data we need to know if the constituent present, and does its concentration exceed TVS more than 15 percent of the time. Given that a constituent is present and exceeds TVS, how many samples are necessary to describe the ambient quality and its variabilty (i.e., what is the 85th percentile). Aquatic life class 1 segments will be sampled approximately monthly for a year. This should provide 10 to 12 samples for most segments. If the water in question exceeds TVS 15 percent or more of the time, then sampling should show that on average one of every seven samples will exceed TVS (1/.15 = 6.67). If the water exceeds TVS more than 15 percent of the time, then sampling will show the constituent exceeds TVS more often than once every seven samples on average. Fewer than one in seven observations exceeding TVS likewise is an indication that the proportion of values exceeding TVS is less than 15 percent.

The next issue is to place a level of confidence on the estimate. If out of 10 samples three or more values of a constituent exceed TVS, then there is about an eighteen percent chance that the true proportion of the time the stream actually exceeds TVS equals 15 percent. Thus an ambient standard should be considered. On the other hand if out of 10 samples, one or fewer samples exceed TVS then there is about a 20 percent chance that the true proportion of the time the stream exceeds TVS is 15 percent and TVS should be adopted. If two samples exceed TVS then monitoring should be considered for another year (i. e. ten more samples). Because the antidegradation rule states that two or more constituents must exceed TVS more than 15 percent of the time, additional data would be warranted only if one constituent already exceeds TVS or if two constituents have two exceedances of TVS.

In regards to the question of what is representative data, we need to know the variation in constituent concentration over the hydrologic year, and whether it fairly represents the quality of the segment in question. The latter issue is important for segments whose quality may not be homogeneous under existing classifications and standards owing to point or nonpoint sources of pollution or to dissimilar land use, land cover, or geology. Homogenity of stream segments may also be an issue on segments that have multiple tributaries.

Spatial distribution of sampling, especially on segments that have multiple tributaries, is also of concern. A target sample allocation of one station per 50 stream miles (class 1 aquatic life) was proposed for the Rio Grande basin. This target was achievable for the Rio Grande, based on the size of the basin and available resources, but may not be possible for larger basins such as the Arkansas where the sites were much more widely spaced due to an area four-times the Rio Grande.

Lakes

Several lakes and reservoirs in each the basin will be sampled as part of the current Lakes Water Quality Assessment Grant (LWQAG). This grant from the USEPA provided for sampling six reservoirs in the Rio Grande basin during 1992 and seven in the Arkansas basin in 1993.

The objective of the LWQAG is to assess the trophic status of lakes. Trophic status will be determined with Carlson's Trophic State Index (TSI), which uses measurements of chlorophyll a, total phosphorus, and Secchi disk depth. In addition to trophic status, the twelve antidegradation parameters will be measured.

The sampling plan, detailed in the Grant Workplan and QAP, calls for data to be collected three times during the summer through fall period which correspond approximately to the beginning, middle, and end of the growing season. Two sites, one near the dam and one near mid-lake, will be sampled on each of the three dates.

Sample collection at the dam site will consist of compositing successvie and evenly spaced water column samples. A composite sample will be collected for either the entire water column when a lake is thermally mixed, or will be collected from the water column above the thermocline when the lake is thermally stratified. Samples for chlorophyll a will be collected from the top 2 meters of the water column. The Secchi depth and a profile of dissolved oxygen and temperature will also be collected at each location.

The candidate lakes were selected on the basis of four criteria: 1) The lake is relatively large (>100 acres) and has public access; 2) lakes come from a variety of ecoregions; 3) lakes with known or suspected water quality problems are included; and 4) data about the trophic status is not available.

Effluent

One of the Division's responsibilities is to inspect wastewater facilities for compliance with effluent quality and other permit requirements at least one time during the life of the discharge permit. Facilities classified as majors are inspected at least once a year. An inspection usually includes a compliance water quality sample in which all permitted constituents are analyzed.

All wastewater facilities will be monitored at least one time for constituents contained in their discharge permit. In addition up to five facilities from each standard industrial code (SIC) group will be selected for a one time analysis of each of the antidegradation parameters plus other selected constituents, depending on the code. The purpose of this analysis is to provide a broader characterization of the effluent quality from different types of facilities, particularly minors, which presently or potentially could discharge to waters reviewable under the antidegradation rule. These data will be combined with similar data from other basin monitoring efforts in the state and used to guide the Division in determining which water quality constituents should be considered in antidegradation analyses and discharge permits.

Biocriteria

The fourth objective of a basinwide program is to compile a data base on aquatic life. It will be used to develop biological water quality criteria (biocriteria) for possible adoption as stream standards, and to evaluate the appropriateness of the existing aquatic life use classifications for stream segments in the basin. Considerations in designing a sampling plan to accomplish this objective are discussed below.

An attempt to sample aquatic life in each stream segment is the goal. This effort is intended to move Colorado toward satisfying the EPA requirement that states adopt narrative biocriteria by FY 1993. Narrative biocriteria are definable statements of the condition or attainable goals for the aquatic life classification. Although such narrative criteria are not expressed numerically, an extensive quantative data base is necessary in order to implement and interpret them. Very few segments in Colorado have an adequate data base.

The EPA's current guidance is directed towards identifying unimpaired reference reaches and characterizing the aquatic life inhabiting them. Due to the number of anthropogenic influences on Colorado streams, the exclusive use of unimpaired conditio
ns is not realistic. It is more practical to characterize a broader spectrum of habitat and water quality conditions found under existing land uses in Colorado, exclusive of the most impaired sites (i. e. such as those affected by mine drainage). Baseline biological data will therefore attempt to identify not only unimpaired reaches, but also the least impacted sites under a variety of land uses. The most impacted sites will be addressed through site specific studies discussed later in the plan.

The EPA guidance lists two approaches to establish reference reaches, 1) site-specific, which includes "upstream-downstream" evaluations and 2) the regional approach which identifies watersheds with similar physical habitat and water quality and their influence on aquatic life. The Division will follow the

regional watershed approach using the EPA ecological subregion map to define areas.

In the Rio Grande basin, biologic and physical variables were sampled from six of the seven sub-ecoregions (no sampling was done in the high elevation tundra sub-region) in the basin's two ecoregions. The present Rio Grande stream classifications generally follow the ecoregion delineations in that most aquatic life class I streams are within the Southern Rockies ecoregion while most of the aquatic life class II streams are within the Arizona/New Mexico ecoregion. Class 1 streams in the Arizona/New Mexico ecoregion are typically mainstem reaches that arise in the Southern Rockies ecoregion. Preliminary review of the sub-ecoregions for the rest of the State indicate similar correllations.

It is difficult to specify, before the data are collected, the number of reference sites that may be required for development of a reference site system in Colorado. For guidance in determining the number of reference sites that may be necessary, the Division looked at two other states that have completed such a system. Ohio has established approximately 300 sites and Nebraska has 350 sites. Each state selected their reference sites from a large pool of surveyed sites numbering several thousand and which were collected over a period of five to ten years. Condsideration of the number of ecological regions that are covered is also important in deciding the number of reference sites. Portions of five ecoregions occur in Ohio, portions of seven occur in Nebraska, and portions of six ecoregions are found in Colorado. In relationship to the number of ecoregions, a target of 300 reference sites would therefore appear to be a reasonable initial estimate of the number of reference sites needed statewide for a Colorado reference site system.

The number of sites is also constrained by resources available to sample them. The resources available to the Division for collection and identification of macroinvertebrates are estimated to allow for approximately 50 sites per year. At this rate it will take about six years to complete a 300 site reference system identification for the entire state. Applying this level of effort to the Rio Grande basin allowed for approximately eight reference sites to be allocated to each of the six ecological subregions within the basin. In the Arkansas, it has been modified to initially sample five reference sites in each eco-subregion because of the existance of at least nine sub-ecoregions. Within each subregion, sites will be stratified into categories by stream size (i.e. small, medium, and large) and by existing aquatic life classification. Because stream size may already be accounted for within the aquatic life classification system, the number of categories will vary depending on the variety of streams within each ecological subregion.

The final sites are selected from a larger group of candidate sites by reviewing existing data, consultation with biologists familiar

with the area and by reconnaissance trips. Streams with access will be selected for monitoring within a size-class and aquatic life classification in a single sub-ecoregion.

Every effort will be made to ensure that chemical monitoring done for water quality standards will be coordinated with sites used for biocriteria. Chemical monitoring will be done at sites that are well mixed and away from direct influence of roads, bridges, culverts, diversion structures or similar works of man which may affect the quality of water in the immediate vicinity of such works. Biological and physical monitoring will be done at least 500 feet away from any such structures. Chemical monitoring on aquatic life class 1 segments will be done monthly so long as the sites are accessible. Chemical monitoring on aquatic life class 2 segments will be done in conjunction with biological and physical assessments.

1993-94 MONITORING SITES

The 1993-94 monitoring effort is focused on the Arkansas River basin with some monitoring also being conducted in the San Miguel River basin in order to resolve some outstanding stream standards issues surrounding the Idarado Superfund site. Also the routine monitoring program is maintaining 36 sites throughout the rest of the State. The sites and water quality sampling frequencies are given in the attached tables.

Emphasis for the Rio Grande Basin Monitoring Program

1. Provide baseline for water quality standards

   a. Antidegradation
   b. Trophic status of lakes

2. Provide background quality/quantity data for permits

3. Facility inspection/evaluation for CPDS permits

4. Provide baseline data for determining achievable use classifications

   a. Physical criteria
   b. Biological criteria

5. Identify and quantify loading from nonpoint sources for selected areas

Expected outcomes of the Basin Effort

1. Assess the status of water quality in the Rio Grande Basin

2. Quantify additional measures required to meet the goals of the CWA

   a. Recommend TMDL's
      1) 304(l) pollutants
      2) Conventional pollutants
   b. Recommend priorities for nonpoint source controls

3. Report on trends in water quality in the Rio Grande Basin

4. Develop a basis for possible inclusion of biological and physical criteria for water quality standards

5. Develop a regional model for estimating low flows in the Rio Grande basin (undiverted streams only)

DESIGN OF WATER QUALITY MONITORING SYSTEMS

A. Water Quality Monitoring Considerations

1. Length of projected life of the monitoring system

   a. Ambient, fixed-station, or long-term monitoring program

      (i) Describe water quality over large areas and long periods

      (ii) Follow general scheme of hydrologic measurements to incorporate flow regime

   b. Special study, intensive survey, or short-term monitoring effort

      (i) Specific informational purpose related to a particular water quality problem

      (ii) Examples: Modeling investigations for WLA, TMDL; Project planning and design, evaluation

   c. Watershed Monitoring

      (i) Ideally 2-3 year, increasingly focused efforts

      (ii) Blend of fixed station and special studies

2. Types of measurements to be made

   a. Physical

      (i) Habitat, flow, temperature, geomorphologic characterization of channel and riparian zone

   b. Chemical

      (i) e.g. toxics, nutrients

   c. Biological

      (i) e.g. biotoxicity, fish survey, benthic survey

   d. Ecological

      (i) e.g. trophic structure, species richness, diversity

3. Location of the water to be monitored

   a. Ground water monitoring

b. Lake monitoring

c. Acid rain monitoring

d. Surface water monitoring

e. Effluent monitoring

4. Type of water quality management decision/tool to be supported

a. Compliance monitoring

b. Enforcement monitoring

c. Trend monitoring

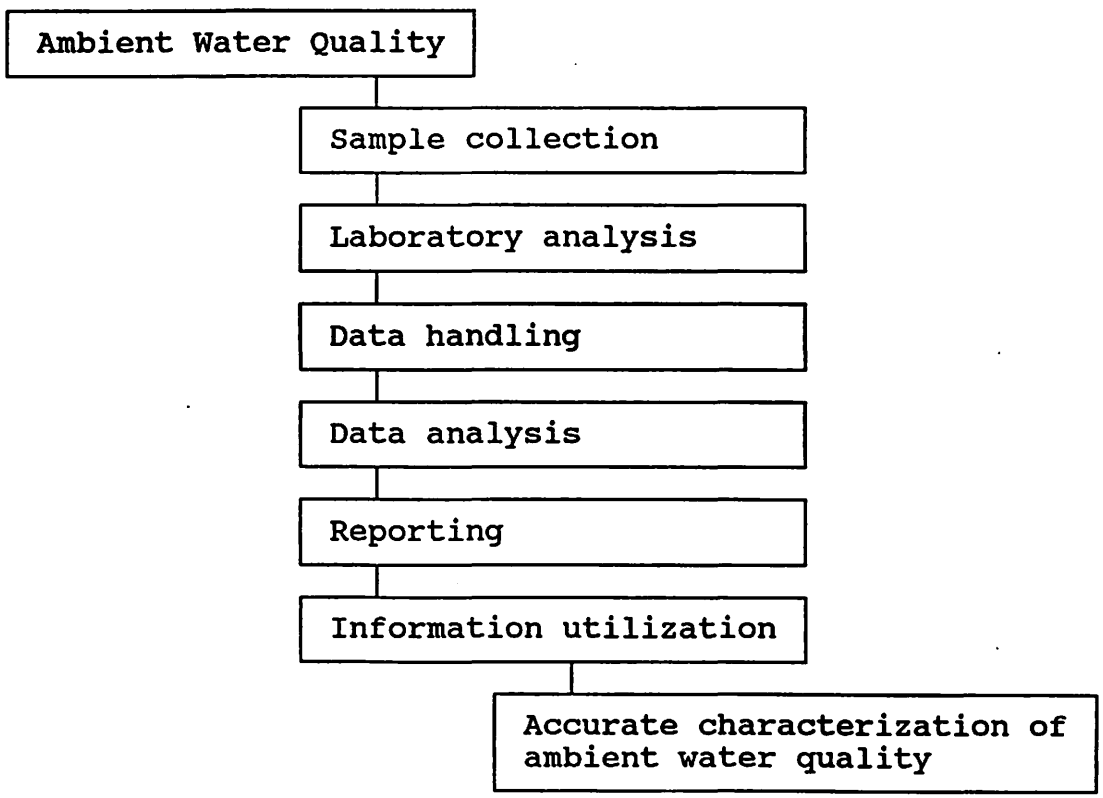
d. Background/ambient monitoring (permits, antidegradation, facility/NPS planning)

e. Classification (use attainability studies)

f. Water quality standards (TVS, ambient, site-specific)

g. Designations (outstanding waters, use-protected)

B. Water quality monitoring information flow



C. Water quality monitoring system design

1. Define information needs of management

   a. identify information needs of each management tool

   b. Summarize information needs of agency

   c. Relate agency information needs to monitoring strategy

   d. Define reporting and information utilization procedures desired by management

   e. Determine appropriate statistical means for producing the desired information

2. Define information that can be produced by monitoring

   a. Statistically characterize water quality "population" to be samples

   b. Review statistical methods applicable for generating the desired information, including their data requirements

   c. State what information can be produced

   d. Compare information sought with information that can be produced

3. Design monitoring network

   a. Document sampling locations

   b. Determine what to measure

   c. Compute sampling frequency

4. Document data collection procedures

   a. Field sampling operations and procedures

   b. Laboratory analysis methods and operations

   c. Data storage and retrieval system .

5. Document information generating and reporting procedures

   a. Data analysis hardware and software

   b. Reporting formats and frequency

   c. Information utilization procedures

COMPARATIVE COSTS FOR OBTAINING VARIOUS TYPES OF STREAM, EFFLUENT, AND FACILITY DATA

	Stream chemistry	Effluent chemistry	Lake chemistry	Physical assessment	Flow	Fish shock	Benthos	Tissue analysis	Toxicity testing	Facility inspection
Field time (hrs)	0.7	0.7	14.2	0.7	0.7	8.6	0.7	8.0	0.7	4
Lab cost (dollars)	$123	$246	$284	$0	$0	$0	$0	$500	$36	$0
Shipping	$2	$4	$8	$0	$0	$0	$0	$0	$4	$0
Mileage	$6	$6	$36	$6	$6	$36	$6	$12	$6	$18
Per diem (dollars)	$6	$6	$124	$6	$6	$75	$6	$70	$6	$33
Office time (hours)	0.5	0.5	2.5	0.25	0.25	0.25	8	2	10	1
Cost per sample	$168	$292	$870	$36	$36	$332	$230	$832	$320	$176

Notes: Per diem based on $70 per day
Salaries based on an average of $25 per hour
Lab costs are based on running ten HQ2 parameters
Field time has been divided by .70 to account for travel time (i. e. assume 6 working hours per day)
Each lake will be sampled at two sites, and includes two people for safety
Tissue analysis is based on lakes, and running metals only. Streams will require less field time.
Orgainic analysis will require higher lab costs
Toxicity tests are run in 10 site blocks.

	DOLLARS	HOURS
Maximum hours for project		
Max dollars for lab		
Max dollars for travel		
Max dollars for outside purchases		
Minimum amt for Lakes		
Minimum amt for NPS		
Minimum amt for effluent		
Minimum amount water supply		
Minimum amt toxicity testing		

ROUTINE MONITORING STATIONS

Parameters–Storet Code–Number of Samples/Year

Sta #	Location	Hard 900	TDS 70300	TSS 530	SO4 945	NO3–N 630	NH3–N 610	TKN 625	T–PO4 665	BOD 310	Cd 1025	Cr 1030	Cu 1040	Fe 980	Pb 1049	Mn 1056	Mo 1060	Hg 71900	T Se 1147	Ag 1075	Zn 1090	Bo 1022	U–nat 22703	Fecal 31615	CN 723	As 1002
21	South Platte R. at Balzac	12	12	12	12	12	12	12	12	6	12		12	6	12	12				12	12		6	12		
22	South Platte R. at Kersey	12	12	12	12	12	12	12	12	6	12		12	6	12	12		6		12	12	6	6	12		
23	South Platte R. at Henderson	12	12	12	12	12	12	12	12	6	12		12	6	12	12		6		12	12	6	6	12		
27	Cache la Poudre nr Greeley	12	12	12	12	12	12	12	12	6	12	6	12	6	12	12				12	12			12		
28	Big Thompson R. at mouth	12	12	12	12	12	12	12	12	6	12	6	12	6	12	12				12	12		6	12		
31	St Vrain R. below Longmont	12	12	12	12	12	12	12	12	6	12		12	6	12	12				12	12	6		12		
33	Boulder Creek at Weld Co Line	12	12	12	12	12	12	12	12	6	12		12	6	12	12				12	12			12		
35	Clear Creek above Golden	12	12	12	12	12	12		12		12		12	6	12	12		6		12	12			12		
46	Colorado River at Dotsero	12	12	12	12	12	12		12		12		12	6	12	12				12	12			12		
52	Eagle River at Gypsum	12	12	12	12	12	12		12		12		12	6	12	12				12	12			12		
53	Roaring Fork R. at Mouth	12	12	12	12	12	12		12		12		12	6	12	12				12	12			12		
89	Clear Creek at Wheat Ridge	12	12	12	12	12	12	12	12	6	12		12	6	12	12		6		12	12			12		
98	Blue River bl Dillon	12	12	12	12	12	12		12		12		12	6	12	12	6	6		12	12			12		
122	Bear Creek at Morrison	12	12	12	12	12	12	12	12		12		12	6	12	12				12	12			12		
124	Little Thompson R. nr Milliken	12	12	12	12	12	12	12	12	6	12		12	6	12	12				12	12		6	12		
130	South Platte nr Platteville	12	12	12	12	12	12	12	12	6	12		12	6	12	12				12	12	6	6	12		
131	West Fork Clear Cr bl Empire	12	12	12	12	12	12		12		12		12	6	12	12	6			12	12			12		
132	Clear Creek bl Idaho Springs	12	12	12	12	12	12		12		12		12	6	12	12		6		12	12			12		
115	Blue River ab Dillon	12	12	12	12	12	12		12		12		12	6	12	12				12	12			12		
140	Snake River bl Keystone	12	12	12	12	12	12		12		12		12	6	12	12				12	12			12		
141	Tenmile Creek at Frisco	12	12	12	12	12	12		12		12		12	6	12	12	6			12	12			12		
38	Yampa River at Milner	6	6	6	6	6	6		6		12		12	6	12	12				12	12			12		
47	Colorado River at Newcastle	12	12	12	12	12	12		6		6		6	6	6	6				6	6			6		
55	Uncompahgre River at Delta	12	12	12	12	12	12	12	12	6	12		12	6	12	12				12	12		6	12		
66	Animas River nr Bondad	6	6	6	6	6	6		6		6		6	6	6	6				6	6			6		
68	San Juan ab Navajo Reservoir	6	6	6	6	6	6		6		6		6	6	6	6		6		6	6			6		
69	Piedra Rivernr Arboles	6	6	6	6	6	6		6		6		6	6	6	6		6		6	6			6		
79	Uncompahgre R. at Ridgeway	12	12	12	12	12	12		12		12		12	6	12	12				12	12			12		
81	Animas River ab Durango	12	12	12	12	12	12		12		12		12	6	12	12				12	12			12		
82	Animas River nr Silverton	12	12	12	12	12	12		12		12		12	6	12	12		6		12	12			12		
151	Slate River bl Crested Butte	6	6	6	6	6	6		6		6		6	6	6	6	6	6		6	6			6		
56	Gunnison River nr Delta	6	6	6	6	6	6		6		6		6	6	6	6	6			6	6			6		
100	North Fork Gunnison bl Hotchk	6	6	6	6	6	6		6		6		6	6	6	6	6			6	6			6		
156	South Platte River at Denver*	10	10	10	10	10	10	10	10	5	10	5	10	5	10	10		5	5	10	10	5		10		
19	Rio Grande at Alamosa	6	6	6	6	6	6		6		6		6	6	6	6		6		6	6			6		
135	Rio Grande at Wagonwheel Ga	6	6	6	6	6	6		6		6		6	6	6	6				6	6			6		
8348	Alamosa River at Gomez Bridg	6	6	6	6	6	6		6		6		6	6	6	6				6	6			6		
	SUBTOTALS	382	382	382	382	382	382	154	376	71	382	17	382	221	382	382	36	71	5	382	382	29	42	382		

2	Arkansas R. at Lamar	12	12	12	12	12	12	12	12	6	12		12	12	12	12		12	6	12	12	6		12
5	Arkansas near Nepesta	12	12	12	12	12	12	12	12	6	12		12	12	12	12		12	6	12	12	6		12
6	Arkansas near Pueblo	12	12	12	12	12	12	12	12	6	12		12	12	12	12		12	6	12	12	6		12
8	Arkansas near Salida	12	12	12	12	12	12		12		12		12	12	12	12		12	6	12	12	6		12
9	Arkansas below Leadville	12	12	12	12	12	12		12		12		12	12	12	12		12	6	12	12			12
15	Fountain Creek at Pueblo	12	12	12	12	12	12	12	12	6	12		12	12	12	12		12	6	12	12	6		12
16	Fountain Creek bl Colo. Spgs.	12	12	12	12	12	12	12	12	6	12		12	12	12	12		12	6	12	12			12
21-1	E. F. Arkansas ab Climax	6	6	6	6	6	6		6		6		6	6	6	6	6	6	6	6	6			6
21-2	South Fork Clear Cr. ab Winfield (Wilderness Area)	6	6	6	6	6	6		6		6		6	6	6	6	6	6	6	6	6			6
21-1	E. F. West Beaver Ck nr Victor	1	1	1	1	1	1		1		1		1	1	1	1	1	1	1	1	1			1
	Evans Gulch at Leadville	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-2	Halfmoon Creek nr Leadville	6	6	6	6	6	6		6		6		6	6	6	6	6	6	6	6	6			6
21-2	Clear Creek ab Reservoir	11	11	11	11	11	11		11		11		11	11	11	11		11	6	11	11			11
21-2	North Cottonwood Cr. nr Buena V (Wilderness Area)	6	6	6	6	6	6		6		6		6	6	6	6	6	6	6	6	6			6
21-2	Middle Cottonwood C bl Rainbow	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-2	St Charles nr Lake Isabel	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-3	Tennessee Ck ab Leadville	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-3	Trout Creek nr Buena Vista	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-3	Fourmile Creek ab Cripple Creek	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-3	Huerfano River ab Red Wing	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-3	North Fork Purgatoire nr North La	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-3	South Arkansas nr Maysville	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-4	Fourmile Creek at Garden Park	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-4	Cucharas River ab La Veta	11	11	11	11	11	11		11		11		11	11	11	11	11	11	6	11	11			11
21-4	Purgatoire River ab Weston	11	11	11	11	11	11		11		11		11	11	11	11		11	6	11	11			11
21-4	Greenhorn Creek ab Rye	11	11	11	11	11	11		11		11		11	11	11	11		11	6	11	11			11
26-1	Smith Canyon nr Higbee	1	1	1	1	1	1		1		1		1	1	1	1		1	1	1	1			1
26-1	South Rush Creek nr Punkin Cen	11	11	11	11	11	11		11		11		11	11	11	11		11	6	11	11	6		11
26-1	Apishapa River nr Fowler	11	11	11	11	11	11		11		11		11	11	11	11		11	6	11	11	6		11
26-1	Timpas Creek nr Rocky Ford	11	11	11	11	11	11		11		11		11	11	11	11		11	6	11	11	6		11
26-1	Carrizo Cr. nr Ideyville	2	2	2	2	2	2		2		2		2	2	2	2	2	2	2	2	2	2		2
	Trinchera Creek bl Trinchera	9	9	9	9	9	9		9		9		9	9	9	9		9	5	9	9	5		9
	Wetlands (Seg. 3b, Fountain Cre	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4			4	4	4	4		4
	Wetlands (Seg. 5, E.F. Arkansas)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4			4	4	4			4
84	San Miguel River above Mouth	12	12	12	12	12	12		12		12		12	12	12	12		12	6	12	12			12
85	Dolores River ab San Miguel R.	12	12	12	12	12	12		12		12		12	12	12	12		12	6	12	12			12
10931	Naturita Creek at Naturita	12	12	12	12	12	12	12	12	6	12		12	12	12	12		12	6	12	12			12
101	San Miguel at Hwy 145 nr Norwo	12	12	12	12	12	12		12		12		12	12	12	12		12	6	12	12			12
10971	South Fork San Miguel nr Mouth	12	12	12	12	12	12		12		12		12	12	12	12		12	6	12	12			12
10975	Howard Fork San Miguel nr Ophi	12	12	12	12	12	12		12		12		12	12	12	12		12	6	12	12			12
10915	San Miguel at Society Turn	12	12	12	12	12	12		12		12		12	12	12	12		12	6	12	12			12
10919	San Miguel above Telluride	10	10	10	10	10	10		10		10		10	10	10	10		6	6	10	10			10
	SUBTOTALS	412	412	412	412	412	412	90	412	44	412	8	412	412	412	412	150	400	239	412	412	59	0	412
	TOTAL ANALYSES	794	794	794	794	794	794	234	709	115	794	25	794	633	794	794	186	471	244	794	794	99	42	794
		Hard	TDS	TSS	SO4	NO2+NO3	NH3	TKN	T-PO4	BOD	Cd	Cr	Cu	Fe	Pb	Mn	Mo	Hg	Se	Ag	Zn	Be	U-nat	Fecal
	COST, $	4764	7146	7146	6734	6734	10124	4797	11920	1150	9529	300	4764	3796	9529	4764	1860	11304	5856	9529	4764	902	462	9529
	TOTAL COST, $	146187																						

STATE OF COLORADO

WATER QUALITY CONTROL COMMISSION
WQCC-CC-B2
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530
Phone: (303) 692-3520

Roy Romer
Governor
Patricia A. Nolan, MD, MPH
Executive Director

M E M O R A N D U M

TO: Parties to the Basic Standards and Methodologies relating to Wetlands.

FROM: Marla L. Biberstine

DATE: March 4, 1993

SUBJECT: Schedule of upcoming deadline dates.

Written testimony by the Unified Teams expert witness, Dr. Steve Canton is due in the Commission Office on March 9, 1993. Any rebuttal to this testimony is due on March 25, 1993.

The Commission requests that all parties submit a summation statement regarding the rec 1/biocrieria portion of the hearing by March 25, 1993.

The hearing is scheduled to continue on April 5, 1993 at 1:00 p.m. Summation statements are due on April 22, 1993 with deliberations being scheduled for May.

If you have any questions or concerns please give me a call.

Thank you.

The State of Colorado

DEPARTMENT OF LAW

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February 25, 1993

M E M O R A N D U M

TO: Wetlands Rulemaking Parties

FROM: Amelia S. Whiting
Assistant Attorney General

RE: Proposed Modifications to Division's Exhibit 10

Enclosed please find a list of proposed modifications to the wetlands rule as found in the Division's Exhibit 10. The proposed modifications reflect changes to which the Division agreed during the February 9, 1993 meeting but which were not included in Exhibit 10. Other proposed modifications respond to concerns raised by EPA and by some parties in rebuttal.

Please do not hesitate to call me at 866-5117 if you have any questions.

cc: Dave Holm
Jon Scherschligt

Attachment

AG Alpha No. HLWQIBAKM
AG File No. E9219035.42

EXHIBIT 15

3.15 DEFINITIONS

. . .

(10) "COMPENSATORY WETLANDS" means wetlands ~~constructed~~ DEVELOPED for mitigation of adverse impacts to other wetlands (e.g. wetlands ~~created~~ DEVELOPED pursuant to Section 404 of the Clean Water Act).

Add New subsection (16)

(16) "FLOODPLAIN" MEANS ANY FLAT OR NEARLY FLAT LOWLAND THAT BORDERS A STREAM, A LAKE, OR A RESERVOIR AND THAT MAY BE COVERED BY ITS WATERS AT FLOOD OR HIGH STAGE AS DESCRIBED BY THE PERIMETER OF THE PROBABLE MAXIMUM FLOOD OR PROBABLE MAXIMUM HIGH STAGE

3.1.7 PROCESS FOR ASSIGNING STANDARDS AND GRANTING, EXTENDING, OR REMOVING TEMPORARY MODIFICATIONS

. . .

(iv) Standards for Surface Waters In Wetlands

. . .

(2) Existing ambient quality ~~BASED-STANDARDS-AS-DEFINED IN-3.1.7(1)(b)(ii)~~ shall be determined IN ACCORDANCE WITH 3.1.7(1)(b)(ii) AND SHALL take into account the location, sampling date, and quality of all available data. EXISTING AMBIENT QUALITY SHALL BE DETERMINED AS OF THE TIME THE FIRST ACTIVITY IS PROPOSED WHICH COULD RESULT IN A DISCHARGE TO THE WETLAND AND WHICH IS SUBJECT TO REGULATIONS THAT IMPLEMENT THE STANDARDS SET FORTH IN SUBSECTIONS 3.1.7(1)(b)(iv) and 3.1.11. If available information is not adequate to otherwise determine or estimate existing ambient quality, ~~as-of [effective-date]~~ the interim standard set forth in subsection 3.1.7(1)(b)(iv)(A)(1(b) shall apply.

3.1.24 STATEMENT OF BASIS, SPECIFIC AUTHORITY AND PURPOSE

A. Wetlands

1. Definitions

. . .

(Modify second paragraph, third sentence as follows)

Consistent with the definition of "state waters", those wetlands that are designed, constructed and operated for the purpose of treatment of wastewater or stormwater, INCLUDING WETLANDS DESIGNED, CONSTRUCTED AND OPERATED AS A SYSTEM OR PART OF A SYSTEM FOR CONTROL, STORAGE OR RETENTION OF WASTEWATER OR STORMWATER, are excluded from coverage.

2. Classifications

(Add after first sentence of third paragraph at page 14)

. . .

THE WETLAND FUNCTIONS TO BE PROTECTED SHOULD BE RELATED TO WATER QUALITY AND DETERMINED ON A SITE-SPECIFIC BASIS.

(Add as next to last sentence to paragraph 2 at page 14).

. . .

GIVEN THE ALREADY APPARENT DISAGREEMENTS REGARDING THE PROPER IMPLEMENTATION OF THE WETLAND NARRATIVE STANDARD AND THE INHERENT DIFFICULTIES IN DISTINGUISHING BETWEEN NATURAL AND CREATED WETLANDS, THE ADOPTED APPROACH TO REGULATION OF CREATED WETLANDS (I.E., INITIALLY APPLYING NARRATIVE STANDARDS ONLY) IS LIKELY TO BE MORE RESOURCE INTENSIVE AND MORE DIFFICULT TO IMPLEMENT THAN THE APPROACH TO REGULATION OF TRIBUTARY WETLANDS. SOME PARTIES AT THE HEARING EXPRESSED CONCERN WITH THE POTENTIAL ABUSE OF THIS APPROACH AND THE BURDENS FACED BY THE DIVISION IF REQUIRED TO MAKE A DEMONSTRATION THAT A WETLAND IS NOT CREATED. THE COMMISSION INTENDS THE DEFINITION OF CREATED WETLANDS TO BE APPLIED NARROWLY AND IN LIGHT OF THE POLICIES BEHIND THIS DIFFERENT APPROACH. ACCORDINGLY, IN THE CREATED VS. TRIBUTARY WETLANDS DETERMINATION, THE COMMISSION EXPECTS THAT WETLANDS WILL BE PRESUMED TO BE TRIBUTARY UNTIL SHOWN TO BE CREATED BY HUMAN ACTIVITY AS SPECIFIED IN THE CREATED WETLANDS DEFINITION.

3. Standards

(add last sentence to eighth paragraph at page 16, as follows:)

THE COMMISSION MAY, ON A SITE-SPECIFIC BASIS, AS APPROPRIATE, APPLY ADJUSTMENTS TO EXISTING TABLE VALUE NUMERIC STANDARDS WHICH MAY BE BASED UPON THE WATER EFFECTS RATIO (WER) AND OTHER ACCEPTED TECHNIQUES.

3. Standards

(add last sentence at page 17 as follows):

. . .

ANOTHER CONCERN EXPRESSED BY SOME PARTIES WAS THE POTENTIAL USE OF THE REGULATION TO CREATE OR EXPAND OTHER AGENCIES' JURISDICTION OVER WETLANDS. THE COMMISSION DOES NOT HAVE THE AUTHORITY TO CREATE OR EXPAND THE AUTHORITIES OF OTHER AGENCIES. THEREFORE, THIS REGULATION CANNOT HAVE SUCH EFFECT.

February 4, 1993

PARTY STATUS LIST
RULEMAKING HEARING
REVISIONS TO THE BASIC STANDARDS AND METHODOLOGIES FOR SURFACE WATER
3.1.0 (5 CCR 1002-8)
MARCH 2, 1993
Hearing Chairs: CONNIE KING AND MARY GEARHART

NAME	REPRESENTED BY	MAILING ADDRESS	TELEPHONE
1. Res-ASARCO	Martha P. Allbright	Bradley Campbell Carney & Madsen 1717 Washington Avenue Golden, CO 80401	(303) 278-3300 FAX: (303) 278-3379
2. The Lake Catamount Joint Venture	Wayne F. Forman	Brownstein Hyatt Farber & Strickland 410 17th St., 22nd Floor Denver, CO 80202	(303) 534-6335 FAX: (303) 623-1956
3. Vail Valley Consolidated Water District	Wayne B. Schroeder	Calkins Kramer Grimshaw & Harring One Norwest Center 1700 Lincoln St., Suite 3800 Denver, CO 80203	(303) 839-3800 FAX: (303) 839-3838
4. The City of Thornton	Michael D. White Austin C. Hamre	White & Jankowski 511 16th St., Suite 500 Denver, CO 80202	(303) 595-9441 FAX: (303) 825-5632
5. The Cache La Poudre Water Users Association	William R. Fischer	Fischer Brown Huddleson & Gunn PO Drawer J Ft. Collins, CO 80522	(303) 482-1056 FAX: (303) 482-3840
6. The Water Supply and Storage Company	William R. Fischer	Fischer Brown Huddleson & Gunn	
7. The Thompson Water Users Association	William R. Fischer	Fischer Brown Huddleson & Gunn	
8. The Cache La Poudre Reservoir Company & the New Cache La Poudre Irrigating Company	William R. Fischer	Fischer Brown Huddleson & Gunn	
9. The North Poudre Irrigation Company	Alden V. Hill John T. Vap	Hill Hill & Manges, P.C. 160 West Mountain Ave. Ft. Collins, CO 80524	(303) 482-3683 FAX: (303) 482-7648
10. The Larimer-Weld Irrigation Company, The Larimer-Weld Reservoir Company & The Windsor Reservoir Canal Company	Timothy J. Dow	Sommermeyer Wick Dow & Campbell 323 S. College Ave., Suite 3 Ft. Collins, CO 80524	(303) 482-4011 FAX: (303) 482-8929

NA	REPRESENTED BY	MAILING ADDRESS	TELEPHONE
11.	The Littleton/Englewood Wastewater Treatment Plant	David W. Robbins Mark J. Wagner	Hill & Robbins, P.C. 1441 18th St., Suite 100 Denver, CO 80202	(303) 296-8100 FAX: (303) 296-2388
12.	NaTec Minerals, Inc.	Timothy R. Buchanan	Timothy R. Buchanan, P.C. 3100 Arapahoe Ave., Suite 204 Boulder, CO 80303	(303) 443-9898 FAX: (303) 443-4571
13.	Fort Morgan Reservoir and Irrigation Company	Timothy R. Buchanan	Timothy R. Buchanan, P.C.	
14.	The City of Colorado Springs	Mark T. Pifher	Anderson Johnson & Gianunzio PO Box 240 Colorado Springs, CO 80901-0240	(719) 632-3545 FAX: (719) 632-5452
		Tad S. Foster	PO Box 1836 Colorado Springs, CO 80901	(719) 632-5240 FAX: (719) 632-5452
15.	Metro Wastewater Reclamation District	Jerry W. Raisch	Vranesh & Raisch PO Box 871 Boulder, CO 80306	(303) 443-6151 FAX: (303) 443-9586
16.	Northwest Colorado Council of Governments	Barbara J. Green Mary C. Larson	Ballard Spahr Andrews & Ingersoll 1225 17th St., Suite 2300 Denver, CO 80202	(303) 292-2400 FAX: (303) 296-3956
17.	Colorado Mining Association	John E. Hardaway	Homestake Mining Company 1726 Cole Blvd. Golden, CO 80401	(303) 277-0700 FAX: (303) 277-1150
18.	Northern Colorado Water Conservancy District & Municipal Subdistrict	Gregory J. Hobbs Jr.	Hobbs Trout & Raley 1775 Sherman #1300 Denver, CO 80201	(303) 861-1963 FAX: (303) 832-4465
19.	Martin Marietta Corp.	Henry W. Ipsen Daniel J. Dunn	Holme Roberts & Owen 1700 Lincoln, Suite 4100 Denver, CO 80203	(303) 861-7000 FAX: (303) 866-0200
20.	Shell Oil Company	John L. Watson	Holme Roberts & Owen	
21.	Cotter Corporation	John L. Watson	Holme Roberts & Owen	
22.	Vail Associations	Henry W. Ipsen	Holme Roberts & Owen	
23.	Environmental Defense Fund	Melinda Kassen	1405 Arapahoe Avenue Boulder, CO 80302	(303) 440-4901 FAX: (303) 440-8052
24.	Battle Mountain Resources, Inc.	Mark Semenoff Christopher Sutton	Parcel Mauro Hultin & Spaanstra 1801 California St., #3600 Denver, CO 80202	(303) 292-6400 FAX: (303) 295-3040

NAME	REPRESENTED BY	MAILING ADDRESS	TELEPHONE
25.	Denver Water Board	Patricia L. Wells Michael L. Walker Henry C. Teigen	1600 West 12th Avenue Denver, CO 80524 FAX: (303) 628-6000 FAX: (303) 628-6478
26.	The Home Builders Association of Metropolitan Denver	Steve Wilson	1400 S. Emerson Denver, CO 80210 (303) 778-1400 FAX: (303) 733-9440
27.	The City and County of Denver	T. Shaun Sullivan	City Attorneys 1437 Bannock St., Room 353 Denver, CO 80202 (303) 640-3552 FAX: (303) 640-5609
28.	Colorado Ski Country USA	Harris D. Sherman Melanie Dummer	Arnold & Porter 1700 Lincoln St., Suite 4000 Denver, CO 80203 (303) 863-1000 FAX: (303) 832-0428
29.	Cherry Creek Basin Water Quality Authority	Ronda L. Sandquist Susan M. Kleid	McKenna & Cuneo 303 E. 17th Ave., Suite 600 Denver, CO 80203 (303) 830-0700 FAX: (303) 830-7743
30.	North Front Range Water Quality Planning Association	Dave DuBois Manager	Civic Center 500 East Third Loveland, CO 80537 (303) 962-2491 FAX: (303) 962-2903
31.	Division of Wildlife	John Woodling	6060 Broadway Denver, CO 80216 (303) 297-1192 FAX: (303) 294-0874
	Martha Rudolph Attorney for Water Quality Control Commission		State Services Building 1525 Sherman St., 5th Floor Denver, CO 80203 (303) 866-5072 FAX: (303) 866-3558
	Amelia Whiting Attorney for Water Quality Control Division		State Services Building 1525 Sherman St., 5th Floor Denver, CO 80203 (303) 866-5072 FAX: (303) 866-3558

*Indicates late request for party status.

NOTE TO PARTIES: Please send copies of all documents (prehearing statements, rebuttals, etc.) directly to the Commission and Division attorneys listed above. You may then submit the original and 13 copies (instead of 15) to the Commission Office. Thank you.

psbs.93

BEFORE THE COLORADO WATER QUALITY CONTROL COMMISSION
Department of Health, State of Colorado

PREHEARING ORDER OF THE WATER QUALITY CONTROL COMMISSION

IN THE MATTER OF THE RULEMAKING HEARING FOR CONSIDERATION OF REVISIONS TO THE BASIC STANDARDS AND METHODOLOGIES FOR SURFACE WATER, 3.1.0 (5 CCR 1002-8) TO ADOPT PROVISIONS ADDRESSING WATER QUALITY CLASSIFICATIONS, STANDARDS AND DESIGNATIONS FOR WETLANDS.

The prehearing conference for this matter was held on February 3, 1993. This Order summarizes the action taken.

The following individuals were present at the prehearing conference: David Dubois, North Front Range Water Quality Planning Association; David Mundis, and Melinda Kassen, Environmental Defense Fund; Becky Spaine, Colorado Department of Transportation; Jim Von Loh, Colorado Department of Parks; Ron Fano, Vail Valley Consolidated Water District; Chris Sutton, Battle Mountain Resources, Inc.; Mark Pifher, City of Colorado Springs; Tom Korver, Martin Marietta Corp, Shell Oil Company, Cotter Corporation and Vail Associates; Melanie Dummer Mills, Colorado Ski County, USA; Susan M. Kleid, Cherry Creek Basin Water Quality Authority; Greg Hobbs and Gene Schleiger, Northern Colorado Water Conservancy District & Municipal Subdistrict; Bill Brown, The Cache La Poudre Water Users Association, The Water Supply and Storage Company, The Thompson Water Users Association, The Cache La Poudre Reservoir Company & the New Cache La Poudre Irrigating Company, and The North Poudre Irrigation Company; Pam Cybyske and Tom Davidson, The City of Thornton; John E. Hardaway, Colorado Mining Association; Jerry Raisch, Metro Wastewater Reclamation District; John Woodling, Division of Wildlife, Mary Larson, Northwest Colorado Council of Governments; Dave Holm, Dennis Anderson and Sarah Plocher, for the Water Quality Control Division (Division); Amelia Whiting, Assistant Attorney General for the Division; Connie King, Hearing Chair for the Water Quality Control Commission (Commission); Jon Scherschligt, Acting Administrator of the Commission; Marla L. Biberstine, Staff Assistant for the Commission; and Martha Rudolph, Assistant Attorney General for the Commission.

I. PARTY STATUS

A. Timely party status requests were received from:

1. Res-ASARCO
2. The Lake Catamount Joint Venture (Catamount)
3. Vail Valley Consolidated Water District (Vail Valley)
4. The City of Thornton (Thornton)

5. The Cache La Poudre Water Users Association (Poudre Team)
6. The Water Supply and Storage Company (Poudre Team)
7. The Thompson Water Users Association (Poudre Team)
8. The Cache La Poudre Reservoir Company & the New Cache La Poudre Irrigating Company (Poudre Team)
9. The North Poudre Irrigation Company (Poudre Team)
10. The Larimer-Weld Irrigation Company, The Larimer-Weld Reservoir Company & The Windsor Reservoir Canal Company (Larimer-Weld)
11. The Littleton/Englewood Wastewater Treatment Plant (Littleton/Englewood)
12. NaTec Minerals, Inc. (NaTec)
13. Fort Morgan Reservoir and Irrigation Company (Fort Morgan Res)
14. The City of Colorado Springs (Unified Team)
15. Metro Wastewater Reclamation District (Metro)
16. Northwest Colorado Council of Governments (NWCCOG)
17. Colorado Mining Association (CMA)
18. Northern Colorado Water Conservancy District & Municipal Subdistrict (Northern)
19. Martin Marietta Corp. (Martin Marietta)
20. Shell Oil Company (Shell/Cotter)
21. Cotter Corporation (Shell/Cotter)
22. Vail Associations (Vail)
23. Environmental Defense Fund (EDF)
24. Battle Mountain Resources, Inc. (Battle Mountain)
25. Denver Water Board (Unified Team)
26. The Home Builders Association of Metropolitan Denver (Unified Team)
27. The City and County of Denver (Unified Team)
28. Colorado Ski Country USA (Unified Team)
29. Cherry Creek Basin Water Quality Authority (Cherry Creek)
30. North Front Range Water Quality Planning Association (NFRWQPA)
31. Division of Wildlife (DOW)

B. No late requests for party status were received.

C. Approval of party status requests was referred to the full Commission.

II. PREHEARING STATEMENTS

A. Prehearing statements were submitted by the Water Quality Control Division (WQCD) and all party status applicants except Catamount.

III. MOTIONS

A. No motions have been filed to date.

IV. STIPULATIONS

A. No stipulations have been filed to date, but EDF and Northern have indicated an intention to prepare a stipulation to issues 18 and 19 (see attached list) which will likely be acceptable to all parties.

V. ISSUES

See attached Issues Summary List.

VI. ALTERNATIVE PROPOSALS

A. The Unified Team and EDF have submitted comprehensive alternative proposals. In addition, many parties have recommended specific modifications of the proposed requirements, as set forth in their prehearing statements. The WQCD has indicated that it is in agreement with several minor issues raised by various parties, and intends to prepare a revised proposal incorporating minor changes for distribution prior to the due date for rebuttal statements.

VII. REBUTTAL

A. Rebuttal statements are to be submitted by 5:00 p.m. on February 18, 1993.

VIII. HEARING PROCEDURES

A. The following order of presentation and times for direct testimony was established. No exchange of time among parties will be allowed.

1. Water Quality Control Division: 30 minutes.
2. EDF: 30 minutes.
3. Unified Team (5 parties): 60 minutes.
4. DOW: 5 minutes.
5. Res-ASARCO: 5 minutes.
6. Catamount: 0 minutes.
7. Vail Valley: 0 minutes.
8. Poudre Group (5 parties): 5 minutes.
9. Larimer-Weld: 0 minutes.
10. Littleton/Englewood: 0 minutes.
11. NaTec: 0 minutes
12. Fort Morgan: 0 minutes.
13. Metro: 10 minutes.
14. NWCCOG: 10 minutes.
15. CMA: 10 minutes.
16. Northern: 10 minutes.
17. Martin Marietta: 10 minutes.
18. Shell/Cotter: 5 minutes.
19. Vail: 0 minutes.
20. Battle Mountain: 5 minutes.
21. NFRWQPA: 5 minutes.

B. Nonparty public comments will be heard at 1:00 p.m., except as may be necessary to accommodate individual conflicts.

C. In addition to the matters addressed above, it was agreed that:

1. Questions from the Commission will occur at the end of each party's complete case (except for Commission questions essential to understanding a party's testimony, which may be asked at any time). Cross-examination will follow Commission questions and may be limited at the Commission's discretion.

2. There will be no redirect testimony, but the Commission will entertain reasonable requests to supplement the record as necessary.

3. The hearing chair will recommend to the Commission that the hearing record established on this matter in August, 1992, (including summations received in September, 1992) be made part of the record for this hearing.

4. The Commission may deliberate regarding the issues raised during their regular meeting in April, 1993.

Dated this 4th day of February, 1993.

Water Quality Control Commission

Marla L. Biberstine

Marla L. Biberstine, Staff Assistant

wetland.pho

Issues Summary
Wetlands

	PARTY	ISSUE
1.	Unified Team, Northern, Metro	Application of numeric stream standards to tributary wetlands unjustified, and without scientific basis.
2.	Unified Team	Application of AD designation is unjustified.
3.	Unified Team	Ambient Standards difficult to implement.
4.	Unified Team, Vail	Wetlands standards could be used by other agencies improperly.
5.	Colorado Springs CMA, Unified Team	No adequate technique is available to measure wetlands functions and values.
6.	Colorado Springs, Vail, WQCD, Unified Team	Compensatory wetlands should not carry the same standards and designations as the wetlands they replace.
7.	Shell, Cotter	All wetlands built for remediation should fall under the definition of constructed wetlands.
8.	Shell, Cotter	Need to clarify that narrative standards will be enforced only through controls on discharges to wetlands.
9.	Shell, Cotter, Metro	Need to avoid confusion on whether any standards apply to constructed wetlands by minor wording change in 3.1.7(iv)(E).
10.	Vail	Created wetlands should not be state waters.
11.	EDF	Compensatory, created and tributary wetland definitions should be eliminated and instead, all considered together under the comprehensive definition of wetland. The basic definition of wetland should be more specific as in the proposed alternative. The Section 404 exemption for constructed wetlands on previously wet sites is inappropriate.
12.	EDF	The provisions that tributary wetlands have the interim classification and standards of the hydrologically connected stream segment is inappropriate.
13.	EDF	The standards in 3.1.7(1)(b)(iv) can be pared down substantially if the separate wetland-type definitions are eliminated. Narrative standards need revisions.
14.	NWCCOG	Narrative standards should be rewritten to reflect that functions of wetlands both affect other water quality, and are dependent on the water quality in the wetland.

	PARTY	ISSUE
15.	NWCC0G	Need to clarify the term "directly connected" in 3.1.13(e)(iv).
16.	Martin Marietta, Metro	The proposal needs to be rewritten to avoid the current situation where any one wetland could fall into several definitional categories.
17.	Cherry Creek	Change definition of constructed wetland to recognize that a 404 permit may not have been required when a wetland was constructed in a previously wet site. The Statement of Basis should be clarified for several aspects of constructed wetlands.
18.	Northern	Water rights protective language should apply to all wetlands, not just created wetlands.
19.	Northern	Regulations should state that wetlands classifications and standards are not intended to prohibit issuance of Section 404 permits.
20.	CMA, Metro	Need to clarify that tributary wetlands do not include created wetlands.
21.	CMA	Only narrative standard 3.1.11(1)(b)(iii) is properly applicable to wetlands.
22.	CMA	Wetlands created during mining should be "constructed" until removed or reclamation completed.
23.	CMA, DOW, Others	Remaining concerns about implementation of regulations, if adopted.
24.	Metro	Narrative standards for wetlands should be re-written.
25.	Metro	The wetland functions enumerated in 3.1.13(1)(e)(v) should be eliminated because they may go beyond WQCC jurisdiction.
26.	DOW	Other wetlands in 3.1.7(iv)(E) should have inorganic standards applied.
27.	NFRWQPA	Definitions of "water quality dependant functions" and "ambient" need clarification.
28.	Several Parties	Question whether the proposal meets or goes beyond EPA guidance.
29.	Poudre Group	Clarify in 3.1.11(1) that the narrative standards are to be implemented by "state" agencies; water quality dependant functions should be listed; the regulation should not thwart the use of wetlands as promising technology for wastewater treatment.

Revised 2-19-93

EXHIBIT 10

Revisions are proposed to sections 3.1.5, 3.1.7, 3.1.11 and 3.1.13 of the regulation, as specified below.

3.1.5 DEFINITIONS

See the Colorado Water Quality Control Act, C.R.S. 1973, 25-8-101 et seq., as amended, and the codified water quality regulations additional definitions.

(1) "ACT" means the Colorado Water Quality Control Act, C.R.S. 1973, 25-8-101 et seq., as amended.

(2) "ACUTE STANDARD" means the level not to be exceeded by the concentration in a single sample or calculated as an average of all samples collected during a one-day period. As used in Tables II and III, acute represents one-half of the 96-hour LC-50 that protects 95 percent of the genera in a water body from lethal effects. The acute standard is implemented in combination with a selected duration and frequency of recurrence (3.1.9(1)).

(3) "ANTIDEGRADATION RULE" means the rule established in Section 3.1.8.

(4) "BASIC STANDARDS" means those standards as established in Section 3.1.11.

(5) "BENEFICIAL USES" means those uses of state surface waters to be protected such as those identified in the classification system.

(6) "BMP" (Best Management Practices) means a practice or a combination of practices that is determined by a governmental agency after problem assessment, examination of alternative practices, and appropriate public participation, to be the most effective, practicable (including technological, economic, and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with quality goals.

(7) "CHRONIC STANDARD" means the level not to be exceeded by the concentration for either a single representative sample or calculated as an average of all samples collected during a thirty-day period. As used in tables II and III, chronic represents the level that protects 90 to 95 percent of the genera from chronic toxic effects from unionized ammonia and 95 percent of the genera from chronic toxic effects from metals. Chronic toxic effects

include, but are not limited to, demonstrable abnormalities and adverse effects on survival, growth, or reproduction. The chronic standard is implemented in combination with a selected duration and frequency of recurrence (3.1.9(1)).

(8) "COLD WATER BIOTA" means aquatic life, including trout, normally found in waters where the summer temperature does not often exceed 20° C.

(9) "COMMISSION" means the Colorado Water Quality Control Commission.

(10) "COMPENSATORY WETLANDS" means wetlands constructed for mitigation of adverse impacts to other wetlands (e.g. wetlands created pursuant to section 404 of the Clean Water Act).

(11) "CONSTRUCTED WETLANDS" means those wetlands intentionally designed, constructed and operated for the primary purpose of wastewater or stormwater treatment or environmental remediation provided under CERCLA, RCRA, or section 319 of the Federal Act, if (a) such wetlands are constructed on non wetland sites that do not contain surface waters of the state, or (b) such wetlands are constructed on previously existing wetland sites, to the extent that approval or authorization under section 404 of the Federal Act has been granted for such construction or it is demonstrated that such approval or authorization is not**, OR WAS NOT,** required. This term includes, but is not limited to, constructed swales, ditches, culverts, infiltration devices, catch basins, and sedimentation basins that are part of a wastewater or stormwater treatment system or a system for environmental remediation mandated under CERCLA or RCRA. Compensatory wetlands shall not be considered constructed wetlands. Constructed wetlands are not state waters.

(12) "CREATED WETLANDS" means those wetlands created in areas which would not be wetlands in the absence of human modifications to the environment. Created wetlands include, but are not limited to wetlands created inadvertently by human activities such as mining, channelization of highway runoff, irrigation, and leakage from man-made water conveyance or storage facilities. Wetlands resulting from hydrologic modifications such as on-channel reservoirs or on-channel diversion structures that expand or extend the reach of adjacent classified state waters are not considered created wetlands.

(13) ~~(10)~~ "DISSOLVED METALS" means that portion of a water and suspended sediment sample which passed through a 0.40 or 0.45 UM (Micron) membrane filter. Determinations of "Dissolved" constituents are made using the filtrate. This may include some very small (Colloidal) suspended

particles which passed through the membrane filter as well as the amount of substance present in true chemical solution.

(14) ~~(11)~~ "DIVISION" means the Division of Administration of the Colorado Department of Health of which the Water Quality Control Division is a part.

(15) ~~(12)~~ "FEDERAL ACT" means the Clean Water Act, U.S.C. Section 1251 et seq., as amended.

(16) ~~(13)~~ "LC-50" means the concentration of a parameter that is lethal to 50% of the test organisms within a defined time period.

(17) ~~(14)~~ "MIXING ZONE" means that area of a water body designated on a case-by-case basis by the Division which is contiguous to a point source and in which certain standards may not apply.

(18) ~~(15)~~ "NUMERIC VALUE" means the measured concentration of a parameter.

(19) ~~(16)~~ "PARAMETER" means the chemical constituents or other characteristics of the water such as algae, fecal coliform, total dissolved solids, dissolved oxygen, or the magnitude of radioactivity levels, temperature, pH, and turbidity, or other relevant characteristics.

(20) ~~(17)~~ "PERMIT" means a National Pollutant Discharge Elimination System (NPDES) permit or other state water quality permit.

(21) ~~(18)~~ "POTENTIALLY DISSOLVED METALS" means that portion of a constituent measured from the filtrate of a water and suspended sediment sample that was first treated with nitric acid to a pH of less than 2.0 and let stand for 8 to 96 hours prior to sample filtration using a 0.4 or 0.45-UM membrane filter. Note the "Potentially Dissolved" method cannot be used where nitric acid will interfere with the analytical procedure used for the constituent measured.

(22) ~~(19)~~ "REGIONAL WASTEWATER MANAGEMENT PLAN" means a water quality planning document prepared pursuant to section 208 of the Federal Act, sometimes referred to as "208 Plans" or "Water Quality Management Plans."

(23) ~~(20)~~ "SALINITY" means total dissolved solids (TDS).

(24) ~~(21)~~ "STANDARD" means a narrative and/or numeric restriction established by the Commission applied to state surface waters to protect one or more beneficial uses of such waters. Whenever only numeric or only narrative standards are intended, the wording shall specifically designate which is intended.

(25) ~~(22)~~ "STATE WATERS" means any and all surface and subsurface waters which are contained in or flow in or through this state, but does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed.

(26) ~~(23)~~ "TABLES" means Tables I, II, and III, appended to this Regulation, which set forth accepted levels for various parameters which will generally protect the beneficial uses of state surface waters.

(27) ~~(24)~~ "TOTAL RECOVERABLE METALS" means that portion of a water and suspended sediment sample measured by the total recoverable analytical procedure described in "Methods for Chemical Analysis of Water and Wastes," U.S. Environmental Protection Agency, March, 1979, or its equivalent.

(28) "TRIBUTARY WETLANDS" means wetlands **WITHIN THE FLOODPLAIN** that are hydrologically connected to surface waters via either surface or ground water flows. The hydrologic connection may be intermittent or seasonal, but must be of sufficient extent and duration to normally reoccur annually. **TRIBUTARY WETLANDS DO NOT INCLUDE CONSTRUCTED OR CREATED WETLANDS.**

(29) ~~(25)~~ "USE ATTAINABILITY ANALYSIS" means an assessment of the factors affecting the attainment of aquatic life uses or other beneficial uses, which may include physical, chemical, biological, and economic factors.

(30) ~~(26)~~ "USES" see Beneficial Uses.

(31) ~~(27)~~ "WARM WATER BIOTA" means aquatic life normally found in waters where the summer temperature frequently exceeds 20° C.

(32) ~~(28)~~ "WATER QUALITY-BASED DESIGNATION" means a designation adopted by the Commission for specific state surface waters pursuant to section 3.1.8(2), to identify which level of water quality protection such waters will receive under the Antidegradation Rule in section 3.1.8(1). Such designations are adopted pursuant to the Commission's authority to classify state waters, as set forth in section 25-8-203, C.R.S., and the procedural requirements for classifying state waters shall be applied in adopting such designations.

(33) ~~(29)~~ "WATER QUALITY STANDARD" see Standard.

(34) "WETLANDS" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal

circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

3.1.7 PROCESS FOR ASSIGNING STANDARDS AND GRANTING, EXTENDING, OR REMOVING TEMPORARY MODIFICATIONS

[This section is proposed to be revised by the addition of a new subsection 3.1.7(1)(b)(iv), as follows:]

(iv) Standards For **SURFACE WATERS IN** Wetlands

(A) Tributary wetlands to which the interim classifications referenced in section 3.1.13(1)(e)(iv) apply, shall be subject to the following interim standard:

(1) Until such time as the Commission adopts a "wetlands" classification for the tributary wetland, water quality in the wetland shall be maintained for each parameter at whichever of the following levels is less restrictive:

(a) existing ambient quality ~~as of [effective date of this regulation]~~, or

(b) that quality which meets the numeric standards (except for numeric standards for pH, ~~and~~ dissolved oxygen, **AND ANY STANDARD ESTABLISHED FOR THE PROTECTION OF A DOMESTIC WATER SUPPLY USE**) of the tributaries of the surface water segment to which the wetland is most directly hydrologically connected.

(2) Existing ambient quality **BASED-STANDARDS AS DEFINED IN 3.1.7(1)(b)(ii)** shall be determined taking into account the location, sampling date, and quality of all available data. ~~Data generated subsequent to [effective date] shall be presumed to be representative of existing quality as of [effective date].~~

~~if the available information indicates that there have been no SIGNIFICANT new or increased sources of water quality contamination initiated in the area in question subsequent to that date.~~ If available information is not adequate to otherwise determine or estimate existing ambient quality, as of [effective date] the interim standard set forth in subsection 3.1.7(1) (b) (iv) (A) (1) (b) shall apply.

(B) Wetlands for which the Commission has adopted a site-specific "wetlands" classification described in section 3.1.13(1)(e)(v), shall be subject to numeric standards and designations adopted by the Commission. The Commission shall adopt any numeric standards and designations determined to be appropriate in view of the functions and values to be protected for the wetlands in question.

(C) Created wetlands, shall be subject only to the narrative standards set forth in section 3.1.11, unless the Commission has adopted the wetlands classification and appropriate numeric standards.

~~(1)~~ All created wetlands will have a use-protected designation unless determined otherwise as a result of a site-specific hearing.

~~(2) For created wetlands that result from the diversion and application to beneficial use of water resulting from the lawful exercise of water rights, including water taken during free river conditions, water quality standards applicable to such wetlands shall not be interpreted or applied in a manner that restricts such diversion and application to beneficial use.~~

(D) Compensatory wetlands shall, ~~at a minimum,~~ be subject to the standards of THE SEGMENT IN WHICH THEY ARE LOCATED ~~the wetlands they mitigate,~~ unless the Commission adopts a wetlands classification and appropriate numeric standards.

(E) All other wetlands WHICH ARE STATE WATERS ~~(EXCEPT CONSTRUCTED WETLANDS)~~ shall be subject only to the narrative standards set forth in section 3.1.11, unless the Commission has adopted the wetlands classification and appropriate numeric standards.

(F) THE ISSUANCE AND USE OF GENERAL OR NATIONWIDE ~~SECTION 404~~ PERMITS UNDER SECTION 404 OF THE CLEAN WATER ACT, ~~INCLUDING NATIONWIDE PERMITS,~~ IS NOT PRECLUDED BY THE PROVISIONS OF 3.1.7, 3.1.11 OR 3.1.13, EXCEPT AS PROVIDED IN THE 401 CERTIFICATION PROCESS UNDER SUBSECTION 25-8-302, C.R.S.

BAD

(G) WETLANDS WATER QUALITY STANDARDS AND CLASSIFICATIONS SHALL NOT BE INTERPRETED OR APPLIED IN A MANNER THAT RESTRICTS THE LAWFUL EXERCISE OF WATER RIGHTS.

3.1.11 BASIC STANDARDS APPLICABLE TO SURFACE WATERS OF THE STATE

All surface waters of the State are subject to the following basic standards; however, discharge of substances regulated by permits which are within those permit limitations shall not be a basis for enforcement proceedings under these basic standards:

(1) For activities subject to point source discharge permit regulations or applicable control regulations adopted by the Commission or applicable water quality regulations of other agencies, eExcept where authorized by permits, BMP's 401 CERTIFICATION or plans of operation approved by the Division ~~or other applicable agencies~~, state surface waters shall be free from substances attributable to human-caused point source or nonpoint source discharge in amounts, concentrations or combinations which:

~~(a) for all surface waters except wetlands;~~

(i) ~~(a)~~ ~~which~~ can settle to form bottom deposits detrimental to the beneficial uses. Depositions are stream bottom buildup of materials which include but are not limited to anaerobic sludges, mine slurry or tailings, silt, or mud; or

(ii) ~~(b)~~ ~~which~~ form floating debris, scum, or other surface materials sufficient to harm existing beneficial uses; or

(iii) ~~(c)~~ ~~which~~ produce color, odor, or other conditions in such a degree as to create a nuisance or harm existing beneficial uses or impart any undesirable taste to significant edible aquatic species or to the water; or

(iv) ~~(d)~~ ~~which~~ are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life; or

(v) ~~(e)~~ ~~which~~ produce a predominance of undesirable aquatic life; or

(vi) ~~(f)~~ ~~which~~ cause a film on the surface or produce a deposit on shorelines~~.~~; and

(b) for SURFACE WATERS IN wetlands;

(i) produce color, odor, or other conditions in such a degree as to create a nuisance or harm ~~existing beneficial uses~~ WATER QUALITY DEPENDENT FUNCTIONS or impart any undesirable taste to significant edible aquatic species OF THE WETLAND; or

(ii) ~~are harmful to the beneficial uses of any ground or surface waters of the wetland or toxic to humans, animals, plants, or aquatic life~~ OF THE WETLAND.; ~~or~~

~~(iii) which are harmful to the water quality dependent functions of THE wetlands.~~

3.1.13 STATE USE CLASSIFICATIONS

[This section is proposed to be revised by the addition of a new subsection 3.1.13(1)(e), as follows:]

(e) wetlands

(i) The provisions of this section do not apply to constructed wetlands.

(ii) Compensatory wetlands shall have, as a minimum, the classifications of the **SEGMENT IN WHICH THEY ARE LOCATED** ~~wetlands they mitigate~~.

(iii) Created wetlands shall be considered to be initially unclassified, and shall be subject only to the narrative standards set forth in section 3.1.11, unless and until the Commission adopts the "wetlands" classification described below and appropriate numeric standards for such wetlands.

(iv) Tributary wetlands shall be considered tributaries of the surface water segment to which they are most directly connected and shall be subject to interim classifications as follows: such wetlands ~~(except for those that are created wetlands)~~ shall be considered to have the same classifications **EXCEPT FOR DRINKING WATER SUPPLY CLASSIFICATIONS,** as the segment of which they are a part, unless the "wetlands" classification and appropriate site-specific standards have been adopted to protect the water quality dependent functions of the wetlands. Interim numeric standards for these wetlands are described in section 3.1.7(1)(b)(iv).

(v) The Commission may adopt a "wetlands" classification based on the functions of the wetlands in question. Wetland functions that may warrant site-specific protection include ground water recharge or discharge, flood flow alteration, sediment stabilization, sediment or other pollutant retention, nutrient removal or transformation, biological diversity or uniqueness, wildlife diversity or abundance, aquatic life diversity or abundance, and recreation. Because some wetland functions may be mutually exclusive (e.g., wildlife abundance, recreation), the functions to be protected or restored will be determined on a wetland-by-wetland basis, considering natural wetland characteristics and overall benefits to the watershed. The initial adoption of

a site-specific wetlands classification and related standards to replace the interim classifications and standards described above shall not be considered a downgrading.

3.1.24 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE; MARCH, 1993 HEARING ON WETLANDS CLASSIFICATIONS AND STANDARDS:

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:

A. WETLANDS

1. Definitions

The Commission considers the existing definition of "state waters" broad enough to include wetlands. Therefore, the definition has not been modified.

To add further clarity in this regard, a definition of "wetlands" has been added to the regulation. This definition is the same as that used by both EPA and the U.S. Army Corps of Engineers, except that the list of examples included in the federal definition has been omitted. These examples do not appear to be generally relevant to the types of wetlands most likely to be found in Colorado. The Commission believes that use of this definition is appropriate for consistency with Clean Water Act programs. The Commission recognizes that the site-specific application of this definition has led to considerable controversy, for example with respect to the Federal Interagency Delineation Manual. That controversy addresses a level of detail that is beyond the scope of this hearing. The Commission generally anticipates that implementation of this definition in Colorado will be consistent with the federal delineation manual once it is finalized, taking any relevant regional differences into account. However, the Commission will await resolution of the issues pertaining to the federal delineation manual and, depending on how such issues are resolved, may elect to provide further clarification or refinement regarding the appropriate delineation of wetlands in Colorado.

A definition of "constructed wetlands" has also been added to the regulation. This definition is intended to provide further clarification as to which wetlands will be subject to water quality classifications and standards. Consistent with the definition of "state waters", those wetlands that are designed, constructed and operated for the purpose of treatment of wastewater or storm water, are excluded from coverage. Wetlands constructed as a part of environmental remediation provided under CERCLA or RCRA and section 319 of the Clean Water Act are also excluded since they also serve primarily a treatment function. The Commission has used the term "primary purpose" rather than "sole purpose" because it recognizes

that some wetlands created for the purpose of treatment may, as a secondary matter, provide other beneficial functions. These secondary benefits should not be discouraged by an overly restrictive definition of constructed wetlands.

There was considerable debate in the hearing regarding whether wetlands constructed for treatment on previously existing wetlands sites should qualify as constructed wetlands, and thereby be excluded from state waters. The Commission believes that such wetlands should be considered constructed wetlands where approval or authorization has been obtained under section 404 of the Federal Act for filling in the previous wetlands. In other words, if a judgment is made in the 404 program that previously existing wetlands may appropriately be eliminated by or transformed into new constructed wetlands for treatment purposes, the water quality standards system should be applied in a manner that is consistent with that determination. Moreover, the existence of the water quality standards adopted by the Commission for wetlands is not intended to affect section 404 permit determinations regarding the permanent filling of areas of state waters. Rather, the standards are intended to govern activities potentially impacting wetlands that will continue to exist as (other than constructed) wetlands after any fill occurs. The Commission recognizes that some flood control, urban drainage improvement and stormwater management activities may have been conducted without prior 404 approval, but such activities may have resulted in the creation of wetlands which could be useful for purposes of complying with the new stormwater discharge requirements. If 404 requirements are demonstrated to be no longer applicable or enforceable, or after-the-fact authorization can be obtained from the Corps of Engineers, such created wetlands shall be considered constructed wetlands. Constructed wetlands are required to be permitted under the CDPS system if they are designed to provide treatment for wastewater or stormwater point sources and discharge to state waters. HOWEVER, THERE IS NOTHING IN THE REGULATION THAT INTERFERES WITH THE CORPS OF ENGINEERS' RESPONSIBILITY TO NEGOTIATE MITIGATION FOR WETLANDS LOST IN A PROJECT FOR WHICH A SECTION 404 PERMIT IS REQUIRED.

Next, a definition of "compensatory wetlands" has been added which includes wetlands created to mitigate for adverse impacts to other wetlands. The definition of constructed wetlands includes a provision clarifying that wetlands created to provide mitigation for adverse impacts to other wetlands will not qualify as "constructed wetlands". If new wetlands are created essentially to replace other wetlands which were state waters, such new wetlands should also be protected as state waters.

Next, a definition of "created wetlands" has been added. Many wetlands today are not natural, but rather created as a result of human actions. In many instances, such wetlands are the unintentional result of topographic or hydrologic modifications undertaken for other purposes. Examples would include wetlands resulting from highway construction or from irrigation tailwaters. These wetlands satisfy the statutory definition of "state waters". However, they have been separately defined because the Commission

believes that their varied nature warrants separate treatment under the water quality classification and standards system, as discussed further below.

The final revision to the Definitions section is the addition of a definition of "tributary wetlands". The Commission has added this term to the definitions because it is used in section 3.1.13(1)(e) to identify certain wetlands that are subject to existing surface water classifications, and some of the associated standards, on an interim basis. This definition does not require a constant hydraulic connection between the wetlands and other surface waters, but rather a situation in which such a connection will exist on at least a periodic basis.

To summarize, the result of this set of definitions, as further elaborated below, is as follows: (1) all wetlands that are not constructed wetlands are state waters, and are subject to the narrative standards; (2) all tributary wetlands are initially subject to interim classifications and numeric standards; (3) created wetlands are initially subject only to the narrative standards; (4) compensatory wetlands are subject to the classification and standards of the wetlands they mitigate; and (5) wetlands that are not tributary wetlands or created wetlands (sometimes referred to generally as isolated wetlands) are also initially subject to the narrative standards.

2. Classifications

The Commission has decided as a matter of policy that the approach to water quality classifications and standards for wetlands in Colorado that will result in the most appropriate protection of the resource with the least disruption to the current system is a two-step process. The initial step is a clarification that for wetlands that are tributary to other surface waters (except for created wetlands), the classifications adopted for the segment into which the wetlands fall will apply on an interim basis. This is consistent with the Commission's approach to classifying all tributaries of a segment. This approach will also ensure that the use of the streams to which the wetland is tributary is not impacted. THE COMMISSION RECOGNIZES, HOWEVER, THAT THE USE OF WETLANDS AS DRINKING WATER SUPPLY SOURCES IS HIGHLY UNLIKELY. FOR THAT REASON, THE COMMISSION'S RULE EXEMPTS TRIBUTARY WETLANDS FROM THE DRINKING WATER SUPPLY CLASSIFICATION, EVEN IF THE SEGMENT TO WHICH THEY ARE HYDROLOGICALLY CONNECTED IS SUBJECT TO SUCH CLASSIFICATION. THIS DOES NOT MEAN THAT DRINKING WATER SUPPLY CANNOT BE CONSIDERED A WATER QUALITY DEPENDANT FUNCTION OF WETLANDS, BUT ONLY THAT SUCH A DETERMINATION MUST BE MADE ON A CASE-BY-CASE BASIS. The Commission intends that in the next round of basin-specific rulemaking hearings appropriate language will be added for each basin to further clarify the application of existing classifications as interim classifications for wetlands that are tributary to other surface waters in the basin.

The Commission has provided that existing surface water classifications will not be considered to apply to created

wetlands, which have been defined as described above. Rather, these wetlands will initially be subject only to the narrative standards set forth in new subsection 3.1.11(1)(b). The Commission has determined this distinction to be appropriate because of the varied nature of these wetlands. Because these wetlands are not natural, their functions may in many instances be more limited than those of other wetlands. Moreover, a blanket application of classifications and standards to these wetlands may create a counter-productive incentive for the elimination (e.g. through draining) or prevention of such wetlands in the future. Finally, it should be noted that if it is determined that specific wetlands of this type warrant additional or more precisely defined protection, the wetlands classification described below, along with associated site-specific standards, can be adopted.

The second step in the process established by the Commission is the application of the new wetlands classification established in section 3.1.13(1)(e)(v), which can be applied on a site-specific basis. The protection resulting from such a site-specific classification could be more or less stringent than that provided by the interim classifications. Some wetlands may have unique functions that are not adequately protected by the interim classifications and standards. In other instances, the interim classifications and standards may protect uses, e.g. sensitive aquatic species, that are not present in particular wetlands and therefore do not require site-specific protection. Because the initial adoption of the wetlands classification, and associated site-specific standards, to replace the interim classifications would provide the first opportunity for review of the site-specific factual circumstances of the wetlands in question, the Commission has provided that such a revision would not be considered a downgrading. This provision is intended to apply only the first time a wetland-specific classification and associated standards are adopted to replace the interim standards established by this rulemaking action.

The new wetlands classification also can be applied to any wetlands that are not tributary to other surface waters. These wetlands, sometimes referred to as isolated wetlands, would initially be protected by the statewide narrative standards in new subsection (1)(b) (discussed below), which apply to all state surface waters. In addition, since these wetlands would generally be associated with the ground water table, they would receive some protection from the statewide, regional, and site-specific ground water quality standards that the Commission has adopted.

Where the Commission applies the new wetlands classification on a site-specific basis, the intent of establishing the classification will be to maintain or restore appropriate wetland characteristics and functions, within the range of natural variation of the affected wetland. Thus, where the site-specific wetlands classification includes the "sediment or other pollutant retention" function, the intent of including this function within the classification is to promote the maintenance or restoration of the natural wetlands characteristics. The classification should not be

viewed as authorizing or promoting the use of the wetlands for treatment or retention of sediments or other pollutants from human sources. Rather, the Commission intends that this classification be interpreted and applied in a manner consistent with section 131.10(a) of the federal water quality standards regulation, which prohibits adoption of waste transport or waste assimilation as a designated use for any waters of the United States.

3. Standards

All wetlands that are state waters (i.e. not constructed wetlands) are subject to the statewide basic standards for all state waters contained in section 3.1.11. Concerns were raised in the hearing regarding the appropriateness of the previous narrative standards (section 3.1.11(1)(a)-(f)) for waters in wetlands. The Commission believes that not all of these standards are appropriate for wetlands.

Accordingly, section 3.1.11(1) has been amended and new subsections (a) and (b) have been created. Subsection (a) continues to apply all narratives to all surface waters, except wetlands. Subsection (b) specifies the narrative standards which are specifically applicable to wetlands.

The Commission also has added new clarifying language to the beginning of section 3.1.11(1) to reinforce the fact that these narrative standards, like all state water quality standards, are not intended to be self-implementing. Rather, implementation occurs only through discharge permits or other regulatory programs specifically designed to include water quality standards implementation as one of their purposes.

Subsection (1)(b)(iv) is a new narrative standard which addresses discharges that would be harmful to water quality dependent functions of wetlands. The Commission intends that implementation of this narrative standard only address activities with adverse water quality impacts. This provision is not intended for example, to be applied as a biological criterion for wetlands that would more broadly mandate preservation of wetlands functions. Any such regulatory provisions should be addressed as part of the broader biological criteria issue, on which the Commission has chosen to defer the adoption of binding standards at this time.

In addition, all wetlands would receive the protection offered by the applicable portions of the antidegradation rule contained in section 3.1.8. A provision has been included in section 3.1.7(1)(b)(iv) to provide that all created wetlands will initially be considered to have a "use-protected" designation. For the same reasons that the Commission has decided to initially apply only narrative standards to these wetlands, the Commission believes that a blanket subjection of such wetlands to antidegradation review requirements is not appropriate at this time. To the extent that specific wetlands do warrant such review, that can be addressed in the site-specific classification and standard-setting process.

The need to apply the narrative standards to created wetlands is not expected to arise very frequently. If this need does arise, e.g. due to a proposed point source discharge into such a wetland, the Commission intends that the water quality dependent functions of the particular wetland would be considered by the Division in applying the standards. In many circumstances, those functions may already be limited by the quality of the inflow that has led to the, sometimes unintentional, creation of the wetland in the first place. In such instances, the discharge of additional flows of similar quality may not interfere with those functions. The Commission recognizes that created wetlands can provide beneficial storm retention and cleansing functions, and intends with these provisions to allow enough flexibility so that such functions can be protected without imposing a degree of regulation likely to result in unreasonable treatment costs or a disincentive to the preservation or future creation of such wetlands.

Consistent with the Commission's two-step approach discussed above, wetlands subject to the interim classifications described in section 3.1.13(1)(e)(iv) (i.e., tributary wetlands) shall be initially subject to the numeric standards adopted for the applicable segment, unless it is demonstrated that said standards are not being met in the wetland in question. To the extent that such a standard is not met for any given parameter, the applicable interim standard shall be the ambient levels for that parameter. This is appropriate because the water quality of the wetland was likely existing and taken into account at the time the water quality standards for the applicable segment were adopted. **THE DETERMINATION OF AMBIENT QUALITY SHALL BE MADE BY THE DIVISION, ON A CASE-BY-CASE BASIS BASED ON AVAILABLE DATA AND INFORMATION.**

Alternative numeric standards, to apply when the "wetlands" classification is adopted to replace the interim classifications, or for specific created wetlands, will need to be developed on a case-by-case basis, taking into account the functions of the wetlands in question. In making this determination, the Commission will take into account all relevant and available information. This information may include, e.g., whether the wetlands are natural or created, or, in the case of the latter, the reason for their creation. Given the diversity of functions of individual wetlands, the Commission does not believe that an effort to develop general "table values" for this new classification would be feasible or constructive at this time.

The Commission has decided not to adopt biological criteria as water quality standards for wetlands at this time. Very little is known at present about the structure and function of aquatic communities within wetlands. Concerns that have been raised regarding the lack of standardized, field-tested biological evaluation techniques are much more significant with respect to wetlands than for other surface waters.

Considerable concern was expressed in the hearing regarding the potential impact of wetlands water quality standards on activities involving the exercise of water rights. As in all other areas of

Colorado's water quality program, the potential for application of these standards in a manner detrimental to water rights is constrained by the provisions of section 25-8-104, C.R.S. However, in an effort to more directly alleviate concerns in this regard, the Commission has adopted new subsection 3.1.7(1)(b)(iv)(~~G~~), to clarify that wetlands water quality standards shall not be interpreted or applied in a manner that restricts the lawful exercise of water rights.

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WATER QUALITY

JAN 2 7 1993

CONTROL COMMISSION

Ms. Sue Ellen Harrison, Chair
Colorado Water Quality Control Commission
Department of Health
4300 Cherry Creek Drive South
Denver, CO 80222-1530

Subject: EPA Comments Regarding the November 30, 1992 Proposed Revisions to the Basic Standards and Methodologies for Wetlands

Dear Ms. Harrison:

The purpose of this letter is to transmit to you our written comments regarding the revisions to the Basic Standards and Methodologies developed by the Water Quality Control Division (the Division) and proposed by the Water Quality Control Commission (the Commission) on November 30, 1992. This proposal was the product of a workgroup composed of Colorado Department of Health staff and representatives of industry, local governments, environmental groups, EPA, and other interests. This proposal is a revised version of an earlier April 20, 1992 proposal and would clarify the State water quality standards applicable to wetlands. EPA notes that the Agency's earlier comments on the need to adopt a narrative biological criterion are still applicable (see EPA correspondence to the State dated July 14, 1992).

Our detailed comments follow. We have attempted to highlight both the positive aspects as well as the limitations of the proposed revisions. Where we have identified limitations or deficiencies, we have also indicated specific recommended actions to resolve our concerns. In several instances, our comments are influenced by the draft implementation plan developed by the Water Quality Control Division.

Colorado's Proposed Revisions for Wetlands

During the course of this State rulemaking, the Region has taken the position that Colorado must clarify the water quality standards requirements that are applicable to wetlands by clearly establishing that wetlands are waters of the State to which appropriate existing water quality standards requirements can be applied. The proposed revisions included in Exhibit 7 of the November 30, 1992 proposal include a number of changes to the State's Basic Standards and Methodologies which substantially accomplish that purpose. However, our preliminary assessment is that one specific provision included in the proposal may conflict with both federal and state water quality standards numeric criteria requirements (see comment number 1). We recommend that clarifying changes be made to this provision

to ensure that the requirements of the Clean Water Act and the federal water quality standards regulation are met.

Before addressing our specific comments, I would like to emphasize that the revisions include several very positive proposed changes, and the Division staff should be commended for what has proven to be a long and intensive rulemaking effort. The more positive aspects of the proposal include:

- new regulatory definitions of the several types of wetlands, including tributary, constructed, created, and compensatory wetlands;
- interim standards applicable to all state wetlands until such time as the "wetlands" classification and related standards are applied by the Commission;
- extension of specific narrative criteria and antidegradation provisions to all state wetlands; and
- clarified authority to protect the beneficial uses as well as the water quality-dependent functions of wetlands.

Specific EPA Comments and Suggestions

Although the proposal will have the overall effect of clarifying and improving the level of protection afforded to Colorado's wetlands, we believe that certain aspects of the revised proposal merit further consideration by the Division and the Commission. Our comments are described below, with the more significant concerns discussed first.

1. Section 3.1.7(1)(b)(iv)(A)(1), which would apply interim standards to tributary wetlands, appears to conflict with both federal and state regulatory requirements. This proposed provision specifies that:

> ***Until such time as the Commission adopts a "wetlands" classification for the tributary wetland, water quality in the wetland shall be maintained for each parameter at whichever of the following levels is less restrictive:***
>
> ***(a) existing ambient quality as of [effective date of this regulation], or***
>
> ***(b) that quality which meets the numeric standards (except for numeric standards for pH and dissolved oxygen) of the tributaries of the surface water segment to which the wetland is most directed hydrologically connected.***

We believe that part (a) of this provision could be interpreted as establishing the existing (elevated) level of water quality as the numeric standard in "water quality limited" tributary wetlands, regardless of the cause(s) of the elevated level. EPA believes that application of such a numeric standard: (1) would serve only to maintain existing elevated levels of water quality, (2) would not provide an appropriate basis for regulating controllable sources, and (3) would likely fail to fully protect the designated beneficial uses of the wetland. Based on this assessment, we believe that the proposed provision, if adopted, would violate § 131.11 of the federal water quality standards regulation. This section of the federal regulation specifies that:

> ***...criteria must be based on sound scientific rationale and must...protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use.***

We also believe that this revised provision could be read as inconsistent with a number of existing provisions of the Colorado Basic Standards and Methodologies (e.g., 3.1.7(1)(b)). Further, although 3.1.7(1)(b)(ii) establishes the Commission's authority for setting ambient-based criteria, this provision addresses only those situations where there are natural or irreversible man-induced water quality levels that exceed table values. Specifically, 3.1.7(1)(b)(ii) allows that:

> ***For State surface waters where the natural or irreversible man-induced ambient water quality levels are higher than specific numeric levels contained in Tables I, II, and III, but are determined adequate to protect classified uses, the Commission may adopt site-specific chronic standards equal to the 85th percentile of the available representative data.***

We read this provision as limiting the use of ambient-based standards to situations where the elevated ambient levels are the result of "natural or irreversible man-induced" sources of pollution. Because the proposed interim standard for tributary wetlands at 3.1.7(1)(b)(iv)(A)(1) does not clearly incorporate this limitation, it could be interpreted as sanctioning any existing wetlands impairment that is the result of controllable sources and sanctioning the establishment of new sources of pollution at the existing elevated or impaired level (provided, in each case, that the standards of downstream segments would be satisfied).

We suggest that the best way to resolve this issue would be to apply the numeric standards of the tributaries of the connected segment to tributary wetlands on an interim basis and to specify, in the Statement of Basis and Purpose, that existing authorities for setting ambient-based criteria (found at 3.1.7(1)(b)(ii)) may be the basis

for revising those interim standards on a case-by-case basis where elevated natural or irreversible man-induced conditions are evident.

Another option would be for the State to apply ambient-based interim standards to tributary wetlands on a generic basis to cover those specific instances where the Division determines that elevated levels are the result of natural or irreversible man-induced sources of pollution. For example, proposed 3.1.7(1)(b)(iv)(A)(1) could be revised as follows:

> ***Until such time as the Commission adopts a "wetlands" classification for the tributary wetland, water quality in the wetland shall be maintained for each parameter at ~~whichever of the following levels is less restrictive~~ one of the following:***
>
> ***~~(b)~~(a) that quality which meets the numeric standards (except for numeric standards for pH and dissolved oxygen) of the tributaries of the surface water segment to which the wetland is most directed hydrologically connected, or***
>
> ***~~(a)~~(b) where natural or irreversible man-induced ambient water quality levels are higher than the numeric standards identified in paragraph (a), existing ambient quality as of [effective date of this regulation].***

One feature of this later option would be that, unlike ambient-based criteria for other surface waterbody types, ambient-based criteria for wetlands would be determined on an ad hoc basis by the Division, and would not be subject to a site-specific rulemaking process.

In addition to the two options outlined above, we would also be open to other possible options to address this issue provided that, pursuant to 40 CFR 131.11, it is clear that the interim standards applicable to tributary wetlands will protect the most sensitive designated use. However, absent clarifying changes prior to adoption, EPA Region VIII would be likely to conclude that disapproval of 3.1.7(1)(b)(iv)(A)(1) is necessary to meet the requirements of the Clean Water Act.

Based on the workgroup discussions, we believe there has been considerable confusion regarding the upcoming permits process for stormwater discharges and how the State's proposed water quality standards for wetlands will affect that process. It is possible that the Division's approach to setting interim standards for tributary wetlands was shaped, in part, by this issue and the comments which were received in response to this issue. We would like to emphasize that the Region's position is that stormwater permits will be based on implementation of appropriate best management practices which are expected to achieve water quality standards, but that such

stormwater permits will not be required to include numeric effluent limits which are calculated to achieve standards. However, we believe that such water quality-based effluent limits may be appropriately applied to any non-stormwater NPDES discharges to wetlands.

2. The Division's draft implementation plan, "Implementation of Wetlands Water Quality Standards," has clarified some issues but also raised others. In particular, we believe that the following issues merit further consideration by the Commission and the Division:

   a. Is the concept of a regulatory mixing zone appropriate for wetlands? Wetlands are special aquatic sites, often with little flow and very limited "mixing" potential. We suggest that, as a matter of policy, the State should require regulated discharges to wetlands to comply with water quality standards at the end-of-pipe and not allow a regulatory mixing zone or other allowance for dilution. At a minimum, the state should establish a clear presumption against a mixing zone or an allowance for dilution and require dischargers to demonstrate that there is a sound scientific basis for allowing a mixing zone or an allowance for dilution for purposes of calculating effluent limits.

   b. How will the concept of "net environmental benefit" as described in the draft implementation plan be applied with respect to implementation of narrative criteria for wetlands? For example:

      Is the provision applicable only to created wetlands?

      Would application of the provision result in more stringent water quality requirements in "high value" wetlands, as defined using the Corps of Engineers Wetland Evaluation Technique (COEWET)?

      Is the discharger required to demonstrate a "credible threat" to relocate the discharge in question (and thus eliminate the created wetland)?

   c. How will antidegradation requirements be applied to "reviewable" wetlands subject only to narrative and basic standards (presumably this means all isolated wetlands not designated Use Protected or Outstanding Waters)? The draft implementation plan states that antidegradation requirements in such wetlands "will be satisfied through the Division's implementation of the narrative standards." If we are reading this correctly, it seems to say that antidegradation requirements will not be applied to such wetlands. What is the basis for this decision?

3. EPA has established as a minimum requirement that state water quality standards are to include wetlands in the definition of "state waters" (see ***Water Quality Standards for Wetlands, National Guidance***, U.S. EPA, July 1990)[1]. In the revised proposal, the state has deleted the reference to wetlands from the previously-proposed definition of "state waters." The Statement of Basis and Purpose asserts that the Commission considers the existing definition of "state waters" broad enough to include wetlands. EPA continues to prefer amending the definition of "state waters" to include a reference to wetlands. However, the state may resolve this issue by submitting to EPA a State Attorney General opinion attesting to the fact that the existing definition of "state waters" includes all state wetlands.

4. The State has made several revisions to the previous proposal to address wetlands which are created as mitigation, defined in the proposal as "compensatory wetlands." EPA endorses these changes but suggests that, where the compensatory wetland is hydrologically-connected to an existing segment, the interim standards for the compensatory wetland should be based on the standards of the segment to which the compensatory wetland is most directly connected. This suggestion differs from the Division's revised proposal, which would apply the "standards of the wetlands they mitigate..." to all compensatory wetlands.

5. The revised proposal clarifies that created wetlands shall have a Use Protected designation for purposes of antidegradation requirements. The revised proposal is less clear on the antidegradation requirements applicable to tributary, compensatory, and other wetlands. The Statement of Basis and Purpose states that "all wetlands would receive the protection offered by the applicable portions of the antidegradation rule contained in section 3.1.8." Consistent with this statement, we presume that tributary wetlands would be subject to the antidegradation requirements applicable to the tributaries of the connected segment. Likewise, we presume that compensatory wetlands would be subject to the antidegradation requirements applicable to the wetlands they mitigate (see comment number 4). We request confirmation of these interpretations and clarification of the antidegradation requirements applicable to "other wetlands" which would include all naturally occurring isolated wetlands (see comment number 2c).

6. The revised proposal would apply specific narrative criteria solely to wetlands. As a result of these changes, certain narrative standards applicable to other surface waters would not be applicable to wetlands (e.g. narratives addressing bottom deposits, floating debris, scum or other surface materials, etc.). EPA continues to support application of all of the State's narrative criteria to wetlands. Because application of

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[1] The basis for this minimum requirement is that CWA § 303(c) requires States to adopt water quality standards for all surface waters, which are defined within EPA regulations as including all wetlands.

these narratives is clearly limited to activities which are subject to control regulations, EPA believes that they may be appropriately applied to wetlands where they may be valuable as the basis for permitting, certification, or enforcement actions where it can be shown that a narrative standard is violated or potentially violated as a result of a regulated activity.

7. With regard to the proposed definition of "wetlands," EPA continues to recommend that the State adopt EPA's regulatory definition for the term "wetlands":

> *Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.*
>
> See 40 CFR 232.2(r).

Adoption of this definition would ensure consistency with federal regulations. However, EPA finds the proposed definition to be acceptable. This definition is identical to the EPA regulatory definition except that it deletes the final sentence. EPA also accepts the draft rationale, which explains that the cited examples (swamps, marshes, etc.) do not appear to be generally relevant to the types of wetlands most likely to be found in Colorado.

8. The proposed regulations at 3.1.13(e)(v) state that the Commission may adopt a "wetlands" classification based on the functions of the wetlands in question. We suggest that the Commission include in the Statement of Basis and Purpose additional discussion regarding situations in which the "wetlands" classification is likely to be applied in the short-term. Is it the intent of the Commission to apply this classification to all State wetlands? What schedule/approach will be followed in applying this classification to wetlands?

Conclusion

Although adoption of the proposed revisions would satisfy, in large part, EPA's minimum expectations for the current triennium, the proposal would not complete the job of establishing water quality standards applicable to wetlands. Most importantly, Colorado needs to re-visit the proposed interim numeric standards for tributary wetlands and consider alternative options that will result in interim standards for such wetlands that are consistent with § 131.11 of the federal water quality standards regulation. In the longer term, the state will need to finally resolve the classifications and standards that will be applicable to state wetlands by applying the "wetlands" classification and appropriate standards on a site-specific basis.

Apart from the concerns and suggestions noted above, we view the proposal as a very positive first step toward establishment of fully-protective wetland water quality standards. EPA generally supports the revisions proposed by the Division as a beginning in what EPA views as an iterative, evolving effort toward a fully-developed wetland water quality standards program.

I hope these comments will be useful to the Commission during the March 2, 1993 rulemaking hearing. In general, although the Division's proposal would not implement all of EPA's recommendations, it does provide a constructive beginning. However, it will be crucial to continue the development and evolution of the applicable wetland water quality standards. If you have questions concerning our comments, please call me or have your staff contact Jim Luey, Chief, Monitoring and Standards Section, at 293-1425.

Sincerely,

Max H. Dodson, Director
Water Management Division

cc: David Holm