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Central Valley Regional Water Quality Control Board

3 November 2023

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APPROVAL OF SURFACE WATER QUALITY MANAGEMENT PLAN EXEMPTION REQUESTS FOR CHLORPYRIFOS, SIMAZINE, pH, AND MOLYBDENUM

Thank you for your 30 August 2023 Surface Water Quality Management Plan (SQMP) Exemption Request for select monitoring constituents within the Kaweah Basin Water Quality Association area. Based on staff's review, I have determined that the development of SQMPs for chlorpyrifos, simazine, pH, and molybdenum is not required at this time.

Please continue monitoring in accordance with the Coalition's approved Surface Water Monitoring Plan and the Monitoring and Reporting Program for Waste Discharge Requirements General Order R5-2013-0120-09. Should future sample results for the above constituents document the exceedance of an applicable water quality objective or trigger limit twice in a three-year period, the requirement to develop a SQMP shall still apply.

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

Christina Shyr

For Patrick Pulupa
Executive Officer

Enclsoure: Staff Review of the Kaweah Basin Water Quality Association Surface Water Quality Management Plan Exemption Request

Central Valley Regional Water Quality Control Board

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

FROM: Mathew Jian
Environmental Scientist
IRRIGATED LANDS REGULATORY PROGRAM

DATE: 2 November 2023

SUBJECT: **REVIEW OF THE KAWEAH BASIN WATER QUALITY ASSOCIATION SURFACE WATER QUALITY MANAGEMENT PLAN EXEMPTION REQUEST**

On 30 August 2023, the Kaweah Basin Water Quality Association (Coalition) submitted a Surface Water Quality Management Plan Exemption Request. 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 objectives or trigger limits more than once in a three-year period.

Background

On 24 April 2023, the Kaweah Basin Water Quality Association (Coalition) submitted a Comprehensive Surface Water Quality Management Plan (CSQMP) to the Central Valley Water Board (Board). Surface Water Quality Management Plans for the following constituents of concern (COCs) have been triggered in multiple watersheds throughout the Coalition boundary: copper, total zinc, molybdenum, diuron, simazine, chlorpyrifos, toxicity to *Selenastrum capricornutum* (*S. capricornutum*), toxicity to *Pimephales promelas* (*P. promelas*), *Escherichia coli* (*E. coli*), and pH. The purpose of the CSQMP was to identify the actions that will be taken to address and examine exceedances of the listed COCs.

Since the initial exceedances that triggered the development of management plans, the Coalition has documented measurable water quality improvements for some of the COCs. Section VIII.N.3 of the General Order states, "*At the request of the Third-Party or upon recommendation by Central Valley Water Board staff, the Executive Officer may determine that the development of a SQMP/GQMP is not required. Such a determination may be issued, after opportunity for public comment, if there is sufficient evidence indicating that Members discharging waste to the affected surface or*

groundwater are meeting the receiving water limitations given in section III of this Order (e.g., evidence indicates that irrigated agriculture does not cause or contribute to the water quality problem) or there is sufficient evidence that the exceedance is not likely to be remedied or addressed by a management plan." Pursuant to this section, the Coalition is requesting an exemption of the development of SQMPs for total zinc at the Kaweah River sampling site, chlorpyrifos and simazine at the Stone Corral monitoring site, pH at the Elk Bayou monitoring site, and molybdenum at the Yokohl Creek monitoring site.

The SQMP Exemption Request was circulated for public comment on 22 September 2023. No comments were received from interested parties during the review period.

The following sections provide a summary of the Coalition's SQMP Exemption Request, along with staff findings and recommendations.

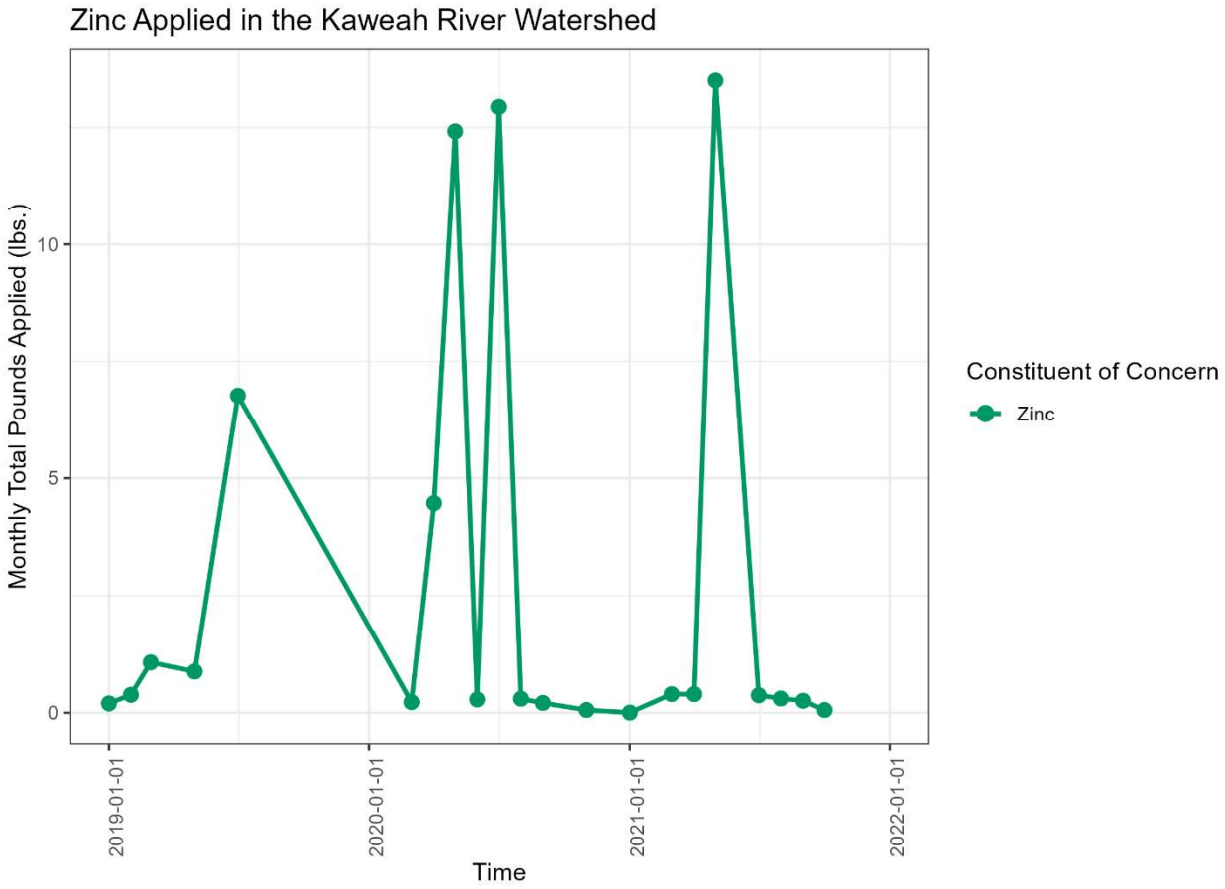
Surface Water Quality Management Plan Exemption Request Summary

Kaweah River: Total Zinc

Exceedances for total zinc at Kaweah River occurred in April 2018, July 2019, and August 2019 triggered the requirement for a management plan. There have been no documented exceedances of total zinc since the August 2019 sampling event.

Potential sources identified in the Exemption Request which may have contributed to the increased concentration of zinc include irrigated agriculture, naturally occurring zinc, historic upstream mining operations, and other anthropogenic sources. Pesticide use records within the Kaweah River watershed indicate that applied quantities of zinc-containing fungicides fluctuated between months from 2019 to 2021 (Figure 1); however, water levels in the Kaweah River during the times of exceedances were lower than normally observed. The Exemption Request speculates this may have contributed to the increased concentration of total zinc.

Figure 1: Month-to-month Application of Zinc-containing Fungicide (Figure 3 of the SQMP Exemption Request)



Stone Corral: Chlorpyrifos and Simazine

Exceedances for chlorpyrifos at Stone Corral in December 2014 and February 2015 triggered the requirement for a management plan. There have been no exceedances of chlorpyrifos since the February 2015 sampling event. Growers in the Stone Corral watershed have not used chlorpyrifos since 2018, and chlorpyrifos use in agricultural operations was banned by the California Department of Pesticide Regulation (DPR) on 31 December 2020.

Exceedances for simazine at Stone Corral in February and December 2015 triggered the requirement for a management plan. The last exceedance of simazine occurred in January 2018. Pesticide use data shows that simazine has not been applied by agricultural Coalition members in the Stone Corral watershed since 2015. Pesticide use data in the Cottonwood Creek watershed (an adjacent watershed to Stone Corral) indicates that simazine was used heavily in 2015 but has not been applied in significant quantities since then. Flow conditions in Stone Corral were low during the periods subsequent exceedances occurred, which the Exception Request speculates may have contributed to the increased concentration of simazine detected.

Elk Bayou: pH

Measured pH values below the Water Quality Objective of 6.5 – 8.3 at Elk Bayou in June and July 2019 triggered the requirement for a management plan. There have been no measurements outside this range at the monitoring site since then; however, samples were not collected in 2021 due to dry conditions. The Exception Request states that causes of low pH can be hard to determine, but may include chemical contaminants, biological activities, geological processes, temporal variations, upstream mining operations, and other anthropogenic activities. The Coalition contends that based on recent data, the Water Quality Objective for pH is currently being met.

Yokohl Creek: Molybdenum

Exceedances for molybdenum at Yokohl Creek in March and April 2017 triggered the requirement for a management plan. There have been no exceedances of molybdenum at Yokohl Creek since then. The Exception Request identified irrigated agriculture, soil erosion, and weathering from rock as potential sources of molybdenum in surface water. The Exception Request also stated that no members used any molybdenum-containing substances during and after the time of the two exceedances.

Staff Findings and Recommendations

Kaweah River: Total Zinc

Through three years of monitoring, exceedances for total zinc have not been observed at the Kaweah River monitoring site during the months of July and August. However, there is only one year of monitoring data around the month of April. This is an insufficient amount of data to demonstrate that the water quality impairments are no longer occurring during that time of the year. Moreover, recent surface water submittal data indicate that there was an exceedance of dissolved zinc during the sampling event on 25 April 2023. Though the exceedances that triggered the development of management plans were for total zinc and not dissolved zinc, the exceedance of dissolved zinc for the sample collected on 25 April 2023 indicate that zinc is still of a water quality concern for Kaweah River. Therefore, staff do not recommend the approval of an exception request for the development of a SQMP for zinc at Kaweah River.

Stone Corral: Chlorpyrifos and Simazine

Monitoring data demonstrates that the water quality impairments by chlorpyrifos and simazine at the Stone Corral monitoring site that triggered the need for the development of management plans is no longer occurring. Staff concur with the Coalition that this is likely due to the changes in grower use of the two pesticides, as well as DPR's ban on chlorpyrifos use in agriculture. Therefore, staff recommends the exemption requests for the development of chlorpyrifos and simazine SQMPs at Stone Corral to be approved.

Elk Bayou: pH

Though not presented in the SQMP Exemption Request, there was no exceedance of pH at the Elk Bayou monitoring site during the June 2023 sampling event (April to June 2023 surface water data was submitted to the Board on 01 September 2023). Considering this data in conjunction with the request, the coalition is able to demonstrate through three years of surface water data collection that the pH exceedances that occurred in June and July 2019 are no longer causing water quality impairments. Therefore, staff recommends the exemption requests for the development of a pH SQMP at Elk Bayou to be approved. The Coalition shall continue to monitor for pH at Elk Bayou in accordance with the Surface Water Monitoring Plan, and any subsequent exceedances that occur more than once in a three-year period will trigger the need to develop a management plan.

Yokohl Creek: Molybdenum

In staff review, it was not clear what records or time period was encompassed by the statement that there was no use of molybdenum-containing substances “during and after the time of exceedances.” However, to the extent which growers have continued applying molybdenum-containing substances after the exceedances, it does not appear to be causing any water quality impairments based on the monitoring data presented. Therefore, staff recommends the exemption request for the development of a molybdenum SQMP at Yokohl Creek to be approved. The Coalition shall continue to monitor for molybdenum at Yokohl Creek in accordance with the Surface Water Monitoring Plan, and any subsequent exceedances that occur more than once in a three-year period will trigger the need to develop a management plan.