
Central Valley Regional Water Quality Control Board

26 January 2016

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WESTERN SAN JOAQUIN RIVER WATERSHED COALITION – APPROVAL OF THE 2016 MONITORING PLAN UPDATE

Thank you for your submittal of the Monitoring Plan Update (MPU) for the Western San Joaquin River Watershed Coalition (Coalition), which was last revised and submitted on 15 January 2016. The MPU updates the Coalition's monitoring plan for the period of March 2015 through February 2017, which was approved on 25 November 2015. The MPU provides detailed plans for monitoring water quality constituents in the discharge and source water sites representing the water bodies in all subwatersheds covered by the Coalition through February 2017, as required under Monitoring and Reporting Order R5-2014-0002-R2 (Order). The MPU proposes the inclusion of two additional monitoring sites representative of the wetlands supply channels for selenium and boron monitoring.

Central Valley Water Board staff has reviewed the MPU and supporting documentation. Based on the information in the submitted documents and the attached staff memorandum, I approve the Coalition's MPU including the addition of wetland supply channels monitoring for the targeted monitoring period through February 2017.

As required by the Order, the next MPU is due by 15 January 2017 and should indicate any changes to the monitoring plan for 2017. Executive Officer approval will be required prior to the implementation of any changes. If you have any questions or comments, you may contact Gurbinder Dhaliwal at (916) 464-4601, or by email at gurbinder.dhaliwal@waterboards.ca.gov.

Original Signed by Patrick Pulupa

Pamela C. Creedon
Executive Officer

Enclosure: Staff Review of Monitoring Plan Update for the period from March 2015 through February 2017.

Central Valley Regional Water Quality Control Board

TO: Susan Fregien
Senior Environmental Scientist
IRRIGATED LANDS REGULATORY PROGRAM

FROM: Gurbinder Dhaliwal
Environmental Scientist
IRRIGATED LANDS REGULATORY PROGRAM

DATE: 22 January 2016

SUBJECT: MONITORING PLAN UPDATE FOR MARCH 2015 THROUGH FEBRUARY 2017– WESTERN SAN JOAQUIN RIVER WATERSHED COALITION

The Central Valley Water Board received a Monitoring Plan Update (MPU) from the Westside San Joaquin River Watershed Coalition (Coalition) on 15 January 2016, as required by the Monitoring and Reporting Program Order No. R5-2014-0002-R2 (Order). The Coalition's monitoring plan for the period from March 2015 through February 2017 was approved by Executive Officer on 25 November 2015. The MPU schedule updates the plan for monitoring water quality constituents in the discharge and source water sites representing the water bodies in all subwatersheds covered by the Coalition. The only significant change brought by this MPU is to include two additional monitoring sites to be monitored for selenium and boron to accommodate wetlands supply channels monitoring. The wetlands supply channels were previously monitored under the Grasslands Bypass Project. With adoption of Grasslands Bypass Order (R5-2015-0094), the wetlands supply channels are now required to be monitored under the Order R5-2014-0002-R2.

The MPU updates the surface water monitoring schedule for the targeted monitoring period through February 2017. The MPU consists of a Monitoring Plan Report including a series of worksheets and appendices providing site-specific and season-specific monitoring details, to support the Coalition's surface water evaluation process.

Staff reviewed the MPU to determine compliance with the requirements pursuant to the Monitoring and Reporting Program. An overview of the proposed monitoring plan is presented below, followed by staff recommendations.

Surface Water Monitoring

No changes to the monitoring plan approved on 25 November 2015 are proposed for the discharge and source water sites.

Wetlands Supply Channels Monitoring

On 16 July 2015, the Coalition proposed the addition of two new monitoring sites to its monitoring program: San Luis Canal upstream of Splits (Site L2) and Santa Fe Canal upstream of Splits (Site M2). Staff and the Coalition held multiple conference calls to discuss and clarify details presented in the Wetlands Supply Channels Monitoring proposal. On 15 January 2016,

the Coalition submitted a revised Wetlands Supply Channels monitoring proposal as part of their MPU that included additional information requested by Staff to clarify the details of their proposal.

The Waste Discharge Requirements General Order R5-2014-0002-R2 requires that surface water monitoring be representative of the region covered by the Order, with sites selected for monitoring water flow and quality of all types of irrigated agricultural waste discharges within the entire third-party area (Attachment B, Section III.A). Sites L2 and M2 are representative of water quality in the wetlands supply channels for wetlands in the North Grassland Water District, and will be designated as wetland source water sites. Marshes in the South Grassland Water District and segments of wetland supply channels in the area are listed under Section 303(d) of the Clean Water Act for exceeding boron or selenium water quality objectives, so Sites L2 and M2 will be monitored monthly for boron, selenium, and field parameters. The Coalition also proposed that site L2 will be monitored on a weekly basis for the months of February through July.

Water deliveries to the North Grassland wetlands include drainage water from the South Grassland wetlands, drainage from adjacent agricultural lands in Poso (Rice) Drain and Almond Drain areas, groundwater seepage, and any other water that may be conveyed through the San Luis Canal or the Santa Fe Canal. During heavy rain events, discharge from the Grassland Drainage Area may be released to the South Grassland wetlands. In addition to daily monitoring of wetland supply channels during and one week following water diversions from the Grassland Drainage Area (as required by the Grassland Bypass Order R5-2015-0094), selenium concentrations in wetland supply channels were historically monitored weekly as a part of the broader sampling effort associated with the Grassland Bypass Project.

Staff reviewed the monitoring history of wetland supply channels and available water quality results to evaluate the Coalition's proposal:

- **San Luis Canal upstream of Splits (Site L2).** Selenium concentrations in the wetland supply channels exhibit a seasonal pattern (Figures 1 and 2).

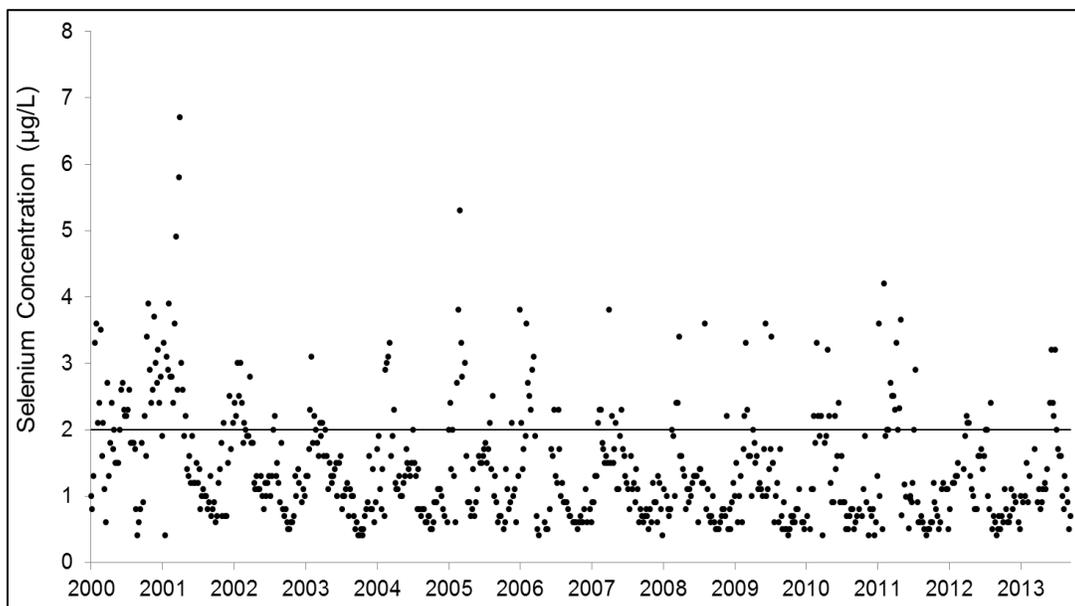


Figure 1. Weekly selenium concentrations in San Luis Canal upstream of Splits (Site L2). Also shown is the 2 µg/L water quality objective for selenium in wetlands (monthly mean).

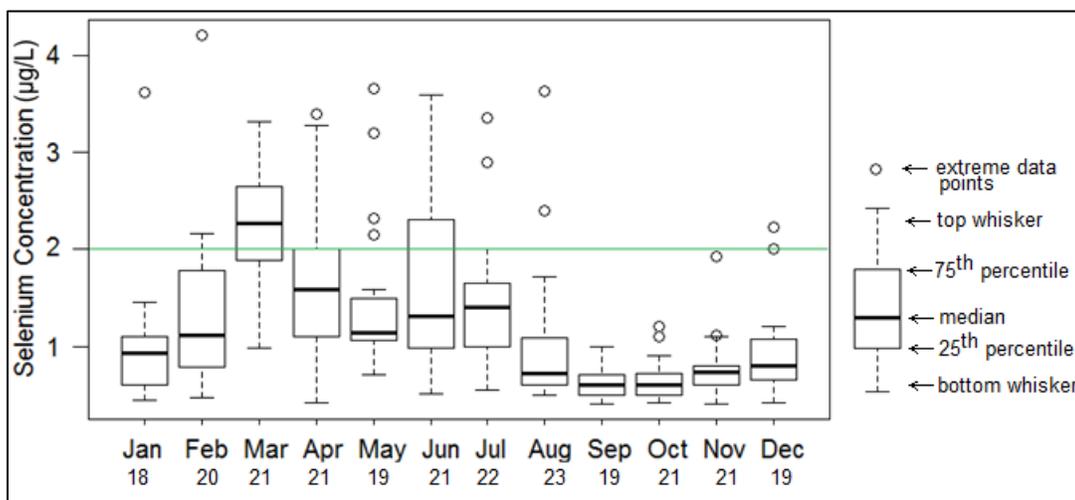


Figure 2. Summary of weekly selenium concentrations in San Luis Canal upstream of Splits (Site L2) measured from 2008 through 2013. Boxes show the median, the 25th and the 75th percentiles. Top whisker is 75th percentile + 1.5×IQR (interquartile range), and the bottom whisker denotes the minimum value. The number of weekly samples is shown below each month. Also shown is the 2 µg/L water quality objective for selenium in wetlands (monthly mean).

Staff examined the most recent five years of weekly selenium measurements in order to capture the water quality in wetland supply channels representative of the crops and management practices currently in place. Selenium concentrations in more than 90% of weekly samples collected and analyzed between 2008 and 2013 have been below the water quality objective from August through January (Figure 2). Despite occasional exceedances of the selenium water quality objective (fewer than 10% of results), monthly monitoring of selenium is likely to capture the representative concentration at Site L2, and staff agrees with the proposed frequency during the period from August

through January. Weekly monitoring of selenium at Site L2 from February through July is also appropriate to capture the period when exceedances have been more frequent.

- **Santa Fe Canal upstream of Splits (Site M2).** The selenium water quality objective for wetlands has been achieved at Site M2 since 2003 (Figure 3). Staff agrees that proposed monthly monitoring is sufficient to capture the representative selenium concentration and track compliance with the water quality objective.

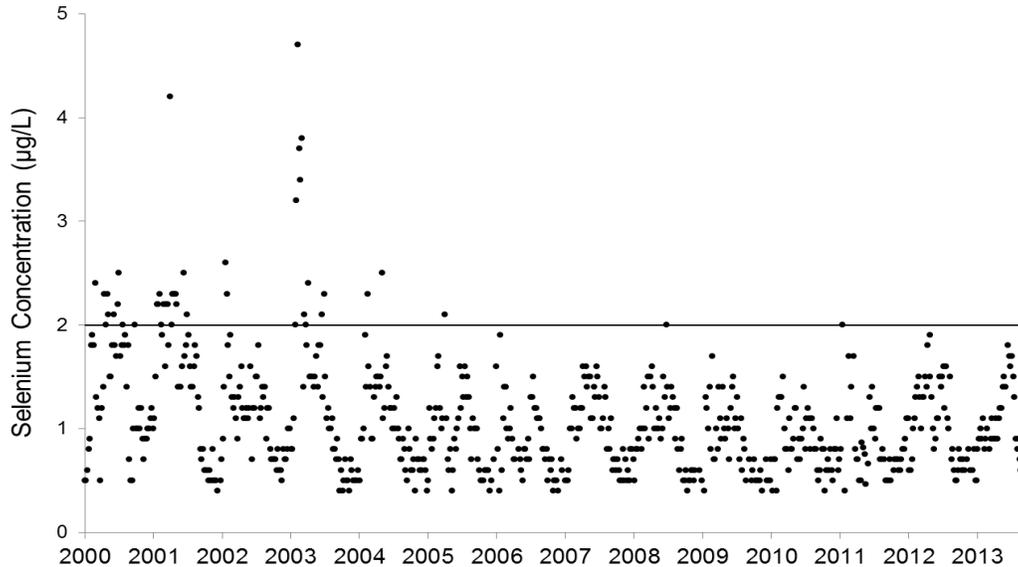


Figure 3. Weekly selenium concentrations in Santa Fe Canal upstream of Splits. Also shown is the 2 µg/L water quality objective for selenium in wetlands (monthly mean).

Staff Recommendations

Staff recommends an approval of the Coalition's MPU covering the targeted monitoring period through February 2017, which includes additional monitoring at the Wetland Supply Channels.