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## Central Valley Regional Water Quality Control Board

29 December 2014

David Hampton  
Cawelo Water District Coalition  
17207 Industrial Farm Rd.  
Bakersfield, CA 93308

### **SURFACE WATER MONITORING PLAN REVIEW, CAWELO WATER DISTRICT COALITION**

On 24 October 2014 the Cawelo Water District Coalition (Coalition) submitted a Surface Water Monitoring Plan (SWMP) in accordance with the Monitoring and Reporting Program (MRP) for Waste Discharge Requirements General Order R5-2013-0120 (Order). Regional Water Board staff (staff) has reviewed the SWMP and identified areas of concern that must be addressed before the submittal can be deemed complete. This letter and enclosed memorandum are intended to provide guidance for the Coalition during the development of a revised submittal. A summary of the staff comments are provided below:

#### General Comments:

- The Porter-Cologne Water Quality Control Act defines waters of the state as “any surface water or groundwater, including saline waters, within the boundaries of the state.”
- The Quality Assurance Project Plan (QAPP) submitted with the SWMP will be reviewed as a separate document.

#### Specific Comments:

- The SWMP does not provide a technical justification showing that all waters of the state within the Coalition area can be adequately characterized by the proposed monitoring sites. Additional surface waters including ephemeral waterways and water conveyance structures should be assessed and monitored, or designated representative sites based on appropriate rationale.
- The proposed monitoring frequency is not based on the evaluation of use patterns for agricultural products. The SWMP should include this information along with a rationale for the proposed monitoring schedule. The proposed sampling frequency should be adequate to characterize agricultural waste discharges.
- Sampling triggers for storm water monitoring are not appropriate to ensure the collection of a water quality sample when storm runoff is present. The SWMP must identify the criteria used to initiate monitoring, based on precipitation levels and knowledge of soils or other factors that affect the presence of storm runoff at a monitoring site. Additionally, flowing water is not a requirement for sampling and is not reflective of the beneficial uses that exist in the Coalition area.

KARL E. LONGLEY ScD, P.E., CHAIR | PAMELA C. CREEDON P.E., BCEE, EXECUTIVE OFFICER

- Information regarding the prioritization of work on specific watersheds, sub-watersheds, and water quality parameters was not provided in the SWMP.
- The SWMP does not identify method(s) to be used to demonstrate the effectiveness of current management practices.
- Any maps included in the SWMP must provide a level of detail that ensures that they are informative and useful. Location maps showing the proposed sampling sites, crops, and land uses within the Coalition area should be submitted with an accompanying GIS shapefile or geodatabase (Albers Projection, NAD83, and units in meters) if applicable.

In accordance with Section III.A of the MRP, please submit a revised SWMP addressing the provided comments by 2 March, 2015.

If you have any questions, please contact Eric Warren at (559) 445-5035 or [eric.warren@waterboards.ca.gov](mailto:eric.warren@waterboards.ca.gov).

*Original signed by:*

DAVID A. SHOLES, C.E.G. 1687  
Senior Engineering Geologist

cc: Adam Laputz, Assistant Executive Officer, Rancho Cordova  
Glenn Meeks, Senior Engineering Geologist, Rancho Cordova

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## Central Valley Regional Water Quality Control Board

**TO:** David Sholes, C.E.G. 1687  
Senior Engineering Geologist  
Irrigated Lands Regulatory Program

**FROM:** Eric Warren  
Water Resource Control Engineer  
Irrigated Lands Regulatory Program

**DATE:** 29 December 2014

**SUBJECT: SURFACE WATER MONITORING PLAN REVIEW, CAWELO WATER DISTRICT COALITION**

On 24 October 2014 the Cawelo Water District Coalition (Coalition) submitted a Surface Water Monitoring Plan (SWMP). The Coalition is currently approved to serve as a third-party entity to represent owners and operators of irrigated lands located within the Tulare Lake Basin Area. A SWMP is required of the Coalition to provide information regarding surface water monitoring activities being conducted within the Coalition area and to fulfil the requirements of the Waste Discharge Requirements General Order R5-2013-0120 (Order). Based on Water Board staff review of the SWMP, the plan meets a portion of the surface water monitoring requirements of the Order. However, additional design and justification are needed prior to SWMP acceptance. Specific Order requirements that need to be addressed are provided in the following items:

**Item 1 – Monitoring of All Waters of the State within the Coalition’s Boundaries that May be Impacted by Irrigated Agricultural Operations**

The Order’s Monitoring and Reporting Program (MRP) requires that the third-party group design a scientifically and technically justifiable Surface Water Monitoring Plan sufficient to characterize water quality for *all waters of the state within the third-party group’s boundaries* (Attachment B, page 3 of MRP). The Porter-Cologne Water Quality Control Act (Cal. Water Code, Division 7) defines waters of the state as “any surface water or groundwater, including saline waters, within the boundaries of the state.”

The SWMP submitted by the Coalition proposes the use of two monitoring sites to meet the surface water monitoring requirements specified in the MRP (Poso Creek at Highway 65 and Poso Creek at Freeway 99). Poso Creek is an intermittent stream that is located in the northern portion of Kern County and was monitored as part of the Conditional Waiver program by the

Kern River subwatershed of the Southern San Joaquin Valley Water Quality Coalition (SSJVWQC). Since the adoption of the Order the Coalition has assumed responsibility for a monitoring site currently established at Zerker Rd; however, the monitoring site has not been successfully sampled since 2012. The SWMP proposes to replace the monitoring site (Poso Creek at Zerker Rd.) with two Core monitoring sites. The Highway 65 monitoring location was chosen to represent water quality prior to the presence of known irrigated agricultural operations, and the Highway 99 monitoring location was designated to assess potential impacts from irrigated agricultural operations.

Prior to the crossing of Highway 99, there are several sand dams and a concrete diversion structure in the channel of Poso Creek. The sand dams are intended to provide groundwater recharge via direct infiltration from Poso Creek, and the diversion structure is used to route water to designated groundwater recharge basins as part of the Famoso Water Banking Project. These diversions significantly reduce the amount of water that can reach the proposed Highway 99 monitoring location, and correspondingly reduce the usefulness of the site in assessing impacts from irrigated agricultural operations. The proposed site should be moved upstream of the water banking project to a location that is more likely to have water present, and the SWMP should include the specific conditions/rationale used in determining an appropriate site.

The SWMP does not provide a technical justification showing that all waters of the state within the Coalition area can be adequately characterized by the two proposed monitoring sites, or that the sites proposed are appropriately situated to address irrigated agriculture's impacts on surface water quality. Additional surface waters including ephemeral waterways and water conveyance structures (e.g., Little Creek, Lerdo Canal) should be assessed and monitored, or designated representative sites based on appropriate rationale. The SWMP states that less than two miles of the Lerdo canal resides entirely within the Coalition boundary; however, approximately 5.5 miles of the canal is bordered by agricultural lands owned or operated by members of the Cawelo Water District Coalition. Direct discharges from these lands to the canal have been observed, and the SWMP should evaluate the effects these may have on the waterway.

## **Item 2 - Monitoring Schedule and Frequency.**

The SWMP's monitoring schedule for Core monitoring sites proposes to follow a rotating three year cycle in which the Coalition will sample for Assessment monitoring parameters during the first year, and Core monitoring parameters the following two years. Sampling events will occur during the last week of each month, with the exception of months that a storm runoff sampling event occurs.

Page 10 of Attachment A (Information Sheet) to the Order notes,  
*"The previous requirement to monitor monthly resulted in monitoring during months in which no problems would be expected and infrequent monitoring during peak periods when potential problems could occur. The third-party will be required to evaluate pesticide use patterns and*

*peak times when pesticides/metals from irrigated agriculture operations may cause problems in surface water. Based on that evaluation, the third-party will propose a frequency and time period to conduct monitoring that will adequately characterize surface waters receiving irrigated agricultural waste discharges;”*

Due to the referenced issues associated with a fixed monitoring schedule, the Order’s MRP (Attachment B) states on page 7 that “*Monitoring shall be conducted when the pollutant is most likely to be present.*” Additionally, the MRP states that “*Adequate characterization of the presence of some pollutants may require monitoring more than once per month.*” The SWMP should include a monitoring schedule designed to collect samples during peak use periods for constituents of concern (e.g., pesticides) at a frequency adequate to ensure the successful characterization of agricultural waste discharges.

The SWMP states that the Coalition will conduct storm water monitoring after flows have been detected for three consecutive days, and following a minimum of one month of dry conditions. During periods in which continuous flow has been established in the waterway, precipitation events will be monitored to determine if a storm runoff event occurs. Sampling of the waterway will occur if measured channel flow increases by greater than 50% over a three day period.

The proposed sampling triggers for storm water monitoring are not appropriate to ensure the collection of a water quality sample when storm runoff is present. The MRP requires that sampling events be scheduled to capture at least two storm runoff events per year. The Coalition must identify the criteria used to initiate monitoring, based on precipitation levels and knowledge of soils or other factors that affect the presence of storm runoff at a monitoring site. Sample collection should occur whenever runoff is present, and not be dependent upon on previously dry conditions. Additionally, three days of continuous flow is not necessary to successfully collect a water quality sample. An effective standard operating procedure should be developed for identifying when conditions needed for sampling are met and actions that will increase the probability of capturing a runoff event when it occurs.

### **Item 3 - Priorities for Work on Specific Watersheds, Sub-Watersheds, and Water Quality Parameters**

Section III.A of the MRP requires that information regarding the prioritization of work be provided in the SWMP. The monitoring sites proposed in the SWMP do not appear to be selected based on priority watersheds or to assess surface water impacts from specific water quality parameters. It is expected that in the process of addressing comments provided in this review that new potential monitoring site locations may be identified. The monitoring sites selected should be prioritized based on appropriate rationale, which should also be provided in the SWMP. For locations that will not be monitored during the current reporting year, a time schedule should be provided to identify when the waters will be monitored.

**Item 4 - Method(s) to be used to demonstrate the effectiveness of current management practices and the processes to be used for implementing new management practices, if necessary to achieve compliance with the Surface Water Limitations of the Order.**

The SWMP does not provide information regarding the method(s) to be used to demonstrate the effectiveness of current management practices. The success of grower outreach activities and implementation efforts are dependent on the critical analysis of management practices currently in place and the measured impacts these practices have on surface waters within the Coalition area. A methodology for analyzing management practice effectiveness should be provided in the SWMP.

**Item 5 – Report Maps/Figures**

Information regarding the proposed monitoring site locations and crop distribution is included in the proposed SWMP; however, more detail is needed to facilitate the discussion provided. The MRP requires that location map(s) showing the sampling sites/monitoring wells, crops, and land uses within the third party's geographic area contain a level of detail that ensures they are informative and useful. All data layers, shapefiles, and/or geodatabases used to create the figures should be submitted with the SWMP. If changes occur to any submitted data, the updated portion should be submitted in the subsequent quarterly electronic data submission.