



**California Regional Water Quality Control Board**  
**Central Valley Region**  
**Katherine Hart, Chair**



Linda S. Adams  
Acting Secretary for  
Environmental Protection

11020 Sun Center Drive, #200, Rancho Cordova, California 95670-6114  
(916) 464-3291 • FAX (916) 464-4645  
<http://www.waterboards.ca.gov/centralvalley>

Edmund G. Brown Jr.  
Governor

16 March 2011

Mr. Michael Wackman  
San Joaquin & Delta Water Quality Coalition  
3422 W. Hammer Lane, Suite A  
Stockton, CA 95219

Mr. Mike Johnson, Program Manager  
East San Joaquin Water Quality Coalition  
632 Cantrill Rd  
Davis, CA 95691

**SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION ANNUAL  
MONITORING REPORT REVIEW**

Thank you for the submittal of the San Joaquin County and Delta Water Quality Coalition (Coalition) Annual Monitoring Report (AMR), which was received on 1 March 2011. Staff has completed a review (enclosed with this letter) of the AMR for compliance with Monitoring and Reporting Program (MRP) Order No. R5-2008-0005.

Staff has noted that the Coalition continues to comply with the majority of MRP Order reporting requirements, including the following:

- Discussion of data to clearly indicate compliance
- Meeting precision, accuracy, and completeness requirements
- Submitting field data sheets, laboratory reports, and chain of custody forms

Staff identified some minor omissions in the AMR. Please review the attached memorandum. The Coalition will need to submit its next AMR in accordance with the MRP by 1 March 2012, and ensure that it complies with the requirements.

If you have any questions or comments regarding the review, or need any further information, please contact Chris Jimmerson at (916) 464-4859.

Susan Fregien, Senior Environmental Scientist  
Monitoring and Implementation Unit  
Irrigated Lands Regulatory Program

Joe Karkoski, Chief  
Irrigated Lands Regulatory Program

Enclosure: Staff Review of SJCDWQC SAMR



# California Regional Water Quality Control Board Central Valley Region

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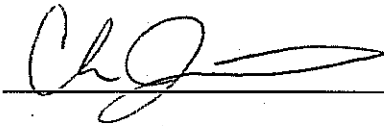
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TO: Susan Fregien  
Senior Environmental Scientist  
Irrigated Lands Regulatory  
Program

FROM: Chris Jimmerson  
Environmental Scientist  
Irrigated Lands Regulatory  
Program

DATE: 16 March 2011

SIGNATURE: 

SUBJECT: 1 MARCH 2011 ANNUAL MONITORING REPORT - SAN JOAQUIN COUNTY  
AND DELTA WATER QUALITY COALITION

On 1 March 2011, the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) received the San Joaquin County and Delta Water Quality Coalition (Coalition) 1 March 2011 Annual Monitoring Report (AMR). The time period discussed in the AMR covers the period January through December 2010.

In this memorandum, staff presents comments pursuant to Order No. R5-2008-0005, and the Coalition's August 2008 Monitoring and Reporting Program Plan (MRPP). Staff also reviewed the Monitoring and Reporting Program Plan MRPP to determine monitoring compliance for the reporting period.

The review section titles below and section numbers in parenthesis are the same as the titles used in the AMR Checklist (see attached). Staff derived the checklist directly from the MRP Order and it provides an itemized account of the compliance components. Staff used the checklist to record that the content presented in the AMR met the minimum prescribed report requirements. If the minimum requirements were not met, this memorandum provides a discussion. A discussion is not provided for those items that met the compliance components because these are indicated in the attached checklist.

Staff revisited the 14 June 2010 AMR staff comment letter to verify that the Coalition considered the comments and recommendations in this AMR. Staff determined that the Coalition considered those comments and incorporated them in this AMR.

## AMR Component Name from Checklist

### 1. Description of the Coalition Group Geographical Area (5.1)

- a) The estimated irrigated acreage stated in the text on page 10 and found in Table 2, page 11, is 609,134. This was obtained from the Department of Water Resources Land Use survey and includes the entire county. It is the most recent acreage information and some of the acres are outside the Coalition area. Over the years, urbanization has claimed much of the acreage and therefore the total acreage is

**California Environmental Protection Agency**

fewer than the acres tabulated on page 14. The 642,254 irrigated acres tabulated on page 14 is acreage that lies solely within the Coalition boundary, but are much older data and therefore not as accurate as the 609,134 acreage sum total, even though the 609,134 includes acres outside the Coalition boundary. The Coalition is using the source data for the 609,134 acres because it is more recent and accurate.

**2. Monitoring Objectives (6.1.2, 6.1.3, 6.2.3)**

- a) Although, references to the MRP Plan and QAPP section and page number are not indicated in these sections, the Monitoring Objectives and Monitoring Design sections provide enough information to determine compliance with the monitoring objectives. Providing references is not a MRP requirement, rather a previous staff suggestion to assist with a thorough staff review.

**3. Quality Assurance Evaluation for Field Data (16.2.5)**

- a) In accordance with the quality objectives found in MRP Attachment C, page 9 and MRP Attachment C, Appendix B, the AMR is to include completeness results for Field and Transport. Reviewing the Coalition's field calibration sheets and number of samples collected, 100% of the field testing met the completeness objective. In the next AMR, the percentage of field testing completeness should either be tabulated or summarized on page 63 of the AMR like the chemistry and toxicity Precision, Accuracy and Completeness sections.

**4. Pesticide Use Data (19.2.3)**

To investigate potential sources of exceedances, the Coalition evaluates Pesticide Use Report (PUR) information. For any PUR data unavailable at the time of the AMR submittal because the Agricultural Commissioner has not released them, the Coalition intends to submit an addendum on 1 June 2011 after the information becomes available. Analytes aldrin, dieldrin, endrin, HCH, DDD, DDE, and DDT do not have PUR data because there are no applications or registered products of these chemicals.

**5. Conclusions and Recommendations (22.3)**

The 2010 Staff AMR review required the Coalition to include any recommendations in the 2011 AMR. The Coalition recommended that the Central Valley Water Board conduct the following: (1) identify dairies with priority areas that are using chlorpyrifos or copper and report these to the Coalition, (2) notify the Coalition of any known dairy discharges that may result in water quality impairments, (3) continue enforcement actions against non-members who have the potential to discharge. Further, the Coalition will continue with its monitoring strategy, management practice assessments, TMDL management, and outreach/education.

# Annual Monitoring Report Review Checklist

Report Name: March 1, 2011 Annual Monitoring Report		Reviewer Name: Chris Jimmerson						
Submittal Date: 3/1/11		Review Date: March						
Item No.	AMR Component Name	A Acceptable	U Unacceptable	NI Not Included	NA Not Applicable	Page # (Section #)	Comments	Staff reference
<b>1</b>	<b>Signed Transmittal Letter</b>							
1.1	Transmittal letter included	X						
1.2	Penalty of Perjury Statement	X						
1.3	Signature of Authorized Coalition Representative	X						
1.4	Dated	X						
1.5	Submitted by Deadline	X						
1.6	Discussion of exceedances	X				pp 106-124	Found in body of rpt.	
1.7	Discussion of actions taken or planned to correct noted exceedances (or reference to prior correspondence)	X				p 125	Found in body of rpt.	
<b>2</b>	<b>Title Page</b>							
2.1	Report title	X						
2.2	Date of the report	X						
2.3	Monitoring date range covered by the report	X						
2.4	Coalition Group name	X						
<b>3</b>	<b>Table of Contents</b>							
3.1	List of sections or chapters with page numbers	X						
<b>4</b>	<b>Executive Summary</b>							
4.1	Brief summary of activities	X						
4.2	Brief summary of results	X						
4.3	Brief summary of conclusions and recommendations	X						
<b>5</b>	<b>Description of the Coalition Group Geographical Area</b>							
5.1	General description of relevant geographic features of the Coalition area, such as location and extent of area, major landforms, land uses, vegetation types, crop types, climate patterns, key waterways, and cities	X				pp 10, 14, 11, 38	Irrigated acres need to reconcile with actual Coalition irrigated acres	

### Annual Monitoring Report Review Checklist

Item No.	Monitoring Objectives and Design	AMR Component Name	A Acceptable	U Unacceptable	NI Not Included	NA Not Applicable	Page # (Section #)	Comments	Staff reference
6	<b>Monitoring Objectives and Design</b>								
6.1		<b>Monitoring Objectives</b>							
	6.1.1	List or brief description of monitoring objectives based on MRP Plan	X				p 21		
	6.1.2	Reference to MRP Plan section and page number where detailed monitoring objectives are			X		p 21	Component not in the MRP, references found in other sections	
	6.1.3	Reference to QAPP section and page number where detailed monitoring objectives are			X		p 21	Component not in the MRP, references to parts of QAPP found in other sections	
6.2		<b>Monitoring Design</b>							
	6.2.1	Aligns with monitoring design description in MRP Plan	X				p 21		
	6.2.2	Monitoring parameters	X				pp 22-24		
	6.2.3	Monitoring frequency	X				pp 22-24		
	6.2.4	Time period of monitoring covered in the report	X				p 7, 25, 26, 36		
	6.2.5	Brief description of Management Plan monitoring	X				p 30		
	6.2.6	Measurement strategies	X				p 59		
	6.2.7	Source Identification strategies	X				p 9, 140		
	6.2.8	Description of any deviation from the MRP Plan or QAPP	X				pp 3, 4, 5	Tabulated the amendments over the years	
	6.2.2	Reference to MRP Plan section and page number where detailed monitoring design is	X				p 27	Component not MRP required	
	6.2.3	Reference to QAPP section and page number where detailed monitoring design is			X		p 27	Component not MRP required	
7		<b>Sampling Site Descriptions and Rainfall Records for the time period covered under the AMR</b>							
7.1		<b>Sampling Site Descriptions</b>							
	7.1.1	Site Name	X				pp 37, 38		

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Item No.	AMR Component Name	A Acceptable	U Unacceptable	NI Not Included	NA Not Applicable	Page # (Section #)	Comments	Staff reference
	7.1.2 Site Identification Number	X				pp 37,38		
	7.1.3 GPS Coordinates	X				pp 37,38		
	7.1.4 Description of site representativeness (ie what geographic area, watershed, crop type does the site represent)	X				pp 39-41		
	7.1.5 Site-specific monitoring type (core, assessment, special project) information	X				pp 25,26,37		
	7.1.6 Any other unique information about the site or surrounding area	X						
7.2	Rainfall Records							
	7.2.1 Graphic or narrative form, in inches of precipitation	X				pp 42-47		
8	Location Maps(s) of sampling sites, crops, and land uses							
8.1	Map(s)							
	8.1.1 Sampling Sites with informative level of detail	X				pp 13-20, 41		
	8.1.2 Crop Types with informative level of detail	X				pp 13-20, Appdx VIII		
	8.1.3 Land Uses with informative level of detail	X				pp 13-20, Appdx VIII		
	8.1.4 Datum identified on map as either WGS 1984 or NAD 1983	X				pp 13-20, Appdx VIII		
	8.1.5 Source and date of all data layers identified on map	X				pp 13-20, Appdx VIII		
8.2	List or Table of Monitoring Site Information							
	8.2.1 Site name	X				pp 37,38		
	8.2.2 Site identification number	X				pp 37,38		
	8.2.3 GPS coordinates at latitude and longitude in decimal degrees to at least five decimal places	X				pp 37,38		
9	Tabulated Results							
9.1	Data is in tabular form	X				pp 104-110, Appdx II		
9.2	Data is clearly organized (ie readily discernable)	X				pp 104-110, Appdx II		

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Item No.	AMR Component Name	A Acceptable	U Unacceptable	NI Not Included	NA Not Applicable	Page # (Section #)	Comments	Staff reference
9.3	Tabulated results agree with the electronic data submittal results	X				Dbase	SWAMP comparable dbase compared to results	
9.4	Tabulated results agree with results discussed in the text	X				p 7, 104-109	no discrepancies	
9.5	Previously reported exceedances match exceedances identified in the AMR	X				pp 104-110, Apdx II	Reconciled staff files to AMR	
9.6	Water Hardness is reported for every water column sample	X				Apdx II		
9.7	Hardness-based metals criteria are calculated correctly	X				Apdx II		
	Cadmium	X				Apdx II		
	Copper	X				Apdx II		
	Lead	X				Apdx II		
	Nickel	X				Apdx II		
	Zinc	X				Apdx II		
9.8	All required constituents for each site have reported results	X				Apdx II		
9.9	All toxic events were re-sampled and results reported	X					Sample results received 30 days after test. Followup sampling not useful.	
10	<b>Data Discussion to Illustrate Compliance</b>							
10.1	Data discussion to illustrate compliance with the CG Conditional Waiver terms and conditions	X				pp 7, 96, 103,		
	Where compliance not achieved, explanation of why required component not met	X				p 64		
10.2	Data discussion to illustrate compliance with water quality standards and trigger limits	X				pp 106-124		
	Where compliance not achieved, explanation of missing data and/or reason for non-compliance	X					MgrPlan explains methods to mitigate exceedances	
11	Electronic data submitted in a SWAMP comparable format, either Option A or B							

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Item No.	AMR Component Name	A Acceptable	U Unacceptable	NI Included/Incomplete	NA Not Applicable	Page # (Section #)	Comments	Staff reference
11.1	<u>Option A. Electronic submittal data package in spreadsheet format</u>							
11.1.1	Lab data is entered and submitted within the ILRP SWAMP comparable data spreadsheets				X			
11.1.2	ILRP SWAMP comparable field sheets in paper copy				X			
11.2	<u>Option B. Electronic submittal data package in SWAMP database format</u>							
11.2.1	All field and lab data is uploaded into a SWAMP comparable database	X				CD		
11.2.2	Electronic data is formatted to the most current Required Data Submission Format document	X				CD		
11.2.3	Field sample results for lab analyses are included (page 21 #2, MRP)	X				CD		
11.2.4	<u>Field Quality Control Results</u>							
	Spikes				X			
	Blanks	X				pp 73-95		
	Surrogates				X			
	Duplicates	X				pp 73-95		
	Replicates				X			
11.2.5	<u>Laboratory Quality Control Results</u>							
	Spikes	X				pp 73-95		
	Blanks	X				pp 73-95		
	Surrogates	X				pp 73-95		
	Certified Reference Materials	X				pp 73-95		
	Duplicates	X				pp 73-95		
	Replicates				X			
11.2.6	<u>Toxicity Analyses electronic submittal requirements</u>							
	Individual sample results	X				CD	Aquascience Rpt	
	Negative control summary results	X				CD	Aquascience Rpt	
	Replicate results	X				CD	Aquascience Rpt	



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	11.2.6.4	X				CD	Aquascience Rpt	
	11.2.6.4.1	X				CD	Aquascience Rpt	
	11.2.6.4.2	X				CD	Aquascience Rpt	
	11.2.6.4.3	X				CD	Aquascience Rpt	
	11.2.6.4.4	X				CD	Aquascience Rpt	
	11.2.7	X				CD	Aquascience Rpt	
12								
12.1	Description of sampling methods used	X				p 57		
12.2	Description of analytical methods used	X				p 57		
13								
13.1	Copies of chain-of-custody forms and sample receipt documentation	X				Apdx I	Spot checked	
13.2	Copies of all COCs are included	X				Apdx I		
13.3	COCs are legible	X				Apdx I	Spot checked	
13.3	COCs are completed accurately	X				Apdx I		
14								
14.1	Field Data Sheets, Lab Reports, Lab Raw Data Field Data Sheets							
	14.1.1				X			
	14.1.2	X				CD	Sent electronically on CD	
	14.1.3	X				CD	Spot checked field sheets	
	14.1.4	X				CD		
14.2	Toxicity Lab Reports							
	14.2.1	X				CD		
	14.2.2	X				CD		

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Item No.	AMR Component Name	A Acceptable	U Unacceptable	NI Not Included	NA Not Applicable	Page # (Section #)	Comments	Staff reference
14.2.3	All toxicity lab reports are signed by authorized lab representative	X				CD		
14.2.4	Toxicity lab narrative describes all QC failures, analytical problems and anomalous occurrences	X				CD, pp71-72		
14.2.5	All raw lab data for acceptable toxicity tests is included	X				CD		
14.2.6	All raw lab data for failed toxicity tests is included	X				CD		
14.2.7	All original bench sheets showing results of individual replicates, such that all calculations and statistics can be reconstructed	X				CD		
14.2.8	All QC sample results including field and lab blanks, lab control spikes, matrix spikes, field and lab duplicates, and surrogate recoveries are included	X				CD		
14.3	Chemistry Lab Reports							
14.3.1	All chemistry lab reports included as attachments to the AMR OR electronically on a CD	X				CD	labs = APPL, Caltest, Nautilus, NCL	
14.3.2	All chemistry lab report copies submitted are complete	X				CD	spot checked	
14.3.3	All chemistry lab reports are signed by authorized lab representative	X				CD	spot checked	
14.3.4	Chemistry lab narratives describe all QC failures, analytical problems and anomalous occurrences	X				CD, pp 63-71		
14.3.5	All sample results for contract and subcontract labs including units, RLS and MDLs are included	X				CD, Appx III	spot checked	
14.3.6	Sample preparation, extraction, and analysis dates are included	X				CD		
14.3.7	All QC sample results including field and lab blanks, lab control spikes, matrix spikes, field and lab duplicates, and surrogate recoveries are included	X				CD		
15	Associated laboratory and field quality control samples results							
16	Summary of Quality Assurance Evaluation results							
16.1	Quality Assurance Evaluation for LAB Data							
16.1.1	Acceptance criteria for all measurements of precision and accuracy are listed and coincide with ILRP requirements in MRP Attachment C, Appendix B	X				pp73-95	Coalition narrative adequate	

**Annual Monitoring Report Review Checklist**

Item No.	AMR Component Name	A Acceptable	U Unacceptable	NI Not Included	NA Not Applicable	Page # (Section #)	Comments	Staff reference
16.1.2	QA/QC results that did not meet acceptance criteria are identified in a table or narrative description that is prepared by the Coalition (not lab)	X				pp 63-72	Coalition narrative adequate	
16.1.3	Discussion of how the failed QA/QC results affect the validity of the reported data	X					Coalition narrative adequate	
16.1.4	Discussion of corrective actions for QA/QC results that did not meet acceptance criteria is included	X				70	retracted and reanalyzed	
16.1.5	Calculation of completeness (percentage of QC data that met acceptance criteria and a determination of project completeness based on this)	X						
16.1.6	Document and discuss any adjustments made to acceptance criteria	X				pp 63-64	RL adjusted due to sample dilution	
16.1.7	Laboratory exception reports are included when samples are reanalyzed due to exceedance of the linear range	X				p 72	Sed re-analyzed due to high variability in replicate result	
16.2	<b>Quality Assurance Evaluation for FIELD Data</b>							
16.2.1	Acceptance criteria for all measurements of precision and accuracy (i.e. MS/MSD $\pm$ 25%, LCS/LCSD $\pm$ 25%) are listed and coincide with ILRP requirements in MRP Attachment C, Appendix B	X				Apdx IX for Field test, pp 73-95 for toxicity & chemistry	Reviewed 20% of calibration sheets to determine field testing accuracy, precision.	MRP Attach C, Apdx B for Field Testing and Lab Analysis.
16.2.2	QA/QC results that did not meet acceptance criteria are identified in a table or narrative description that is prepared by the Coalition (not lab)	X				pp 82-92, 94	Overall acceptance criteria met	
16.2.3	Discussion of how the failed QA/QC results affect the validity of the reported data	X				pp 64-72		
16.2.4	Discussion of corrective actions for QA/QC results that did not meet acceptance criteria	X				pp 64-72		

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Item No.	AMR Component Name	A Acceptable	U Unacceptable	NI Not Included / Incomplete	NA Not Applicable	Page # (Section #)	Comments	Staff reference
16.2.5	Calculation of completeness (percentage of QC data that met acceptance criteria and a determination of project completeness based i.e field blanks, dups, equip blanks, dups, travel)	X				pp 63-96	Coalition needs to provide field completeness calculation (pH, Temp, EC, DO, turbidity) in the Precision, Accuracy and Completeness section, pg 63.	MRP Order p21, Attach. B pg 2; Attach. C pg 9, Attach C, Apdx B.
16.2.6	Document and discuss any adjustments made to acceptance criteria	X					No adjustments made to acceptance criteria	
17	<b>Flow Monitoring Method(s)</b>							
17.1	The method used to obtain flow measurement at each monitoring site during each monitoring event is listed	X				p59, 63, Apdx IX	Reviewed 20% of field sheets	
18	<b>Monitoring Site Photos</b>							
18.1	Photos are included for each monitoring site for every monitoring event, either electronically or in hard copy	X				Apdx VIII, CD		
18.2	Each photo is clearly labeled with site ID and date	X				Apdx VIII, CD		
18.3	Photos are descriptive and useful	X				Apdx VIII, CD		
19	<b>Summary of Exceedance Reports submitted during the reporting period and related pesticide use information</b>							
19.1	Summary of Exceedance Reports submitted during the AMR period	X				Apdx V	Table of Contents lists all exceedance rpts.	
19.1.1	Summary includes all needed exceedance reports	X				Apdx V	Table of Contents lists all exceedance rpts.	
19.2	<u>Pesticide Use Data</u>							

Annual Monitoring Report Review Checklist

Item No.	AMR Component Name	A Acceptable	U Unacceptable	NI Not Included/Incompletable	NA Not Applicable	Page # (Section #)	Comments	Staff reference
19.2.1	Pesticide use data is included for all pesticide and toxicity exceedances occurring during the AMR time period (except those that fall under a Mgt Plan)	X				Apdx IV, PUR release CD	Have all available PURs. Some PURs not released by Ag Com yet. Coalition to provide those 6/1/11 addendum	
19.2.2	Pesticide use data is directly relevant to the monitoring sites where exceedances occurred	X					Arsenic has no reported applications, therefore sourcing difficult.	
19.2.3	Pesticide use data includes all pesticides applied within the monitoring site drainage area during the four weeks prior to the measured exceedance	X					Have all available PURs. Some PURs not released by Ag Com yet. Coalition to provide those 6/1/11 addendum	
20	<b>Actions Taken to Address Water Quality Exceedances</b>							
20.1	Discussion of actions taken to address water quality exceedances during the time frame of the AMR is included	X				pp 125-133		
20.2	Actions taken to address the exceedances are adequate	X					Actions align with MRPP	
21	<b>Status update on preparation and implementation of all management plans and other special projects</b>							
21.1	Discuss preparation and implementation of all management plans and special projects	X						
22	<b>Conclusions and Recommendations</b>							
22.1	Conclusions are supported by the data presented in the AMR	X				pp 135-142		
22.2	Discussion is adequately detailed	X				pp 135-142		
22.3	Recommendations are appropriate and adequately detailed	X				p 142	Coalition provided recommendations for Staff.	