

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 73 - CHATFIELD RESERVOIR CONTROL REGULATION

5 CCR 1002-73

73.0 CHATFIELD RESERVOIR CONTROL REGULATION

73.1 AUTHORITY

The Water Quality Control Commission is authorized by section 25–8–205, C.R.S. to promulgate control regulations to describe limitations for the extent of specifically identified pollutants that any person may discharge into any specified class of state waters.

73.2 DEFINITIONS

See the Colorado Water Quality Control Act and other Water Quality Control Commission regulations for additional definitions.

1. "Background" means the calculated phosphorus loads from surface water and alluvial groundwater, including nonpoint sources and direct precipitation, that does not originate from point source discharges. Background is calculated by subtracting the Reservoir Base-Load and Wasteload Allocations from the Total Maximum Annual Load.
2. "Best management practice" means best methods, measures or practices selected by an agency to meet its nonpoint source control needs. Best management practices include, but are not limited to, structural and nonstructural controls and operation and maintenance procedures. Best management practices can be applied before, during and after pollution producing activities to reduce or eliminate the introduction of pollutants into receiving waters.
3. "Chatfield Watershed" consists of: (a) for Plum Creek, all portions of Plum Creek and its tributaries, including segments 8, 9, 10a, 10b, 11a, 11b, 12 and 13 ¹ and (b) for the South Platte River, the portions of segments 6a, 6b, and 7 of the South Platte River ¹ downstream of Strontia Springs Reservoir outfall. The Chatfield Watershed is depicted in Figure 1 attached to this regulation (New Figure 1)

¹ The stream segments referenced are described in the Classifications and Numeric Standards - South Platte River Basin, Regulation No. 38 (5 CCR 1002-38).

4. "Chatfield Watershed Authority" means the organization formed by local governments and Title 32 Districts, industry, corporations and other entities within the Chatfield Watershed to implement point source, nonpoint source and/or stormwater controls.
5. "Effluent limitation" means any restriction or prohibition established pursuant to this regulation, the Colorado Water Quality Control Act or the federal 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.

6. "Individual sewage disposal system" means 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.
7. "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.
8. "Land Application Return Factor" means (1) For land application sites with an augmentation plan decreed by Colorado District Court, Water Division 1: the return flow percent decreed in that augmentation plan; and (2) For land application sites without an augmentation plan decreed by Colorado District Court, Water Division, or who elect not to use the return flow percent in their decree: the ratio of the area of the land treatment site divided by the sum of the surface areas of all lysimeters.
9. "Land disposal" is any discharge of pollutant containing waters being applied to land for which no further treatment is intended.
10. "Land treatment" is any discharge of pollutant containing waters being applied to land for the purpose of treatment.
11. "Margin of safety" means the additional protective factor in the Total Maximum Annual Load, which accounts for limitations in accuracy of modeling.
12. "Nonpoint source" means, for the purpose of this regulation, any activity or facility other than a point source with wasteload allocation specified at section 73.3(2)(c), from which pollutants are or may be discharged. For the purposes of this regulation, nonpoint source includes all stormwater runoff, whether sheet flows or collected and conveyed through channels, conduits, pipes or other discrete conveyances, and runoff from wildfires such as the Hayman Fire.
13. "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, or vessel or other floating craft, from which pollutants are or may be discharged. "Point source" does not include irrigation return flows.
14. "Reserve/Emergency Pool" means the pool of point source total phosphorus pounds available for allocation to point source wastewater dischargers pursuant to 73.3(2)(h) of this regulation or for emergency allocations to point source wastewater dischargers for a time period not to exceed five years.
15. "Reservoir base-load" means the average measured total phosphorus load reaching the Chatfield Reservoir.
16. "Regulated Stormwater" means stormwater discharges to state waters that are from regulated facilities or activities; i.e., industrial or commercial facilities, or municipal separate storm sewer systems regulated under 5 CCR 1002-61 section 61.3(2)(e), (f) or (g), including those designated by the Water Quality Control Division ("Division") under section 61.3(2)(f)(iii).

17. "TMAL" means the Total Maximum Annual Load for Chatfield Reservoir, derived from the sums of the Reservoir Base-Load, Background, and Wasteload Allocations for Chatfield Watershed and Upper South Platte River Watershed, with the Margin of Safety.
18. "Trading Program" means the program administered by the Authority for phosphorus trading in the Chatfield Watershed.
19. "Upper South Platte River Watershed" means all portions of the South Platte River and its tributaries, from the river's headwaters through Strontia Springs Reservoir outfall, including Segments 1a, 1b, 2a, 2b, 2c, 3, 4, 5a, 5b, 5c, and the portions of segments 6 and 71 upstream of Strontia Springs Reservoir outfall. The Upper South Platte River Watershed is depicted in Figure 2 attached to this regulation. The Roberts Tunnel transfers water from Dillon Reservoir in Summit County into Segment 4 of the South Platte River.
20. "Wasteload allocation" means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution.
21. "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.

73.3 TOTAL MAXIMUM ANNUAL LOAD ALLOCATION FOR TOTAL PHOSPHORUS LOADING AND EFFLUENT LIMITATIONS [Eff. 03/30/2009]

1. TOTAL MAXIMUM ANNUAL LOAD ALLOCATION FOR TOTAL PHOSPHORUS LOADING

- a. A new total maximum annual load (TMAL) for phosphorus of 19,600 lbs/y under a median inflow of 100,860 AF/y has been identified to attain the water quality standards for 10 µg/l chlorophyll a and 0.030 mg/L total phosphorus, as described in Regulation No.38.
 - i. Revised allocations of that load will be developed to complete revisions to the TMAL.
 - ii. Activities necessary to reduce the actual phosphorus loads to an amount no greater than the TMAL shall be implemented.
 - iii. The activities to support revisions to allocations of the allowable load are identified below. The Authority shall implement these activities, as allowed by applicable funding levels, for review by the Division and Commission at the next triennial review. Results from the Authority's implementation of this control regulation and the load allocation development tasks listed below may suggest redefining and reprioritizing activities. The Authority shall submit any such proposed revisions with proposed priorities for review and approval by the Division, annually, in their annual report to the Commission due May 15 of each year. The activities shall include, but are not limited to the following items:
 - A. Partition allowable load between the two main basins (South Platte and Plum Creek);
 - B. Determine allocation of loads within each basin;

C. Revise wasteload allocations, as appropriate; and

D. Update definitions and regulation language to support TMAL revisions.

iv. Attainment of the TMAL may require progressive development of point source and nonpoint controls.

v. The following provisions of this control regulation along with the waste load and load allocations remain in effect until revisions have been adopted to meet the new TMAL.

b. The total phosphorus allocations by watersheds are distributed among sources as follows:

Allocation Type	Total Phosphorus Pounds/Year
Total Maximum Annual Load (TMAL) =	59,000 @ 261,000 ac-ft/year
Chatfield Watershed	40,894
Reservoir Base-Load	13,400
Background	19,961
Wasteload Allocation (point sources)	7,533 ¹
Upper South Platte River Watershed	17,930 ²
Reservoir Base-Load	6,000
Background	11,842
Summit County Wasteload Allocation	88
Total	58,824 ³

1 Point source discharge permit holders and regulated stormwater permittees who are in compliance with their permit limits and terms for a constituent will not have those limits or terms modified prior to any future adjustment of classifications or standards by the Commission to the extent any observed water quality standards exceedances are attributable to other factors, such as wildfires that are beyond the control of the permit holders.

2 Loadings from the Upper South Platte River watershed include all point sources upstream of the Strontia Springs Reservoir outfall, including 88 pounds of phosphorus per year from wastewater originating in Summit County and discharged directly into the Roberts Tunnel, and all nonpoint sources above the Strontia Springs Reservoir outfall.

3. While the TMAL total phosphorus poundage allocation formula remains unchanged, the amount of total phosphorus assigned to the Chatfield Watershed is reduced because of approved nonpoint source to point source trades.

2. EFFLUENT LIMITATIONS AND POINT SOURCE WASTELOAD ALLOCATIONS

a. The Division shall not issue discharge permits (pursuant to Regulation #61) or notices of authorizations for use of reclaimed water (pursuant to Regulation #84) to any wastewater facilities and industrial process wastewater sources that allow effluent limitations exceeding their total phosphorus allocation, unless such exceedances consist solely of phosphorus pounds awarded from the Reserve Pool, or that are authorized through the Trading Program or by Temporary Transfers. However, in no event shall these allocations be construed to allow discharges in violation of the requirements of section 73.3.1, subject to approved trades pursuant to section 73.3.2.

b. No municipal, domestic, or industrial wastewater discharge in the Chatfield Watershed shall exceed 1.0 mg/l total phosphorus as a 30-day average concentration, except as provided under section 73.3(2)(f)

- c. The allowed annual wasteload of point source phosphorus in the Chatfield Watershed is limited to 7,533 lbs/yr, allocated among the dischargers as follows, except as provided in sections 73.3(2)(e),(g),(h), and (i):

Facility	Pounds Per Year
Plum Creek Wastewater Authority	4,256
Lockheed Martin Astronautics	1,005
Roxborough Park Metro District Dominion Water & Sanitation District	1,218
Perry Park Water & San. District Waucondah	365
Perry Park Water & San. District Sageport	73
Town of Larkspur	231
Louviers Mutual Service Company	122
Sacred Heart Retreat	15 ¹
Jackson Creek Ranch	50 ²
Ponderosa Retreat Center	75 ²
Centennial Water and Sanitation District	50 ²
Reserve/Emergency Pool	73
Total Point Source Phosphorus Wasteload =	7,533

1 A five-year Total Phosphorus Allocation (2010) of 15 pounds for inclusion in the Sacred Heart discharge permit; Obtained from the Reserve/Emergency Pool.

2 These entities received point source allocations through trades pursuant to the Authority Trading Guidelines.

- d. Phosphorus effluent limits for site approvals and discharge permits in the Chatfield Watershed shall be based on total phosphorus effluent quality of 1.0 mg/l for a 30-day average at the design capacity of the wastewater facility, except as provided in section 73.3(2)(f), and the annual wasteload allocation specified in this section, except as provided in 73.3(2)(e)(g)(h) and (i). A wastewater treatment facility may need to adjust operations for periods of time sufficient to meet the annual phosphorus poundage allocation by producing effluent total phosphorus concentrations below 1.0 mg/l.
- e. Point source dischargers may apply to the Chatfield Watershed Authority and the Division for phosphorus trade credits, which allow corresponding increases to a discharger's total phosphorus wasteload allocation. Phosphorus trade credits for point sources shall be based upon reductions of phosphorus from nonpoint sources. The amount of point source trade credit shall be based upon one pound of credit for two pounds of nonpoint source reduction, unless water quality data substantiates greater phosphorus removals, in which case one pound of trade credit may be established by fewer than two pounds of nonpoint source reduction, on a site-specific basis. The Chatfield Watershed Authority shall review the application for trade credits in coordination with the Division. The Chatfield Watershed Authority shall take action by approving, conditionally approving, or denying the trade credits, and forward its decision to the Division. Thereafter, the Division shall consider the Authority's decision and render the Division's final decision on the trade credits. Trade credits shall be incorporated into discharge permits by the Division, as appropriate, and incorporated as proposed amendments to the phosphorus allocation at the next triennial review or rulemaking hearing for this regulation.
- f. Point sources may discharge a total phosphorus concentration of greater than 1.0 mg/l if an agreement has been made with an alternative point source discharger for equal phosphorus reduction. The agreement for alternative treatment must be executed by the

owners of both facilities, and the agreement must describe estimated changes in average wastewater flows and performance in treatment of phosphorus. The wastewater facility that 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 wastewater treatment facility is exceeding its wasteload allocation. The Chatfield Watershed Authority shall review applications for alternative treatment arrangements in coordination with the Division. The Chatfield Watershed Authority shall take action by approving, conditionally approving, or denying the alternative treatment arrangements, and forward its decision to the Division. Thereafter, the Division shall consider the Authority's decision and render the Division's final decision on the alternative treatment arrangements. Alternative treatment arrangements, including provisions for equivalent phosphorus reductions shall be incorporated as permit conditions into both discharge permits, as appropriate.

- g. Point source wastewater dischargers shall apply to the Chatfield Watershed Authority and the Division for transfers of all or part of one point source discharger's total phosphorus allocation to another point source wastewater discharger. Both dischargers must jointly apply for such transfers. Applications for transfer must include an agreement executed by the owners of the facilities specifying changes in average wastewater flows and performance in treatment of total phosphorus. The Chatfield Watershed Authority shall review phosphorus transfer proposals in coordination with the Division. The Chatfield Watershed Authority shall take action by approving, conditionally approving, or denying the phosphorus transfer, and forward its decision to the Division. Thereafter, the Division shall consider the Authority's decision and render the Division's final decision on the phosphorus transfer. The Division shall incorporate approvals in both discharge permits, if these transfers are not otherwise accounted for by the Division.
- h. Point source wastewater dischargers may apply to the Chatfield Watershed Authority and the Division for allocations of total phosphorus pounds from the reserve/emergency pool, to be applied to the dischargers total phosphorus wasteload allocation. Applications for total phosphorus pounds from the reserve/emergency pool must specify the number of pounds desired from the pool. The Chatfield Watershed Authority shall review the application for allocations of phosphorus from the reserve/emergency pool in coordination with the Division. The Chatfield Watershed Authority shall take action by approving, conditionally approving, or denying allocations from the reserve/emergency pool, and forward its decision to the Division. Thereafter, the Division shall consider the Authority's decision and render the Division's final decision on an allocation from the reserve/emergency pool. Approved allocations of phosphorus pounds from the reserve/emergency pool shall be incorporated as proposed amendments to the phosphorus wasteload allocation in section 73.3 at the next triennial review or rulemaking hearing of this regulation.
- i. If new point source wastewater facilities are proposed for the Chatfield Watershed, the appropriate entities shall apply to the Chatfield Watershed Authority and the Division for a phosphorus allocation. Phosphorus allocation pounds for such new point source wastewater dischargers may be derived from: (1) withdrawals from the reserve/emergency pool pursuant to 73.3(2)(h); (2) nonpoint source to point source trades pursuant to 73.3(2)(e); (3) point source to point source transfers pursuant to 73.3(2)(g); or (4) phosphorus concentration reductions through alternative treatment pursuant to 73.3(2)(f). Applications shall specify the number of desired total phosphorus pounds and

how the pounds will be derived as specified in 73.3(2)(i). The Chatfield Watershed Authority shall review the applications for phosphorus allocations in coordination with the Division. The Chatfield Watershed Authority shall take action by approving, conditionally approving, or denying the new phosphorus allocations, and forward its decision to the Division. Thereafter, the Division shall consider the Authority's decision and render the Division's final decision on the new phosphorus allocation. Allocations for new dischargers shall be incorporated into the new discharge permit by the Division and incorporated as proposed amendments to the phosphorus wasteload allocation in section 73.3 at the next triennial review or rulemaking hearing of this regulation.

- j. The Division shall provide notice of any application for a proposed trade in the Chatfield watershed in the monthly Water Quality Bulletin. Such notice shall be provided as early in the process as possible but only after the Division has completed its initial review.
- k. Any person adversely affected or aggrieved by a final decision of the Division on trade credits, transfers, or awards of phosphorus pounds from the Reserve Pool pursuant to section 73.3.2 may request an adjudicatory hearing before the Commission pursuant to the requirements and procedures of section 21.4. 5 CCR 1002-21.

73.4 DETERMINATIONS OF WASTELOAD

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

1. Direct Discharge.

For each direct discharge, monthly phosphorus loads (pounds) contributed shall be determined based upon the following formula:

Monthly Phosphorus Load (pounds) = Monthly volume discharged (million gallons) X Average Phosphorus Concentration (mg/l) for that month X 8.34.

The monthly volume (million gallons) = the sum of all total volumes of effluent measured at each permitted wastewater outfall ÷ number of measurements.

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

2. Land Application.

a. Land Treatment. For each land treatment discharge, monthly phosphorus load (pounds) contributed shall be determined based upon the following formulas:

i. Monthly Phosphorus Load

Monthly Phosphorus Load (pounds) = sum of the Phosphorus Masses (pounds) for the month X Land Application Return Factor.

OR

Monthly Phosphorus Load (pounds) = sum of loads from each land treatment site (monthly Phosphorus Mass at each land treatment site X Area Ratio for the land treatment site X Land Application Return Factor for the land treatment site)

ii. Phosphorus Mass

Phosphorus Mass = 8.34 X concentration value (mg/l) for phosphorus determined for the sample X the volume of water applied to the land (gallons) ÷ 1,000,000

iii. Phosphorus Concentration

Phosphorus concentrations for land treatment sites may be monitored either (1) at the land treatment site below the surface and above the seasonal high groundwater level, or (2) in the system prior to land application.

b. Land Disposal. For each land disposal discharge, monthly phosphorus load (pounds) contributed shall be determined based upon the following formulas:

i. Monthly Phosphorus Load

Monthly Phosphorus Load (pounds) = Monthly volume discharged (million gallons) X Average Phosphorus Concentration (mg/l) for that month X 8.34 X Land Application Return Factor.

ii. Monthly Volume

The monthly volume (million gallons) = the sum of all total volumes measured at or calculated for the month for all wastewater land applied.

iii. Average Phosphorus Concentration

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

iv. Phosphorus Concentration

Phosphorus concentrations for land disposal sites must be measured prior to land application.

c. Exemption. The Division may determine that a land application discharger has no phosphorus discharge, or a reduced phosphorus discharge, if the discharger demonstrates that: (1) the discharger land applies, or will land apply, at agronomic rates for the specific vegetative species at the land application site, and (2) the discharger has installed, or will install, soil moisture probes or other systems to assure land application at agronomic rates. Further, for such dischargers, the Division may authorize reduced monitoring requirements for discharge volume or phosphorus.

d. Site Approval. The Division shall use the return flow percent in a decreed augmentation plan to calculate phosphorus discharge loads for the site application of a land application discharger, if the discharger demonstrates that: (1) the discharger land applies, or will land apply, at agronomic rates for the specific vegetative species at the land application

site, and (2) the discharger has installed, or will install, soil moisture probes or other systems to assure land application at agronomic rates.

3. Annual Phosphorus Wasteload.

The annual phosphorus wasteload shall be the sum of the 12 monthly phosphorus loads calculated for that calendar year for permitted wastewater discharge points and sites and shall not exceed the wasteload allocations, set forth in section 73.3.

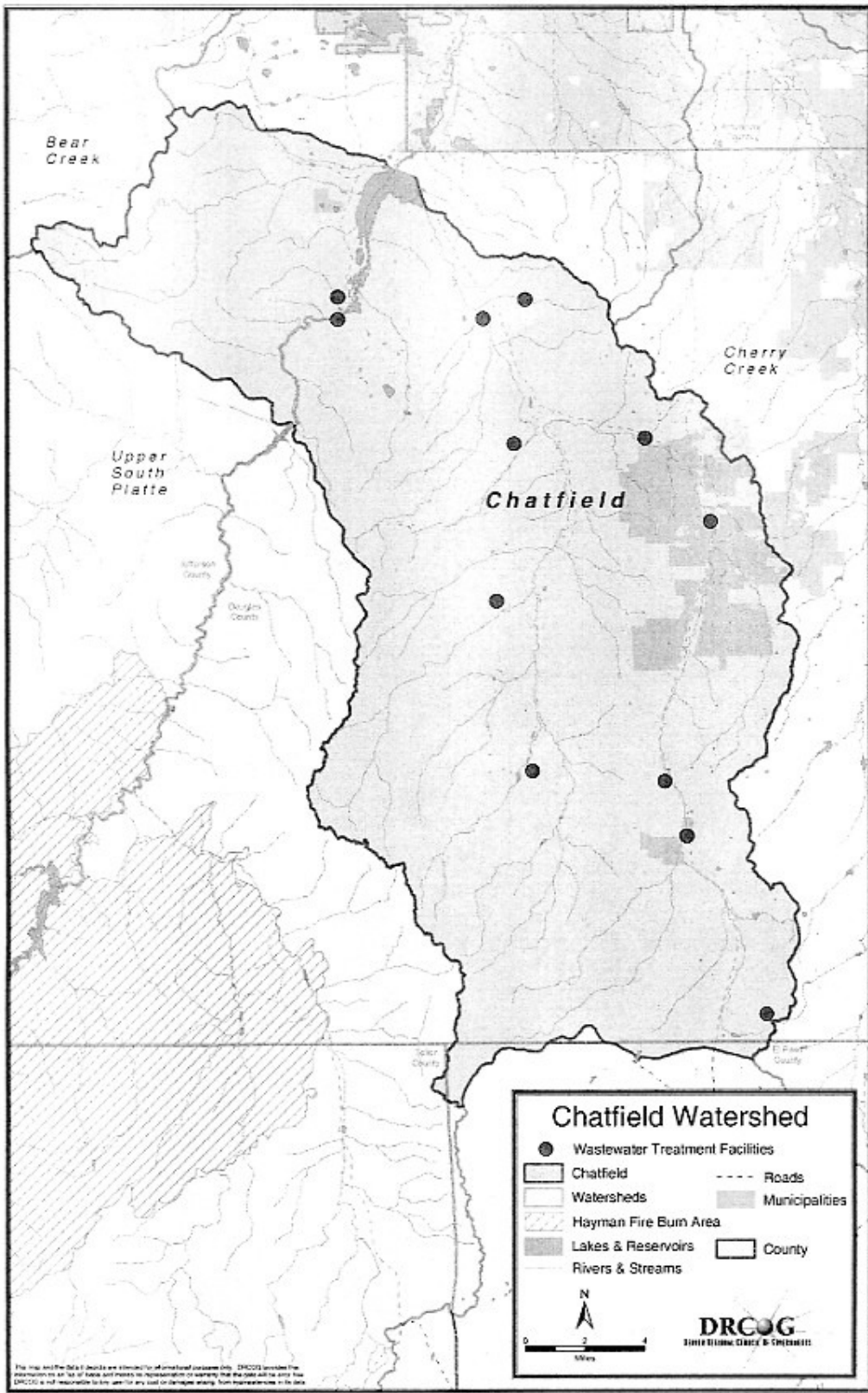
73.5 MONITORING AND ANNUAL REPORT

1. The Chatfield Watershed Authority shall, in consultation with the Water Quality Control Division, prepare and implement a monitoring and quality assurance project plan and annually review such plan to ensure that the monitoring addresses water quality problems and data transfer requirements associated with the Chatfield Watershed. The Division shall receive an electronic data transfer annually of all water quality data collected by the Authority. Data collection, compilation and transfer protocols will be detailed in the Chatfield Watershed Authority's quality assurance project plan.
2. The Chatfield Watershed Authority shall submit an annual report to the Water Quality Control Division for submittal to the Water Quality Control Commission by May 15. The annual report shall provide information on water quality monitoring, point source loadings and the status of compliance with discharge permit limits and conditions, nonpoint source loadings and the status of nonpoint source control efforts, status of trades approved, model updates, recommendations on any new or proposed expansion of wastewater treatment facilities, and recommendations for improving water quality, as appropriate.
3. For point source discharges, the annual report shall include a summary of actual discharge monitoring data for each permit, with average monthly concentrations of phosphorus and the annual phosphorus poundage discharged for each permit.

73.6 NONPOINT SOURCE CONTROLS

1. The Chatfield Watershed Authority shall develop an implementation program of best management practices for control of erosion and sediments. The Commission shall review the implementation program for existing erosion and sediment control programs as submitted by the Chatfield Watershed Authority at each triennial review of this regulation.
2. The Chatfield Watershed Authority members shall implement nonpoint source control programs for those areas within their jurisdictions with the goal of reducing nonpoint source phosphorus in the Chatfield Watershed so as not to exceed the 33,361 lbs/yr allocation for reservoir base load and background.
3. If nonpoint source control programs are not implemented, the Commission may adjust the phosphorus total maximum annual load allocations stated in section 73.3 of this regulation, alter water quality monitoring requirements and specify a nonpoint source management program.
4. Constructed structural nonpoint source best management practices shall be monitored by the Chatfield Watershed Authority, agencies, owners, or dischargers to determine total phosphorus removal efficiencies if credits for the controls are to be assigned to point source facilities, as provided under section 73.3(2)(e).

73.7 - 73.10 Reserved



73.18 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (JUNE 14, 2021 RULEMAKING HEARING EFFECTIVE AUGUST 14, 2021)

Sections 25–8–202 and 25–8–205, C.R.S., provide the specific statutory authority for adoption of the revisions to this 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 Water Quality Control Commission (“Commission”) approves revisions to Regulation 73.3(2) to incorporate findings that Dominion Water & Sanitation District (“Dominion”) owns the 1,218 pound total phosphorus wasteload allocation which was transferred by Roxborough Park Metro District (“Roxborough”) to Dominion (hereinafter referred to as “TP Transfer”).

In support of this revision to Regulation 73.3(2) and related Statement of Basis and Purpose, Dominion submitted the following:

- (1) A Clean Water Plan Amendment that set forth the transfer of Roxborough’s wastewater treatment plant and the associated 1,218 pound total phosphorus wasteload allocate to Dominion. That Clean Water Plan Amendment was approved in 2007 by the Chatfield Watershed Authority, the 208 Management Agency.
- (2) Also, the Clean Water Plan Amendment was approved by the Denver Regional Council of Governments in 2007 and incorporated into the DRCOG 2008 Water Quality Plan.
- (3) In 2015, the Water Quality Control Division, at the request of Roxborough and Dominion, transferred Roxborough’s discharge permit (CO0041645) to Dominion; Dominion’s discharge permit includes as a term the 1,218 pound wasteload allocation and Dominion’s responsibility for discharges to be at or below that wasteload allocation.
- (4) Roxborough participated in the transfers to Dominion, and supported Dominion’s proposed change to Reg 73.3(2).
- (5) Additionally, Dominion proposed and constructed wastewater infrastructure to convey and treat its wastewater; relying on Dominion’s ownership of 1,218 pound wasteload allocation to demonstrate that facilities would meet water quality standards. Dominion’s construction of wastewater infrastructure has been approved by the Division, Tri County Health Department, Douglas County and the Chatfield Watershed Authority.

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