

INFORMATION REPORT
CONDITIONAL WAIVERS
FOR
DISCHARGES FROM IRRIGATED LANDS
CENTRAL VALLEY REGION

23 June 2005 - Joint Board Meeting

INTRODUCTION

On 11 July 2003, the Central Valley Regional Water Quality Control Board (Water Board) adopted Resolution No. R5-2003-0105 approving two Conditional Waivers of Waste Discharge Requirements for Discharges from Irrigated Lands in the Central Valley Region. The Water Board also adopted Monitoring and Reporting Program (MRP) Order No R5-2003-0826 for Coalition Groups, MRP Order No. R5-2003-0827 for Individual Dischargers, and Resolution No. R5-2003-0103 approving an Initial Study and adopting a Negative Declaration for the Conditional Waivers.

In August 2003, six agricultural interests and one environmental interest submitted petitions to the State Water Resources Control Board (State Water Board) regarding these actions. On 22 January 2004 the State Water Board adopted Order WQO 2004-0003, which upheld the Waivers and Monitoring and Report Programs with revisions. On 8 July 2004, the Water Board and the State Water Board held a joint meeting and heard an informational item on the progress and status of the Irrigated Lands Conditional Waiver Program.

The Conditional Waivers describe a specific path for owners and operators of irrigated lands, including water districts and managed wetland operators, to achieve compliance with the California Water Code. The Conditional Waivers and MRPs set the minimum requirements for these entities to comply with the California Water Code. The Regional Board is in the process of developing an Environmental Impact Report for a long-term plan to address water quality impacts from discharges of waste from irrigated agricultural lands.

The following nine coalition groups have received Notices of Applicability to represent identified groups of growers within their designated jurisdictions:

Sacramento Valley Water Quality Coalition
California Rice Commission
San Joaquin County and Delta Water Quality Coalition
East San Joaquin Water Quality Coalition
Westside San Joaquin River Watershed Coalition
Westlands Water District
Southern San Joaquin Valley Water Quality Coalition
Root Creek Water District
Goose Lake Coalition

The San Luis Water District Watershed Coalition refilled a Notice of Intent (NOI) on 18 April 2005. This NOI contained limited information and is under review.

The following seven entities have filed for coverage under the Conditional Waiver for Individual Dischargers:

The Modesto Irrigation District
The Merced Irrigation District
The Oakdale Irrigation District
The Turlock Irrigation District
The South San Joaquin Irrigation District
Berry Blest (Organic) Farm
Western Agricultural Services
Quail Valley Ranch

The Conditional Waiver Program has faced many challenges and achieved many goals in the 2-1/2 years since its initial adoption. This information report describes the achievements, challenges, and plans for the future of the program. This report has three main sections, which correspond to the three units of the Irrigated Lands Conditional Waiver Section at the Water Board: 1) Policy and Planning, 2) Monitoring and Assessment, and 3) Public Outreach and Compliance.

POLICY AND PLANNING

Conditional Waiver Extension and Update

The Coalition Group and the Individual Discharger Conditional Waivers expire on 31 December 2005. Water Board staff intend to propose to extend the expiration date of both of Conditional Waivers to 1 July 2007. Water Board staff will meet with representatives interested groups in separate meetings during June and July. The staff will circulate the proposed waiver extension for public comment in the early summer and tentatively intend to place the item on the agenda for the 15-16 September 2005 meeting. During the comment period, Water Board staff plan to conduct significant public outreach throughout the Central Valley to explain the proposed changes and get feedback from interested persons.

In addition to providing the Water Board additional time to assess the effectiveness of the program, the extension will provide Coalition Groups an opportunity to address various issues, including continued development of long-term funding for Coalition activities; improved grower participation; refined water quality monitoring activities; identification of management practices which protect water quality; the start of monitoring at additional Phase I monitoring sites; and implementation of Phase II monitoring activities at existing monitoring sites.

Proposed "Low Threat" Conditional Waiver

Water Board staff have renewed their effort to develop a "Low Threat" Conditional Waiver to address impacts from small or rural growers. Water Board staff will meet with the agricultural community, especially small and rural growers and their representatives, local and state government officials, and other interested persons to discuss ideas and issues that should be considered in defining a low-threat conditional waiver. The outreach meetings will take place throughout the Central Valley during Summer 2005. Staff intend to circulate a draft for public comment in Fall 2005 and to schedule a hearing by the end of 2005 if feasible.

Monitoring and Reporting Program Revisions

On 6 May 2005, Water Board staff circulated for public comment a draft revised MRP for Coalition Groups. The revisions resulted from discussions in the Technical Issues Committee about the need to include language to clarify when a toxicity test should trigger a Toxicity Identification Evaluation. The draft revised MRP also included some changes to Table 1, Constituents To Be Monitored, which were presented and discussed during the January 2005 Water Board meeting. The due date for comments on the draft revised MRP was 3 June 2005. As of 2 June 2005, Water Board staff had not received any comments on the draft revised MRP distributed on 6 May 2005.

On 2 June, Water Board staff circulated for public comment a second revised MRP for Coalition Groups for comment. Most of the additional revisions resulted from discussions in the Management Practices Working Group (see discussion later in this report). The primary change is to allow for collection and evaluation of management practices when a water quality parameter exceeds a water quality objective, rather than throughout the watershed before monitoring begins. In addition, Table 1 was revised to list allowable analytical methods to use and the maximum acceptable practical quantitation limit for those analyses. The due date for comments on the second revised MRP was extended to 10 June 2005.

Environmental Impact Report Status

On 1 November 2004, interviews were held with three environmental firms who were responsive to the Request for Qualifications. The interview panel evaluated each firm and on 18 November 2004, selected Jones and Stokes Associates (JSA) as the top ranked firm. JSA submitted a draft Scope of Work to Water Board staff in early 2005, and negotiations between staff and JSA resulted in reaching an acceptable final Scope of Work in April. Contract documents were submitted to State Board for processing, and we anticipate that a fully executed agreement will be in place by 1 July 2005. The contract timeline shows completion of the EIR by the end of 2006.

Public Advisory Committee Meetings

PAC meetings have been held every few months since August 2004. These meetings were designed to provide a forum for all interested persons to ask questions about and give feedback to Water Board staff on the conditional waivers, including what challenges exist in their implementation by coalition groups and individuals. Numerous topics have been discussed since the initial meeting, including but not limited to monitoring programs, the Water Board's public outreach process, EIR status, status of report submittals (such as Watershed Evaluation Reports, Monitoring and Reporting Program Plans, Annual Monitoring Reports, etc), proposed "low threat" conditional waiver, discussions on what is a discharger, status of coalition group activities, presentations on the State Board's Enforcement Policy and the Policy for Implementation and Enforcement of Non-Point Sources Pollution Control Program, status of agricultural water quality grants, and the proposed fee schedule to fund the statewide program. The next PAC meeting is scheduled for 18 July 2005 in Modesto.

Management Practices Working Group

This group began in April 2005 as a result of discussions in the Technical Issues Committee. The purpose of the group is to determine what information needs to be gathered on management practices to comply with the conditional waivers. The group held a meeting and a teleconference during which

participants discussed possible changes to the language in the coalition group MRP. Water Board staff considered all the input and proposed revised language in the draft revised MRP circulated on 2 June 2005 for public comments.

MONITORING AND ASSESSMENT

Introduction

The MRPs require Coalition Groups and Individual Dischargers monitor during the irrigation season and the wet weather season, and prepare and submit the first annual monitoring report (AMR) by 1 April 2005. The AMR is required to include tabulated monitoring results, laboratory data sheets, quality control information, copies of communication reports that were submitted during the year, and discussions of the monitoring results. Eight of the nine Coalition Groups and five of the nine Individual Dischargers were expected to submit AMRs by 1 April 2005.

The Goose Lake Coalition in Modoc County received a Notice of Applicability from the Water Board on 14 April 2005, however the due dates for submittal of their MRPP (1 May 2005) and the first annual report (1 June 2005) have not been met. Water Board staff is working with the coalition on a schedule to submit required reports or to determine if consideration needs to be given for dissolving the Coalition. All other coalition groups have received approvals for their Coalition Group Monitoring and Reporting Program Plans (MRPPs), some with conditions, and with the exception of Westlands Water District, they have submitted their AMRs.

The five individual dischargers that submitted AMRs are the five irrigation districts for Modesto, Merced, Oakdale, Turlock and South San Joaquin. These five districts cover a portion of the San Joaquin Valley that is nearly contiguous and provides water to customers for irrigation. This represents 456,000 acres of their service area. All water districts have submitted MRPPs, and Water Board staff provided comments on them. However, Water Board staff have not approved these MRPPs for reasons that will be described later in this report.

Water Board staff received all AMRs for Coalition Groups and Individual Dischargers by the 1 April due date, except Westlands Water District Coalition. The total volume of report material is significant, and it will take some time for Water Board staff to conduct a complete review of the material. The following sections discuss the current status of the AMR review.

General Comments

This is the first AMR review for the Conditional Waiver Program, and the reviews are still in progress at this time. Nonetheless, the following findings apply to all or most of the AMRs:

AMR Format

The Irrigated Lands Conditional Waiver requirements allow for some interpretation of monitoring parameters and monitoring frequency for some constituents, and an individualized approach on reporting format. This flexibility was intentional in order to allow Coalition Groups and Individual Dischargers to specify the individuality of their watersheds and their agricultural activities in their

MRPPs. However, the variety of styles and report formats, as well as the large volume of material requires significant staff time to conduct thorough and equal reviews of all the reports. Some Dischargers have commented that more specificity in report format requirements would be helpful. Water Board staff will consider potential modifications to the MRPs and the Conditional Waivers, as well as templates for recording field and laboratory monitoring data in order to facilitate a more streamlined report and review process.

Follow-Up to Exceedances

Inconsistency in follow-up where toxicity is found or other water quality objectives are exceeded is a common concern. When exceedances occur, the Conditional Waiver requires notification of the Water Board staff through Communication Reports, follow-up resampling and Toxicity Identification Evaluations (TIEs) where appropriate. However, the Coalition Groups and Individual Dischargers have not been consistent in meeting those requirements, perhaps due in part to the generalized description of the requirement in the MRPs. The inconsistent approaches have affected the submittal and timing of communication reports, failure to resample and/or timing of resampling when exceedances occurred, and failure to conduct a TIE and/or incorrect application of a TIE.

Water Board staff have discussed these inconsistencies with the Coalition Groups and Individual Dischargers. Water Board staff has prepared a revision to the MRP for Coalition Groups to clarify the MRP requirements, and recommendations for further changes are being developed through the efforts of the Technical Issues Committee (TIC) and its' focus groups.

Applicability of MRP to Water Districts

Five of the Individual Dischargers that filed for coverage are water districts. Although some water districts have elected to participate in the Conditional Waiver Program by joining a Coalition Group, these five irrigation districts chose to comply with the California Water Code by filing as Individual Dischargers. Water Board staff developed the MRP for Individual Dischargers to accommodate the land use and management practices of individual farmers, and the operations of water districts do not fit this model. Therefore, although the five irrigation submitted MRPPs to comply with the Individual Discharger MRP, but the Water Board staff have not recommended these plans be approved by the Executive Officer because the Individual Discharger MRP was not designed considering water district operations.

Water Board staff has met with the five individual dischargers to discuss a draft MRP for water districts, and is currently conducting audits of the water district facilities. A revised draft MRP will be finalized and after a period of public comment will be presented to the Executive Officer of the Water Board for approval.

The draft Water District MRP has taken into account the individual water district maintenance practices, operational spill locations, agreements that are maintained with irrigation customers with respect to supply, and tailwater (including tile drain) and stormwater discharges to supply canals. It is anticipated that a draft MRP for water districts will be circulated for public comment in Summer 2005.

Reporting for Wet Season Monitoring

In all of the AMRs, the data for 2005 wet season monitoring is incomplete or non-existent. Water Board staff recognize that some of the reasons this is the result of the required submittal date, 1 April 2005 of the AMR. In many cases, wet season monitoring was conducted in February and/or March, and the turnaround for routine laboratory reporting did not allow for inclusion of these data in the AMRs. To resolve this concern, Water Board staff are considering revising the Coalition Group and the Individual Discharger MRPs during the Conditional Waiver extension process to address this issue. The proposal would require the submittal of two reports, a report in the early winter representing irrigation season monitoring, and one in early summer representing wet season monitoring.

Early Season Monitoring in 2004

Many of the Coalition Groups did not conduct monitoring at the sites listed in their MRPPs prior to June 2004. Some participants expressed concern that monitoring prior to approval of their MRPPs by the Water Board would not be appropriate. At this point, eight Coalition Groups have received MRPP approvals, some with conditions, so this should not be a concern for 2005 irrigation season monitoring events for them.

B. Coalition Group AMRs

Seven of the eight Coalition Groups with approved MRPPs have submitted their AMRs by the 1 April 2005 deadline, and they have been distributed to Water Board staff members for a thorough review. The status of the reviews for Coalition Groups is discussed below.

1. Westside San Joaquin River Watershed Coalition

Westside San Joaquin River Watershed Coalition (Westside Coalition) submitted their AMR to the Water Board on 1 April 2005. Initial review of the data indicates that there are impacts to water quality in the Westside Coalition area and follow-up monitoring to identify sources and/or improvements in management practices will need to be considered. The Westside Coalition has been collaborative with the Water Board in selection of monitoring sites, and responsive to requests for changes for Communication Reports timing that have been made. The Water Board will make suggestions for improvements on the format of the AMR as well, but Westside Coalition has been responsive and cooperative. Details regarding the status of the AMR review are described below.

Westside Coalition is comprised of an area primarily on the western side of the San Joaquin River from the Stanislaus River on the north to 10 miles south of Mendota on the South. This area covers approximately 550,000 acres and includes irrigated agriculture as well as private, state and federal wetland areas. Counties within the Coalition area include the Stanislaus, Merced, Madera and Fresno Counties. Water bodies that are 303d listed within the Coalition area include Del Puerto Creek, Grassland Marshes, Ingram/Hospital Creek, Mendota Pool, Mud Slough, Newman Wasteway, Orestimba Creek, Panoche Creek, Salt Slough, and the San Joaquin River. Waterbodies are listed for chlorpyrifos, diazinon, conductivity/salt, selenium, boron, pesticides, unknown toxicity, azinphos methyl, DDE, Group A Pesticides, DDT and mercury.

Irrigation Season Monitoring: The Westside Coalition proposed to monitor 19 core sites throughout their coalition to characterize irrigation return flows. Sampling was conducted within both the irrigation season and the dormant season. Within the 2004 irrigation season, 17 of these sites were sampled in two sampling events for July and August. Two sites did not have adequate flow and subsequently were not sampled. From September to January 2005, each of the 19 sites were sampled, or sampling was attempted for five consecutive monthly events. Only four sites that discharge from the wetlands were monitored for toxicity and pesticides from September through January. Pesticide analyses included organophosphates, organochlorines, carbamates, pyrethroids and herbicides.

Data acquired within the July-August irrigation season suggested three instances of water column toxicity. The AMR reports that two July samples exhibited toxicity to *Ceriodaphnia dubia* (water flea) at Salado Creek and Orestimba Creek. The August sampling event indicated toxicity in to water flea at Del Puerto Creek. A Toxicity Identification Evaluation (TIE) was performed on the July Salado Creek sample, which indicated that the probable cause was a non-polar organic compound. The site was re-sampled on 16 July 2004, and no toxicity was observed. Several pesticides, including diazinon, dimethoate, prowl, and trifluralin were detected in the sample collected on July 6. Communication reports detailing the toxic event and the follow-up activities were transmitted to the board in a timely manner.

The July sample collected at Orestimba Creek and the August sample collected at Del Puerto Creek exhibited 100% mortality to water flea. No TIE was performed and the sites were not re-sampled (prior to the next scheduled sampling event in August). No communication report was issued for these events. Pesticides detected in the Orestimba Creek sample included Dimethoate, Prowl, Parathion-methyl, Trifluralin, and Chlorpyrifos.

Dormant Season Monitoring: The four sites that were monitored for toxicity and pesticides during monthly sampling events from September 2004 through January 2005 included San Joaquin River at Lander Avenue, Mud Slough upstream from the San Luis Drain, Salt Slough at Lander Avenue, and Los Banos Creek at Highway 140. Four occurrences of toxicity were observed for these samples.

The sample collected at San Joaquin River at Lander Avenue exhibited 40% reduction in cell growth to *Selenastrum* (algae). A dilution series was performed, and showed no significant reduction in growth at any concentration. No re-sample, or TIE was conducted, although a Communication Report was submitted on 8 October 2004.

The samples collected 12 October at Mud Slough, Salt Slough and Los Banos Creek all exhibited marginal toxicity to water flea. The sample from Mud Slough exhibited 60% survival, and was not re-tested. The samples at Salt Slough and Los Banos Creek exhibited lower survival rates, but were diluted and re-tested, and did not exhibit toxicity at any concentration. No re-sampling or TIE was conducted. A Communication Report was submitted on 3 November 2004.

Rain Event Monitoring: Fifteen of the nineteen proposed sites were sampled for water column toxicity during rain events in December 2004 and January 2005. Six sites, including Hospital Creek, Ingraham Creek, Del Puerto Creek, Marshall Road Drain, Newman Wasteway and Salt Slough exhibited toxicity to algae. During the same monitoring events, two sites exhibited toxicity to water flea, including

Hospital Creek and Del Puerto Creek. A TIE was conducted on the Hospital Creek sample. Pesticides identified in the water sample included Simazine, Diazinon, Prowl, and Trifluralin. The pesticides identified in the Del Puerto Creek water sample were Simazine, Prowl, and Diazinon. There were no follow-up activities conducted at Marshall Road and Newman Wasteway, however Simazine was detected in both water samples.

Sediment Toxicity Monitoring: Sediment samples were collected on 13 September 2004 at 14 of the proposed sites. Two samples (Ingram Creek and Orestimba Creek) exhibited 0% and 53% survival, respectively. Other samples did not exhibit significant toxicity.

Water Board staff is continuing to conduct a review of the Westside AMR, which will include existing monitoring data from other programs, such as the Water Board SWAMP program. Review findings will be reported when it is complete.

TABLE 1
SUMMARY OF REPORTING/FOLLOW-UP WITH TOXICITY
WESTSIDE WATER QUALITY COALITION
Updated 6/2/05

Sample Date	Location	Toxicity Species	Result	Com Report?	Dilution Performed	TIE Conducted	TIE Result	Comments	Resampled?	Resample Results
08/10/04	Del Puerto Creek Near Cox Road	Ceriodaphnia dubia (flea)	0% Survival	Yes	Yes	No		Chlorpyrifos detected	No	NA
07/06/04	Salado Creek near Olive Avenue-	Ceriodaphnia dubia (flea)	0% Survival	Yes	Yes	Yes	non-polar organic	Diazinon, dimethoate, prowl and trifluralin detected	Yes	No persistence
07/6/04	Orestimba Creek at Highway 33	Ceriodaphnia dubia (flea)	0% Survival	Yes	Yes	No		Dimethoate, Prowl, Parathion-methyl, Trifluralin, Chlorpyrifos detected	No	NA
09/14/04	San Joaquin River at Lander Avenue	Selanastrum (algae)	40% Reduced Growth	Yes	Yes	No			No	NA
10/11/04	Ingram Creek at River Road	Hyalella (sediment toxicity)	0% Survival	Yes	No	No			No	NA
10/11/04	Orestimba Creek at Highway 33	Hyalella (sediment toxicity)	52.5% Survival	Yes	Not needed	No			No	No
10/12/04	Los Banos Creek at Highway 140	Ceriodaphnia dubia (flea)	15% Survival	Yes	Yes	No			No	NA
10/12/04	Salt Slough at Lander Avenue	Ceriodaphnia dubia (flea)	45% Survival	Yes	Not needed	No			No	NA
10/12/04	Mud Slough Upstream of Lander Ave	Ceriodaphnia dubia (flea)	60% Survival	Yes	Not needed	No			No	NA

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Sample Date	Location	Toxicity Species	Result	Com Report?	Dilution Performed	TIE Conducted	TIE Result	Comments	Resampled?	Resample Results
12/28/04	Newman Wasteway Near Hills Ferry Rd.	Selenastrum (algae)	42% Reduced Growth	Yes	Not needed	No		Simazine detected	No	NA
12/28/04	Salt Slough at Sand Dam	Selenastrum (algae)	42% Reduced Growth	Yes	Not needed	No			No	NA
12/29/04	Del Puerto Creek at Highway 33	Ceriodaphnia dubia (flea)	9% survival	Yes	Yes	Yes	Non-polar organic	Diazinon detected	No	NA
12/29/04	Hospital Creek at River Rd.	Ceriodaphnia dubia (flea)	55% survival	yes	Yes	No			No	NA
12/29/04	Del Puerto Creek at Highway 33	Selenastrum (algae)	97% Reduced growth	yes	Yes	No		Simazine detected	No	NA
12/29/04	Hospital Creek at River Rd.	Selenastrum (algae)	49% Reduced Growth	yes	Yes	No		Simazine detected	No	NA
12/29/04	Ingram Creek at River Rd.	Selenastrum (algae)	96% Reduced Growth	yes	Yes	No		Simazine detected	No	NA
1/8/05	Marshall road at River Rd.	Selenastrum (algae)	47% Reduced Growth	Yes	No	No			No	NA
02/15/05	Orestimba Creek at Highway 33	Ceriodaphnia dubia (flea)	70% Survival	Yes	Not needed	No			No	NA
02/15/05	Los Banos Creek at Highway 140	Ceriodaphnia dubia (flea)	0% Survival	Yes	Yes	No				NA
02/15/05	Hospital Creek at River Road	Selanastrum (algae)	83% Reduced Growth	Yes	No	No			No	NA
02/15/05	Ingram Creek at River Road	Selanastrum (algae)	82% Reduced Growth	Yes	No	No			No	NA
2/15/05	Marshall Rd. Drain at River Rd.	Selenastrum (algae)	48% Reduced Grown	Yes	No	No			No	NA
2/15/05	Ingram Creek at River Rd.	Pimephales promelas (minnow)	65% survival	Yes	No	No			No	NA
2/15/05	Orestimba Creek at River Rd.	Pimephales promelas (minnow)	65% survival	Yes	NO	No			No	NA
2/15/05	Los Banos Creek at China Camp Road	Pimephales promelas (minnow)	40% survival	Yes	Yes	No			No	NA

2. Sacramento Valley Water Quality Coalition

Sacramento Valley Water Quality Coalition (SVWQC) submitted their AMR to the Water Board on 1 April 2005. Initial review of the data raises concern about the selection of monitoring sites, and also

indicates that there are impacts to water quality in the SVWQC area. Follow-up monitoring to identify sources and/or improve management practices will need to be considered. All monitoring sites that provide evidence of toxicity, whether they are approved or exploratory, will need to be further investigated, rather than eliminated as routine monitoring sites as the SVWQC has proposed. The SVWQC will also need to make better efforts to be communicative with the Water Board for issues such as timing of Communication Reports and appropriate follow-up to toxicity results. Details regarding the SVWQC AMR review to date are described below.

SVWQC covers approximately 2,145,000 acres including all or portions of the following counties: Amador, Butte, Colusa, El Dorado, Lassen, Modoc, Lake, Napa, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Solano, Sutter, Tehama, Yolo, and Yuba. The SVWQC is divided into ten sub-watersheds: Pit River, Shasta-Tehama, Colusa Basin, Placer-Nevada-South Sutter-North Sacramento, Butte-Yuba-Sutter, Solano-Yolo, Upper Feather River, Lake-Napa, El Dorado County, and the Sacramento-Amador.

Waterbodies that are listed in the CWA Section 303(d) as impaired for the following constituents include the following:

Acid Mine Drainage: Little Backbone Creek, Spring Creek, Willow Creek

Arsenic: Pit River

Azinphos-methyl: Colusa Basin Drain

Cadmium: Horse Creek, Little Backbone Creek, Spring Creek, Town Creek, West Squaw Creek

Carbofuran: Colusa Basin Drain

Chlorpyrifos: Arcade Creek, Chicken Ranch Slough, Strong Ranch Slough

Copper: Arcade Creek, Dolly Creek, Horse Creek, Humbug Creek, Little Backbone Creek, Little Cow Creek, West Squaw Creek, Little Grizzly Creek, Spring Creek, Town Creek, Willow Creek

Diazinon: Arcade Creek and Lower Bear River, Butte Slough, Chicken Ranch Slough, Colusa Basin Drain, Elder Creek, Lower Feather River, Jack Slough, Morrison Creek, Natomas East Drain, Sacramento River, Strong Ranch Slough, Sutter Bypass

Fecal coliform: Clover Creek, Kanaka Creek, Oak Run Creek, South Cow Creek, Wolf Creek

Group A Pesticides: Chicken Ranch Slough, Colusa Basin Drain, Lower Feather River

Lead : Horse Creek, Little Cow Creek, Town Creek, West Squaw Creek

Malathion: Colusa Basin Drain

Mercury: Lower American River, Bear Creek, Upper Bear River, Cache Creek, Elder Creek, Lower Feather River, Harley Gulch, Humbug Creek, James Creek, Putah Creek, Sacramento River, Sulphur Creek

Methyl parathion : Colusa Basin Drain

Molinate : Colusa Basin Drain

Nickel: James Creek

Nutrients: Pit River

Organic Enrichment/Low DO: Pit River

PCB's: Natomas East Main Drain

Sedimentation: Fall River, Humbug Creek

Unknown toxicity: Lower American River, Cache Creek, Colusa Basin Drain, Deer Creek, French Ravine

Zinc: Dolly Creek, Horse Creek, Humbug Creek, Little Backbone Creek, Little Cow Creek, Little Grizzly Creek, Spring Creek, Town Creek, West Squaw Creek, Willow Creek

The SVWQC submitted a limited amount of data from the 2004 irrigation season monitoring and more information for the two-storm season monitoring events in the AMR. Irrigation season samples that resulted in toxicity were not tabulated, nor was there any discussion regarding the results in the narrative of the report. The data did exist in the form of the certified laboratory results as appendices to the AMR.

Irrigation season monitoring included three conditionally approved monitoring sites, three RWQCB recognized supplemental sites, and four monitoring sites that have not received RWQCB approval. The 2004 irrigation season monitoring included analysis for general constituents and water column toxicity. No sediment toxicity samples were collected. Data for the 2005 storm season monitoring included data for one storm event, which included sixteen monitoring sites, fourteen of which had been approved by the Water Board.

Chemical and pesticide analyses as well as water column toxicity were performed for the one storm event included in the AMR. No sediment toxicity samples were collected. Data from the second storm event was not included in the SVWQC AMR submittal for lack of sufficient time to perform data analysis.

Irrigation Season Monitoring: Although the information is not tabulated nor discussed in the narrative of the AMR, Water Board staff has found that water column toxicity conducted during the 2004 irrigation season indicated nine toxic events. Six samples were collected on 20 August 2004 and all resulted in algae toxicity. These samples were collected at Z Drain –Dixon RCD, Tule Canal @ I-80, Toe Drain @ NE corner of Little Holland Tract, Cache Creek, Ridge Cut, and Willow Slough. Samples collected on 21 September 2004 resulted in toxicity to the fathead minnow, and one other sample resulted in algal toxicity (Cache Creek). Two sites were re-sampled on 29 September 2004, and neither sample exhibited persistence in toxicity. No Communication Reports were submitted to the Water Board for the 2004 irrigation season monitoring.

Storm Season Monitoring: Water column toxicity conducted during the one 2005 storm season monitoring resulted in three toxic samples collected on 26 January 2005. A sample collected at Burch Creek @ Woodson Ave Bridge indicated a 20 percent survival to water flea. Diazinon was detected at 0.316 ug/L in the sample. A follow-up toxicity sample was taken on 2 February 2005. Persistence was clearly noted with the result of zero percent survival. A TIE was not conducted in either instance of observed toxicity.

A sample collected at Z Drain – Dixon RCD in January resulted in 55 percent survival to water flea, but persistence was not repeated in the resample collected on 2 February 2005. The initial sample collected at Pine Creek resulted in a 46 percent reduction to algal cell growth. Chlorpyrifos (0.0141 ug/L) and diazinon (0.227 ug/L) were detected in the sample. A follow-up sample collected on 2 February 2005

did not indicate persistence in toxicity. Communication reports were submitted to the RWQCB by the SVWQC on 3 February 2005 regarding the toxicity observed in samples collected on 26 January 2005. Communication reports regarding follow-up samples taken on 2 February 2005 were submitted on 9 February 2005.

The SVWQC did not conduct sediment toxicity prior to their AMR submittal. They have indicated their intentions to conduct sediment toxicity monitoring twice during the 2005 irrigation season only.

Although the SVWQC often refers to 27 sites that they include in their monitoring, only 14 sites have been approved, or conditionally approved, by the Water Board. Water Board staff is continuing to conduct a review of the SVWQC, which will include evaluation of data from UC Davis and other sources, and will finalize comments in writing when completed.

TABLE 2
SUMMARY OF REPORTING/FOLLOW-UP WITH TOXICITY
SACRAMENTO VALLEY WATER QUALITY COALITION
Updated as of 6/2/05

Sample Date	Location	Toxicity Species	Result	Com Report?	Dilution Performed	TIE Conducted	TIE Result	Comments	Resampled?	Resample Results
8/20/04	Z Drain – Dixon RCD	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA
8/20/04	Tule Canal at I-80	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA
8/20/04	Toe Drain at NE Corner of Little Holland Tract	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA
8/20/04	Cache Creek	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA
8/20/04	Willow Slough	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA
8/20/04	Ridge Cut	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA
9/21/04	Z Drain – Dixon RCD	Pimephales promelas (minnow)	77.5 % survival	None in AMR	Not Required	No			Yes	No persistence indicated
9/21/04	Toe Drain at NE Corner of Little Holland Tract	Pimephales promelas (minnow)	65% survival	None in AMR	Not Required	No			Yes	No persistence indicated
9/21/04	Cache Creek	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA

Sample Date	Location	Toxicity Species	Result	Com Report?	Dilution Performed	TIE Conducted	TIE Result	Comments	Resampled?	Resample Results
1/26/05	Burch Creek At Woodson Ave Bridge	Ceriodaphnia dubia (flea)	20% survival	Yes	Not required	No		Diazinon at 0.315 ppb	Yes	Persistence with 0% survival in resample
1/26/05	Pine Creek at Nord – Gianella Rd	Selenastrum (algae)	46% reduction in cell growth	Yes	Not required	No		Chlorpyrifos at 0.0141 ppb and diazinon at 0.227 ppb	Yes	Resample indicated 138% cell growth
1/26/05	Z Drain – Dixon Road	Ceriodaphnia dubia (flea)	55% survival	Yes	Not required	No			Yes	No persistence indicated

3. San Joaquin and Delta Coalition

San Joaquin and Delta Coalition (SJD Coalition) submitted their AMR to the Water Board on 1 April 2005. Initial review of the data indicates that there are impacts to water quality in the SJD Coalition area and follow-up monitoring to identify sources and/or improve management practices will need to be considered. The SJD Coalition has been collaborative with the Water Board in submittal of monitoring data in SWAMP comparable format, and responsive to requests for changes for Communication Reports timing that have been made. Details regarding the status of the AMR review are described below.

The San Joaquin County and Delta Water Quality Coalition includes San Joaquin County and the eastern portion of Contra Costa County as well as a small area in the northeastern portion of Alameda County. This coalition comprises 558,575 irrigated acres and contains three major tributaries to the San Joaquin River – the Stanislaus, Mokelumne, and Calaveras Rivers. Water bodies that have been 303d listed included the lower Stanislaus (unknown toxicity, mercury, diazinon, and Group A pesticides), the San Joaquin River (unknown toxicity, boron, mercury, conductivity, chlorpyrifos, DDT, diazinon and Group A pesticides).

The Coalition MRPP is proposing to have six core sites at which sampling would continue through the life of the monitoring plan, and a series of rotating sites sampled on a two-year calendar for each rotation. The AMR indicates that six sites were sampled in two sampling events in the 2004 irrigation season and were tested for general constituents, toxicity analysis, diazinon, chlorpyrifos, esfenvalerate, permethrin, and lambda-cyhalothrin.

During the 2004 irrigation season there were four instances of water column toxicity. Two of these were collected on August 24 and indicated algal toxicity at the Mokelumne River-Bruella Road and Little John's Creek-Jack Tone Road. The Coalition believes that the data is qualified because of problems with the laboratory analysis, but this information remains to be confirmed. The sites were not resampled based on the toxicity test results, although routine sampling in September did not indicate repeat toxicity to algae. No TIEs were conducted, although a Communication Report was submitted.

The second sampling event on September 21 did indicate significant toxicity to *Ceriodaphnia dubia* (water flea) at the Mokelumne River-Bruella Road site, and sediment toxicity was indicated at the Lone Tree Creek-Jack Tone Road site. A TIE was performed for the Mokelumne River sample and the site was also re-sampled. A Communication Report was submitted to the Water Board on 1 October 2005 for the Mokelumne River site. A TIE and a resample were initiated for the water column toxicity.

There were concerns regarding the laboratory performance for method detection and surrogate recoveries of certain pesticides, including chlorpyrifos and cypermethrin, although all coalition samples did show non-detect for all pesticide analyses. The Coalition has discussed the fact that they will be selecting an alternative laboratory for the 2005 pesticide analyses.

Water Board staff is continuing to conduct a review of the San Joaquin and Delta Coalition AMR, and will finalize comments in writing when the review is completed. Final review will include evaluation of data collected by UC Davis, and Water Board SWAMP program.

TABLE 3
SUMMARY OF REPORTING/FOLLOW-UP WITH TOXICITY
SAN JOAQUIN COUNTY & DELTA WATER QUALITY COALITION
Updated 2 June 2005

Sample Date	Location	Toxicity Species	Result	Com Report?	Dilution Performed	TIE Conducted	TIE Result	Comments	Resampled?	Resample Results
8/24/04	Mokelumne River at Bruella road	Selenastrum (algae)	Significant Reduction	Yes	No	No			No	NA
8/24/04	Little Johns Creek @ Jack Tone Rd.	Selenastrum (algae)	Significant Reduction	Yes	No	No			No	NA
9/21/04	Mokelumne River @ Bruella Rd.	Ceriodaphnia dubia (flea)	5% Survival	Yes	No	Yes	Inconclusive		Yes	Toxicity was not persistent
	Lone Tree Creek @ Jack Tone Rod	Hyaella (sediment toxicity)	Reduced growth	No	No	No	NA		No	NA

4. East San Joaquin Water Quality Coalition

East San Joaquin Water Quality Coalition (ESJWQC) submitted their AMR to the Water Board on 1 April 2005. Initial review of the data indicates that there are impacts to water quality in the ESJWQC area and follow-up monitoring to identify sources and/or improve management practices will need to be considered. The ESJWQC has been collaborative with the Water Board in submittal of monitoring data in SWAMP comparable format, and responsive to requests for changes for Communication Reports timing that have been made. Details regarding the status of the AMR review are described below.

The East San Joaquin Water Quality Coalition includes farmland encompassed by the lower Stanislaus, Tuolumne and Merced River subwatersheds, which are primary tributaries to the east side of the San Joaquin River. The Coalition coverage area comprises 660,000 acres of irrigated lands, which fall into the Stanislaus, Merced, Calaveras, Mariposa and Tuolumne Counties. Water bodies that are 303d listed include the Harding Drain, Merced River, McSwain Reservoir to the San Joaquin River, Mud Slough, Newman Wasteway, Salt Slough, lower Stanislaus River, Tuolumne River and the San Joaquin River. The constituents of concern for these water bodies include Unknown Toxicity, boron, conductivity, chlorpyrifos, DDT, diazinon, Group A Pesticides, mercury and ammonia.

Four sites were sampled in three sampling events within the 2004 irrigation season. The sites were sampled for general constituents, toxicity analyses, diazinon, chlorpyrifos, esfenvalerate, permethrin, lambda-cyhalothrin, and cypermethrin. Two additional monitoring sites had been proposed in the Coalition MRPP, but were dry during the sampling events. The Coalition is proposing to use all six sites as core sites for sampling throughout the life of the monitoring plan, with a series of rotating sites sampled on a two-year calendar for each rotation.

Data suggested five separate instances of water column toxicity during the 2004 irrigation season monitoring. This included a July sample at the Merced River-Santa Fe Drive for *Ceriodaphnia Dubia*. The Coalition did not resample the site based on toxicity, nor was a TIE conducted. The routine August sampling event indicated a repeat of toxicity at the same site as well as toxicity for *pimephales* (fathead minnow). The same sampling round indicated sediment toxicity at Duck Slough-Gurr Road. A second sample was collected at the Merced River site, triggered by the August toxicity results, and a TIE was also conducted on the August sample. The second sampling did not indicate continued toxicity, and the TIE was inconclusive. The third sampling event in September indicated algae toxicity at Duck Slough, although there was not resampling and a TIE was not conducted.

The second sampling event on 31 August 2004, revealed two sites displaying toxicity; Merced River @ Santa Fe Drive at 45% survival for water flea and 65% for fathead minnow, and Duck Slough @ Gurr Road showed 34% survival for *Hyaella* (sediment toxicity). A second sample was collected at the Merced River site and a TIE was initiated on water flea results. By the time the TIE was conducted, the sample no longer displayed toxicity and the results were inconclusive. The second sample at the site did not display toxicity to water flea indicating that the toxicity was not persistent. The sediment toxicity analysis at the Duck Slough site displayed 34% survival in comparison with the control sample at 95%. Growth of the organism was not affected. It is not indicated whether a second sample was collected or whether a TIE was initiated. The third sampling event on 23 September 2004 showed a reduction of the growth of algae at Duck Slough site. A TIE was not performed and the site was not re-sampled. The lack of follow-up for this sample is explained to be an error in reporting by the laboratory.

A Communication Report was submitted on 10 September 2004, describing three of the four toxic events that occurred in the first and second sampling event. A separate Communication Report was submitted for the September sediment toxicity result.

There were concerns regarding the laboratory performance for method detection and surrogate recoveries of certain pesticides, including chlorpyrifos and cypermethrin, although all coalition samples

did show non-detect for all pesticide analyses. The Coalition has discussed the fact that they will be selecting an alternative laboratory for the 2005 pesticide analyses.

Water Board staff is continuing to conduct a review of the East San Joaquin Water Quality Coalition AMR, and will finalize comments in writing when the review is completed.

TABLE 4
SUMMARY OF REPORTING/FOLLOW-UP WITH TOXICITY
EAST SAN JOAQUIN WATER QUALITY COALITION
Updated 2 June 2005

Sample Date	Location	Toxicity Species	Result	Com Report?	Dilution Performed	TIE Conducted	TIE Result	Comments	Resampled?	Resample Results
7/31/04	Merced River at Santa Fe	Ceriodaphnia dubia (flea)	75% Survival	Yes	No	No	NA		No	NA
8/31/04	Merced River at Santa Fe	Ceriodaphnia dubia (flea)	45% Survival	Yes	No	Yes	Inconclusive	.	Yes (9/07/04)	No Persistence
8/31/04	Merced River at Santa Fe	Pimpehales promelas (minnow)	65% Survival	No	No	Yes	No		No	NA
8/31/04	Duck Slough-Gurr Road	Sediment Toxicity	34% Survival	No	No	No	NA	Chlorpyrifos detected at 0.045 ppb and trifluralin at 0.34 ppb	No	NA
09/29/04	Duck Slough-Gurr Road	Selanastrum (algae)	~27% reduced growth	Yes	No	No	NA	Esfenvalerate detected at 0.05 ppb	No	NA

4. California Rice Commission

The California Rice Commission Coalition (CRC) submitted their AMR to the Water Board on 1 April 2005. Initial review of the data indicates that there are impacts to water quality in the CRC area and follow-up monitoring to identify sources and/or improve management practices will need to be considered. The CRC has been responsive to requests for changes for Communication Report timing. Details regarding the status of the AMR review are described below.

The California Rice Commission (CRC) serves as a crop-specific coalition for rice producers in the Butte, Colusa, Glenn, Placer, Sacramento, Sutter, Tehama, Yolo and Yuba counties, covering 500,000 acres of irrigated lands. The acreage represented by the CRC lies within the geographic area also served by the Sacramento Valley Water Quality Coalition and the water bodies monitored by the CRC carry drainage from other crops, wetland areas and land uses.

The water bodies that are 303d listed in the Coalition coverage area includes Bear River, Lower (Diazinon); Butte Slough (Diazinon); Colusa Basin Drain (Azinphos-methyl, Carbofuran/Furadan,

Diazinon, Group A Pesticides, Malathion, Methyl Parathion, Molinate/Ordram and Unknown Toxicity); Feather River, Lower (Diazinon, Group A Pesticides, Unknown Toxicity); Jack Slough (Diazinon); Natomas East Main Drainage Canal (Diazinon, PCBs); Sacramento River (Red Bluff to Knights Landing) (Unknown Toxicity); Sacramento River (Knights Landing to Delta) (Diazinon, Unknown Toxicity); Sacramento Slough (Diazinon); and Sutter Bypass (Diazinon). Many of the pesticides (carbofuran, methyl parathion, diazinon, for example) are not currently used on rice fields. Group A pesticides consist of chlorinated hydrocarbons that are no longer in use, but could be absorbed to sediment in runoff from fields.

The CRC has a Rice-specific ILP MRP issued on 18 November 2004, and they have submitted their Coalition MRPP, which was approved by the Executive Officer of the Central Valley RWQCB. The CRC has five monitoring sites, one of which rotates annually. The five sites were sampled twice, during September and October 2004. Sites were sampled for general constituents, toxicity analysis, and pesticides lambda cyhalothrin and zeta cypermethrin.

During the 2004 season a total of 30 toxicity tests (10 fish, 10 water flea and 10 algae) were conducted. Three incidents of algae water column toxicity were detected. September sampling results indicated reduced algae growth in the Colusa Basin Drain (south of Highway 20 and west of Knight's Landing). The CRC notified Water Board staff in an email communication, however follow-up sampling and TIEs were not conducted. In October 2004, algae growth reduction was again observed in Sacramento Slough. Re-sampling did not occur and no TIEs were initiated. Winter 2005 sampling was not included in the 2004 annual monitoring report. Communication reports received thus far in 2005 indicate that the CRC has begun to initiate re-sampling when toxicity is found and has initiated a TIE for algae growth reduction found in March 2005, as required in the rice MRP and QAPP. The 2004 monitoring results showed that pesticide analysis for pyrethroids, lambda cyhalothrin and zeta cypermethrin were non-detect at all five sites. Water Board staff review also found a few water samples with slightly low pH and dissolved oxygen levels as compared to the Basin Plan requirements, however Water Board staff is still reviewing field log entries to confirm this data.

Water Board staff is continuing to conduct a review of the California Rice Commission AMR and will finalize comments in writing, as well as suggestions for continued monitoring and follow-up to samples that indicate toxicity, when the review is completed.

5. South San Joaquin Valley Water Quality Coalition

South San Joaquin Valley Water Quality Coalition (SSJWQC) submitted their AMR to the Water Board on 1 April 2005. There is a concern that the SSJWQC is not adequately serving as a coordinator of monitoring information and providing an overview evaluation. There are four sub-watersheds in the SSJWQC, and four separate and distinct AMRs were submitted by the 1 April 2005 deadline. The SSJWQC will need to consider options for better coordinating and evaluating the monitoring and assessment process in order to fully function as a coalition. Initial review of the data indicates that there are impacts to water quality in the SSJWQC area. Follow-up monitoring to identify sources and/or improve management practices will need to be considered. The SSJWQC will also need to make better efforts to be communicative with the Water Board for issues such as timing of

Communication Reports and appropriate follow-up to toxicity results. Details regarding the SSJWQC AMR review to date are described below.

The Southern San Joaquin Valley Water Quality Coalition (SSJWQC) is comprised of the Kings, Kaweah, Tule, and Kern River Sub-Watersheds. These Sub-watersheds encompass the entire Tulare Lake Basin and consists of approximately 4,400,000 acres of irrigated lands. The SSJWQC has submitted four separate AMRs to address the ILP MRP monitoring conducted for the Coalition, and there is not a consistent approach for the four different reports, resulting in the need for a separate and unique review of each Sub-Watershed Report.

- a. Kings River Subwatershed. Four monitoring sites were proposed for the Kings River subwatershed for which two monitoring events occurred during the 2004 irrigation season and two during the storm season of 2005 (January and February). Two sediment samples were also collected in October 2004. Surface water samples were monitored for general physical parameters, toxicity and other constituents such as pH, dissolved oxygen and bacteria, in accordance the subwatershed MRPP.

Toxicity was demonstrated in two sampling events (July and August) for algal growth at all four sites. Resampling did not occur and no TIEs were initiated. The Communication Report was sent by the Kings River Subwatershed Group to the Rancho Cordova of the Water Board in February to discuss the toxicity of these eight sample results.

- b. Kaweah River Subwatershed. Four monitoring sites were proposed in the subwatershed MRPP. One irrigation season monitoring event occurred for these sites, as well as two monitoring events during the January and February 2005 storm season. All samples were monitored for toxicity, general physical parameters, dissolved oxygen, pH and bacteria, in accordance with the sub-watershed MRPP.

One sample collected in July at the Cottonwood Creek site, downstream of the Stone Corral Irrigation District return to irrigation water exhibited toxicity to fathead minnow. The sediment samples collected in October exhibited toxicity in three of the four sample locations. In all instances, resampling did not occur, nor was a TIE conducted or a Communication Report submitted to the RWQCB.

- c. Tule River Sub-watershed. The Tule River Sub-watershed proposed six monitoring sites tow of which were sampled twice during the irrigation water delivery season, and once in January during the storm season. Samples were monitored for toxicity, general physical parameters, dissolved oxygen, pH, and bacteria, in accordance with the subwatershed MRPP.

Dissolved oxygen (DO) concentrations during the July and August monitoring events at the Woods Central monitoring site on the Tule River, indicated low DO concentrations of 4.2 mg/L and 3.3 mg/L, respectively. Both were below the minimum of 5.0 mg/L, which is established in the Tulare Lake Basin Water Quality Control Plan. A Communication report was not submitted and re-sampling did not occur.

One sample collected in August 2004 indicated sediment toxicity, which was reported in a Communication Report to the RWQCB in December. Also during the August sampling event, the McCarthy Check Site on the Tule River exhibited toxicity to algae. In all instances, where toxicity was exhibited or a water quality objective was exceeded, resampling did not occur, nor was a TIE conducted. The Tule River Sub-watershed Group submitted one Communication Report, briefly describing sediment toxicity, but the report was submitted significantly later than the toxic event, making it impractical for the Water Board to prescribe any follow-up.

- d. Kern River Subwatershed. Two monitoring sites were proposed for the Kern River Subwatershed. One monitoring event occurred during the 2004 irrigation season, and one during the storm season in February 2005. Samples were analyzed for toxicity, general physical parameters, dissolved oxygen, pH, and bacteria, in accordance with the sub-watershed MRPP. The results do not indicate that any toxicity was exhibited or water quality objectives were exceeded.

Water Board staff is continuing to conduct a review of the SSJRWQC AMR and will finalize comments in writing when the review is completed. Final review will include an evaluation of existing data that has been collected by the Water Board SWAMP and TMDL programs.

TABLE 5
SUMMARY OF REPORTING/FOLLOW-UP WITH TOXICITY
SOUTH SAN JOAQUIN WATER QUALITY COALITION
Updated 2 June 2005

Sample Date	Location	Toxicity Species	Result	Com Report?	Dilution Performed	TIE Conducted	TIE Result	Comments	Resampled?	Resample Results
7/6/04	Kings River @ Fresno Weir	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA
7/6/04	Kings River at Lemoore Weir	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA
8/9/04	Kings River at Lemoore Weir	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA
8/9/04	Kings River at Manning Ave.	Selenastrum (algae)	Significant Reduction	No	No	No			No	NA
10/14/04	Kings River at Lemoore Weir	Sediment Toxicity	82.5% survival	No	Not Required	No			No	NA
7/22/04	Kaweah River	Pimephales promelas	65% survival		Not Required	No			No	NA

INFORMATIONAL REPORT FOR
DISCHARGES FROM IRRIGATED LANDS
23 JUNE 2005 REGIONAL & STATE BOARD MEETING

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Sample Date	Location	Toxicity Species	Result	Com Report?	Dilution Performed	TIE Conducted	TIE Result	Comments	Resampled?	Resample Results
	Upstream of Oaks Basin	(minnow)		No						
7/22/04	Kaweah River Upstream of Oaks Basin	Ceriodaphnia dubia (flea)	85% survival	No	Not Required	No			No	NA
7/22/04	St. Johns River at Ben Maddox Way	Pimephales promelas (minnow)	80% survival	No	Not Required	No			No	NA
7/22/04	Stone Corral ID at Cottonwood Creek	Pimephales promelas (minnow)	45% survival	No	Not Required	No			No	NA
7/22/04	Cross Creek at Hwy 99	Sediment Toxicity	17.5% survival	No	Not Required	No			No	NA
8/10/04	Tule River at the Woods-Central Ditch Diversion	Sediment Toxicity	12.5% survival	No	Not Required	No			No	NA
8/10/04	Tule River at McCarthy Creek	Sediment Toxicity	42.5% survival	No	Not Required	No			No	NA
8/12/04	Main Drain	Sediment Toxicity	85% survival	No	Not Required	No			No	NA
2/10/05	Main Drain	Sediment Toxicity	75% survival	No	Not Required	No			No	NA

6. Root Creek Water District (Coalition)

The Root Creek Water District Coalition (RCWD) submitted a 'provisional' AMR to the Water Board on 1 April 2005. Information in the AMR does not include irrigation season monitoring, as the RCWD states that there is no runoff during irrigation season. Results that are reported for the wet weather season are incomplete and insufficient in required information to substantiate results, such as certified laboratory reports and quality control results. Improvement in monitoring, reporting and evaluation, as well as better efforts to be communicative with the Water Board when toxicity occurs will need to take place if the RCWD is to continue to operate as a coalition. A meeting will be held with the RCWD and the Water Board to discuss these issues. Details regarding the RCWD AMR review to date are described below.

The Root Creek Coalition consists of a 28,708 acres of irrigated lands located in the San Joaquin River Basin in the southeastern portion of Madera County in the San Joaquin Valley. The watershed is comprised of Little Dry Creek (extreme northern boundary), Root Creek, and the San Joaquin River (extreme southern boundary). The Root Creek Watershed Annual Monitoring Report was incomplete, and was submitted as 'Provisional'. The additional information has not been received to the Water Board as of 2 June 2005, although a meeting is being arranged with the Coalition Group and the Water Board to discuss the deficiencies.

The AMR does include partial documentation from three of the proposed four sites, with two storm-season-only sampling events conducted by Pacific EcoRisk (subcontractor) in January and February of 2005. The fourth site (MS3) was located adjacent to the San Joaquin River and was identified as dry during both sampling events. Large portions of the report are blank including the analytical results section, data interpretation section, field data sheets, sheets and the conclusions and recommendations section.

Samples were for general water quality parameters and toxicity testing. The January sampling event (Event 1) was conducted on 1 January 2005, and the date for Event 2 is unknown. No analytical results were included for the second storm-water sampling event. The AMR's Executive Summary states that the laboratory data for Event 2 will be incorporated into the final annual report, which has not been received by the Water Board as of 2 June 2005.

The results of toxicity testing for Event 1 found significantly reduced growth to *Selenastrum capricornutum* in the sample collected from MS4 (western terminus of Root Creek). A follow-up test was performed on the MS4 sample collected during Event 1. Significantly less than the Lab Control growth was again noted for *Selenastrum capricornutum*. No formal Communication Report was submitted, however an informational fax was sent to Water Board staff.

An ambiguous table within the report presents the results of the Event 2 toxicity. No toxicity was detected with the exception of a significant reduction to *Selenastrum capricornutum* in the sample collected from MS4. No laboratory data sheets are included for this Event. No Communication Report was submitted.

Water Board Staff will be meeting with the Root Creek Coalition regarding the report deficiencies, will continue to conduct a review and prepare a written summary of the evaluation, and other action as necessary.

TABLE 6
SUMMARY OF REPORTING/FOLLOW-UP WITH TOXICITY
ROOT CREEK WATER QUALITY COALITION
Updated 2 June 2005

Sample Date	Location	Toxicity Species	Result	Com Report?	Dilution Performed	TIE Conducted	TIE Result	Comments	Resampled?	Resample Results
01/07/05	Terminus of Root Creek	<i>Selenastrum</i> (algae)	Significant Reduction	No	No	No			Yes	Significant Reduction
Unknown	Terminus of Root Creek	<i>Selenastrum</i> (algae)	Significant Reduction	No	No	No			No	NA

8. Westlands Water District (Coalition)

Westlands Water District has not complied with the conditions of the Irrigated Lands Conditional Waiver, their NOA, nor with their own MRPP. Water Board staff will be meeting with the Westlands Coalition representative(s) and will consider appropriate action.

C. Individual Discharger AMRs

There were five Individual Dischargers that submitted AMRs, all of them water districts in an essentially contiguous section of the Central Valley. These were the Modesto, Turlock, Merced, South San Joaquin and Oakdale Irrigation Districts. The Irrigation Districts have been thorough and responsive to the commitments that were made in their individual MRPPs, and were timely in monitoring and report submittals. Water Board staff has not yet completed an evaluation of their individual monitoring data to ascertain compliance with water quality objectives, or compliance with the Conditional Waiver MRP for Individual Dischargers. It is recommended by Water Board staff that a water-district-specific MRP for the Irrigated Lands Conditional Waiver Program be prepared first, so that recommendations and changes to the monitoring currently being conducted by the Irrigation Districts can be more appropriate to the unique role that water districts have with irrigated agriculture.

D. Next Steps for Monitoring and Assessment

The Monitoring and Assessment Unit of the Irrigated Lands Conditional Waiver Program has performed the data review process thus far with the limited Water Board staff resources. All four Water Board staff members have been hired and all will be in the office by 15 June 2005. Training of new Water Board staff will be necessary and will take sometime. The ability of the Water Board to evaluate information from the Coalition Groups and Individual Dischargers, and to provide timely comment, will be improved when all Water Board staff resources are in place. The review that has been conducted thus far is nonetheless informative and Water Board staff will be able to make recommendations for source identification, additional monitoring locations, additional monitoring parameters or preparation of Management Plans in the near future.

The AMR review thus far has focused on the toxicity sample results, and follow-up to results of toxicity, as well as the timeliness of communication reporting and other information. Continued review will focus on the chemical analytical results, including pesticides and bacteriological analyses, quality control review, and an evaluation of the Coalition Group or Individual Discharger's assessments. Information from the UC Davis Phase II project, funded by the Water Board, as well as monitoring data from the Water Board SWAMP and TMDL Programs will be utilized for the final assessment and reports on the program. Collaborative efforts of the Coalition Groups will allow the Water Board to continue to explore measures to reduce or eliminate the impacts of irrigation water and stormwater on waters of the State.

PUBLIC OUTREACH AND COMPLIANCE

Water Board staff have been continuing the extensive education and outreach effort to maximize the amount of program information to growers and to increase member participation in coalition groups.

Public Outreach

The following outreach efforts have taken place since the April 2005 Water Board meeting.

On 22 April 2005, Bill Croyle and David Guy, Sacramento Valley Water Quality Coalition gave an informal presentations to the Agriculture Roundtable in El Dorado County. Margie Lopez-Read also attended. The brief presentation was followed by a lengthy question and answer session, and discussion involving the agriculture community, water district, county superintendents and local newspaper staff.

On 4 May 2005, Diana Messina gave an informal presentation on the Irrigated Lands Conditional Waiver Program to the California Certified Crop Advisor (CCA) Board Meeting in Sacramento. Approximately twenty certified crop advisers were present. This outreach effort resulted in further invitations for Water Board staff presentations to grower events, improved coordination with CCA's education and outreach efforts and the addition of a nutrient specialist from UC Davis to the Technical Issues Committee's proposed Nutrients Workgroup.

On 18 May 2005, Bill Croyle gave a formal presentation to the Regional Council of Rural Counties (RCRC) in Sacramento. Bill's presentation was an overview of the Conditional Waiver Program and a discussion of pending regulatory policy issues. Approximately 30 RCRC Board Members were in attendance.

On 24 May 2005, Diana Messina of the Water Board and Danny Merkley of the State Board gave presentations to the Mariposa County Board of Supervisors in Mariposa. Diana's presentation gave a basic overview of the Conditional Waiver Program and pending issues. Diana answered many of the County Supervisors' questions regarding the program. Danny presented CalEPA's efforts currently taking place to minimize regulatory overlap of environmental protection programs placed on the agricultural community.

Post Card Mailings

Water Board staff has completed the outreach efforts using the informational postcards. About 19,000 postcards were sent out to growers in the Central Valley Region. As these postcards were sent to the growers, Water Board staff notified the Department of Pesticide Regulation, and the appropriate Agricultural Commissioners and Coalition Groups. About 2,000 growers returned the self-addressed detachable postcards requesting further program information by mail. Irrigated Lands Program staff sent Newsletters, brochures, and other informational items to these growers.

Grower Participation

The percentage of grower participation within the various Coalition Groups and geographical areas of the Central Valley Region vary. Water Board staff is continuously updating information from Coalition Group representatives regarding the current group jurisdiction, irrigated lands acreage and grower participation. Current information, per Coalition Group, is shown in the table below for irrigated lands within the Central Valley Region.

Coalition Group	Total Group Irrigated Lands Acreage	Group Estimated Percent Participation	Estimated Acreage Not Covered By Waiver Program
Sac Valley Water Quality Coalition	2,145,000	60%	858,000
California Rice Commission	500,000	100%	0
Goose Lake Coalition Group	7300	TBD	TBD
East San Joaquin Water Quality Coalition	1,250,000*	TBD*	TBD*
San Joaquin County and Delta Coalition	545,000	85%	81,750
Westside San Joaquin River Watershed Coalition	334,000	87%	43,420
SSJWQCG (Tulare Lake Basin)	4,400,000	70%	1,320,000
Westlands Water District	570,000	75%	142,500
Root Creek Water District	26,000	70%	7,800

* Total irrigated acreage estimate from year 2000 Department of Water Resources data. Coalition Group to refine estimates after determining decrease in irrigated lands due to recent years of development.

Program Compliance and Enforcement Measures Taken

On 4 March 2005, under the Executive Officer's signature, the Water Board issued a California Water Code (CWC) Section 13267 letter to 88 growers in Yolo, Madera and Fresno Counties. This CWC Section 13267 letter for the Irrigated Lands Conditional Waiver Program was written in a manner to serve both as an additional educational tool to inform growers of their alternatives to meet CWC requirements and a requirement for the recipient to submit a technical report.

Issuance of the CWC Section 13267 letters was the initial step of the Water Board's overall effort to maximize program compliance while educating and informing growers of legal requirements. Sacramento and Fresno office staff are conducting one hundred percent follow-up on the recipients' requirement to submit a technical report on the description of their irrigated lands and the current status of compliance with CWC requirements. As of the end of May 2005, of the 88 letters sent, 62 technical reports were submitted, of which 51 stated they were members of coalition groups. Thirty-four of those 51 included proof of new membership in coalition groups that were dated after the date of the CWC Section 13267 letters. The remaining technical reports indicate that the growers do not believe they have runoff from their lands, not even during storm events. This is a common report that Water Board staff is receiving from many growers and agricultural commissioners in this area of the San Joaquin Valley.

At this time, Water Board staff proposes to inspect these sites and document the irrigation and drainage characteristics of the parcels. For lands where Water Board staff inspections and findings clearly

conclude that there is drainage to surface waters, Water Board staff proposes to continue enforcement activities on the landowners/operators indicating that coverage under a conditional waiver or filing for WDRs is their immediate responsibility to comply with the CWC. Water Board staff also proposes to continue enforcement activities for landowners/operators who did not respond to the 13267 letters.

Water Board staff's effort to identify landowners/operators of irrigated agricultural lands and develop a contact list of those not complying with the CWC is very resource intensive. Although the immediate increase in coalition group membership is clearly linked to the Board's initial issuance of formal enforcement letters, Water Board staff continues to receive no detailed response to their request for assistance in acquiring information to maximize conditional waiver participation and program success.

Focused Outreach and Compliance Activities

The next step the Public Outreach and Compliance Unit staff propose to take is to identify non-participating growers in the Upper Pit River Subwatershed, the San Joaquin Valley floor, and portions of Sutter, Butte and Yuba Counties.

The Goose Lake Coalition is in non-compliance with the Executive Officer's Notice of Applicability (NOA) for the Coalition Group due to failure to submit an MRP Plan and Annual Monitoring Report in a timely manner. Therefore, Water Board staff may propose to withdraw this NOA.

Similarly, the Westlands Water District is in non-compliance with their MRP Plan and Annual Monitoring Reporting requirements. The District failed to submit their MRP Plan by the 1 May 2005 deadline and their irrigation season and storm season monitoring results in an Annual Monitoring Report by 1 April 2005, as required. Water Board staff will be meeting with District representatives prior to determining if enforcement actions are necessary.

WATER BOARD STAFF CONTACTS FOR INFORMATION REPORT

Comments or questions regarding this Information Report should be directed to the following Water Board staff members:

Wendy Cohen at (916) 464-5817 or wcohen@waterboards.ca.gov

Margie Lopez-Read at (916) 464-4624 or mlopez-read@waterboards.ca.gov

Diana Messina at (916) 464-4828 or dmessina@waterboards.ca.gov