

# Colorado

## State Agency

The Colorado Department of Public Health and Environment, Water Quality Control Division (WQCD) is the agency responsible for maintaining, restoring, and improving the quality of Colorado's waters.<sup>1</sup> The WQCD is organized into two sections: the Watershed Section and the Water Quality Protection Section, each consisting of three units (see Figure One).

The State of Colorado is hydrologically divided into seven major river basins: Arkansas, Rio Grande, San Juan, Colorado, Green, Platte, and Republican Rivers. Colorado's seven major river basins have been divided into four major administrative watersheds: the Arkansas/Rio Grande, the Upper Colorado, the Lower Colorado, and the South Platte. A watershed coordinator works in each watershed and acts as the WQCD's field representatives.

**Figure One: WQCD Units and Function**

<b>Watershed Section</b>	Monitoring Unit	Ambient water quality monitoring (chemical, physical, and biological sampling and field investigations; laboratory-based toxicity bioassays); compliance sampling in conjunction with watershed-scale investigations and targeted facility inspections; lake and reservoir monitoring and assessment; and bioassessments.
	Assessment Unit	Surface and groundwater standards development; TMDL development, data analysis, interpretation, and reporting; water quality modeling; antidegradation reviews; §401 certifications; support to permits group; support to the Water Quality Control Commission (WQCC); and assessment of agricultural chemicals in groundwater.
	Outreach and Assistance Unit	Community-based water quality management planning and financial assistance (watershed partnerships, nonpoint source cooperative projects, drinking water and pollution control facility grants and loans).
<b>Water Quality Protection Section</b>	Permits Unit	NPDES program management (industrial and domestic discharge permits, stormwater permits, biosolids authorizations, pretreatment control mechanisms, and groundwater discharge permits).
	Drinking Water and Waste Water Technical Services Unit	Compliance assurance and technical assistance for drinking water and waste water (DW/WW) facilities (including area-wide WW facility planning and DW capacity development; facility siting approval; engineering plan review; facility construction inspection; compliance sampling and inspection; compliance assistance and comprehensive performance evaluation; spill response, and enforcement case support).
	Compliance and Monitoring and Data Management Unit	Evaluation of self-reported DW/WW facility monitoring data, facility data management, enforcement of monitoring requirements, and self-reported violations.

<sup>1</sup> Additional information is available on their webpage: <http://www.cdphe.state.co.us/wq/wqhom.asp>.

### **Delegated Permit Authority**

Colorado has been delegated permit authority for the NPDES permit program including stormwater permits for all areas except Indian lands and Federal facilities. The EPA is the permitting authority for BLM NPDES and stormwater permits. The State has also been delegated authority for the §404 dredge and fill program.

### **State Definition of Covered Waters**

According to Colorado State law, "waters of the state" are "all streams, lakes, rivers, ponds, wells, impounding reservoirs, watercourses, springs, drainage systems, and irrigation systems; all sources of water such as snow, ice, and glaciers; and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, located wholly or partly within or bordering upon this state and within the jurisdiction of this state."<sup>2</sup>

State water quality standards extend to intermittent non-navigable tributaries, isolated wetlands, and groundwater. For groundwater, specified areas are designated to delineate a special activity or use.

### **Point Sources and NPDES Permits**

The BLM does not hold any NPDES permits in Colorado.

### **Water Quality Standards**

Colorado's water quality standards and regulations are codified in Regulation No. 31 of the Colorado Code of Regulations (C.C.R.) at Title 5 C.C.R. 1002-31 (Basic Standards and Methodologies for Surface Water).<sup>3</sup> Colorado's regulations: 1) set forth provisions regarding the adoption of water-quality based designations for certain surface waters; and 2) establish an antidegradation review process applicable to certain activities impacting the quality of surface waters.<sup>4</sup>

### **Designated Uses**

Either of two water quality-based designations may be adopted.<sup>5</sup> An "outstanding waters" designation may be applied to certain high quality waters that constitute an outstanding natural resource. No degradation of outstanding waters by regulated activities is allowed.

A "use-protected waters" designation may be applied to waters with existing quality that is not better than necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water. The quality of these waters may be altered so long as applicable use-based water quality classification and standards are met. Classifications may be established for any of Colorado's water bodies except waters in ditches and other manmade conveyance structures, which shall not be classified.<sup>6</sup> Colorado's designated uses are outlined in Figure Two.

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<sup>2</sup> C.R.S. 25-13-103(12).

<sup>3</sup> Available at: <http://www.cdphe.state.co.us/op/regs/waterregs/100231.pdf>.

<sup>4</sup> See generally, 5 C.C.R. 1002-31.8.

<sup>5</sup> 5 C.C.R. 1002-31.8(2).

<sup>6</sup> 5 C.C.R. 1002-31, 39.

**Figure Two: Colorado State-Designated Use Descriptions**

State-Designated Use Code	State-Designated Use	State-Designated Use Description
AG	Agriculture	These surface waters are suitable or intended to become suitable for irrigation of crops usually grown in Colorado and which are not hazardous as drinking water for livestock.
ALCW1	Aquatic Life Cold Water-Class 1	These are waters that (1) currently are capable of sustaining a wide variety of cold water biota, including sensitive species, or (2) could sustain such biota but for correctable water quality conditions. Waters shall be considered capable of sustaining such biota where physical habitat, water flows or levels, and water quality conditions result in no substantial impairment of the abundance and diversity of species.
ALCW2	Aquatic Life Cold Water-Class 2	These are waters that are not capable of sustaining a wide variety of cold water biota, including sensitive species, due to physical habitat, water flows or levels, or uncorrectable water quality conditions that result in substantial impairment of the abundance and diversity of species.
ALWW1	Aquatic Life Warm Water-Class 1	These are waters that (1) currently are capable of sustaining a wide variety of warm water biota, including sensitive species, or (2) could sustain such biota but for correctable water quality conditions. Waters shall be considered capable of sustaining such biota where physical habitat, water flows or levels, and water quality conditions result in no substantial impairment of the abundance and diversity of species.
ALWW2	Aquatic Life Warm Water-Class 2	These are waters that are not capable of sustaining a wide variety of warm water biota, including sensitive species, due to physical habitat, water flows or levels, or uncorrectable water quality conditions that result in substantial impairment of the abundance and diversity of species.
DWS	Domestic Water Source	These surface waters are suitable or intended to become suitable for potable water supplies. After receiving standard treatment (defined as coagulation, flocculation, sedimentation, filtration, and disinfection with chlorine or its equivalent) these waters will meet Colorado drinking water regulations and any revisions, amendments, or supplements thereto.
RPC	Recreation Primary Contact	These surface waters are suitable or intended to become suitable for recreational activities in or on the water when the ingestion of small quantities of water is likely to occur. Such waters include but are not limited to those used for swimming, rafting, kayaking and water-skiing.
RSC	Recreation Secondary Contact	These surface waters are suitable or intended to become suitable for recreational uses on or about the water which are not included in the primary contact subcategory, including but not limited to fishing and other streamside or lakeside recreation.

Source: EPA WQSDB available at: [http://oaspub.epa.gov/wqsdatabase/wqsi\\_water\\_body.rep\\_parameter](http://oaspub.epa.gov/wqsdatabase/wqsi_water_body.rep_parameter)

### Water Quality Criteria

Colorado’s water quality criteria are set by the Department of Public Health and Environment – Water Quality Control Division. Figure Three outlines Colorado’s water quality criteria regulations. These regulations provide classifications and numeric standards for Colorado’s river basins.

For groundwater, specified areas are designated to delineate a special activity or use. Site-specific uses and standards are then promulgated for the specified area. Where there is no specified area, and therefore no site-specific standards, “interim narrative standards” apply.

Colorado does not have streamflow criterion to protect streamflow necessary to support existing uses. The State also does not have biological criteria or guidance.

## Sediment

Colorado has issued provisional guidance for assessing sediment impairment to aquatic life.<sup>7</sup> This guidance is currently under revision and could be modified in the near future.

In 1996, the Colorado Sediment Task Force formed to develop a guidance document that could be used to implement the State's narrative sediment standard. The product of the task force was the "Implementation Guidance for the Determination of Impacts to Aquatic Life in Streams and Rivers Caused by the Deposition of Sediment" (Sediment Guidance).<sup>8</sup> This guidance was revised in May, 2002, but remains provisional guidance. Nevertheless, state and federal agencies (including the BLM) have been implementing the sediment guidance on streams identified on the 303(d) List and the Monitoring and Evaluation List.

The approach of the sediment guidance is to compare a sediment-impacted stream to a reference condition for that stream. The reference condition is the stream condition (including sediment deposition and aquatic life) in the absence of sediment impacts. The following steps outline how the comparison of impacted stream to reference stream is made.

- Establish a stakeholder group of multidisciplinary members to design the study and assess endpoints.
- Identify candidate sediment-impacted segments by reviewing reports [305(b), etc.] and completing screening-level reconnaissance surveys.
- Establish an expected or reference condition, considering physical, chemical, and biological attributes (such as watershed size, stream size, ecoregion, channel morphology, flow regime, and elevation).
- Identify reference conditions for comparison, by selecting a reference area that is representative of similar physical and ecological characteristics or is based on an upstream/downstream comparison or hypothetical condition.
- Complete habitat evaluations at the study and reference areas. The analyses must be quantitative for comparison and expressed as a percent of the reference condition. Analysis may include pebble counts, residual pool volume (V\*), embeddedness measurements, and channel type.
- Assess the benthic macro invertebrate and /or fish communities using biomass, abundance, and sediment tolerance endpoints. Impacts to aquatic life are expressed as the percent of reference condition.
- Determine attainment (attained, threatened, or exceeded) of the narrative standard by comparing the percent of reference condition for biological quality and physical habitat quality.

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<sup>7</sup> Colorado Department of Public Health and Environment, Water Quality Control Commission, Water Quality Control Division. Provisional Implementation Guidance for Determining Sediment Deposition Impacts to Aquatic Life in Streams and Rivers. As Revised, May 2002. Available at: <http://www.cdph.state.co.us/op/regs/waterregs/wqccprovisionalguidance98-1-2002.pdf>.

<sup>8</sup> *Id.*

**Figure Three: Colorado’s Water Quality Criteria Regulations**

<b>Regulation No.</b>	<b>Basins</b>
32	Arkansas River Basin
33	Upper Colorado and North Platte River Basins
34	San Juan and Dolores River Basins
35	Gunnison and Lower Dolores River Basins
36	Rio Grande River Basin
37	Lower Colorado River Basin
38	South Platte River Basin; Laramie River Basin; Republican River Basin; Smoky Hill River Basin
39	Colorado River Salinity Standards

Source: Water Quality Control Commission Regulations 5 CCR 1002. Links to these regulations and tables of numeric water quality criteria can be found at: <http://www.cdphe.state.co.us/op/regs/waterqualityregs.asp>.

### **Antidegradation**

Colorado’s Antidegradation Rules are in the “Basic Standards and Methodologies for Surface Waters” (5 CCR 1002-31), also known as Regulation #31.<sup>9</sup> The antidegradation rules are in section 31.8, and are summarized below:

The antidegradation provisions of the Basic Standards and Methodologies for Surface Water: (1) set forth provisions regarding the adoption of water quality-based designations for certain surface waters; and (2) establish an antidegradation review process applicable to certain activities impacting the quality of surface waters. See generally, section 31.8.

Either of two water quality-based designations may be adopted in appropriate circumstances. Section 31.8(2). An “outstanding waters” designation may be applied to certain high quality waters that constitute an outstanding natural resource. No degradation of outstanding waters by regulated activities is allowed. A “use-protected waters” designation may be applied to waters with existing quality that is not better than necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water. The quality of these waters may be altered so long as applicable use-based water quality classifications and standards are met.

Waters that are not given one of these designations are subject to antidegradation review requirements before any new or increased water quality impacts are allowed. Section 31.8(3). The activities that are subject to these requirements are those that: (1) require a discharge permit; (2) require water quality certification under section 401 of the federal Act; or (3) are subject to control regulations. The first step in the antidegradation review process is a determination, in accordance with criteria specified in the regulation, whether “significant degradation” would result from the activity. If not, the review ceases. If significant degradation would result, a determination is made whether the degradation is necessary to accommodate important economic or social development in the area in which the waters are located. This determination is based on an assessment of whether there are quality control alternatives available that would result in less degradation of state waters and which are economically, environmentally, and technologically reasonable. The proposed degradation is allowed only if no such alternatives are available.

<sup>9</sup> Available at: <http://www.cdphe.state.co.us/op/regs/waterregs/100231.pdf>

Colorado’s version of ONRWs or Tier III waters is “Outstanding Waters.” Colorado’s Outstanding Waters are included on the standards tables in Regulations 32-38 (see Figure Three above). Figure Four lists Colorado’s Outstanding Waters. The Water Quality Control Commission (WQCC) determines the suitability of waters for “Outstanding Waters” designation.

Colorado does not make use of the Tier II \_ classification, and surface waters are not formally designated as Tier I or II. However, Colorado does have waters designated and all designations are provided in the basin standards regulations (see Figure Three above).

**Figure Four: Colorado’s Outstanding Waters**

<b>Outstanding Waters</b>	<b>Description</b>
<b><i>Regulation 32: Arkansas River Basin</i></b>	
Upper Arkansas River Basin	All streams, wetlands, lakes, and reservoirs within Mount Massive and Collegiate Peaks Wilderness Areas.
<b><i>Regulation 35: Gunnison and Lower Dolores River Basins</i></b>	
Upper Gunnison River Basin	All tributaries, including lakes, reservoirs, and wetlands, within the LaGarita Wilderness Area; All tributaries to the Gunnison River, including lakes, reservoirs, and wetlands, within the West Elk, Collegiate Peaks, Maroon Bells, Raggeds, Fossil Ridge, and Oh-Be-Joyful Wilderness Areas; All tributaries to the Gunnison, including lakes, reservoirs, and wetlands, within the Big Blue Wilderness Area.
North Fork of the Gunnison River Basin	All tributaries to the North Fork of the Gunnison River, including all lakes, reservoirs, and wetlands, within the West Elk and Raggeds Wilderness Areas
Uncompahgre River Basin	All tributaries to the Uncompahgre River, including lakes, reservoirs, and wetlands, which are within the Mt. Sneffels and Big Blue Wilderness Areas.
San Miguel River Basin	All streams, lakes, reservoirs, and wetlands within the boundaries of the Lizard Head and Mt. Sneffels Wilderness Areas.
<b><i>Regulation 37: Lower Colorado River Basin</i></b>	
White River Basin	Trappers Lake, including all tributaries to Trappers Lake.
<b><i>Regulation 38: South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin</i></b>	
Upper South Platte River Basin	All tributaries to the South Platte River, including lakes, reservoirs, and wetlands within the Lost Creek and Mt. Evans Wilderness Areas.
Bear Creek Basin	All tributaries to Bear Creek, including lakes, reservoirs, and wetlands within the Mt. Evans Wilderness Area.
Clear Creek Basin	All tributaries to Clear Creek, including lakes, reservoirs, and wetlands, within the Mt. Evans Wilderness Area.
Boulder Creek Basin	All tributaries to Boulder Creek, including lakes, reservoirs, and wetlands, within the Indian Peaks Wilderness Area.
St. Vrain Creek Basin	All tributaries to St. Vrain Creek, including lakes, reservoirs, and wetlands, which are within the Indian Peaks Wilderness Area and Rocky Mountain National Park.

Big Thompson River Basin	All tributaries to Big Thompson River system, including lakes, reservoirs, and wetlands, which are within Rocky Mountain National Park, except for specific listings within Segment 2. [Segment 2 (No designation) = Mainstem of the Big Thompson River, including all tributaries, lakes, and wetlands from the boundary of Rocky Mountain National Park to the Home Supply Canal diversion, except for the specific listing in Segment 7; mainstem of Black Canyon Creek and Glacier Creek below Estes Park water treatment plant. Segment 7 (No designation) = Mainstem of the North Fork of the Big Thompson River from the boundary of Rocky Mountain National Park to the confluence with the Big Thompson River; mainstem of Buckhorn Creek from the source to the confluence with the Big Thompson River].
Cache La Poudre River Basin	Mainstem of the Cache La Poudre River, and all tributaries, including lakes, reservoirs, and wetlands, within Rocky Mountain National Park and the Rawah, Neota, Comanche Peak, and Cache La Poudre Wilderness Areas.
Laramie River Basin	All tributaries to the Laramie River, including lakes, reservoirs, and wetlands, which are within the Rawah Wilderness Area.

### ONRWs on BLM Land

There are no “outstanding waters” on BLM land in Colorado. There are several intermediate designations on the Yampa and Rio Grande where the State recognized segments of high quality water, but they are not designated as “outstanding.”

### State 305(b) Reporting

The National Assessment Database (NAD) contains information on the attainment of water quality standards. Assessed waters are classified as either Fully Supporting, Threatened, or Not Supporting their designated uses. This information is reported in the National Water Quality Inventory Report to Congress under Section 305(b) of the CWA.<sup>10</sup>

### State 303(d) List and TMDLs

The EPA TMDL Tracking System contains information on all impaired waters under section 303(d) of the CWA. The database also has information on EPA-approved TMDLs.<sup>11</sup> As of 1998, the date of the most recent data in the EPA’s tracking system, Colorado reported 79 water bodies on its 303(d) List. At the time EPA received Colorado’s 2004 list, they were still in the process of reviewing the 2002 list which was submitted to the EPA on March 3, 2004. Because Colorado submitted its 2004 list, approval or disapproval of the 2002 list was not necessary. The State’s most recent 303(d) List is found in “2004 Section 303(d) List: Water Quality-Limited Segment Requiring TMDLs,” Regulation #93 (5 CCR 1002-93).<sup>12</sup> In August 2004, the EPA approved in part and disapproved in part this 303(d) List. The EPA added six waters and associated pollutants and one pollutant for a water already listed by the State to Colorado’s 2004 303(d) List.<sup>13</sup>

<sup>10</sup> Colorado’s attainment of water quality standards can be found at: [http://oaspub.epa.gov/waters/w305b\\_report.state?p\\_state=CO](http://oaspub.epa.gov/waters/w305b_report.state?p_state=CO).

<sup>11</sup> Colorado’s 1998 303(d) Lists and approved TMDLs are available at: [http://oaspub.epa.gov/waters/state\\_rept.control?p\\_state=CO](http://oaspub.epa.gov/waters/state_rept.control?p_state=CO).

<sup>12</sup> Available at: <http://www.cdphe.state.co.us/op/reggs/waterregs/100293wqlimitedsegmtmdls.pdf>.

<sup>13</sup> The EPA’s decision to partially approve and partially disapprove Colorado’s Section 303(d) and EPA’s additions to the list can be found at: [http://www.cdphe.state.co.us/op/wqcc/SpecialTopics/303\(d\)/EPA303dReview\\_0704.pdf](http://www.cdphe.state.co.us/op/wqcc/SpecialTopics/303(d)/EPA303dReview_0704.pdf).



Colorado's WQCD submitted 12 TMDLs to the EPA prior to June 30, 2000. An additional 21 written determinations that TMDLs are not necessary for specific pollutant/segment combinations were also submitted.

Colorado does not maintain GIS coverage of impaired streams. However, the BLM Colorado State Office has GIS coverage of impaired streams on BLM land.

### **303(d) List**

#### Listing and Credible Data Standards

Colorado's procedures for listing and de-listing stream segments are found in "Section 303(d) Listing Methodology."<sup>14</sup> Listing criteria used to place a segment on the 303(d) List includes the following: 1) segments that have temporary modifications of standards; and 2) segments that have classified use impairment based on credible evidence of impairment.

When conducting a listing assessment, Colorado uses specific data criteria:

- Only data for which sample collection and laboratory analysis methods are known will be used. Quality assurance requirements must be met by all data, and must be made available to the division for review.
- Chemical data should be supported by a Sampling and Analysis Plan (SAP).
- In-situ bioassay test results, or other ambient toxicity test results, must demonstrate adverse effects as measured by a statistically significant response relative to a representative reference or control.
- Sufficient information must be available to show the data represents existing conditions.
- The data must have been collected within the last five years, or the division must determine the data is representative.
- Physical and biological assessments must be performed in accordance with scientifically sound methodologies by a trained observer.
- Anecdotal information, in absence of chemical, physical, or biological data, will not be adequate to support a non-attainment.
- Data collected during or immediately after events that are temporarily impacting a water body, or which are not representative of normal conditions will not be used to support a non-attainment decision.

Colorado will accept other methodologies and protocols for physical and biological assessments based upon a review of the methodology and protocol along with its site-specific application. The WQCD document "Guidance on Data Requirements and Data Interpretation Methods Used in Stream Standards and Classification Proceedings" is used for data assessment for list development.<sup>15</sup> Released in August of 2004, this document outlines Colorado's minimum data qualifiers, the format of data, the quality of data, the quantity of data, and data interpretation methods.

Data considered in assessment decisions must be representative of the water body and account for seasonal and diel variations. When the assessment utilizes third party data, the WQCD may require submittal of an SAP, or other documentation, to assure sample results are representative for these conditions. Attainment of chronic chemical standards, in both lotic

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<sup>14</sup> Available at: [http://www.cdphe.state.co.us/op/wqcc/SpecialTopics/303\(d\)/303\(d\)ListMeth2004final.pdf](http://www.cdphe.state.co.us/op/wqcc/SpecialTopics/303(d)/303(d)ListMeth2004final.pdf).

<sup>15</sup> Available at: [http://www.cdphe.state.co.us/wq/Assessment/Assess\\_pdf/DATA%20REQUIREMENTS%20POLICY.pdf](http://www.cdphe.state.co.us/wq/Assessment/Assess_pdf/DATA%20REQUIREMENTS%20POLICY.pdf).



(streams and rivers) and limnic (lakes and reservoirs) systems, is based upon the 85<sup>th</sup> percentile of the ranked data, except: 1) hardness based metal standards are evaluated by comparing the 85<sup>th</sup> percentile against the assigned hardness based equation using either the mean hardness at low flow or, when available, paired hardness and flow data; 2) total recoverable iron is evaluated against the median value, or the 50<sup>th</sup> percentile; 3) dissolved oxygen is evaluated at the 15<sup>th</sup> percentile; and 4) minima pH is evaluated against the 15<sup>th</sup> percentile, maxima at the 85<sup>th</sup>.

Besides its 303(d) List, Colorado also has a “Monitoring and Evaluation List” (M&E List).<sup>16</sup> This list was devised as an administrative and tracking tool to identify the segments where there was reason to suspect water quality problems, but there was some uncertainty about their degree of use support. Colorado is monitoring a number of segments located on Federally managed lands in cooperation with the BLM and the USFS. These are segments which are included on the 1998 M&E List due to potential impairment resulting from excessive sediment deposition.

### De-Listing

Delisting criteria is similar to listing criteria and is further outlined in “Section 303(d) Listing Methodology.”<sup>17</sup> In general, however, delisting criteria used to remove a segment from the 303(d) List includes: 1) segments where Federal, state, or local requirements are stringent enough to attain water quality standards; and 2) segments where approved TMDLs address all the pollutants of concern. If new credible data and information demonstrates that water quality standards and beneficial uses are being attained, then a de-listing process commences. Changes in standards and uses may also cause a water body to be de-listed.

### Nonpoint Sources and 303(d)

Colorado lists nonpoint source impaired waters. As mentioned above, the State maintains an M&E List which identifies many NPS-affected streams. However, placement on the M&E List is primarily determined by data quality/availability, and not by a distinction between point and nonpoint source impairment.

### **TMDLs**

The Colorado Environmental Coalition and Biodiversity Legal Foundation filed a complaint against the EPA in August 1997, and amended it in February 1998, alleging that the EPA had failed to assure that Colorado had established a reasonable schedule for completion of TMDLs for waters on the 1998 303(d) List. At the EPA's request, the WQCD had prepared a schedule for development of TMDLs for segments and pollutants included on the 1998 303(d) List. All TMDLs would be developed by June 30, 2010. Colorado intervened in the lawsuit and was a signatory to a Settlement Agreement filed on August 24, 1999. The Settlement Agreement stipulated a revised schedule for TMDL completion. Figure Five shows the completion schedule for the TMDLs.

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<sup>16</sup> Available at: <http://www.cdphe.state.co.us/op/regs/waterregs/100294wqccmonitoringevaluationlist.pdf>.

<sup>17</sup> Available at: [http://www.cdphe.state.co.us/op/wqcc/SpecialTopics/303\(d\)/303\(d\)ListMeth2004final.pdf](http://www.cdphe.state.co.us/op/wqcc/SpecialTopics/303(d)/303(d)ListMeth2004final.pdf).

**Figure Five: TMDL Completion Schedule**

End Date	Number of TMDLs to be Completed	
	Number	Cumulative Percentage
6/30/00	30	15
6/30/02	50	40
6/30/04	40	60
6/30/06	40	80
6/30/08	38	100

Source: Status of Water Quality in Colorado: 2002. Available at:  
[http://www.cdphe.state.co.us/op/wqcc/waterstatus2002/305\(b\)tableofcontents.html](http://www.cdphe.state.co.us/op/wqcc/waterstatus2002/305(b)tableofcontents.html).

### Establishment, Apportionment, and Implementation

The State of Colorado does not have a set protocol for apportioning TMDLs. The State works with stakeholders during apportionment.

Historically, the TMDL program in Colorado has dealt primarily with metals from mining legacy areas and abandoned mine lands. While metals continue to be a focus, the State is increasingly dealing with selenium from agriculture and irrigation return flows.

Most of the TMDLs the BLM is involved in encompass large watershed areas and have multiple stakeholders. The BLM has had little direct involvement with the State's TMDLs. The BLM's primary involvement is dealing with nonpoint sources of pollution. To date, most nonpoint source TMDLs in Colorado have been developed for Park Service and Forest Service lands. These TMDLs have been implemented through park and forest management plans. BLM has a Federal Consistency review with the State every year to determine the BLM's compliance with the CWA in minimizing nonpoint source pollution. There is a review of the BLM's implementation of best management practices (BMPs) in reducing nonpoint source pollution. The BLM has made some on-the-ground improvements in response to State concerns. Although this process is somewhat informal, some of the reviews have occurred in watersheds where TMDLs have been established.

### Water Quality Monitoring

Colorado's Monitoring Unit's activities can be grouped into four general monitoring types: 1) routine sampling, 2) special studies, 3) lake and reservoir monitoring, and 4) aquatic life and habitat studies. The majority of sampling efforts are devoted to the collection of routine water chemistry samples from the four major river basins across the State. River and stream sites in these basins are sampled for the purposes of reviewing and developing standards for triennial reviews, water quality assessments, developing TMDLs, 303(d) listing determinations, and for reporting trends and water quality status in Colorado's section 305(b) report.

Colorado's approach to routine sampling includes concentrating the majority of sampling in a different major basin each year. Each of the four major river basins is sampled intensively once every five years.

Special monitoring studies include synoptic sampling events for TMDL determinations, spill and fish kill investigations, fish tissue sampling, and other water quality investigations.

Lake and reservoir sampling is sporadic depending upon funding, partnerships, and water conditions. In 2004, only one collection was made due to low water levels. The Monitoring Unit is collaborating with University of Colorado Center for Limnology on a nutrient limitation study on Cherry Creek Reservoir, and in 2005, lake and reservoir sampling is expected to expand to include 10-20 water bodies.

Macro invertebrate and habitat samples are collected for the purpose of filling in data gaps of reference site data. The data is used in the development of expected conditions and bioassessments. In 2004, sediment assessments of twenty-two Monitoring and Evaluation (M&E) listed segments were conducted under a cooperative study with the BLM. Fourteen of these were tributaries to the Colorado River below Parachute Creek. The remaining eight are tributaries to the White River. The Monitoring Unit also conducts sediment impairment studies where there is a listing dispute.

### **Nonpoint Source Pollution Program**

Colorado's NPS Management Program was updated, adopted by the WQCC, and approved by the EPA in 2000. The management program provides information on the BMPs available to address nonpoint sources in all categories as well as administering programs for restoration and prevention activities. Colorado's NPS program is two tiered:

1. The program level identifies and prioritizes NPS issues, coordinates resources and partners to address these issues, and tracks progress in water quality improvement.
2. The project level addresses State program priorities through on-the-ground watershed restoration efforts and information/educational campaigns to broaden public awareness of NPS issues.

Historically, Colorado's nonpoint source pollution program has been a voluntary program. The major emphasis of Colorado's nonpoint source pollution program is: 1) encouraging the voluntary use of BMPs, and 2) completing and implementing TMDLs.

Nonpoint source projects that conduct on-the-ground restoration and remediation activities are required through EPA grant conditions to report measurable results from their efforts.<sup>18</sup> Colorado is currently reviewing its approach to monitoring and evaluating nonpoint source projects.<sup>19</sup> Starting with the 2004-2005 319 project cycle, sponsors will be required to provide more definitive water quality baseline data, and subsequent post-project data to substantiate project outcomes.

### **BMPs**

Implementation of BMPs to correct nonpoint source water quality problems is voluntary in Colorado. However, the State has a list of recommended practices and technologies, and these are organized into the following nonpoint source management programs: agriculture/silviculture (including BMPs for grazing, soil stabilization in riparian areas, forest management, and soil stabilization on forest lands), hydrologic modification, information and education, mining, urban, and construction.<sup>20</sup>

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<sup>18</sup> The EPA defines measurable results as "restoring waters to partial or full uses and standards, or as a minimum, reducing pollutant loads such as nutrients and sediment."

<sup>19</sup> Annual Report to the Water Quality Control Commission, Fiscal Year 2003-2004, Water Quality Control Division, Colorado Department of Public Health and Environment, October 1, 2004.

<sup>20</sup> Information on these nonpoint source management programs and associated BMPs is available at: <http://www.cdphe.state.co.us/op/wqcc/Other/NPS/cnpsmpu.html>.

## **Implementation on Federal Land**

Colorado's nonpoint source program has funded (through section 319 grants) projects on the following BLM land: North Park (Kremmling Field Office), Badger Creek (Canon City Field Office), Dinero Tunnel (Canon City Field Office), and Animas River (Durango Field Office).

## **Federal Consistency**

The Federal consistency provisions of section 319 of the CWA authorize Colorado to review Federal financial assistance programs and development projects for their effect on water quality. If the state determines that an application or project is not consistent with the State Nonpoint Source Management Program and notifies the Federal agency of its concerns, the agency must make efforts to accommodate the State's concerns, or explain its decision to not make accommodations, in accordance with Executive Order 12372. Additionally, section 313 of the CWA requires Federal agencies having jurisdiction over property or facilities, or engaged in activities which may result in water pollution, to comply with State and local water pollution control regulations and authorities to the same extent as any non-governmental entity.

Nearly 37% of the surface land and water of Colorado is Federally owned, largely in headwater areas.<sup>21</sup> The State no longer participates in the "Single Point of Contact (SPOC)" process, as described in Executive Order 12372, which discusses the intergovernmental review process for Federal assistance programs and development projects. In addition, due to limited resources, the State does not aggressively pursue review opportunities of most Federal programs. Colorado does not review each forest plan, grazing allotment plan, and other routine management tools. There is, however, a somewhat informal process for Colorado's Federal consistency provisions.

Colorado has developed a BMP audit process for use in evaluating USFS and BLM activities. These audits are conducted by the WQCD each year and are intended to evaluate the effectiveness of an individual practice or set of practices on water quality. Should an audit identify areas of concern in how BMPs are implemented, the WQCD would notify the agency of the findings and encourage a collaborative process to identify options for improving the use of a particular practice. Audits are performed on timber sales, road construction, grazing allotments, etc.

## **Enforceable State Laws/Policies/Programs to Limit NPS Pollution**

### **Water Pollution Control Laws**

Colorado's Water Quality Control Act contains a general policy declaration in favor of preventing the discharge of untreated pollutants; however, the law does not have a general enforceable prohibition that directly applies to nonpoint sources. The act confers authority on the WQCC to adopt regulations, which may include nonpoint source regulations. The act also specifically requires the use of non-regulatory mechanisms before regulatory approaches may be used for agricultural nonpoint sources, and it places express limitations on the use of permits and other control regulations for agricultural nonpoint source discharges.

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<sup>21</sup> Colorado's Nonpoint Source Management Program, Colorado Department of Public Health and Environment, Water Quality Control Division, January 10, 2000.

Under the act, the WQCC may classify State waters, and must set water quality standards.<sup>22</sup> The act further declares it the policy of the State “to provide that no pollutant be released into any state waters without first receiving the treatment or other corrective action necessary to reasonably protect the legitimate and beneficial uses of such waters.”<sup>23</sup> “Pollutant” is defined to include, among other things, biological nutrient, biological material, rock, sand, and agricultural waste.<sup>24</sup> The act expressly makes this policy enforceable against point sources by prohibiting pollutant discharges from point sources without a permit.<sup>25</sup> It allows, but does not require, adoption of measures for nonpoint sources of pollution, and expressly exempts agricultural activities from any permitting requirements except as required by Federal law. For basins not meeting water quality standards, the commission has promulgated special control regulations. These regulations can and often do include nonpoint source pollution controls.

### **Fish and Fisheries laws**

Colorado’s fish and wildlife code does not include enforceable provisions against nonpoint source pollution, except operational requirements placed on projects that could affect fishing waters (see Earth-Disturbing Activities below).

### **Operational Requirements**

#### Forestry Requirements

The State Board of Agriculture has the power and duty “to foster and promote the control of soil erosion on ... forest lands.”<sup>26</sup> These forestry laws rely on incentive measures and do not contain enforceable provisions.

#### Agriculture and Grazing Requirements

The soil conservation code creates soil conservation districts, but does not vest them with regulatory powers. However, the Soil Erosion-Dust Blowing Act makes it “the duty of the owner or occupier of any land in this state to prevent soil blowing therefrom, as nearly as can be done.”<sup>27</sup>

Colorado law also declares it “the policy of this state to preserve the grasses and vegetation on the public domain ... and to prevent erosion of the soil and thereby conserve the waters and water supply originating on the public domain ranges of the state.”<sup>28</sup> It creates a cause of action to seek an injunction reducing use of public range lands when “any such range is overstocked ... and vegetation is being permanently destroyed ... and the water supply upon which any person is dependent is about to be diminished or impaired.”<sup>29</sup>

Colorado has promulgated feedlot rules under the rulemaking authority in the Water Quality Control Act. Under these rules, “concentrated animal feeding operations are required to operate as no-discharge facilities.”<sup>30</sup> The rules set out BMPs, which are enforceable by the

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<sup>22</sup> Colo. Rev. Stat. §§ 25-8-203, 204.

<sup>23</sup> Colo. Rev. Stat. §§ 25-8-102(2).

<sup>24</sup> Colo. Rev. Stat. §§ 25-8-1023(14).

<sup>25</sup> Colo. Rev. Stat. §§ 25-8-501(1).

<sup>26</sup> Colo. Rev. Stat. § 23-30-202(1)(b).

<sup>27</sup> Colo. Rev. Stat. § 35-72-102(1).

<sup>28</sup> Colo. Rev. Stat. § 35-45-106.

<sup>29</sup> Colo. Rev. Stat. § 35-45-106.

<sup>30</sup> 5 Colo. Code Regs. § 1002-19-4.8.3(A).

department. In addition, the department has extensive rules on the use of biosolids as fertilizer and in 1998 Colorado voters adopted further controls on animal feeding operations by referendum.

### Earth-Disturbing Activities

The Colorado Land Use Act provides that “local governments shall be encouraged to designate areas and activities of state interest and, after such designation, shall administer such areas and activities of state interest and promulgate guidelines . . .”<sup>31</sup> Potential areas of State interest include “natural hazard areas,” which include floodplains, as well as “areas containing, or having a significant impact upon, historical, natural, or archeological resources of statewide importance.”<sup>32</sup> Development in areas of State interest is subject to a permit system, and the standard for approving a permit is compliance with the local guidelines and regulations.

The wildlife code requires State agencies to give notice to the wildlife commission 90 days before any action which would “obstruct, damage, diminish, destroy, change, modify, or vary the existing shape or form of any stream or its banks or tributaries by any type of construction.”<sup>33</sup> If the project will adversely affect the stream, particularly as fishing waters, the commission can request modifications to the project.

### Wetlands and § 404 Permits

As “waters of the State,” wetlands are covered by Colorado’s water quality law. Colorado has surface water standards applicable to wetlands.

### **State Implementation of § 404**

The State of Colorado has authority from the EPA to administer the § 404 dredge and fill permit program.

### **Additional State Laws/Policies/Programs for Wetlands**

Colorado has an extensive State-based wetlands program. This program, run by the Division of Wildlife, is intended to protect wetlands and wetland-dependent wildlife through incentives and other voluntary means. More information is available from the Division of Wildlife.<sup>34</sup>

### Stormwater Provisions

The EPA is the permitting authority for BLM stormwater permits in Colorado. The EPA requires the submission of permit number COR10000F for all Federal facilities in the State of Colorado, except those located on Indian land (facilities on Indian land require permit number COR10000I).

Final approval of the Phase II regulations was granted in January, 2001. It is important to note that energy companies are exempt from obtaining Phase II stormwater permits until March, 2005.

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<sup>31</sup> Colo. Rev. Stat. § 24-65.1-101(2).

<sup>32</sup> Colo. Rev. Stat. § 24-65.1-201.

<sup>33</sup> Colo. Rev. Stat. § 33-5-102.

<sup>34</sup> See the Colorado Wetlands Program homepage at: <http://wildlife.state.co.us/habitat/wetlands/index.asp>.