
Central Valley Regional Water Quality Control Board

5 October 2015

Joseph C. McGahan
Watershed Coordinator
San Joaquin Valley Drainage Authority
P. O. Box 1122
887 N. Irwin St.
Hanford, CA 93232

APPROVAL TO ALLOW THE WESTSIDE SAN JOAQUIN RIVER WATERSHED COALITION TO REDUCE WATER QUALITY MONITORING AND PARTICIPATE IN THE DELTA REGIONAL MONITORING PROGRAM

Thank you for submitting your 3 August 2015 and 17 August 2015 letters to the Central Valley Regional Water Quality Control Board (Central Valley Water Board) proposing reductions to current water quality monitoring requirements in order to participate in the Delta Regional Monitoring Program (Delta RMP) as allowed by Order No. R5-2014-0002-R2 for growers within the Western San Joaquin River watershed.

I approve the proposed reductions in water quality monitoring according to Table 1 (attached) and further described in the attached staff memo. The reduced monitoring may begin October 2015. Other monitoring requirements in the MRP remain unchanged.

Per your 17 August 2015 letter, the Coalition estimates that an annual contribution of \$40,000 to the Delta RMP is reasonably equivalent to the costs the Coalition would have incurred absent the proposed monitoring reductions. While this letter approves reductions in water quality monitoring for participation in the Delta RMP, the Delta RMP Steering Committee ultimately will determine a process for defining adequate participation in the Delta RMP. The \$40,000 annual contribution is the minimum contribution to the Delta RMP in exchange for the reduced individual monitoring.

For the current fiscal year, the reduced monitoring may begin in October 2015 on the condition that the Coalition provides the first of two \$20,000 contributions to the Delta RMP by **31 October 2015** and the second contribution by **31 January 2016**.

The Coalition shall continue to adequately participate in the Delta RMP to maintain the reduced monitoring as described in Table 1 and the staff memo. If adequate participation is not maintained, the Central Valley Water Board will require that the Coalition reinstate the monitoring required by Order R5-2014-0002-R2.

Your request for a seat on the Delta RMP Steering Committee will be addressed at the 23 October 2015 Steering Committee meeting to be held at the Central Valley Water Board.

If you have any questions about the Delta RMP or this approval, please contact Selina Cole at (916) 464-4683 or selina.cole@waterboards.ca.gov. If you have questions about ILRP monitoring requirements, please contact Susan Fregien at (916) 464-4813 or susan.fregien@waterboards.ca.gov.

Original signed by Adam Laputz for

Pamela C. Creedon
Executive Officer

cc: Electronic copy only-
RMP Steering Committee
Chris Linneman, Summers Engineering

Table 1. Water Quality Monitoring Reductions for November and December of 2015 and 2016

Monitoring Sites	Current Monitoring Requirements	Approved Monitoring Reductions for 2015 and 2016
Ingram Creek At River Road	Core ¹ : Monthly ³ Metals : Monthly Pesticides : Monthly (March - August) ² Water Toxicity : <i>Ceriodaphnia</i> and <i>Selenastrum</i> , monthly (March - August) Rain Event ⁴ : all required constituents	Discontinue Core and Metals monitoring in November and December
Westley Wasteway near Cox Road	Core : Monthly Metals : Monthly Pesticides : Monthly (March - August) Water Toxicity : Monthly (March - August) - <i>Ceriodaphnia</i> and <i>Selenastrum</i> Rain Event : all required constituents	Discontinue Core and Metals monitoring in November and December
Del Puerto Creek Near Cox Road	Core : Monthly Metals : Monthly (March - August) Pesticides : Monthly (March - August) Water Toxicity : Monthly (March - August) - <i>Ceriodaphnia</i> Rain Event : all required constituents	Discontinue Core monitoring in November and December
Ramona Lake Near Fig Avenue	Core : Monthly Metals : Monthly (March - August) Pesticides : Monthly (March - August) Water Toxicity : Monthly (March - August) - <i>Ceriodaphnia</i> Rain Event : all required constituents	Discontinue Core monitoring in November and December
Marshall Road Drain Near River Road	Core : Monthly Metals : Monthly (March - August) Pesticides : Monthly (March - August) Water Toxicity : Monthly (March - August) - <i>Ceriodaphnia</i> Rain Event : all required constituents	Discontinue Core monitoring in November and December
Orestimba Creek at River Road	Core : Monthly Metals : Monthly Pesticides : Monthly (March - August) Water Toxicity : Monthly (March - August) - <i>Ceriodaphnia</i> and <i>Selenastrum</i> Rain Event : all required constituents	Discontinue Core and Metals monitoring in November and December
Blewett Drain Near Hyw 132	Core : Monthly Metals : Monthly (March - August) Pesticides : Monthly (March - August) Water Toxicity : Monthly (March - August) - <i>Ceriodaphnia</i> Rain Event : all required constituents	Discontinue Core monitoring in November and December
Newman Wasteway Near Hills Ferry Road	Core : Monthly Metals : Monthly (March - August) Pesticides : Monthly (March - August) Water Toxicity : Monthly (March - August) - <i>Ceriodaphnia</i> Rain Event : all required constituents	Discontinue Core monitoring in November and December
San Joaquin River at Lander Avenue	Core : Monthly Metals : Monthly Pesticides : Monthly Water Toxicity : Monthly - <i>Ceriodaphnia</i> and <i>Selenastrum</i> Rain Event : all required constituents	Discontinue Core , Metals , Water Toxicity , and Pesticides monitoring in November and December
Mud Slough u/s ⁵ San Luis Drain	Core : Monthly Metals : Monthly (March - August) Pesticides : Monthly Water Toxicity : Monthly - <i>Ceriodaphnia</i> Rain Event : all required constituents	Discontinue Core , Water Toxicity , and Pesticides monitoring in November and December
Salt Slough at Lander Avenue	Core : Monthly Metals : Monthly (March - August) Pesticides : Monthly Water Toxicity : Monthly - <i>Ceriodaphnia</i> Rain Event : all required constituents	Discontinue Core , Water Toxicity , and Pesticides monitoring in November and December
Los Banos Creek at Hwy 140	Core : Monthly Metals : Monthly Pesticides : Monthly Water Toxicity : Monthly - <i>Ceriodaphnia</i> and <i>Selenastrum</i> Rain Event : all required constituents	Discontinue Core , Metals , Water Toxicity , and Pesticides monitoring in November and December
Los Banos Creek at China Camp Road	Core : Monthly Metals : Monthly Pesticides : Monthly (March - August) Water Toxicity : Monthly (March - August) - <i>Ceriodaphnia</i> and <i>Selenastrum</i> Rain Event : all required constituents	Discontinue Core and Metals monitoring in November and December
Poso Slough at Indiana Avenue	Core : Monthly Metals : Monthly Pesticides : Monthly (March - August) Water Toxicity : Monthly (March - August) - <i>Ceriodaphnia</i> and <i>Selenastrum</i> Rain Event : all required constituents	Discontinue Core and Metals monitoring in November and December
Source Water Sites		
San Joaquin River at Sack Dam	Core : Monthly Metals : Monthly (March - August) Pesticides : Monthly - Organophosphates	Discontinue Core and Pesticides monitoring in November and December
San Joaquin River at PID Pumps	Core : Monthly Metals : Monthly (March - August) Pesticides : Monthly - Organophosphates	Discontinue Core and Pesticides monitoring in November and December
Delta Mendota Canal at DPWD Turnout	Core : Monthly Metals : Monthly (March - August) Pesticides : Monthly - Organophosphates	Discontinue Core and Pesticides monitoring in November and December

¹ The Core monitoring group includes Field Measurements, Drinking Water, and General Physical parameters as described in Table 2 per Section III.C.3 of the permit and the approved monitoring plan.

² Scheduled to be monitored monthly during the Irrigation Season (March through August).

³ Scheduled to be monitored monthly during both irrigation (March through August) and Non-Irrigation Season (September through February).

⁴ Monitoring is required for two rain events per year for the constituents listed in the current monitoring program. Rain event samples will continue to be collected regardless of the month in which they occur.

⁵ u/s is defined as upstream.

Central Valley Regional Water Quality Control Board

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

FROM: Gurbinder Dhaliwal
Environmental Scientist
Monitoring and Implementation Unit
Irrigated Lands Regulatory Program

DATE: 20 August 2015

SUBJECT: REGIONAL MONITORING PROGRAM AND REDUCTION IN MONTHLY
MONITORING – WESTSIDE SAN JOAQUIN RIVER WATERSHED COALITION

The Central Valley Water Board adopted Waste Discharge Requirements Order R5-2014-0002-R1 (Order) on 17 April 2015 for the Westside San Joaquin River Watershed Coalition (Coalition) to include voluntary Coalition participation with a Regional Monitoring Program (RMP). The Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which was adopted by the State Water Board, Central Valley Regional Water Board, and San Francisco Bay Regional Water Board, identifies the development of a RMP as a priority action. Participation, as described in the Coalition's 17 August proposal and as reviewed in this memorandum, will consist of providing funds at least equivalent to discontinued individual monitoring and study efforts.

The goal of the Delta RMP is to develop a comprehensive and coordinated monitoring program across the many entities that currently conduct monitoring within the Delta or in water bodies that discharge to the Delta, including the agricultural coalitions (i.e. Westside San Joaquin River Watershed Coalition). Based on the success of similar programs, it is anticipated that this effort will lead to opportunities to fill data gaps related to contaminants, water quality impairment, and aquatic health and reduce redundant monitoring efforts and costs.

In July 2015, the Central Valley Water Board's staff and the Coalition representatives discussed the options for reducing some elements of the surface water monitoring requirements that would provide funding support to an approved RMP. This kind of support is described in the Order. Staff reviewed the Coalition's initial RMP proposal, monitoring plan, and constituents of concern exceedance frequency in an effort to identify monitoring reductions that would permit the Coalition to continue to comply with the Order and offer support to the RMP. Staff and the Coalition, through collaboration on 30 July 2015, discussed reduction in monthly monitoring two times during the year at all of the discharge and source water sites for all groups of monitoring constituents (Table 1).

The Coalition follows a 3 year monitoring cycle (1 year of Assessment monitoring followed by 2 years of targeted monitoring). The targeted monitoring is scheduled from March 2015 through

February 2017. Monitoring is normally done on a monthly basis and is divided into irrigation (March through August), non-irrigation (September through February) and rain-event monitoring (twice per year). The monitoring reduction is proposed for the non-irrigation months of November and December in 2015 and 2016; however, rain event monitoring will not be reduced. The Coalition will provide support to the Delta RMP in an amount that is equivalent to the anticipated reduction of monitoring costs. The Coalition's proposal to reduce monitoring in the above months is based on historical monitoring frequency, pesticide use patterns and pesticide detections. All previously proposed monitoring will be discontinued during November and December and the equivalent costs normally incurred during the sample events will be transferred to the RMP program.

Staff evaluated the Coalition's proposal to determine if it fulfills the Order requirements while reducing the monitoring and without affecting management plan activities. Core constituents (i.e., field measurements, drinking water, general physical and nutrients) are normally collected at every event throughout the year. Historical monitoring data collected since 2004 provides enough information to continue to characterize core constituent water quality in the waterbodies throughout the watershed area under the proposed reduction in frequency (further described below). Further, the core constituents will be collected per the Order in all months except November and December.

Aquatic Toxicity and Pesticides Monitoring Reductions

Targeted monitoring requires the Coalition to monitor aquatic toxicity in rain events, which will remain unchanged under RMP reductions. Staff reviewed the toxicity and pesticide water quality exceedance data since 2008 for the proposed monitoring reduction periods (November and December). Past monitoring data reveals that there were no exceedances of aquatic toxicity and pesticides during November and December. Although toxicity and pesticide management plans exist on sites where monitoring reductions are proposed (Table 2), none of the management plans were triggered in November or December. Sediment toxicity testing is conducted once during irrigation season and once during non-irrigation season and will remain unchanged.

- Current Monitoring
All constituents are monitored on a monthly basis except sediment toxicity which will be monitored once during irrigation season and once during non-irrigation season. Storm monitoring is conducted twice in a year.
- Monitoring Reductions
No monitoring will be scheduled in the months of November and December of year 2015 and 2016. The reductions do not apply to the rain event and sediment toxicity monitoring.
- Outcome
The proposed reductions in monitoring will not affect any management plan activities and the Coalition's ability to comply with the Order.

Metal Monitoring Reduction

Staff reviewed the metals water quality exceedance data of the past 3 years for the proposed monitoring reduction periods (November and December). Monitoring data (events 97, 98, 108, 109, 119 and R16- See Table 3 below) shows that exceedances have occurred at three sites for boron and arsenic. Table 3 shows that Los Banos Creek at Hwy 140 has multiple boron exceedances and is under a management plan. The boron concentration throughout the regular monitoring events (Table 3) does not vary widely except the rain event R16 where it was detected at 2100 µg/L while the water quality objective is 700 µg/L. Boron has been monitored every month for the past ten years providing enough information to characterize water quality

throughout the watershed. Proposed monitoring reductions of boron in the months of November and December, will not impact management plan activities because management plans include focused monitoring. There has only been one exceedance for arsenic at all monitoring stations since November 2012. For these reasons, staff agrees with the proposed reductions in monitoring of the metals (Table 1 and 3).

- Current Monitoring
Metals are monitored on a monthly basis (irrigation and non-irrigation season) and two rain events per year. November and December falls in non-irrigation season and metals are currently scheduled on 7 discharge sites (Table 1).
- Monitoring Reductions
No metals monitoring will be scheduled in the months of November and December of years 2015 and 2016. The reductions do not apply to the rain event and other monthly events.
- Outcome
The proposed reductions in monitoring will not affect any management plan activities and the Coalition's ability to comply with the Order.

Conclusions

The Coalition chose non-irrigation season months of November and December for reduced monitoring based on least use of pesticides, exceedance data and historical monitoring frequency. The proposed reductions in monitoring will not affect any management plan activities and the Coalition's ability to comply with the Order requirements.

The year 2016 is in the targeted monitoring cycle. Therefore, the proposed monitoring reductions may also be applied to year 2016 along with the corresponding monetary support to the Delta RMP. If there are any changes to the Delta RMP or Coalition's monitoring program, monitoring reductions and contributions to the Delta RMP could be revised accordingly.

Staff recommends an approval of the Coalition's 17 August 2015 reduced monitoring proposal to offset the monitoring cost for in-kind support to the Delta RMP.

Table 1: Green shading identifies reduced monitoring in the months of November and December for all groups of monitoring constituents

Monitoring Sites	Monitoring Parameters and Cost				
Discharge Sites	Core** (\$)	Metals (\$)	Aquatic Toxicity (\$)	Pesticides (\$)	Total cost (\$)
Hospital Creek At River Road	*	*	*	*	0
Ingram Creek At River Road	800	170	*	*	970
Westley Wasteway near Cox Road	800	170	*	*	970
Del Puerto Creek Near Cox Road	800	*	*	*	800
Del Puerto Creek Near Hwy 33	*	*	*	*	0
Ramona Lake Near Fig Avenue	800	*	*	*	800
Marshall Road Drain Near River Road	800	*	*	*	800
Orestimba Creek at River Road	800	170	*	*	970
Orestimba Creek at Hwy 33	*	*	*	*	0
Blewett Drain Near Hyw 132	800	*	*	*	800
Newman Wasteway Near Hills Ferry Road	800	*	*	*	800
San Joaquin River at Lander Avenue	800	170	550 (Algae and Cerio)	480 (OP&Herb)	2000
Mud Slough u/s San Luis Drain	800	*	250 (Cerio)	870 (all)	1920
Salt Slough at Lander Avenue	800	*	251 (Cerio)	870 (all)	1920
Salt Slough at Sand Dam	*	*	*	*	0
Los Banos Creek at Hwy 140	800	170	550 (Algae and Cerio)	480 (OP&Herb)	2000
Los Banos Creek at China Camp Road	800	170	*	*	970
Poso Slough at Indiana Avenue	800	170	*	*	970
Source Water Sites					
San Joaquin River at Sack Dam	800	*	*	230 (OP)	1030
San Joaquin River at PID Pumps	800	*	*	230 (OP)	1030
Delta Mendota Canal at DPWD Turnout	800	*	*	230 (OP)	1030
Grand Total Cost Per Month					19780

Monitoring Reductions

* The Constituent is not required to be monitored in November and December.

** Core monitoring group includes field measurements, general physical, drinking water and nutrient parameters.

Sample Collection: \$8,300
 Administration, EDDs, and Transportation \$3,700
 Monthly Monitoring Cost: \$19,780
 Total Monthly Cost (Base Cost): \$31,780

	Base Cost	Frequency Factor	Rain Event Factor	Adjusted Savings
November Sampling Cost	31780	79%	100%	\$25,106
December Sampling Cost	31780	80%	60%	\$15,254
				\$40,360

Table 2: Current pesticide and toxicity Management Plans at proposed monitoring reduction sites

Site Name	Organophosphates		Herbicides	Water Toxicity	
	Chlorpyrifos	Malathion	Diuron	Selanastrum	Ceriodaphnia
Discharge Sites					
San Joaquin River at Lander Avenue			*	*	
Mud Slough u/s San Luis Drain	*				*
Salt Slough at Lander Avenue	*		*	*	*
Los Banos Creek at Hwy 140		*			*
Source Water Sites					
San Joaquin River at Sack Dam	*				
San Joaquin River at PID Pumps	*				
Delta Mendota Canal at DPWD Turnout					

Management Plan

* There are no pesticides/toxicity management plans triggered by exceedances in the months of November and December

Table 3: Metal exceedances in the month of November and December from 2012 through 2014

Monitoring Sites	2012		2013		2014	
	E97 (Nov)	E98 (Dec)	E108 (Nov)	E109 (Dec)	E119 (Nov)	R16 (Dec)
Ingram Creek at River Road					B (843 µg/L)	
Los Banos Creek at China Camp Road					Ar (11 µg/L)	
Orestimba Creek at River Road						
Poso Slough at Indiana Ave						
Westley Wasteway near Cox Road						
Los Banos Creek at Hwy 140		B (880 µg/L)	B (730 µg/L)	B (970 µg/L)	B (940 µg/L)	B (2100 µg/L)
SJR at Lander Avenue						