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**DATE:** 26 February 2008

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## **31 DECEMBER 2007 SEMI-ANNUAL MONITORING REPORT - SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION**

On 18 December, the Coalition requested an extension to the 31 December submittal deadline to 15 January 2008. The California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) Executive Officer approved the extension. On 14 January 2008, the Regional Water Board staff (staff) received the San Joaquin County and Delta Water Quality Coalition (Coalition) 31 December 2007 Semi-Annual Monitoring Report (SAMR).

Staff reviewed the SAMR to evaluate it for the required reporting conditions described in Order No. R5-2005-0833 (Order). The Coalition did not need to incorporate revision elements from the June SAMR into the December SAMR because the Coalition did not receive staff comments in time.

The Coalition is currently preparing management plans to address 92% of the exceedances. The 8% balance of exceedances have occurred only once in a subwatershed which do not require a management plan. Exceedances of color will be addressed indirectly through management practice implementation for other parameters.

In this memorandum, staff presents their comments pursuant to the Order, and MRP Plan. The review is divided into two parts: (A) a discussion of administrative and compliance aspects and (B) a discussion of analytical aspects. The section titles in the two parts are the same as the titles used in the SAMR.

### **A. ADMINISTRATIVE AND COMPLIANCE**

- **Executive Summary**

Page 2 of the Executive Summary reports the number of exceedances reported during the reporting period. Staff found inconsistencies between the exceedance tables and the text, as noted below. These inconsistencies need to be reconciled in a revised SAMR.

- a) Text reads 19 pesticide exceedances in water, while Table 28 reports 21 exceedances (not including the field blank DDT exceedance).
- b) Text reads six chlorpyrifos exceedances, while Table 28 reports nine.
- c) Text reads toxicity observed 10 times: six *Selenastrum* and four *Ceriodaphnia*, while Table 31 reports 11 toxicity exceedances: seven *Selenastrum* and four *Ceriodaphnia*.
- d) Text reads four *Hyalella* exceedances, while Table 31 reports six *Hyalella* exceedances.
- e) Text reads 37 DO exceedances spread across eight sites. Table 27 reports 55 exceedances spread across 10 sites.
- f) Text reads two pH exceedances. Table 27 reports 4 pH exceedances.
- g) Text reads 29 specific conductance exceedances. Table 27 reports 42 specific conductance exceedances.
- h) Text reads 17 exceedances of metals involving copper, arsenic, and boron. Tables 29 and 30 report 23 exceedances, including one lead exceedance.

- **Description of Watershed**

The SAMR reported the required watershed description elements: boundaries, climate, soil, hydrology, valuable aquatic resources, beneficial uses, and water body size designation.

- **Monitoring and Analysis**

Page 32 reports that the Coalition is monitoring for all Phase II pesticides at Phase I and Phase II sites. Staff acknowledges the Coalition's extra effort with pesticide Phase II monitoring.

- Page 33, the sample site Mokelumne River @ Bruella Road, the Coalition discontinued monitoring for *E.coli* because two years of sample results reported no exceedances of *E.coli*. Request for monitoring reductions must be requested by the Coalition and approved by the Regional Water Board Executive Officer. Post SAMR note: In a 4 February 2008 Coalition letter, the Coalition reinitiated *E.coli* sampling at this site in response to staff's previous SAMR comments.

- **Chain of Custody forms**

The Coalition presented all of the Chain of Custody forms for the 2007 irrigation season.

- **Pesticide Use Information**

Page 86, the Coalition requested and received the most current pesticide use information from counties within the Coalition boundaries. However, no PUR data from Contra Costa County was available. PURs remain difficult to obtain from this county because of limitations within the County's operational procedures.

- **Summary of Management Practices**

The Coalition provided management practice surveys to growers throughout the 2007 irrigation season. The Coalition compiled the growers responses for each monitoring location and presented them in the SAMR. It is not apparent where the Coalition assessed the survey results in the SAMR.

- **Actions Taken to Address Water Quality Impacts**

On page 119, it mentions a website hosted by the Coalition where Coalition information is maintained. An additional website could be mentioned <http://www.sideltawatershed.org/>.

- **Activities, Events and Deliverables**

Table 32, page 121, reports a calendar of events for the Coalition during the reporting period. Staff verified that the SAMR included all of the irrigation season Exceedance and Communication Reports, except the 6/26/07 *E.coli*, metals Communication Report and the 6/28/07 pesticides Communication Report. The Coalition needs to submit these reports for a complete SAMR.

- **Conclusions and Recommendations**

Page 131, discusses the degree to which the Coalition met its five monitoring objectives and provided a few technical conclusions. The technical conclusions appear to be the same conclusions from the December 2006 SAMR.

Page 133, the Coalition states that in the subwatersheds Sand Creek and Grant Line Canal at Calpack, no exceedances were experienced this irrigation season for specific constituents of concern because of growers' efforts. Staff is not completely sure which constituents of concern these are (i.e. specific pesticides, metals, parameters).

## **B. ANALYTICAL ASPECTS**

- **Metals**

Page 28 discusses that the Coalition will attempt to establish background concentrations of some metals to determine if concentrations are a result of natural or anthropogenic inputs. The metal cumulative monitoring results report 12 arsenic, 9 boron, 32 copper, 7 lead, and 1 nickel exceedance. The Coalition should provide its current progress status to establish background levels in additional subwatersheds, as it did for boron at the Marsh Creek sampling site. Using the information presented to staff, the Marsh Creek boron exceedances appear to be from background sources other than agriculture.

- **Precision and Accuracy**

The Coalition completed its regular sampling schedule (6 events per site) at its 15 monitoring sites. Marsh Creek exhibited dryness 5 of the 6 events. In previous correspondence, staff requested that the Coalition exchange the Marsh Creek site and the Coalition agreed. Although the Coalition has not determined the exchange site, staff expects the Coalition to provide an exchange site before implementation of the new MRP.

- Page 59, the Coalition met the required persistence resampling and dilution series testing at the MRP prescribed rates.
- Page 60, reports that the Coalition collected 100% of the environmental samples with the exception of not collecting 18 of the 50 selenium tests because of a Chain

of Custody error. Taking this into account the Coalition still met its overall 90% completeness objective, but not its 90% selenium sampling completeness objective.

- The correct number of duplicates and field blanks were collected above the minimum 5% rate. All quality assurance (QA) and quality control (QC) analyses met acceptance criteria for the irrigation season at a level greater than 90%. The Coalition's tabulated QAQC summary tables clearly illustrate this. Where lab QCs were outside of acceptability criteria range, these samples were J flagged in the monitoring results appendix.
- For toxicity, the Coalition met the minimum 5% duplicate collection rate, and all of these samples met the acceptability criteria. All tests met holding time requirements except one sample, which is a substantial improvement from the 2006 irrigation season. All sediment samples met acceptability and holding time criteria.
- Where results indicated a 50% or greater difference in test organism mortality between the ambient and laboratory sample, the Coalition conducted all necessary Toxicity Identification Evaluations (TIEs), with the exception of two TIEs not conducted due to lab error.
- **Interpretation of Results**

Page 110 reports that there were 50% less chlorpyrifos exceedances in 2007 than in 2006. Staff compared the two seasons (9 in 2007 and 12 in 2006) and calculated a 25% reduction. Of the remaining pesticides (35 in 2006 and 26 in 2007), there was a 26% reduction in pesticide exceedance frequency. The Coalition needs to confirm its chlorpyrifos reduction percent result.
- Page 112 provides a discussion of the metal exceedances that occurred during the reporting period. Copper exceedances increased from 10 in 2006 to 22 in 2007. An additional monitoring event did take place in 2007 than it did in 2006. It was not apparent in the SAMR what could have contributed to increases in copper exceedances.
- Page 113 reports that 37 DO exceedances occurred during the reporting period. Table 27 reports 55 exceedances. The text is inconsistent with the table.
- Page 114 reports that 2 pH exceedances occurred during the reporting period. Table 27 reports 4 exceedances. For EC, it reports that 29 exceedances occurred. Table 27 reports 40. The text is inconsistent with the table.