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## Central Valley Regional Water Quality Control Board

1 July 2013

Mr. Parry Klassen  
East San Joaquin Water Quality Coalition  
1201 L Street  
Modesto, CA 95354

Dr. Michael Johnson, Program Manager  
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### **REVIEW OF EAST SAN JOAQUIN WATER QUALITY COALITION 2013 ANNUAL MONITORING REPORT**

Thank you for submitting the East San Joaquin Water Quality Coalition (Coalition) Annual Monitoring Report (AMR), which was received on 1 March 2013. The AMR addresses monitoring, reporting, outreach and education activities from 1 January through 31 December 2012.

Staff reviewed the AMR for compliance with Monitoring and Reporting Program (MRP) Order No. R5-2008-0005. As noted in the attached memorandum and checklist, staff determined that the Coalition complied with all monitoring and reporting requirements in 2012. The collected data are of high quality, meeting precision, accuracy, and completeness requirements, and the Coalition thoughtfully addressed the key programmatic questions. The Coalition will need to submit its next AMR in accordance with the Order No. R5-2012-0116 by 1 May 2014.

If you have any questions or comments regarding the review, or need any further information, please contact Jelena Hartman at [jhartman@waterboards.ca.gov](mailto:jhartman@waterboards.ca.gov) or by phone at 916-464-4628.

Sincerely,

*Original signed by*

Joe Karkoski, Chief  
Irrigated Lands Regulatory Program

*Original signed by*

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

Enclosures: Staff Review of East San Joaquin Water Quality Coalition AMR  
Annual Monitoring Report Review Checklist

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## Central Valley Regional Water Quality Control Board

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

**FROM:** Jelena Hartman  
Environmental Scientist  
**MONITORING AND IMPLEMENTATION UNIT**  
**IRRIGATED LANDS REGULATORY PROGRAM**

**DATE:** 1 July 2013

**SUBJECT:** 1 MARCH 2013 ANNUAL MONITORING REPORT REVIEW – EAST SAN JOAQUIN WATER QUALITY COALITION

On 1 March 2013, the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) received the East San Joaquin Water Quality Coalition (Coalition) 2012 Annual Monitoring Report (AMR). The AMR discusses the Coalition's monitoring program for the time period from 1 January through 31 December 2012, and covers monitoring, reporting, outreach, and education activities.

The 2012 AMR was reviewed to determine compliance with requirements pursuant to the Monitoring and Reporting Program (MRP) Order No. R5-2008-0005, and the Coalition's approved 2008 MRP Plan. An AMR Checklist derived directly from the MRP Order was used to provide an itemized account of the compliance elements. Components that fully met the requirements, and minor comments are indicated in the attached Checklist, while the memorandum provides details on items that warranted further discussion (memorandum section numbers correspond to item numbers in the attached AMR Checklist).

Overall, the AMR demonstrates that in 2012 the Coalition complied with the terms and conditions of the MRP Order. The Coalition effectively presents information and discusses compliance with the water quality standards, implemented practices to protect beneficial uses and prevent nuisance in order to verify the adequacy and effectiveness of the monitoring program. The AMR describes activities that are required by the MRP Order, implementation and evaluation of management practices to achieve compliance with applicable water quality standards, and how the water quality information addresses key program questions from the MRP Order.

### Item 6. Monitoring Objectives and Design

On 17 April 2012 the Executive Officer approved the Coalition's request to temporarily reduce monitoring. From April through December 2012, samples were collected at one assessment monitoring location in each of the six Coalition zones; core and management plan monitoring were suspended. Monitoring in April was scheduled for the 11<sup>th</sup> and 18<sup>th</sup>. Due to weather

forecast, the Coalition collected samples on 12 April to capture a storm event at the assessment monitoring sites. The reduction in monitoring was approved before the scheduled monitoring on 18 April; no samples were collected for core and management plan monitoring in April.

#### **Item 9. Tabulated Results**

With the exception of one set of sediment samples for toxicity testing, all samples for water and sediment chemistry and toxicity analyses met preservation and met hold time requirements.

Sediment samples collected in March 2012 were analyzed 7 days outside of the 14-day hold time for toxicity to *H. azteca*. Per QAPP Guidelines (Order R5-2008-0005, Attachment C), samples that do not meet preservation and/or holding times require re-sampling. However, by the time the error was noticed it was too late to re-sample sediments. The error was due to a miscommunication with the laboratory. It has been clarified with the sediment toxicity laboratory that all future samples will be run within the 14 day hold time and tests will be initiated as soon as possible.

#### **Item 11. Electronic data submitted in a SWAMP comparable format**

Overall, the Coalition does an excellent job with the formatting and review of their electronic data; data not meeting project acceptance guidelines are flagged and include notes describing the issue in the *Comments* field.

Samples for matrix spike analysis are collected during each monitoring event at the required rate. It is frequently not possible to have all project samples in the same analytical batch. If samples are analyzed in multiple analytical batches, non-project matrix spikes are used for batch completeness as the volume of the project matrix spike is sufficient for analysis in one batch. Batches analyzed with non-project spikes are flagged, and comments indicate that batch quality assurance is from another project. The described practice meets the Program requirements, and results from such analytical batches are considered usable.

In the 2012 data submission, only a single batch of paraquat results was not reported correctly. Paraquat results from original analysis were reported, with laboratory control spike recovery and duplicate deviation outside the acceptance limits, and matrix spike recovery was 0%. Samples were re-extracted past hold time and re-analyzed. Deviation of duplicates and matrix spike recoveries were better, but still outside the limits, lab control spike was recovered within the limits. The approved QAPP requires rejection of all data in a batch with zero percent recovery. Hence, the original results should have been rejected and not reported electronically. The re-test results should have been reported and flagged with both the low recovery, and the resulting hold time hold violation; batch comments would require an explanation that the original results were rejected due to no recovery of the matrix spikes. The Coalition made the appropriate changes and included the corrected information in the 1 June 2013 quarterly data submission.

#### **Item 12. Sampling and analytical methods used**

The AMR Tables 15 and 18 reference sample preservation and hold conditions and methods approved on 15 January 2013, not what was in place throughout 2012. In 2012, the Coalition followed the approved QAPP which required sample storage at <4°C, and relied on EPA method 619 for triazine analysis.

#### **Item 16. Summary of Quality Assurance Evaluation results**

No adjustments were made to the QC acceptance criteria, all QC results were assessed against the ILRP acceptance criteria. Accuracy and precision were calculated and tabulated for all constituents. Overall, more than 97% of all QC samples met acceptance criteria.

The Coalition followed corrective actions described in the approved QAPP for QA/QC that did not meet acceptance criteria. Typically, suspect samples are re-extracted and/or re-analyzed after process is examined for potential problems; actions and outcome are recorded in the *LabBatchComments* field. The Coalition reviewed QC samples not meeting the acceptance criteria, and evaluated how those results affect usability of data. For all batches with one failing QC sample, there were sufficient other QC results, and all derived data were accepted and are usable. Environmental data associated with failing QC samples were flagged appropriately.

The Project completeness goal of 90% was met in 2012: field completeness was 100%, and laboratory completeness was above 90%. Although the overall completeness by analyte is not calculated, the proportions of QC samples that were within acceptance criteria are tabulated for each analyte and type of QC sample, and the completeness for each analyte can be inferred.

## Item 20. Conclusions and Recommendations

The monitoring results and data collected during the focused outreach were used to draw conclusions and address the five key programmatic questions.

A total of 87 water samples from throughout the Coalition region were analyzed for a full suite or a subset of constituents in 2012 (a grand total of more than 3,500 chemistry and toxicity tests). Samples collected in 2012 indicated that the conditions in waters affected by discharges from irrigated lands met the applicable water quality objectives (WQO) fifty five percent of the time. At least one constituent exceeded WQO in 45% of the samples. The AMR provides a more detailed discussion and an evaluation of conditions in waters that receive discharges of wastes from irrigated lands from 2008 through 2012 (2012 AMR, pages 152-159).

In samples with exceedances of applicable water quality objectives, concentrations of the vast majority of quantified constituents were within an order of magnitude of the WQO's (Table 1). Only two samples analyzed for *E.coli* were more than 10 times greater than the applicable WQO. An overview of extent of exceedances and interpretation of results by the Coalition zone are addressed in the AMR (pages 160-162), along with the discussion of potential sources of water quality impairments (pages 163-164, 167-168).

**Table 1.** Proportion of samples meeting applicable water quality objectives (WQO) for select groups of constituents, and magnitude of exceedances observed in 2012 in the Coalition region.

Constituent (number of samples)	In Compliance ≤ WQO	Magnitude of Exceedance ** (expressed as a ratio of sample concentration to applicable WQO)					
		1-2	2-3	3-4	4-5	5-10	>10
Pesticides (n=64)	100%						
Ammonia (n=70)	96%	1%	1%	1%			
Arsenic (n=5)	80%	20%					
Copper (n=72)	88%	10%	1%		1%		
DO* (n=87)	87%	13%					
EC (n=87)	82%	5%	11%	2%			
<i>E. coli</i> (n=32)	69%	13%	3%	6%	3%		6%
Nitrate (n=70)	80%	9%	6%	6%			
pH (n=87)	82%	18%					
TDS (n=70)	79%	3%	16%	3%			
Water Toxicity* (n=64)	98%	2%					
Sediment Toxicity* (n=16)	94%	6%					

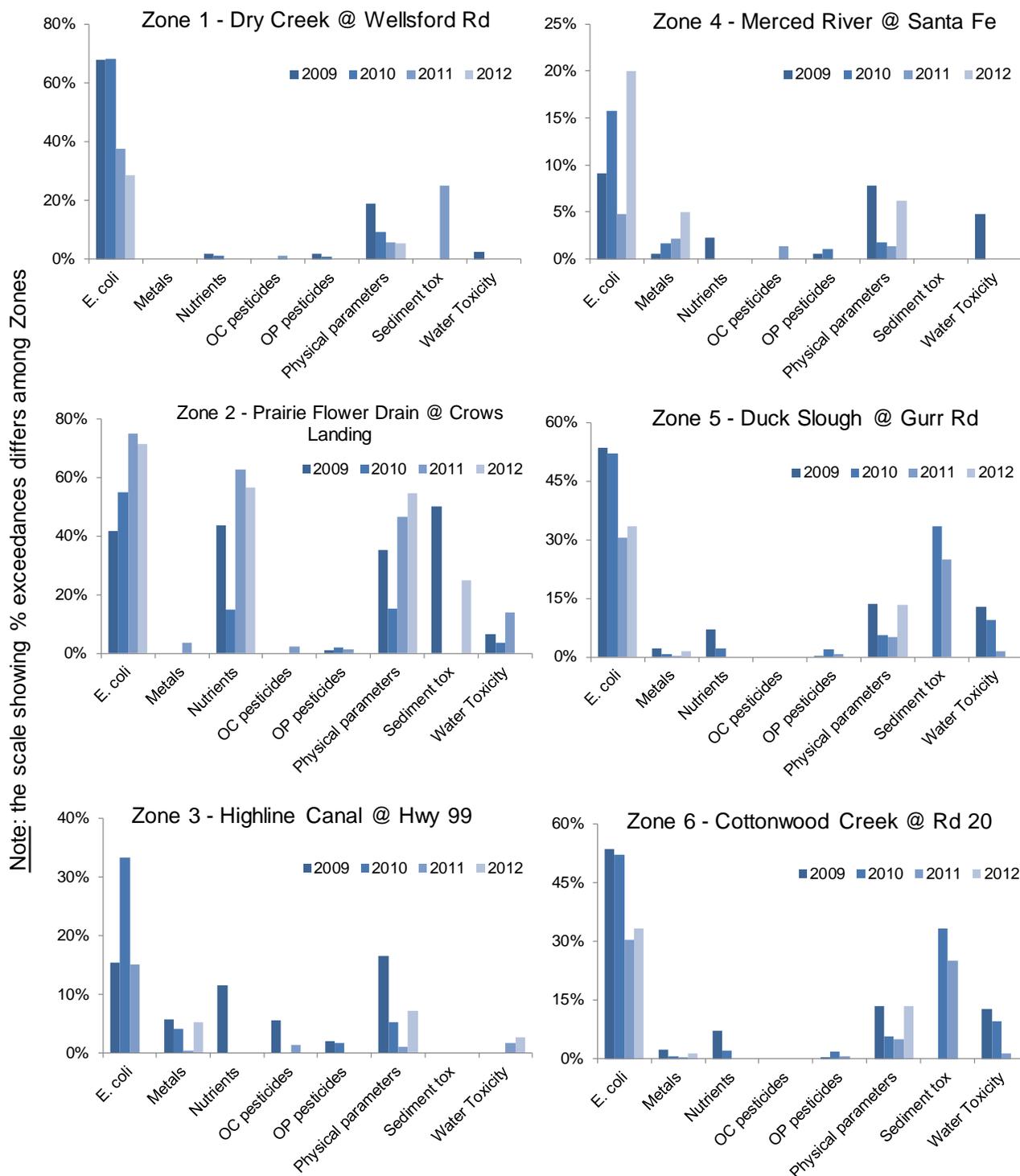
\*Exceedances are recorded when the water quality falls below the applicable trigger limit

\*\*For example, a sample with arsenic concentration of 12 µg/L is above the 10 µg/L water quality objective for arsenic, and the magnitude of exceedance is below the two times the WQO, i.e. the magnitude of exceedance falls within 1-2 WQO range.

To answer the question on what management practices are being implemented to reduce the impacts of irrigated agriculture within the Coalition region, the AMR summarizes the information on practices implemented as a result of outreach in the high priority subwatersheds (pages 164-166). More detailed information on all management practices in the Coalition region and where they are applied is reported in annual Management Plan Update Reports; the 2013 update was submitted on 1 April 2013.

The AMR presents analysis of monitoring results between 2008 and 2012 (pages 167-170). The proportion of exceedances of water quality objectives for metals, pesticides and toxicity were relatively small compared to field and physical parameters, nutrients and bacteria. Overall, the proportions of exceedances of metals and pesticides have declined across the Coalition region, with the most notable decline between 2008 and 2009, following the initial general outreach and education. In general, water quality associated with numerous constituents has improved in Zones 1, 5 and 6 since 2009 (Figure 1, based on information from Table 44 in 2010 AMR, Table 47 in 2011 AMR, Table 48 in 2012 AMR, and Table 52 in 2013 AMR). There has been little change in the proportion of metals exceedances in the majority of the Coalition zones. The challenges in Zone 2 remain to be nutrients, bacteria, physical parameters and water column toxicity; there are numerous dairies in the zone.

The AMR concludes that the implementation of management practices continues to lead to improvement in water quality in the Coalition region. The Coalition has indicated that parameters, such as dissolved oxygen, electrical conductivity and pH cannot readily be determined or tracked upstream, and the report suggests that exceedances of such parameters may be difficult to eliminate. The Coalition made several recommendations regarding the identification and regulation of the remaining potential sources in the region, continued enforcement against dischargers who do not have regulatory coverage, and continued work on processes to address *E. coli* contamination, and impairments of water quality due to parameters for which the cause of exceedances are difficult to determine.



**Figure 1.** Proportion of exceedances of water quality objectives for select groups of constituents in samples collected from the Coalition region from 2009 through 2012. Exceedances of metals are typically due to copper, lead and arsenic, nutrients due to nitrate and ammonia, OC pesticides due to DDT and DDE, and OP pesticides due to chlorpyrifos; for a complete list of constituents in each group of constituents see 2013 AMR Table 35.

The figure is based on the data summaries provided in the Coalition AMR's. The number of samples analyzed in various zones are different; for details see Table 44 in 2010 AMR, Table 47 in 2011 AMR, Table 48 in 2012 AMR, and Table 52 in 2013 AMR.

### Annual Monitoring Report Review Checklist

Report Name: Annual Monitoring Report ESJWQC, January 2012-December 2012					Reviewer Name: Jelena Hartman				
Submittal Date: 1 March 2013					Review Date: 28 March 2013				
Item No.	AMR Component Name	Acceptable	Unacceptable	Incomplete/ Not Included	Not Applicable	Page Number	Comments		
<b>1 Signed Transmittal Letter</b>									
1.1	Penalty of Perjury Statement	✓							
1.2	Signature of Authorized Coalition Representative	✓							
1.3	Dated	✓							
1.4	Discussion of exceedances, and corrective actions taken or planned (or reference to previous correspondence)	✓				18-19			
1.5	Submitted on time	✓							
<b>2 Title Page</b>									
2.1	Report title	✓							
2.2	Date of the report	✓							
2.3	Monitoring date range covered by the report	✓							
2.4	Coalition Group name	✓							
<b>3 Table of Contents</b>									
3.1	List of sections/chapters, tables, figures, appendices/attachments with page numbers	✓				i-vi			
<b>4 Executive Summary</b>									
4.1	Summary of key results and activities	✓				16-20			
4.2	Brief summary of conclusions and recommendations	✓				20-21	The Coalition makes several substantive recommendations for identifying addressing any gaps in water quality protection.		
<b>5 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	✓				22-31	Land use maps show only dairy facilities, and not necessarily all parcels that are associated with dairies. The layer with dairy parcels as of 2007 is available by request to the Central Valley Water Board.		

### Annual Monitoring Report Review Checklist

Item No.		AMR Component Name	Acceptable	Unacceptable	Incomplete/Not Included	Not Applicable	Page Number	Comments
<b>6</b>	<b>Monitoring Objectives and Design</b>							
6.1		Brief description of monitoring objectives (references to section and page numbers in MRP Plan or QAPP, as appropriate)	✓				33	
6.2		Monitoring design aligns with MRP Plan, any deviations from MRP Plan or QAPP are described (references to section and page number in MRP Plan or QAPP, as appropriate)	✓				32-50	The Executive Officer approved the suspension of core and management plan monitoring from April through December 2012; monitoring was restricted to one assessment site in each of the six Coalition zones. Please see staff memo.
	6.2.1	Assessment Monitoring: sites, parameters, schedule	✓				Tables 4-6	
	6.2.2	Core Monitoring: sites, parameters, schedule	✓				Tables 4-5	
	6.2.3	Special monitoring (Management Plan, TMDL, source identification): sites, parameters, schedule	✓				Tables 5-6, p. 43-47	
<b>7</b>	<b>Sampling Site Descriptions and Rainfall Records for the time period covered under the AMR</b>							
7.1		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	✓				51-59 Appendix VIII	
7.2		Rainfall records in graphic or narrative form (in inches of precipitation)	✓				60-65	The Coalition sampled two storm events in 2012: 12 April and 3 December. The narrative addresses both precipitation and monitoring (p. 60-62); marks for monitoring events on the rain graphs could be added for easy reference (not required).
<b>8</b>	<b>Location Maps(s) of sampling sites, crops, and land uses</b>							
8.1		Location maps show sampling sites, crops, and land use with informative level of detail	✓				24-31, 52-54, Appendix VIII	All maps include sufficient level of detail.
	8.1.1	Datum identified on map ( <u>must be</u> WGS 1984 or NAD 1983)	✓					The Coalition continues to meet the reporting requirements for this element. Due to staff error, the geographic coordinate system identified on maps in the 2012 AMR was not recognized as the required NAD 1983, although data were referenced to the correct datum.
	8.1.2	Source and date of all data layers identified on map	✓					All maps include required layer information.
8.2		Accompanying list or table indicates: site name, ID number, ILRP station code number, and GPS coordinates (latitude and longitude in decimal degrees to at least five decimal places)	✓				Tables 11-12	
<b>9</b>	<b>Tabulated Results</b>							
9.1		Data are in tabular form, clearly organized and readily discernible	✓				Appendix II, CD	
9.2		Tabulated results agree with the electronically submitted data	✓				Appendix II, CD	

### Annual Monitoring Report Review Checklist

Item No.		AMR Component Name	Acceptable	Unacceptable	Incomplete/ Not Included	Not Applicable	Page Number	Comments
9.3		Previously reported exceedances match exceedances identified in the AMR	✓				121-125, Appendix II, CD	Summary of exceedances reconciled with staff files.
9.4		All required constituents for each site have reported results	✓				Appendix II, CD	
9.5		All necessary re-sampling completed and results reported			X		Appendix II, CD	With the exception of one set of sediment samples for toxicity test, all samples for water and sediment chemistry and toxicity analyses were preserved appropriately, and met hold time requirements. Please see staff memo.
<b>10</b>	<b>Data Discussion to Illustrate Compliance</b>							
10.1		Results discussed in text agree with tabulated data	✓					
10.2		Discussion illustrates compliance with the Conditional Waiver, or if a required component was not met an explanation of missing data or a reason for non-compliance is included	✓				66-73	
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	✓				114-139	One sample collected in 2012 exhibited water column toxicity to algae. Toxicity was lost before TIE was initiated. One sediment sample was toxic to the test organism; pyrethroids and chlorpyrifos were present in the sediment sample.
<b>11</b>	<b>Electronic data submitted in a SWAMP comparable format, <u>either</u> Option A or B</b>							
11.1	A	<u>Option A. Spreadsheet format:</u> Lab data submitted electronically within the SWAMP comparable spreadsheets; Field data submitted electronically, or in paper copy on SWAMP comparable field sheets within AMR						
	B	<u>Option B. SWAMP database format:</u> All field and lab data uploaded into a SWAMP comparable database (following the most current <i>Required Data Submission Format</i> document)	✓				dBase on CD	
11.2		Sample results and required QC results are included: field blanks, field duplicates, lab blanks, spikes (LCS, MS), duplicates (LCD, MSD, replicates), surrogates (for pesticide analyses)	✓				dBase on CD	All required QC results are reported. The Coalition met the required frequency for collecting field blank, field duplicate and samples for matrix spike analyses both on the per event and on an annual basis. Adequate number of laboratory blanks, laboratory control spikes, surrogates for organics, matrix spikes and duplicates were included with each analytical batch. Please see staff memo.
11.3		Toxicity analyses include: individual sample results, negative control summary results, replicate results, water quality measurements (pH, ammonia, temperature, SC, DO)	✓				dBase on CD	All required results for toxicity analyses are included.
11.4		Data not meeting project QA acceptance guidelines are flagged and include brief notes detailing the problem in the <i>Comments</i> field	✓				dBase on CD	<i>LabSubmissionCode</i> and <i>LabBatchComments</i> are included. One batch of paraquat results was not reported correctly. Please see staff memo.

### Annual Monitoring Report Review Checklist

Item No.	AMR Component Name	Acceptable	Unacceptable	Incomplete/Not Included	Not Applicable	Page Number	Comments
<b>12</b>	<b>Sampling and analytical methods used</b>						
12.1	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	✓				75-76	Table 15 reflects changes approved for 2013, not what was in place throughout 2012. Please see staff memo.
12.2	Description of analytical methods used (references to SOP's and QAPP as appropriate); any deviations from the QAPP are described and explained	✓				77-78	Table 18 reflects methods that were approved for 2013, not what was in place throughout 2012. Please see staff memo.
<b>13</b>	<b>Copies of chain-of-custody forms and sample receipt documentation</b>						
13.1	Copies of all COCs are included, legible and completed accurately; any anomalies are noted/explained	✓				Appendix I	All COCs are legible and completed accurately. Cooler temperature at log in is not recorded on some COCs; temperature at receipt is recorded in the laboratory reports.
<b>14</b>	<b>Field Data Sheets, Lab Reports, Lab Raw Data</b>						
14.1	Copies of all field data sheets (attached/provided electronically on CD) are included, legible, contain the required elements in the ILRP template, and are completely filled out	✓				Appendix IX, CD	
14.2	All analytical reports (attached/provided on CD) are included, complete, and signed by authorized laboratory representative	✓					Staff verified APPL, NCL, Caltest, PTS reports were complete.
	14.2.1 Sample results with units, RLs and MDLs	✓					
	14.2.2 Sample preparation, extraction and analysis dates	✓					
	14.2.3 Results for all QC samples: field and laboratory blanks, lab control spikes, matrix spikes, field and laboratory duplicates, surrogate recoveries	✓					
	14.2.4 Chemistry lab narrative describes all QC failures, analytical problems and anomalous occurrences.	✓					
14.3	All toxicity lab reports (attached/provided on CD) are included, complete, and signed by authorized lab representative	✓				Appendix VI, CD	Staff verified AQUA, Nautilus Environmental reports were complete.
	14.3.1 All toxicity sample results included	✓					
	14.3.2 Results for all QC samples: field duplicate, negative control, narrative summary of reference toxicant results	✓					
	14.3.3 All raw data (including failed tests) and original bench sheets showing individual replicates	✓					
	14.3.4 Toxicity lab narrative describes all QC failures, analytical problems and anomalous occurrences	✓					

### Annual Monitoring Report Review Checklist

Item No.	AMR Component Name	Acceptable	Unacceptable	Incomplete/ Not Included	Not Applicable	Page Number	Comments
<b>15</b>	<b>Associated laboratory and field quality control samples results</b>						
15.1	Chemical analyses include: field blank, field duplicate, lab blank, matrix spike and MSD, lab control spike and LCSD	✓				Appendix III	Additionally, surrogate recoveries are reported for organics, as required.
15.2	Microbiological analyses include: field blank, field duplicate, negative control, positive control	✓				Appendix III	The laboratory QC samples meet the approved method requirements; details on the complete QC for the <i>E. coli</i> analysis are available in Caltest Level III data reports.
15.3	Toxicity tests include: field duplicate, negative control, reference toxicant (narrative OK, raw data not required)	✓				Appendix III	
<b>16</b>	<b>Summary of Quality Assurance Evaluation results</b>						
16.1	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	✓				Tables 20-32	All QC results were assessed against the ILRP acceptance criteria. In Table 30, the proportion of acceptable sediment toxicity samples should be 61.1% - 11 out of 18 samples were analyzed within the required hold time.
16.2	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	✓				96-97, 100-113	All accuracy and precision results are summarized by constituent.
16.3	QA/QC results that did not meet acceptance criteria identified in a table or narrative description that is prepared by the Coalition (not laboratories)	✓				81-88	Overall, fewer than 3% of all QC samples did not meet acceptance criteria. The Coalition provided a narrative addressing each failing QC sample.
16.3.1	Discussion of how the failed QA/QC results affect the validity of the reported data	✓				79-88	The Coalition reviewed QC samples not meeting the acceptance criteria, and evaluated how those results affect usability of data.
16.3.2	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	✓				88-89	The Coalition followed corrective actions described in the approved QAPP for QA/QC that did not meet acceptance criteria.
16.4	Both field and laboratory completeness are calculated and reported; overall Project completeness is determined	✓				79-81	The Project completeness goal of 90% was met in 2012: field completeness was 100%, and laboratory completeness was above 90%. Analytical completeness is summarized in table 19. The table includes environmental samples from Lateral 3 - the site was removed from the Coalition's monitoring program and those results should be presented separately (in 2011 AMR, all data from Lateral 3 were shown in an appendix, the footnote to Table 19 still refers to the appendix although not included in the 2012 AMR).
<b>17</b>	<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	✓				Table 17	

### Annual Monitoring Report Review Checklist

Item No.	AMR Component Name	Acceptable	Unacceptable	Incomplete/ Not Included	Not Applicable	Page Number	Comments
<b>18</b>	<b>Monitoring Site Photos</b>						
18.1	Photos are included for each monitoring site for every monitoring event, either electronically or in hard copy	✓				CD	
18.2	Each photo is clearly labeled with site ID and date	✓					
18.3	Photos are descriptive and useful	✓					
<b>19</b>	<b>Summary of Exceedance Reports submitted during the reporting period and related pesticide use information</b>						
19.1	Summary of all Exceedance Reports submitted during the AMR period is included	✓				121-139, Appendix V	
19.2	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	✓				114-115, 126 Appendix IV, PUR dBase on CD	Preliminary pesticide use data are complete for 2012. The report also includes PUR data for an exceedance of the narrative water quality objective for toxicity in December 2011.
<b>20</b>	<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	✓				140-147 Appendix VII	
20.2	Updates or additional management practices implemented	✓				140-142	
<b>21</b>	<b>Status update on preparation and implementation of all management plans and other special projects</b>						
21.1	Brief update on status of all Management Plans and special projects that are in preparation or being implemented	✓				148-151	Detailed evaluation of management practices and water quality improvements will be included in the 2013 MPUR due on 1 April.
<b>22</b>	<b>Conclusions and Recommendations</b>						
22.1	Conclusions are supported by the data presented in the AMR	✓				152-170	The five key programmatic questions are discussed, and the Coalition draws broader conclusions using monitoring results and analysis of information gathered during focused outreach. Please see staff memo. The proportion of impairments due to TDS in Figure 13 indicates 17 exceedances of TDS in 2012. The number of TDS exceedances should be reconciled with the number of exceedances presented in Table 37 that does not account for exceedances in Lateral 3 along East Taylor Road.
22.3	Recommendations are appropriate and adequately detailed	✓				170	Based on the collected data and issues encountered over the years, the Coalition identified actions to address the remaining water quality problems.