

## DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

### Water Quality Control Commission

## REGULATION NO. 74 - BEAR CREEK WATERSHED CONTROL REGULATION

### 5 CCR 1002-74

*[Editor's Notes follow the text of the rules at the end of this CCR Document.]*

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## 74.0 BEAR CREEK WATERSHED CONTROL REGULATION

### 74.1 AUTHORITY

The Water Quality Control Commission is authorized by sections 25-8-202(1)(c) and 25-8-205, C.R.S. to promulgate control regulations which describe prohibitions, standards, concentrations, and effluent limitations on the extent of specifically identified pollutants that any person may discharge into any specified class of state waters.

### 74.2 DEFINITIONS

1. "Association" means the Bear Creek Watershed Association formed by intergovernmental agreement and by-laws, and consisting of general purpose governments, Title 32 Districts outside incorporated areas, and permitted industry, corporations, proprietorships, and agencies or other appropriate entities within the Bear Creek Watershed.
2. "Bear Creek Watershed" includes Bear Creek and all tributaries, Turkey Creek and all tributaries, and Bear Creek Reservoir in Jefferson County. The Bear Creek Watershed extends into Clear Creek and Park Counties, Colorado. The watershed area is delineated in Figure 1 attached to this regulation.
3. "Best Management Practices (BMPs)" means best methods, measures, prohibitions or practices, schedule of activities, operation and maintenance procedures, and other management practices to prevent or reduce the introduction of pollutants into state waters. Best Management Practices include, but are not limited to, structural and nonstructural controls or policies. Such practices can be applied before, during, and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters.
4. "Commission" means the Colorado Water Quality Control Commission created by section 25-8-201 of the Colorado Water Quality Control Act.
5. "Districts" means all special districts in the Bear Creek Watershed who provide water and/or wastewater service, and operate a treatment facility.
6. "Division" means the Water Quality Control Division of the Colorado Department of Public Health and Environment, with specific powers and duties defined in the Colorado Water Quality Control Act.
7. "Effluent Limitation" means any restriction or prohibition established pursuant to this regulation, the Water Quality Control Act, or the federal Clean Water Act on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into state waters, including but not limited to standards of performance for new sources, toxic effluent standards, and schedules of compliance.

8. "Individual Sewage Disposal or Onsite System" means an absorption system or a system or facility for treating, neutralizing, stabilizing, or disposing of sewage which is not a part of or connected to a wastewater treatment works, with a designed treatment capacity of less than 2,000 gallons per day. For purposes of this regulation, onsite systems in the Bear Creek Watershed are classified as nonpoint sources.
9. "Land Application" is any discharge applied to the land for land disposal or land treatment and does not include a discharge to surface waters even if such waters are subsequently diverted and applied to the land.
10. "Land disposal" is any discharge of pollutant containing waters being applied to land for which no further treatment is intended.
11. "Land treatment" is any discharge of pollutant containing waters being applied to land for the purpose of treatment.
12. "Management Plan" means the Bear Creek Watershed Association Management Plan developed by the Association, local governments, citizens, state agencies, federal agencies, and the Denver Regional Council of Governments in a cooperative effort to assess and improve water quality in Bear Creek Watershed.
13. "Nonpoint Source" means for the purpose of this regulation diffuse sources of pollution that are not regulated as a point source and normally are associated with impacts from agriculture, silviculture, urban runoff, construction activities, inactive or abandoned mines, and individual sewage disposal systems.
14. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft from which pollutants are or may be discharged. "Point Source" includes conveyances of regulated stormwater. "Point Source" does not include irrigation return flows.
15. "Reserve Pool" consists of wasteload allocation total phosphorus pounds available to wastewater treatment facilities that may be awarded by the Division to those facilities in Bear Creek Watershed pursuant to section 74.3.
16. "Stormwater" means stormwater runoff, snowmelt runoff, and surface runoff and drainage.
17. "Trading Program" means the program managed by the Association and Division for phosphorus trading in the Bear Creek Watershed.
18. "Wasteload Allocation" means the portion of receiving water's assimilative capacity that is allocated to a specific point source(s) of pollution.
19. "Wastewater Treatment Facility" means a system or facility for treating, neutralizing, stabilizing, or disposing of domestic wastewater, which system or facility has a designed capacity to receive more than two thousand gallons per day of domestic wastewater. The term "Wastewater Treatment Facility" also includes appurtenances to such system or facility, such as outfall sewers and pumping stations, and equipment related to such appurtenances.

### **74.3 WASTELOAD ALLOCATION AND EFFLUENT LIMITATIONS FOR WASTEWATER TREATMENT FACILITIES**

#### **PHOSPHORUS**

1. The total wasteload allocation for all wastewater treatment facilities in the Bear Creek Watershed is 5,255 pounds per year. Each individual discharger in the Bear Creek Watershed shall be limited to an annual wasteload of total phosphorus which shall not be exceeded, except as provided for through trading provisions in paragraphs 3, 6, 7 and 8 of this section, as shown in the following table:

<u>Wastewater Treatment Facility</u>	<u>Pounds per year</u>
Evergreen Metropolitan District	1,500
West Jefferson County Metro District	1,500
Genesee Water and Sanitation District	1,015
Town of Morrison	600
Kittredge Sanitation and Water District	240
Forest Hills Metropolitan District	80
Jefferson County Schools - Conifer High School	110
Conifer Center Sanitation Association	40
West/Brandt Foundation - Singing River Ranch	30
Aspen Park Metropolitan District	40 <sup>1</sup>
Conifer Metropolitan District	40 <sup>1</sup>
The Fort	18 <sup>1, 2</sup>
Brook Forest Inn	5
Bear Creek Development Corp. - Tiny Town	5
Jefferson County Schools – Mount Evans Outdoor Lab School	20
Davidson Lodge	5
Geneva Glen Camp	5
Reserve Pool	2
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Total Wastewater Treatment Facility Phosphorus Wasteload (lbs. per year)	5,255

1 This wasteload allocation requires treatment to 0.5 mg/l total phosphorus.

2 The Fort is in the Town of Morrison wastewater service area.

2. Wastewater treatment facilities in the Bear Creek Watershed shall not exceed a total phosphorus effluent concentration of 1.0 mg/l as a 30 day average except as provided in paragraph 3 of this section. All wastewater treatment facilities in the watershed are required to meet the 1.0 mg/l total phosphorus concentration effluent limitation.
3. The Division is authorized to allow wastewater treatment facilities to discharge a total phosphorus concentration of greater than 1.0 mg/l if an agreement is made for equal phosphorus reduction at an alternative facility. The equivalent annual mass load from one wastewater treatment facility shall be calculated using a 1.0 mg/l total phosphorus concentration at the average daily wastewater flow for the most recent 12 months. The agreement for alternative treatment must be executed by the owners of the facilities, updated annually, summarized in the Association annual report and submitted to the Division to reflect changes in average wastewater flows and performance in treatment of phosphorus. The wastewater treatment facility which agrees to provide the equivalent phosphorus poundage reduction must demonstrate that it is achieving a total phosphorus effluent concentration of less than 1.0 mg/l for a period of time sufficient to remove the equivalent phosphorus load by which the other wastewater treatment facility is exceeding its wasteload allocation. The equivalent reduction provisions shall be incorporated as permit conditions in both discharge permits.

4. A reserve pool of total phosphorus shall be maintained for use by wastewater treatment facilities in the Bear Creek Watershed. Where phosphorus credits are created, consistent with section 74.3.6, such credits may be allocated to the reserve pool, subject to recommendation of the Association, and review and approval by the Division. Facilities with a phosphorus allocation in section 74.3.1 of this regulation may donate pounds to the reserve pool, subject to recommendation by the Association, and review and approval by the Division. Phosphorus credit pounds and donated pounds added to the reserve pool shall be summarized in the Association annual report. Any facility that proposes to use all or a portion of the reserve pool allocation must comply with the 1.0 mg/l total phosphorus effluent concentration. Exemptions provided for in paragraph 3 of this section do not apply to the reserve pool. The Division shall review all requests for use of reserve pool phosphorus and shall approve or deny such use as part of the site application process. For industrial facilities, approval or denial of the use of reserve pool phosphorus shall be made by the Division through the discharge permit application and issuance process.
5. The Division shall require all site approvals and discharge permits issued in the Bear Creek Watershed for all new or expanded wastewater treatment facilities be based on a maximum total phosphorus effluent concentration of 1.0 mg/l with an assigned wasteload allocation consistent with section 74.3.1.
6. Wastewater treatment facility dischargers shall apply to the Association for phosphorus trade credits which would allow corresponding increases to a discharger's total phosphorus wasteload allocation. Phosphorus trade credits shall be based upon reductions of existing sources of phosphorus from nonpoint sources generated in the watershed prior to January 1, 2005. The amount of wastewater treatment facility trade credit shall be based upon one pound of credit for two pounds of nonpoint source reduction. The Association shall review applications and make recommendations to the Division regarding allocations of phosphorus trade credits to dischargers. The Division shall consider the Association's recommendations in making determinations regarding phosphorus trade credit allocations, and shall incorporate credits into the relevant discharge permits.
7. Wastewater treatment facility dischargers shall apply to the Association for permanent or temporary transfers of all or part of the discharger's total phosphorus allocation to another wastewater discharger. Both dischargers must jointly apply to the Association for such transfers and shall include an agreement executed by the owners of the facilities specifying changes in average wastewater flows and performance in treatment of total phosphorus. The Association shall review transfer proposals and make recommendations to the Division. The Division shall consider the Association's recommendations in making such transfers, and shall incorporate its determinations into the relevant discharge permits, if these transfers are not otherwise accounted for by the Division.
8. If new wastewater treatment facilities are proposed in the Bear Creek Watershed, the appropriate entities shall apply to the Association for a phosphorus allocation. Phosphorus allocation pounds for such new wastewater dischargers shall be derived from: (1) withdrawals from the reserve/emergency pool pursuant to section 74.3.4; (2) nonpoint source to wastewater treatment facility trades pursuant to section 74.3.6; (3) point source to point source transfers pursuant to section 74.3.7; or (4) phosphorus concentration reductions through alternative treatment pursuant to section 74.3.3. New dischargers desiring allocations shall specify the number of desired total phosphorus pounds and how the pounds will be derived, consistent with section 74.3.5. The Association shall review the application and make recommendations to the Division on new phosphorus allocations. The Division shall make a determination on allocations for new facilities and incorporate in site approval and a discharge permit.

#### **74.4 DETERMINATIONS OF WASTELOAD**

For municipal, domestic and industrial dischargers, the monthly and annual wasteloads shall be determined as follows:

1. For each direct discharge and for each discharge to land disposal and land treatment, monthly phosphorus loads (pounds) contributed shall be determined based upon the following formula:

Monthly Phosphorus Load (Pounds) = Monthly volume discharged (million gallons) x average of all individual concentration values for that month (mg/l) x 8.34

- (1) For dischargers utilizing land treatment, the monthly volume shall be calculated by the following formula:

Monthly Volume Discharged (Million Gallons)(MG) = Volume in all lysimeters (gallons) x Area of land application site (square feet) / Total Area of all lysimeters (square feet) (1,000,000 gal/mg)

- (2) For all dischargers using land disposal and for direct dischargers, the monthly volume shall be the sum of all total volumes of effluent measured at each outfall.

2. The annual phosphorus wasteload shall be the sum of the 12 monthly phosphorus loads calculated for that calendar year for all discharge points and sites and shall not exceed the wasteload allocations, set forth in section 74.3.1.

3. Phosphorus concentrations for each direct discharge and land disposal site will be calculated by the following formula:

Phosphorus Concentration (mg/l) = the sum of the total phosphorus concentrations of all samples (mg/l) for the month / the number of samples collected.

4. For land treatment discharges a flow-weighted phosphorus concentration shall be determined by using the formula in 3 above and the following formula:

Flow-Weighted Phosphorus Concentration (mg/l) = sum of the products of phosphorus concentrations and monthly volumes for each lysimeter / the sum of all monthly volumes for all lysimeters.

Monthly Average Phosphorus Concentration = the sum of all concentration values for a lysimeter for the month / the number of concentration values for that lysimeter.

#### **74.5 CONTROL OF NONPOINT SOURCES**

Jefferson County, Clear Creek County, Park County, municipalities, and districts in the Bear Creek Watershed shall implement best management practices for control of erosion and sediments. The Commission shall review the performance in implementation of existing erosion and sediment control programs by the counties, municipalities, and districts at each triennial review of this regulation. The Association will identify nonpoint source management practices and programs in the management plan and annual report.

The Association may include in the management plan and annual reports a listing of those non-urban areas where existing or planned development relies on individual sewage disposal or onsite systems as mapped by Jefferson County, Clear Creek County, or Park County. The Association may recommend that counties develop a septic management plan. Septic management plans should be designed to protect watershed surface and groundwater quality and will not target individual onsite systems.

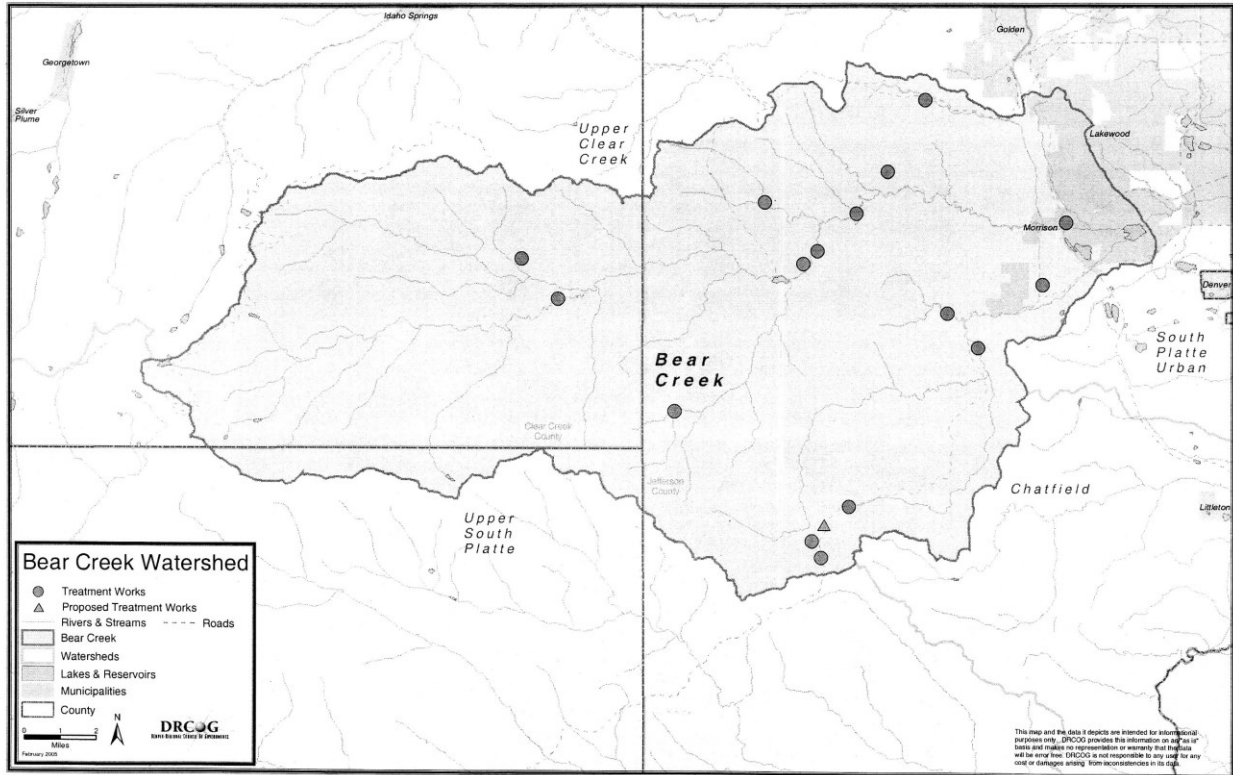
#### **74.6 MONITORING**

1. Jefferson County, Clear Creek County, Park County, municipalities, districts, and other agencies responsible for point and nonpoint sources in the Bear Creek Watershed shall conduct water quality monitoring in the watershed, in accordance with the monitoring procedures described in an annually reviewed quality assurance project plan approved by the Division. The Association shall ensure that water quality monitoring is conducted on Turkey Creek, Bear Creek, and in Bear Creek Reservoir to measure the phosphorus loadings reaching the reservoir and other factors which affect the watershed water quality, as well as the attainment of beneficial uses for the reservoir and watershed.
2. The Commission and Division shall receive annually from the Association an annual report covering the status of water quality in the watershed for the previous calendar year. The report shall include information on the wastewater treatment facilities loading and compliance with permit limitations, the nonpoint source loading and appropriate best management practices, and in-stream and in-lake data analyses indicating whether the water quality goals and standards for the watershed are being met. Information about water quality projects planned or implemented in the watershed shall also be included in the annual report. The Division shall receive annually an electronic data transfer of all water quality data collected by the Association. Data shall be submitted consistent with Division guidance, and transfer protocols will be detailed in the quality assurance project plan.
3. All permits issued by the Division for wastewater treatment facility discharges shall be consistent with sections 74.3 and 74.4. Effluent total phosphorus shall be monitored by the permittee at least once per month but more often than monthly if specified by the Division. Phosphorus concentrations shall be reported as a 30 day average and discharge monitoring reports shall be filed with the Division monthly. The Division may establish ambient monitoring requirements in discharge permits for dischargers in the Bear Creek Watershed for use in the annual assessment of water quality in the watershed, consistent with the provisions and intent of this control regulation and the water quality narrative standard for Bear Creek Reservoir.

#### **74.7 SEVERABILITY**

The provisions of this regulation are severable, and if any provisions or the application of the provisions to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this regulation shall not be affected thereby.

#### **74.8 - 74.9 RESERVED**



## 74.10 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE

The provisions of sections 25-8-202(1)(c) and (2); and 25-8-205; C.R.S., provide the specific statutory authority for adoption of the attached regulation. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

### Background

The Water Quality Control Commission is adopting concurrently a narrative standard for water quality in Segment 1c of Bear Creek, Bear Creek Reservoir. Goals and objectives for improving water quality in Bear Creek Reservoir have been developed by the Bear Creek Basin Management Plan Committee based upon water quality data which has been gathered from 1985-1991.

Bear Creek Reservoir has a very high level of nutrients which causes algal blooms in the growing season, based upon data compiled from the Phase I Clean Lakes Diagnostic/Feasibility Study done in 1988 and 1989. The reservoir can be characterized as eutrophic to hypertrophic.

Algal blooms dominated by species such as the bluegreen alga *Aphanizomenon* are frequent. During summer stratification the concentration of dissolved oxygen approaches zero throughout the hypolimnion (6-14 meters depth). These low oxygen conditions have eliminated most of the cold water habitat for aquatic life in the months of July, August, and September. Potential for recreation on and in the lake is limited under present conditions.

Due to the short residence time of water in the reservoir and the stratification of the hypolimnion, it is difficult to predict how nutrient loads will affect algae growth in the reservoir. The narrative standard for water quality in the reservoir is designed to set realistic goals for improving the conditions which impair the beneficial uses, primarily to reduce the severity and the frequency of algal blooms. Control of phosphorus in the basin is the primary tool for reducing levels of chlorophyll a in the reservoir.

Local governments, state and federal agencies, and the Denver Regional Council of Governments, who have served on the Bear Creek Basin Management Plan Committee, reached a consensus that control of phosphorus sources without addressing in-lake conditions is unlikely to produce significant improvements in reservoir water quality. The DRCOG Clean Water Plan recommends that hypolimnetic aeration be installed at the reservoir to provide a more consistent oxygen level throughout the reservoir. Studies have indicated that point source phosphorus controls, nonpoint source phosphorus reduction through the use of best management practices, and the operation of hypolimnetic aeration and hypolimnetic withdrawals from the reservoir can, in combination, produce significant water quality improvements and bring the reservoir to a trophic status of mesotrophic to eutrophic, with chlorophyll a concentrations during the growing season substantially reduced from present conditions.

### **Point Source Phosphorus**

The Bear Creek Basin Clean Lakes study concluded that point sources of phosphorus comprise 70 percent of the total phosphorus load to the reservoir during the period of June to September.

There are 14 dischargers in the basin which are subject to the Colorado Discharge Permit System. A study by Arber and Associates of wastewater treatment facilities in the basin showed that biological treatment processes for reducing phosphorus, or simple alum addition to wastewater in a mechanical treatment plant, can achieve a total phosphorus concentration of 1.0 mg/l without major upgrade of treatment facilities and with considerably less operation and maintenance expense than advanced treatment. The basin management plan recommends that point source phosphorus loading in the basin, currently estimated at 21,584 pounds per year, be reduced by 75 percent.

This reduction in phosphorus would allow an annual load from all point sources of 5,395 pounds per year. When dischargers in the basin reach a wastewater treatment level of 1.0 mg/l for effluent phosphorus by 1994, the point source load will be substantially less than the 5,395 pounds allowed by the wasteload allocation in Section 4.6.3(1). Population growth in the basin consistent with Denver Regional Council of Governments projections for the year 2000 is provided for while achieving a 75 percent or greater reduction from 1991 levels. It is recognized that some dischargers may reach a point where exceedance of their wasteload allocation could occur at future wastewater flows while achieving the effluent limitation of 1.0 mg/l. Effluent phosphorus concentrations may need to be less than 1.0 mg/l to stay within the wasteload allocation.

The Commission reviewed testimony on the cost and benefits of point source dischargers in the Bear Creek Basin being required to meet a total phosphorus effluent limitation of 0.2 mg/l, similar to point source limits in other basins in Colorado which have adopted phosphorus control regulations, such as Cherry Creek, Chatfield, and Dillon basins. The information presented indicated that an effluent limit of 0.2 mg/l would bring the chlorophyll a concentrations in the reservoir slightly lower than the expected levels if the effluent limit is 1.0 mg/l. It is believed that there would be no perceivable change in the lake to the user if the point source limit was more restrictive but the cost to the dischargers to meet the 0.2 mg/l effluent limit would be much greater. The estimate of capital improvement costs for all dischargers to meet 1.0 mg/l total phosphorus was slightly less than \$1,000,000. The estimate for achieving 0.2 mg/l at the design capacity of all facilities could be in excess of \$11,000,000. The Commission determined that the adopted effluent limit of 1.0 mg/l will provide a substantial reduction in phosphorus load to the reservoir and is justified as a first step in point source control. The possible need for further controls can be reassessed in subsequent triennial reviews of this regulation.



Section 4.6.3(3) provides for equivalent phosphorus reduction for small wastewater dischargers with 20,000 gallons per day design capacity or less. This equivalent reduction must be arranged through an agreement between the small discharger and the entity providing the equivalent reduction. The Jefferson County Mountain Water Quality Association, which consists of the City of Lakewood, Jefferson County, Evergreen Metropolitan District, West Jefferson County Sanitation District, Genesee Water and Sanitation District, Kittredge Sanitation and Water District, Willowbrook Water and Sanitation District, the Town of Morrison, Forest Hills Metropolitan District, Conifer Sanitation Association, and Jefferson County R-1 School District, shall be provided the opportunity to review and comment on all equivalent reduction agreements prior to approval of such agreements by the division. The division shall incorporate equivalent phosphorus reduction provisions in the discharge permit of both parties to the agreement.

The allowable point source phosphorus load established in Section 4.6.3(1) provides for a reserve pool of phosphorus which can be utilized by a new wastewater treatment facility (domestic or industrial) in the future or by an existing facility that may need to expand their capacity. Anyone who uses phosphorus from the reserve pool must design for and achieve a total phosphorus effluent concentration of 1.0 mg/l and use no more than 100 pounds of phosphorus as an annual allocation or whatever portion of the 100 pounds that remains unallocated at the time the new or expanded facility is proposed.

### **Nonpoint Source Phosphorus**

Nonpoint sources of phosphorus to Bear Creek Reservoir are estimated to be 50 percent or more of the annual load to the reservoir. The Clean Lakes study estimates the orthophosphorus from nonpoint sources at 20,995 lbs. per year. Existing legal authority of county, state, and federal agencies to issue erosion control and grading permits or to require best management practices will be used to control nonpoint sources of phosphorus in the basin. Jefferson County has enacted a grading permit system and erosion control program, Section 11 of Jefferson County Zoning Resolution No. CC91-762, "Grading Permit and Erosion and Sediment Control", effective January 1, 1992, which applies to many activities in the county. The Commission will review the performance of county and local entities in the basin in implementing erosion and sediment controls through triennial review of this regulation. Where an entity in the Bear Creek Basin is issued a permit under authority of Environmental Protection Agency Regulations 40 CFR 122, 123, and 124, "National Pollutant Discharge Elimination System Permit Application Regulations for Stormwater Discharges", as amended, such permits will define stormwater management requirements which may include measures to control phosphorus from point sources of stormwater. Management of urban runoff and control of sediments is expected to reduce the nonpoint source loading of phosphorus to the reservoir.

The Bear Creek Basin Clean Lakes study indicates there is a substantial nonpoint source loading of nutrients in the basin in areas where there are only very small wastewater point sources or no point source discharges. The study estimated that there are about 6,500 individual sewage disposal systems (ISDS) in the basin with an estimated 1.6 million gallons per day of sewage flow in the individual systems. The use of ISDS for wastewater disposal in the basin is predicted to increase by 30 percent from 1989 - 2010. The Clean Lakes study used selected literature information to predict ISDS nonpoint loadings for planning purposes. The Commission believes that specific measurement of ISDS loading and septic system treatment performance needs to be done in order to quantify ISDS impact on the nonpoint source phosphorus loading in the basin. Jefferson County, municipalities, and districts in the basin are encouraged to jointly design and conduct an ISDS study to get better information on ISDS nutrient loading so that the Commission can evaluate the impacts at the first triennial review of this regulation and recommend control strategies, which may include additional criteria in Jefferson and Clear Creek County regulations for approval of new ISDS or upgrade of existing ISDS. The protocol for any ISDS study should be approved by the division and public participation in the scope and protocol of the study is encouraged.

### **Water Quality Monitoring**

Section 4.6.5 on the monitoring of phosphorus is required so that the phosphorus control measures in the basin and in-lake management practices can be evaluated as to effectiveness in improving the water quality of Bear Creek Reservoir. This requires that the major inflow streams to the reservoir, Turkey Creek and Bear Creek, be monitored for nutrient loadings and other appropriate parameters, as well as in-lake water quality monitoring which measures the physical, chemical and biological status of the reservoir. The monitoring procedures shown in Appendix A provide for water quality assessment of the basin and a quality assurance/quality control plan for the monitoring program. The basin monitoring program may be changed periodically with review and approval by the division.

The Commission requires that an annual report be submitted which summarizes information on water quality in the Bear Creek Basin. This provision provides for oversight of the monitoring program as well as documentation of the implementation of phosphorus controls required by this regulation. The annual report will help the Commission determine if the classified beneficial uses of the reservoir are being attained.

#### **74.11 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (1996 REVISIONS)**

The provisions of sections 25-8-202(1)(c) and (2); and 25-8-205; C.R.S., provide the specific statutory authority for adoption of the attached regulation. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

#### **BASIS AND PURPOSE**

The Bear Creek Basin has been designated as the Bear Creek Watershed through the Denver Regional Council of Government's Clean Water Plan. The basin boundary has been modified to a watershed boundary with recognition of drainage from Park County into Jefferson County. The Jefferson County Mountain Water Quality Association, City of Lakewood and the Bear Creek Management Plan Committee have been formed into the Bear Creek Watershed Association. The Association is the management agency for the Bear Creek Watershed.

The Willowbrook Sanitation and Water District has transferred wastewater treatment to the Metropolitan Wastewater Reclamation District and no longer needs a phosphorus wasteload allocation. The Jefferson County R-1 School District is building a new Conifer High School which will have a wastewater treatment facility to serve all of the wastewater treatment requirements of the school district in the Conifer and Aspen Park area of Jefferson County. The existing wastewater treatment facility located at the Jefferson County Junior High School will be closed with the opening of the new Conifer High School Facility. The Junior High School facility has a phosphorus wasteload allocation of 30 pounds. The new Conifer High School Facility needs a phosphorus wasteload allocation of 125 pounds, therefore Jefferson County Schools requires an additional 95 pounds of phosphorus wasteload allocation. The proposed Geneva Glen Camp wastewater treatment facility needs a phosphorus wasteload allocation of five pounds for a new wastewater treatment facility. Additionally, this facility proposes to use land application as part of the treatment process.

Allocations of phosphorus or modifications to phosphorus wasteload allocations require a rulemaking hearing by the Commission. The Commission adopted changes to the phosphorus wasteload allocations in section 4.6.3 by allocating the Jefferson County School District 125 pounds, Geneva Glen five pounds, and transferring 100 pounds to the reserve pool from the previous 240 pound allocation that was available to Willowbrook Sanitation and Water District. The other 140 pounds of the previous 240 allocation that was available to the Willowbrook Water and Sanitation District has been removed from the total point source phosphorus wasteload of 5,395 pounds per year, which decreases the annual allowable wasteload to 5,255 pounds. The Bear Creek Watershed Association recommended and the Commission concurred that wasteload allocation processes and reporting be consistent between adopted phosphorus control regulations. The land disposal and land application wasteload definitions and determinations as adopted in the Cherry Creek Reservoir Control Regulation have been incorporated into the Bear Creek Watershed Control Regulation. This will allow the Association and the Division to more efficiently monitor and report land disposal or land treatment wasteloads.

Two changes were made in the requirements for the Bear Creek Watershed annual report to the Commission. First, the annual report will be submitted to the Commission on or before May 1 of each year which covers the previous calendar year. Second, in response to a concern by one of the parties to the hearing, the Commission adopted language that requires the watershed annual report to document monitoring data quality assurance/quality control procedures for ambient water quality monitoring as well as monitoring of wastewater treatment facility effluent. The Bear Creek Watershed Association will review quality assurance/quality control procedures through their regular meeting process.

One of the parties to the hearing requested that the Bear Creek Watershed Association study the costs and benefits of expanding the implementation of water reuse methods in this watershed. Inclusion of requirements to study water reuse was determined to be beyond the authority of the Commission. In adopting this revision to the regulation, the Commission recognized the intent of the Bear Creek Watershed Association to pursue the development of a policy for use in the Association's review of applications for site approval of domestic wastewater treatment facilities. This policy will address potential water reuse and other relevant environmental issues.

The water quality monitoring program for the Bear Creek Watershed was evaluated by the Association and the Division. An additional permanent surface water monitoring station has been added to lower Bear Creek. A special surface water monitoring program associated with Colorado Department of Transportation construction activities along the U.S. 285 corridor through the Turkey Creek drainage has also been added to the monitoring program. This construction program is forecast to last 20 years with construction activities occurring in a series of smaller phases. Ongoing water quality monitoring is needed to characterize this large scale construction activity. The Colorado Department of Transportation has become a participant in the Bear Creek Watershed Association.

Clear Creek County has become a member of the Association and they are a participant in the water quality monitoring program, with responsibility for point and nonpoint sources in the watershed.

#### PARTIES TO THE RULEMAKING HEARING

1. Nicole and Charles Moody and Family
2. Jefferson County Mountain Water Quality Association
3. Denver Regional Council of Governments
4. Town of Morrison
5. Aspen Park Improvement Association
6. Richard W. Burrows

#### **74.12 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY & PURPOSE (1996 Amendments)**

The provisions of sections 25-8-202(1)(c) and (2); and 25-8-205; C.R.S., provide the specific statutory authority for amendments to the regulation. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

##### **BASIS AND PURPOSE**

A written comment only hearing was conducted to make minor revisions to this regulation. Two sections of the rule were modified (4.6.4 and 4.6.5) to include Park County in the Bear Creek Watershed program for nonpoint source best management practices and the watershed monitoring program. Appendix A of the regulation was modified to reflect the revised monitoring program which has been agreed to by members of the Bear Creek Watershed Association. A revised Appendix A was intended to be adopted in the February, 1996 Commission rulemaking hearing but due to problems with the public notice, these changes were not made at that time. The current monitoring program for the Bear Creek Watershed is reflected in the revised Appendix A which was adopted in this written comment only rulemaking.

#### **74.13 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JULY, 1997 RULEMAKING**

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

##### **BASIS AND PURPOSE**

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

#### **74.14 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; MARCH 2005 RULEMAKING**

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

##### **BASIS AND PURPOSE**

The Commission has adopted changes for this regulation, which include adding new definitions, adjusting the wasteload allocations for total phosphorus, recognizing three new wastewater treatment facilities, adding wastewater treatment facility trading provisions, clarifying nonpoint source control responsibilities for onsite wastewater management regions, removing Appendix A on monitoring and replacing it with a quality assurance project plan, and changing annual reporting requirements.

A definition for the Association was added to identify eligible members in the Association and provide a framework for adding potential new members to the Association. The definition of best management practices was made consistent with the definition used in other reservoir control regulations. The definition recognizes non-structural practices, operation and maintenance and certain preventive measures as acceptable best management practices. The definition of individual sewage disposal or onsite systems includes a statement defining onsite systems in the watershed as nonpoint sources. If onsite systems exceed a daily capacity of 2,000 gallons of wastewater per day, they become a wastewater treatment facility requiring a phosphorus allocation under this regulation, and Division site approval and issuance of a discharge permit. The Association is responsible for developing and maintaining a watershed management plan as defined in this regulation. The Association serves as the management agency for the Bear Creek Watershed within the areawide planning process of the Denver Regional Council of Governments (DRCOG) and maintains the management plan consistent with DRCOG's Metro Vision Plan. The definition of a point source was expanded to clarify that point sources include conveyances of regulated stormwater, but do not include irrigation return flows. Several minor typographical corrections were also made to definitions to improve understanding.

New definitions were added for reserve pool, stormwater, trading program, and wastewater treatment facility. The reserve pool is a component of the wasteload allocation. The new definition clarifies the intent of this reserve pool. A definition for stormwater was added to this regulation. The wastewater treatment facility definition distinguishes between the wastewater treatment facility wasteload allocations and other Point Sources. A wastewater trading program was incorporated into this regulation. The Association will develop and maintain a trading program guidance document subject to review and approval by the Division.

Section 74.3 was re-titled to clarify that the wasteload allocation is for wastewater treatment facilities and does not apply to other potential point sources. The total wasteload allocation of 5,255 pounds of annual total phosphorus was unchanged and the total maximum annual load for the watershed is not altered. Fifteen total phosphorus pounds were traded between the Jefferson County Schools Conifer High School allocation and the Mount Evans Outdoor Lab School, resulting in an allocation of 110 pounds total phosphorus for the Conifer High School and 20 pounds total phosphorus for the Mount Evans Outdoor Lab. Three wastewater treatment facilities were added: Aspen Park Metropolitan District (New), Conifer Metropolitan District (New), and The Fort Restaurant (Existing). The total phosphorus allocation was taken from the reserve pool with the poundage allocation based on a total phosphorus effluent concentration of 0.5 mg/l. Aspen Park Metropolitan District and Conifer Metropolitan District were each allocated 40 pounds of total phosphorus annually, with 18 pounds total phosphorus for The Fort Restaurant. The reserve pool retains two pounds total phosphorus. The trading program is designed to replenish this reserve pool through phosphorus credits created by point and nonpoint source trades.

Trading provisions were added to this regulation to allow point source to point source trades, nonpoint source to point source trades, temporary or permanent trades into and out of the reserve pool, and alternative trading subject to Division approval. Trading can be either temporary or permanent. The trade ratio between nonpoint source and point source is set at 2:1. Trading program guidance must be adopted by the Association and approved by the Division before any trade agreements are finalized.

The revised regulation allows a number of opportunities for modifications of phosphorus allocations for individual dischargers, subject to approval by the Division. It is intended that these phosphorus trades, transfers, credits and reallocations (e.g., from the reserve pool) be consistent with the overall allocations set forth in section 74.3.1. It is anticipated that the Commission will reflect any such approved trades, transfers, credits and allocations in modifications to the regulation during subsequent triennial reviews. Of course, such future action by the Commission will be dependent on the Commission's determination that the overall result of these reallocations under the regulation is achieving the desired results in terms of phosphorus loading and reservoir water quality.

Section 74.5 on the control of nonpoint sources includes a provision for the Association to work with the counties in development of a septic management plan in areas identified by the counties. Onsite systems in the watershed can affect both surface and groundwater quality.

Section 74.6 on monitoring was modified to remove reference to Appendix A that defined the monitoring program. Including the intended monitoring plan in the regulation has been restrictive and has made it difficult to revise the plan on an annual basis. Consequently, the Association will maintain a quality assurance program plan that is subject to Division review and approval. This monitoring plan will detail the water quality monitoring program and reporting requirements for the monitoring information. Data transfer protocols will be included in the monitoring plan consistent with Division guidance. The Association will provide annual monitoring data to the Division and continue to provide a summary annual report to the Commission.

Small wastewater dischargers in the watershed have chronically failed to report wasteload allocation information to the Association. This makes it difficult for the Association to comply with the annual wasteload allocation reporting requirements in this regulation. Additionally, these small dischargers have not been regular or active participants in the watershed management plan and they have not provided the necessary funding support to the watershed monitoring program. The Association is responsible for maintaining a wasteload allocation for total phosphorus among dischargers. In order to assure that adequate data are available, Bear Creek Watershed dischargers may elect to meet the monitoring requirements through participation in the Bear Creek Watershed Association's water quality monitoring program, or perform monitoring and reporting on their own, pursuant to monitoring requirements in the discharge permit, and consistent with the provisions and intent of this control regulation and the water quality narrative standard for Bear Creek Reservoir.

#### PARTIES TO THE RULEMAKING HEARING

1. Bear Creek Watershed Association
2. Denver Regional Council of Governments

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#### **Editor's Notes**

#### **History**