



**California Regional Water Quality Control Board  
Central Valley Region**



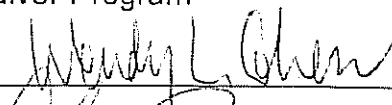
Arnold  
Schwarzenegger  
Governor

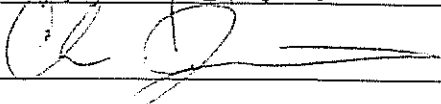
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**TO:** Bill Croyle, Program Manager  
Irrigated Lands Conditional  
Waiver Program

**FROM:** Wendy Cohen and Chris Jimmerson  
Policy and Planning Unit  
Irrigated Lands Conditional  
Waiver Program

**SIGNATURE:** 

**SIGNATURE:** 

**DATE:** 19 December 2006

**COMMENTS AND RESPONSES ON SEMI-ANNUAL MONITORING REPORT,  
SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION**

On 30 November 2006, Central Valley Regional Water Quality Control Board (Board) staff held a quarterly meeting (Meeting) with representatives of the San Joaquin County and Delta Water Quality Coalition (Coalition) to discuss staff comments on the 30 June 2006 *Semi-Annual Monitoring Report (SAMR)* and five other agenda items. To facilitate our dialogue during the Meeting, staff provided attendees with the attached handout containing a bullet summary of Board staff comments on the SAMR. This dialogue was intended to assist the Coalition in complying with Monitoring and Reporting Program (MRP) Order No. R5-2005-0833.

This memorandum discusses Board staff comments on the Coalition's SAMR and the agreements reached during the Meeting. Staff has provided a summary of the other agenda items discussed in a separate memorandum.

The list of comments below follows the order of the Meeting handout, which staff organized using the sequence of the Coalition's SAMR Table of Contents. Each comment has additional details to aid with the subject matter. The Coalition's responses are shown in italics beneath each comment. At the Meeting, the Coalition stated it prefers to correct the inconsistencies and other content summarized in this memorandum in a revised SAMR rather than in a SAMR addendum.

**1. Cover Page**

- The transmittal letter should note "...any violations of the Conditional Waiver found during the reporting period, and actions taken or planned for correcting noted violations..." as required in the MRP. In the SAMR, these include (1) lack of documented management practices (MPs), (2) incorrect *E.coli* hold time, (3) not identifying all of the intermediate sized water bodies, and (4) using the incorrect cypermethrin PQL of 0.10 ug/L.

*Mike Johnson explained that he thought reporting "violations" meant exceedances. He now understands reporting "violations" means to report any non-compliance issues with*

*the MRP and Conditional Waiver. The Coalition said it would prepare a new transmittal letter explaining why these violations occurred and what actions the Coalition will take to correct them. Mike suggested sending staff a draft transmittal letter for review. We agreed that this would help staff and the Coalition with MRP Order compliance.*

## 2. Table of Contents

- The table of contents format adequately duplicates the 17 MRP Order components. The Coalition provided each component neatly supplemented with descriptive tables, which aided the review.

*No response needed.*

- The List of Acronyms Used In Text section should also include the following common acronyms found in the SAMR text or tables: SJR, DWR, BU, GIS, SWAMP, EC, TDS, DO, PH, TOC, BOD, RL, PR, QUAPP, MDL, MCL, COC, QC, LCS, CRM, PQL, CL, WQO, DNQ, SNV, CVP, BMP.

*The Coalition said it would include a more thorough acronym section. [Post meeting note: On 6 December, staff emailed a list of missing acronyms for the Coalition to include in a revised SAMR.]*

- On page 115, Table 18 does not list the first sample date for which minimum detection levels (MDLs) and reporting limits (RLs) were first used, as described in the table description header.

*Staff presented this topic at the back of the meeting handout as an item planned for a future telephone discussion. [Post meeting note: On 7 December, Board staff left a message with Mike Johnson's answering machine and is waiting for a reply.]*

## 3. Executive Summary

- The Coalition stated there was one exceedance (0.87 ug/l) for diazinon at sample point French Camp Slough @ Airport Way. This result is inconsistent with the 6 April 2006 Exceedance Report, SAMR Tabulated Results section, and the Surface Water Ambient Monitoring Program (SWAMP) database.

*The Coalition said it would correct this diazinon inconsistency in a revised SAMR.*

- In the Tabulated Results section, the Coalition is using 0.05 ug/l as the Water Quality Objective (WQO) for diazinon. The Board approved WQO for diazinon is 0.10 ug/L.

*Mike said he was unaware of the new diazinon WQO of 0.10 ug/L. He said that he has been using 0.05 ug/L for the Coalition and for the East San Joaquin Water Quality Coalition (ESJ). Staff explained that the Water Board adopted 0.10 ug/L in Resolution No.R5-2005-0138 titled "Amending the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control of Diazinon and Chlorpyrifos Runoff into the San Joaquin River." The WQO is still pending USEPA approval. Mike said they would use 0.10 ug/L in future deliverables. We agreed that amending this SAMR would*

*be adequate and it would not be necessary to amend previous deliverables, such as Exceedance Reports and Communication Reports.*

- The Coalition states *Selenastrum* had three significant reductions in growth during the storm season, but this is inconsistent in the Tabulated Results section.

*The Coalition said it would correct the Selenastrum reporting inconsistency in a revised SAMR.*

- The Executive Summary states there were 21 *E. coli* exceedances, but the exceedances described add up to 16. The SWAMP raw data reports 20 exceedances, so to be consistent, the Executive Summary needs to include four more exceedances. These are the 27 February results from Grant Line Canal @ Calpack Road and Terminous Tract Drain @ Highway 12, and the 15 March results from French Camp Slough @ Airport Way and Grant Line Canal @ Calpack Road.

*The Coalition said it would correct the E.coli reporting inconsistency in a revised SAMR.*

#### **4. Description of Watershed**

- On pages 11 and 12, the SAMR refers to Little Johns Creek, Duck Creek, Lone Tree Creek, Bear Creek, and French Camp Slough as intermediate water bodies, but should also include Marsh Creek, Mormon Slough, Mosher Creek, and Pixley Slough, which are in the intermediate-watershed description reported on page 24. In a 13 September letter, the Coalition submitted a list of major, intermediate, and minor water bodies, but the list of intermediate water bodies does not match the SAMR's list. The SAMR and other information submitted need to be consistent.

*The Coalition said it did not list these four intermediate water bodies on pages 11 and 12 because the Coalition is not currently sampling them. Staff explained that the intermediate water body list is inconsistent with the tables and language in this SAMR and with deliverables. In addition, staff has not received a complete water body list that includes major, intermediate, and minor water bodies from the Coalition. Mike said he is currently preparing a complete water body list for the ESJ Coalition and will do so for this Coalition. We agreed that the Coalition would prepare a revised Transmittal Letter in response to this comment. A complete water body list will be included in a revised Watershed Evaluation Report (WER).*

#### **5. Monitoring Objectives**

- The SAMR lists five monitoring objectives, which match the objectives in the MRP Order. The first Coalition objective is to determine the concentration and waste load discharged to surface waters. This is well tabulated in Table 14c, clearly showing the loading rate in grams per day for chlorpyrifos and diazinon. Four sample points in Table 14c experienced significant loading rates, so the SAMR needs to include a discussion of proposed MPs to reduce the loads.

*Staff and the Coalition briefly discussed this comment. The Coalition's response is parallel to other staff comments related to MP identification, implementation and evaluation. See topic number 12, Management Practices.*

- The second Coalition objective is "...to evaluate compliance with existing narrative and numeric water quality objectives to determine if implementation of additional management practices is necessary to improve and/or protect water quality." Evaluating and implementing MPs is an essential part of complying with the MRP Order. Data are a good start and required, but by themselves do not comply with the MRP Order or provide a proper MP evaluation. The Coalition still needs to clarify or evaluate ongoing MPs where exceedances have occurred.

*Staff and the Coalition briefly discussed this comment. The Coalition's response is parallel to other staff comments related to MP identification, implementation and evaluation. See topic number 12, Management Practices.*

- The third Coalition objective is to assess the effects of waste discharges from irrigated agriculture to surface water. This assessment is in the section "Actions Taken to Address Water Quality Impacts Identified." Activities to date described here focus on a single identified grower, but needs more discussion and should include outreach activities with MP evaluation for other growers who may be contributing to exceedances.

*Since the Coalition did contact the grower, who now understands the problem (including extensive talks with the applicator), the Coalition concluded the exceedance might be a function of aerial pesticide applications. However, staff did not know what the Coalition discussed with the grower or why the Coalition thinks the exceedances were eliminated, given exceedances are reoccurring. We agreed that the Coalition would discuss and evaluate these efforts more thoroughly in a revised SAMR.*

- To paraphrase, the Coalition's fourth and fifth objectives are to determine the degree of implementation and effectiveness of MPs to reduce discharge of specific wastes that affect water quality. Thus, the Coalition recognizes the importance of MPs and has collected significant toxicity, pesticide, and other water quality data. However, to reduce water quality exceedances and degradation, the Coalition needs to focus more effort on MP identification, implementation and evaluation. The goal is to analyze collected data, and then make a determination of MP effectiveness to reduce the loading of constituents of concern.

*Staff and the Coalition briefly discussed this comment. The Coalition's response is parallel to other staff comments related to MP identification, implementation and evaluation. See topic number 12, Management Practices.*

## **6. Tabulated Results of All Analyses**

- Staff is pleased that the Coalition tabulated flow results, as required and previously requested in comments on the 31 December 2005 SAMR. All other data tabulations are well organized and neatly separated with descriptive table headers.

*Staff thanked the Coalition for its efforts. No further response needed.*

- In tabulated storm season *E. coli* samples and the Coalition's 31 July 2006 Quality Assurance Project Plan (QAPP), the maximum hold time for *E. coli* is listed as 24 hours.

Some samples exceeded the 24-hour hold time and all samples exceeded the 6-hour hold time. The Coalition should use the 6-hour hold time, as required in the SWAMP Quality Assurance Project Plan, on page 11.

*The Coalition said it would change the E.coli hold time in the QAPP and tables to comply with the SWAMP QAPP. However, Mike said they use 24-hours because it is impossible to route samples back to the laboratory within the required 6 hours, given the travel distance and length of time in between sample points and the laboratory.*

- Staff is pleased the Coalition collected the required field duplicates and field blanks for the sampling events, thus achieving an overall rate of at least 5% of all analyses for a particular parameter, as the MRP Order requires.

*Staff thanked the Coalition for its efforts. No further response needed.*

## 7. Sampling and Analytical Methods Used

- Except for cypermethrin, staff is pleased that all Reporting Limits (RLs) in Table 18 meet the maximum Practical Quantification Limits (PQLs) in the MRP Order. Table 18 shows cypermethrin with a RL of 0.10 ug/l, while the maximum MRP PQL for this constituent is 0.05 ug/l.

*Melissa Turner stated they are using 0.05 ug/L, but agreed that Table 18 incorrectly reports the cypermethrin RL as 0.10 ug/L. The Coalition said it would correct this inconsistency in a revised SAMR.*

## 8. Copy of Chain of Custody Forms

- In this section, there are no chain of custody (COC) forms for samples collected on 10, 15 or 24 March. All COC forms for samples collected during the storm 2006 storm season need to be in the SAMR.

*The Coalition said it would include these missing COC forms in a revised SAMR.*

- The COC forms for 27 February are obscured and difficult to read, and the nomenclature used for sample identification was illegible. The Coalition needs to provide clearer copies so staff can conduct an accurate review.

*Mike said the laboratory emails lab-signed scanned copies to the Coalition. Thus, the effect of scanning obscures the COCs. Mike said the Coalition could insert unsigned copies, but staff would have to confirm with Board management if unsigned COCs would be sufficient. [Post meeting note: Board management said the Coalition should include lab-signed COCs. This will document when the Coalition's courier relinquished the samples to the lab.]*

## 9. Summary of Precision and Accuracy

- On page 140 of the SAMR, the Coalition states *E.coli* samples met acceptance criteria. Since the Coalition's laboratory is holding samples greater than 6 hours, these results will not accurately represent bacterial counts in the water column. Some *E.coli* samples were analyzed outside of the 24-hour hold time, and the results still exceeded the *E.coli*

WQO. Since the hold time surpassed the maximum 6 hours, the two other samples that did not have an *E.coli* exceedance may also have exceeded the WQO.

*See the second bullet italic under topic number six concerning E.coli hold time. Wendy Cohen said that the exceedances reported might not have been exceedances after all because E.coli could have replicated above the WQO since the Coalition is using a 24-hour hold time. These results are not favorable to the Coalition. Mike agreed that holding samples for 24 hours could cause exceedances for the Coalition. The Coalition said it would update the Transmittal Letter to report a violation of hold time and on page 140 restate that the Coalition did not meet E.coli acceptance criteria.*

## 10. Pesticide Use Information

- There are inconsistent diazinon values in the Tabulated Results (page 97), Table 40 (page 179), and the Pesticides section (page 245). Page 97 shows 15 March samples at Lone Tree Creek @ Jack Tone Road with 0.023 ug/l, Table 40 shows 0.089 ug/l, and page 245 does not mention an exceedance. The Coalition needs to confirm results and correct these inconsistencies.

*The Coalition said it would correct these inconsistencies in a revised SAMR.*

- On page 186, the Coalition states it did not collect storm-season sediment samples until 27 April due to high flows and unsafe collection conditions. In the SAMR, the Coalition states it did not have these results while preparing this SAMR, but the SAMR does include the 24 May sediment *Hyaella* Exceedance Report for this sample. Thus, the Coalition needs to discuss these data on page 186.

*Mike said the Hyaella exceedances were not included on page 186 because the lab only notified the Coalition via email that there was an exceedance. The Coalition had not received a laboratory report at that point, so the SAMR could not include a thorough discussion. Staff agreed that this explanation is sufficient, but the Coalition should discuss why the SAMR did not include Hyaella toxicity. We agreed that the Coalition would submit this information in a revised SAMR.*

## 11. Data Interpretation

- On page 245, in the Pesticides section, there are inconsistencies for diazinon (0.87 ug/l) and chlorpyrifos (0.039 ug/l) at French Camp Slough @ Airport Way.

*The Coalition said it would correct these inconsistencies in a revised SAMR.*

- On page 245, in the Toxicity section, staff compared the toxicity results in the SAMR to the PER laboratory results. The Coalition states there were three samples with significant toxicity to *Selenastrum*, the lab sheets show four.

*The Coalition said it would correct these inconsistencies in a revised SAMR.*

- The Coalition conducted Toxicity Identification Evaluations (TIEs) and identified ammonia as the putative cause of toxicity in the Lone Tree Creek @ Bernnan Road

sample. The SAMR needs to discuss the nature of the ammonia exceedance and its possible source(s).

*John Meek said he believed that nearby dairies were the source of the ammonia. Staff said the SAMR needs to discuss this conclusion to comply with the MRP Order. The Coalition said it would discuss this more thoroughly in a revised SAMR.*

- On page 247, the Coalition states that agricultural is not causing EC/TDS exceedances. However, the Coalition should still consider commercial fertilizers a possible source of EC/TDS exceedances until its proposed study is completed.

*Staff stated it is not appropriate to assume that commercial fertilizers are not causing EC/TDS exceedances. John said the EC/TDS exceedances are a result of irrigating the crops with Delta water that already has elevated EC/TDS levels.*

## 12. Summary of Management Practices Used

- In several Communication Reports, the Coalition proposed to conduct a MP survey. In a 16 May 2006 letter, Water Board staff requested the Coalition to provide the results of this survey and its evaluation of MPs employed. The SAMR was supposed to include the results, but time-consuming grant contract negotiations substantially delayed the Coalition's funding for outreach activities and MP surveys. Staff is cognizant that on 21 September 2006, the San Joaquin County Resource Conservation District (SJCRCDD) Board approved the latest MP survey. It is likely, depending on crop type, that some growers are using MPs to restrict tailwater runoff. Some examples of what may be used include barriers, pesticide application methods, containment ponds or sumps, and vegetative strips or buffer zones, among others. If the Coalition employs these methods, then the SAMR should discuss them in this section. Otherwise, it appears no MPs are in use.

*Wendy said MPs are really the crux of the Conditional Waiver and since the SJCRCDD Board approved the MP survey, the Coalition needs to discuss the MPs in the December 2006 SAMR. John said he is handing out MP surveys at every grower meeting, and asks each attendee to turn them in at the end of the meeting. He said he has handed out more than 500 surveys, but the Coalition has only received a few responses. Chris Jimmerson asked John how does he know if all the growers are receiving the MP survey to fill out. John said he did not know, but he would compile a list of attendees at all the meetings that did receive the MP survey. He will consider mailing the MP survey to Coalition members who did not attend meetings, but he needs to think about cost. The growers are required to attend certain meetings in order for them to earn continuing education credits. These credits are required to maintain their pesticide use permit(s).*

*To survey more growers, Chris suggested posting the MP surveys where the growers sell their product to distributors. John said the problem with that is not all growers deliver their own product, nor do they sell their product at the same places, so this was not practical.*

*Wendy said staff would like the results of the survey when the Coalition receives them so we can collaborate with the Coalition about outreach efforts. John agreed to share the survey results.*

*Wendy commented on the 15 November 2006 Communication Report use of language when discussing MP evaluation. This report said the Coalition "will be able to evaluate" MPs, which does not convey if the Coalition will actually evaluate them. Mike said the term "will be able to evaluate" means they will evaluate MPs. Wendy requested that the language be modified to communicate the appropriate meaning. Mike said he would consider changing the language in future reports.*

- When discussing exceedances in the SAMR, the Coalition needs to include a discussion of MP success stories or where effective MPs reduced exceedances. This information will help shape future Coalition monitoring and MP outreach efforts.

*The Coalition discussed the results from identifying a grower, linking the grower to the exceedance (see response to topic number 13). We did not discuss this topic further because the Coalition's answer was parallel to the response above.*

### **13. Actions Taken to Address Water Quality Impacts Identified**

- Conducting outreach, such as workshops, meetings, and surveys is a good start, but the Coalition cannot rely solely on these methods to address water quality problems. The Coalition needs to collect sufficient information on the types of MPs that growers are using, the degree to which they are implementing MPs in the watershed, and how effective the MPs are in protecting water quality. This section needs to be more robust in the December 2006 SAMR.

*The Coalition stated it would report more details in the December 2006 SAMR.*

- Regarding the "Future Activities" discussed in this section, the SAMR needs to provide what the Coalition hopes to gain from sending letters to growers who have experienced exceedances. Scheduling meetings and providing MP surveys for voluntary attendees may not accomplish the goal of evaluating and documenting MPs. In addition, the Coalition needs to conduct follow-up activities with these growers to ensure they understand what MPs to use to protect water quality.

*The Coalition said sending out letters to growers at grower meetings conducted throughout the year is the best way to inform growers of the exceedances. John is participating in several grower meetings in December to inform growers.*

- The Coalition has outlined toxicity and other exceedances and collected PURs, but has not made sufficient effort to link the growers who (1) used the product causing the exceedance or (2) described the MPs employed, except in the single case discussed in topic number 5.

*The Coalition stated linking pesticide use to a grower's use is very difficult. The PURs are voluminous and include data not related to the area of concern, which compounds the difficulty in linking user to exceedance. In addition, toxicity identification evaluations*



*are sometimes inconclusive to identify cause. Many growers turn in their PURs late, so the Coalition receives incomplete PUR reports. The growers are supposed to turn in use reports to the Agricultural Commissioner by the 10<sup>th</sup> of each month. John said when the Coalition submits the pesticide use information, it is based on the available information at the time of submittal.*

#### **14.Exceedance, Communication, and Evaluation Reports**

- On 29 March 2006, the Coalition submitted an Exceedance Report for *Selenastrum* and field parameters. On 5 June, the Coalition submitted a Communication Report for the DO exceedance, but not for the *Selenastrum* exceedance.

*[Post meeting note: On 11 December 2006, Melissa and Chris discussed the Selenastrum Communication Report. They determined that this Communication Report was included in a 25 May Communication Report.]*

#### **15.Conclusions and Recommendations**

- The Coalition has gone through tremendous expense and effort to collect exceedance data and report those results to the Water Board. The Coalition has collected samples, performed TIEs, then re-sampled, and procured PURs. The Coalition describes all of these efforts in various reports, but there is no discussion of MP identification, implementation, and evaluation. There is a missing link between the exceedance(s) and the grower(s), in order to develop successful MPs. MP identification and evaluation needs to be a result of any discovered exceedance after identifying the grower(s) found via the PURs. The Coalition needs to discuss and account for these steps in the December 2006 SAMR.

*The Coalition said it would more thoroughly discuss MPs in the December 2006 SAMR.*

- The SAMR includes seven technical conclusions/recommendations, which duplicate nearly verbatim those in the 31 December 2005 SAMR. However, these conclusions are not representative of the 2006 storm season.

*Staff presented this topic on the back of the Meeting handout as an item planned for a future telephone discussion. [Post meeting note: On 7 December, Board staff left a message on Mike's answering machine and is waiting for a reply.]*

- The SAMR needs to include a discussion describing the significance of the results with respect to water quality in the Coalition area and whether the sampling sites are adequately characterizing the identified water bodies. The Coalition needs to evaluate the monitoring and reporting results and propose actions to improve the monitoring.

*The Coalition agreed to include a discussion about adequately characterizing water bodies within the Coalition area.*

