



California Regional Water Quality Control Board Central Valley Region

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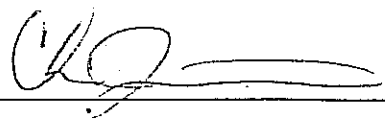
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DATE: 21 December 2007

30 JUNE 2007 SEMI-ANNUAL MONITORING REPORT - SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION

On 2 July 2007, the California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) staff received the San Joaquin County and Delta Water Quality Coalition (Coalition) 30 June 2007 Semi-Annual Monitoring Report (SAMR).

Regional Water Board staff reviewed the SAMR to evaluate it for the required reporting conditions described in Order No. R5-2005-0833 (Order) and in the Coalition's Monitoring and Reporting Program (MRP) Plan. This memorandum summarizes the review findings.

In this memorandum, staff presents their comments and recommendations 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.

A. ADMINISTRATIVE AND COMPLIANCE

- **Executive Summary**

Page 1 at the bottom of the Executive Summary reads, "Water column toxicity was experienced in samples six times, of which two samples showed persistent toxicity in the resample". Staff counted occurrences of water column toxicity in the SAMR exceedance tables eight times not six. Staff counted six samples toxic to test species *Selenastrum*, not four. In addition, at the top of the page 2, staff counted 11 sediment toxic exceedances to *Hyaella*, not six. The text is inconsistent with the table.

- **Sampling Sites Description**

The sample site descriptions, rainfall records, and location maps meet the minimum requirements of the MRP.

- Page 33, for 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.

- **Chain of Custody Forms**

The Chain of Custody (COC) for sample event dates 2/28/07, 3/1/07, and 3/7/07 are COCs for the East San Joaquin Water Quality Coalition. In Appendix II, it appears some COCs are missing from the SAMR. Referring to the table below, the blank fields are those COCs that appear to be missing, where X = included, blank = not included, and NA = not applicable. The Coalition should provide missing COCs.

Sample Event Date	Organics	Toxicity		Inorganics	Comments
		Water	Sediment		
2/11/07		X		X	
2/22/07	NA	X	NA	NA	Resample event
2/28/07		X			
3/6/07			X		
3/7/07	NA	X	X	NA	Resample event
3/29/07	NA	NA	X	NA	Resample event

- **Pesticide Use Information**

The Coalition submitted Pesticide Use Reports (PURs) for the two months before the sample collection date in which a relevant exceedance occurred. These PUR data are mapped relative to the sample location indicating possible sources of exceedances. This information is very helpful to the reader.

- **Data Interpretation / Interpretation of Results**

Page 89, Table 30, reported Marsh Creek @ Marsh Creek Road Lower with a boron exceedance (2/28/07; 2500 ug/L). This exceedance was not reported in the 4/23/07 Exceedance Report.

- Page 91, Table 31, reported Duck Creek @ Hwy 4 Selenastrum with an exceedance (2/28/07; 77.1 percent control). This exceedance may have been incorrectly reported in the 3/9/07 Exceedance Report as 76 percent control.
- Table 31 reports that the 2/22/07 sample collected at Unnamed Drain to Lone Tree Creek @ Jack Tone Rd. result as 83.42 percent control. This exceedance may have been incorrectly reported in the 3/6/07 Exceedance Report as 78.
- Table 31 reports that a sample was collected at Unnamed Drain to Lone Tree Creek @ Jack Tone Rd. on 3/6/07. The 3/14/07 Exceedance Report lists the sample date as 3/7/07.

- **Summary of Management Practices**

Since management practices are a key element of the Irrigated Lands Regulatory Program, it is critical that the Coalition discuss the management practices that are being implemented, how their effectiveness will be evaluated, and, if appropriate, how the management practices will be implemented in other areas where similar exceedances occur. It is important to note that after the Coalition submitted this SAMR to the Regional Water Board, in October 2007, it provided an outline for Management Plans in the Coalition area. The outline is currently being developed in coordination with staff. Staff expects that the Coalition will provide more information about management

practices and develop an approach to determine their effectiveness in these Management Plans.

- **Outreach and Education**

The Coalition provided information on the number of meetings and personal contacts made since the last SAMR. The Coalition held 12 meetings in San Joaquin County with 1248 growers attending between November and December 2006. Additional presentations were held in March, May and June. The Coalition significantly increased its outreach and education documentation from the previous storm season SAMR.

- **Activities, Events and Deliverables**

Table 32, page 105, shows a calendar of deliverables for the Coalition during the period of January – June 2007. Staff verified that the SAMR included all of the storm seasons Exceedance and Communication Reports, as required.

- Table 33, page 106, tabulates the Coalition's actions and deliverables including outreach, individual grower contacts, and meetings. This table augments the text and assists the reader with gaining a better understanding of the Coalition's outreach. The table indicates an increase in efforts with outreach, individual grower, and specific commodity contact since the last SAMR.

- **Conclusions and Recommendations**

The conclusions and recommendations section of the SAMR bulletized the Coalition's objectives and included brief conclusions that pertain to those objectives. This section should thoroughly describe the conclusions and recommendations made by the Coalition, based on the monitoring results and interpretation provided in the SAMR.

B. ANALYTICAL ASPECTS

- **Monitoring Results**

The Coalition calculated the loads for all detections during the reporting period and tabulated the results. To inform the reader of the limitations of the calculated load, staff recommends inserting the following paragraph. "The load values calculated and presented for pesticides or other constituents in this report represent instantaneous loads only. These values should not be used to extrapolate loading over any period of time (e.g., weekly, monthly, seasonal or annual). The primary purpose for reporting instantaneous loads is to provide the Regional Water Board with a context for the concentrations of various constituents at the time that samples were collected."

- The tabulated toxicity results indicate that the Coalition collected all toxicity resamples as required.
- 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).
- The Coalition collected and analyzed all MRP required analytes at the Phase I and Phase II sites.

- **Lab and Field QC Results**

Staff reviewed approximately 30% of the QC data. The number of samples collected divided by the number of samples analyzed was 99%, meeting completeness requirements. The Coalition's tabulated QC tables clearly illustrate this.

- **Precision and Accuracy**

Overall, the precision, completeness, and accuracy met acceptability criteria requirements. The Coalition sampled all sites twice for water toxicity and chemistry plus once for sediment toxicity. The correct number of toxicity resample events took place and the correct number of duplicates and field blanks were collected at the required 5% rate. The pesticide lab precision assessed by Relative Percent Difference (RPD) of lab duplicates, met acceptability criteria in 80% of lab control spikes and 95% of matrix spike duplicates. Where lab QCs were outside of acceptability criteria range, these samples were J flagged. Finally, all of the hold-times for toxicity were not exceeded.

- Page 55 indicates that the Coalition analyzed for 34 different kinds of pesticides when actually it analyzed for 39 pesticides.

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

The SAMR section *Actions Taken to Address Water Quality Impacts* includes a discussion of pesticides/toxicity, *E.coli*, DO, BOD/COD, EC/TDS, and pH. This section should also include a discussion of metal exceedances in the SAMR. Staff made the same comment in the previous SAMR review.

- The *BOD Analysis* section includes a discussion of obtaining and analyzing BOD data for the purposes of understanding DO dynamics. The Coalition proposed to submit a report to the Regional Water Board by 31 October 2007. Staff has not received yet received this report.
- Page 100, section *Pesticides and Toxicity*, the Coalition reports that pesticide applications should be identifiable to individual parcels using PURs. However, the SAMR only provides maps and an accounting of PURs and Township Range Section (TRS) coordinates where use occurred.
- On page 104, with other references to surveys on pages 110 and 111, the Coalition proposes to submit an analysis of the management practice surveys by the end of the 2007 irrigation season. Staff has not yet received this analysis. So far, each proposed due date for this deliverable have passed.