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## Central Valley Regional Water Quality Control Board

17 December 2015

Mr. Mike Wackman  
San Joaquin County and Delta Water Quality Coalition  
3422 W. Hammer Lane, Suite A  
Stockton, CA 95219

### **APPROVAL OF THE 2015 MONITORING PLAN UPDATE – SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION**

Thank you for the timely submittal of the 1 August 2015 San Joaquin County and Delta Water Quality Coalition's (Coalition) Monitoring Plan Update (MPU), as required by the Monitoring and Reporting Program (MRP) of Waste Discharge Requirements General Order R5-2014-0029-R1. The MPU includes a monitoring frequency and schedule for each specific constituent.

Based on the attached staff memorandum and the approved 16 September Delta Regional Monitoring Program letter, I approve the Coalition's Monitoring Plan for the 2016 water year including *Selenastrum capricornutum* monitoring for at least one more year at the Bear Creek at North Alpine site.

Please review the attached staff memo to address the need for additional MPU schedule corrections and revisions. Any other proposed changes to the MPU must be approved by the Executive Officer prior to implementation.

If you have questions regarding this letter, please contact Chris Jimmerson at (916) 464-4859 or by email at [Chris.Jimmerson@waterboards.ca.gov](mailto:Chris.Jimmerson@waterboards.ca.gov).

Sincerely,

*Original signed by*

Pamela C. Creedon  
Executive Officer

Enclosure: Staff Review of MPU

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## Central Valley Regional Water Quality Control Board

**TO:** Susan Fregien  
Senior Environmental Scientist  
Monitoring and Implementation Unit  
Irrigated Lands Regulatory Program

**FROM:** Chris Jimmerson  
Environmental Scientist  
Monitoring and Implementation Unit  
Irrigated Lands Regulatory Program

**DATE:** 30 September 2015

**SUBJECT:** MONITORING PLAN UPDATE FOR 2016 WATER YEAR – SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION

As required by Order R5-2014-0029-R1 Monitoring and Reporting Program (MRP), the Central Valley Regional Water Quality Control Board (Central Valley Water Board) received a Monitoring Plan Update from the San Joaquin County and Delta Water Quality Coalition (Coalition) on 1 August 2015. The Monitoring Plan Update (MPU) report provides the proposed surface water monitoring schedule for the period 1 October 2015 through 30 September 2016 – the 2016 water year.

The Coalition evaluated monitoring results through June 2015 along with other applicable criteria to determine the 2016 water year monitoring schedule. The May 2016 Annual Monitoring Report will include an addendum, potentially revising the MPU, that addresses monitoring results from July through September 2015. Those results were not available at the time the Coalition prepared the MPU and may affect the monitoring schedule next year during those months.

Staff reviewed the MPU to determine compliance with requirements pursuant to the Monitoring and Reporting Program. Overall, the Coalition approached the very complex assessment of monitoring sites and parameters in a systematic and logical way. An overview of the main elements of the proposed monitoring plan is presented below, followed by staff recommendations.

### **Monitoring Sites, Parameters, Schedule and Frequency**

The monitoring design for the 2016 water year includes six Core sites for seven zones in the Coalition region (one Core site represents zones 5 and 6), 20 Represented sites, and four sites established for diazinon and chlorpyrifos Total Maximum Daily Load compliance in the Delta. As required by the MRP, the Coalition identified a specific set of monitoring parameters for each site that is scheduled to be monitored, selected appropriate monitoring periods, and included a discussion of the rationale to support the proposed schedule.

**Regional Monitoring Program Reductions:**

On 16 September, the Executive Officer approved monitoring reductions as part of the Coalition's participation with the Delta Regional Monitoring Program (RMP), after the Coalition submitted the MPU to staff. Table 1 from that letter is shown below indicating the Core site sampling reductions.

**Table 1. The sites and months where monitoring will not be conducted for any analyte. No visit to the site will take place on these months.**

<b>Core Site Name</b>	<b>No Monitoring under Delta RMP</b>
Mokelumne River @ Bruella Rd.	October, November
French Camp Slough @ Airport Way	November, December
Terminus Tract Drain @ Hwy 12	November, December
Roberts Island @ Whiskey Slough Pump	November
Walthall Slough @ Woodward Ave.	February, April

**1. Core Site Monitoring**

Surface water assessment monitoring will be conducted at Core sites for two consecutive years, per Attachment B, section III.A.1 of the Order. The 2016 water year will be the second consecutive year for the first set of Core sites. The MPU's Core sites will change next year, as per the Order. The MPU's Appendix 1 lists the analytes that will be monitored monthly in the water year, minus approved RMP reduced monitoring. The monitoring will include field measurements, nutrients, field and general physical parameters, metals, pesticides, and water column and sediment toxicity, meeting the requirements in the Order. Monitoring schedules are based on pesticide use patterns and previous monitoring results.

**Pesticides:** Pesticides that require monitoring will be identified as part of an evaluation process being developed by staff with input from scientists and in coordination with the Department of Pesticide Regulation. Until the process for pesticide selection is developed, the Coalition will continue to monitor pesticides based on the 2008 Monitoring and Reporting Program pesticide list. Paraquat and glyphosate will be monitored twice per year during a storm and an irrigation event to coincide with high TSS/runoff events.

**Metals:** To identify the metals monitoring frequency and schedule, the Coalition followed an evaluation process shown in Figure 3 of the MPU, which takes into account previous monitoring results, pesticide use information, geologic conditions, and Basin Plan requirements satisfying the Order's requirements. Staff reviewed the Coalition's decision process and concurs with their metals monitoring plan.

**Aquatic and Sediment Toxicity:** The Coalition surface water monitoring includes monthly water column toxicity monitoring on three test species (*Ceriodaphnia dubia*, *Pimephales promelas* and *Selenastrum capricornutum*). As per the MRP, the Coalition will conduct toxicity identification evaluations to identify the potential sources of toxicity when percent survival or growth is 50% or less compared to the control. The Coalition also proposes to sample sediment toxicity to *Hyalella azteca* twice a year, once during the irrigation and storm season according to MRP section III.4.b. Additional sediment chemistry analyses for chlorpyrifos, piperonyl butoxide (PBO) and pyrethroids will be conducted on sediment samples when survival of *H. azteca* is less than 80% compared to the control.

## 2. Represented Site Monitoring

As the 2016 water year is the first year to be monitored under the updated Surface Water Quality Management Plan (SQMP), the proposed represented monitoring is based on: a) the management plans for high-priority constituents (applied pesticides, metals and toxicity) already in place at each Represented site, and b) exceedances of the trigger limit for a constituent at the representative Core site that are evaluated and deemed to also pose a threat to water quality at the Represented site.

Attachment B, section III.A.2 of the Order requires monitoring at Represented sites when there is potential risk to water quality. The Coalition proposed to discontinue *S. capricornutum* monitoring at Bear Creek at North Alpine. Based on the March 2015 Core site *S. capricornutum* exceedance and the volume of herbicides and metals that the MPU states are being applied in the Bear Creek area, there is potential risk. According to the Order, if there is potential risk then the Coalition must perform monitoring for that parameter in the represented waterbody for a minimum of two years during the time period of highest risk. In this case, the time period is November 2015 through March of 2016. Furthermore, based on the Coalition's flowchart strategy for monitoring at a Represented site, the *S. capricornutum* monitoring at represented site Bear Creek at North Alpine should continue. The Coalition has completed one year of monitoring since the 2015 Core exceedance. An additional year of monitoring (November 2015 through March 2016) without an exceedance will meet the Order's minimum requirements. If no exceedances are observed, then the Coalition can request to suspend *S. capricornutum* monitoring at Bear Creek in the next MPU.

Attachment B, Section III.C states, "...*monitoring periods shall be determined utilizing previous monitoring results, knowledge of agricultural use patterns (if applicable), pesticide use trends, chemical characteristics, and other applicable criteria.*" The Coalition will satisfactorily meet this requirement when adhering to the above *S. capricornutum* monitoring at Bear Creek.

## 3. Management Plan Monitoring

The Coalition's management plan monitoring schedule is based on the monitoring strategy in the approved Surface Water Quality Management Plan (SQMP), and considers the 10-year compliance schedule (MPU Table 4). The Coalition followed an evaluation process (MPU Figure 1) for high priority constituents to conduct focused outreach and water quality monitoring in site subwatersheds within three years to reach the compliance deadline.

Analytes, that are difficult to source or are not applied by agriculture, will be addressed in constituent specific workplans, as allowed in the Order. The Coalition will not conduct management plan monitoring for constituents requiring source identification until workplans are developed. The constituents requiring workplans include DO, pH, SC, ammonia, and nitrate/nitrite. According to the MPU, workplan timelines will be provided 120 days after the approved 2015 SQMP.

## 4. TMDL Monitoring

To ensure compliance with the Diazinon and Chlorpyrifos Total Maximum Daily Load (TMDL) requirements, the Coalition will monitor four sites that represent the Delta Waterways (Table 2) and sites outside and nearest to the Delta to assess compliance with the load allocation.

**Table 2. TMDL diazinon and chlorpyrifos waterbody areas with the represented location name.**

TMDL Waterbody Areas	Location Name
San Joaquin River (Stanislaus River to Delta Boundary)	Walthall Slough at Woodward Ave.
Delta Waterways (Stockton Ship Channel)	San Joaquin River at West Neugerbauer Rd.
Delta Waterways (export area, southern and western portions)	Old River at the west end of Clifton Court Rd.
Delta Waterways (central and eastern portions), Mosher Slough and Five Mile Slough	Light House Restaurant at West Brannon Island Rd.

Chlorpyrifos and diazinon samples will be collected once during the winter storm season (January/February/March), and monthly from May through August when applications are highest. Assessing compliance with load allocations is an Order requirement. The Coalition should clarify in the MPU to indicate that the results collected from sites outside and nearest to the Delta will be used to assess compliance with the load allocation.

Agriculture has been identified as a contributing source to low dissolved oxygen in the Stockton Deep Water Ship Channel. The MPU should clarify that the Coalition reviews DO monitoring results in the Stockton Deep Water Ship Channel and from within its tributaries to assess compliance with the DO water quality objectives required in the TMDL.

### 5. 303(d) Constituents

The MRP requires monitoring of 303(d) listed constituents if irrigated agriculture is a contributing source and if monitoring is requested by the Executive Officer. At this time, the Executive Officer has not requested specific monitoring based on 303(d) listing. The Coalition is monitoring for copper at the Mokelumne River at Bruella Rd.; while the Mokelumne River is 303(d) listed for copper, the monitoring is required based on the Coalition's evaluation process.

### STAFF RECOMMENDATIONS

The scheduled December 2015 MPU monitoring events will continue as planned and will not be hampered by the following recommendations.

- The MPU will need to be revised to account for changes in DO and SC water quality triggers, as per the approved SQMP. The changes will likely reduce the number of DO and SC management plans, reducing the DO and SC management plan monitoring. The Coalition should revise its Excel monitoring schedule if there are changes to the schedule.
- The Coalition should clarify in the MPU to address the TMDL chlorpyrifos and diazinon load allocations monitoring and Stockton DWSC TMDL dissolved oxygen monitoring.
- An August 2015 petition for management plan completion is under staff review, and if approved, may reduce the amount of management plan monitoring approved in this MPU. The Coalition should revise the monitoring schedule to reflect any approved completed management plans by the Executive Officer.
- The Coalition's Excel monitoring schedule should be reconciled with the Coalition's Appendix I. Management plan monitoring for disulfoton and *S. capricornutum* at Sand Creek and management plan monitoring for chlorpyrifos at Upper Roberts Island Drain are not indicated on the Excel monitoring schedule worksheet. The Coalition should correct the schedule.

- Table 7 on page 16 displays the monitoring frequency for each parameter. Based on a comparison of the MPU's Attachment A, Table 7 inaccurately lists certain parameters that will be collected monthly at Core sites. The collection frequency of *S. capricornutum*, diuron, and chlorpyrifos are not listed as "monthly" in Attachment A. In these cases, monitoring less than monthly is based on pesticide use information and historical exceedances and in accordance with the Order's monitoring schedule and frequency strategy. The discrepancies in Table 7 should be reconciled with Attachment A. The Coalition should submit a revised schedule to staff to include these revisions.