



Central Valley Regional Water Quality Control Board

7 August 2024

David Halopoff
Cawelo Water District Coalition
17207 Industrial Farm Road
Bakersfield, CA 93308

APPROVAL OF CAWELO WATER DISTRICT COALITION'S SURFACE WATER QUALITY MANAGEMENT PLAN EXEMPTION REQUEST FOR pH AND *E. coli*

Thank you for your 24 June 2024 Surface Water Quality Management Plan (SQMP) Exemption Request for pH and *Escherichia coli* (*E. coli*) within the Cawelo Water District Coalition (Coalition) area. Based on staff's review, I have determined that the development of SQMPs for pH and *E. coli* 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 pH and *E. coli* document the exceedance of applicable water quality objectives or trigger limits 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 SQMP Exemption Request. 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.

A handwritten signature in blue ink, appearing to read "Christine Sheen".

For Patrick Pulupa
Executive Officer

Enclosure: Staff Review of the Cawelo Water District Coalition's 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
Water Resource Control Engineer
IRRIGATED LANDS REGULATORY PROGRAM

DATE: 7 August 2024

SUBJECT: REVIEW OF CAWELO WATER DISTRICT COALITION’S SURFACE WATER QUALITY MANAGEMENT PLAN EXEMPTION REQUEST

On 24 June 2024, the Cawelo Water District Coalition (Coalition) submitted a Surface Water Quality Management Plan (SQMP) Exemption Request to the Central Valley Water Board. Waste Discharge Requirements General Order R5-2023-0120-09 (General Order) requires the development and implementation of SQMPs for constituents that exceed applicable water quality objectives or trigger limits more than once in a three-year period.

BACKGROUND

The General Order requires the Coalition to conduct surface water quality monitoring at designated sites in accordance with its approved Surface Water Monitoring Plan. From 23 January 2023 to 24 April 2023, multiple exceedances of pH and *Escherichia coli* (*E. coli*) occurred in two of the surface water monitoring sites located on Poso Creek, summarized in Table 1 below.

Date	pH		<i>E. coli</i> (MPN/100ml)	
	Hwy 65	Hwy 99/Zerker Rd	Hwy 65	Hwy 99/Zerker Rd
1/12/23	-	-	33	130
1/23/23	6.21	6.08	23	49
2/28/23	7.19	7.43	540	240
3/23/23	5.94	6.02	130	110
4/24/23	7.16	6.62	540	540
5/23/23	7.64	7.11	240	240

Table 1: Results for pH and *E. coli* from 23 January 2023 to 24 April 2023. Red numbers indicate water quality exceedances.

The Coalition believes that irrigated agriculture is not the cause of the exceedances and that there are various non-agricultural sources of the exceedances upstream of the Coalition monitoring sites. The Exemption Request states that the Highway 65 monitoring site is located upstream of irrigated agricultural influence, and serves to provide background water quality information. The Highway 99 monitoring site is located at the western boundary of the Coalition area, downstream of irrigated agricultural lands in the Coalition. The Zerker Road monitoring site serves as an alternative monitoring site during times when there is insufficient flow in the Poso Creek reaching the Highway 99 monitoring site to collect a water quality sample.

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

SURFACE WATER QUALITY MANAGEMENT PLAN EXEMPTION REQUEST SUMMARY

pH: Highway 65 and Highway 99 Monitoring Sites

Exceedances for pH at the Highway 65 and Highway 99 monitoring sites which occurred on 23 January 2023 and 28 March 2023 triggered the need to develop a SQMP. Past data collected by the Coalition shows that historically pH has ranged between 7 and 8, but significantly dropped in 2023 when extreme storm events occurred. Potential sources of acidic conditions identified in the Exemption Request include chemical contaminants, biological activity, geologic processes, temporal variability, mining waste, other anthropogenic activities, and irrigated agriculture.

Potential sources of pH exceedances from irrigated agriculture as identified in the Exemption Request can include fertilizer, pesticide runoff, or erosion. However, the Coalition stated that there were no exceedances of nutrient, metal, pesticide, or toxicity that suggest irrigated agriculture is the source of acidic pH conditions. Moreover, the Coalition stated that there is no irrigated agriculture upstream of the Highway 65 monitoring site. Additionally, there is a lack of pH variation between sites as water flows through irrigated lands during any given sampling event. The Coalition cited a 2020 Improvement District No. 4 Consumer Confidence Report published by the Kern County Water Agency that found that contaminants affecting pH are naturally occurring. The Coalition also referenced two reports stating that river systems can experience diurnal fluctuation in pH between 0.5 and 1 pH units due to microbial respiration and photosynthesis.

***E. coli*: Highway 65**

Exceedances for pH at Highway 65 monitoring site which occurred in samples collected on 28 February 2023 and 24 April 2023 triggered the need to develop a SQMP. One additional exceedance occurred at the Highway 99 monitoring site in a sample collected on 24 April 2023. Potential sources of *E. coli* identified in the Exemption Request include wastewater treatment effluent, broken or leaky sewer pipes, failed septic systems, and stormwater runoff from livestock lands. As stated previously, the Coalition

stated that there are no irrigated agricultural lands upstream of the Highway 65 monitoring site that could have contributed to the exceedance.

STAFF COMMENTS AND RECOMMENDATIONS

pH: Highway 65 and Highway 99 Monitoring Sites

Monitoring data collected on 23 January 2023 and 28 March 2023 demonstrates that the pH of water did not change significantly between the Highway 65 monitoring site and Highway 99 monitoring as water flowed through irrigated lands. Staff independently verified the Coalition's claim that there was no irrigated agriculture upstream of the Highway 65 monitoring site, and that there were no exceedances of nutrients, metals, pesticides, or observed toxicity to suggest irrigated agriculture is the source of acidic pH conditions. Therefore, staff recommends the exemption request for the development of a SQMP to address pH be approved. The Coalition should continue to monitor for pH 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 or separate exemption request.

***E. coli*: Highway 65**

As stated previously, staff independently verified the Coalition's claim that there was no irrigated agriculture upstream of the Highway 65 monitoring site. Moreover, *E. coli* concentration appears to decrease as water flows through irrigated lands as shown in samples collected on 28 February 2023. Therefore, staff recommend the exemption request for the development of a SQMP for *E. coli* be approved. The Coalition should continue to monitor for *E. coli* 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 or separate exemption request.