COLORADO
Water Quality Control Division
Department of Public Health & Environment

MEMORANDUM

DATE: August 31, 2022

TO: Water Quality Control Commission
Jeremy Neustifter, Director, Environmental Boards and Commissions

FROM: Joni Nuttle, Senior TMDL Specialist, Restoration and Protection Unit, WQCD
Tammy Allen, Restoration and Protection Unit Manager, WQCD

RE: Division Review of the Chatfield Watershed Authority 2021 Annual Report

INTRODUCTION

The Chatfield Reservoir Control Regulation No. 73, 5 CCR 1002-73 is a watershed-scale implementation plan for meeting a total maximum annual load (TMAL) of total phosphorus (TP) to Chatfield Reservoir. The TMAL's purpose is to ensure the water quality of Chatfield Reservoir meets the site-specific water quality standards of 10 ug/L chlorophyll *a* and 0.030 mg/L TP. Both of these water quality standards include assessment thresholds for determining attainment of the standards. The control regulation defines the TP allowable load to the reservoir, allocates that load among point, nonpoint, background, and reservoir base-load sources, establishes a trading program, and specifies nonpoint source control, monitoring, and reporting requirements. As the Clean Water Act Section 208 management agency for the watershed, the Chatfield Watershed Authority (authority) is identified in the control regulation as the organization to oversee implementation of TP controls for point sources, including regulated stormwater, as well as nonpoint sources.

BACKGROUND

The control regulation requires the authority to submit an annual report to the Water Quality Control Commission (commission) by May 15 each year. Accomplishments discussed in the report are presented to the commission during annual briefings. The annual report provides information that demonstrates performance and status of point and nonpoint source controls of TP, as well as highlighting the activities undertaken in the watershed during the reporting period. Specifically, the report should include information on:

- Water quality monitoring
- Point source loadings and the status of compliance with discharge permit limits and conditions, as well as average monthly discharge monitoring data and annual phosphorus poundage for each permit
- 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
- Recommendations for improving water quality, as appropriate

The control regulation provides additional guidance on annual report content including the evaluation of nonpoint source activities and programs as they relate to the goal of reducing nonpoint source

phosphorus in Chatfield Reservoir and the monitoring of structural BMPs associated with nonpoint source to point source trades.

The annual report also discusses progress made on revising allocations in the control regulation. In 2009, the control regulation was revised to include an updated TMAL. However, at that time, revised allocations of that TMAL were not adopted. The control regulation identifies activities to support revisions of the allocations and directs the authority to implement these activities. The activities include:

- Partition the allowable load between the South Platte and Plum Creek basins
- Determine the allocations of loads within each basin
- Revise wasteload allocations
- Update definitions and regulation language to support TMAL revisions

ANNUAL REPORT HIGHLIGHTS

Highlights from the 2021 annual report include the status of water quality in Chatfield Reservoir.

During 2021, the growing season (July through September) average chlorophyll *a* concentration in the reservoir was 7.3 ug/L, which is below the water quality standard of 10 ug/L as well as the assessment threshold of 11.2 ug/L. The chlorophyll *a* standard allows an exceedance frequency of 1 in 5 years. The reservoir exceeded the chlorophyll *a* standard once in the last 5 years. Therefore, as of 2021, based on data reported in the annual report Chatfield Reservoir was in attainment of the site-specific water quality standard for chlorophyll *a*.

During 2021, the growing season (July through September) average TP concentration in the reservoir was 20 ug/L, which is below the water quality standard of 30 ug/L as well as the assessment threshold of 35 ug/L. The TP standard allows an exceedance frequency of 1 in 5 years. The reservoir has attained the TP standard in 4 of the past 5 years. Therefore, as of 2021, based on data reported in the annual report Chatfield Reservoir was in attainment of the site-specific water quality standard for TP.

The authority continues its work to collect water quality data in the basin and develop their watershed model. The authority also continues to coordinate and collaborate with the Chatfield Reservoir Mitigation Company (CRMC) on data collection and CRMC's Chatfield reservoir model. These models will inform revisions to allocations in the control regulation. The division looks forward to the authority's inclusion of model results in the 2022 annual report.

DIVISION COLLABORATION WITH THE AUTHORITY

The Water Quality Control Division's (division) work with the authority in 2021 was primarily focused on stakeholder processes scoping issues for triennial reviews and rulemaking hearings. The division appreciates the authority's commitment to these discussions and the progress that was made during the reporting period.

RECOMMENDATIONS

The division's participation in the authority's development of the annual report was limited to a review of the final report. The primary criterion the division used to evaluate the report was completeness

with respect to the reporting requirements from the control regulation. The division finds that the annual report generally meets the reporting requirements. The annual report identified the need for more data collection to identify and quantify nonpoint sources of phosphorus in the Plum Creek Basin. The division agrees with this need. When resources allow, the division recommends more focused monitoring to evaluate nonpoint source projects in the watershed in order to document nonpoint source loadings and project effectiveness. This monitoring data and project effectiveness information would be particularly valuable to inform future nonpoint source projects and support evaluations of proposed trades, as well as the watershed modeling that is underway.

cc: Chatfield Watershed Authority

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