

## Central Valley Regional Water Quality Control Board

4 August 2016

Tim Johnson  
California Rice Commission  
1231 I Street, Suite 205  
Sacramento, CA 95814-2933

### **APPROVAL OF THE CALIFORNIA RICE COMMISSION'S 2015 ANNUAL MONITORING REPORT AND PESTICIDE MONITORING PROPOSAL**

Thank you for submitting the 2015 Annual Monitoring Report (AMR) for Sacramento Valley Rice Growers on 24 December 2015 (revised on 30 March 2016) as required by the Monitoring and Reporting Program (MRP) for General Order R5-2014-0032 (Order). The AMR covers the reporting period from 1 November 2014 through 31 October 2015. This is the first year that annual reporting has been completed under the Order.

The Central Valley Water Board staff review of the AMR is in the attached memorandum. Staff reviewed the AMR to determine if all Order requirements were met. There were instances where water quality objectives for dissolved oxygen, electrical conductivity, and pH were not met. A management plan for dissolved oxygen was submitted in May 2015 and is under staff review.

As required by the Order, the AMR included a proposed list of pesticides for monitoring in 2016. An updated Rice Pesticide Evaluation was also submitted as an addendum to the AMR on 12 April 2016, which has been reviewed as part of a rice-specific process that includes input from qualified scientists and coordination with the Department of Pesticide Regulation.

As discussed in the attached memorandum, the addendum did not address the process for evaluating degradates. However, the CRC confirmed that the evaluation process for degradates is the same as for active ingredients, and is reliant on U.S. EPA provision of an evaluation, aquatic life benchmarks, and standards for analysis.

Therefore, I am approving the 2016 pesticide monitoring list and am requiring that the next update of the rice pesticide evaluation, due in 2020, clearly outline the process for evaluating degradates. In addition, the CRC should consider expanding the process to include an alternative means of evaluating degradates of pesticides selected for monitoring, in cases where information is not available from the U.S. EPA to implement the existing process.

If you have any questions or comments regarding the review, please contact Ashley Peters at 916-464-4857 or [Ashley.Peters@waterboards.ca.gov](mailto:Ashley.Peters@waterboards.ca.gov).

#### *Original signed by*

Pamela C. Creedon  
Executive Officer

cc: Roberta Firoved, California Rice Commission

Enclosure

---

## Central Valley Regional Water Quality Control Board

**TO:** Susan Fregien  
Senior Environmental Scientist  
**IRRIGATED LANDS REGULATORY PROGRAM**

**FROM:** Ashley Peters  
Water Resource Control Engineer  
**IRRIGATED LANDS REGULATORY PROGRAM**

**DATE:** 29 July 2016

**SUBJECT:** REVIEW OF THE CALIFORNIA RICE COMMISSION'S 2015 ANNUAL  
MONITORING REPORT AND PESTICIDE MONITORING PROPOSAL

On 24 December 2015 (revised on 30 March 2016), the Central Valley Water Board received the Waste Discharge Requirements for Sacramento Valley Rice Growers 2015 Annual Monitoring Report (AMR) from the California Rice Commission (CRC) as required by the Monitoring and Reporting Program (MRP) for General Order R5-2014-0032 (Order). The AMR covers the reporting period from 1 November 2014 through 31 October 2015. This is the first year that reporting has been completed under the Order since its adoption on 27 March 2014. An addendum to the AMR was submitted on 12 April 2016 that includes an updated rice pesticide evaluation.

In this memorandum, staff provides a brief summary of the monitoring activities conducted by the CRC during the 2015 reporting period, followed by comments on reporting requirements that were not fully met. The item numbers used in the review of reporting requirements are the same as those used in the AMR Checklist (see attached). Staff derived the checklist 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.

Requirements which are not discussed herein have been met by the CRC and/or do not warrant additional discussion.

### 2015 Program Summary

The CRC performed assessment monitoring in 2015, from April through August, at four primary sites: CBD5, BS1, CBD1, and SSB, and three secondary sites: F, G, and H. The sampling schedule and constituent categories monitored during the 2015 season are shown in Table 1. Monitoring for each constituent was completed at the frequency specified in the MRP with the exception of electrical conductivity (EC), which was not measured during the 7-8 July sampling event.

The CRC submitted exceedance reports for every sampling event in which water quality triggers/objectives were exceeded. Exceedances were observed for dissolved oxygen (DO), EC, and pH. Tables 2, 3, and 4 summarize the DO, EC, and pH exceedances. No exceedances

were observed for any other constituents monitored during the reporting period.

Low DO occurred at all events and at all sites during at least one annual sampling event, except for at Site F. The CRC reported that drought conditions, along with longer required water holds, have resulted in drains with decreased water volumes and higher in-stream temperatures, conditions that can each lead to decreased DO.

A management plan for DO was submitted by the CRC in May 2015 based on exceedances of the DO objective that occurred in 2014. Staff will provide feedback on the DO management plan and request revisions if necessary for compliance with the requirements of the MRP.

The CRC implemented a CEDEN-compliant electronic data submittal system in 2015 and their review of data quality indicated a substantial achievement of quality objectives. Staff confirmed that the CRC met greater than 90-percent of compliance objectives in all areas except CLS Chemistry Batch Completeness (58%) and MCA Chemistry Batch Completeness (80%).

A summary of Farm Evaluation (FE) management practice information for 2014 was provided in the AMR. The CRC uses a web-based template to collect FE information from growers. The CRC reported close to 100 percent reporting compliance for the 2014 growing season. Based on the results of the FEs, the aggregated rice acreage grown in 2014 was 455,120 acres. The FE divides management practices into 13 regulatory practices and 13 voluntary practices. Regulatory FE management practice data reflected a participation range of 80 to 99 percent. Voluntary FE management practice data showed a participation range of 46 to 94 percent.

The CRC provided the first rice pesticide evaluation required under the Order as an addendum to the AMR. Staff reviewed this rice-specific process with input from qualified scientists and the Department of Pesticide Regulation (DPR). The evaluation method has not substantially changed since the CRC first began using it as a planning tool in 2004. Based on the results of the evaluation, the CRC has proposed that monitoring for clomazone and propanil continue in 2016. The next rice pesticide evaluation update is required in 2020.

## **2015 Staff Review**

### *Checklist Item 4.2 Executive Summary: Conclusions and Recommendations*

The Executive Summary does not provide a summary of the conclusions and recommendations made by the CRC based on the results of the 2015 reporting period. Future AMRs should include a discussion of the conclusions and recommendations in the Executive Summary.

### *Checklist Item 10.4 Tabulated Results of all Analyses: EC Monitoring*

All of the sampling results for surface water monitoring conducted during the reporting period are provided. However, EC was not measured during the 7-8 July sample event. Sampling must be completed for all constituents identified in the Order at the frequency specified. In addition, an explanation should be provided if a situation occurs that impacts the ability to complete the required monitoring.

### *Checklist Item 12.2 Proposed Pesticide Monitoring: Updated Evaluation of Rice Pesticides*

In the 2015 AMR, and every (5) years thereafter, the Order requires that an updated evaluation of rice pesticides be completed to assess their potential effects on surface water quality. The 2015 pesticide evaluation was provided as an addendum to the AMR on 12 April 2016. The next update is due in 2020 and should be provided with the AMR by the 31 December deadline.

Footnote 6, on page 4 of the MRP, states:

*Pesticides to be monitored may include environmentally stable degradates of the registered active ingredient. The evaluation factors applied to degradates will be the same as those applied to the registered active ingredient and will include consideration of the commercial availability of analytical methods to detect the degradate. Potential degradates to evaluate will be identified through Central Valley Water Board and CRC consultation with the Department of Pesticide Regulation.*

Office of Pesticide Programs' aquatic life benchmarks were included in Attachment A (Rice Pesticide Decision Matrix) to the addendum for select degradates. Since degradates were not discussed in the technical memorandum, staff consulted with the CRC and confirmed that they evaluate degradates using the same approach that they apply to active ingredients. Additional rice pesticides and active ingredients are evaluated as the U.S. EPA develops aquatic benchmarks and standards for analysis.

3,4-dichloroaniline, listed under propanil in the updated pesticide evaluation matrix as N-(3,4-Dichlorophenyl) propanamide, is an example of a degradate that may act differently than its parent product to impact water quality. It is a degradate of pesticides including: diuron, linuron, and propanil. Propanil has high usage rates on rice fields and was selected by the CRC for monitoring in 2016. However, the updated rice pesticide evaluation does not directly evaluate 3,4-dichloroaniline for monitoring because the U.S. EPA has not provided the evaluation or benchmarks for it.

Staff consulted with the DPR about their recommendations for monitoring pesticide degradates. The DPR provided staff with draft criteria that they have developed to assess degradates.

These draft criteria are:

- A. the parent compound is associated with quick dissipation (so the degradate might be the actual AI [active ingredient]), and the degradate is highly toxic (EC50 or LC50 <100 ppb); or
- B. the parent is very highly toxic, and the degradate is even more toxic than its parent.

Staff recommends that, when these criteria are finalized, the CRC use them to evaluate degradates in cases where their current evaluation process does not provide a means to determine if a specific degradate should be monitored. In addition, staff recommends that the 2020 update to the rice pesticide evaluation clearly identify the process that the CRC follows when evaluating degradates, including identification of existing or new evaluation criteria.

*Checklist Item 15.1 Sampling and Analytical Methods: Sample Containers and Preservation*

The sampling methods used are described in the AMR. However, the collection containers and sample preservation methods are not described. The containers and preservation methods should be identified in future AMRs.

**Table 1. 2015 Sampling Schedule**

Sample Event	Field Measurements	Physical Parameters	Nutrients	Pesticides	Toxicity	Sediment
SE1: 4/28-4/29	✓			C		
SE2: 5/12-5/13	✓	✓	✓	C	✓	
SE3: 5/26-5/27	✓			C		
SE4: 6/9-6/10	✓	✓		C, P	✓	
SE5: 6/23-6/24	✓			P		
SE6: 7/7-7/8	✓		✓	P	✓	
SE7: 7/21-7/22	✓			P		
SE8: 8/25-8/26	✓					✓

Notes:

C = clomazone

P = propanil

**Table 2. Dissolved Oxygen Exceedances reported during 2015**

Event	Sites with Exceedance and DO Reading (mg/L)						
	BS1	CBD5	CBD1	SSB	F	G	H
SE1	<b>5.34/4.60</b>	--	9.97/6.38	6.33/5.66	--	6.97/6.82	--
SE2	<b>6.09/5.33</b>	--	<b>4.85/5.07</b>	--	--	--	--
SE3	<b>5.84/5.83</b>	--	--	6.41/6.36	--	--	5.77/6.41
SE4	<b>4.51/3.97</b>	6.70/6.77	--	5.49/4.86	--	6.60/5.79	6.03/5.32
SE5	<b>5.24/5.37</b>	--	<b>4.02/3.90</b>	6.00/6.03	--	1.51/1.49	--
SE6	<b>6.67/6.94</b>	--	5.32/5.89	6.61/6.69	--	<b>3.46/3.52</b>	5.61/5.70
SE7	<b>6.67/6.44</b>	6.48/6.96	<b>4.10/4.71</b>	<b>4.79/4.75</b>	--	<b>3.87/3.75</b>	--
SE8	<b>4.84/6.07</b>	--	5.33/6.01	3.36/4.19	--	2.66/3.34	3.31/4.29

Notes: Two instruments were used for sampling; results shown as Instrument 1/Instrument 2.

-- = no exceedance

**Gray** indicates the cold water quality objective (>7.0 mg/L DO) was not met.**Bold** indicates the warm water quality objective (>5.0 mg/L) was not met.**Table 3. Electrical Conductivity Exceedances reported during 2015**

Event	Sites with Exceedance and EC Reading (µmhos/cm)						
	BS1	CBD5	CBD1	SSB	F	G	H
SE1	--	<b>703/716</b>	<b>748/766</b>	--	--	--	--
SE2	--	--	<b>924/929</b>	--	--	--	--
SE4	--	--	<b>803/804</b>	--	--	--	--
SE5	--	<b>867/867</b>	<b>877/873</b>	--	--	--	--
SE6	EC readings were not taken during SE6.						
SE7	--	<b>785/799</b>	<b>1372/1399</b>	--	--	--	--

Notes: Two instruments were used for sampling; results shown as Instrument 1/Instrument 2.

-- = no exceedance

**Bold** indicates exceedance of 700 µmhos/cm objective**Table 4. pH Exceedances reported during 2015**

Event	Sites with Exceedance and pH Reading						
	BS1	CBD5	CBD1	SSB	F	G	H
SE1	--	--	--	--	--	--	<b>8.64/8.71</b>
SE3	--	--	--	--	8.48/8.52	--	--

Notes: Two instruments were used for sampling; results shown as Instrument 1/Instrument 2.

-- = no exceedance

**Bold** indicates exceedance of the 6.5<pH<8.5 pH range objective

**Attachment 1: 2015 Annual Report Review Checklist**

Report Name: Waste Discharge Requirements for Sacramento Valley Rice Growers 2015 Annual Monitoring Report					Reviewer Name: Ashley Peters	
Submittal Date: 12/24/2015 (revised 3/30/2016; 4/12/2016)					Review Date: 7/29/2016	
Item No.	AMR Component Name	Item meets requirement	Incomplete item/ Not included	Not applicable	Page # (Section #)	Comments
<b>1</b>	<b>Signed Transmittal Letter</b>					
1.1	Penalty of Perjury Statement	✓			2 (Trans. Letter)	
1.2	Signature of Authorized Coalition Representative	✓			2 (Trans. Letter)	
1.3	Dated	✓			1 (Trans. Letter)	
1.4	Submitted on time	✓			1 (Trans. Letter)	
<b>2</b>	<b>Title page</b>					
2.1	Report title	✓			ii	
2.2	Date of the report	✓			ii	
2.3	Monitoring date range covered by the report		✓		ii	For clarity, the monitoring date range should be listed on the cover page.
2.4	Coalition Group name	✓			ii	
<b>3</b>	<b>Table of contents</b>					
3.1	List of sections/chapters, tables, figures, appendices/attachments with page numbers	✓			iii-vi	
<b>4</b>	<b>Executive Summary</b>					
4.1	Summary of key results and activities	✓			ix-x	
4.2	Brief summary of conclusions and recommendations		✓		ix-x	See memo.
<b>5</b>	<b>Description of the CRC 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	✓			2-1 - 2-2	
<b>6</b>	<b>Monitoring objectives and design</b>					
6.1	Brief description of monitoring objectives (references to section and page numbers in Monitoring Plan or QAPP, as appropriate)	✓			3-1	
6.2	Monitoring design aligns with Monitoring Plan, any deviations from Monitoring Plan or QAPP are described (references to section and page number in Monitoring Plan or QAPP, as appropriate)	✓			3-3 - 3-5	
6.2.1	Assessment Monitoring: sites, parameters, schedule	✓			3-3 - 3-5	
6.2.2	Core Monitoring: sites, parameters, schedule	✓			3-3 - 3-5	
6.2.3	Special monitoring (Management Plan, TMDL, source identification): sites, parameters, schedule			✓		

**Attachment 1: 2015 Annual Report Review Checklist**

Item No.	AMR Component Name	Item meets requirement	Incomplete item/ Not included	Not applicable	Page # (Section #)	Comments
<b>7</b>	<b>Sampling site/monitoring well descriptions and rainfall records for the time period covered under the Annual Monitoring Report (AMR)</b>					
7.1	Sampling site name and description (e.g. geographic area, watershed, and drainages that the site represents), or unique information about the site or surrounding area	✓			4-1 - 4-2	CRC should consider updating the rice acre acres represented by each sampling site. A 2004 report is referenced for acreages.
7.2	Rainfall records in graphic or narrative form (in inches of precipitation)	✓			4-3	
<b>8</b>	<b>Location maps(s) of sampling sites/monitoring wells, crops and land uses</b>					
8.1	Location maps show sampling sites/monitoring wells, crops, and land use with informative level of detail	✓			4-2 (Fig. 4-1)	
	8.1.1 Datum identified on map ( <u>must be</u> WGS 1984 or NAD 1983)	✓			4-2 (Fig. 4-1)	
	8.1.2 Source and date of all data layers identified on map	✓			4-2 (Fig. 4-1)	
8.2	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)		✓		4-1 (Tbl. 4-1)	Latitude and longitude are provided to four decimal places.
8.3	Accompanying GIS shapefile or geodatabase that identifies parcels covered by the CRC.	✓				Electronic Data attachment.
	8.3.1 The data that the GIS information is based on must be no greater than one (1) year old.	✓				Electronic Data attachment.
	8.3.2 This information shall be updated at least every three years, or whenever rice acreage varies by 20% from the latest submitted GIS information.	✓				Electronic Data attachment.
<b>9</b>	<b>Summary of pesticides used on rice, including pounds of active ingredient applied and acreage, as well as any changes in label requirements</b>					
9.1	List the pesticides used on rice, the pounds of active ingredient applied, the acreage covered, and summarize any changes in label requirements.	✓			6-1 - 6-5	Report includes preliminary data. Should state where final data will be presented.
<b>10</b>	<b>Tabulated results of all analyses arranged in tabular form so that the required information is readily discernible</b>					
10.1	Data are in tabular form, clearly organized and readily discernible	✓			7-2 - 7-19	
10.2	Tabulated results agree with the electronically submitted data	✓			7-2 - 7-19	
10.3	Previously reported exceedances match exceedances identified in the AMR	✓			7-2 - 7-19	
10.4	All required constituents for each site have reported results		✓		7-2 - 7-19	See memo.
10.5	All necessary re-sampling completed and results reported			✓		
<b>11</b>	<b>Discussion of data relative to water quality objectives/trigger limits, and water quality management plan milestones, where applicable</b>					
11.1	Results discussed in text agree with tabulated data	✓			7-2 - 7-19	

**Attachment 1: 2015 Annual Report Review Checklist**

Item No.	AMR Component Name	Item meets requirement	Incomplete item/ Not included	Not applicable	Page # (Section #)	Comments
11.2	Discussion illustrates compliance with the WDRs, or if a required component was not met an explanation of missing data or a reason for non-compliance is included	✓			7-2 - 7-19	
11.3	Results are compared to WDR requirements, water quality standards and trigger limits; toxicity results, TIE's and possible causes of toxicity are discussed	✓			7-2 - 7-19	
<b>12</b>	<b>Proposed pesticide monitoring</b>					
12.1	Evaluate previous years' monitoring results, whether changes in the pesticide usage has occurred, and the most recent rice pesticide evaluation (MRP Order R5-2014-0032 Section III.C.1).	✓			8-1; Addendum	
12.2	In the 2015 AMR, and every five (5) years thereafter, provide an updated evaluation of rice pesticides relative to potential effects on surface water quality.	✓			Addendum	See memo.
12.2.1	Consider use information (e.g., pounds applied, acres treated, timing of application, product formulation, method of application, application rate, hold times, requirements associated with drift or discharge to surface waters)	✓			Addendum	
12.2.2	Consider physical and chemical properties of the pesticide (e.g., degradation rate, adsorption coefficients)	✓			Addendum	
12.2.3	Consider the pesticide's toxicity to aquatic life and risk to human health (e.g., through review of relevant toxicity studies, benchmarks or criteria established for human health or aquatic life protection)	✓			Addendum	
12.2.4	Consider newly registered or cancelled pesticides that are registered for use on rice fields	✓			Addendum	
12.3	Propose the pesticides to be monitored and provide the rationale for the proposal.	✓			8-1; Addendum	
<b>13</b>	<b>Electronic data submittal</b>					
13.1	An Excel workbook containing an export of all data records uploaded and/or entered into the CEDEN comparable database (surface water data). The work book shall contain, at a minimum, those items details in the QAPP Guidelines.	✓			(App. E)	
13.2	The most current version of the CRC's eQAPP.	✓			(App. E)	
13.3	Electronic copies of all field sheets.	✓			(App. B-1)	
13.4	Electronic copies of photos obtained from all surface water monitoring sites, clearly labeled with CEDEN comparable station code and date.	✓				
13.5	Electronic copies of all applicable laboratory analytical results	✓			(App. B)	

**Attachment 1: 2015 Annual Report Review Checklist**

			Item meets requirement	Incomplete item/ Not included	Not applicable	Page # (Section #)	Comments
Item No.		AMR Component Name					
13.6		For toxicity reports, all laboratory raw data must be included in the analytical report (including data for failed tests), as well as copies of all original bench sheets showing the results of individual replicates, such that all calculations and statistics can be reconstructed. The toxicity analyses data submittals must include individual sample results, negative control summary results, and replicate results. The minimum in-test water quality measurements reported must include the minimum and maximum measured values for specific conductivity, pH, ammonia, temperature, and dissolved oxygen.	✓			(App. B-2)	
13.7		For chemistry data, analytical reports must include, at a minimum, the following:	✓			(App. B)	
	13.7.1	A lab narrative describing QC failures	✓			(App. B)	
	13.7.2	Analytical problems and anomalous occurrences	✓			(App. B)	
	13.7.2	Chain of custody (COC) and sample receipt documentation	✓			(App. B)	
	13.7.4	All sample results for contract and subcontract laboratories with units, RLs and MDLs	✓			(App. B)	
	13.7.5	Sample preparation, extraction and analysis dates	✓			(App. B)	
	13.7.6	Results for all QC samples including all field and laboratory blanks, lab control spikes, matrix spikes, field and laboratory duplicates, and surrogate recoveries	✓			(App. B)	
<b>14</b>	<b>Electronic groundwater data provided as specified by the Executive Officer</b>						
14.1		The CRC shall submit the prior year's groundwater monitoring results as an Excel workbook containing an export of all data records in a format specified by the Executive Officer.			✓		Groundwater sampling for this program has not started yet.
14.2		If any data are missing from the report, the submittal must include a description of what data are missing and when they will be submitted to the Central Valley Water Board.			✓		

**Attachment 1: 2015 Annual Report Review Checklist**

Item No.	AMR Component Name	Item meets requirement	Incomplete item/ Not included	Not applicable	Page # (Section #)	Comments
<b>15</b>	<b>Sampling and analytical methods used</b>					
15.1	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	✓			10-1 - 10-2	See memo.
15.2	Description of analytical methods used (references to SOP's and QAPP as appropriate); any deviations from the QAPP are described and explained	✓			10-1 - 10-2	
<b>16</b>	<b>Summary of QA Evaluation results (as identified in the most recent version of the CRC's approved QAPP for Precision, Accuracy and Completeness)</b>					
16.1	Acceptance criteria for all field and laboratory QA/QC measurements identified and in agreement with most recent approved QAPP; any adjustments to acceptance criteria documented and discussed	✓			(Section 11 and App. E)	Text cites the August 2015 QAPP, which has not yet been approved by the CVWB.
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	✓			(Section 11)	Tables 11-1 - 11-7
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)	✓			11-11 - 11-13	
	16.3.1 Discussion of how the failed QA/QC results affect the validity of the reported data	✓			11-13 - 11-14	
	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	✓			(App. B-1)	Only corrective actions for field sampling crew field parameter collection.
16.4	Both field and laboratory completeness are calculated and reported; overall Project completeness is determined	✓			11-13	Table 11-8
<b>17</b>	<b>Specification of the method(s) used to obtain estimated flow at each surface water monitoring site during each monitoring event</b>					
17.1	The method used to obtain flow measurement at each monitoring site during each monitoring event is listed	✓				

**Attachment 1: 2015 Annual Report Review Checklist**

Item No.	AMR Component Name	Item meets requirement	Incomplete item/ Not included	Not applicable	Page # (Section #)	Comments
<b>18</b>	<b>Required every three years, an evaluation of monitoring data to identify spatial trends and patterns (begins 2018)</b>					
18.1	Identification of potential trends and patterns in surface and groundwater quality			✓		
	18.1.1 Determination whether there are any trends in degradation that may threaten applicable beneficial uses			✓		
	18.1.2 Incorporation of pesticide use information, as needed, to assist in data evaluation.			✓		
18.2	Analyze monitoring data to determine if additional sampling locations are needed. Propose schedule for additional monitoring or source studies			✓		
18.3	Tables and/or graphs are utilized to illustrate and summarize the data evaluation			✓		
<b>19</b>	<b>Electronic or hard copies of photos obtained from all monitoring sites, clearly labeled with site ID and date</b>					
19.1	Photos are included for each monitoring site, either electronically or in hardcopy	✓			(App. A)	
19.2	Each photo is clearly labeled with CEDEN comparable station code and date	✓			(App. A)	
19.3	Photos are descriptive and useful	✓			(App. A)	
<b>20</b>	<b>Summary of exceedances of water quality objectives/trigger limits occurring during the reporting period and related pesticide use information</b>					
20.1	Summary of all Exceedance Reports submitted during the AMR period is included	✓			13-1 - 13-2	
20.1	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			✓		No exceedances.
<b>21</b>	<b>Actions taken to address exceedances that have occurred, including but not limited to, revised or additional management practices implemented</b>					
21.1	Discussion of actions taken to address water quality exceedances during the time frame of the AMR is included	✓			13-1 - 13-2	A DO management was submitted by CRC in May 2015 and is under staff review.
21.2	Updates or additional management practices implemented			✓		No additional management practices implemented.
<b>22</b>	<b>Status update on preparation and implementation of all Management Plans and other special projects</b>					
22.1	Brief update on status of all Management Plans and special projects that are in preparation or being implemented	✓			14-1	A DO management was submitted by CRC in May 2015 and is under staff review.
<b>23</b>	<b>Summary of Management Practice Information collected as part of Farm Evaluations</b>					
23.1	Aggregate and summarize information collected from Farm Evaluations once every three years beginning in 2015.	✓			15-1 - 15-6; (App. D)	

**Attachment 1: 2015 Annual Report Review Checklist**

Item No.	AMR Component Name	Item meets requirement	Incomplete item/ Not included	Not applicable	Page # (Section #)	Comments
	23.1.1	Include quality assessment of the collected information by township (e.g., missing data, potentially incorrect/inaccurate reporting).	✓			15-6
	23.1.2	Description of corrective actions to be taken	✓			15-6
	23.2	Provide individual data records used to develop summary in electronic format, compatible with ArcGIS to at least township level.	✓			(App. D)
<b>24</b>	<b>Summary or updates of mitigation monitoring</b>					
	24.1	Report on CEQA mitigation measures reported by rice growers to meet the provisions of the Order and any mitigation measures the CRC has implemented on behalf of its growers.			✓	
	24.2	Identify the mitigation measure implemented, the potential impact the measure addressed, the location of the mitigation measure (township range, section), and any steps taken to monitor the success of the measure.			✓	
<b>25</b>	<b>Summary of education and outreach activities</b>					
	25.1	Location, dates, and reason for activities.		✓		Only general information is provided. Locations, dates and reasons for activities are not provided.
	25.2	Summary of the content at each session.		✓		Only general information is provided. Content of outreach activities is not provided.
<b>26</b>	<b>Summary of nitrogen management plan reporting, if applicable</b>					
	26.1	Aggregate information from Nitrogen Management Plan Summary Reports to characterize the input, uptake, and loss of nitrogen fertilizer application by specific crops.			✓	18-1
<b>27</b>	<b>Conclusions and recommendations</b>					
	27.1	Conclusions are supported by the data presented in the AMR	✓			19-2 - 19-3 Conclusion mentions Site F pH exceedances, but not Site H pH exceedance.
	27.2	Recommendations are appropriate and adequately detailed	✓			19-3