
Central Valley Regional Water Quality Control Board

25 September 2024

David Guy, President
Northern California Water Association
455 Capitol Mall, Suite 703
Sacramento, CA 95814

REVIEW OF THE 2025 MONITORING PLAN UPDATE – SACRAMENTO VALLEY WATER QUALITY COALITION

Thank you for submitting the 2025 Monitoring Plan Update for the Sacramento Valley Water Quality Coalition, which was last revised and submitted on 11 September 2024. This schedule provides detailed plans for monitoring water quality constituents at representative and integration monitoring sites as required by the *Waste Discharge Requirements General Order for Growers in the Sacramento River Watershed that are Members of a Third-Party Group, Order R5-2014-0030-11* (Order). This plan also presents the monitoring schedule for special project monitoring sites, and all monitoring required for Total Maximum Daily Loads (TMDLs) and surface water quality management plans in the Coalition area.

Central Valley Regional Water Quality Control Board staff has reviewed the 2025 Monitoring Plan Update and supporting documentation, including the Pesticide Evaluation Protocol. The 2025 Monitoring Plan Update is consistent with the Surface Water Quality Monitoring Requirements (Section III) of the MRP Order, with the exception of some excluded pesticide monitoring. For this reason, I approve of the 2025 Monitoring Plan Update on the condition that the staff recommendations for additional pesticide monitoring of bifenthrin at GIDLR and UCBRD in September and July, respectively, in addition to 2,4-D acids & salts, acetamiprid, methomyl, and thiamethoxam at COLDR, 2,4-D acids & salts, acetamiprid, dimethoate, and methomyl at SSKNK, and acetamiprid, methomyl, and thiamethoxam at SSLIB.

Any additional revisions or updates to the 2025 Monitoring Plan Update will require my approval prior to implementation of any such changes. If you have any questions or comments, you may contact Olivia Mathews at (530) 224-3215, or by email at Olivia.Mathews@waterboards.ca.gov.

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David Guy, President
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25 September 2024

Enclosure: Staff Review of the 2025 Monitoring Plan Update – Sacramento Valley
Water Quality Coalition

cc: Bruce Houdesheldt, Northern California Water Association

Central Valley Regional Water Quality Control Board

TO: Petra Lee
Senior Environmental Scientist
IRRIGATED LANDS REGULATORY PROGRAM

FROM: Olivia Mathews
Environmental Scientist
IRRIGATED LANDS REGULATORY PROGRAM

DATE: 20 September 2024

SUBJECT: REVIEW OF THE 2025 MONITORING PLAN UPDATE – SACRAMENTO VALLEY WATER QUALITY COALITION

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) received the 2025 Monitoring Plan Update from the Sacramento Valley Water Quality Coalition (Coalition) on 1 August 2024, as required by the *Waste Discharge Requirements General Order for Growers in the Sacramento River Watershed that are Members of a Third-Party Group, Order R5-2014-0030-11* (Order). One revision was submitted on 11 September 2024. The 2025 Monitoring Plan Update provides the proposed surface water monitoring schedule for the period 1 October 2024 through 30 September 2025 (2025 Water Year).

This staff review memorandum includes a summary of the monitoring plan as presented in the 2025 Monitoring Plan Update, followed by staff comments and recommendations.

Summary of Monitoring Requirements and Schedule

The Order requires a monitoring and reporting program (MRP) with periodic monitoring conducted in a manner that allows for evaluation of the condition of water bodies and determination of whether irrigated agriculture operations in the Sacramento River Watershed are causing or contributing to any surface water quality problems. This is achieved through monitoring of three different monitoring site types: representative, integration, and special project sites.

Representative monitoring sites are selected to be representative of all types of irrigated agriculture within the designated represented watersheds and are monitored to track trends in surface water quality and to identify water quality problems. Representative sites are monitored comprehensively once every three years (assessment monitoring),

followed by two consecutive years of follow-up monitoring (core monitoring) for any parameters that exceeded an adopted water quality objective or water quality trigger.

Integration monitoring sites are selected to be representative of large and diverse drainages and are monitored to identify cumulative effects and long-term trends in surface water quality. Integration sites are monitored comprehensively four times annually.

Special project monitoring sites are selected for implementation of surface water quality management plans or Total Maximum Daily Load (TMDL) requirements and are monitored to track known surface water quality problems. Special project sites are monitored according to the associated plan or requirement. Representative sites located in areas where surface water quality management plans are required can also be considered special project sites for the parameter subject to the management plan.

The 2025 Water Year is an assessment monitoring year and the Monitoring Plan Update includes the required representative sites, integration sites, and special project sites. The Monitoring Plan Update consists of an Excel workbook, including a series of worksheets providing site-specific monitoring details, a monitoring summary table, and a monitoring schedule. All sites are identified in the 2025 Monitoring Year Summary Table, as well as in the Site-Specific Monitoring Table.

Representative and Integration Sites Monitoring

Assessment monitoring includes a comprehensive suite of constituents monitored periodically in a manner that allows for an evaluation of the condition of a water body and determination of whether irrigated agriculture operations in the Sacramento River Watershed are causing or contributing to any surface water quality problems. The 2025 Monitoring Plan Update includes the required assessment monitoring for representative and integration sites.

Representative Sites: Assessment monitoring at representative sites consists of comprehensive sampling scheduled at 11 (of 15) representative sites for the 2025 Water Year. Four (of 15) representative sites are in subwatersheds which are enrolled in the Reduced Monitoring/Management Practices (RMMP) Verification Option and do not require assessment monitoring during the 2025 Water Year.

Integration Sites: Three integration sites are scheduled for monitoring during the 2025 Water Year. Monitoring is scheduled twice during irrigation season (May and August) and twice during the storm season (November and February). Integration site storm events may be moved within a month of the planned event to obtain significant storm runoff samples.

The 2025 Water Year assessment monitoring is scheduled at representative sites and integration sites for general water quality parameters, nutrients, pathogen indicators, water column and sediment toxicity, pesticides, and metals. Per the MRP, the 2025

Monitoring Plan Update provides a monitoring schedule for each site, identifying the parameters planned for sampling during each 2025 Water Year monitoring event.

Pesticides: The Coalition utilized the Pesticide Evaluation Protocol (PEP) to identify pesticides proposed in the 2025 Monitoring Plan Update, including pyrethroid pesticides. The pesticides proposed for monitoring at each site depend on pesticide use and prioritization of monitoring (ranking of pesticides) based on aquatic life. In addition, environmental fate factors, available monitoring data, availability of analytical methods, and site-specific considerations (monthly use, management plan status, etc.) were evaluated when selecting the pesticides proposed for the 2025 Monitoring Plan Update. Staff conducted a thorough review of the implementation of the PEP steps. **Staff recommends inclusion of additional pesticide monitoring based on the PEP. See the staff comments and recommendations at the end of this memo.**

Metals: The Coalition utilized the PEP to determine the monitoring frequency of applied metals (boron, copper, zinc). If copper was identified for monitoring, monitoring for hardness as CaCO₃ was scheduled to coincide. For the remaining metals (arsenic, cadmium, lead, molybdenum, nickel, and selenium), the Coalition based monitoring decisions on regionally elevated metals concentrations and historical monitoring data. Staff concurs with this approach and with the proposed metals monitoring.

Aquatic and Sediment Toxicity: Water column toxicity monitoring for *Ceriodaphnia dubia* and *Selenastrum capricornutum* is scheduled to coincide with the application of pesticides and metals (identified through the PEP process) to which the test species are sensitive. Per the Order Pursuant to Water Code Section 13267 letter dated 7 June 2024, water column toxicity monitoring will follow the *State Policy for Water Quality Control: Toxicity Provisions* (1 May 2023) for all surface water toxicity monitoring beginning 1 October 2024. Sediment toxicity monitoring for *Hyaella azteca* paired with grain size and total organic carbon monitoring is scheduled at each site twice a year per the MRP. Staff concurs with the proposed toxicity monitoring.

General Water Quality Parameters, Nutrients, and Pathogen Indicators: The remaining parameters are scheduled to coincide with monitoring for the high priority parameters as identified above. An exception is dissolved organic carbon, which is only scheduled to coincide with Pyrethroid pesticides monitoring per the Pyrethroid Control Program. Staff concurs with the proposed monitoring for general water quality parameters, nutrients, and pathogen indicators.

Special Project Sites Monitoring

Special project monitoring includes, but is not limited to, specific targeted monitoring for implementation of surface water quality management plans or TMDL requirements. Monitoring is designed to evaluate management practice-specific effects on identified water quality problems, to identify the source of a problem, and to monitor the status of an identified water quality problem. The 2025 Monitoring Plan Update includes the required monitoring for active surface water quality management plans and TMDL requirements.

Surface water quality management plans: Surface water quality management plan monitoring is generally conducted to assess the effects of management practice changes or to support source identification and may include surveys of agricultural practices as well as water column or sediment sampling. The 2025 Monitoring Plan Update includes the recommended monitoring schedule for locations where management plans for high priority constituents (pesticides, metals, toxicity, and nutrients) are currently required (i.e., pyrethroids at Lower Honcut Creek). Management plan monitoring is not currently scheduled for *E. coli*, specific conductivity, dissolved oxygen, and pH management plans at special project sites, unless monitored concurrently with management plan monitoring for higher priority constituents. Staff concurs with the proposed special project monitoring.

TMDL requirements: Monitoring associated with TMDL requirements is generally conducted to monitor the status of an identified water quality problem. The 2025 Monitoring Plan Update includes the recommended monitoring schedule for special monitoring sites associated with TMDL requirements (i.e., Clear Lake Nutrient TMDL at McGaugh Slough). Staff concurs with the proposed monitoring for TMDL requirements.

Delta Regional Monitoring Program

In March 2018, the Executive Officer approved the Coalition's participation in the Delta Regional Monitoring Program (Delta RMP). Participation allows the Coalition to revise surface water monitoring and reporting efforts in exchange for funding provided to the Delta RMP for conducting in-depth monitoring and studies related to pesticides, toxicity, nutrients, mercury, and other constituents. Delta RMP exchanges contained in the 2025 Monitoring Plan Update include:

- Eliminate monitoring for *Pimephales promelas*
 - The Coalition will not conduct monitoring for *P. promelas* for the 2025 Monitoring Year. All representative and integration sites have sufficient monitoring history (10 or more samples) and no *P. promelas* toxicity exceedances in the past ten years.
- Remove the quality assurance/quality control (QA/QC) reporting section from Annual Monitoring Report (AMR) beginning in 2018 and continuing for 2025 reporting
 - Monitoring data is validated and submitted on a quarterly basis. The QA/QC section of the AMR will be updated to just include a single summary table of the percent acceptance for all of the combined data across the QA/QC categories. Discussion of any QA/QC categories will occur that have less than 90% acceptance.
- Chlorpyrifos and Diazinon TMDL
 - The Central Valley Water Board approved a revision to the Coalition's compliance with the Chlorpyrifos and Diazinon TMDL on 14 February 2024. This removed all monitoring and reporting for chlorpyrifos and only requires diazinon monitoring as designated in the PEP. There is no additional TMDL monitoring that can be reduced, but the letter does still require that the Coalition participate in the Delta RMP.

Reduced Monitoring/Management Practices Verification Option

There are four subwatersheds enrolled in the RMMP Verification Option based on having lower potential for surface water quality impacts from irrigated agricultural discharges. These subwatersheds are the El Dorado, Lake, Napa, and Pit River subwatersheds. El Dorado, Lake, and Napa subwatersheds were originally approved by the Executive Officer for enrollment in the RMMP Verification Option in 2016. Pit River was originally approved for enrollment in the RMMP Verification Option in 2019. Per the MRP, enrollment in the RMMP Verification Option is in effect for five years from the approval date and following the fourth year of implementation, a renewal request may be submitted for the Executive Officer to approve another five-year period.

The subwatersheds enrolled in the RMMP Verification Option conduct assessment monitoring at representative sites within the subwatershed areas once every five years instead of once every three years (i.e., instead of the assessment-core-core cycle). An exceedance of any pesticide, toxicity, copper, or nutrient water quality objective or trigger limit during the assessment monitoring year will require Executive Officer approval to continue in the RMMP Verification Option for the subwatershed where the exceedance occurred. The parameter(s) which exceeded its respective water quality objective or trigger limit during the assessment monitoring year must be monitored for an additional two years. Any special project monitoring required for surface water quality management plans for lower priority parameters (i.e., not toxicity, copper, pesticides, or nutrients) or TMDL requirements must continue on an on-going basis. In each AMR, the Third-Party must report on the implementation of the education and outreach strategy and the management practice verification strategy. Farm Evaluations are collected from Members within the subwatersheds during the same year as assessment monitoring and reported as required in the AMR.

The Executive Officer approved an alignment of the assessment monitoring for all subwatersheds enrolled in the RMMP Verification Option to occur during the 2021 Water Year, and the next assessment monitoring for all subwatersheds is scheduled for the 2026 Water Year. To continue in the RMMP Verification Option, renewal requests following the Order guidelines for each subwatershed are due 1 February 2025. If approved by the Executive Officer, a 5-year reduced monitoring cycle will begin with assessment monitoring in the 2026 Water Year.

The 2025 Monitoring Plan Update includes the required special project monitoring at special project sites within subwatersheds enrolled in the RMMP Verification Option.

Staff Comments

The PEP identified bifenthrin monitoring at Grand Island Near Leary Road (GIDLR) and Ulatis Creek at Brown Road (UCBRD) in September and July, respectively. The monitoring events were not added to the 2025 Monitoring Plan Update accordingly. See the staff recommendation below.

Whereas the Coalition proposed to exclude certain pesticides from monitoring at representative sites if the aquatic life risk ratio (RR) for the pesticide is less than 50, The Coalition proposed to exclude certain pesticides from monitoring at integration sites if the RR is less than 300:

- Colusa Basin Drain above Knights Landing (COLDR)
 - Eighteen (18) pesticides proposed for monitoring.
 - Eleven (11) pesticides with a RR greater than 50 that were excluded from monitoring based on a RR less than 300:
 - 2,4-D acids & salts, acetamiprid, cyprodinil, hexazinone, methomyl, metribuzin, propiconazole, pyrethrins, tebuconazole, thiamethoxam, zinc
- Sacramento Slough Bridge near Karnak (SSKNK)
 - Seventeen (17) pesticides proposed for monitoring.
 - Thirteen (13) pesticides with a RR greater than 50 that were excluded from monitoring based on a RR less than 300:
 - 2,4-D acids & salts, acetamiprid, cyprodinil, dimethoate, methomyl, metribuzin, oryzalin, prometryn, propiconazole, pyraclostrobin, pyrethrins, simazine, tebuconazole
- Shag Slough at Liberty Island Bridge (SSLIB)
 - Sixteen (16) pesticides proposed for monitoring.
 - Nine (9) pesticides with a RR greater than 50 that were excluded from monitoring based on a RR less than 300:
 - acetamiprid, chloropicrin, cyprodinil, hexazinone, methomyl, metribuzin, pyraclostrobin, simazine, thiamethoxam

Staff generally agrees with the Coalition's approach to exclude pesticides with a RR less than 300 for integration sites for this monitoring year only. This year, staff recommends five (5) pesticides with a RR less than 300 and greater than 50 to be included for monitoring at integration sites. Staff recommendations are below.

Staff Recommendation

Staff recommends approval of the 2025 Monitoring Plan Update with the condition that monitoring for the following pesticides are added to the 2025 Monitoring Plan Update for monitoring during the 2025 Water Year:

- GIDLR
 - Bifenthrin (TMDL Pyrethroids + DOC) in September
- UCBRD
 - Bifenthrin in July
- COLDR
 - 2,4-D acids & salts

- Acetamiprid
- Methomyl
- Thiamethoxam
- SSKNK
 - 2,4-D acids & salts,
 - Acetamiprid
 - Dimethoate
 - Methomyl
- SSLIB
 - Acetamiprid
 - Methomyl
 - Thiamethoxam