



Dan Skopec
Acting Secretary

California Regional Water Quality Control Board Central Valley Region

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17 May 2006

Mr. John Meek
San Joaquin County & Delta Water Quality Coalition
1440 Arundel Court
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REVIEW AND COMMENTS ON SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION SEMI-ANNUAL REPORT OF MONITORING AND OUTREACH ACTIVITIES

On 3 January 2006, staff of the Central Valley Regional Water Quality Control Board (Central Valley Water Board) received the 31 December 2005 *Semi-Annual Report of Monitoring and Outreach Activities* (Semi-Annual Report) submitted by Dr. Michael Johnson on behalf of the San Joaquin County and Delta Water Quality Coalition (Coalition). Central Valley Water Board staff performed an administrative review of the Semi-Annual Report and on 2 February, sent a letter to the Coalition listing preliminary comments based on that review (copy attached). That letter requested responses to comments by 21 February. As of the date of this letter, staff received the field documentation and laboratory original data, but has not received responses to the comments, despite several follow-up requests from staff. The Coalition still needs to respond to the comments in the 2 February letter.

Attached is a memorandum with additional comments on the Semi-Annual Report. A majority of the comments focus on the lack of consistency throughout the Semi-Annual Report. Comments also include the need for additional details and discussion to evaluate monitoring results and to support the Semi-Annual Report's conclusions and/or assumptions.

Based on the review of the Semi-Annual Report, there are six problem areas for which the Coalition needs to initiate and/or continue with follow-up activities. Listed below are the six sites along with the constituents that were detected in multiple sampling events above limits that are protective of water quality objectives and beneficial uses or determined to be toxic:

Monitoring Location

French Camp Slough at Airport Way
Grant Line Canal at Calpack Road
Kellogg Creek at Highway 4
Lone Tree Creek at Jack Tone Road
Marsh Creek at Balfour Avenue
Terminus Tract sampling area

Constituents with Exceedances

Electrical conductivity (EC), E. coli, total dissolved solids (TDS), chlorpyrifos, and diazinon
EC, E. coli, TDS, toxic to ceriodaphnia & hyalella, and chlorpyrifos
EC, TDS, toxic to pimephales & hyalella
E. coli, chlorpyrifos, and diazinon
EC, E. coli, TDS, toxic to hyalella, and chlorpyrifos
EC, E. coli, TDS, and chlorpyrifos

California Environmental Protection Agency

The Coalition has proposed studies to evaluate EC, TDS, and E. coli in the Coalition area. Central Valley Water Board staff has not received any proposals or results for these proposed studies. The Coalition needs to perform follow-up activities to identify potential sources. The Semi-Annual Report references proposed activities to survey growers to evaluate management practices used. The results of this survey and the Coalition's evaluation of the management practices should be in the next monitoring report, which is due by **30 June 2006**.

By **16 June 2006**, please submit a Semi-Annual Report Addendum to respond to the comments in the 2 February letter and in the attached memorandum. If there are any questions regarding this review, please contact Ms. Devra Lewis at (916) 464-4859 or by email at dlewis@waterboards.ca.gov.

Original signed by Wendy L. Cohen

Original signed by Devra Lewis

WENDY L. COHEN
Senior Engineer
Policy & Planning Unit

DEVRA LEWIS
Environmental Scientist
Planning & Policy Unit

Attachments (2)

cc: Dr. Michael Johnson, University of California, Davis



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TO: Ms. Wendy Cohen, Chief
Policy and Planning Unit
Irrigated Lands Program

FROM: Ms. Devra Lewis
Environmental Scientist
Policy and Planning Unit

DATE: 17 May 2006

SIGNATURE: *Original signed by Devra Lewis*

SUBJECT: REVIEW AND COMMENTS ON SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION SEMI-ANNUAL REPORT OF MONITORING AND OUTREACH ACTIVITIES

On 3 January 2006, staff of the Central Valley Regional Water Quality Control Board (Central Valley Water Board) received the 31 December 2005 *Semi-Annual Report of Monitoring and Outreach Activities* (Semi-Annual Report) submitted by Dr. Michael Johnson on behalf of the San Joaquin County and Delta Water Quality Coalition (Coalition). Central Valley Water Board staff performed an administrative review of the Semi-Annual Report and on 2 February, sent a letter to the Coalition listing preliminary comments based on that review. Those preliminary comments are not provided in this memorandum.

The Semi-Annual Report is well organized and has all of the required components. The contents of the Semi-Annual Report follows the order listed in Monitoring and Reporting Program (MRP) Order No. R5-2005-0833. The following comments are organized by the Sections of the Semi-Annual Report.

Table of Contents

1. Figure 16, which is on page 244, is not listed in the Table of Contents.
2. Figure 25 is listed twice in the Table of Contents.
3. In future monitoring reports, the Table of Contents should list out the dates of each Exceedance, Communication, and Evaluation Report.

Description of Watershed

4. The watershed description on page 6 does not discuss the Alameda County portion of the Coalition area. The Semi-Annual Report description of the Coalition area must be consistent with the Watershed Evaluation Report (WER) and Monitoring and Reporting Program (MRP Plan). The WER and MRP Plan on file at the time of the Semi-Annual

Report submittal show four subwatersheds, but these are not referenced or discussed in the Semi-Annual Report.

Monitoring Objectives

5. There are five objectives listed in this Section of the Semi-Annual Report, but no section evaluates whether the monitoring objectives were met. Although some are long-term objectives, the Coalition must still discuss the progress the Coalition has made towards achieving the objectives.
6. The Semi-Annual Report refers to 13 initial sites to monitor water quality, but the table of sampling sites in the Sampling Sites Description Section only lists 12, and the sampling results provided throughout the report show only 12. If the Coalition originally planned to monitor 13, but reduced the number to 12, then the Semi-Annual Report must provide the rationale for the reduction.

Sampling Sites Description

7. The descriptions of sampling sites provide a good overview of location and crops represented by the sites, but they do not include the size and flow of the water bodies being sampled. As required by MRP Order No. R5-2005-0833, the Coalition must discuss the size (major, intermediate, and small) of water bodies and how this information was used to develop the monitoring plan. At a minimum, the Semi-Annual Report needs to provide the size of the water bodies being sampled.
8. The "Description of Watershed" Section states that of the total acres represented by the Coalition (998,340), 576,800 acres are considered irrigated agriculture, which is about 58 percent of the Coalition area. This Section lists out each of the sampling sites along with the number of irrigated acres represented by each sampling site. Based on the values provided, the irrigated acres represented by the 12 sampling sites are 67,593. Therefore, the Coalition's 2005 sampling represented about 11.7 percent of all the irrigated acres in the Coalition area. The Coalition has not provided a list of the known water bodies along with their sizes and flows in the Coalition area to determine if it has met the requirement to monitor "At least 20% of the intermediate drainages ... during the first year." Therefore, the Coalition must discuss how sampling about 11.7 percent of all the irrigated acres in the Coalition area is adequate for Phase 1 monitoring and the effectiveness of this amount of sampling to evaluate the watersheds.
9. Figures 2 – 12 show the areas of the sampling sites. These figures would be much more useful if they included a north direction arrow and general drainage direction.

Tabulated Results of All Analyses

10. The Field Results portion of this Section does not include flow. Flow is a required "constituent" in Table 1 of both MRP Order No. R5-2003-0826 and Order No. R5-2005-0833 and needs to be in the tabulated results portion of the Semi-Annual Report.

11. The tables provided in this Section and throughout the Semi-Annual Report need to include units (e.g., milligrams per liter for total dissolved solids starting on page 48).
12. The tabulated results list the acronym "ND" for many of the results. The Coalition needs to provide this information as less than the practical quantitation limit (e.g., <0.5 milligrams per liter).
13. There are 19 occurrences where the tabulated results did not provide all sampling event results (such as the dissolved oxygen, pH, specific conductivity, and temperature for the 31 May 2005 sampling at the Marsh Creek at Balfour Avenue sample). The Coalition needs to perform a quality assurance/quality control (QA/QC) evaluation of the data provided in the tabulated results and other tables throughout the Semi-Annual Report to verify accuracy and completeness.
14. This Section includes surrogate recovery results for organic samples, but does not provide the acceptable range for the recoveries to compare the values. Acceptable ranges must be included with the surrogate recovery results.
15. The toxicity test portions of the tabulated results use acronyms for qualifying the data, but the meanings of these acronyms are not provided until later in the Semi-Annual Report. Definitions of acronyms used in tables should be provided as footnotes to the table, or the Coalition should provide a master list of acronyms in the Table of Contents.
16. The ceriodaphnia, pimephales, and sediment toxicity results are provided in percent survival as compared to control. The algae toxicity results are provided in cell count. The Coalition needs to provide algae toxicity results as percent reduction as compared to control. This comment applies to all sections of the Semi-Annual Report that discuss algae toxicity.

Sampling and Analytical Methods Used

17. The tables in this Section are clear and well organized.
18. The introduction to this Section refers to the information provided as being consistent with the Quality Assurance Project Plan (QAPP). The Coalition's QAPP has not been approved by the Central Valley Water Board Executive Officer. Furthermore, several of the practical quantitation limits (PQL) listed do not meet the requirements of MRP Order No. R5-2005-0833 (e.g., chlorpyrifos, diazinon, and cypermethrin). A majority of the samples were collected under MRP Order No. R5-2003-0826, which did not specify PQLs. Therefore, the Coalition needs to notify the laboratories of the PQLs required by MRP Order No. R5-2005-0833 and any other future revisions.

Copy of Chain of Custody Forms

19. There are no chain of custody forms provided for the samples collected on 27 September 2005.

Associated Laboratory and Field QC Results

20. The quality control samples provided do not include acceptable ranges to compare the results, such as for the surrogates, percent recovery, and relative percent difference (RPD). Furthermore, the Section does not provide the original and duplicate sample to verify that the RPD listed is accurate.
21. There is no discussion in this Section about how the quality control samples might affect the sampling results and whether any sampling results were qualified, such as qualified estimated, based on the quality control results.
22. The toxicity QA/QC Section includes “X” behind each of the results, but there is no definition for “X” provided.

Summary of Precision and Accuracy

23. Page 215 lists an acceptable RPD for color as less than 25 and states that one result did not meet this criterion. This exceedance of an acceptable RPD should be showing in the results table, and there should be a discussion of how the results affect the quality of the data from that batch. Throughout this Section, there are discussions that are constituent specific regarding the acceptable ranges for QA/QC data, such as acceptable ranges for blank and laboratory control samples. This information needs to be included in the tables that list the QA/QC data.
24. Page 216 states there is no water quality objective to evaluate color exceedances. The Water Quality Objectives Chapter of the Sacramento/San Joaquin River Basin Plan states, “Water shall be free of discoloration that causes nuisance or adversely affects beneficial uses.” This is a narrative water quality objective, so the statement in the Semi-Annual Report is incorrect. Similar statements are made in other portions of this Section. The Sacramento/San Joaquin River Basin Plan includes narrative, as well as numeric, water quality objectives that need to be considered in evaluating water quality.
25. This Section states there were 41 *E. coli* exceedances. Table 12 lists 42 exceedances, and based on the results presented throughout the Semi-Annual Report, there were 47 exceedances. This discrepancy in the number of exceedances occurs also in total dissolved solids, chlorpyrifos, and water column toxicity portions of this Section. The data provided in the Semi-Annual Report need to be consistent throughout.
26. On page 218, it states there are no water quality objectives that exist to evaluate turbidity exceedances. The Sacramento/San Joaquin River Basin Plan lists various numeric limits for turbidity in surface waters. There are two values listed that apply to samples collected from the Coalition area. With the exception for periods of storm runoff, the turbidity of Delta waters shall not exceed 50 Nephelometric Turbidity Units (NTUs) in the waters of the Central Delta and 150 NTUs in the other Delta waters.
27. The toxicity portion of this Section states that the Coalition did follow-up sampling for results that showed toxicity. There are *Hyalella* results that showed toxicity, but the sites were not resampled and the Semi-Annual Report does not provide a rationale for not resampling. MRP Order No. R5-2005-0833 requires follow-up monitoring at a

minimum of two upstream locations. The Coalition must conduct resampling and other efforts to identify persistence and source(s).

28. This Section includes a discussion of toxicity samples that required a Toxicity Identification Evaluation (TIE) and references Table 15. According to the values in Table 15, which showed survival or growth reduction of 50 percent or greater in 20 samples, the Coalition should have performed more than 8 water column and algae TIEs. One of the discrepancies is attributable to a typographical error (Table 15 lists 0, but the percent survival was actually 70). The Coalition must discuss the rationale for which water column and algae toxicity samples met the requirements for conducting a TIE and which did not.
29. The Coalition is required to have the laboratory start the TIE once the percent reduction is below 50 percent. There are many examples throughout the laboratory reports that show that the TIE was not initiated until several days after the conclusion of the toxicity test. The Coalition needs to discuss how this delay in initiating the TIE may have affected the toxicity results and request the laboratory to run the TIE within 24 hours of recording the 50 percent or greater reduction.
30. The sediment toxicity discussion in this Section refers to 50 *Hyalella* tests. According to the table on pages 72 – 74, there were 30 samples for *Hyalella*. However, the chain of custody forms and lab reports provide information for 32 samples. Furthermore, there is reference to five samples from the Marsh Creek at Balfour Avenue site, but there is only information provided for three such samples in the Semi-Annual Report. If the Coalition is including QA/QC samples in the total number of samples, this is not consistent with other sampling totals in other portions of this Section. The Coalition must provide consistent information throughout the Semi-Annual Report.
31. The Coalition did not collect sediment toxicity samples during the storm season but does not provide the rationale for not collecting these samples. The Coalition must provide an explanation for not collecting sediment toxicity samples during every sampling event, as required by MRP Order No. R5-2003-0826.
32. The Semi-Annual Report states that no resampling was done for *Hyalella* tests but does not provide the rationale for not resampling. The Coalition must include a discussion to support the decision not to resample, since resampling of “sites identified as toxic in the initial screen” is required by MRP Order No. R5-2005-0833.

Pesticide Use Information

33. The tables in the “Exceedances” portion of this Section are generally longer than one page. When tables continue onto additional pages, the header row should be included on each page to prevent confusion and/or misinterpretation of data. Also, the Semi-Annual Report needs to define all acronyms used in tables (e.g., DNQ and E).
34. The tables in the “Pesticides Exceedances in Water Column” portion of this Section are not consistent. Some tables include the commodity and some include the date treated. These tables should be consistent to provide comparable data for assessment.

35. The "Pesticides Exceedances in Water Column" portion of this Section refers to concentrations as being either above or below the water quality objective, but does not state what those objectives are. The Coalition needs to provide the water quality objective being used to interpret the analytical results.
36. It is unclear why the Semi-Annual Report discusses sample results in the "Pesticides Exceedances in Water Column" portion of this Section when the Coalition has determined the results to be below numeric limits which are protective of water quality and beneficial uses. Page 223 states the Coalition will "treat each detection of an organophosphate compound as an exceedance." Although this is evident in the discussion of results and in the tables of this Section, this approach is not consistent throughout the Semi-Annual Report or by the actions of the Coalition (e.g., the Coalition did not provide Exceedance Reports during 2005 for all the organophosphate detections).
37. There are a couple of errors in the "Pesticides Exceedances in Water Column" portion of this Section where the Semi-Annual Report uses the incorrect constituent or sample date. Again, the results provided must be consistent throughout the Semi-Annual Report.
38. At the top of page 255, there is reference to both diazinon and cypermethrin detections. However, the cypermethrin detections are not discussed. This portion of the Section needs to be revised to include a discussion of the cypermethrin detection.
39. On page 255, there is a discussion of a 21 March 2005 permethrin detection at the Marsh Creek at Balfour Avenue sampling site. The last sentence of the discussion proposes to evaluate chlorpyrifos applications in the area. Because the Coalition states there is potential for urban influence at this location, it is difficult to determine whether the reference to chlorpyrifos is an error or if the chlorpyrifos use in that area will provide information to determine the potential source area of the permethrin discharge. Furthermore, an evaluation of chlorpyrifos use is proposed again on page 259 for a detection of diazinon. The Coalition needs to provide further rationale for the proposed follow-up activity of evaluating chlorpyrifos use when the detection was not chlorpyrifos.
40. The last sentence on page 255, regarding a chlorpyrifos detection at the Marsh Creek at Balfour Avenue sampling site states, "In fact, no chlorpyrifos was reported used in (the) watershed from January to July." The Coalition needs to discuss why an evaluation of chlorpyrifos use is proposed (see comment No. 34 above) when it is known that there is no reported use.

Data Interpretation

41. Throughout this Section, there are discrepancies between the number of detections and samples as compared with other Sections of the Semi-Annual Report (e.g., there are 15 detections of chlorpyrifos reported, not 11). The Coalition needs to clarify the totals and values provided.
42. This Section provides information on the number of detections compared to the total number of samples analyzed to provide a percentage of detections. The Coalition did

not include a discussion of any values detected between the method detection limit (MDL) and PQL or include any qualifiers to the data in the analytical tables to signify this. For compliance with MRP Order No. R5-2005-0833, the Coalition must require the laboratories to report detections between the MDL and PQL. Since it is not clear whether the laboratories did this, it is possible that the percentages provided are not accurate.

43. This Section does not discuss the significance of monitoring results with respect to water quality in the watersheds or whether monitoring and data quality objectives were achieved. Furthermore, this Section should include an overview of the data quality and whether any samples are or should be qualified based on holding times, surrogate recoveries, laboratory control samples, matrix spike/matrix spike duplicate, etc.

Summary of Management Practices Used

44. The Semi-Annual Report states that a goal for the Coalition is to understand the specific management practices used by growers in the watersheds. Although this is a long-term goal and Coalition actions performed to date are discussed on page 331, the Semi-Annual Report needs to evaluate the actions the Coalition has identified thus far that work towards this goal, which actions the Coalition proposes to continue, justification for the actions continued and not continued, and a proposal for additional actions towards the goal.

Actions Taken to Address Water Quality Impacts Identified

45. Table 53 lists the outreach and education activities with the estimated number of attendees. However, the Section does not support Table 53 with a discussion of feedback from attendees, amount of time at the meetings devoted to discussing management practices, or which activities had the best results. The Semi-Annual Report should include this kind of information.
46. Regarding the "Future Activities" discussed in this Section, the Semi-Annual Report needs to provide further rationale for the proposed activities and what the Coalition hopes to gain from the proposed activities.

Exceedance, Communication, and Evaluation Reports

47. This Section was not well organized, not all reports were included, and some of the reports provided were not the same reports originally submitted. Please see Central Valley Water Board staff's 2 February 2006 letter for the detailed comments.

Conclusions and Recommendations

48. This Section states, "The Data Quality Objectives were met." It is not clear from the Semi-Annual Report what the data quality objectives are or how it was determined that they were met. The Coalition needs to clarify whether the "Data Quality Objectives" are those listed on page 9 of the Semi-Annual Report, which are the five MRP Plan objectives listed in MRP Order No. R5-2005-0833, or whether they are the QA/QC data related to precision, accuracy, and completeness of laboratory results. The brief

paragraph that follows the list on page 9 does not discuss the data results in relation to achieving or working towards achieving compliance with the five MRP Plan objectives. The term "data quality objectives" appears twice in the Semi-Annual Report, which is not sufficient to evaluate precision, accuracy, and completeness. The Coalition needs to clarify its definition of data quality objectives and provide a justification for the conclusion that the data quality objectives were met.

49. This Section proposes to meet PQLs required in MRP Order No. R5-2005-0833 in 2006 as a means to improve the monitoring program. Central Valley Water Board staff does not consider setting a target date of 2006 for meeting PQLs that were required in August 2005 as an improvement. To improve the monitoring program, the Coalition needs to propose actions to further evaluate the data collected and incorporate the results of that evaluation into the Coalition's future activities.
50. In general, this Section needs more discussion to support the statements.

General Overall Comments

51. Although not required by MRP Order No. R5-2005-0833, an Executive Summary would be helpful in the review of the Semi-Annual Report.
52. Some portions of the Semi-Annual Report include data from 2004, but the data were not complete and there was no discussion of why they were included only in certain sections.
53. The Semi-Annual Report does not include a discussion of the significance of the results with respect to water quality in the Coalition area or whether the sampling sites are adequately characterizing the identified watersheds. The Coalition needs to evaluate the monitoring and reporting results and propose actions to improve the monitoring.
54. The Coalition did not sample for all 303(d) pollutants related to agriculture, such as DDT, Group A pesticides, and boron. The Coalition will need address 303(d) listed pollutants during Phase 1 monitoring.
55. Not all of the laboratory packages were complete. Although the chain of custody forms were provided separately in the Semi-Annual Report, several laboratory data packages did not include the chain of custody forms. Others did not include the cover sheet or the report of sample integrity. The Coalition needs to provide the complete laboratory package.
56. Many of the samples were reported as diluted. The sample results for those diluted samples did not seem to warrant dilution, but there is no discussion in the Semi-Annual Report about diluted samples. Furthermore, some of the samples showed a dilution without increasing the PQL. The Coalition must discuss the data and aspects of the data that might require qualification of the data and explain how the laboratory was able to dilute the sample without increasing the PQL.
57. Many of the laboratory reports included a cover letter summarizing the results. Several cover letters attached to laboratory reports had inaccuracies. The Coalition must

review these reports and request laboratories to correct errors at the time the laboratory report is first submitted. If the error is recognized at the time of preparing a report, the Coalition must identify the error in the text of that report and the corrective measures proposed to prevent the oversight.

58. Although it is data from 2004, one laboratory package included a chain of custody form that specifically requested the matrix spike/matrix spike duplicate be performed on that sample, yet the corresponding laboratory package used a different sample for the matrix spike/matrix spike duplicate. There is no discussion of this in the case narrative and an exception report was not included. The Coalition needs to follow up on these types of oversights with the laboratory and discuss the actions taken to prevent the oversight from recurring in the Semi-Annual Report.
59. The Coalition did not provide flow measurements in cubic feet per second for a majority of the sampling events. Flow measurements in cubic feet per second are a requirement of MRP Order No. R5-2005-0833. If the current method is not able to record these measurements, the Coalition must use alternative methods or equipment to record the measurements.
60. Attached is a table listing the analytical results and whether or not chain of custody forms and/or field logs were provided with the Semi-Annual Report. The Coalition may want to consider using this (or similar) type of a table to include in future submittals of Semi-Annual Reports because all the data are in one table which would help prevent inconsistencies, and it would be easier to track the elements needed to complete the Semi-Annual Report.
61. The purpose of including the attached table is to point out inconsistencies in the Semi-Annual Report without providing each as a comment. Furthermore, the table identifies exceedances that the Coalition did not report in an Exceedance Report. The Coalition needs to: a) explain why these exceedances were not reported during the year; b) the corrective measures proposed to prevent the oversight from occurring during the upcoming monitoring season; c) explain why resampling was not conducted for many of the exceedances; and d) explain the follow-up activities conducted by the Coalition to address exceedances.
62. Overall, more details are needed. For management practices, discuss the anticipated benefit of the practice. For discussing exceedances, include whether or not it is a recurring trend and how that affects the management practices the Coalition would suggest to growers. Include additional discussion of the sampling sites and what the results from the location tell about the water quality and its relationship to agriculture. How and when are the analytical results being evaluated to determine effectiveness of the monitoring and the sampling sites? Include a discussion of whether the analytical results show that discharges are being reduced. This information will help shape the future monitoring and outreach efforts needed by the Coalition.

Attachment: Analytical Table of December 2005 SAMR Data

Date	Field Log	COC	DO (mg/L)	pH	EC (umhos/cm)	Temp (a) (Deg C)	Color (units)	E. coli (MPN/100ml)	TDS (mg/L)	TOC (mg/L)	Turb (NTU)	Cerio (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Pimeph (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Selen (b) (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Hyaella (%)	Toxic	Re-sample
Water Quality Limit			>5.0	6.5 - 8.5	700			235	450	--	50 & 150 (c)																					
CALAVERAS RIVER AT BELOTA INTAKE																																
8/24/2004	Y		9.5	8.47	218	27.9																										
9/23/04*			8.6	8.17	208	21.6																										
DUCK CREEK AT HIGHWAY 4																																
8/24/2004	Y		11.3	7.54*	215	21.9																										
9/23/2004			11.3	8.6 (8.2)*	390	18.4																										
FRENCH CAMP SLOUGH AT AIRPORT WAY																																
2/16/2005	Y	Y	9.8	7.75	259	13.9	380	>1600	180	12	120	100		N				75		N				78.3		Y	Y	N		--		
2/23/2005	Y	Y	9.5	7.61	195.4	14.5	--	--	--	--	--	--						--						495		N				--		
3/21/2005	Y	Y	10.7	8.40	207	16.5	75	220	140	5.8	18	100		N				100		N				140		N			--			
5/17/2005	Y	Y	7.8	9.02*	145.5	13.9	100	500	91	5.7	41	100		N				100		N				99.4		N			97.5	N		
6/21/2005	Y	Y	8.3	7.38	116.2	21.2	120	300	84	4.8	48	100		N				100		N				170		N			--			
7/19/2005	Y	Y	6	7.73	226	26.6	120	>1600	150	4.9	40	90		N				100		N				194		N			95	N		
8/16/2005	Y	Y	5.8	7.42	142.1	35.3	150	1600	100	6.1	43	100		N				100		N				148		N			--			
9/20/2005	Y	Y	4.8*	7.48	99.4	23.8	100	300	81	3.7	32	95		N				100		N				146		N			78.8	N		
9/20/2005	NA	Y	--	--	--			500				--						--						--					--			
GRANT LINE CANAL AT ARNANDO																																
2/16/2005	Y	Y	5.3	6.77	1743	14.1	100	240	1200	11	26	95		N				95		N				109		N			--			
3/21/2005	Y	Y	3.8*	-88*	1715	15.4	100	240	1100	10	49	100		N				95		N				150		N			--			
5/17/2005	Y	Y	13.3	6.68	801	20.7	250	30	550	9.9	150	100		N				100		N				102		N			96.3*	N		
6/21/2005	Y	Y	5.4	6.81	442	24	300	50	320	8.3	98	100		N				100		N				164		N			--			
7/19/2005	Y	Y	6.4	8.18	243	32.5	750	>1600	180	5.5	360*	100		N				100		N				136		N			--			
8/16/2005	Y	Y	4.7*	7.01	290	36.4	2000	>1600	330	16	860*	100		N				100		N				174		N			--			
9/20/2005	Y	Y	3.8*	6.98	477*	29.2	1000	"ND"	300	9.7	340*	100		N				90		N				146		N			9 (8.75)*	Y	N	
GRANT LINE CANAL AT CALPACK ROAD																																
2/16/2005	Y	Y	12.7	7.09	1412	14.2	200	240	930	7.8	87	80		N				70		N				7.17	2/17/2005	Y	Y	Y	2/24/2005	--		
2/23/2005	Y	Y	6.8	7.13	1834	15.2						--						--						219		N			--			
3/21/2005	Y	Y	11.5	-88*	1970	15.4	50	130	1200	5	18	75		Y	Y	N		95		N				111		N			--			
4/4/2005	Y	Y	4.8*	7.12	2140	14.7						100		N				--						--					--			
5/17/2005	Y	Y	6.3	6.96	847	16.9	150	110	550	7.3	89	100		N				97.5		N				124		N			69 (43.8)*	Y	N	
6/21/2005	Y	Y	5.1	6.95	835	21.4	200	>1600	520	8.7	120	95		N				100		N				182		N			--			
7/19/2005	Y	Y	4.8*	8.08	673	23.8	300	500	380	5.2	140	100		N				97.5		N				142		N			68.8	Y	N	
8/16/2005	Y	Y	3.8*	6.96	1077	31.1	150	1600	670	6.7	55	5 (0)*	8/17/2005	Y	Y	Y*	8/22/2005	100		N				160		N			--			
8/23/2005	Y	Y	4.2*	6.8	759	30.7						20 (95)*		N				--						--					--			
9/20/2005	Y	Y	2.9*	6.83	1390	34	75	500	840	5.8	24	95		N				82.5		N				144		N			89 (88.8)*	Y	N	

Date	Field Log	COC	DO (mg/L)	pH	EC (umhos/cm)	Temp (a) (Deg C)	Color (units)	E. coli (MPN/100ml)	TDS (mg/L)	TOC (mg/L)	Turb (NTU)	Cerio (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Pimeph (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Selen (b) (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Hyalella (%)	Toxic	Re-sample
Water Quality Limit			>5.0	6.5 - 8.5	700			235	450	--	50 & 150 (c)																					
KELLOGG CREEK AT HIGHWAY 4																																
2/16/2005	Y	Y	13.5	7.76	259	12.8	1000	>1600	320	12	580*	0	2/17/2005	Y	Y	Y	2/21/2005	80 (100)*		N				138		N				--		
2/23/2005	Y	Y	9.2	8.03	990	16						100		N				--					--						--			
3/21/2005	Y	Y	8.2	-88*	1136	17.1	30	22	680	3.3	13	100		N				95		N			145		N				--			
5/17/2005	Y	Y	5.8*	5.7 (7.58)*	544	18.4	200	2	340	2.8	170	100		N				92.5		N			147		N				0 (95 & 92.5)*	N		
5/17/2005	NA	Y										--						--					149		N				--			
6/21/2005	Y	Y	7.5	7.46	470	23.2	2000	300	340	9.3	1700*	100		N				21 (20)*	6/22/2006	Y	Y	Y*	6/26/2005	205		N			--			
6/29/2005	Y	Y	7.8	7.55	435	21.7						--						97.5		N			--					--				
7/19/2005	Y	Y	7.7	8.66	1485	22.1	60	80	890	1.2	27	100		N				97.5		N			154		N			0	Y	N		
8/16/2005	Y	Y	6.6	8.27	1447	35.5	50	30	950	1.4	18	95		N				95		N			44.2*	Y	Y	*		--				
8/23/2005	Y	Y	7.9	-88*	885	39.8			950*			--						--					150		N				--			
9/20/2005	Y	Y	9.3	7.89	667	26.4	150	900	370	3.3	64	100		N				85*		Y	Y	N	131		N			58 (57.5)*	Y	N		
9/27/2005	Y		10.1*	8.05*	582*							--						100		N			--					--				
KELLOGG CREEK AT HOFFMAN LANE																																
9/20/2005	Y	Y	9.1	8.72*	443	-88	20	>1600	220	3.1	2.8	100		N				90		N			130		N			--				
9/27/2005			10.1*	8.05*	582*	20.4*																							--			
LITTLE JOHNS CREEK AT JACK TONE ROAD																																
8/24/2004	Y		7.1	7.66	88	25.3																										
9/23/2004			6.7	7.71	528*	23.8																										
2/16/2005	Y	Y	11.7	7.63	183.3	13.1	100	>1600	110	6.6	69	95		N				0* (70)	2/17/2005	Y	Y	Y*	*	96.1		N			--			
3/1/2005	Y	Y	8.7	6.37	197.2	14.1						--						100		N			--					--				
3/21/2005	Y	Y	9.1	8.04	193	15.7	60	900	120	4.8	11	100		N				100		N			85.3	Y	Y	N		--				
4/5/2005	Y	Y	9.1	7.62	262	14.6						--						--					116		N			--				
5/17/2005	Y	Y	8.5	7.40	134.8	19.5	100	900	87	3.5	40	100		N				100		N			101		N			97.5	N			
6/21/2005	Y	Y	7.9	7.18	87.4	21.2	60	130	61	3.1	23	100		N				100		N			118		N			--				
7/19/2005	*	Y	6.6	7.28	92.5	26	60	41	59	3	22	100		N				100		N			150		N			81.3*	N			
8/16/2005	Y	Y	7.9	7.19	91.4	25.4	40	80	61	2.2	15	100		N				95		N			108		N			--				
9/20/2005	Y	Y	5.4	7.20	105.5	21.8	50	900	73	3	9.3	100		N				100		N			140		N			97.5	N			
LONE TREE CREEK AT JACK TONE ROAD																																
8/24/2004	Y		6.3	7.24	89.6	21.8		500*																								
9/23/2004			7.1	7.18	136.5	20																										
2/16/2005	Y	Y	6.0	7.51	602	13.1	800	>1600	430	76	150	90		N				0*	2/17/2005	Y	Y	Y	2/23/2005	76.7		Y	Y	N		--		
2/23/2005	Y	Y	7.5	7.61	288	13.8						--						100		N			511		N			--				
3/21/2005	Y	Y	11.4	8.58*	340	17.1	150	900	250	20	20	100		N				92.5		N			96		N			--				
5/17/2005	Y	Y	18.6 (-88)*	7.36	108.5	18.1	50	900	72	4.2	13	100		N				100		N			95.3		N			93.8	Y	N		
6/21/2005	Y	Y	7.5	7.27	98.2	20.2	75	500	74	6.6	24	100		N				100		N			149		N			--				
7/19/2005	Y	Y	6.1	7.37	122.9	23.6	60	900	83	6.3	15	100		N				100		N			157		N			--				
8/16/2005	Y	Y	6.9	7.44	112.5	29.2	75	500	85	6	20	100		N				100		N			132		N			--				
8/16/2005	NA	Y	--	--	--							--						--					--					--				
9/20/2005	Y	Y	4.5*	7.44	102.8	37.1	80	>1600	75	5.4	16	100		N				97.5		N			140		N			96.2	N			
LONE TREE CREEK AT BERNAN ROAD																																
9/20/2005	Y	Y	5.1	7.34	121.9	31.4	150	1600	96	9.8	30	100		N				97.5		N			133		N			--				

Date	Field Log	COC	DO (mg/L)	pH	EC (umhos/cm)	Temp (a) (Deg C)	Color (units)	E. coli (MPN/100ml)	TDS (mg/L)	TOC (mg/L)	Turb (NTU)	Cerio (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Pimeph (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Selen (b) (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Hyaella (%)	Toxic	Re-sample	
Water Quality Limit			>5.0	6.5 - 8.5	700			235	450	--	50 & 150 (c)																						
MARSH CREEK AT BALFOUR AVENUE																																	
2/16/2005	Y	Y	9.7	8.18	500*	12.2	750	>1600	370	12	350*	90		N				80		N				146		N				--			
3/21/2005	Y	Y	8.5	-88*	1022	14.2	25	500	630	4.1	4.5	100		N				97.5		N				138		N				--			
5/17/2005	Y	Y	6.6	8.08	915	17.6	200	"ND"	580	4.5	130	100		N				100		N				143		N			0	Y	N		
5/31/2005	Y	*	8	6.71	58.9							--						--						--									
6/21/2005	Y	Y	6.8	8.06	1868	20	40	900	1300	6.2	7.7	47 (45)*		Y	Y	Y		100		N				219		N				--			
6/29/2005	Y	Y	7.2	7.92	580	21.7						100		N				--						--									
7/19/2005	Y	Y	7.7	8.92	552	22.8	70	1600	320	4.9	16	100		N				100		N				212		N			0	Y	N		
8/16/2005	Y	Y	8.5	8.34	695	23.0 (37.3)*	50	300*	430	4.2	11	95		N				100		N				111		N			--				
9/20/2005	Y	Y	5.7	7.73	1368	17.6	40	>1600	860	7.2	6.3	100		N				90		N				168		N			0	Y	N		
MARSH CREEK AT CONCORD AVENUE																																	
9/20/2005	Y	Y	7.2	7.82	624	21.1	45	50	320	3.6	9.2	95		N				85		Y	N	N		149		N				--			
9/20/2005	NA	NA	--	--	582							--						--						--						--			
MOKELUMNE RIVER AT BRUELLA ROAD																																	
8/24/2004	Y		8.5	5.5 (7.16)*	53.4	16.4																											
9/23/2004			7.8	6.98	54.9	16.7																											
10/6/2004			8.9	7.13	53.8	15.3																											
2/16/2005	Y	Y	9.2	6.78	56.4	9.8	15	170	35	2	5.3	100 (80)*		N				95		N				85.6		N				--			
3/21/2005	Y	Y	8.8	7.18	54.5	10.9	10	170	38	1.9	2.7	35 (70)*	3/22/2005	Y	Y	Y	4/4/2005	97.5		N				84*		Y	Y	N		--			
4/4/2005	Y	Y	10.5	7.26	56.1	10.6						100		N				--						142		N				--			
5/17/2005	Y	Y	9	6.87	56.6	11.9	10	23	39	1.9	1.8	95		N				100		N				91.9		Y	Y	N		95	N		
5/31/2005	*	Y	*	*	*	*						--						--						80.6		N				--			
6/21/2005	Y	Y	5.1	6.79	52.4	13.1	10	11	35	2	5.2	37 (35)*	6/22/2005	Y	Y	Y	6/25/2005	97.5		N				133		N				--			
6/29/2005	Y	Y	8.5	6.70	59.2*	13.8						100		N				--						--									
7/19/2005	Y	Y	6.6	6.92	50.4	14.9	15	17	31	1.8	3.7	100		N				97.5		N				136		N			93.8	N			
8/16/2005	Y	Y	7.5	6.76	46.6	20.3	10	23	32	1.8	2.5	100		N				100		N				106		N			--				
9/20/2005	Y	Y	7.6	7.07	48.3	18.8	15	90	860 (37)*	1.8	3.5	100		N				100		N				121		N			93.8	N			
MOKELUMNE RIVER AT FISH HATCHERY																																	
9/20/2005	Y	Y	5.5	6.54	45.3	34.8	150	1600*	96	9.8	30	100		N				97.5		N				120		N			--				
POTATO SLOUGH AT HIGHWAY 12																																	
8/24/2004	Y		7.3	7.68	191	22																											
9/23/2004			7.4	7.31	196.1	19.5																											
2/16/2005	Y	Y	9.7	7.41	243	11.6	35	50	140	3.6	6.4	30 (75)*	2/17/2005	Y	Y	N	2/21/2005	85 & 80		N				131 (135)		N				--			
3/21/2005	Y	Y	8.1	11.74*	195.5	13.5	20	4	110	2.6	5.4	100		N				100		N				128		N				--			
5/17/2005	Y	Y	NT	7.27	124.8	17.2	40	13	76	2.1	12	100		N				100		N				97.1		N			*	*			
6/21/2005	Y	Y	7.4	7.36	121.5	18.5	30	13	71	2.4	11	90 (70)*		N				100		N				160		N			--				
7/19/2005	Y	Y	6.5	8.76	160.5	22.9	25	23	83	1.8	8.9	100		N				100		N				190		N			--				
8/16/2005	Y	Y	7.5	7.17	125.9	23.5	25	7	71	2.2	7.6	100		N				100		N				98.4		N			--				
9/20/2005	Y	Y	7.2	7.12	174.1	18	30	"ND"	99	1.9	6.4	90		N				92.5		N				131		N			--				

Date	Field Log	COC	DO (mg/L)	pH	EC (umhos/cm)	Temp (a) (Deg C)	Color (units)	E. coli (MPN/100ml)	TDS (mg/L)	TOC (mg/L)	Turb (NTU)	Cerio (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Pimeph (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Selen (b) (%)	Date Test Started	Toxic	Re-sample	TIE	Date TIE started	Hyaella (%)	Toxic	Re-sample
Water Quality Limit			>5.0	6.5 - 8.5	700			235	450	--	50 & 150 (c)																					
TERMINOUS TRACT DRAIN AT HIGHWAY 12																																
2/16/2005	Y	Y	8.0	7.41	950	12.7	200	1600	580	18	86	95 (100)*		N				85		N				18.6	2/17/2005	Y	Y	Y	2/24/2005	--		
2/23/2005	Y	Y	7.0	7.74	1868	13.1						--						--						603		N				--		
3/21/2005	Y	Y	6.3	7.67	1705	13.6	100	130	1000	13	13	100		N				97.5		N				81.3		N	Y	N		--		
4/4/2005	Y	Y	7.4	7.72	1742	11.5						--						--						104		N				--		
5/17/2005	Y	Y	7.2	7.46	515	16.1	100	240	290	6.3	29	100		N				97.5		N				122		N				96.3*	N	
6/21/2005	Y	Y	5.2	7.14	411	18.6	100	220*	240	9.8	33	100		N				100		N				153		N				--		
7/19/2005	Y	Y	3.7*	8.07	398	21.6	100	120	210	6.6	23	95		N				100		N				196		N				93.8	N	
8/16/2005	Y	Y	4.9*	6.99	348	31.3	100	170	210	10	30	95		N				100		N				152		N				--		
9/20/2005	Y	Y	14.3	7.24	314	22.9	80	50	190	4.9	14	100		N				88 (87.5)*		Y	Y	N		149		N				98.8	N	
9/27/2005	Y		7.8	7.37	235	27.3						--						97.5		N				--						--		
TERMINOUS TRACT OFF GLASCOCK ROAD																																
2/16/2005	Y	Y	5.1	6.85	684*	12.4	250	>1600	470	29	29	100		N				95		N				151		N				--		
3/21/2005	Y	Y	6	7.14	848	12.2	150	130	540	20	17	95		N				95		N				215		N				--		
5/17/2005	Y	Y	5.4	7.25	515	14.1	150	240	310	12	16	100		N				100		N				152		N				97.5	N	
6/21/2005	Y	Y	9.6	7.12	567	17.2	100	70	330	11	9.5	90		N				100		N				187		N				--		
7/19/2005	Y	Y	3.4*	7.03	429	20.9	140	13	260	10	11	100		N				100		N				202		N				96.2	N	
8/16/2005	Y	Y	6	6.93	294	22.4	100	280	180	10	12	100		N				100		N				136		N				--		
9/20/2005	Y	Y	4.8*	7.10	543*	27.8	75	110	300	10	11	100		N				88 (87.5)		Y	Y	N		164		N				88 (87.5)*	Y	N
9/27/2005	Y		3.7*	7.14	394	22.1						--						100		N				--						--		
TERMINOUS TRACT OFF GUARD ROAD																																
2/16/2005	Y	Y	6.8	7.65	1189	13.7	50	900	670	5	11	95		N				80		N				168		N				--		
3/21/2005	Y	Y	8.8	7.71	1408	12.7	30	80	830	3.7	5.1	95		N				100		N				152		N				--		
5/17/2005	Y	Y	5.3	7.65	1088	15.1	35	17	660	3.7	8.6	95		N				100		N				165		N				94.4	N	
6/21/2005	Y	Y	4.6*	7.57	1099	17	50	50	610	4	13	100		N				100		N				253		N				--		
7/19/2005	Y	Y	2.7*	7.43	809	21	70	22	480	4.4	13	100		N				100		N				188		N				96.2	N	
7/19/2005	NA	Y							480			--						--						--*						97.5	N	
8/16/2005	Y	Y	4.7*	7.65	701	20.7	50	170	390	4.7	15	100		N				100		N				123		N				--		
9/20/2005	Y*	Y										--						--						--						--		

Notes:

Values that are in bold text indicate an exceedance

NA Not applicable

NT Not taken

* See Note column at end of row.

(a) Temperature data is from Field Results Section of SAMR only - not verified against field sheets unless otherwise noted.

(b) Selenastrum % is from Water Board database. SAMR only provided cell count.

(c) Central Delta is 50, other Delta waters is 150

Date	Bif (ug/L)	Cyf (ug/L)	Cyh (ug/L)	Cyp (ug/L)	Esf (ug/L)	Per (ug/L)	Chlorpy (ug/L)	Chlorpy Load	Diaz (ug/L)	Diaz Load	Flow (cfs)	Notes
Water Quality Limit	0.0004	0.00024	0.00041	0.00047	0.007	0.0019	0.014		0.08			
CALAVERAS RIVER AT BELOTA INTAKE												
8/24/2004												
9/23/04*												Info provided on page 32 of SAMR
DUCK CREEK AT HIGHWAY 4												
8/24/2004												Lab = 8.8
9/23/2004												pH exceedance in 8/18 Exceedance Report, no where else. Page 33 of SAMR lists 8.2.
FRENCH CAMP SLOUGH AT AIRPORT WAY												
2/16/2005	--	--	ND	ND	ND	ND	ND		0.052*	36.712	706	No Exceedance Report for Diazinon
2/23/2005	--	--	--	--	--	--	--		--		fast	
3/21/2005	--	--	ND	ND	ND	ND	ND		ND		40.7 (51.4)	
5/17/2005	--	--	ND	ND	ND	ND	0.011*	0.47916	ND		43.56	Lab pH=7.8. listed as exceedance, but is not an exceedance
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		79.1	
7/19/2005	--	--	ND	ND	ND	ND	0.033*	1.9602	0.013*	0.7722	59.4	No Exceedance Report for Chlorpy. Diazinon listed as exceedance but is not
8/16/2005	--	--	0.0032*	ND	ND	ND	0.043*	3.8872	ND		90.4	No Exceedance Report for Cyh or Chlorpy. Why no load calculation for Cyh?
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		121	Not listed as exceedance in SAMR
9/20/2005	--	--	--	--	--	--	--		--			
GRANT LINE CANAL AT ARNANDO												
2/16/2005	--	--	ND	ND	ND	ND	ND		ND		0	
3/21/2005	--	--	ND	ND	ND	ND	0.02*		ND		--	pH meter not working. No Exceedance Report for DO or Chlorpyrifos
5/17/2005	--	--	ND	ND	ND	ND	ND		ND		0	SAMR text lists 96.2
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		--	
7/19/2005	--	--	ND	ND	ND	ND	ND		ND		--	No Exceedance Report for turbidity
8/16/2005	--	--	ND	ND	ND	ND	ND		ND		--	No Exceedance Report for DO or turbidity
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		--	9/29 Exceedance Report lists EC as 447. 10/18 Exceedance Report lists 8.75, Table 15 lists 9. No Exceedance Report for DO or turbidity. SAMR texts lists 8.8.
GRANT LINE CANAL AT CALPACK ROAD												
2/16/2005	--	--	ND	ND	ND	ND	ND		0.012*	0	0	Diazinon listed as exceedance but is not
2/23/2005	--	--	--	--	--	--	--		--		low	
3/21/2005	--	--	ND	ND	ND	ND	0.076*		ND		--	pH meter not working. No Exceedance Report for Chlorpyrifos
4/4/2005	--	--	--	--	--	--	--		--		0	No Exceedance Report for DO
5/17/2005	--	--	ND	ND	ND	ND	ND		ND		0	Table 15 lists 69, 6/17/05 Exceedance Report lists 43.8.
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		--	
7/19/2005	--	--	ND	ND	ND	ND	0.053*		ND		--	No Exceedance Report for DO or Chlorpyrifos
8/16/2005	--	--	ND	ND	ND	ND	0.15		ND		--	8/22 Exc Rpt states 0%, Table 15 lists 5%. No blank interference was present in any of the TIE treatments. The toxicity observed during the original testing was persistent in the 100% baseline sample. However, all treatmentns effectively removed the observed toxicity, indicating that the toxicity may be a result of one or more of the following: particulate-associated contaminants, non-polar organics, & metabolically-activated substanes (e.g., some pesticides). <u>No Exceedance Report for DO</u>
8/23/2005	--	--	--	--	--	--	--		--		--	This is a re-sample (1.4 TU). 20% value is provided in Table 15. 95% provided in 10/25 Exceedance Report and SAMR text. Toxicity removed by centrifugation & PBO. (Probably chlorpyrifos). No Exceedance Report for DO
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		--	10/18 Exceedance Report lists 88.8, Table 15 lists 89. No Exceedance Report for DO

Date	Bif (ug/L)	Cyf (ug/L)	Cyh (ug/L)	Cyp (ug/L)	Esf (ug/L)	Per (ug/L)	Chlorpy (ug/L)	Chlorpy Load	Diaz (ug/L)	Diaz Load	Flow (cfs)	Notes
Water Quality Limit	0.0004	0.00024	0.00041	0.00047	0.007	0.0019	0.014		0.08			
KELLOGG CREEK AT HIGHWAY 4												
2/16/2005	--	--	ND	ND	ND	ND	0.18		ND		fast	SAMR text lists 100, 2/24/05 Exceedance Report lists 80. Lab data shows as a re-sample. No Exceedance Report for turbidity.
2/23/2005	--	--	--	--	--	--	--		--		Not listed	
3/21/2005	--	--	ND	ND	ND	ND	ND		ND		3.05	pH meter not working
5/17/2005	--	--	ND	ND	ND	0.036*	ND		ND		6.38	See Field Log & Table 13. Field log & SAMR text show DO as 5.8, pH as 7.58. Table 13 lists pH as 5.7. Table 15 lists 0 for Hyallella, 6/17 Exceedance Report lists 95 & 92.5. Why no load calculation?
5/17/2005	--	--	--	--	--	0.03	--		--			
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		9.63	6/28 Exceedance Report lists sample date as 6/22 - not 6/21 and Pimep results as 20, not 21 list Table 15. See SAMR text also. No Exceedance Report for turbidity. The follow-up testing indicated that particulate-associated contaminants and/or metabolically activated substances may all have contributed to the observed toxicity.
6/29/2005	--	--	--	--	--	--	--		--		--	
7/19/2005	--	--	ND	ND	ND	ND	ND		ND		0.93	
8/16/2005	--	--	ND	ND	ND	ND	ND		ND		0.5	No Exceedance Report for Selenastrum (our database has 3 results). Check for zinc or copper use. Why no TIE?
8/23/2005	--	--	--	--	--	--	--		--		--	Meter failure. 10/18 Exceedance Report lists date as 8/16, Table 8/23.
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		2.48	10/18 Exceedance Report lists 57.5, Table 15 lists 58. Table 15 for Pime lists 85 as an exc, but no Exceedance Report
9/27/2005	--	--	--	--	--	--	--		--		Not listed	See 3 rows down - which site had exceedance? Table 13 & SAMR text list Hoffman Lane. Field log lists Hwy 4. EC of 582 is not an exceedance.
KELLOGG CREEK AT HOFFMAN LANE												
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		--	No Exceedance Report for pH
9/27/2005	--	--	--	--	--	--	--		--		Not taken	See 3 rows up - which site had exceedance? Table 13 & SAMR text list Hoffman Lane. Field log lists Hwy 4. EC of 582 is not an exceedance.
LITTLE JOHNS CREEK AT JACK TONE ROAD												
8/24/2004												
9/23/2004												Not listed as an exceedance in SAMR
2/16/2005	--	--	ND	ND	ND	ND	ND		ND		high	2/24/05 Exceedance Report & SAMR text list 70%, Table 15 lists 0%. The lab report cover letter and summary state this sample had TIE ran, but it was actually LTCJR that had TIE ran (according to lab report). Why no TIE?
3/1/2005	--	--	--	--	--	--	--		--		fast	
3/21/2005	--	--	ND	ND	ND	ND	ND		ND		20.71	
4/5/2005	--	--	--	--	--	--	--		--		--	
5/17/2005	--	--	ND	ND	ND	ND	ND		ND		0	
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		0	
7/19/2005	--	--	ND	ND	ND	ND	0.017		ND		low	No field log (values from table in SAMR text). SAMR lists Hyalella as 81.2
8/16/2005	--	--	ND	ND	ND	ND	ND		ND		--	
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		--	
LONE TREE CREEK AT JACK TONE ROAD												
8/24/2004												In 8/18 Exceedance Report, but not in Table 12
9/23/2004												
2/16/2005	--	--	ND	ND	ND	ND	0.014	0.31164	0.089	1.98114	22.26	Why no TIE?
2/23/2005	--	--	--	--	--	--	--		--		moderate	
3/21/2005	--	--	ND	ND	ND	ND	ND		ND		0.41	Lab pH was 8.3
5/17/2005	--	--	ND	ND	ND	ND	ND		ND		21.77	Field sheet has 18.6, table in text has -88.
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		63.62	
7/19/2005	--	--	0.006*	0.03*	ND	ND	0.036*		0.045*		--	No exceedance report for Chlorpyrifos, Diazinon, Cyhalothrin, or Cypermethrin.
8/16/2005	--	--	ND	ND	ND	ND	0.019	0.49115	ND		25.85	our database shows 2 Selen results
8/16/2005	--	--	--	--	--	--	0.019		--			
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		--	No Exceedance Report for DO
LONE TREE CREEK AT BERNAN ROAD												
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		33.4	

Date	Bif (ug/L)	Cyf (ug/L)	Cyh (ug/L)	Cyp (ug/L)	Esf (ug/L)	Per (ug/L)	Chlorpy (ug/L)	Chlorpy Load	Diaz (ug/L)	Diaz Load	Flow (cfs)	Notes
Water Quality Limit	0.0004	0.00024	0.00041	0.00047	0.007	0.0019	0.014		0.08			
MARSH CREEK AT BALFOUR AVENUE												
2/16/2005	--	--	ND	ND	ND	ND	ND		ND		fast	No Exceedance Report for turbidity
3/21/2005	--	--	ND	ND	ND	0.023*	ND		ND		12.83	pH meter not working. No Exceedance Report for Permethrin or load calculation.
5/17/2005	--	--	ND	ND	ND	ND	0.015	0.0456	ND		3.04	
5/31/2005	--	--	--	--	--	--	--		--		Not listed	See MRABR 5/31 - which is the typo, the COC or field log?
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		0.25	Table 15 lists 47, the 6/28 Exceedance Report lists 45
6/29/2005	--	--	--	--	--	--	--		--		--	
7/19/2005	--	--	ND	ND	ND	ND	ND		ND		2.59	
8/16/2005	--	--	ND	ND	ND	ND	ND		ND		1.92	SAMR text lists 37.3, which field log shows as air temp. Sample temp on field log is 23.0. No Exceedance Report for E. coli
9/20/2005	ND	ND	ND	ND	ND	ND	0.049	0.01568	ND		0.32	No Exceedance Report for Chlorpyrifos.
MARSH CREEK AT CONCORD AVENUE												
9/20/2005	ND	ND	ND	ND	ND	ND	ND		0.014*	0.02478	1.77	Why an Exceedance Report, below RWL?
9/20/2005	--	--	--	--	--	--	--		--			
MOKELUMNE RIVER AT BRUELLA ROAD												
8/24/2004												In 8/18 Exceedance Report, but not Table 13. SAMR text lists 7.16
9/23/2004												
10/6/2004												
2/16/2005	--	--	ND	ND	ND	ND	ND		ND		fast	SAMR text lists 80
3/21/2005	--	--	ND	ND	ND	ND	ND		ND		--	SAMR text lists 70 for Cerio. Our database has Selen dup sample
4/4/2005	--	--	--	--	--	--	--		--		high	
5/17/2005	--	--	ND	ND	ND	ND	ND		ND		fast	This is only a 8.1% reduction when compared to the control. There is a Selen cell count discrepancy - probably typo.
5/31/2005	--	--	--	--	--	--	-		-		Not listed	See MCABA 5/31 - which is the typo, the COC or field log? (No field parameters listed in SAMR)
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		--	6/28 Exceedance Report says samples on 6/22, not 6/21 & Table 15 lists 37, the 6/28 Exceedance Report lists 35
6/29/2005	--	--					--		--		high	SAMR text lists 59.3
7/19/2005	--	--	ND	ND	ND	ND	ND		ND		--	
8/16/2005	--	--	ND	ND	ND	ND	ND		ND		--	
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		fast	SAMR text list 37, Table 13 & 10/18 Exceedance Report list as 860.
MOKELUMNE RIVER AT FISH HATCHERY												
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		fast	No Exceedance Report and not listed as exceedance in Table 12.
POTATO SLOUGH AT HIGHWAY 12												
8/24/2004												
9/23/2004												
2/16/2005	--	--	ND	ND	ND	ND	ND		ND		Not listed	There were 2 values provided in the 2/22/05 Exceedance Report.
3/21/2005	--	--	ND	ND	ND	ND	ND		ND		--	pH meter not working
5/17/2005	--	--	ND	ND	ND	ND	ND		ND		--	Conflicting information. Lab report cover letter lists growth toxicity, but other portions state a sample was not collected.
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		--	SAMR text lists 70
7/19/2005	--	--	ND	ND	ND	ND	ND		ND		--	
8/16/2005	--	--	ND	ND	ND	ND	ND		ND		--	
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		--	

Date	Bif (ug/L)	Cyf (ug/L)	Cyh (ug/L)	Cyp (ug/L)	Esf (ug/L)	Per (ug/L)	Chlorpy (ug/L)	Chlorpy Load	Diaz (ug/L)	Diaz Load	Flow (cfs)	Notes
Water Quality Limit	0.0004	0.00024	0.00041	0.00047	0.007	0.0019	0.014		0.08			
TERMINOUS TRACT DRAIN AT HIGHWAY 12												
2/16/2005	--	--	ND	ND	ND	ND	ND		0.025		moderate	SAMR lists 100
2/23/2005	--	--	--	--	--	--	--		--		low	
3/21/2005	--	--	ND	ND	ND	ND	0.012	0.10872	ND		9.06	
4/4/2005	--	--	--	--	--	--	--		--		moderate	
5/17/2005	--	--	ND	ND	ND	ND	ND		ND		16.4	SAMR text lists 96.2
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		30.2	No Exceedance Report for E. coli
7/19/2005	--	--	ND	ND	ND	ND	ND		ND		29.92	No Exceedance Report for DO
8/16/2005	--	--	ND	ND	ND	ND	ND		ND		39.84	No Exceedance Report for DO
9/20/2005	--	--	ND	ND	ND	ND	ND		ND		18.31	SAMR text lists 87.5
9/27/2005	ND	ND	--	--	--	--	--		--		--	
TERMINOUS TRACT OFF GLASCOCK ROAD												
2/16/2005	--	--	ND	ND	ND	ND	ND		0.016		moderate	
3/21/2005	--	--	ND	ND	ND	ND	ND		ND		--	
5/17/2005	--	--	ND	ND	ND	ND	ND		ND		--	
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		1.34	
7/19/2005	--	--	ND	ND	ND	ND	ND		ND		1.99	No Exceedance Report for DO
8/16/2005	--	--	ND	ND	ND	ND	ND		ND		3.2	
9/20/2005	ND	ND	ND	ND	ND	ND	ND		ND		0.275	9/29 Exceedance Report also lists 394 as an exceedance # for EC. Limit for EC is 700. 10/18 & SAMR text list 87.5, Table 15 lists 88. No Exceedance Report for DO
9/27/2005	--	--	--	--	--	--	--		--		--	No Exceedance Report for DO
TERMINOUS TRACT OFF GUARD ROAD												
2/16/2005	--	--	ND	ND	ND	ND	ND		ND		high	
3/21/2005	--	--	ND	ND	ND	ND	ND		ND		--	
5/17/2005	--	--	ND	ND	ND	ND	0.014		ND		--	
6/21/2005	--	--	ND	ND	ND	ND	ND		ND		0.314	No Exceedance Report for DO
7/19/2005	--	--	ND	ND	ND	ND	ND		ND		--	No Exceedance Report for DO
7/19/2005	--	--	ND	ND	ND	ND	--		--		--	Our database shows a duplicate sample
8/16/2005	--	--	ND	ND	ND	ND	ND		ND		0.17	No Exceedance Report for DO
9/20/2005	--	--	--	--	--	--	--		--		Not listed	Field log states water too low for samples, but there is a COC.

Notes:

Values that are in bold text indicate an exceedance

NA Not applicable

NT Not taken

* See Note column at end of row.

(a) Temperature data is from Field Results Section of SAMR only - not verified against field sheets unless otherwise noted.

(b) Selenastrum % is from Water Board database. SAMR only provided cell count.

(c) Central Delta is 50, other Delta waters is 150

Diaz - Diazinon

Bif - Bifenthrin

Cyf - Cyfluthrin

Cyh - Cyhalothrin, lambda

Cyp - Cypermethrin

Esf - Esfenvalerate/Fenvalerate



California Regional Water Quality Control Board

Central Valley Region



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2 February 2006

Mr. John Meek
San Joaquin County & Delta Water Quality Coalition
1440 Arundel Court
Lodi, CA 95242

PRELIMINARY REVIEW OF SEMI-ANNUAL MONITORING REPORT, SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION

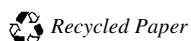
On 3 January 2006, staff of the Central Valley Regional Water Quality Control Board (Central Valley Water Board) received the 31 December 2005 *San Joaquin County and Delta Water Quality Coalition Semi-Annual Report of Monitoring and Outreach Activities* (Semi-Annual Report) submitted by Mr. Michael Johnson on behalf of the San Joaquin County and Delta Water Quality Coalition (Coalition). As of the date of this letter, staff has not received the "copies of all field documentation and laboratory original data" for the reporting time frame required by Monitoring and Reporting Program (MRP) No. R5-2005-0833.

The cover letter with the Semi-Annual Report states the laboratory data would be provided within two weeks. On 18 January 2006, staff asked the status of the data submittal, and Mr. Mike Johnson stated that the Coalition still had not received the reports from the laboratory. On 1 February 2006, staff contacted Mr. Johnson regarding the status of the laboratory data. Mr. Johnson expressed that they continue to follow-up with the laboratory regarding the data required for the Semi-Annual Report and that based on his most recent correspondence with the laboratory, the data should be ready for electronic submittal within two weeks.

Based on the **preliminary** review of the Semi-Annual Report, staff has the following comments:

1. The Exceedance and/or Communication Reports submitted in the Semi-Annual Report dated 18 August, 30 August, 16 September, and 25 October 2005 are not the same letters submitted to staff during the year. Although some of the changes are minor word changes, the Coalition must submit the same reports submitted during the year in the Semi-Annual Report.
2. The Semi-Annual Report included the following Exceedance and/or Communication Reports, which the Coalition did not provide to staff during the year: 5 October and two

California Environmental Protection Agency



- reports dated 25 October. The Coalition must discuss why these reports were not provided on those dates.
3. The Semi-Annual Report includes information after 31 October. The documentation regarding submittals and sampling after 31 October 2005 must be included in the next Semi-Annual Monitoring Report.
 4. Many of the Communication Reports submitted propose follow-up activities, such as initiating a Toxicity Identification Evaluation (TIE), evaluating pesticide use reports, and re-sampling. Based on the Semi-Annual Report, staff can only evaluate the collection of pesticide use reports because those were provided as an appendix to the report. Staff cannot evaluate the TIE and re-sampling results because the laboratory data has not been provided. The tabulated data is only a part of reviewing the re-sampling and the text only briefly discusses the toxicity sampling with no tabulated data provided for the TIEs. Therefore, the Coalition needs to provide information on TIEs initiated on toxic samples that not only includes the laboratory reports, but tabulated information also.
 5. Page 333 of the Semi-Annual Report states, "In addition, to focus our management outreach efforts for *E. coli*, we have proposed a source identification study and are awaiting Regional Board concurrence on that proposal to move forward with the study design." Staff has not received a proposal from the Coalition for a "source identification study." Based on activities listed in various Communication Reports, the Coalition proposes to submit a bacteria identification study proposal in March 2006. The Coalition needs to provide the proposed study referenced as quoted or amend the text of the Semi-Annual Report.

This letter provides only preliminary comments because the review of the Semi-Annual Report is not complete. The above requested information is needed for staff to continue the review of the Semi-Annual Report, which is incomplete as submitted. Therefore, please provide a response to the above comments, including documentation required by MRP No. R5-2005-0833, by **21 February 2006**. Although MRP No. R5-2005-0833 does not require an executive summary section, it would be a valuable section for the Coalition to include in the Semi-Annual Report. If you have any questions or comments, please contact me at (916) 464-4859 or dlewis@waterboards.ca.gov.

Original signed by Devra Lewis

DEVRA LEWIS
Environmental Scientist

cc: Mr. Michael Johnson, University of Davis, Davis
Mr. Thomas Kimball, Kimball Environmental, Davis