
Central Valley Regional Water Quality Control Board

19 July 2016

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2016 ANNUAL MONITORING REPORT REVIEW - SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION

Thank you for submitting the San Joaquin County and Delta Water Quality Coalition (Coalition) Annual Monitoring Report (AMR) and Management Plan Progress Report received on 1 May 2016.

Staff has completed a review of each component for compliance with Monitoring and Reporting Program (MRP) Order No. R5-2014-0029-R1, which includes monitoring as described in the Coalition's 2008 Monitoring and Reporting Program (MRP). Staff also reviewed the AMR sections covering the Management Plan Progress Report to determine monitoring compliance for the reporting period.

The Coalition is complying with the Order requirements and meeting its deadlines. It is understood that the May AMR was due before the nitrogen management plan summary report due date (June 2016). The 2017 AMR will provide nitrogen management summary information aggregated by township.

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

Original signed by:

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

Original signed by:

Sue McConnell, Chief
Irrigated Lands Regulatory Program

Enclosure: Staff memo; memo checklist

Central Valley Regional Water Quality Control Board

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

FROM: Chris Jimmerson
Environmental Scientist
Monitoring and Implementation Unit
Irrigated Lands Regulatory Program

DATE: 28 June 2016

SUBJECT: ANNUAL MONITORING REPORT REVIEW – SAN JOAQUIN COUNTY AND DELTA WATER QUALITY COALITION

On 1 May 2016, the Central Valley Water Board received the San Joaquin County and Delta Water Quality Coalition's (Coalition) Annual Monitoring Report (AMR) and Management Plan Progress Report covering the water year reporting period October 2014 through September 2015.

In this memorandum, staff presents comments pursuant to water quality monitoring under the Order, which includes monitoring as described in the Coalition's 2008 Monitoring and Reporting Program (MRP). The 2008 MRP applied until the Executive Officer's approval of the initial Monitoring Plan Update. The Monitoring Plan Update was approved after the AMR's reporting period. Staff also reviewed the Management Plan Progress Report to determine monitoring compliance for the reporting period.

After staff received the AMR, the Coalition informed staff that some management plan tally counts needed revising. The revisions affected text and tables in the AMR, Appendix I, and the Monitoring Plan Update schedule. On 8 June, the Coalition provided the revised pages, including a table describing the revisions.

The review section titles and section numbers below are the same as the titles used in the AMR Checklist (see attached). Staff derived the checklist directly from the Order and it provides an itemized account of the compliance components. Staff used the checklist to document that the content presented in the AMR complies with the Order.

This memorandum provides a discussion if the minimum requirements were not met or items warranted further explanation. Those items requiring further discussion are briefly noted in the attached checklist.

Item 17.1 Summary of Nitrogen Management Plan Information

The nitrogen management plan summary information is required in the next AMR. Growers were required to submit a summary report to the coalition by June 2016. This AMR came due before the June 2016 Nitrogen Management Plan (NMP) due date. The AMR indicated that the Coalition mailed nitrogen management worksheets to all their members between January and September 2015 completing this component Order requirement.

Item 12.0-12.4 Summary of Quality Assurance Evaluation

All QA and QC analyses met acceptance criteria for the reporting period at a level greater than 90% as shown in Table 2 below. The Coalition met the hold-times 98% of the time for all analytes.

Table 2: Quality Assurance and Quality Control Percent Acceptance

Field Blank	Field Duplicate	Method or Lab Blank	Lab Control Spike	Lab Control Spike Duplicate	Matrix Spike	Matrix Spike Duplicate	Lab Duplicate	Surrogate Recovery
99.90%	96.30%	100%	99.60%	100.00%	97.30%	98.30%	94.00%	98.10%

Item 14.2 Pesticide Use Data

At the time the Coalition submitted the AMR, some 2015 year pesticide use report data was not available for San Joaquin County. The Coalition indicated that it will complete an addendum when the PUR information becomes available. Unless the PUR information causes the Coalition to modify the sampling routine in this water year, staff recommends submission of the PUR information in the next AMR rather than providing an addendum.

Item 20 Management Plan Progress Report

The term Management Plan Progress Report is used in the Order. Please refer to Management Plan Update Report as Management Plan Progress Report. This same comment was provided in the last AMR. The term will need to be corrected in the next AMR.

Item 20.2.2 New Management Plans

Table 58, page 141 reports that Kellogg Creek along Hoffman Lane has a completed management plan for dissolved oxygen (3/15/13). However, Staff records indicate the management plan was reinstated September 2014 and is not complete. The Coalition should coordinate with staff to resolve the discrepancy.

Staff records indicate that Table 58, page 141 is missing a pH management plan for Littlejohns Creek at Jack Tone Road. The Coalition should coordinate with staff to resolve the discrepancy.

Item 20.5.3 Evaluation of Management Practice Effectiveness

On page 146 the AMR states that management practices for diuron have had a significant impact on reducing exceedances. Table 63 reports that the diuron percent exceedance have actually increased from recent years even though on other pages of the AMR, applications of diuron have reportedly decreased. The Coalition should provide clarification on the relationship between diuron and management practice effectiveness.

Item 22 Summary and Recommendations

The Coalition prepared additional source studies (DO/pH, Arsenic, nutrients, and Pb/DDT/DDE) in 2016 as part of the approved Surface Water Quality Management Plan to investigate potential sources. These are under staff review.

Annual Monitoring Report Review Checklist

Report Name: San Joaquin County and Delta Water Coalition Annual Monitoring Report								
Submittal Date: 1 May 2016, Reporting period Oct 2014 - Sep 2015, WDR Mar 2014								
Item No.		AMR Component Name	Meets Requirement	Incomplete Not Included	Not Applicable	Page # (Section #)	Comments	
1	Signed Transmittal Letter							
1.1		Penalty of Perjury Statement	X					
1.2		Signature of Authorized Coalition Representative	X					
1.3		Dated	X					
1.4		Submitted on time	X					
2	Title Page							
2.1		Report title	X					
2.2		Date of the report	X				Please include the reporting period, Oct 2014 - Sep 2015 on this page.	
2.3		Monitoring date range covered by the report	X				Date range in accordance with Order.	
2.4		Coalition Group name	X					
3	Table of Contents							
3.1		List of sections/chapters, tables, figures, appendices/attachments with page numbers	X					
4	Executive Summary							
4.1		Summary of key results and activities	X			2-5	2 storm events conducted. 2 sediment events conducted.	
4.2		Brief summary of conclusions and recommendations	X			4-5		
5	Description of the Coalition Group Geographical Area							
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			8-17	Meets requirements.	
6	Monitoring Objectives and Design							

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Item No.		AMR Component Name	Meets Requirement	Incomplete Not Included	Not Applicable	Page # (Section #)	Comments
6.1		Brief description of monitoring objectives (references to section and page numbers in MRP or QAPP, as appropriate)	X			34	Monitoring objectives found on pages 34.
6.2		Monitoring design aligns with MRP, any deviations from MRP or QAPP are described (references to section and page number in MRP or QAPP, as appropriate)	X			37	Monitoring design meets objectives.
	6.2.1	Representative Monitoring: sites, parameters, schedule	X			Apdx III	Sites, parameters and schedule provided for the 2015 Water Year in its annual Monitoring Plan Update. AMR aligns with schedule.
	6.2.2	Core Monitoring: sites, parameters, schedule	X			Apdx III	Sites, parameters and schedule provided for the 2015 Water Year in its annual Monitoring Plan Update. AMR aligns with schedule.
	6.2.3	Special monitoring (Management Plan, TMDL, source identification): sites, parameters, schedule	X			36, 153	DO/pH/As/EC TDS/Nutrient Source identification feasibility workplans provided in Feb, Mar, Apr under separate cover. TMDL chlorpyrifos/diazinon in compliance with load capacity. DO, salt, boron, methyl-mercury TMDL monitoring conducted as per Order.
7	Sampling Site Descriptions and Rainfall Records for the time period covered under the AMR						
7.1		Electronic copies of photos clearly labeled with CEDEN comparable station code and date	X				Quarterly surface water monitoring data submittal includes electronic copies of site photos with CEDEN comparable station codes and dates.
7.2		Sampling site name and description (e.g. geographic area, watershed, crop type and drainages that the site represents), or unique information about the site or surrounding area	X			Apdx I, et al	
7.3		Rainfall records in graphic or narrative form (in inches of precipitation)	X			27-33	The Coalition conducted its two storm monitoring events.
8	Location Maps(s) of sampling sites, crops, and land uses						
8.1		Location maps show sampling sites, crops, and land use with informative level of detail	X			various pgs, ApdxVII	All maps satisfactorily include sufficient level of detail.
	8.1.1	Datum identified on map (<u>must be</u> WGS 1984 or NAD 1983)	X			various pgs, ApdxVII	Datum identified as NAD83
	8.1.2	Source and date of all data layers identified on map	X			various pgs, ApdxVII	All maps include required layer information.

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Item No.	AMR Component Name	Meets Requirement	Incomplete Not Included	Not Applicable	Page # (Section #)	Comments
8.2	Accompanying GIS shapefile or geodatabase of monitoring site and monitoring well information include the CEDEN comparable site code and name (surface water) and GPS coordinates (monitored sites only).	X			19	Shape files provided in AMR attachment. Site Code found in Table 3.
8.3	A list or table indicates: site name, ID/well number, CEDEN site code (if applicable), and GPS coordinates (latitude and longitude in decimal degrees to at least five decimal places)	X			Table 3	Site name, GPS coordinates found in table.
9	Tabulated Results					
9.1	Data are in tabular form, clearly organized and readily discernible	X			ApdxIII	
9.2	Previously reported exceedances match exceedances identified in the AMR	X			107-122	Reported exceedances match AMR
9.3	All required constituents for each site have reported results	X			ApdxIII	
9.4	All necessary re-sampling completed and results reported	X			ApdxIII	Several dry monitoring events explained.
10	Data Discussion to Illustrate Compliance					
10.1	Results discussed in text agree with tabulated data	X			various pages	Text agrees with tabulated data.
10.2	Discussion illustrates compliance, or if a required component was not met an explanation of missing data or a reason for non-compliance is included	X			46	Several dry monitoring events explained.
10.3	Results are compared to ILRP requirements, water quality standards and trigger limits; toxicity results, TIE's and possible causes of toxicity are discussed	X			81-87 et al	TIEs results provided in tables. Non polar organics are generally the cause of toxicity.
11	Description of sampling and analytical methods used					
11.1	Description of sampling methods used (e.g. type of collection, collection containers, sample preservation, transportation, handling, field measurements), with references to SOP's if appropriate	X			40-41, various pages	
11.2	Description of analytical methods used	X			40-44	Methods used provided in a table
12	Summary of Quality Assurance Evaluation results					
12.1	Acceptance criteria for all field and laboratory QA/QC measurements identified and in agreement with ILRP requirements; any adjustments to acceptance criteria documented and discussed	X			52-53	Met >90% requirement.

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Item No.		AMR Component Name	Meets Requirement	Incomplete Not Included	Not Applicable	Page # (Section #)	Comments
12.2		Summary of accuracy (lab control spike and matrix spike recovery) and precision (RPD for field duplicate, LCS/LCSD and MS/MSD pairs) included for all constituents and tests	X			52-59	Met >90%
12.3		QA/QC results that did not meet acceptance criteria identified in a table or narrative description that is prepared by the Coalition (not laboratories)	X			61-92	Criteria tabulated in various tables.
	12.3.1	Discussion of how the failed QA/QC results affect the validity of the reported data	X			49-50	Failures did not affect data usability.
	12.3.2	Corrective actions for QA/QC results that did not meet acceptance criteria are described, laboratory exception reports are included when samples are reanalyzed due to exceedance of the linear range	X			59-60	Corrective actions taken
12.4		Both field and laboratory completeness are calculated and reported; overall Project completeness is determined	X			52-59	Met >90% . Page 59 mentions all control tests for sediment toxicity met the 80% acceptability criteria. Text should read 90%.
13	Flow Monitoring Method(s)						
13.1		The method used to obtain flow measurement at each monitoring site during each monitoring event is listed	X			42	
14	Summary of Exceedance Reports submitted during the reporting period and related pesticide use information						
14.1		Summary of all Exceedance Reports submitted during the AMR period is included	X			86-122	Summary included.
14.2		Pesticide use data for all pesticide and toxicity exceedances occurring during the AMR time period (unless under a Management Plan): all chemicals applied within the monitoring site subwatershed during the four weeks prior to the measured exceedance	X			86, ApdxV	Page 87, the PUR data not available for the reporting period can be submitted in the next AMR - See memorandum.
15	Actions Taken to Address Water Quality Exceedances						
15.1		Discussion of actions taken to address water quality exceedances during the time frame of the AMR is included	X			123-134, Table 49	Provided Performance Goal Updates and management practice and exceedance information via newsletter and many outreach meetings, over 350 attendees.
15.2		Updates or additional management practices implemented	X			127, 152-153	The Mgt Plan tally listed in tables revised in an amended AMR.
16	Evaluation of Monitoring Data						
16.1		Identification of spatial trends and patterns in surface and groundwater quality	X			223-228	Trend analysis focused on constituents applied by agriculture.

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Item No.		AMR Component Name	Meets Requirement	Incomplete Not Included	Not Applicable	Page # (Section #)	Comments
	16.1.1	Incorporation of pesticide use information, as needed, to assist in data evaluation.	X			223-226	Coalition determined no correlation with pesticide applications and exceedances.
	16.2	Analyze monitoring data to determine if additional sampling locations are needed. Propose schedule for additional monitoring or source studies	X				Source studies (Do, Ph, As, Nutrient, Pb, DDT/DDE/HCH) provided in other submittals.
17	Summary of Nitrogen Management Plan information						
	17.1	Aggregate information from Nitrogen Management Plan Summary Reports to characterize the input, uptake, and loss of nitrogen fertilizer application by specific crops.	X			175, 196, 205-206	The nitrogen summary information is required in the next AMR. Growers are required to submit a summary report to the coalition by June 2016. This AMR came due before the NMP due date. NMP must be summarized by township, as per Order. NMP mailings have begun.
	17.1.1	Include comparison of farms with same crops, similar soil conditions and similar practices.			X		AMR due before the NMP summary report was due.
	17.1.2	Submittal of aggregate data in an electronic format, compatible with ArcGIS, identified to at least the township level.			X		AMR due before the NMP summary report was due.
	17.2	Statistical summary of nitrogen consumption ratios by crop or other equivalent reporting units			X		AMR due before the NMP summary report was due.
	17.2.1	Estimated crop nitrogen needs for different crop types and soil conditions in percentiles (10th, 25th, 50th, 75th and 90th) and any outliers.			X		AMR due before the NMP summary report was due.
	17.3	Quality assessment of collected information by township.			X		AMR due before the NMP summary report was due.
	17.4	Description of corrective actions for deficiencies in quality of data submitted, if identified.			X		AMR due before the NMP summary report was due.
18	Summary of Management Practice Information						
	18.1	Aggregate and summarize information collected from Farm Evaluations.	X			183-201	Approximately 22% of Farm Evaluations not returned. Reminder notices sent. Management practices summarized and charted.
	18.1.1	Include quality assessment of the collected information by township (e.g., missing data, potentially incorrect/inaccurate reporting).	X			180-182	Approximately 300 non respondents tallied.
	18.1.2	Description of corrective actions regarding any deficiencies in data quality.	X			133	The coalition followed up with growers regarding inaccuracies or non-reporting.

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Item No.		AMR Component Name	Meets Requirement	Incomplete Not Included	Not Applicable	Page # (Section #)	Comments
18.2		Provide individual data records used to develop summary in electronic format, compatible with ArcGIS to at least township level.	X			178	Data not found in AMR, but are available in a Access database provided in an attachment file. Data was queried to generate the tallies and charts found in the AMR.
18.3		Changes in patterns of implemented management practices	X			143-145	Tabulated in various tables.
19	Summary of Mitigation Monitoring						
19.1		Identify measures implemented by Members or Coalition to mitigate effects of program as identified in CEQA mitigation measures	X			169, 209, 237-239	There were no implemented mitigation measures reported by Coalition members during the 2015 WY. However, member education on use of PAM, and sources of financial assistance (EQIP) funding allowing members to keep farmland in production are mentioned.
19.2		Identify potential impact the mitigation measure addressed, the location of the mitigation measure (township range, section), and any steps taken to monitor the success of the measure.	X			169, 209, 237-239	
20	Management Plan Progress Report						
20.1		Background	X			137	
	20.1.1	Location map(s) and summary of management plans	X			155	Map adequate
20.2		Update on exceedances	X			140	
	20.2.1	Table tallying all exceedances for management plans	X			141	
	20.2.2	List of new management plans triggered since previous report		X		142	21 new management plans during the reporting period. All but 6 are field parameter mgt plans. See memo.
	20.2.3	Status update on new management plans	X			137 et al	Tabulated new management plans.
20.3		Monitoring data collected during reporting period	X			141-142	Tabulated and reported in appendices. Summarized in table 58.
	20.3.1	Summary and assessment of management plan monitoring	X			143-149	
	20.3.2	Summary and assessment of TMDL monitoring	X			152-155	
20.4		Outreach, education and collaboration activities	X			123-136	Copies of meeting handouts provided in appendices.
	20.4.1	List of outreach activities and information supplied	X			Apdx VI	

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Item No.	AMR Component Name	Meets Requirement	Incomplete Not Included	Not Applicable	Page # (Section #)	Comments
	20.4.2 List of collaborative efforts for outreach	X			127-132	Collaboration with County Agricultural Commissioners, Pest Control Advisors and Pesticide Registrants.
20.5	Summary of management practices identified/implemented	X			143	Summary based on priority site subwatersheds.
	20.5.1 Baseline data	X			138	Summary based on priority site subwatersheds. Access dbase provided based on township.
	20.5.2 Degree of implemented practices	X			145	Summary based on priority site subwatersheds then by township.
	20.5.3 Evaluation of management practice effectiveness	X			143-145	Demonstrated through meeting focused outreach metric and summarizing percent exceedances. May need to improve mgt practices for diuron coalition-wide b/c significant improvement stated in AMR not supported by data. See memo.
20.6	Performance Goal and Schedule Evaluation	X			131-132	Performance goals on track with schedule. Coalition following up with overdue growers' Farm Evaluations.
	20.6.1 Progress in meeting performance goals	X			132	Perf goals are being met. Chlorpyrifos/diazinon TMDL compliance load capacity objectives met. Load allocations not met in approx. 6% of samples.
	20.6.2 Sufficient timeframe to meet scheduled deadlines in Management Plan	X			132	Some FEs not returned on time prompting Coalition follow-up.
20.7	Recommendations for changes to Management Plan	X			240-241	Coalition requested revisions to the mgt plan tally table in a follow-up phone call after the AMR submission. Revisions received in June.
21	Summary of Education & Outreach Activities					
21.1	Location, dates, and reason for activities.	X			123-126, 132, Apdx. VI	Table 49 summarizes where, when and details of activities.
21.2	Summary of the content at each session.	X			125-126, 132, Apdx. VI	Table 49 summarizes where, when and details of activities.
22	Summary and Recommendations					

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Item No.	AMR Component Name	Meets Requirement	Incomplete Not Included	Not Applicable	Page # (Section #)	Comments
22.1	Summary of the AMR results and conclusions	X			240-241	
22.2	Recommendations are appropriate and adequately detailed	X			240-241	