
Central Valley Regional Water Quality Control Board

25 June 2012

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

Dr. Mike Johnson, Program Manager
East San Joaquin Water Quality Coalition
632 Cantrill Drive
Davis, CA 95618

REVIEW OF EAST SAN JOAQUIN WATER QUALITY COALITION 2012 ANNUAL MANAGEMENT PLAN UPDATE REPORT

Thank you for submitting the East San Joaquin Water Quality Coalition (Coalition) Annual Management Plan Update Report (MPUR), which was received on 2 April 2012. Central Valley Regional Water Quality Control Board staff has completed a review of the MPUR for compliance with Monitoring and Reporting Program (MRP) Order No. R5-2008-0005, and the Sacramento and San Joaquin River Basin Plan for specific Total Maximum Daily Load requirements.

As noted in the enclosed memorandum and checklist, staff determined that the Coalition's MPUR demonstrates compliance with the terms and conditions of the MRP Order, and meets or exceeds all reporting requirements. The staff memorandum describes items that should be addressed in future MPUR.

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

Original signed by

Joe Karkoski, Program Manager
Irrigated Lands Regulatory Program

Original signed by

Susan Fregien, Unit Supervisor
Monitoring and Implementation Unit
Irrigated Lands Regulatory Program

Enclosure: Staff Review of East San Joaquin Water Quality Coalition 1 April 2012 MPUR

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: 6 June 2012

SUBJECT: 1 APRIL 2012 ANNUAL MANAGEMENT PLAN UPDATE REPORT REVIEW –
EAST SAN JOAQUIN WATER QUALITY COALITION

On 2 April 2012, 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 Management Plan Update Report (MPUR). The Coalition submitted an amendment to the MPUR on 30 April 2012. The MPUR summarizes the Coalition's management plan efforts and monitoring results from 1 January through 31 December 2011.

Central Valley Water Board staff reviewed the MPUR to determine compliance with reporting and monitoring requirements pursuant to the Monitoring and Reporting Program (MRP) Order No. R5-2008-0005, the Sacramento and San Joaquin River Basin Plan (Basin Plan) for parameters with Total Maximum Daily Load (TMDL) requirements, and the Coalition's 2008 Management Plan. A checklist based on the provisions in the MRP Order was used to provide an itemized account of the compliance elements. This memorandum provides details on components that warranted further discussion (the memorandum section numbers correspond to the item numbers in the attached checklist).

Overall, the MPUR demonstrates compliance with the terms and conditions of the MRP Order, and meets or exceeds all reporting requirements. The MPUR provides comprehensive information regarding achievement of the performance goals outlined in the Coalition's Management Plan, and evaluates management practice effectiveness to achieve compliance with applicable water quality standards. Monitoring results are assessed for exceedances and water quality improvements, detailed status updates on constituents and subwatersheds requiring a management plan are included, and actions taken to address TMDL requirements are summarized. Additionally, the MPUR compliments and further informs the answers to the Program questions that are addressed in the Coalition's 1 March 2012 Annual Monitoring Report (2012 AMR, pages 148-159). The MPUR demonstrates that the Coalition's Management Plan is structured to thoroughly answer the key Program questions, especially regarding the management practice implementation to reduce impacts of irrigated agriculture on waters of the State (Question No. 4), and if water quality conditions are changing through implementation of management practices (Question No. 5).

Item I.5. Waste-specific monitoring schedule

Based on the prioritization of exceedances (MPUR, Figure 4), the Coalition conducted Management Plan Monitoring (MPM) in 2011 for copper, chlorpyrifos, diazinon, diuron, lead, water column toxicity to *Ceriodaphnia dubia*, and *Selenastrum capricornutum*, and sediment toxicity to *Hyalella azteca* at twelve high priority site subwatersheds (MPUR, Table 3). Nine additional site/constituent pairs require a management plan based on 2011 exceedances (MPUR, Table 5).

The Coalition sampled from January to March 2012 according to the waste-specific MPM schedule which has been suspended at all locations except Bear Creek @ Kibby Road*. A revised monitoring schedule was submitted in an amendment to the MPUR on 4/30/2012.

Item I.6. A process and schedule for evaluating management practice effectiveness

The Coalition provides a detailed and accurate analysis of management practice effectiveness in the first and second sets of high priority subwatersheds. The number of exceedances of high priority pesticides decreased since the outreach to growers and implementation of new management practices in 2008 and 2009 (MPUR, pages 127-134).

A different analysis of the effectiveness of management practices is presented in the introduction, where results from management plan monitoring (MPM) in 2010 and 2011 are compared across all monitored subwatersheds (MPUR, pages 8-9). Implemented management practices affect water quality regardless of whether sampling time formally qualifies as MPM, and while a statement that MPM "in 2011 resulted in no exceedances for [...] chlorpyrifos" is technically correct, the results of water quality analyses are not presented accurately. For example, only monitoring in July and September was formally designated as MPM in Berenda Slough along Ave 18 ½, and a sample with a concentration above the WQO for chlorpyrifos collected on 4/19/2011 does not count as an exceedance during MPM (MPUR, Tables 2 and 3). The assessment of management practice effectiveness in the introduction should be revised so that both regular monitoring (core and assessment) and MPM results are considered.

Evaluation of the effectiveness of management practices implemented by growers is further complicated if results across all subwatersheds scheduled for MPM are aggregated by year. As subwatersheds rotate into MPM, new subwatersheds at early stages of management plan implementation are added to MPM while other sites may no longer be scheduled for MPM. Therefore, between-year comparison of exceedances across all subwatersheds under a management plan may not reflect a change due to the implementation of management practices. The change in water quality over time should compare subwatersheds at the same stage of the management plan process, similar to the analysis on pages 130-134 in the MPUR.

Item II.1. Achievement of performance goals

Status of the performance goals is the centerpiece of the Coalition's MPUR. The management goal outlined in the 2008 Management Plan is to "*continue to monitor and analyze the water and sediment quality [...] to facilitate the implementation of management practices by providing outreach and support to growers in order to effectively enhance water quality in the Coalition region*". The MPUR demonstrates that the Coalition is successfully meeting the general

* The Coalition's request to suspend MPM was approved on 17 April 2012. MPM will resume in 2013.

management goal, and provides an update on all performance goals (PG) and specific performance measures at the first four sets of high priority site subwatersheds:

- PG 1 – individual contacts with targeted growers
- PG 2 – document current management practices on targeted parcels
- PG 3 – document implementation of recommended additional management practices
- PG 4 – evaluate effectiveness of the newly implemented management practices
- PG 5 – discuss activities and evaluate Management Plan strategy with the Central Valley Water Board staff.

1.1 First priority subwatersheds. The Coalition identified targeted growers on properties adjacent to waterways based on applications of priority pesticides, and the potential for direct drainage or spray drift to reach the waterway. Having completed surveys and additional follow-up contact with all targeted growers (MPUR, Table 17), the Coalition provided the final analysis of newly implemented management practices (PG 3) in the Dry Creek at Wellsford Rd and Duck Slough at Hwy 99 subwatersheds (MPUR, Tables 18, 19, 21, and Figures 8, 10, 11). Targeted growers in the first priority subwatersheds indicated they implement management practices to address irrigation water and storm drainage management, erosion and sediment management, pest management and dormant spray management. In addition to the management practices recommended during outreach, growers implemented additional practices not specifically recommended by the Coalition.

The completion date for evaluating the effectiveness of the newly implemented management practices (PG 4) in the first priority subwatersheds was 1 April 2011. The count of chlorpyrifos exceedances has decreased since the implementation of new management practices (Table 1). The Coalition plans to monitor all first priority sites an additional year for management plan constituents and provide a more complete evaluation of management practices effectiveness in future MPUR¹. The Coalition regularly discussed Management Plan activities and strategy with the Central Valley Water Board staff (PG 5).

Table 1. Summary of probable sources based on PUR data (application time, crops treated), recommended management practices to address exceedances, monitoring results for chlorpyrifos, and the amount of active ingredient (AI) applied at the first set of High Priority Site Subwatersheds (2008-2010).

	Dry Creek @ Wellsford Road		Duck Slough @ Hwy 99		Prairie Flower Drain @ Crows Landing Rd		Combined data for all three first priority subwatersheds		
Source Manage ¹	spray drift tailwater / spray drift		spray drift tailwater / spray drift		runoff / dairies irrigation water				
Year	Exceed /Test ²	AI applied (lbs)	Exceed /Test	AI applied (lbs)	Exceed /Test	AI applied (lbs)	Number of Exceedances	Number of Tests	Percent Exceedances
2006	2/7	7,135	1/7	1,877	0/7	396	3	21	14%
2007	2/10	6,145	1/9	1,474	1/10	150	4	29	14%
2008	1/8	5,392	1/8	1,112	1/8	1,050	3	24	13%
2009	1/2	5,292	0/3	154	0/1	392	1	6	17%
2010	1/3	3,949	0/3	296	0/2	297	1	8	13%
2011	0/12	1,872	0/3	366	0/12	275	0	27	0%

¹ Source | Manage = probable source of chlorpyrifos and management practices recommended during outreach

² Exceed/Test = ratio of the number of samples that exceed the WQO and the number of conducted tests

1.2 Second priority subwatersheds. Individual contacts with targeted growers were completed in 2010 (PG 1), with follow-up in 2011. Based on the surveys and contact with growers, the

Coalition compiled information about the current management practices (MPUR, Tables 21, 23, 25, 27) and made recommendations for new practices to be implemented (MPUR, Tables 22, 24, 26, 28, and Figures 14, 18, 22, 26; PG 2). Follow-up contact allowed identifying what management practices were implemented, and the acreage affected (MPUR, Tables 22, 24, 26, 28, and Figures 15, 19, 23, 27, 28; PG 3). The majority of targeted acreage in the second priority subwatersheds had at least one management practice designed to address erosion and sediment management, irrigation management, and pest management. The acreage with newly implemented practices was lower than the area that had recommended management practices in Bear Creek @ Kibby Road and Duck Slough @ Gurr Road subwatersheds due to lack of funds. The Coalition notifies growers about available funding opportunities and assists in the application process.

The Coalition conducted management plan monitoring in 2010 and 2011 and will continue sampling for management plan constituents to assess effects of structural management practices that may be implemented as additional funding becomes available. The count of chlorpyrifos exceedances has decreased since the implementation of new management practices (Table 2). A more complete evaluation of management practice effectiveness will be included in the 2013 MPUR (PG 4). The Coalition regularly discusses Management Plan activities and strategy with the Central Valley Water Board staff (PG 5).

Table 2. Summary of probable sources based on PUR data (application time, crops treated), recommended management practices to address exceedances, monitoring results for chlorpyrifos, and the amount of active ingredient (AI) applied at the second set of High Priority Site Subwatersheds (2010-2012)

	Bear Creek @ Kibby Road		Cottonwood Creek @ Road 20		Duck Slough @ Gurr Road		Highline Canal @ Hwy 99		Combined data for all four second priority subwatersheds		
Source Manage ¹	spray drift tailwater	tailwater spray drift	spray drift	spray drift	spray drift	tailwater spray drift	spray drift tailwater spray drift	spray drift tailwater spray drift	Exceedances	Number of Tests	Percent Exceedances
Year	Exceed /Test ²	AI applied (lbs)	Exceed /Test	AI applied (lbs)	Exceed /Test	AI applied (lbs)	Exceed /Test	AI applied (lbs)			
2006	1/7	1,670	0/7	7,704	0/7	2,401	1/7	15,127	2	28	7%
2007	1/8	1,244	0/5	971	0/9	2,221	1/7	18,201	2	29	7%
2008	0/10	1,430	2/7	740	0/9	2,056	2/9	6,011	4	35	11%
2009	-	356	-	1,239	0/5	646	1/1	10,741	1	6	17%
2010	0/2	664	1/1	1,781	0/2	4,217	0/3	9,593	1	8	13%
2011	0/2	24	0/10	166	0/11	1,064	0/9	3,290	0	32	0%

¹ Source | Manage = probable source of chlorpyrifos and management practices recommended during outreach

² Exceed/Test = ratio of the number of samples that exceed the WQO and the number of conducted tests

1.3 Third priority subwatersheds. Initial contact with targeted growers was completed in 2011 (PG 1). The Coalition documented current management practices (MPUR, Tables 30-33), and recommended implementation of additional management practices (MPUR, Figures 31, 34, 37, 40; PG 2). Follow-up with growers who received recommendation for additional management practices has been conducted in February, March and April 2012, and analysis of newly implemented management practices (PG 3) will be reported in the 2013 MPUR.

The first year of management plan monitoring was conducted in 2011, and the Coalition has compiled baseline information for assessing the effectiveness of newly implemented management practices (Table 3). An interim evaluation of management practice effectiveness will be provided in the 2013 MPUR. The Coalition regularly discusses Management Plan activities and strategy with the Central Valley Water Board staff (PG 5).

Table 3. Summary of probable sources based on PUR data (application time, crops treated), recommended management practices to address exceedances, monitoring results for chlorpyrifos, and the amount of active ingredient (AI) applied at the third set of High Priority Site Subwatersheds (2011-2013)

	Berenda Slough @ Ave 18 1/2		Dry Creek @ Road 18		Lateral 2 1/2 near Keyes Road		Livingston Drain @ Robin Ave		Combined data for all four third priority subwatersheds		
Source Manage ¹	tailwater transport tailwater and runoff		tailwater transport tailwater and runoff		tailwater transport tailwater and runoff		tailwater and runoff tailwater and runoff		Number of Exceedances	Number of Tests	Percent Exceedances
Year	Exceed /Test ²	AI applied (lbs)	Exceed /Test	AI applied (lbs)	Exceed /Test	AI applied (lbs)	Exceed /Test	AI applied (lbs)			
2006	-	17,521	-	3,114	1/5	-	-	-	1	5	20%
2007	-	6,943	-	4,392	1/6	-	1/5	2,235	2	11	18%
2008	0/2	3,744	0/1	499	1/7	12,040	2/8	2,051	3	18	17%
2009	1/7	7,849	-	950	-	11,836	-	1,034	1	7	14%
2010	1/4	4,336	-	2,423	-	9,062	-	1,293	1	4	25%
2011	1/12	1,783	0/3	38	0/2	6,430	0/3	1,812	1	20	5%

¹ Source | Manage = probable source of chlorpyrifos and management practices recommended during outreach

² Exceed/Test = ratio of the number of samples that exceed the WQO and the number of conducted tests

1.4 Fourth priority subwatersheds (Table 4). Individual contact with targeted growers in the fourth set of high priority subwatersheds has been initiated (PG 1), and analysis of current and recommended management practices (PG 2) will be reported in the 2013 MPUR. The Coalition has started regular discussion of Management Plan activities and strategy with the Central Valley Water Board staff (PG 5).

Table 4. Summary of monitoring results for chlorpyrifos, and the amount of active ingredient (AI) applied at the fourth set of High Priority Site Subwatersheds (2012-2014)

	Black Rascal Creek @ Yosemite Road		Deadman Creek @ Gurr Road		Deadman Creek @ Hwy 59		Hilmar Drain @ Central Ave		Combined data for all four fourth priority subwatersheds		
Year	Exceed /Test ²	AI applied (lbs)	Exceed /Test	AI applied (lbs)	Exceed /Test	AI applied (lbs)	Exceed /Test	AI applied (lbs)	Number of Exceedances	Number of Tests	Percent Exceedances
2006	1/5	193	1/5	5,735	1/5	5,735	1/7	22	4	22	18%
2007	3/8	505	0/8	4,062	1/8	3,927	0/8	48	4	32	13%
2008	0/12	60	0/11	2,352	2/14	2,180	0/8	228	2	45	4%
2009	-	-	0/12	4,007	-	4,007	-	30	0	12	0%
2010	-	-	3/12	5,059	-	4,862	-	64	3	12	25%
2011	-	-	-	2,869	2/12	2,045	-	467	2	12	17%

² Exceed/Test = ratio of the number of samples that exceed the WQO and the number of conducted tests

Item II.3. Revision of Management Plan strategies

There are five essential steps in the Coalition's Management Plan strategy: 1. inventory management practices currently in place, 2. outreach to growers, 3. implementation of new management practices, 4. assess the implementation of new management practices, and 5. evaluate the effectiveness of the new management practices. The Coalition's Management Plan process includes individual and group outreach to growers, the Management Plan Monitoring (MPM) and management practice evaluation strategy (MPUR, Figures 1 and 2), and a strategy to document changes in management practices in high priority subwatersheds (MPUR, Figure 3).

A schedule establishing when sites become high priority was developed (MPUR, Table 6), and the only update in 2011 was the addition of McCoy Lateral at Hwy 140 that will rotate into high priority status in 2016. The MPUR states that the MPM strategy was updated to include MPM for high priority subwatersheds during Years 1-4 (page 3). This change in MPM strategy is not reflected in Figure 2 in the MPUR. The discrepancy should be reconciled either by correcting

the text or Figure 2 in the future MPUR, and if there are changes of the MPM strategy, modifications should be discussed with the Central Valley Water Board staff.

Item III.1. Chlorpyrifos and diazinon TMDL

Detailed analysis and discussion of compliance with WQOs and load allocations from October 2010 to September 2011 are included in the 1 May 2012 San Joaquin River Chlorpyrifos and Diazinon AMR. While it is reasonable to streamline reporting and avoid redundancy, a brief summary statement demonstrating compliance with the loading capacity and established load allocations for diazinon and chlorpyrifos would provide a more complete picture of the management plan efforts. Additionally, the MPUR should list the Coalition's compliance sites (there have been no updates in the list of compliance sites, the staff recommendation is for the purpose of completeness so that the MPUR can stand independently).

The Coalition already does a good job documenting the relationship between the actions to be taken and the expected reductions in diazinon and chlorpyrifos discharges (MPUR, pages 50-125), determining the degree of implementation (MPUR, pages 54-125) and the effectiveness (MPUR, pages 130-132, 135-136) of management practices to reduce off-site movement, and whether the discharge causes or contributes to a toxicity impairment due to additive or synergistic effects of multiple pollutants (MPUR, pages 131, 133-134). The current MPUR builds on the previous discussion (2011 MPUR, pages 130-131) to demonstrate that management practices are achieving the lowest pesticide levels technically and economically achievable (MPUR, pages 135-139).

Item III.2. Dissolved Oxygen TMDL

Discussion of actions to address the dissolved oxygen (DO) TMDL was not included in the initial submission of the 2012 MPUR. The Coalition provided an amendment to the MPUR on 30 April 2012 with information addressing the DO TMDL.

The management plan process, discussions of water quality concerns during grower outreach in high priority subwatersheds, and regular and management plan monitoring include DO. During monthly monitoring of tributaries in 2011, the DO WQO was exceeded in five subwatersheds. Although DO concentrations in tributaries are not necessarily linked to DO in the Stockton Deep Watership Channel, the DO status can serve as a proxy for loads of oxygen demanding substances and their precursors that are contributed by the tributaries under the flow and temperature conditions at the time of sampling.

Annual Management Plan Update Report Review Checklist

Report Name: ESJWQC 2012 Annual Management Plan Update Report				Reviewer Name: Jelena Hartman		
Submittal Date: 2 April 2012				Review Date: 20 April 2012		
Item No.	MPUR Item Name	Acceptable	Unacceptable	Incomplete	Page Number	Comments
I. Management Plan Components⁽¹⁾						
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.	✓			page 22, Appendix I: (2, 20-26, 28-37, 54-64, 88-97, 113-123, 142-163, 185-196, 216-232, 244-245, 268-285)	The Coalition uses PUR data, and relevant water quality monitoring data to conduct source analysis. The Coalition identifies most frequent crop type, time of applications, and management practices that are probable sources of pesticide exceedances. The Coalition is therefore able to contact growers targeted for outreach, and advise on management practices.
2	Identification of management practices to be implemented to address the exceedances.	✓			pages 50-51, 51-126	The Coalition identified general classes of structural and non-structural management practices that could be implemented to address the exceedances. The Coalition recommends implementation of management practices tailored to the specific water quality exceedances and current management practices within each high priority subwatershed.
3	Management practice implementation schedule.	✓			Tables 9, 11-13	
4	Management practice performance goals with a schedule.	✓			pages 31-44	The Coalition reports on the status of performance goals in the first, second and third high priority subwatersheds, and provides performance goals and measures for the new set of high priority site subwatersheds (p. 42-44). Please see item II.1 below.
5	Waste-specific monitoring schedule.	✓			Tables 7-8, pages 28-30, Appendix I	Based on the prioritization of exceedances (Figure 4), the Coalition conducted Management Plan Monitoring (MPM) in 2011 for copper, chlorpyrifos, diazinon, diuron, lead, water column toxicity to <i>Ceriodaphnia dubia</i> , and <i>Selenastrum capricornutum</i> , and sediment toxicity to <i>Hyalella azteca</i> at twelve high priority site subwatersheds (Table 3). Nine additional site/constituent pairs require a management plan based on 2011 exceedances (pages 14-15, Table 5), and the Coalition provides a waste-specific MPM schedule for 2012 (Tables 7-8). <u>4/30/2012 amendment:</u> MPM suspended in 2012 (please see Staff memo).
6	A process and schedule for evaluating management practice effectiveness.	✓			pages 8-9, 127-134	Results of focused outreach and management plan monitoring (MPM) provide the Coalition with data to evaluate the effectiveness of management practices. The MPUR summarizes the results of MPM in 2011 (Table 3 and 5), and provides an overview of all exceedances in the Coalition region since 2004 (pages 11-14). The number of high priority exceedances decreased in the first and second set of high priority subwatersheds since the implementation of new management practices in 2008 and 2009 (Tables 37-38, Figure 41). The analysis in the text (pages 8-9) and Table 2 should be revised - for a more accurate assessment of effectiveness of management practices, both regular (core and assessment) monitoring and MPM results should be considered, and the change in water quality over time should be examined in subwatersheds at the same stage of the management plan process (please see Staff memo). Additionally, the discrepancy between the number of total MPM samples collected for chlorpyrifos, and the numbers of MPM exceedances and samples collected for copper in 2011 in Tables 2 and 3 should be reconciled.
7	Identification of the participants and Coalition Group(s) that will implement the Management Plan.	✓			pages 31-32, Tables 9, 11-13 (details for PG 1), Appendix I (26-27, 38-39, 58-59, 65-66, 92-93, 117-118, 146-147, 189, 221, 248-249, 272-273)	The Coalition has developed a general strategy to identify growers targeted for outreach and implementation of management practices. Mapping, PUR data, field visits, grower surveys, and monitoring data allow identifying parcels with potential for direct drainage and potential for spray drift to reach waterways in each subwatershed. The effort is than focused on participants who can potentially contribute to water quality improvement by implementing new or additional management practices.
8	An identified routine schedule of reporting to the Regional Water Board.	✓			page 45	The Coalition submits exceedance reports following each sampling events, participates in Management Plan Quarterly Status meetings, and submits annual MPUR on April 1 each year.
9	Signed Transmittal Letter.	✓				

Annual Management Plan Update Report Review Checklist

Item No.	MPUR Item Name	Acceptable	Unacceptable	Incomplete	Page Number	Comments
II. Management Plan Reporting requirements⁽¹⁾						
1	Achievement of performance goals	✓			31-44	The MPUR gives a detailed summary of outreach activities in high priority subwatersheds by date and area (Table 40), and an update on all performance goals and specific performance measures at the first four sets of high priority site subwatersheds is provided (please see Staff memo).
	1.1 First priority subwatersheds	✓			31-35, 55-67	The final analysis of newly implemented management practices (PG 3) shows that growers implemented new practices not specifically recommended by the Coalition in addition to recommended management practices. The Coalition will be monitoring for an additional year and will provide a more complete evaluation of management practices effectiveness in the 2013 MPUR.
	1.2 Second priority subwatersheds	✓			36-38, 68-100	Follow-up with targeted growers was completed in 2011, and the Coalition compiled information about the current management practices and made recommendations for new practices to be implemented (PG 2). Newly implemented management practices and acreage affected were identified (PG 3). A more complete evaluation of management practice effectiveness will be included in the 2013 MPUR (PG 4). Table 22 and Figure 15 indicate 34% of acreage received microirrigation, text erroneously identifies the proportion of acres with new microirrigation (p. 76).
	1.3 Third priority subwatersheds	✓			39-41, 101-125	Initial contact was completed in 2011 (PG 1) and the Coalition established what management practices are currently used and recommended implementation of new management practices (PG 2). Analysis of newly implemented management practices (PG 3) will be reported in the 2013 MPUR. The first year of MPM was conducted in 2011, and an interim evaluation of management practice effectiveness will be provided in the 2013 MPUR. Figure 40 presents recommended management practices for acreage with <u>no</u> irrigation runoff, the caption should be corrected accordingly.
	1.4 Fourth priority subwatersheds	✓			42-44, 126	Individual contact with targeted growers initiated (PG 1), current and recommended management practices (PG 2) will be reported in the 2013 MPUR.
2	Stages when evaluations will occur to determine the effectiveness of the management practice implementation	✓			Figure 2	The Coalition has defined the stage and process for evaluating the effectiveness of the management practices. The requirement is addressed by the Performance Goal 4 in each set of high priority subwatersheds.
3	Information whether Management Plan strategies need to be revised	✓			16-25	The only update in 2011 was the addition of McCoy Lateral at Hwy 140 that will rotate into high priority status in 2016 (please see Staff memo). Staff previously recommended a summary of all Management Plan amendments to be included in subsequent annual MPUR. Management Plan updates and amendments have been added (Table A).
III. Update on actions to address TMDL requirements⁽²⁾						
1	Chlorpyrifos and diazinon TMDL (Basin Plan IV 36.02 - IV 36.03, V-4.00).	✓			141-142	Detailed analysis and discussion of all monitoring data collected from October 2010 to September 2011 is included in the 1 May 2012 SJR Chlorpyrifos and Diazinon AMR. A brief summary of preliminary data in addition to referencing the upcoming Report demonstrating compliance with the loading capacity and established load allocations for diazinon and chlorpyrifos would provide a more complete picture of the management plan efforts (please see Staff memo).
2	Dissolved oxygen TMDL (Basin Plan IV 37.01 - IV 37.03).	✓			143-144	The update on activities to comply with the DO TMDL was missing. <u>4/30/2012 amendment:</u> section on DO TMDL provided (please see Staff memo).
3	Salt and boron TMDL (Basin Plan IV 32.00 - IV 32.07).	✓			142-143	The Coalition monitors for salt and boron in each Coalition Zone, outreach with growers includes discussion about water impairments and management practices to control salt and boron. Coalition representatives actively participate in the CV-SALTS meetings and committees.
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)						
(2) "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.						