Central Valley Regional Water Quality Control Board

18 April 2024

Donald Ikemiya
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CONDITIONAL APPROVAL OF THE KAWEAH BASIN WATER QUALITY ASSOCIATION'S COMPREHENSIVE SURFACE WATER QUALITY MANAGEMENT PLAN

Thank you for your 24 April 2023 submittal of the proposed Comprehensive Surface Water Quality Management Plan (CSQMP) for the Kaweah Basin Water Quality Association. Based on staff review, the CSQMP does not contain certain key elements required by Waste Discharge Requirements General Order R5-2013-0120-09. However, it is vital that immediate actions are taken to address the existing water quality issues while the deficiencies are rectified. To expedite this goal, I am conditionally approving the CSQMP.

By 31 August 2024, please submit the following:

1. A separate Source Identification Study proposal for copper, zinc, and diuron containing at least the minimum components listed in Appendix MRP-1 of the General Order's Monitoring and Reporting Program.

2. An updated CSQMP that addresses staff comments and recommendations as identified in the enclosed memorandum and the additional pH management plans triggered in the Cameron Creek and Goshen Ditch monitoring sites.

I agree with the assessment that the *Escherichia coli* (*E. coli*) issues noted in the CSQMP are not likely remedied through a Coalition-specific management plan and acknowledge the Kaweah Basin Water Quality Association's commitment to engage in region-wide efforts to address these constituents as they develop. Management plan development for *E. coli* is not required at this time.

The enclosed memorandum provides additional details regarding staff's review of the CSQMP. If you have any questions regarding this letter, please contact Mathew Jian at (559) 445-5567 or by email at Mathew.Jian@waterboards.ca.gov.

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For Patrick Pulupa
Executive Officer

Enclosure: Staff Review of the Kaweah Basin Water Quality Association
Comprehensive Surface Water Quality Management Plan

Central Valley Regional Water Quality Control Board

TO: Eric Warren, PE
Senior Water Resource Control Engineer
IRRIGATED LANDS REGULATORY PROGRAM

FROM: Mathew Jian
Water Resource Control Engineer
IRRIGATED LANDS REGULATORY PROGRAM

DATE: 18 April 2024

SUBJECT: **REVIEW OF THE KAWEAH BASIN WATER QUALITY ASSOCIATION'S PROPOSED COMPREHENSIVE SURFACE WATER QUALITY MANAGEMENT PLAN**

On 23 April 2023, the Kaweah Basin Water Quality Association (Coalition) submitted a proposed Comprehensive Surface Water Quality Management Plan (CSQMP) to the Central Valley Water Board. Waste Discharge Requirements General Order R5-2013-0120-09 (General Order) requires the development and implementation of Surface Water Quality Management Plans for constituents that exceed applicable water quality trigger limits more than once in a three-year period.

The following sections provide pertinent background information, a summary of the CSQMP's proposed actions, and staff's comments and recommendations.

BACKGROUND

Surface water monitoring conducted by the Kaweah Basin Water Quality Association has triggered the requirement to develop management plans to address Copper (Cu), Zinc (Zn), Molybdenum (Mo), diuron, simazine, chlorpyrifos, water column toxicity to *Selenastrum capricornutum* (*S. capricornutum*), *Escherichia coli* (*E. coli*), and pH. In lieu of developing separate individual Surface Water Quality Management Plans, the Coalition has elected to develop a single comprehensive plan describing the approaches that will be used to examine and address exceedances of the listed constituents of concern. The plan identifies exceedances observed across multiple watersheds dating back to the 2014 water year (1 October 2013 to 30 September 2014).

Since the Coalition submittal of the CSQMP, subsequent exceedances within the Coalition boundary have triggered the requirement to develop pH management plans in Cameron Creek and Goshen Ditch monitoring sites.

Pursuant to Section VIII.N.3 of the General Order, the Coalition submitted a management plan exemption request on 30 August 2023 for total Zn at the Kaweah River monitoring site, chlorpyrifos and simazine at the Stone Corral monitoring site, pH at the Elk Bayou monitoring site, and Mo at the Yokohl Creek monitoring site. On 3 November 2023, Central Valley Water Board approved the exemption for all the listed constituents except for total Zn at the Kaweah River monitoring site. In acknowledgement of the exemption, staff has disregarded the above constituents at those monitoring sites in this review. The remaining constituents being addressed by the CSQMP are Cu, Zn, diuron, water column toxicity to *S. capricornutum*, *E. coli*, and pH.

Public Comments Received
The CSQMP was circulated for public comment on 12 August 2023. No comment letters were received from interested parties during the 30-day review period.

SUMMARY OF THE COALITION'S COMPREHENSIVE SURFACE WATER QUALITY MANAGEMENT PLAN APPROACH

The CSQMP categorized each constituent of concern into three approaches for addressing the water quality issues: Source Identification Review, 10-Year Compliance, and Valley-Wide Issue. A summary of these categories, the applicable constituents of concern, and proposed management strategies are provided below.

Source Identification Review
The constituents placed in the Source Identification Review category are Cu, Zn, and diuron. These constituents would undergo extensive data review to identify potential sources that could be causing or contributing to the documented exceedances. Upon identification of the potential source(s), the Coalition intends to notify growers adjacent to the waterway and those who have been specifically identified as potential contributors. Additional education and outreach efforts would be conducted to inform these growers of best management practices that can be implemented to address the water quality issues. Follow-up outreach and surveys would be conducted to document if best management practices have been implemented. The Coalition would continue to monitor surface water quality for a minimum of three years to evaluate if implemented management practices have addressed constituents of concern.

10-Year Compliance
The constituents placed in the 10-Year Compliance category are water column toxicity to *S. capricornutum* and pH and are intended to be addressed within 10 years. The Coalition would initially identify best management practices and then commence regional grower outreach and education about the exceedances. Follow-up outreach and surveys would be conducted to document if best management practices have been implemented. The Coalition would continue to monitor surface water quality for a minimum of three years and evaluate if implemented management practices have improved local water quality.

Valley-Wide Issue
A single constituent (*E.* Coli) was placed in the Valley-Wide Compliance category. Due to the widespread nature of bacterial contamination within the Central Valley region, the CSQMP states that the Coalition intends, under the direction and guidance from the Central Valley Water Board, to participate in the development of a regional approach for characterizing and addressing fecal indicator bacterial sources, including *E.* coli. This approach would likely include collaboration with other agricultural third-party groups within the Central Valley.

Reporting
The CSQMP proposes for the Coalition to continue to submit quarterly surface water monitoring reports as required by the General Order's Monitoring and Reporting Program. Annually on 31 August, the Coalition would submit a CSQMP Annual Status Report, summarizing the progress made in the previous reporting period. The status report would be submitted on the same day as the Annual Monitoring Report (AMR).

STAFF COMMENTS AND RECOMMENDATIONS

Representative Monitoring Sites
Appendix MRP-1 of the General Order states, "The SQMP shall also include a description of the watershed areas and associated COC being addressed by the plan. For a water body that is representative of other water bodies, those areas being represented must also be identified in the SQMP."

Since many of the surface water bodies within the Coalition boundaries are ephemeral, the Coalition's existing Surface Water Monitoring Plan utilizes a representative monitoring approach for a number of watersheds. The following table identifies these represented watersheds and the monitoring sites they have been associated with:

Representative Monitoring Site	Represented Watersheds
Kaweah River	East Mill Creek
	East Packwood Creek
	Deep Creek
Goshen Ditch	Base Slough
	West Mill Creek
	West Packwood Creek
	Southwest Cameron Creek
	Elk Bayou
Cottonwood Creek	Antelope Creek
	Stone Corral
Yokohl Creek	Foothill Ditch

Table 2 of the CSQMP briefly identifies the representative monitoring sites. However, there was no identification or discussion of the represented watersheds. Surface Water Quality Management Plans triggered in representative waterways apply to all the

respective watersheds they represent unless there is data or additional monitoring to demonstrate that the exceedances are not reflected in the represented waterways. The Coalition must update the CSQMP to properly reflect the watersheds required to be covered under the management plan.

Management Practice Implementation Reporting
General Order Section VII.G requires the use of Management Practice Implementation Reports (MPIRs) to document practices implemented by applicable members to comply with the requirements of a Surface or Groundwater Quality Management Plan. The CSQMP refers to the use of "outreach surveys" to achieve a similar goal, but no further context or proposed form was provided. The Coalition must develop and utilize a Management Practice Implementation Report form tailored to the requirements contained in the CSQMP and approved by the Executive Officer.

Management Plan Strategy – Sediment and Erosion Control
The Coalition identified sediment discharge and erosion as a potential mode of transport for pesticides and metals (particularly Diuron and Zn) to reach surface waters due to their tendency to bind to soil particles. However, the Coalition does not identify sediment and erosion control as part of the management plan strategy. The coalition should consider reviewing and/or implementing sediment and erosion control plans as part of an update to the CSQMP.

General Requirements – Baseline Inventory of Existing Management Practices
Appendix MRP-1 of the General Order requires management plans to include "A baseline inventory of identified existing management practices in use within the management plan area that could be affecting the concentrations of the COCs in surface water and/or groundwater (as applicable) and locations of the various practices."

The CSQMP states that Irrigation and Nitrogen Management Plan (INMP) Summary Report and Farm Evaluation data would be used to identify a baseline inventory of existing management practices upon approval of the CSQMP. Per the General Order, the baseline inventory should have already been conducted and included in the CSQMP submittal. The CSQMP must be updated to include the baseline inventory of management practices.

Time Schedule for Compliance – Source Identification Review and 10-Year Compliance
Section XII of the General Order states, "The time schedule identified in the SQMP for compliance with Surface Water Limitation III.A must be as short as practicable, but may not exceed 10 years from the date the SQMP is submitted for approval by the Executive Officer. The proposed time schedule in the SQMP must be supported with appropriate technical or economic justification as to why the proposed schedule is as short as practicable."

An Implementation Schedule was outlined in Section 3.3.1 in the CSQMP, along with a statement that it will commence upon approval of the CSQMP. Although water column toxicity to *S. capricornutum* and pH were listed in the 10-Year Compliance Category, there were no appropriate technical or economic justifications provided as to why 10-year compliance is the shortest practicable time schedule for compliance. The CSQMP must include this information.

Data Evaluation
Appendix MRP-1 of the General Order states that data evaluation should include, at a minimum, "Methods to be utilized to perform data analysis (graphical, statistics, modeling, index computation, or some combination."

Section 5.1 of the CSQMP only states the use of databases, custom programs, and a Geographic Information System to conduct trend analyses and data tracking. No specific methods (e.g., linear regression, Mann-Kendall) were identified to conduct the types of trend analyses needed to evaluate the effectiveness of the management plans. This information should be identified in an updated CSQMP.

Escherichia coli
Staff are aware of the complexities regarding *E. coli*, both from a source identification and a treatment perspective. It is a water quality issue that is ubiquitous throughout the region, observed in both agricultural and non-agricultural settings, and often does not have broadly applicable management practices demonstrated to be effective in resolving them.

In the event there is sufficient evidence indicating that a water quality exceedance is unlikely to be remedied by a management plan, Section VIII.N.3 of the General Order grants the Executive Officer the discretion to determine that a SQMP is not required. In acknowledgement of the statements above, it is staff's opinion that the observed exceedances are unlikely to be remedied solely by the actions of the Coalition members and are currently best addressed through more comprehensive coordinated efforts within the region.

Copper, Zinc, and Diuron
The General Order allows the Coalition to conduct a Source Identification Study as an intermediate step in identifying and addressing contributing sources of water quality constituents of concern. However, the Coalition has not provided sufficient information regarding the proposed study for Cu, Zn, and Diuron for staff to make a recommendation to proceed with its implementation. The Coalition should submit a separate Source Identification Study proposal to the Executive Officer containing the minimum components listed in Appendix MRP-1 of the General Order's Monitoring and Reporting Program. If the Source Identification Study proposal is approved, and the Source Identification Study determines an irrigated agricultural source for Cu, Zn and/or Diuron, the Coalition should update the CSQMP with a description of the actions that will be taken to address the constituents and develop an appropriate technical or

economic justification as to why a proposed time schedule for compliance is as short as practicable.

Identified Minor Errors
Staff identified two minor errors during Review of the CSQMP. Water column toxicity to *Pimephales promelas* was incorrectly identified as a constituent that triggered a management plan at the Foothill Ditch monitoring site in Table 6. The St. Johns River Monitoring Site was incorrectly identified as a Representative Monitoring Site in Table 2. Staff recommend removing the identified minor errors in an updated CSQMP.