



California Regional Water Quality Control Board Central Valley Region

Katherine Hart, Chair



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21 June 2010

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EAST SAN JOAQUIN WATER QUALITY COALITION ANNUAL MANAGEMENT PLAN UPDATE REPORT REVIEW

Thank you for the submittal of the East San Joaquin Water Quality Coalition (Coalition) Annual Management Plan Update Report (Annual MPUR), which was received on 1 April 2010. Staff has completed a review (enclosed with this letter) of the Annual MPUR for compliance with Monitoring and Reporting Program Order No. R5-2008-0005 (MRP Order) and the Sacramento and San Joaquin River Basin Plan for specific Total Maximum Daily Load (Basin Plan -TMDL).

The Coalition provided the necessary information for all components of the Basin Plan – TMDL requirements. Staff also identified several areas in which the Coalition has improved the Annual MPUR reporting requirements, such as:

- Summary and analysis of new exceedances and management plans
- Detail description of how performance goals and measures are being met
- Summary of compliance with all components of Basin Plan TMDL requirements

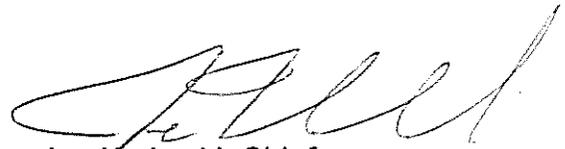
Staff identified certain items that will need to be corrected and further explained. The Coalition could address Staff comments through a response to comments letter. These items are described in the following sections of the Staff enclosed memorandum:

- A.1.2. Determination of the number of acres with and without drainage acres were made
- A.1.3. Clarification on management practices implementation for the first high priority set
- A.1.7. Identification of who will implement the management plan activities
- A.2.8. Clarification on management plan monitoring strategy
- A.2.9. Clarification of management plan monitoring schedule for low priority areas
- A.2.10. Information on the references for land use information
- A.2.11. Information on non members and dropped member parcels

The items described above were also discussed with the Coalition at the 4 May 2010 quarterly meeting. If you have any questions or comments regarding the review, or need any further information, please contact Dania Huggins at (916) 464-48439.



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



Joe Karkoski, Chief
Irrigated Lands Regulatory Program

Enclosure: Staff Review of ESJWQC 1 April 2010 Annual MPUR



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TO: Susan Fregien
Senior Environmental Scientist
Irrigated Lands Regulatory Program

FROM: Dania Huggins
Water Resources Control Engineer
Irrigated Lands Regulatory Program

DATE: 21 June 2010

SIGNATURE:

REVIEW OF 1 APRIL 2010 ANNUAL MANAGEMENT PLAN UPDATE REPORT – EAST SAN JOAQUIN WATER QUALITY COALITION

On 1 April 2010, the East San Joaquin Water Quality Coalition (Coalition) submitted the Annual Management Plan Update Report (Annual MPUR) to the Central Valley Regional Water Quality Control Board Staff (Staff). The Annual MPUR is required per the Monitoring and Reporting Program Order No. R5-2008-0005 (MRP Order) and the Management Plan approved by the Central Valley Water Board Executive Officer on 25 November 2008. The Annual MPUR includes an update on Management Plan Monitoring (MPM) results, new site/constituent combinations that require a Management Plan, and Management Plan implementation.

Staff comments are pursuant to the Coalition's MRP Order and the Sacramento and San Joaquin River Basin Plan for specific parameters that have Total Maximum Daily Load (Basin Plan -TMDL) requirements. The section titles of this review are the same as the titles used in the Annual MPUR Checklist (Appendices I and II). Staff derived the Annual MPUR Checklist directly from the MRP Order and the Basin Plan -TMDL requirements. Staff used the Annual MPUR Checklist to verify that the content presented in the Annual MPUR met the minimum prescribed report requirements.

Under the section named "Other Items" Staff described additional items that need to be revised by the Coalition in the 2011 Annual MPUR. Staff's review is divided into two categories: (A) MRP Order requirements and (B) Basin Plan - TMDL requirements. The MRP Order and Basin Plan - TMDL requirements are subsequently listed in the order that they are described in the Annual MPUR Checklist (Appendices I and II).

A. MRP ORDER REQUIREMENTS (Appendix I)

The components in this section are subdivided into MRP Order requirements (Section A.1), which are described in Section III.D, page 24 of the MRP Order, and ESJWQC Management Plan requirements (Section A.2). The ESJWQC Management Plan requirements are part of the high priority strategy that the Coalition selected to implement their Management Plan. Per a Coalition request, Staff sent a guidance document on 23 October 2009, to clarify the information that the Coalition should include in the Annual MPUR.

A.1. MRP Order

A.1.1. Identification of irrigated agriculture source

The Coalition provided a description of the potential sources of exceedances for all constituents in the first¹ set and second² set of high priority areas (Appendix I). The process for determining the potential source of exceedances is described in the Annual MPUR (page 21 and pages 83 through 89). The above information in conjunction with creek walks (by agricultural commissioners), outreach meetings, general surveys, and individual surveys has provided the Coalition with the necessary information to determine the sources of the exceedances.

A.1.2. Identification of management practices

Through the management practice tracking strategy (see Section A.2.6 for more details on the process), in which the individual survey is the main tool, the Coalition was able to determine the most appropriate management practices to recommend to the contacted growers. Based on the information given in the Annual MPUR, Staff has summarized the Coalition's recommended management practices to growers (Table 1). It is not clear how the number of acres with no drainage were obtained. Additionally, the Coalition needs to clarify what the percent of acres with recommended management practices (Figure 11) represent (e.g. area farmed by targeted growers = 22 members with 6,116 acres, page 44; or the number of acres with no irrigation run off = 86%, 5,260 acres, page 59). This needs to be clarified for future reporting. The Coalition stated that follow-up surveys with growers, in the three first high priority site-subwatersheds, will be completed by 30 June 2010.

A.1.3. Description of management practice implementation schedule

The Coalition provided a schedule of when recommended management practices, in the priority site-subwatersheds are expected to be implemented. This schedule was given in the performance goals summary tables for both sets of high priority site-subwatersheds (Tables 8 and 11 respectively, Annual MPUR). A description was provided of the recommended management practices in the first set of high priority site-subwatershed (Table 1, Section A.1.2).

A.1.4. Description of management practice performance goals with a schedule

The Coalition provided a schedule for management practice performance goals for both sets of high priority site-subwatersheds (Tables 8 and 11 respectively, Annual MPUR).

A.1.5. Description of waste-specific monitoring schedule

A Management Plan Monitoring (MPM) schedule was provided by the Coalition in Table 7. The MPM Schedule for the upstream monitoring sites was included in Appendix I for both sets of high priority site-subwatersheds.

¹ Dry Creek @ Wellsford Rd, Duck Slough @ Hwy 99, and Prairie Flower Drain @ Crows Landing Rd

² Cottonwood Creek @ Rd 20, Highline Canal @ Hwy 99, Duck Slough @ Gurr Rd, and Bear Creek @ Kibby Rd

Table 1. Summary of management practices implemented as a result of individual surveys

Site-Subwatershed	Number of Growers Implementing Management Practices.	Recommended Management Practices		Percentage of Acreage Represented ⁽¹⁾
Dry Creek @ Wellsford Rd Total Acres= 68,620 Target Acres=6,116	12 of 22 (55%)	No Drainage (569 acres)	Shut off outside nozzles when spraying outer rows next to sensitive sites	92
			Vegetation is planted along or allowed to grow along ditches	8
Duck Slough @ Hwy 99 Total Acres= 17,559 Target Acres=4,017	12 of 24 (50%)	Drainage (728 Acres)	Shut off outside nozzles when spraying outer rows next to sensitive sites	60
			Control time of pump/drain into waterway	6
			Drainage basins (sediment ponds)	31
			Vegetation is planted along or allowed to grow along ditches	3
		No Drainage (1812 acres)	Shut off outside nozzles when spraying outer rows next to sensitive sites	36
			Spray areas close to waterbodies when the wind is blowing away from them	17
Use air blast applications when wind is between 3-10 mph and upwind of a sensitive site	47			
Prairie Flower Drain @ Crows Landing Rd Total Acres= 3,106 Target Acres=865	6 of 11 (55%)	Drainage (382 Acres)	Control time of pump/drain into waterway; plant or allow vegetation along ditches	20
			Recirculation - tailwater return system	9
			Drainage basins (sediment ponds)	71

(1) The percent of acreage represented is based on the total number of acres that the contacted growers farm.

A.1.6. Description of management practice effectiveness evaluation process

The Coalition recommended management practices to the contacted growers in 2009 for the first set of high priority site-subwatersheds. Since MPM is being completed during 2009 and 2010, an evaluation of water quality and potential improvements as a result of the recently implemented management practices will be provided in the 2011 Annual MPUR.

The Coalition has included an evaluation of management practices based on the current management plan implementation, which is based on the assumption that activities for the high priority site-subwatersheds such as: (1) individual surveys, (2) outreach, and (3) potential management practices already implemented have had a positive impact. Since the number of exceedances has decreased from 2008 to 2009 (Figure 16), the Coalition states that the individual survey strategy appears to have a positive impact on water quality, not only in the high priority site-subwatersheds, but in the overall Zones. Staff provided a detailed analysis related to water quality improvement in the 2010 AMR review (Section 22, ILRP Question 5, pages 7 and 8).

A.1.7. Identification of who will implement the Management Plan

Identification of the persons or groups that will implement the Management Plan is a required reporting component. The Coalition has provided this information for the first set of High Priority Goals in the Management Plan. However, performance goals and measures for the second set (Table 11, page 36) needs to indicate who is performing each one of these performance goals and measures (see Table C, page IX, Management Plan as an example for the second set of high priority areas).

A.1.8. Identification of a routine schedule of reporting to the Central Valley Water Board

The Coalition has scheduled the submittals of the Annual MPURs to be the first of April. Thus, next Annual MPUR is due on 1 April 2011. On 3 March 2010 Staff, and the ESJWQC, and Westside Coalitions met to discuss TMDL related items. During the meeting Staff and the Coalitions agreed on the submittal of a separate-single Annual Chlorpyrifos and Diazinon TMDL Report (Annual CD TMDL Report) for both Coalitions (ESJWQC and the Westside) to answer and determine compliance with the Basin Plan-MDL requirements. The ESJWQC and Westside Coalitions submitted a proposed approach letter on 1 June 2010 in which they included a description of the schedules and content of the Annual CD TMDL Report and monitoring strategy.

A.1.9. Signed Transmittal Letter

A signed transmittal letter was included in the Annual MUPR.

A.2. ESJWQC Management Plan – Priority Site-Subwatersheds

A.2.1. Achievement of the performance goals and measures

Currently, the Coalition has met PGs and PMs 1³ and 2⁴ for the first set of high priority site-subwatersheds, as per modifications approved on 16 December 2009. The status of completion of PG 3⁵ and PM 3.1⁶, “document additional management practices implemented by targeted growers” in the first set of high priority site-subwatersheds is about 50% complete. The Coalition indicated that PM 3.1 for Dry Creek @ Wellsford would be completed by April 2009 (Table 9, page 31, Annual MPUR). However, at the 4 May 2010 Management Plan quarterly meeting the Coalition explained that Table 9 was created with the purpose to provide a continuous tracking of management practices and does not accurately reflect the actual PG schedules. Thus, it was clarified that PM 3.1 is scheduled to be completed by February 2011 (PM 3.1, Table 8, page 29, Annual MPUR). The Coalition will continue to contact those growers that did not attend the follow up meeting and report on those results in the 2011 Annual MPUR. Performance goal 4, which is the evaluation of the newly implemented management practices effectiveness, will continue to be evaluated during 2010. A complete evaluation for the first set of high priority site-subwatersheds will be provided in 2011 Annual MPUR.

The Coalition stated that the schedules modification request was approved on 15 June 2009 (pages 28; 33 and 34). This needs to be corrected since the modifications were actually approved on 2 June 2010, after Staff and the Coalition had the opportunity to meet and discuss some of the rationale for the proposed schedule modifications.

A.2.2. Performance goals and measures for the next set of high priority site subwatersheds

The Coalition provided a draft of the PGs and PMs for the second set of high priority site-subwatersheds on 7 October 2009. The timeframes and PGs and PMs were discussed and revised at the 3 November 2009 quarterly Management Plan meeting and approved by the Executive Officer on 2 June 2010 (Table 4, 2 June 2010, Approval Letter). The Coalition has completed PG 1 for two of the four site-subwatersheds. PG1 was scheduled to be completed on 30 May 2010.

A.2.3. Evaluation of management practice effectiveness – Schedule and status

Information on this item is provided in Section A.1.6

A.2.4. Revision of Management Plan strategies

All revisions to the Management Plan, originally approved on 25 November 2008, have been completed through a request and approval of the Executive Officer (Appendix I.A.2, component No 4). Since Management Plan amendments have occurred since the Management Plan was approved, Staff recommends that the Coalition add a summary of all Management Plan amendments in the 2011 Annual MPUR and subsequent Annual MPUR (see example provided in Appendix III).

³ Individually contact members on adjacent properties to waterways where discharges have been identified during winter 2008/2009

⁴ Establish current practices by August 2009, on adjacent properties to waterways or where discharges are identified.

⁵ Encourage growers to implement additional management practices based on water quality results.

⁶ By February 2011, document additional management practices implemented by targeted growers.

A.2.5. Tracking and implementation of Management Plan - Schedule and status

From 37 Management Plan site /constituents sampling events only 4 exceedances were found (page 9). Based on the 2009 exceedances the Coalition has to implement 13 new management plans. From those 13, one is for chlorpyrifos, one for *Ceriodaphnia dubia*, and two for *E.coli*. The remaining nine management plans need to be implemented for physical parameters (DO, pH, and SC), nutrients (ammonia and nitrate), *E.coli* and metals (copper).

A.2.6. Tracking and implementation of management practices - Schedule and status

Information on the management practice tracking process and how newly implemented management practices are going to be tracked (e.g. phone, survey, site inspection) is described in the Annual MPUR (pages 19 and 20). The Coalition also provided information on the specific management practices recommended during the individual surveys. This information is provided in Section A.1.2 (Table 1).

A.2.7. Compliance with the Sacramento-San Joaquin Basin Plan TMDL requirements.

Details for this item are provided in Section B.

Other Items

A.2.8. Management Plan monitoring strategy (Annual MPUR, page 15)

Implementation of activities as described in the Management Plan (Figure 3, page 40) include: (1) source, (2) outreach, and (3) evaluation of management practices. The activities described in the Annual MPUR are: (1) source, (2) outreach, and (3) education. Education through outreach meetings was going to be implemented in low priority site-subwatersheds, but "evaluation" of the recommended management practices is scheduled to occur in the high priority site-subwatersheds. Therefore, this statement needs to be corrected.

A.2.9. Management Plan development timelines (Annual MPUR, page 23)

It is stated that Lateral 2 ½ near Keyes Rd and Mootz Drain @ Langworth Rd / Mootz Drain Downstream of Langworth Pond are new sites added to the Coalition's Management Plan and that they have been prioritized for 2015-2017. However, it should be clarified that management plan monitoring will still occur during 2010 and 2011 for the constituents for which exceedances were found (chlorpyrifos and *E.coli* respectively, Annual MPUR, page 14).

A.2.10. References for land use information

The number of site-subwatershed acres has changed, as result of the land use updates for the different counties. The output of PM 1.2 is to "report ratio of acreage represented by individual contacts versus total subwatershed acreage;" thus, Staff recommends that land use information (reference and date) presented in maps is included throughout the text as well.

A.2.11. Non-members and Dropped member parcels

In the maps for the high priority site-subwatersheds the Coalition indicates that there are parcels with non-members and dropped members (with proximity to waterways). The Coalition needs to shared this information with to the ILRP Compliance and Outreach Unit.

B. BASIN PLAN - TMDL REQUIREMENTS

The following discussion of the Sacramento and San Joaquin River Basin Plan TMDL requirements has been divided according to the appropriate TMDLs that the Coalition is required to implement, including chlorpyrifos and diazinon, dissolved oxygen, and salt and boron.

B.1. Chlorpyrifos and Diazinon TMDL

B.1.1. Compliance with established water quality objectives and the loading capacity

The Coalition reported a summary of the exceedances from 2004 through 2009. Seventy five exceedances of the chlorpyrifos water quality objective (WQO) across 24 site-subwatersheds and three exceedances of the diazinon WQO across two site-subwatersheds (Table 4, page 11, Annual MPUR). In 2009, there were a total of five exceedances, in the Coalition MRP Plan monitoring locations (tributaries to the San Joaquin River), of the chlorpyrifos WQO, which means that they were not in compliance with the chlorpyrifos WQO (Table 5, page 13). However, it is important to notice that three of the five samples were collected as part of the ESJWQC Management Plan monitoring strategy to determine the source of the original exceedances (e.g. increased frequency, additional upstream monitoring location, etc.).

B.1.2. Compliance with established load allocations (Annual MPUR, page 71)

The Coalition calculated and analyzed the load allocations by zone for chlorpyrifos and diazinon (Table 21, page 77) and determined that in 2009 they were out of compliance in six occasions.

B.1.3. Implementation of management practices (Annual MPUR, page 77)

In the "General Survey Summary Report" submitted by the ESJWQC to the Regional Board on 30 January 2009, the Coalition provided a summary of the management practices that growers were using. The survey represented 261,826 acres and 3,328 parcels. Currently, the Coalition is completing individual surveys for the high priority site-subwatersheds and compiling information on the implemented management practices based on the 2009 recommendations (see sections A.1.2, A.1.3, and A.2.6 of this memorandum).

B.1.4. Determination of management practices effectiveness (Annual MPUR, page 77)

B.1.5. Impacts to surface water quality caused by alternative pesticides

B.1.6. Toxicity impairment due to additive or synergistic effects of multiple pollutants

B.1.7. Demonstrate that management practices are achieving the lowest pesticide levels

For items B.1.4 through B.1.7, the Coalition provided complete detailed information on these items in the Annual MPUR (pages 77 through 79).

B.2. Dissolved Oxygen TMDL

B.2.1. Compliance with established water quality objectives

To demonstrate compliance with the TMDL limits, several agriculturally-influenced tributaries to the San Joaquin River are routinely monitored, as described in the East San Joaquin Water Quality Coalition's MRPP. The Coalition is addressing Dissolved Oxygen

exceedances through the Management Prioritization process described in the Management Plan Process Section (page 21-28) of the current management Plan document

B.2.2. Process to comply with Dissolved Oxygen TMDL – Status

The Central Valley Water Board staff is actively engaging stakeholders on the process to discuss actions to be taken to address the impending prohibition of discharge that will take effect on 01 January 2012. The coalition is also participating in the DO TMDL Technical Working Group meetings.

B.3. Salt and Boron TMDL

B.3.1. Salt/boron at Vernalis

The Regional Board and State Water Board are addressing the Basin Plan Salt and Boron requirements through the (1) Basin Plan Amendment for the San Joaquin River at Vernalis Salinity and Boron TMDL (pending item) and (2) Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS). The Coalition is participating in both efforts (Section B.3.2)

B.3.2. Process to comply with Salt and Boron TMDL - Status

The Coalition is (1) participating in ongoing Regional Water Board programs for the management of salt and boron, and (2) implementing actions required by the Regional Water Board. Additionally, the Coalition provided a summary of their participation on the CV Salts and Real Time Management Program (RTMP) meetings (Table 22, pages 81 and 82).

In addition to participating in the RTMP (as part of the CV Salts meetings) it would be beneficial for the Coalition to be more involved with the studies that the Bureau of Reclamation is managing, such as the Evaluation on the type of infrastructures that the RTMP may need for its implementation and the Salt Source and Fate Transport

The Coalition also could start load allocation calculations for their site-subwatersheds areas using the "Based Salt Load Allocation" to obtain a better understanding of what the load allocation numbers mean and make an informed decision on whether they need to join the RTMP or comply through a General Order.

The Coalition is collecting EC, TDS, and Flow measurements on a monthly basis; therefore, to incorporate these parameters into the "Based Salt Load Allocation" should not take additional resources. The results of these calculations will not be used as part of a regulatory component because compliance with the TMDL starts in 2014. Starting the calculations early will allow for better planning and preparation to comply with the Salt/Boron TMDL.

Enclosure:

Appendix I:

- A. 1. Annual MPUR Checklist - MRP Order
- A. 2. Annual MPUR Checklist – ESJWQC Management Plan

Appendix II:

- B. 1. Annual MPUR Checklist – Chlorpyrifos and Diazinon TMDL
- B. 2. Annual MPUR Checklist – Dissolved Oxygen TMDL

B. 3. Annual MPUR Checklist – Salt and Boron TMDL
Appendix III:
Example – Management Plan Amendments Summary

**APPENDIX I
Annual MPUR Checklist - MRP Order**

Report Name: ESJWQC Annual Management Plan Update Report		Reviewer Name: Dania Huggins				
Submittal Date: 1 April 2010		Review Date: 10/01/08- 10/29/08				
Item No.	I. Management Plan Component Description ⁽¹⁾	Review			Page No. (Section No.)	Comments
		Acceptable A	Unacceptable U	Incomplete I		
1	Identification of irrigated agriculture source -- general practice or specific location -- that may be the cause of the water quality problem, or a study design to determine the source.	X			20 - 21 (Prioritization of Exceedances) 16-33, 48-59, 76-82, 94-102, 117-140, 154-168, 181-197 (Source Identification and Outreach, Appendix I)	The overall strategy is also described in more details in the "Constituents Specific Traits" section of the MgmtPlan document (pages 24-38).
2	Identification of management practices to be implemented to address the exceedances.	X			59-62	Identification of management practices to be implemented was completed during the individual survey process. The Coalition had follow up mtgs in 2010 on February 19, February 26 and March 19 for Duck Slough @ Hwy 99, Dry Creek @ Wellsford, and Prairie Flower Drain @ Crows Landing, respectively. The Coalition anticipates completing follow up surveys with growers in all three first high priority subwatersheds by June 30, 2010 (to verify what new mgmt practices have been implemented).
3	Management practice implementation schedule. Implementation may occur through another Water Board regulatory program designed to address the specific exceedances.	X			31 (Table 9) 64 (Implemented Management Practices - 2009/2010)	Mgmt Plan implementation schedules have been provided for all high priority subwatersheds. The Coalition anticipates completing follow up surveys with growers in all three first high priority subwatersheds by June 30, 2010 (to verify what new mgmt practices have been implemented).
4	Management practice performance goals with a schedule.	X			29-31 and 36-37 (Performance Goals and Schedules)	Information on implementation schedules was provided in the Performance Goals and Schedules section for the first and second set of high priority site-subwatersheds.
5	Waste-specific monitoring schedule.	X			25 - 27 (2010 Mgmt Plan Monitoring Schedule, Table 7)	Schedule for the upstream monitoring sites is provided in Appendix I for the specific site-subwatersheds.
6	A process and schedule for evaluating management practice effectiveness.	X			29-31 and 36-37 (Performance Goals and Schedules)	Information on implementation and evaluation schedules was provided in the Performance Goals and Schedules section for the first and second set of high priority site-subwatersheds.
7	Identification of the participants and Coalition Group(s) that will implement the Management Plan.			X	40 - 42 (Tables 13)	Since the high priority site-subwatersheds strategy and its Performance Goals and Measures are part of the process of how the Coalition will implement the Mgmt Plan, it needs to be indicated who is performing each one of these activities.

**APPENDIX I
Annual MPUR Checklist - MRP Order**

Item No.	I. Management Plan Component Description ⁽¹⁾	Acceptable	Unacceptable	Incomplete	Page No. (Section No.)	Comments
		A	U	I		
8	An identified routine schedule of reporting to the Regional Water Board.	X			1 (Executive Summary) 34 (Performance Goal 5) 69 (Chlorpyrifos and Diazinon TMDL)	The Coalition will be submitting Annual MPUR (1 April of every year) and is mtg quarterly with Regional Board staff to review status on high priority site-subwatersheds. The Coalition submitted a letter to the Central Valley Water Board on 1 June 2010 for the joint strategy between the ESJWQC and the Westside Coalition for coordinating sampling events and the reporting process, including when the Annual Chlorpyrifos and Diazinon TMDL Report (Annual CD TMDL Report) will be routinely submitted to Staff.
9	Signed Transmittal Letter.	X				
	III. MRP Program Questions					The Coalition provided answers and information to all the MRP Order questions in the 1 March 2010 AMR.
1	QUESTION No.1: Are conditions in waters of the State that receive discharges of wastes from irrigated lands within Coalition Group boundaries, as a result of activities within those boundaries, protective of beneficial uses?	X			151-153	Addressed in the ESJWQC 1 March 2010 AMR In Table 43 of the AMR the Coalition provides a description of the Monitoring Sites and if Beneficial Uses are impaired.
2	QUESTION No.2: What is the magnitude and extent of water quality problems in waters of the State that receive agricultural drainage or are affected by other irrigated agriculture activities within Coalition Group boundaries, as determined using monitoring	X			154-155	Addressed in the ESJWQC 1 March 2010 AMR In this section and Table 44 of the AMR the Coalition addressed water quality status and exceedances occurred in every zone during 2009. Additionally, in appendix II of the AMR the Coalition includes all tabulated results from October 2008 through December 2009.
3	QUESTION No.3: What are the contributing source(s) from irrigated agriculture to the water quality problems in waters of the State that receive agricultural drainage or are affected by other irrigated agriculture activities within Coalition Group boundary	X			156	Addressed in the ESJWQC 1 March 2010 AMR
4	QUESTION No.4: What are the management practices that are being implemented to reduce the impacts of irrigated agriculture on waters of the State within the Coalition Group boundaries and where are they being applied?	X			156-557 (1 March 2010 AMR) 43-65 (1 April Annual MPUR)	Addressed in the ESJWQC 1 March 2010 AMR Addressed in the ESJWQC 1 April 2010 Annual MPUR The Coalition provided a summary indicating what current growers are implementing and the recommended mgmt practices based on 2007 (general survey) and 2009 (individual surveys).
5	QUESTION No.5: Are water quality conditions in waters of the State within Coalition Group boundaries getting better or worse through implementation of management practices?	X			158-159 (1 March 2010 AMR) 65-67 (1 April Annual MPUR)	Addressed in the ESJWQC 1 March 2010 AMR Based on the number of exceedances, it is possible to infer that water quality conditions have improved based solely on these numbers. However, other important factors needs to be to considered in this analysis (see Staff comments on Section 22, pages 7 through 9 of 1 March 2010 AMR review memorandum). Addressed in the ESJWQC 1 April 2010 Annual MPUR Even though the Coalition is focusing on 3 to 4 site-subwatersheds at the time it is expected that with the current outreach strategy (e.g. county and subwatershed grower meetings) growers will take the initiative to implement the appropriate additional management practices before their site-subwatershed becomes a priority. A water quality improvement have is noted in all Zones (especially on the ones where the high priority strategy has ben implemented).

Footnotes

- (1) Monitoring and Reporting Program Order No. R5-2008-0005 for Coalition Groups under the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands Amended Order No. R5-2006-0053. Section II.D (Pages 24 and 25)

**APPENDIX I
Annual MPUR Checklist - ESJWQC Management Plan**

Report Name: ESJWQC Management Plan - Priority Site-subwatershed		Reviewer Name: Dania Huggins				
Submittal Date: 1 April 2010		Review Date: 04/05/10- 04/29/10				
Item No.	I. Annual MPUR Guidance Document Component Description ⁽¹⁾	Review			Page No. (Section No.)	Comments
		Acceptable A	Unacceptable U	Incomplete I		
1	Provide sufficient information regarding achievement of the performance goals and measures	X			28-34 (Performance Goals and Schedules)	Information was provided in this section for the first and second set of high priority site-subwatersheds.
2	Provide performance goals and measures for the next set of high priority site subwatersheds or constituents	X			35-39 (Performance Goals and Schedules)	The Coalition submitted a draft of the Performance Goals and Measures for the second set of high priority site subwatersheds during the fourth pre-quarterly mtg (10/07/10). The draft was revised and approved by the EO among with other modifications on June 2010.
3	Provide a schedule and status of when evaluations will occur to determine the effectiveness of the management practice implementation.	X			29-31 and 36-37 (Performance Goals and Schedules)	Information was provided in this section for the first and second set of high priority site-subwatersheds.
4	Provide sufficient information when Management Plan strategies need to be revised. Any updates must receive Executive Officer approval.	X			15-18 (Management Plan Process) 23-24 (Management Plan Development Timelines)	There have been three changes to the ESJWQC Mgmt Plan. These changes involved: (1) Management Plan Process = Changes were discussed at 10/07/10 fourth pre-quarterly mtg (pages 15 through 18). (2) Schedule modification request = Changes were discussed during quarterly mtgs and approved by EO on 5 June 2010. (3) Exchange to replace Hilmar Drain @ Central Ave with Bear Creek @ Kibby Rd as a high priority site subwatershed in 2010 – 2012. In exchange, Hilmar Drain would become high priority in 2012 – 2014. This change was approved by EO on 18 Nov 2009.
5	Provide a status of Management Plan Tracking and Implementation Schedules	X			19-20 (Management Practice Tracking Strategy) 29-31 and 36-37 (Performance Goals and Schedules)	Information on implementation schedules was provided in the Performance Goals and Schedules section for the first and second set of high priority site-subwatersheds.
6	Provide a status of management practices implementation schedules and the process for tracking them.	X			29-31 and 36-37 (Performance Goals and Schedules)	Information on implementation schedules was provided in the Performance Goals and Schedules section for the first and second set of high priority site-subwatersheds.
7	Provide an update on how TMDL requirements are being met. Management Plans were approved in part based upon complying with the Sacramento-San Joaquin Basin Plan components.	X			68-82	See Staff comments in the TMDL specific checklists for (1) chlorpyrifos and diazinon, (2) salt and boron, and (3) dissolved oxygen.
	Sampling sites that are compliance monitoring sites for TMDLs ⁽²⁾	X			69	The Westside Water Quality Coalition and the ESJWQC are splitting the six San Joaquin River compliance monitoring points. ESJWQC would sample (1) San Joaquin River @ Vernalis (Airport Way), (2) San Joaquin River @ Maze Rd, and (3) San Joaquin River @ Hills Ferry. Monitoring will occur quarterly. The Westside Water Quality Coalition will monitor (4) San Joaquin River @ Las Palmas Ave (Patterson), (5) San Joaquin River @ Hwy 65 (Lander Ave), and (6) San Joaquin River @ Sack Dam. The Coalition submitted schedules and content of the Annual Chlorpyrifos and Diazinon TMDL Report on 1 June 2010.

Footnotes

- (1) "Guidance for Management Plan Update Report Items" submitted by Staff to ESJWQC on 10/23/2009 as per request of the ESJWQC to provide clarification on the minimum set of items that the Coalition needs to include in the Annual Management Plan Update Report (Annual MPUR) to comply with the requirements in Board Order No. R5-2008-0005.
- (2) Fourth Edition of the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins (item 7, section IV-36.03)

**APPENDIX II
Annual MPUR Checklist - Chlorpyrifos and Diazinon TMDL**

Report Name: ESJWQC Annual Management Plan Update Report			Reviewer Name: Dania Huggins			
Submittal Date: 1 April 2010			Review Date: 04/05/10- 04/29/10			
Item No.	I. Basin Plan Component Description ⁽¹⁾	Review Criteria			Page No. (Section No.)	Comments
		Acceptable A	Unacceptable U	Incomplete I		
1	Determine compliance with established water quality objectives and the loading capacity applicable to diazinon and chlorpyrifos in the San Joaquin River.	X			70-77, Tables 20-21	
2	Determine compliance with established load allocations for diazinon and chlorpyrifos.	X			70-77, Tables 20-21	
3	Determine the degree of implementation of management practices to reduce off-site movement of diazinon and chlorpyrifos.	X			43, 59-62, 78	Implementation and evaluation of new management practices will occur throughout the entire Coalition area as site-subwatersheds became high priority (see schedule on Table 6, page 24).
4	Determine the effectiveness of management practices and strategies to reduce off-site migration of diazinon and chlorpyrifos.	X			43, 59-62, 78	
5	Determine whether alternatives to diazinon and chlorpyrifos are causing surface water quality impacts.	X			78-79	
6	Determine whether the discharge causes or contributes to a toxicity impairment due to additive or synergistic effects of multiple pollutants.	X			81-82 (MRP Plan, Water Quality Status and Monitoring Background) 33-37 (Table 8); (Priority Specific Management Plan Goals and Plans. Priority A/B) 71 (Management Practice Performance Goals) 79 (2010 Annual MPUR)	The MRP Plan discusses additivity and synergistic effects on page 82. Sediment monitoring will be Collected at all sample points. The Coalition is gathering data on the top 109 used active ingredients (Table 8, pg 33). <u>Water Quality Management Practice Performance Goal #1:</u> 1.3 Identify applications with the potential to cause toxicity or result in an exceedance of a specific chemical.
7	Demonstrate that management practices are achieving the lowest pesticide levels technically and economically achievable.	X			79	

Footnotes

- (1) Fourth Edition of the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins (Diazinon and Chlorpyrifos Runoff in the San Joaquin River Basin, page V-4.00)

APPENDIX II
Annual MPUR Checklist - Dissolved Oxygen TMDL

Report Name: ESJWQC Annual Management Plan Update Report		Reviewer Name: Dania Huggins				
Submittal Date: 1 April 2010		Review Date: 04/05/10- 04/29/10				
Item No.	I. Basin Plan Component Description ⁽¹⁾	Review Criteria			Page No. (Section No.)	Comments
		Acceptable A	Unacceptable U	Incomplete I		
Dissolved Oxygen TMDL Related Sections						
1	Determine compliance with established water quality objectives and the loading capacity applicable to dissolved oxygen in the San Joaquin River.	X			2 (Introduction, Management Plan)	To demonstrate compliance with the TMDL limits, several agriculturally-influenced tributaries to the San Joaquin River are routinely monitored, as described in the East San Joaquin Water Quality Coalition's MRPP. The Coalition is addressing Dissolved Oxygen exceedances through the Management Prioritization process described in the Management Plan Process Section (page 21-28) of the current management Plan document
II. ILRP MRP Component Description ⁽²⁾						
2	Process to comply with Dissolved Oxygen TMDL - Status	X			82 (1 April Annual MPUR)	The Coalition is addressing Dissolved Oxygen exceedances through the Management Prioritization process described in the Management Plan Process Section (page 21-28, Management Plan) of the current management Plan document. In addition, the Coalition is participating in the DO TMDL Technical Working Group meetings.

Footnotes

- (1) Fourth Edition of the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins. Amendment for the Control Program for Factors Contributing to the DO Impairment in the Stockton Deep Water Ship Channel was adopted in 27 January 2005, and is in effect since 23 August 2006 by Resolution No. R5-2005-0005 into the Lower San Joaquin River. Final Staff Report October 2005
- (2) Monitoring and Reporting Program Order No. R5-2008-0005 for Coalition Groups under the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands Amended Order No. R5-2006-0053. Sections I.B and I.C (Pages 6 and 7)

**APPENDIX II
Annual MPUR Checklist - Salt and Boron TMDL**

Report Name: ESJWQC Annual Management Plan Update Report			Reviewer Name: Dania Huggins			
Submittal Date: 1 April 2010			Review Date: 04/05/10- 04/29/10			
		Review Criteria				
Item No.	I. Basin Plan Component Description (1)	Acceptable	Unacceptable	Incomplete	Page No. (Section No.)	Comments
		A	U	I		
	Salt/Boron TMDL Related Sections					
1	Salt/boron at Vernalis: Nonpoint source dischargers operating under waiver of waste discharge requirements must participate in a Regional Water Board approved real-time management program (Basin Plan IV 32.00 - IV 32.08).	X			79-82	The Regional Board and State Water Board are addressing the Basin Plan Salt and Boron requirements through the (1) Basin Plan Amendment for the San Joaquin River at Vernalis Salinity and Boron TMDL (pending item) and (2) Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).
	II. ILRP MRP Component Description (2)					
2	Process to comply with the Salt and Boron TMDL - Status	X			79-82	The Coalition is (1) participating in ongoing Regional Water Board programs for the management of salt and boron, and (2) implementing actions required by the Regional Water Board. Additionally, the Coalition provided a summary of their participation in the: (1) CV Salts and (2) Real Time Management Program (RTMP) meetings.

Footnotes

- (1) Fourth Edition of the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins. Control Program for Salt and Boron Dischargers into the Lower San Joaquin River (Basin Plan IV 32.00) and is in effect since 23 August 2006 by Resolution No. R5-2005-0005 into the Lower San Joaquin River. Final Staff Report October 2005
- (2) Monitoring and Reporting Program Order No. R5-2008-0005 for Coalition Groups under the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands Amended Order No. R5-2006-0053. Sections I.B and I.C (Pages 6 and 7)

Appendix III: Example – Management Plan Amendments Summary

Item No.	Amendments Description	Management Plan Page No	Approved
ESJWQC Management Plan			25 November 2008
1	Request to change the Bear Creek at Kibby Rd site-subwatershed to priority status in 2010 and moving the Hilmar Drain at Central Avenue site-subwatershed from priority status to non-priority status	Table A, pg VII Table B, pg VIII	18 November 2009
2	Request to modify ESJWQC Management Plan Schedule	Table A, pg VII Table B, pg VIII	XX June 2010