SAN JOAQUIN VALLEY DRAINAGE AUTHORITY

P O Box 2157 Los Banos, CA 93635
209 826 9696 Phone 209 826 9698 Fax

June 15, 2012

Pamela Creedon, Executive Officer
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA. 95670-6114

Subject: Westside San Joaquin River Watershed Coalition
Submittal of June 15, 2012 semi-annual monitoring report

Dear Pamela,

Attached is the June 15, 2012 semi-annual monitoring report as required under our Monitoring and Reporting Program Order No. R5-2008-0831. This report covers the non-irrigation season monitoring from September 2011 through February 2012.

Laboratory reports associated with this monitoring period are included electronically (on a CD) as Appendix C, along with associated electronic data deliverables (EDDs). Hard copies of the laboratory reports can be provided upon request.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment for violations.

If you should have any questions on the information submitted in this report, please give me a call directly at 559-582-9237.

Joseph C. McGahan
Watershed Coordinator
Westside San Joaquin River Watershed Coalition

San Joaquin Valley Drainage Authority

Westside San Joaquin River Watershed Coalition

Semi-Annual Monitoring Report

2011/12 Non-Irrigation Season Report
Assessment Monitoring Year

Covering the period: September 2011 through February, 2012
(Sampling Events 83 through 88)

June 15, 2012

Prepared by:
Summers Engineering, Inc.
Consulting Engineers
Hanford California

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SECTION 1: EXECUTIVE SUMMARY

This report covers the 2011/12 non-irrigation season sampling events beginning September 2011 through February 2012 (Event 83 through Event 88). In accordance with Monitoring Order No. R5-2008-0831, assessment monitoring was implemented in March of 2011 at all discharge sites and carried through February 2012 (the end of this reporting period). Assessment monitoring required that all discharge sites be tested for the full panel of pesticides, chemistry, and toxicity indicator species (see **Attachment 7**). Nineteen of the 26 monitoring sites within the Westside San Joaquin River Watershed Coalition (Westside Coalition) are located on streams that are dominated by summer agricultural drainage runoff and are often dry or have little flow outside of the irrigation season.

The 2011/12 non-irrigation season was classified as a dry hydrologic year type for the westside of the San Joaquin Valley. There were few significant storms during this reporting period, none of which produced sufficient runoff to collect storm samples. See **Section 3** for a discussion of measured rainfall. Assessment monitoring samples were collected at all sites containing sufficient water in accordance with the Westside Coalition's Monitoring and Reporting Plan (MRP – see MRP Order No. R5-2008-0831). Sediment samples were collected in September 2011, as scheduled. Sediment toxicity was observed at Blewett Drain, Hospital Creek, Ingram Creek, and Orestimba Creek (at Highway 33). Survival in all three samples was less than 80% of the control sample and those sediment samples from were tested for selected pesticides. See **Sections 8** and **9.**

Attachment 1 details the samples collected at each site during each sampling event. A summary of the monitoring results is presented in **Appendix A**. Significant aquatic toxicity was measured six times during three events: twice for *Ceriodaphnia dubia*, and four times for algae. These are summarized in **Table 1** below.

Table 1: Summary of Toxicity

Event	Site	Species/% Survival or % Control Growth
Event 85 (Nov.)	Poso Slough at Indiana Ave.	*Ceriodaphnia dubia* - 0% survival
Event 86 (Dec.)	Orestimba Creek at Hwy 33.	*Ceriodaphnia dubia* - 60% survival
Event 88 (Feb.)	Poso Slough at Indiana Ave.	*Selenastum* - 24% of Control
Event 88 (Feb.)	Salt Slough at Sand Dam	*Selenastum* - 54% of Control
Event 88 (Feb.)	Salt Slough at Lander Ave.	*Selenastum* - 45% of Control
Event 88 (Feb.)	San Joaquin River at Fremont Ford.	*Selenastum* - 48% of Control

These results, along with associated water quality and flow data, are summarized in **Attachment 2**. Details of the aquatic toxicity analyses are included in **Appendix C**.

Quality control samples were collected in addition to the event analysis sample. The quality control samples included field blanks, field duplicates, laboratory blanks and spike, and matrix spike/matrix spike duplicate samples (MS/MSD).

There were a handful of minor quality control issues, including exceedance of the field duplicate relative percent difference (RPD) value, and surrogate or laboratory spike recoveries outside of the expected range. None of these issues are expected to affect data usability. Results of the Field Quality Control samples are discussed in **Section 6** and **Attachment 3**. A review of Laboratory quality assurance activities is included in **Appendix D**.

Four sites within San Luis Water District (SLWD) were monitored monthly in accordance with the Monitoring and Reporting Plan. SLWD has implemented an aggressive tailwater prohibition policy and growers within the district do not discharge tailwater. None of the four sites within SLWD discharged during this report period and only one has discharged since their inclusion with the Westside Coalition. Beginning in March 2012, the Westside Coalition will no longer monitor the SLWD sites.

Table 2 lists the sites that were sampled during the 2012 Non-irrigation Season.

Table 2: Collected Samples September 2011 through February 2012.

Map Designation	Monitoring Site	Event 83		Event 84	Event 85	Event 86	Event 87	Event 88
	Discharge Sites	September		October	November	December	January	February
1	Hospital Cr at River Road	S	SS	NF	S	NF	NF	S
2	Ingram Cr at River Road	S	SS	S	NF	S	NF	NF
3	Westley Wasteway near Cox Road	S	SS	S	S	S	NF	NA
4	Del Puerto Cr near Cox Road	S	SS	S	S	S	S	NF
5	Del Puerto Cr at Hwy 33	NF	NF	NF	NF	NF	NF	NF
7	Ramona Lake near Fig Avenue	S	SS	S	NF	S	S	S
8	Marshall Road Drain near River Road	S	NP	NF	NF	NF	NF	NF
9	Orestimba Cr at River Road	S	SS	S	NF	NF	NF	NF
10	Orestimba Cr at Hwy 33	S	SS	S	NF	NF	NF	NF
11	Newman Wasteway near Hills Ferry Road	S	SS	S	S	S	S	S
13	San Joaquin River at Lander Avenue*	S	SS	NA	S	S	S	S
14	Mud Slough u/s San Luis Drain	S	SS	S	S	S	S	S
15	Salt Slough at Lander Avenue	S	SS	S	S	S	S	S
16	Salt Slough at Sand Dam	S	SS	S	S	S	S	S
17	Los Banos Creek at Highway 140	S	SS	S	S	S	S	S
18	Los Banos Creek at China Camp Road	S	SS	S	S	S	S	S
19	Turner Slough near Edminster Road	S	SS	S	S	NF	S	S
20	Blewett Drain near Highway 132	NF	SS	NF	NF	NF	NF	NF
21	Poso Slough at Indiana Avenue	S	SS	S	S	S	S	S
24	Los Banos Creek at Sunset Ave	NF	NP	NF	NF	NF	NF	NF
25	Little Panoche Cr at Western Boundary	NF	NP	NF	NF	NF	NF	NF
26	Little Panoche Cr at San Luis Canal	NF	NP	NF	NF	NF	NF	NF
27	Russell Ave. Drain at San Luis Canal	NF	NP	NF	NF	NF	NF	NF
	Source Water Sites							
12	San Joaquin River at Sack Dam	S	NP	S	S	S	S	S
22	San Joaquin River at PID Pumps	S	NP	S	S	S	S	S
23	Delta Mendota Canal at Del Puerto WD	S	NP	S	S	S	S	S

Notes: S = Water sampled according to the MRP.
SS = Sediment sampled according to the MRP.
NA = Not sampled due to lack of safe access.
NP = Not included in the sampling plan.
NF = Not sampled due to lack of flow.
* From October through February, Lander Ave. was inaccessable. Sample collected at Fremont Ford from Nov to Feb.

SECTION 2: COALITION AND MONITORING PROGRAM DESCRIPTION

In June, 2003, the San Joaquin Valley Drainage Authority (SJVDA) submitted a Conditional Waiver Report for the Westside San Joaquin River Watershed Coalition (Westside Coalition). The Westside Coalition watershed generally lies on the westside of the San Joaquin River from approximately the Stanislaus River on the north to 10 miles south of Mendota and encompasses an area of approximately 460,500 acres. There are approximately 4,000 landowners and 1,500

operators within the watershed. Most of the watershed receives water supplies from the Central Valley Project, while certain areas receive water from the State Water Project. In addition, some areas receive supplies from the San Joaquin River and local water sources, one area receives a Kings River supply, and some areas receive water from groundwater wells. The Delta-Mendota Canal and San Luis Canal run through the center of the watershed. Water deliveries are made to Federal Central Valley Project Contractors and to San Joaquin River Exchange Contractors from these facilities. State water deliveries are also made to one area.

The Grassland Drainage Area encompasses 97,400 acres that are geographically within the watershed. The Grassland Drainage Area is covered under waste discharge requirements (No. 5-01-234), which regulates the discharge of subsurface drainage water through the San Luis Drain to the San Joaquin River. Tailwater is aggressively controlled and not allowed to discharge from the region. The area coordinates a separate monitoring and reporting program under the above waste discharge requirements.

The Westside Coalition area also includes federal, state and private managed wetlands. These areas share water delivery and drainage conveyance systems with the surrounding agricultural areas. Due to the integrated nature of the water facilities the managed wetlands have joined the Westside Coalition as a wetland sub-watershed participant to comply with the Conditional Waiver and effectively and efficiently address water quality issues. The effects of discharges from the wetland areas are covered in this monitoring program.

The communities of Grayson, Westley, Vernalis, Crows Landing, Patterson, Newman, Gustine, Stevinson, Los Banos, Dos Palos, South Dos Palos, Firebaugh, Mendota and Tranquillity lie within the geographic area of the Westside Coalition. These communities do not have discharges from irrigated lands and are not included in the Westside Coalition, but contribute storm waters and municipal waste waters to the watershed and may impact discharges from irrigated lands.

Interstate Highway 5 and State Highways 33, 140, 165 and 152 and many county roads run through the geographic area of the Westside Watershed. Storm water discharges from these roads and highways can contribute contaminants to the same water bodies that carry agricultural return water.

The San Joaquin Valley Drainage Authority, a joint powers agency, is the umbrella organization for the Westside Coalition for purposes of the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands within the Central Valley Region (Resolution No.R5-2003-0105). On July 30, 2004, the Westside Coalition received approval for its irrigated agricultural monitoring plan from the Central Valley Regional Water Quality Control Board. The first sampling event took place on July 6, 2004, with subsequent event samples collected monthly. In February, 2008, the Westside Coalition received approval for a revised Monitoring and Reporting Plan (Revised MRP). The Revised MRP was designed to focus monitoring efforts at sites with known water or sediment issues and to support the Management Plan issues. The Revised MRP was implemented in March of 2008. Monitoring and Reporting Program Order No. R5-2008-0831 (MRP Order or MRP) was issued by the Regional Board in September 2008. This order was largely reflective of the Revised MRP and took effect in March 2009.

The MRP Order includes a targeted monthly sampling plan for 26 monitoring sites within the Coalition area as well as plans for sampling for two rain events during each year. The monitoring sites include three source water sites and 23 sites that discharge agricultural drain water. Four of the discharge sites are within San Luis Water District, which maintains a tailwater discharge prohibition. These sites generally only discharge during severe storm events.

During any given sampling event, each accessible site is visited, visually assessed, and samples are collected in accordance with the field sampling manual. See **Table 2.**

The objectives of the original monitoring program are:

- To assess the existing water quality characteristics of major agricultural drains within the watershed area.
- To determine the location and magnitude of water quality problems.
- To determine the cause of water quality problems and develop solutions.

Three sampling crews have been trained by the analytical laboratories to collect samples according to the Westside Coalition's QAPP and Field Sampling Manual. These crews are responsible for collecting samples at each of the 26 sites; the field coordinator for the northerly region is responsible for collecting samples north of Newman Wasteway. The field coordinator for the southerly region is responsible for collecting samples south of (and including) Newman Wasteway, and staff from San Luis Water District are responsible for monitoring and sampling sites within that district. The sampling responsibilities include completion of the field data sheets, collection of water and sediment samples, completion of labels and chain of custody sheets, and coordination with the labs for sample pickup. The parameters analyzed at each site are shown in **Table 3**. The laboratory, method, and constituent groups analyzed are shown in **Table 4** and a list of specific analytes is included in **Attachment 7**.

Table 3: Monitoring Stations and Samples

Monitoring Site	Site Code	2011-2012 Season Irrigation (Mar-Aug)*	Non-Irrigation (Sep-Feb)*	Rain Event (2x per year)
Discharge Sites				
Blewett Drain at Highway 132	VH132	Assessment	Assessment	Rain
Poso Slough at Indiana Avenue	PSAIA	Assessment	Assessment	Rain
Hospital Cr at River Road	HCARR	Assessment	Assessment	Rain
Ingram Cr at River Road	ICARR	Assessment	Assessment	Rain
Westley Wasteway near Cox Road	WWNCR	Assessment	Assessment	Rain
Del Puerto Cr near Cox Road	DPCCR	Assessment	Assessment	Rain
Del Puerto Cr at Hwy 33	DPCHW	Assessment	Assessment	Rain
Ramona Lake near Fig Avenue	ROLFA	Assessment	Assessment	Rain
Marshall Road Drain near River Road	MRDRR	Assessment	Assessment	Rain
Orestimba Cr at River Road	OCARR	Assessment	Assessment	Rain
Orestimba Cr at Hwy 33	OCAHW	Assessment	Assessment	Rain
Newman Wasteway near Hills Ferry Road	NWHFR	Assessment	Assessment	Rain
San Joaquin River at Lander Avenue	SJRLA	Assessment	Assessment	Rain
Mud Slough u/s San Luis Drain	MSUSL	Assessment	Assessment	Rain
Salt Slough at Lander Avenue	SSALA	Assessment	Assessment	Rain
Salt Slough at Sand Dam	SSASD	Assessment	Assessment	Rain
Los Banos Creek at Highway 140	LBCHW	Assessment	Assessment	Rain
Los Banos Creek at China Camp Road	LBCCC	Assessment	Assessment	Rain
Turner Slough near Edminster Road	TSAER	Assessment	Assessment	Rain
Little Panoche Cr at Western Boundary	LPCWB	Assessment	Assessment	Rain
Little Panoche Cr at San Luis Canal	LPCSL	Assessment	Assessment	Rain
Russell Ave. Drain at San Luis Canal	RADSL	Assessment	Assessment	Rain
Los Banos Creek at Sunset Ave	LBCSA	Assessment	Assessment	Rain
Source Water Sites				
San Joaquin River at Sack Dam	SJRSD	Source	Source	Source
Delta Mendota Canal at Del Puerto WD	DMCDP	Source	Source	Source
San Joaquin River at PID Pumps	SJRPP	Source	Source	Source

* For the period from March 2011 through February 2012, all discharge sites shall be sampled in accordance with the Assessment criteria per the Monitoring Order.

Table 4: Analytes, Laboratories, and Methods

	Constituent	Laboratory	Method	Units	Laboratory SOP No.
Field Data	pH	Field Crew	YSI meter	-	Field Manual
	Temperature	Field Crew	YSI meter	ºC	Field Manual
	Conductivity	Field Crew	YSI meter	µmhos/cm	Field Manual
	Dissolved Oxygen	Field Crew	YSI meter	mg/L	Field Manual
	Flow	Field Crew	Estimate	cfs	Field Manual
	pH	Caltest	SM 4500-H+B	-	PH-rev4
	TDS	Caltest	SM 2540C	mg/L	TDS-rev4E
	TSS	Caltest	SM 2540D	mg/L	TSS-rev4
	Turbidity	Caltest	SM 2130B	NTU	TURB-rev4E
	Hardness	Caltest	EPA 130.2	mg/L	HARD-rev5E
	Metals	Caltest	EPA 200.7, 200.8	mg/L	M-ICP-rev10E & 2008rev5Ea
	Bromide/Nitrate	Caltest	EPA 300.0	mg/L	DIONEX-rev5E
	Nitrogen, Nitrite	Caltest	EPA 354.1	mg/L	NO2-rev6
	TKN	Caltest	EPA 351.3	mg/L	NH3-TKN-rev6E
	Phosphate	Caltest	EPA 365.2	mg/L	PHOS-rev4
	Ammonia (as N)	Caltest	EPA 350.2	mg/L	NH3-TKN-rev6E
	DOC	Caltest	SM 5310-B/C	mg/L	TOC-D0C-rev7E
	TOC	Caltest	SM 5310-B/C	mg/L	TOC-D0C-rev7E
	E. Coli	Caltest	SM 9221BF/9223-B	mpn/100ml	MMOMUG-rev8E
Pesticides	Organophosphates	APPL	EPA 8141A	µg/L	ANA8141A
	Organochlorines	APPL	8081A/8082	µg/L	ANA8081A
	Carbamates	APPL	EPA 8321A LL	µg/L	HPL8321A
	Herbicides	APPL	EPA 619	µg/L	ANA8151A
Sediment	Organochlorine	Caltest	SW846 8081	mg/kg (dry)	8081rev8
	Pyrethroid	Caltest	SW846 8270(SIM)	mg/kg (dry)	Pyrethroidsrev4a
	% Solids	Caltest	EPA 160.3	%	Residue-rev6
	TOC	Caltest	EPA 9060A	%	WalkleyBlack TOC
Toxicity	*Ceriodaphnia d.*	PER	EPA-821-R-02-012	% survival	Acute Cerio SOP
	Selenastrum c.	PER	EPA-821-R-02-013 & EPA-600-4-91-002	cell growth	Chronic Selenastrum SOP
	Pimephales p.	PER	EPA-821-R-02-012	% survival	Acute FHM SOP
	Hyalella a.	PER	EPA-600-R-99-064	% survival	10-D HyalellaAcuteSedTest

CalTest Labs in Napa, California
APPL labs in Fresno, California
Pacific Ecorisk (PER) in Martinez, California

Aquatic toxicity samples were collected and analyzed by Pacific Ecorisk, Inc. using the methods described below:

- *Ceriodaphnia dubia*: "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (USEPA 2002a).
- *Pimephales promelas*: "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (USEPA 2002a).
- *Selenastrum capricornutum*: "Short-term Methods for Estimated the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms" (USEPA 2002b).
- *Hyalella azteca*: "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Organisms" (USEPA 2000).

SECTION 3: MONITORING EVENT SUMMARIES

Monitoring Event Summaries.
In accordance with the MRP order, assessment monitoring was implemented at all discharge sites beginning with the March 2011 event. Assessment monitoring continued through the February 2012 event, coinciding with the end of this report period. Assessment monitoring is intended to re-asses the water quality conditions of each monitored site, and includes analysis for all three toxicity species, and the complete list of pesticides and metals.

Each site was visited monthly during the reporting period and samples were collected from every site with sufficient water to submerge and fill a sample container.

Three CIMIS[1] stations were monitored by the Westside Coalition for rainfall: Patterson, Los Banos, and Firebaugh. **Table 5** summarizes the monthly rainfall measured at each station.

Table 5: Monthly Rainfall in Inches

Month	Patterson	Los Banos	Firebaugh
September	0	0	0
October	0.87	1.34	0.44
November	0.59	0.85	0.74
December	0.05	0.11	0.07
January 2012	0.77	0.59	0.33
February	1.04	0.43	0.44
Report Period Total:	3.32	3.32	2.02
2010/11 Period Total:	9.39	6.91	6.08

In contrast with water year 2011, this report period was extremely dry. None of the storms during the 2011/12 non-irrigation period produced significant runoff and no storm event samples were collected. The dry conditions resulted in no-flow conditions at 35 of the 132 site visits (~27%), excluding the SLWD sites.

Event 83, September 12th and 13th, 2011.
Assessment-level water samples were collected at 17 sites and 3 source water sites on September 13th in accordance with the Westside Coalition MRP. There was insufficient flow for sample collection at Del Puerto Creek at Highway 33, and Blewett Drain. Aquatic toxicity was tested for algae, invertebrates, and fish at all discharge sites and no aquatic toxicity was observed. Sediment samples were collected at 17 sites on September 12th. Significant toxicity was observed in the Blewett Drain sample (56.3% survival), the Hospital Creek sample (20% survival), the Ingram Creek sample (0% survival), and the Orestimba Creek at Highway 33 sample (0%) survival. Sediment from all four samples was sent to CalTest Laboratories for pesticide analysis. In all four sediment samples, pesticides were present in sufficient concentration to have caused the observed toxicity. See **Section 8** and **Attachment 4**.

[1] California Irrigation Management Information System, http://wwwcimis.water.ca.gov/cimis/welcome.jsp

Event 84, October 11th, 2011.
Assessment-level water samples were collected at 14 monitoring sites and source water samples were collected at 3 sites on October 11th. There was insufficient flow to collect samples at Hospital Creek, Del Puerto Creek (Highway 33), Marshall Road Drain, and Blewett Drain and there was no access to Westley Wasteway. No aquatic toxicity was observed in any of tested sites.

Event 85, November 8th, 2011.
Assessment-level water samples were collected at 12 monitoring sites and 3 source water sites on November 8th. There was insufficient flow for sample collection at Hospital Creek, Del Puerto Creek (Highway 33), Ramona Lake, Marshall Road Drain, Orestimba Creek (both sites), and Blewett DRain. Aquatic toxicity to *Ceriodaphnia dubia* was observed at Poso Slough (0% survival). A dilution series measured 2.9 toxic unites and the TIE results indicated that a pesticide(s) was likely the cause. Pesticide analytical results detected elevated levels of diazinon (1.2 µg/L) in the sample and was the only detected pesticide. See **Attachment 2**.

Event 86, December 13th, 2011.
Assessment-level water samples were collected at 12 monitoring sites and 3 source water sites on December 13th in accordance with the Westside Coalition's MRP. There was insufficient flow at the Blewett Drain, Hospital Creek, Del Puerto Creek (Highway 33), Marshall Road Drain, Orestimba Creek (both sites), and Turner Slough sites for sample collection. Aquatic toxicity to *Ceriodaphnia dubia* was observed at the Orestimba Creek at Highway 33 (60% survival). The toxicity was not sufficient enough to require follow-up. DDE and DDD were detected in the sample at relatively low levels and it is not clear if they were the cause of toxicity. No other aquatic toxicity was observed.

Event 87, January 10th and 11th, 2012.
Assessment-level water samples were collected at 11 monitoring sites and 3 source water sites. An unforeseen scheduling conflict caused a one-day delay in sample collection in the northly sites. There was insufficient flow at Blewett Drain, Hospital Creek, Ingram Creek, Westley Wasteway, Del Puerto Creek at Highway 33, Marshall Road Drain, and both Orestimba Creek sites to collect samples. No aquatic toxicity was observed in any of the samples.

Event 88, February 14th, 2011.
Assessment-level water samples were collected at 11 monitoring sites and 3 source water sites. There was insufficient flow at Blewett Drain, Ingram Creek, Del Puerto Creek (both sites), Marshall Road Drain, and Orestimba Creek (both Sites). Locked gates prevented access to Westley Wasteway. Aquatic toxicity to algae was observed at Poso Slough (24% of Control Growth), Salt Slough at Sand Dam (54%), Salt Slough at Lander Avenue (45%) and the San Joaquin River at Lander Avenue (48%). TIEs were performed on the San Joaquin River, Salt Slough at Lander Avenue, and Poso Slough samples, all of which indicated a herbicide was the likely cause. Diuron were detected in all four samples at levels that would be expected to cause the observed toxicity. See **Attachment 2**.

SECTION 4: SAMPLING SITE AND WATERSHED DESCRIPTIONS

Figure 1 shows the Westside Coalition area and the location of the monitoring sites. Following is a description and rationale for the monitoring sites.

- Blewett Drain near Highway 132 (originally called Vernalis at Highway 132 [VH132]). This site is located at the northerly boundary of the Westside Coalition. The cropping pattern for discharges into this drain is similar to that of Hospital Creek. Flow at this site is calculated as an estimated velocity and measured flow area. The Westside Coalition began monitoring this site in 2008.
- Poso Slough at Indiana Avenue (PSAIA). This site is located on Poso Slough near the boundary between San Luis Canal Company and Central California Irrigation District in the Dos Palos Subarea of the Westside Coalition. Flow at this site is calculated as an estimated velocity and measured flow area. The Westside Coalition began monitoring this site in 2008. Poso Slough is a tributary to Salt Slough, discharging upstream of the Sand Dam monitoring site.
- Hospital Creek at River Road (HCARR). This site is a significant drainage for the Patterson Subarea of the Westside Coalition and has been monitored since July 2004 for a variety of constituents. Sediment discharge, sediment toxicity, aquatic toxicity (water flea), and pesticides have been measured at this site. It is on the 303(d) list for pesticides. Flow at this site is measured by a rectangular weir.
- Ingram Creek at River Road (ICARR). This site is a significant drainage for the Patterson Subarea of the Westside Coalition and has been monitored since July 2004 for a variety of constituents. Sediment discharge, sediment toxicity, aquatic toxicity (water flea), and pesticides have been measured at this site. It is on the 303(d) list for pesticides. Flow at this site is measured by a rectangular weir.
- Westley Wasteway near Cox Road (WWNCR). Westley Wasteway is a significant drainage for the Patterson Subarea for both tailwater and storm runoff. Land use upstream of this monitoring station is similar to that of Del Puerto Creek. This site has been monitored for a variety of constituents since 2004. Sediment discharge, sediment toxicity, aquatic toxicity (water flea), and pesticides have been measured at this site. Flow at this site is measured by a rectangular weir.
- Del Puerto Creek near Cox Road (DPCCR) and Del Puerto Creek near Highway 33 (DPCHW). Del Puerto Creek is on the 303(d) list for pesticides and is a major drainage for the Patterson Subarea and major storm runoff collector. Two stations are identified on this waterbody; one near the discharge to the San Joaquin River, and one at Highway 33, near the middle of the Patterson Subarea. Biological assessments are performed on Del Puerto Creek to assess its overall health, which will be useful in relating to collected water quality data. Both of these sites have been monitored for a variety of constituents since 2004. Sediment discharge, sediment toxicity, aquatic toxicity (water flea), and pesticides have been measured at both sites. Flow at this site is measured through a stream rating.
- Ramona Lake near Fig Avenue (ROLFA). This site monitors discharge from a small lake as it flows into the San Joaquin River. Agricultural and storm runoff from the Patterson Subarea can discharge into the lake. This site has been monitored for a variety of constituents since 2004. Some pesticides have been measured at this site.

- Marshall Road Drain near River Road (MRDRR). This site monitors a pipe drain that carries agricultural and storm runoff from the Patterson Subarea of the Westside Coalition. This site has been monitored for a variety of constituents since 2004. Some pesticides and aquatic toxicity have been measured at this site. Flow from this site is measured by a weir within the pipe. During periods of high flow, the weir can become submerged and incapable of measuring flow.
- Orestimba Creek at River Road (OCARR) and Highway 33 (OCAHW). There are two monitoring locations on Orestimba Creek; one near the discharge point to the San Joaquin River; and one upstream at Highway 33. Orestimba Creek is similar to that of Del Puerto in both the surrounding landscape and discharged water quality. It is on the 303(d) list for pesticides, is a major drainage for the Patterson Subarea, and is included in the biological assessment portion of the monitoring program. Pesticides, sediment discharge, sediment toxicity, and aquatic toxicity have been measured at these sites. USGS monitors are reports flow at Orestimba Creek at River Road. Flow at Orestimba Creek at Highway 33 is calculated through an estimated velocity and cross-sectional flow area.
- Newman Wasteway near Hills Ferry Road (NWHFR). The Newman Wasteway is a significant drainage for the Patterson Subarea and is on the 303(d) list for salt and pesticides. This site measures drainage that originates from the southerly region of the Patterson Subarea, and has been monitored for a variety of constituents since 2004. Pesticides, sediment discharge, sediment toxicity, and aquatic toxicity have been measured at this site. Flow at this site is calculated through an estimated velocity and cross-sectional flow area.
- The San Joaquin River at Lander Avenue (SJRLA). This site is both a receiving waterbody for agricultural and storm drainage and a source water for districts that pump from the San Joaquin River. It also receives drainage flows from irrigated wetlands in the fall and winter months. It has been monitored for a variety of constituents since 2004, and pesticides, sediment toxicity, and aquatic toxicity have been measured. Flow at this site is reported by a nearby CDEC station.
- The San Joaquin River at Fremont Ford (SJRFF). In October 2011, the California Department of Transportation (CALTRANS) began a retrofit project on the Lander Avenue bridge at the San Joaquin River, which prevented safe access to that site from November through February. This location is the nearest downstream site with safe access to the river, and is approximately 4.5 linear miles downstream. Flow for this station was reported by CEDEC (station FFB). CALTRANS' work was completed in March 2012 and future sample collections will revert back to the Lander Avenue site.
- Mud Slough upstream of the San Luis Drain (MSUSL). This site measures drainage originating from the Dos Palos and Los Banos Subareas that flow through the wetlands as well as the wetlands themselves. Mud Slough is on the 303(d) list for a variety of constituents. In addition to the Westside Coalition's monitoring program, the Central Valley Regional Water Quality Control Board, Surface Water Ambient Monitoring Program (SWAMP) collects and analyzes samples from this site throughout the year. These samples are analyzed for selenium, boron, and EC, along with other constituents. Flow at this site is calculated as the difference between the flow downstream of the San Luis Drain (reported by CDEC) and the measured San Luis Drain Discharge. The SWAMP Data is available via the internet at:

http://www.waterboards.ca.gov/centralvalley/programs/agunit/swamp/index.html.

- Salt Slough at Lander Avenue (SSALA) Salt Slough at Lander Avenue measures agricultural, storm, and wetland runoff from the Dos Palos and Los Banos Subareas, and has been monitored (and 303(d) listed) for a variety of constituents since 2004. In addition to the Westside Coalition's monitoring program, the Central Valley Regional Water Quality Control Board, SWAMP collects and analyzes samples from this site throughout the year. These samples are analyzed for selenium, boron, and EC, along with other constituents. Flow at this site is reported by CDEC. The SWAMP Data is available via the internet at: http://www.waterboards.ca.gov/centralvalley/programs/agunit/swamp/index.html.
- Salt Slough at Sand Dam (SSASD). This site is upstream of the Lander Avenue site and measures agricultural and storm drainage originating in portions of the Dos Palos Subarea. Pesticides and aquatic toxicity have been measured at this site, which has been monitored for a variety of constituents since 2004. Flow at this site is measured by a weir.
- Los Banos Creek at Highway 140 (LBCHW). This site carries agricultural, storm and irrigated wetland runoff from the Los Banos Subarea. Some pesticides have been measured at this site. Flow at this site is calculated through an estimated velocity and cross-sectional flow area.
- Los Banos Creek at China Camp Road (LBCCC). This site monitors agricultural and storm runoff from the Los Banos Subarea, upstream of the Highway 140 site. There is a farmer-maintained dam downstream of this site which is frequently used to stop flows so that it may be diverted for irrigation. Flow at this site is calculated through an estimated velocity and cross-sectional flow area.
- Turner Slough near Edminster Road (TSAER). This station is located on the eastside of the San Joaquin River and measures drainage from a portion of the Patterson Subarea. A very small number of pesticides have been detected at this site since 2004. In 2007, Stevinson Water District constructed a drain water return system upstream of the Turner Slough discharge (and monitoring) point. This system captures most of the drainage that flows through Turner Slough and returns it to the Stevinson Water District irrigation system. Since the construction of this system, discharges from Turner Slough into the San Joaquin River have become infrequent. Flow at this site is calculated through an estimated velocity and cross-sectional flow area.
- Little Panoche Creek at Western Boundary (LPCWB) and at San Luis Canal (LPCSL). These two sites were incorporated from the San Luis Water District Water Quality Coalition. Because San Luis Water District has a strict no-discharge policy, these sites are typically dry. High water levels in the Panoche Creek Reservoir have caused shallow groundwater to accrete into the creek at the Western Boundary site, but no other flows (either agricultural discharges or storm runoff) have been observed at either site.
- Russell Avenue Drain at San Luis Canal (RADSL). This is a small drain along Russell Avenue that discharges into the San Luis Canal. These two sites were incorporated from the San Luis Water District Water Quality Coalition. Because San Luis Water District has a strict no-discharge policy, this site will typically measure only storm runoff. Since inclusion within the Westside Coalition, this site has not had any observed flow and has not been sampled.

- Los Banos Creek at Sunset Avenue (LBCSA). This monitoring site was incorporated from the San Luis Water District Water Quality Coalition, and is located near the western boundary of the Westside Coalition, downstream of the Los Banos Reservoir. There is not a large amount of actively farmed land at or upstream of this site, and discharges here are typically releases from the Los Banos Reservoir.
- San Joaquin River at Sack Dam (SJRSD). This is a source water monitoring site located at the diversion point for San Luis Canal Company. This site is monitored for source water constituents. Flow at this site is measured across the dam.
- Delta Mendota Canal at Del Puerto Water District (DMCDP). This site monitors water quality in the Delta Mendota Canal at a Del Puerto Water District turnout. This site characterizes the source water quality typical of the Delta Mendota Canal, and is monitored for source water constituents. Flow is not measured at this site.
- San Joaquin River at Patterson Irrigation District Pumps (SJRPP). This monitoring site is located at the Patterson Irrigation District pump station on the San Joaquin River and characterizes the source water quality of the San Joaquin River in the Patterson Subarea. This site is monitored for source water constituents. Flow from this site is reported by CDEC. This site is the same as the San Joaquin River at Las Palmas site listed in the Chlorpyrifos and Diazinon TMDL program.

Table 6 lists the monitoring sites and coordinates in the WGS84 datum.

Table 6: Monitoring Site Coordinates

Site	Latitude (N)	Longitude (W)
Hospital Cr at River Road	37.61047	121.23078
Ingram Cr at River Road	37.60022	121.22506
Westley Wasteway near Cox Road	37.55822	121.16372
Del Puerto Cr near Cox Road	37.53936	121.12206
Del Puerto Cr at Hwy 33	37.51406	121.15956
Ramona Lake near Fig Avenue	37.47875	121.06839
Marshall Road Drain near River Road	37.43631	121.03617
Orestimba Cr at River Road	37.41386	121.01489
Orestimba Cr at Hwy 33	37.37717	121.05856
Newman Wasteway near Hills Ferry Road	37.32036	120.98336
San Joaquin River at Sack Dam	36.98353	120.50050
San Joaquin River at Lander Avenue	37.29506	120.85139
San Joaquin River at Fremont Ford	37.30986	120.93053
Mud Slough u/s San Luis Drain	37.26164	120.90614
Salt Slough at Lander Avenue	37.24797	120.85225
Salt Slough at Sand Dam	37.13664	120.76194
Los Banos Creek at Highway 140	37.27619	120.95547
Los Banos Creek at China Camp Road	37.11447	120.88953
Turner Slough near Edminster Road	37.30411	120.90083
Blewett Drain at Highway 132	37.64053	121.22942
Poso Slough at Indiana Ave	37.00622	120.59033
SJR at PID Pumps	37.49739	121.08267
DMC at Del Puerto WD	37.43678	121.13347
Los Banos Creek at Sunset Ave	37.02747	120.88983
Little Panoche Cr at Western Boundary	36.79100	120.76200
Little Panoche Cr at San Luis Canal	36.81728	120.72614
Russell Ave Drain at San Luis Canal	36.75142	120.65775

FIGURE 1: WATERSHED MAP W/ MONITORING SITES.

More than 59 different varieties of crops are grown within the Westside Coalition watershed area, ranging from fruit and nut trees to melons and cotton. **Table 7** shows the top ten crops within the Coalition area based on 2011 irrigation season Agricultural Commissioner pesticide use data.

Table 7: Top 10 Crops Grown by County

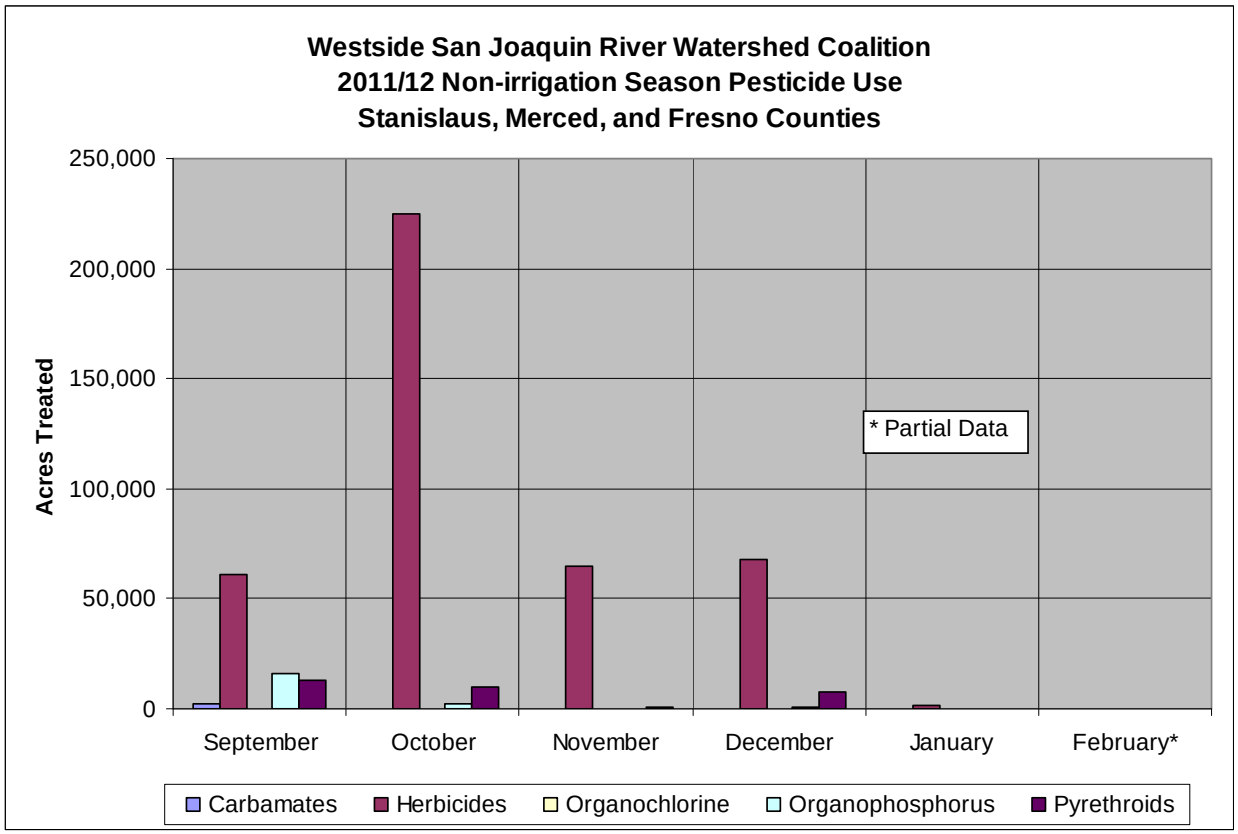
Fresno	Merced	Stanislaus
Cotton	Cotton	Almonds
Almonds	Alfalfa	Tomatoes
Tomatoes	Almonds	Lettuce
Grapes	Tomatoes	Beans
Pistachios	Corn	Mixed Greens
Melons	Pistachios	Walnuts
Pomegranate	Oats	Apricots
Wheat	Walnuts	Grapes
Onions	Melons	Corn
Rice	Wheat	Alfalfa

These crops are dispersed approximately evenly throughout the Coalition area, with the exceptions of cotton (mostly in the Los Banos, Dos Palos and Tranquillity Subareas), and fruit trees and beans (mostly in the Patterson Subarea). The planting practices are typical for conventional agriculture within the Central Valley. A complete crop list and detailed crop calendar was presented in the "Watershed Evaluation Report", submitted in April, 2004.

Annual field crops are typically planted as seed or transplants after the field has been pre-irrigated to provide salt leaching and soil moisture for germination. These crops can be furrow irrigated using either a plowed head ditch or gated pipe, sprinkler irrigated with hand-move sprinkler pipe, or sub-surface drip irrigated. Permanent field crops such as pasture or alfalfa are usually flood or sprinkler irrigated. The younger fruit and nut trees are almost universally irrigated with drip or micro-sprinkler systems, though some of the older orchards are still flood irrigated.

Typically, there is minimal agricultural activity during the non-irrigation season. By September, most crops have been harvested and growers are preparing fields for the next season's crop. Applications of pesticides are usually limited to weed control during the late fall and early winter and orchard insect control through dormant sprays during the late winter. **Figure 2** shows the 2011/12 non-irrigation season monthly pesticide application within the Westside Coalition by pesticide group. During the development of this figure, the Westside Coalition noted many errors in the pesticide use data, including duplicate and incomplete records in the data set. Based on this review the Westside Coalition believes that the available Pesticide Use data overestimates the actual pesticide applications. This data should be used cautiously and not be considered an accurate representation of the actual pesticide use.

Figure 2: 2011/12 Non-irrigation Season Pesticide Use.



A more detailed review of pesticide use and detections is provided in **Section 8**. **Table 8** shows the 10 most commonly applied pesticides during the 2011/12 non-irrigation season (by acreage) within the three counties occupied by the Westside Coalition.

Table 8: Most Commonly Applied Pesticides by County (2011/12 Non-irrigation Season)

Fresno County		Merced County		Stanislaus County	
Pesticide	**Class**	**Pesticide**	**Class**	**Pesticide**	**Class**
Diuron	Herbicide	Diuron	Herbicide	Glyphosate	Herbicide
Thidiazuron	Herbicide	Thidiazuron	Herbicide	Oxyfluorfen	Herbicide
Paraquat-Dichloride	Herbicide	Paraquat-Dichloride	Herbicide	Pendimethalin (Prowl)	Herbicide
Oxyfluorfen	Herbicide	Glyphosate	Herbicide	Metribuzin	Herbicide
Glyphosate	Herbicide	Oxyfluorfen	Herbicide	Dimethoate	Organophosphorus
Pendimethalin (Prowl)	Herbicide	Cyfluthrin	Pyrethroid	Esfenvalerate	Pyrethroid
Chlorpyrifos	Organophosphorus	Pendimethalin (Prowl)	Herbicide	Simzaine	Herbicide
Naled	Organophosphorus	Bifenthrin	Pyrethroid	MCPA	Herbicide
Bifenthrin	Pyrethroid	Hexazinone	Herbicide	Lambda-Cyhalothrin	Pyrethroid
Hexazinone	Herbicide	Clethodim	Herbicide	Permethrin	Pyrethroid

SECTION 5: FIELD SAMPLING PROCEDURE

Field water quality data and sample collections were collected as outlined in the Westside Coalition's Quality Assurance Project Plan (QAPP) and Field Sampling Manual. Three sampling crews have been trained by the analytical laboratories to collect samples according to the Westside Coalition's QAPP and Field Sampling Manual. These crews are responsible for collecting samples at each of the 26 sites: The field coordinator for the northerly region is responsible for collecting samples from north of Newman Wasteway. The field coordinator for the southerly region is responsible for collecting samples south of (and including) Newman Wasteway, and staff from San Luis Water District are responsible for monitoring and sampling sites within that district. The sampling responsibilities include completion of the field data sheets, collection of water and sediment samples, completion of labels and chain of custody sheets, and coordination with the labs for sample pickup. Samples are collected either as a direct grab from the waterbody or as a bucket grab, where a large volume of water is collected in a stainless steel bucket and transferred to the sample bottles. Details of these collection methods are explained in the Field Sampling Manual. The list of tested constituents is discussed in the MRP Order.

In accordance with the MRP Order, the Westside Coalition implemented Assessment Monitoring at all discharge sites starting with the March 2011 event. Assessment monitoring requires that each discharge site be analyzed for aquatic toxicity for algae, fathead minnow, and water flea; organochlorine, organophosphate, carbamate, and herbicide pesticides; and general chemistry constituents, including the full panel of nutrients and metals as listed in the MRP Order. Assessment monitoring continued through the end of this report period (February 2012).

SECTION 6: FIELD AND LABORATORY QUALITY CONTROL SAMPLES

Laboratory Quality Control Samples. The three laboratories that perform analyses for the Westside Coalition monitoring activities are certified through the National Environmental Laboratory Accreditation Program (NELAP) and perform all testing and analyses according to the most current NELAP standards, including the performance of several quality control tests to ensure all methods and equipment are operating correctly. A handful of quality control tests for APPL and Caltest failed to meet acceptability criteria. These failures represented less than 6% of the QA/QC analyses performed by each lab and do not affect data usability. One control sample survival for *Ceriodaphnia dubia* was below the criteria, affecting five sample results. A retest was performed and all acceptability criteria was met. All other analyses performed by Pacific Ecorisk met test acceptability criteria. Details of the laboratory quality control review are included in **Appendix D**. Although the Westside Coalition reviews each of the laboratories' QA/QC results, it considers each of the laboratories to be experts in their respective fields and defers to their judgment regarding data acceptability.

Field Quality Control Samples. Field quality control samples included the collection of field duplicate samples for sediment and aquatic toxicity analysis, and the collection of both field duplicate and field blank samples for pesticides, drinking water, and general physical constituent analysis. It should be noted that the field duplicate samples are typically collected as separate samples simultaneously with the event sample (as opposed to field split samples). The

calculated RPD between the event sample and field duplicate sample should be considered a measurement of site water variability.

- **Water Chemistry Analyses.** Six sets of field duplicate and field blank samples were collected during the reporting period and analyzed for general chemistry and drinking water constituents. A comparison of the event samples, duplicate samples, and blank samples is tabulated in **Attachment 3**. A total of 156 duplicate analyses were completed and compared to the event sample results. Sixteen duplicate samples exceeded the 25% relative percent difference (RPD) established in the QAPP for:

Ammonia	Bromide	Cadmium (total)	Copper (total)
E. Coli	Lead (total)	Nickel (total)	TKN
TSS	Zinc (total)		

  These exceedances of the field duplicate quality control criteria are reflective of the complicated nature of the site water and the naturally occurring variations of the stream water quality. Three of the results exceeding the RPD criteria were detected below the reporting limit (flagged "DNQ") where small variations between the duplicate and event sample can result in relatively large RPD values. The Westside Coalition does not expect these variations to impact data usability.

  Six field blank sample sets were analyzed during the report period (156 results, total). Of these, five analyses resulted in values greater than 20% of the event sample result for:

Copper (dissolved)	Copper (total)	TOC
Zinc (dissolved)	Zinc (total)	

- **Pesticide Analyses.** Six field duplicate and field blank samples sets were collected during the reporting period and analyzed for pesticides (288 results each). There were no pesticide detections in any of the field blank samples. Calculated RPD for field duplicate results did not exceeded the 25% threshold for any analyte. The results of the field blank, field duplicate and event sample comparisons are tabulated in **Attachment 3**.

- **Aquatic Toxicity Analyses.** Field duplicate samples were collected and analyzed for toxicity to all species tested during the report period. The calculated RPD value exceeded the 25% threshold during the January sampling event (Event 87) for the algae test (calculated RPD = 51.5%). Toxicity was not observed in either the event or the duplicate sample and this RPD violation is not expected affect data usability.

- **Sediment Toxicity Analyses.** A field duplicate sample was collected for sediment toxicity during the September sampling event (Event 83). The measured RPD was 2.5%.

Completeness for sampling collection and analysis was reviewed for samples collected during this monitoring program. Completeness was measured for sample collection and transit, sample analysis, and field quality control samples.

- Collection and Transit: Completeness for this reporting period for sample collection and transit is 100%. No sample containers were lost or broken during this reporting period.
- Sample Analysis: Completeness for sample analysis during this reporting period is 100%. Control sample survival was less than the 90% criteria for one set of *Ceriodaphnia dubia* tests during the December Sample event (Event 86) affecting five sample test. Survival in all tests were 100% and there was no apparent toxicity. The samples were successfully retested. All other collected samples were analyzed in accordance with the appropriate method.
- Field Quality Control Samples: Completeness for toxicity duplicate samples is 100% for this reporting period. The completeness for field blank and duplicate samples is 100% for both pesticide analyses and water chemistry samples.

SECTION 7: ANALYTICAL METHODS

Table 4 indicates the laboratories responsible for the analytical results of this monitoring program, the analytical method used, and the standard operating procedure (SOP) document number. This table reflects the constituents analyzed as part of the Revised MRP.

Chain of Custody (COC) sheets were maintained from the time of sample collection to receipt at the laboratories. Copies of the COC sheets are included in **Appendix A**, along with a summary of the data results. The data summary includes all of the field readings, analytical chemistry results, pesticide scan results, and toxicity screening test results. The original laboratory reports are included in **Appendix C**. These reports also include all of the field and internal quality control results.

The laboratory original data sheets (raw data) for the toxicity results are included in **Appendix C**, as part of the laboratory reports. Raw data for general physical results, drinking water results, and pesticide results are kept by the laboratories for a minimum of five years and are available upon request.

SECTION 8: DATA INTERPRETATION

The primary objective of the monitoring program is to identify water bodies that are adversely affected by agricultural discharges and to help determine the impacts of management activities. The monitoring program has used a combination of toxicity tests and pesticide analyses, along with close coordination among districts and growers to not only identify problem areas but also to determine the magnitude and cause of the problems. During this report period, toxicity analyses for all three species along with complete pesticide analyses and metals analyses were performed at each flowing site.

The Westside Coalition's monitoring program includes 26 monitoring sites on the Westside of the San Joaquin Valley (see **Table 3** and **Figure 2**). These sites are representative of the various regions within the Coalition and include agricultural discharge sites, storm drainage sites, and irrigation source water sites. A summary of this data is presented in **Appendix A**, and the laboratory data reports are provided in **Appendix C**.

All of the analyzed parameters were reviewed regularly to evaluate the overall health of the water bodies within the Coalition area. This reporting period covered the 2011/12 non-irrigation season months, during which there was not significant agricultural activity. Additionally, the period was dryer than normal and no storm event samples were collected. Statistically significant aquatic toxicity occurred six times during three events: two to *Ceriodaphnia dubia* and four to algae. All observations of aquatic toxicity are detailed in **Attachment 2**.

Ceriodaphnia dubia. Toxicity to *Ceriodaphnia dubia* was measured once in November 2011, and once in December 2011.

- Poso Slough at Indiana Avenue – Event 85 (November 8th), 0% survival. Dilution series analyses calculated 2.9 toxic units and the TIE indicated that a pesticide(s) were the likely cause. Diazinon was detected in the sample (1.2 µg/L) at a level that would be expected to cause full mortality and is assumed to be the source of the toxicity. No other pesticides were detected.
- Orestimba Creek at Highway 33 – Event 86 (December 13th), 60% survival. The initial screening test measured 37% different from control and no follow up toxicity testing was required. Pesticide analysis of the sample measured low levels of DDE (0.048µg/L) and DDD (0.0059j µg/L) and diuron (0.25j µg/L). The diuron is not expected to contribute to invertebrate mortality and it is unclear of the levels of DDE and DDD could have caused the toxicity.

Selenastrum capricornutum (algae). Toxicity to algae was observed four times in February 2012. Of particular note, three of the samples showing toxicity were within the Salt Slough subwatershed, with the same apparent cause (diuron), indicating that the source of the herbicide discharge was caused by a watershed-wide practice.

- Poso Slough at Indiana Avenue – Event 88 (February 14th), 24% of control growth. A TIE was performed and indicated that pesticide(s) were the likely cause. Diuron (6.8µg/L) and Prowl (1.3 µg/L) were detected in the sample and are expected to have caused to the toxicity.
- Salt Slough at Sand Dam – Event 88 (February 14th), 54% of control growth. Follow up testing was not required for this sample. Diuron (5.5µg/L) and Prowl (1.9 µg/L) were detected in the sample and are expected to have caused to the toxicity.
- Salt Slough at Lander Avenue – Event 88 (February 14th), 45% of control growth. A TIE was performed and indicated that pesticide(s) were the likely cause. Diuron (6.9µg/L) and Prowl (0.46 µg/L) were detected in the sample and are expected to have caused to the toxicity.
- San Joaquin River at Freemont Ford – Event 88 (February 14th), 48% of control growth. A TIE was performed and indicated that pesticide(s) were the likely cause. Diuron (8.7µg/L) and Prowl (0.26 µg/L) were detected in the sample and are expected to have caused to the toxicity.

Pimephales Promelas (fathead minnow). No measurements of fathead minnow toxicity were observed during this reporting period.

Sediment Toxicity (*Hyalella azteca*). The Westside Coalition's MRP Order specifies that sediment sample collection should occur at the end of the irrigation season, between August 15th

and October 15th [2]. Eighteen samples were collected (including one duplicate) and tested for toxicity to *Hyalella azteca* on September 12th. Statistically significant toxicity was measured at four sites, all of which were sufficiently severe to require follow up pesticide analysis. **Table 9** lists the results for the sites exhibiting sediment toxicity. **Table 10** summarizes the detected pesticide data at those four sites. See **Appendix C** for the full laboratory report. **Table 11** shows the sediment toxicity results since March 2005.

Table 9: Sites Exhibiting Statistically Significant Toxicity to *Hyalella azteca.*

Site	Percent Survival
Blewett Drain at Highway 132*	56.3%
Hospital Creek at River Road*	20%
Ingram Creek at River Road*	0%
Orestimba Creek at Highway 33	0%

* Sample analyzed for specific pesticides.

Table 10: Detected Pesticides in Sediment Samples (September 2011)

	Blewett Drain	Hospital Creek	Ingram Creek	Orestimba Creek (Hwy 33)
Sediment Toxicity (% survival)	56.3	20	0	0
Percent Solids (%)	96	100	93	93
Bifenthrin (µg/kg)	5.1	0.16j	3.0	25.5
Chlorpyrifos (µg/kg)	0.32j	0.53	1.4	1.3
Cyfluthrin (µg/kg)	ND	ND	ND	0.24j
Cypermethrin (µg/kg)	ND	ND	ND	ND
Es/Fenvalerate (µg/kg)	0.23j	ND	1.5	27.4
Lambda-Cyhalothrin (µg/kg)	0.66	1.3	32.2	0.67
Permethrin (µg/kg)	2.6	ND	0.18j	0.49
Total Organic Carbon (mg/kg)	8,000	630	7,300	7,800

Details of the sediment pesticide analyses are in **Attachment 4.**

[2] MRP Order No. R5-2008-0831, p. 16.

Table 11: Sediment Toxicity Results.

Site	Sept 11 % Survival	Sept 11 Toxicity (Y/N)	May 11 % Survival	May 11 Toxicity (Y/N)	Sept 10 % Survival	Sept 10 Toxicity (Y/N)	March 10 % Survival	March 10 Toxicity (Y/N)
Blewett Drain (Vernalis at hwy 132)	56.3	**Y**	86.3	N				
Hospital Creek	20	**Y**	8.75	**Y**	0	**Y**	77.5	**Y**
Ingram Creek	0	**Y**	16.3	**Y**	0	**Y**	35	**Y**
Westley Wasteway	90	N	93.8	N	41.2	**Y**	N/A	N/A
Del Puerto Creek (Cox Rd)	88.8	N	81.3	N	0	**Y**	77.5	**Y**
Del Puerto Creek (Hwy 33)			96.3	N	81.2	**Y**	92.5	N
Orestimba Creek at River Rd.	96.3	N	100	N	95	N	96.2	N
Orestimba Creek at Hwy 33	0	**Y**	92.5	N	93.8	N	90	N
Ramona Lake at Fig Ave.	96.3	N	92.5	**Y**	92.5	N	93.8	N
Newman Wasteway	97.5	N			97.5	N	93.8	N
Poso Slough	98.8	N	87.5	**Y**				
Turner Slough	95	N	100	N				
SJR at Lander	98.8	N						
Salt Slough at Lander	97.5	N						
Salt Slough at Sand Dam	100	N	78.8	**Y**				
Los Banos Creek at Hwy 140	97.5	N	97.5	N				
Los Banos Creek at China Camp Rd.	97.5	N	98.15	N	98.8/96.2	N	95	N
Los Banos Creek at Sunset Ave.							96.2	N
Mud Slough	98.8	N	96.3	N				

Site	Sept 09 % Survival	Sept 09 Toxicity (Y/N)	Mar 09 % Survival	Mar 09 Toxicity (Y/N)	Sept 08 % Survival	Sept 08 Toxicity (Y/N)	Mar 08 % Survival	Mar 08 Toxicity (Y/N)
Blewett Drain (Vernalis at hwy 132)			18.8	**Y**	16.2	**Y**		
Hospital Creek	10	**Y**	0	**Y**	25	**Y**	80	**Y**
Ingram Creek	0	**Y**	18.8	**Y**	0	**Y**	2.5	**Y**
Westley Wasteway	92.5	N	82.5	**Y**	1.25	**Y**	65	**Y**
Del Puerto Creek (Cox Rd)	13.8	**Y**	97.5	N	62.5	**Y**	N/A	N/A
Del Puerto Creek (Hwy 33)	N/A	N/A	97.5	N	N/A	N/A	N/A	N/A
Orestimba Creek at River Rd.	87.5	N	91.2	**Y**	80	N	95	N
Orestimba Creek at Hwy 33	80	N	88.8	**Y**	92.5	N	90	N
Ramona Lake at Fig Ave.	92.5	N	97.5	N	98.8	N	68.8	**Y**
Newman Wasteway	98.8	N	98.8	N	82.5	**Y**	97.5	N
Poso Slough			N/A	N/A	72.5	**Y**	98.8	N
Turner Slough								
SJR at Lander								
Salt Slough at Lander								
Salt Slough at Sand Dam								
Los Banos Creek at Hwy 140								
Los Banos Creek at China Camp Rd.	96.2	N	97.5	N	87.5	**Y**	92.5	N
Los Banos Creek at Sunset Ave.								
Mud Slough								

Site	Sept 07 % Survival	Sept 07 Toxicity (Y/N)	Mar 07 % Survival	Mar 07 Toxicity (Y/N)	Sep 06 % Survival	Sep 06 Toxicity (Y/N)	Mar 06 % Survival	Mar 06 Toxicity (Y/N)
Blewett Drain (Vernalis at hwy 132)								
Hospital Creek	16.2	**Y**	0	**Y**	**1.25**	**Y**	**82.5**	**Y**
Ingram Creek	0	**Y**	0	**Y**	**0**	**Y**	**23.8**	**Y**
Westley Wasteway	0	**Y**	0	**Y**	**1.25**	**Y**	**0**	**Y**
Del Puerto Creek (Cox Rd)	93.8	N	81.2	**Y**	**55**	**Y**	**0**	**Y**
Del Puerto Creek (Hwy 33)	58.8	**Y**	91.2	**Y**	**1.25**	**Y**	**68.8**	**Y**
Orestimba Creek at River Rd.	98.8	N	90	N	96.25	N	97.5	N
Orestimba Creek at Hwy 33	95	N	13.8	**Y**	**6.25**	**Y**	66.3	N
Ramona Lake at Fig Ave.	91.2	**Y**	N/A	N/A	N/A	N/A	N/A	N/A
Newman Wasteway	51.2	**Y**	93.8	N	98.75	N	90	N
Poso Slough								
Turner Slough	92.5	N	96.2	N	98.75	N	91.3	N
SJR at Lander	95	N	90	**Y**	95	N	N/A	N/A
Salt Slough at Lander	86.2	N	96.2	N	97.5	N	100	N
Salt Slough at Sand Dam	92.5	N	96.2	N	98.75	N	95	N
Los Banos Creek at Hwy 140	87.5	N	96.2	N	98.75	N	95	N
Los Banos Creek at China Camp Rd.	13.8	**Y**	98.8	N	100	N	93.8	N
Los Banos Creek at Sunset Ave.								
Mud Slough	90	N	96.2	N	100	N	98.8	N

Pesticide Analyses.

A total of fifteen different pesticides were detected in water samples during the 2011/12 non-irrigation season for a total of 68 detections. Twenty four of these detections (35%) were below the reporting limit (DNQ) and 16 (24%) were legacy pesticides that are no longer in use (DDT, DDE, DDD, and dieldrin). Each of the detected pesticides is discussed below.

- Carbaryl (1 detection): Carbaryl is a carbamate insecticide used to control insects on a variety of citrus and nut trees and fruit and fiber crops.
- Chlorpyrifos (7 detections): Chlorpyrifos is a common organophosphate pesticide used to control a wide range of insects in orchards, pasture, and field crops. It can be used as a dormant spray for fruit and nut trees. Chlorpyrifos use during this reporting season likely occurred on field and forage crops (corn, cotton, alfalfa) in the fall and as dormant sprays on fruit and nut trees in the mid to late winter.
- DDT/DDE/DDD (1 DDT detection, 13 DDE detections, 1 DDD detection): DDT is an organochlorine pesticide that was banned for agricultural use in 1972. It is a legacy pesticide that is still detected in the watershed at relatively low levels. DDE and DDD have no commercial use but are compounds normally associated with the degradation of DDT.
- Diazinon (1 detection): Diazinon is an organophosphate pesticide used to control a wide range of insects and is frequently applied to nut trees, melons, and tomatoes, and is often used as a dormant spray for trees.
- Dicofol (5 detection): Dicofol is an orgaochlorine insecticide that is registered for use on a variety of field crops such as cotton, tomatoes, beans, and melons.
- Dieldrin (1 detections): Dieldrin is an orgaonchlorine insecticide that was used on a variety of field and orchard crops including cotton, corn, and citrus. Most uses of Dieldrin were banned in 1987.
- Dimethoate (3 detections): Dimethoate is an organophosphate pesticide used to control a wide range of insects. It is used on a variety of field crops including alfalfa, beans, tomatoes, and cotton.
- Diuron (19 detections): Diuron is a substitute urea herbicide used to control weeds in a variety of field crops including cotton, alfalfa, walnuts and wheat. It is also effective in controlling algae.
- Endosulfan I, II, and Sulfate (1 each of Endosulfan I and II, 2 of Endosulfan Sulfate): Endosulfan is an organocholorine insecticide registered for use on cotton, tomatoes, fruit trees and other crops. Endosulfan II and endosulfan sulfate are typically associated with the breakdown of Eundosulfan. It is in the process of being phased out in the United States.
- Methomyl (2 detections): Methomyl is a carbamate insecticide used to control a variety of pests on vegetable, fruit, and field crops.
- Prowl (10 detections): Prowl is a herbicide used to control broadleaf and grassy weeds and is approved for a variety of crops including cotton, field corn, beans, rice, and vineyards.

Exceedances of Recommended Water Quality Values.
Water chemistry analyses were compared to recommended water quality values[3] (RWQV). **Attachment 5** tabulates all of the RWQV exceedances for the reporting period by site.

- **Field, General Physical and Drinking Water Quality Exceedances.** Comparisons were made to several RWQVs. **Attachment 5** tabulates the results for these constituents and the comparison to the RWQVs. The Westside Coalition performed analyses or observed more than 3,000 field and chemistry (non-pesticide) parameters during the reporting period, during which, 191 (6%) results were greater than the RWQVs. Electrical conductivity and total dissolved solids (TDS) accounted for 61 and 57 of these exceedances (respectively, approximately 62% of the exceedances, combined). E. coli results accounted for 22 of these exceedances, 30 for boron and 8 for dissolved oxygen. The RWQV for cadmium, copper, lead, nickel, and zinc are dependant on site water hardness and is a calculated value. There were no exceedances of dissolved metals during this report period. Potential causes for EC/TDS, E. coli, DO, and boron exceedances are discussed below.
    - **EC/TDS.** Electrical Conductivity and TDS are measures of the amount of salts dissolved in the water column. There are a variety of sources of salts that may be contributing to these results including natural marine sediments, accretion of shallow/perched ground water, and the irrigation source water. Additionally, the many growers to rely on wells to supplement surface water supplies. Most of the groundwater wells within the Westside Coalition are more saline than the surface water sources.
    - **E. coli.** E. coli is a measurement of bacteria in the water column. The Westside Coalition has participated in a study to attempt to identify the source of these exceedances. The preliminary results were not conclusive, however human sources were identified as the possible cause for at least some of the exceedances. There is also some suspicion that E. coli colonies have become self-sustaining within some watersheds. The Westside Coalition's Management Plan, approved November 18, 2008, discusses future activities related to the E. coli exceedances. By letter dated February 17, 2012, the Westside Coalition was requested to participate in a group discussion to develop a joint workplan. The Westside Coalition will participate in this workgroup.
    - **Dissolved Oxygen.** DO is measured through a field probe at the time of sample collection. By it's nature, DO is a highly variable and influenced by a variety of conditions including sunlight exposure (related to time of day and time of year), turbidity, biological growth and decay, and channel turbulence. The cause of the DO exceedances measured during this report period is not immediately clear, in many cases, a low DO measurement is accompanied with no flow – indicating that the water is stagnant.
    - **Boron.** Boron is a metal element commonly found in soils on the Westside of the San Joaquin Valley. It is not applied by growers for any agricultural

[3] Water Quality Limits were provided by the Central Valley Regional Water Quality Control Board as part of the MRP Order. Water quality limits for cadmium, copper, lead, nickel and zinc are calculated from equations provided by the Central Valley Regional Water Quality Control Board.

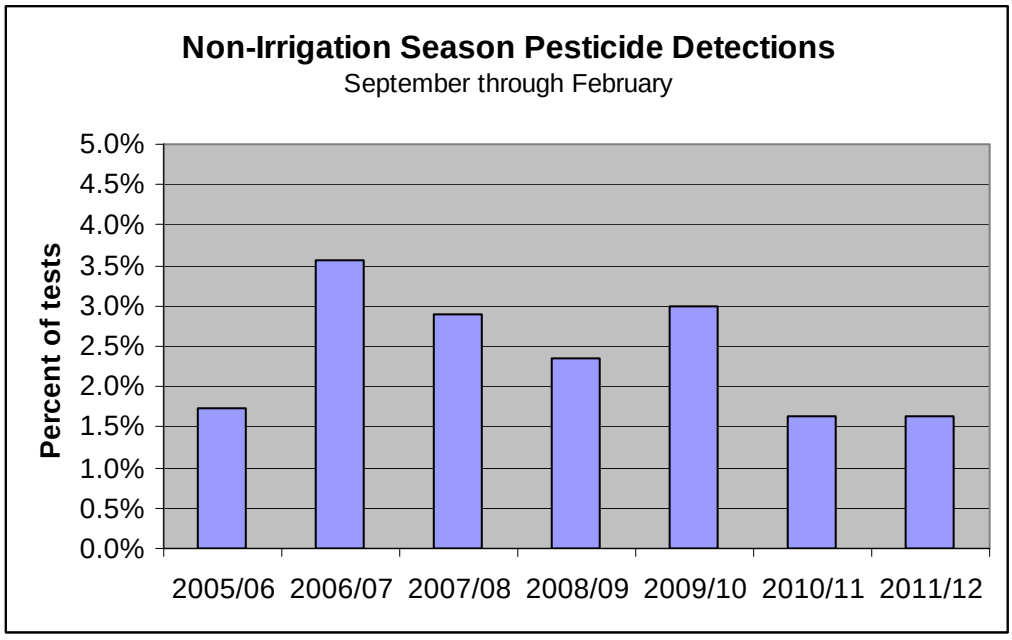
purpose but may be dissolved in tail water, storm runoff, subsurface flows, or groundwater supplies.

The number and type of field and general chemistry exceedances was not dramatically different than those of prior years.

- **Pesticide exceedances.** On average, 48 different pesticides were tested at each monitoring site each month. Samples collected within the Westside Coalition during this report period provided almost 4200 pesticide results, 98% of which resulted in no detection. Of the detected pesticides (68), 28 were greater than established RWQVs. Of the 28 exceedances, 15 (54%) were caused by legacy pesticides (DDT, DDE, and DDD) which are not currently in use. Of the remaining 13, seven were caused by chlorpyrifos, one by diazinon and five by diuron.

  As a fraction of the number of pesticide tests, there were about the same amount of pesticides detected during this reporting period when compared to the previous non-irrigation season, sustaining an overall reducing trend. **Figure 3** shows the percent of total pesticides detected in each irrigation season since 2005 (number of detections / number of results).

Figure 3: Percent of total pesticides detected.



Chlorpyrifos and Diazinon. In 2010, the Regional Board implemented a chlorpyrifos and diazinon TMDL on the San Joaquin River. In response to this TMDL, the Westside Coalition has increased its outreach efforts with additional grower workshops and individual grower meetings in regions with a history of chlorpyrifos or diazinon exceedances. These meetings emphasized the water quality issues related to these materials and management practices that could be implemented to reduce or eliminate discharge. During this reporting period there was one detection of diazinon (Poso Slough) and seven detections of chlorpyrifos (none of which occurred at any of the San Joaquin River monitoring sites). The

Westside Coalition mailed 289 letters to growers within the watersheds where chlorpyrifos was detected and several field "tailgate" meetings were held to increase awareness of the chlorpyrifos and diazinon discharge issues. Pesticide use report (PUR) data was reviewed but provided no useful information. In accordance with the TMDL program requirements, an annual monitoring report for chlorpyrifos and diazinon monitoring results, covering the period of October 2010 through September 2011, was submitted in May 2011. Westside coalition monitoring results from September 2011 through February 2012 have not detected either chlorpyrifos or diazinon in any of the samples from the three San Joaquin River monitoring sites.

SECTION 9: ACTIONS TAKEN TO ADDRESS WATER QUALITY IMPACTS – MANAGEMENT PLAN ACTIVITIES

In October 2008, the Westside Coalition submitted a Management Plan and Focused Watershed Plan (Focused Plan) which described the actions that would be taken to address the water quality issues identified by the monitoring program. The Management Plan described a general approach that covered all of the subwatersheds within the Westside Coalition. Focused Plans have been developed for specific issues within Hospital Creek, Ingram Creek, Del Puerto Creek, Westley Wasteway, Orestimba Creek, and Salt Slough (including both Salt Slough monitoring sites and Poso Slough). **Table 12** shows the implementation schedule listed in the Management Plan (see the Management Plan – General Approach, Table 4, October 23, 2008). In addition to these actions, the Westside Coalition reviews exceedances over the past three years to determine what modifications (if any) need to be made to the Management or Focused plans. A tally of exceedances from February 2009 through February 2012 is included in **Attachment 6**, along with a more detailed review of Management Plan activities.

Table 12: Management Plan Implementation Schedule

Item	Action	Affecting	Estimated Start	Estimated Completion
1	Continue monitoring program	All Categories	On-going	On-going
2	Develop and implement Focused Plan	Site-specific	July 2008	2013
3	Compile MP inventory	All Categories	Jan. 2009	Complete for FP1 and FP2, July 2012 for FP3
4	Develop subwatershed maps	All Categories	On-going	Jan. 2013
5	Determine regional pesticide application	Pesticides, aquatic toxicity	On-going	Annually updated
6	Continue participation in the Dissolved Oxygen study	Dissolved Oxygen	On-going	On-going
7	Analyze results of E. coli study and map/inventory potential sources	E. coli	Sept. 2007	Jan. 2010
8	Continue outreach and education efforts	All Categories	On-going	On-going
9	Analyze for correlation between low DO and other parameters	Dissolved Oxygen	Sept. 2008	June 2009
10	Continue participation in the Salinity TMDL Program	EC/TDS	On-going	On-going
11	Track changes in water quality	All Categories	On-going	On-going

1. Continue Monitoring Program.
This semi-annual monitoring report represents the 15th monitoring report submitted by the Westside Coalition since its inception in 2004. The monitoring program (as revised by the MRP Order) is designed to be a dynamic program that aggressively tracks known water quality issues and conducts broad assessment monitoring to identify new issues (see the MRP Order). The monitoring program is also designed to support the activities of the Management Plan and the Focused Watershed plans. The results of the monitoring program are reported twice annually (June and November). Beginning in March of 2011 the Westside Coalition implemented assessment monitoring at all discharge sites, analyzing samples collected at these sites for the full spectrum of toxicity, pesticide, and general chemistry constituents as indicated in the MRP order. Assessment monitoring continued through February of 2012, the end of this report period, at which point, Special Project monitoring (adjusted based on the results of the Assessment Monitoring) will resume.

2. Develop and Implement Focused Watershed Plan.
A Focused Plan for the Ingram and Hospital Creek watersheds was developed and submitted to the Regional Board on October 23, 2008 followed by a Focused Plan for the Westley Wasteway, Del Puerto Creek, and Orestimba Creek in February 2011. The Focused Plan for Salt Slough (including Poso Slough) was adopted in December 2011. Since that time, the Westside Coalition has implemented a number of activities. A detailed update of the focused plan activities is included in **Attachment 6.**

3. Compile Management Practice Inventory.
A management plan survey for the Ingram and Hospital creek watersheds was completed in 2010 with a similar survey completed for Del Puerto Creek, Westley Wasteway, and Orestimba Creek completed in the Spring of 2011, the results of which were reported in the June 2011 SAMR. A management practice survey for Salt Slough has been developed and circulated. Approximately 80% of the parcels surveyed have been received and the Westside Coalition is meeting with each landowner of the remaining parcels to finalize the survey. A summary of the survey results received to date are included in **Attachment 6**.

4. Develop Subwatershed Maps.
The Westside Coalition submitted subwatershed maps for the major watersheds within its boundaries in 2008. These maps were based on known drainage patterns and available mapping information. As part of the focused plans, the Westside Coalition collected highly detailed drainage information on the Ingram and Hospital creek subwatersheds. Draft maps for the Westley Wasteway, Del Puerto Creek, Orestimba Creek, and Salt Slough subwatersheds have been developed and submitted in previous SAMRs.

5. Determine Regional Pesticide Use.
Pesticide use report data is collected from the agricultural commissioners in the various counties occupied by the Westside Coalition. In addition to general trends analysis, specific regional pesticide use data is periodically reviewed to attempt to compare with pesticide detections through the monitoring program. Limitations with pesticide use report data completeness and availability limit the usefulness of this data for that purpose. A summary of available pesticide use data is provided in **Attachment 6**.

6. Continue Participation in the Dissolved Oxygen Study.

On January 27, 2005 the Central Valley Regional Water Quality Control Board adopted Resolution R5-2005-0005 which included a TMDL directed to the point and non-point discharges that contribute to the dissolved oxygen impairment in the Stockton deepwater Ship Channel (DO TMDL). As part of the DO TMDL certain studies were required. The San Joaquin Valley Drainage Authority received funds from the State Water Resources Control Board to undertake these studies (Recipient Agreement ERP-02D-P63). These studies were completed in June of 2008. The project established a series of monitoring stations, developed a DO model, characterized the fate of algae and nutrients, developed linkages between flow, algae, nutrients and dissolved oxygen. Additional studies were proposed to connect the results of this effort to downstream impacts. This work is ongoing. The Westside Coalition has maintained the monitoring sites within boundaries of the Westside Coalition to maintain the data availability. The Westside Coalition also is prepared to continue to participate in the DO TMDL as further actions are developed. The SJVDA is currently participating with other stakeholders to provide funding for operation of the aerator installed by the Department of Water Resources. A funding agreement is anticipated to be completed within the next few months. An agreement between the parties was finalized in early 2012 and a mechanism in place to fund short term operation of the Stockton Deepwater Ship Channel aerator until May 31, 2014. There are provisions in the agreement for extensions of time.

7. Analyze results of E. coli study and map/inventory potential sources.

Since 2007, the Westside Coalition has participated in studies and other investigations to attempt to identify the source and cause of various E. coli exceedances (reported in previous SAMRs). A technical committee is currently developing an approach plan with which the Westside Coalition will participate.

8. Continue Reporting and Outreach.

Coalition outreach during this period consisted of two mailing campaigns regarding localized sediment discharges in the Blewett Drain and Orestimba Creek areas, grower meetings, monthly updates to the Westside Coalition management committee and one on one meetings with coalition members. Outreach was conducted per the tabulation in **Table 13**.

Outreach this period included our normal group outreach meeting as well as focused individual meetings. A staff person from the Westside Coalition made frequent trips through the Coalition area to observe field conditions. These visits resulted in the discovery of silt discharges and 60 letters were mailed and 22 field "tailgate" meetings were held to help address these issues.

Table 13 lists the outreach activities performed during this reporting period coalition-wide.

Table 13: Outreach Meetings.

Date	Group	Location	Description	Attended	By
September 2011	Del Puerto Creek Growers	Field	Management Practices	2	Rich Peltzer
September 2011	Ingram Creek Growers	Field	Management Practices	2	Rich Peltzer
September 2011	Hospital Creek Growers	Field	Management Practices	1	Rich Peltzer
September 2011	Marshall Road Drain Growers	Field	Management Practices	3	Rich Peltzer
9/20/2011	Certified Letter to Blewett Farmers	Letter	Sediment Exceedances	25	Letter
9/21/2011	Certified Letter to Orestimba Watershed Farmers	Letter	Sediment Exceedances	35	Letter
9/23/2011	Blewett Drain Watershed	Field	Discussion of sedminent exceedances	2	Rich Peltzer
10/14/2011	Orestimba Creek Watershed	Field	Chlorpyrifos and sedmiment issues	1	Rich Peltzer
2/1/2012	Orestimba/ Hospital Creek Watersheds	Letters	Chlorpyrifos Exceedances	83	Letter
2/19/2012	Field tailgate meetings	Field	BMPs + Chlorpyrifos/Malathion/ Sediment	19	Rich Peltzer
2/28/2012	Cotton Project Meet	Dos Palos	Stakeholder outreach meeting	50	Chris Linneman

In both general grower workshops and individual member meetings, landowners and operators with irrigation drainage are encouraged to adopt practices to protect surface water that include a number of options based on their crop and farming conditions. Those practices include irrigation drainage return systems, sediment ponds for containing irrigation drainage, managed vegetation in drainage ditches, use of PAM in irrigation water, and upgrading irrigation systems.

As a reaction to pesticide exceedances, the Coalition has also scheduled individual meetings with growers who may have used pesticides associated with those exceedances in the waterways. In preparation for the meetings, pesticide use information from the Fresno, Merced and Stanislaus County Agricultural Commissioners office is compiled and examined to see if use reports could be correlated to exceedances in the waterways, however in all cases this data was insufficiently complete to provide any useful information at the time outreach activities were performed.

Grant Funding

The Westside Coalition continued to offer private grant funding to its members totaling more $30,000 for construction of new tailwater silt ponds or to maintain existing ponds. The program funds 75% of the costs of any single project, up to a maximum of $6,000 per project. Thirty three project were completed during the 2012 non-irrigation season, expending $21,200 of the

grant funds (about 71% of the available funds). All of these projects were in the northerly region of the Westside Coalition, affecting 5,600 acres that drain into the Marshall Road Drain, Orestimba Creek, Spanish Land Grant Drain and Delta-Mendota Canal.

Proposition 84 has also been made available in 2011 a program managed by CURES and funded by the State Water Resources Control Board. Information on the grant funding availability has been communicated during the previous reporting period to landowners and operators through direct mailings, grower group meetings and individual contacts with landowners.

The Proposition 84 program provides funding for projects in the Central Valley primarily for the purpose of improving irrigation systems. Outreach by CURES was focused on landowners with fields along waterways with management plans in place by the local watershed coalition and located in the northern San Joaquin Valley, San Joaquin County/Sacramento Rivers Delta and southern Sacramento Valley. To date, 51 project have been funded (including 34 in progress), affecting a total of 3,674 acres within the Westside Coalition. A map showing the completed and in-progress projects funded through Prop 84 is included in **Attachment 6**.

9. Analyze for Correlation Between Low DO and Other Parameters.

The Westside Coalition has performed a preliminary review of the low DO measurements and other data. A summary of this review was included in the November 2009 Semi-Annual Monitoring Report.

10. Continue Participation in the Salinity TMDL Program.

The Westside Coalition is actively engaged in the Central Valley Salinity Alternatives for Long-term Sustainability (CVSALTS) process and is an active member of the Central Valley Salinity Coalition that has been organized to facilitate the funding of the CVSALT effort. The Coalition's participation includes both monetary contributions and a substantial commitment of staff time.

Specific actions by the Westside Coalition to support the CVSALT efforts include: (1) Coalition representative's consistent participation in the CVSALT committees and sub-committees including serving as chair of the Economic and Social Impact Committee. (2) Consistent participation and economic contributions to the Central Valley Salinity Coalition, including representative serving as president of the CV Salinity Coalition. In addition the San Joaquin Valley Drainage Authority is providing contracting and contract administration services for the CVSALT effort. The Westside Coalition has committed to substantial resources to help ensure that the CVSALT effort results in an effective and efficient salinity management program for the Central Valley.

11. Track Changes in Water Quality.

Water quality changes are tracked through the Westside Coalition's monitoring program (see the MRP Order). Water quality data is reported and summarized twice annually.

Other Activities.

- **Conversion to high efficiency irrigation systems:** Several of the districts within the Westside Coalition have implemented grant and loan programs to assist growers in upgrading their irrigation systems, and more 17,000 acre of high efficiency systems came on-line during the 2011/12 non-irrigation season within the Westside Coalition, including almost 3,700 acres funded through the Proposition 84 program.
- **NRCS EQUIP Funding:** The Westside Coalition is working with NRCS to develop a targeted funding program to focus EQUIP funds to watershed areas with know water quality issues. This program is currently being developed.

Monitoring Results:
Data gathered since the inception of the monitoring program has allowed the Westside Coalition to identify problem areas and issues. Details of sites exhibiting significant toxicity during this monitoring period are included in **Attachment 2** and all results that exceeded RWQVs are included in **Attachment 5**. This information, along with results from previous years will be used as talking points during upcoming grower meetings to outline the problem issues and sites. The Management Plan and Focused Watershed Plan also outline approaches that will be implemented to address the highlighted issues. A number of preliminary conclusions can be made from the data collected so far:

- **Sediment Toxicity:** Sediment toxicity tests were performed on 18 samples (including one duplicate) collected in May (Event 83). Statistically significant toxicity was measured at four sites (See **Tables 10** and **11**). All four samples were tested for a variety of pesticides as well as total organic carbon (TOC) and percent solids, the results of which were compared to literature values for the purpose of determining the probable cause of toxicity in each sample. In all cases pesticides were present in sufficient quantity to have caused the toxicity.

    - Blewett Drain (56.3% Survival): A total of 1.2 sediment toxic units (TUs) were calculated based on the detected pesticides, which is reflective of the survival observed in the sample. Bifentrhin accounted for 0.97 toxic units.
    - Hospital Creek (20% Survival): A total of 5.2 TUs were calculated, with lambda-cyhalothrin accounting for 4.8 TUs with bifenthrin accounting for 0.4 TUs.
    - Ingram Creek (0% Survival): 10.4 TUs were calculated, with lambda-cyhalothrin and bifenthrin accouting for 9.5 TUs and 0.6 TUs, respectively.
    - Orestimba Creek at Highway 33 (0% Survival): A total of 7.1 TUs, were calculated with lambda-cyhalothrin, bifenthrin, and esfenvalerate accounting for 0.2 TUs, 4.8 TUs, and 2.0 TUs, respectively.

  Bifenthrin, cyfluthrin, Lambda-cyhalothrin, Es/fenvlaerate, and permethrin are all pyethroids use on a variety of field and tree crops including, tomatos, corn, beans, alfalfa, walnuts, and almonds, all of which are grown in the northerly part of the Westside Coalition. The majority of walnut and almond orchards within the Westside Coalition are irrigated with micro-sprinklers and drips systems which do not generate significant

tailwater. It is likely that the discharge of these materials were from field crops using furrow or similar irrigation method.

The Westside Coalition believes the best way to reduce sediment toxicity will be through the management of sediment discharges at the farm level. Sedimentation ponds and tailwater return ponds, along with grower awareness of the issue will likely reduce the amount of sediment load leaving the farm and depositing in the waterways. The Coalition's Management Plan and Focused Watershed Plan include management approaches to address sediment toxicity.

Figure 4 shows the number statistically significant observations during the Fall sediment sampling events. The Fall 2011 sediment results showed the same number of sites with observed toxicity as the previous year, despite a significant increase in sites tested. However, of the four sites showing sediment toxicity, two of them (Hospital Creek and Ingram Creek) have been consistently toxic since the beginning of the program. The Westside Coalition continues to reach out to growers within those subwatersheds to address the issue.

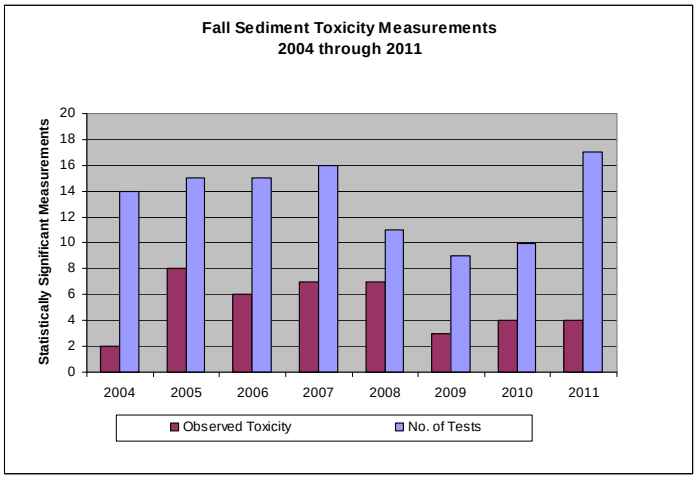


Figure 4: Fall Sediment Toxicity Measurements

Figure 5 shows the trend of percent survival for sediment toxicity (average percent survival for all tested sites at each event), along with a linear trendline. Based on the trendline, there appears to be an improving trend in terms of the magnitude of survival. It is also apparent that the magnitude of Fall survival is generally worse than that of Spring survival.

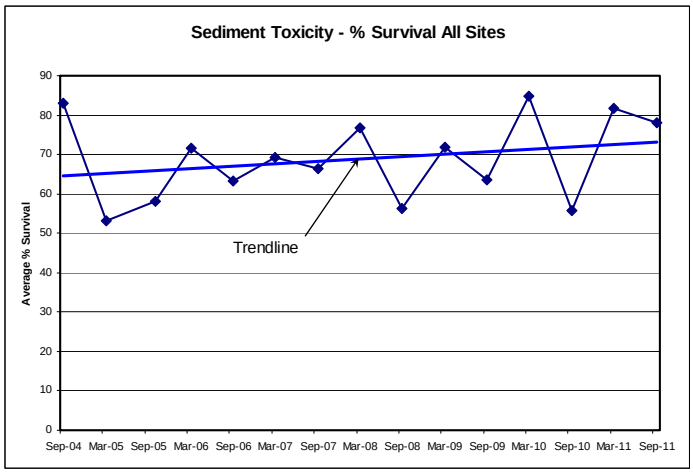


Figure 5: Average Sediment % Survival.

- **Aquatic Toxicity:** Because assessment monitoring was in effect during this report period, samples collected at each discharge site were tested for aquatic toxicity to

Ceriodaphnia dubia, fathead minnow, and algae in accordance with the MRP Order. A total of 244 aquatic toxicity tests were performed, including 18 field duplicates. A total of 6 incidences of statistically significant toxicity (2.5%) were observed during the irrigation season – two for *Ceriodaphnia dubia* and four for algae. **Attachment 2** provides monitoring results for all of the sites that measured significant toxicity, including a discussion of the TIE and dilution series findings.

- **Pesticide Analyses:** During this reporting period, a total of fifteen different pesticides were detected for a total of 68 detections. Twenty eight of these detections exceeded the established RWQV, however 36% of these exceedances were caused by legacy pesticides like DDT. During this report period, aquatic toxicity was observed twice to *Ceriodaphnia dubia*, of which one event could be tied to an insecticide (diazinon). There were four observations of algae toxicity, all of which could be tied to herbicides (diuron). See **Attachment 2**.

- **Chlorpyrifos and Diazinon TMDL Program.** In addition to its monthly monitoring program, the Westside Coalition also participates in the San Joaquin River Chlorpyrifos and Diazinon TMDL program. The Westside Coalition collects water monthly samples for chlorpyrifos and diazinon analysis at the San Joaquin River at Sack Dam, Lander Avenue, and Las Palmas Avenue (near the PID pumps) and collaborates with the Eastside Coalition in the development of the TMDL monitoring report and outreach activities. During this reporting period, neither chlorpyrifos nor diazinon were detected at any of the San Joaquin River monitoring sites sampled by the Westside Coalition. An annual monitoring report for the San Joaquin River Chlorpyrifos and Diazinon TMDL program covering October 2010 through December 2011 was submitted to the Central Valley Regional Water Quality Control Board in May 2012.

- **General Chemistry and Field Observations:** The monitoring results for field and general chemistry tests were generally similar to previous irrigation seasons. EC/TDS measured the largest number of exceedances for this reporting period (61 and 57 exceedances, respectively). Bacteria continues to be a leading source of exceedances (22 for E. Coli during this period), however there was a significant reduction compared to the 2010/11 non-irrigation season (22 exceedances for E. coli this period verses 54 for the last non-irrigation period). There was also an increase in the number of boron exceedances compared to the last non-irrigation season (30 exceedances verses 11). Boron is typically connected with shallow groundwater within the Westside San Joaquin Valley. Other constituent exceedances include dissolved oxygen (8 exceedances), pH (12 exceedances) and arsenic (1 exceedance). Dissolved cadmium, copper, lead, nickel, and zinc results were compared to the calculated RWQV (based on site water hardness) and no exceedances were measured during this reporting period. With many of these constituents, the source of the exceedance is neither clear nor easily traceable, and often can be found in the source water itself (such as the San Joaquin River at Sack Dam or the Delta-Mendota Canal).

SECTION 10: COMMUNICATION REPORTS

Exceedance reports were submitted to the Central Valley Regional Water Quality Control Board in response to monitoring results for the reporting period. These reports are included in **Appendix B.**

Follow-up included reporting statistically significant toxic events and exceedences of water quality values to the overlying districts, PCA's and to individual Coalition participants. The districts would then communicate with the affected growers to notify them that there is a problem. Meetings are then to be organized at the Coalition level as required to inform landowners, operators, PCA's, chemical applicators and others on monitoring results and likely best management measures that could be undertaken to minimize these problems (see **Table 15**).

SECTION 11: CONCLUSIONS AND RECOMMENDATIONS

The Westside Coalition's monitoring program has identified constituents of concern (see **Attachments 2** and **5**). The Westside Coalition has submitted a Management Plan and Focused Watershed Plan to address the water quality concerns discovered by previous monitoring. Implementation of these plans has begun.

The Westside Coalition monitoring program has accumulated data from 88 regular monitoring events and 12 rain events. Data from this reporting period has verified previously identified water quality issues but has also showed some indications of an improving trend in water quality (see **Section 9**). As part of the Management Plan submitted in 2008, the Westside Coalition developed a tally of exceedances by constituent for the data collected between March 2009 through February 2012 (three years). In comparison with the same sites over the previous three year period (March 2008 through February 2011), there are some promising improvements:

- Chlorpyrifos exceedances reduced by 17 (60 exceedances/588 tests verses 77 exceedances/524 tests in the previous 3 year period) and diazinon exceedances reduced by 1 (2 exceedances/588 tests verses 3 exceedances/524 test in the previous period).
- Measurement of sediment toxicity reduced by 2 (26 exceedances/71 tests for the most recent period verses 28 exceedances/59 tests).
- *Ceriodaphnia dubia* toxicity observations reduced by 5 (28 exceedances/484 tests in the most recent period verse 33 exceedances/442 tests in the previous).

A complete tally of exceedances by site and constituent is included in **Attachment 6**.

Attachment 1
Sampling Event Details

Event 83	Map	Caltest		APPL	PER				
September, 2011	Desig.	Gen Phy	Drnk Wtr	Pest	Sed Tox	CD Tox	PP Tox	SC Tox	Dup?
Hospital Cr at River Road	HCARR	x	x	x	x	x	x	x	
Ingram Cr at River Road	ICARR	x	x	x	x	x	x	x	
Westley Wasteway near Cox Road	WWNCR	x	x	x	x	x	x	x	
Del Puerto Cr near Cox Road	DPCCR	x	x	x	x	x	x	x	
Del Puerto Cr at Hwy 33	DPCHW	**No Flow**							
Ramona Lake near Fig Avenue	ROLFA	x	x	x	x	x	x	x	
Marshall Road Drain near River Road	MRDRR	x	x	x		x	x	x	
Orestimba Cr at River Road	OCARR	x	x	x	x	x	x	x	
Orestimba Cr at Hwy 33	OCAHW	x	x	x	x	x	x	x	
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x	x	x	x	x	
San Joaquin River at Lander Avenue	SJRLA	x	x	x	x	x	x	x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x	x	x	x	x	
Salt Slough at Lander Avenue	SSALA	x	x	x	x	x	x	x	x
Salt Slough at Sand Dam	SSASD	x	x	x	x	x	x	x	
Los Banos Creek at Highway 140	LBCHW	x	x	x	x	x	x	x	
Los Banos Creek at China Camp Road	LBCCC	**No Flow**			x				
Turner Slough near Edminster Road	TSAER	x	x	x	x	x	x	x	
Blewett Drain near Highway 132	VH132	**No Flow**			x				
Poso Slough at Indiana Avenue	PSAIA	x	x	x	x	x	x	x	
Los Banos Creek at Sunset Ave	LBCSA	**No Flow**							
Little Panoche Cr at Western Boundary	LPCWB	**No Flow**							
Little Panoche Cr at San Luis Canal	LPCSL	**No Flow**							
Russell Ave. Drain at San Luis Canal	RADSL	**No Flow**							
San Joaquin River at Sack Dam	SJRSD	x	x	x					
San Joaquin River at PID Pumps	SJRPP	x	x	x					
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x					

Event 84	Map	Caltest		APPL	PER				
October, 2011	Desig.	Gen Phy	Drnk Wtr	Pest	Sed Tox	CD Tox	PP Tox	SC Tox	Dup?
Hospital Cr at River Road	HCARR	**No Flow**							
Ingram Cr at River Road	ICARR	x	x	x		x	x	x	
Westley Wasteway near Cox Road	WWNCR	x	x	x		x	x	x	
Del Puerto Cr near Cox Road	DPCCR	x	x	x		x	x	x	
Del Puerto Cr at Hwy 33	DPCHW	**No Flow**							
Ramona Lake near Fig Avenue	ROLFA	x	x	x		x	x	x	
Marshall Road Drain near River Road	MRDRR	**No Flow**							
Orestimba Cr at River Road	OCARR	x	x	x		x	x	x	
Orestimba Cr at Hwy 33	OCAHW	x	x	x		x	x	x	
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x		x	x	x	
San Joaquin River at Lander Avenue	SJRLA	**No Flow**							
Mud Slough u/s San Luis Drain	MSUSL	x	x	x		x	x	x	
Salt Slough at Lander Avenue	SSALA	x	x	x		x	x	x	
Salt Slough at Sand Dam	SSASD	x	x	x		x	x	x	
Los Banos Creek at Highway 140	LBCHW	x	x	x		x	x	x	
Los Banos Creek at China Camp Road	LBCCC	x	x	x		x	x	x	
Turner Slough near Edminster Road	TSAER	x	x	x		x	x	x	
Blewett Drain near Highway 132	VH132	**No Flow**							
Poso Slough at Indiana Avenue	PSAIA	x	x	x		x	x	x	
Los Banos Creek at Sunset Ave	LBCSA	**No Flow**							
Little Panoche Cr at Western Boundary	LPCWB	**No Flow**							
Little Panoche Cr at San Luis Canal	LPCSL	**No Flow**							
Russell Ave. Drain at San Luis Canal	RADSL	**No Flow**							
San Joaquin River at Sack Dam	SJRSD	x	x	x		x	x	x	
San Joaquin River at PID Pumps	SJRPP	x	x	x		x	x	x	
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x		x	x	x	

Event 85	Map	Caltest		APPL	PER				
November, 2011	Desig.	Gen Phy	Drnk Wtr	Pest	Sed Tox	CD Tox	PP Tox	SC Tox	Dup?
Hospital Cr at River Road	HCARR	x	x	x		x	x	x	
Ingram Cr at River Road	ICARR	**No Flow**							
Westley Wasteway near Cox Road	WWNCR	x	x	x		x	x	x	
Del Puerto Cr near Cox Road	DPCCR	x	x	x		x	x	x	
Del Puerto Cr at Hwy 33	DPCHW	**No Flow**							
Ramona Lake near Fig Avenue	ROLFA	**No Flow**							
Marshall Road Drain near River Road	MRDRR	**No Flow**							
Orestimba Cr at River Road	OCARR	**No Flow**							
Orestimba Cr at Hwy 33	OCAHW	x	x	x		x	x	x	
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x		x	x	x	
San Joaquin River at Lander Avenue	SJRLA	x	x	x		x	x	x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x		x	x	x	
Salt Slough at Lander Avenue	SSALA	x	x	x		x	x	x	
Salt Slough at Sand Dam	SSASD	x	x	x		x	x	x	
Los Banos Creek at Highway 140	LBCHW	x	x	x		x	x	x	
Los Banos Creek at China Camp Road	LBCCC	x	x	x		x	x	x	
Turner Slough near Edminster Road	TSAER	x	x	x		x	x	x	
Blewett Drain near Highway 132	VH132	**No Flow**							
Poso Slough at Indiana Avenue	PSAIA	x	x	x		x	x	x	
Los Banos Creek at Sunset Ave	LBCSA	**No Flow**							
Little Panoche Cr at Western Boundary	LPCWB	**No Flow**							
Little Panoche Cr at San Luis Canal	LPCSL	**No Flow**							
Russell Ave. Drain at San Luis Canal	RADSL	**No Flow**							
San Joaquin River at Sack Dam	SJRSD	x	x	x					
San Joaquin River at PID Pumps	SJRPP	x	x	x					
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x					

Event 86	Map	Caltest		APPL	PER				
December, 2011	Desig.	Gen Phy	Drnk Wtr	Pest	Sed Tox	CD Tox	PP Tox	SC Tox	Dup?
Hospital Cr at River Road	HCARR	**No Flow**							
Ingram Cr at River Road	ICARR	x	x	x		x	x	x	
Westley Wasteway near Cox Road	WWNCR	x	x	x		x	x	x	
Del Puerto Cr near Cox Road	DPCCR	x	x	x		x	x	x	
Del Puerto Cr at Hwy 33	DPCHW	**No Flow**							
Ramona Lake near Fig Avenue	ROLFA	x	x	x		x	x	x	
Marshall Road Drain near River Road	MRDRR	**No Flow**							
Orestimba Cr at River Road	OCARR	**No Flow**							
Orestimba Cr at Hwy 33	OCAHW	x	x	x		x	x	x	
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x		x	x	x	
San Joaquin River at Lander Avenue	SJRLA	x	x	x		x	x	x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x		x	x	x	
Salt Slough at Lander Avenue	SSALA	x	x	x		x	x	x	
Salt Slough at Sand Dam	SSASD	x	x	x		x	x	x	
Los Banos Creek at Highway 140	LBCHW	x	x	x		x	x	x	
Los Banos Creek at China Camp Road	LBCCC	x	x	x		x	x	x	
Turner Slough near Edminster Road	TSAER	x	x	x		x	x	x	
Blewett Drain near Highway 132	VH132	**No Flow**							
Poso Slough at Indiana Avenue	PSAIA	x	x	x		x	x	x	
Los Banos Creek at Sunset Ave	LBCSA	**No Flow**							
Little Panoche Cr at Western Boundary	LPCWB	**No Flow**							
Little Panoche Cr at San Luis Canal	LPCSL	**No Flow**							
Russell Ave. Drain at San Luis Canal	RADSL	**No Flow**							
San Joaquin River at Sack Dam	SJRSD	x	x	x					
San Joaquin River at PID Pumps	SJRPP	x	x	x					
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x					

Event 87	Map	Caltest		APPL	PER				Dup?
January, 2012	Desig.	Gen Phy	Drnk Wtr	Pest	Sed Tox	CD Tox	PP Tox	SC Tox	
Hospital Cr at River Road	HCARR	**No Flow**							
Ingram Cr at River Road	ICARR	**No Flow**							
Westley Wasteway near Cox Road	WWNCR	x	x	x		x	x	x	
Del Puerto Cr near Cox Road	DPCCR	x	x	x		x	x	x	
Del Puerto Cr at Hwy 33	DPCHW	**No Flow**							
Ramona Lake near Fig Avenue	ROLFA	x	x	x		x	x	x	
Marshall Road Drain near River Road	MRDRR	x	x	x		x	x	x	
Orestimba Cr at River Road	OCARR	**No Flow**							
Orestimba Cr at Hwy 33	OCAHW	**No Flow**							
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x		x	x	x	
San Joaquin River at Lander Avenue	SJRLA	x	x	x		x	x	x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x		x	x	x	
Salt Slough at Lander Avenue	SSALA	x	x	x		x	x	x	
Salt Slough at Sand Dam	SSASD	x	x	x		x	x	x	
Los Banos Creek at Highway 140	LBCHW	x	x	x		x	x	x	
Los Banos Creek at China Camp Road	LBCCC	x	x	x		x	x	x	
Turner Slough near Edminster Road	TSAER	x	x	x		x	x	x	
Blewett Drain near Highway 132	VH132	**No Flow**							
Poso Slough at Indiana Avenue	PSAIA	x	x	x		x	x	x	
Los Banos Creek at Sunset Ave	LBCSA	**No Flow**							
Little Panoche Cr at Western Boundary	LPCWB	**No Flow**							
Little Panoche Cr at San Luis Canal	LPCSL	**No Flow**							
Russell Ave. Drain at San Luis Canal	RADSL	**No Flow**							
San Joaquin River at Sack Dam	SJRSD	x	x	x					
San Joaquin River at PID Pumps	SJRPP	x	x	x					
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x					

Event 88	Map	Caltest		APPL	PER				Dup?
February, 2012	Desig.	Gen Phy	Drnk Wtr	Pest	Sed Tox	CD Tox	PP Tox	SC Tox	
Hospital Cr at River Road	HCARR	x	x	x		x	x	x	
Ingram Cr at River Road	ICARR	**No Flow**							
Westley Wasteway near Cox Road	WWNCR	**No Flow**							
Del Puerto Cr near Cox Road	DPCCR	**No Flow**							
Del Puerto Cr at Hwy 33	DPCHW	**No Flow**							
Ramona Lake near Fig Avenue	ROLFA	x	x	x		x	x	x	
Marshall Road Drain near River Road	MRDRR	**No Flow**							
Orestimba Cr at River Road	OCARR	**No Flow**							
Orestimba Cr at Hwy 33	OCAHW	**No Flow**							
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x		x	x	x	
San Joaquin River at Lander Avenue	SJRLA	x	x	x		x	x	x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x		x	x	x	
Salt Slough at Lander Avenue	SSALA	x	x	x		x	x	x	
Salt Slough at Sand Dam	SSASD	x	x	x		x	x	x	
Los Banos Creek at Highway 140	LBCHW	x	x	x		x	x	x	
Los Banos Creek at China Camp Road	LBCCC	x	x	x		x	x	x	
Turner Slough near Edminster Road	TSAER	x	x	x		x	x	x	
Blewett Drain near Highway 132	VH132	**No Flow**							
Poso Slough at Indiana Avenue	PSAIA	x	x	x		x	x	x	
Los Banos Creek at Sunset Ave	LBCSA	**No Flow**							
Little Panoche Cr at Western Boundary	LPCWB	**No Flow**							
Little Panoche Cr at San Luis Canal	LPCSL	**No Flow**							
Russell Ave. Drain at San Luis Canal	RADSL	**No Flow**							
San Joaquin River at Sack Dam	SJRSD	x	x	x					
San Joaquin River at PID Pumps	SJRPP	x	x	x					
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x					

Attachment 2
Significant Aquatic Toxicity Results

Westside San Joaquin River Watershed Coalition
Significant Aquatic Toxicity Results

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Poso Slough at Indiana Ave	11/8/2011	85	Ceriodaphnia dubia	0	100	100%	%

Followup: The Dilution Series measured 2.9 toxic units and the TIE indicated that pesticide(s) likely caused the toxicity.

Field Data

DO	10.45	mg/l
EC	489	µmhos/cm
Est Depth	1.86	ft
Flow	19	cfs
pH	7.78	
Staff Gage	1.86	ft
Temp	14.54	c

Water Chemistry

Bromide	0.16	DNQ	mg/L
Dissolved Organic Carbon	5.3		mg/L
E. coli	330		MPN/100m
Total Organic Carbon	5.5		mg/L
Dissolved Solids	360		mg/L
Hardness (as CACO3)	130		mg/L
Suspended Solids	65		mg/L
Turbidity	37		NTU
Arsenic	4.8		ug/L
Boron	216		ug/L
Cadmium	-0.04	ND	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	4.8		ug/L
Copper (Dissolved)	1.9		ug/L
Lead	1.2		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	5.8		ug/L
Nickel (Dissolved)	2.0		ug/L
Selenium	0.51	DNQ	ug/L
Zinc	9.4		ug/L
Zinc (Dissolved)	-0.7	ND	ug/L
Ammonia as N	0.13		mg/L
Nitrate + Nitrite as N	1.9		mg/L
Nitrogen, Total Kjeldahl	1.2		mg/L
OrthoPhosphate as P	0.19		mg/L
Phosphate as P	0.29		mg/L

Detected Pesticides

Diazinon	1.2	=

DNQ = Estimated value, below reporting limit.
Y = % Difference primary and confirmation column is >40%.
B = Constituent also detected in blank sample.

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Orestimba Creek at Hwy 33	12/13/2011	86	Ceriodaphnia dubia	60	95	37%	%

Followup: No follow up testing was required.

Field Data

DO	5.09	mg/l
EC	332	µmhos/cm
Est Depth		ft
Flow	0	cfs
pH	5.83	
Staff Gage		ft
Temp	6.1	c

Water Chemistry

Bromide	0.23	DNQ	mg/L
Dissolved Organic Carbon	2.8		mg/L
E. coli	71		MPN/100m
Total Organic Carbon	3.1		mg/L
Dissolved Solids	300		mg/L
Hardness (as CACO3)	140		mg/L
Suspended Solids	403		mg/L
Turbidity	230		NTU
Arsenic	5.4		ug/L
Boron	218		ug/L
Cadmium	0.12		ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	25		ug/L
Copper (Dissolved)	1.4		ug/L
Lead	9.4		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	27		ug/L
Nickel (Dissolved)	1.4		ug/L
Selenium	0.42	DNQ	ug/L
Zinc	55		ug/L
Zinc (Dissolved)	-0.7	ND	ug/L
Ammonia as N	-0.040	ND	mg/L
Nitrate + Nitrite as N	1.3		mg/L
Nitrogen, Total Kjeldahl	1.5		mg/L
OrthoPhosphate as P	0.053		mg/L
Phosphate as P	0.51		mg/L

Detected Pesticides

DDD(p,p')	0.0059	DNQ
DDE(p,p')	0.048	=
Diuron	0.25	DNQ

DNQ = Estimated value, below reporting limit.
Y = % Difference primary and confirmation column is >40%.
B = Constituent also detected in blank sample.

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Poso Slough at Indiana Ave	2/14/2012	88	Selenastrum capricornutum	408,500	1,708,000	76%	cells/ml

Followup: TIE indicated that pesticide(s) likely caused the toxicty.

Field Data

DO	10.09	mg/l
EC	818	µmhos/cm
Est Depth	3.4	ft
Flow	61	cfs
pH	7.84	
Staff Gage		ft
Temp	11.39	c

Water Chemistry

Bromide	0.39	DNQ	mg/L
Dissolved Organic Carbon	6.9		mg/L
E. coli	390		MPN/100m
Total Organic Carbon	6.6		mg/L
Dissolved Solids	470		mg/L
Hardness (as CACO3)	190		mg/L
Suspended Solids	122		mg/L
Turbidity	70		NTU
Arsenic	6.2		ug/L
Boron	259		ug/L
Cadmium	0.05	DNQ	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	6.2		ug/L
Copper (Dissolved)	2.6		ug/L
Lead	1.5		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	7.1		ug/L
Nickel (Dissolved)	2.4		ug/L
Selenium	0.74	DNQ	ug/L
Zinc	13		ug/L
Zinc (Dissolved)	-0.7	ND	ug/L
Ammonia as N	0.31		mg/L
Nitrate + Nitrite as N	3.8		mg/L
Nitrogen, Total Kjeldahl	1.2		mg/L
OrthoPhosphate as P	0.40		mg/L
Phosphate as P	0.55		mg/L

Detected Pesticides

Diuron	6.8	=
Prowl	1.3	=

DNQ = Estimated value, below reporting limit.
Y = % Difference primary and confirmation column is >40%.
B = Constituent also detected in blank sample.

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Salt Slough at Lander Ave	2/14/2012	88	Selenastrum capricornutum	796,000	1,773,000	55%	cells/ml

Followup: TIE indicated that pesticide(s) likely caused the toxicty.

Field Data

DO	6.95	mg/l
EC	1404	µmhos/cm
Est Depth		ft
Flow	354	cfs
pH	7.58	
Staff Gage	0	ft
Temp	11.41	c

Water Chemistry

Bromide	0.58	DNQ	mg/L
Dissolved Organic Carbon	7.8		mg/L
E. coli	36		MPN/100m
Total Organic Carbon	7.4		mg/L
Dissolved Solids	880		mg/L
Hardness (as CACO3)	320		mg/L
Suspended Solids	116		mg/L
Turbidity	50		NTU
Arsenic	4.4		ug/L
Boron	700		ug/L
Cadmium	-0.04	ND	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	2.8		ug/L
Copper (Dissolved)	1.4		ug/L
Lead	0.57		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	4.5		ug/L
Nickel (Dissolved)	2.5		ug/L
Selenium	0.55	DNQ	ug/L
Zinc	4.6		ug/L
Zinc (Dissolved)	-0.7	ND	ug/L
Ammonia as N	0.12		mg/L
Nitrate + Nitrite as N	2.5		mg/L
Nitrogen, Total Kjeldahl	1.2		mg/L
OrthoPhosphate as P	0.24		mg/L
Phosphate as P	0.46		mg/L

Detected Pesticides

Diuron	6.9	=
Prowl	0.46	=

DNQ = Estimated value, below reporting limit.
Y = % Difference primary and confirmation column is >40%.
B = Constituent also detected in blank sample.

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Salt Slough at Sand Dam	2/14/2012	88	Selenastrum capricornutum	915,500	1,708,000	46%	cells/ml

Followup: No follow up testing was required.

Field Data

DO	8.63	mg/l
EC	974	µmhos/cm
Est Depth	6.82	ft
Flow		cfs
pH	7.91	
Staff Gage		ft
Temp	12.47	c

Water Chemistry

Bromide	0.41	DNQ	mg/L
Dissolved Organic Carbon	7.1		mg/L
E. coli	83		MPN/100m
Total Organic Carbon	7.3		mg/L
Dissolved Solids	610		mg/L
Hardness (as CACO3)	250		mg/L
Suspended Solids	62		mg/L
Turbidity	37		NTU
Arsenic	7.2		ug/L
Boron	251		ug/L
Cadmium	-0.04	ND	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	5.1		ug/L
Copper (Dissolved)	2.9		ug/L
Lead	0.81		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	5.6		ug/L
Nickel (Dissolved)	3.0		ug/L
Selenium	0.69	DNQ	ug/L
Zinc	7.9		ug/L
Zinc (Dissolved)	0.8	DNQ	ug/L
Ammonia as N	0.31		mg/L
Nitrate + Nitrite as N	5.5		mg/L
Nitrogen, Total Kjeldahl	1.4		mg/L
OrthoPhosphate as P	0.51		mg/L
Phosphate as P	0.64		mg/L

Detected Pesticides

Diuron	5.5	=
Prowl	1.9	=

DNQ = Estimated value, below reporting limit.
Y = % Difference primary and confirmation column is >40%.
B = Constituent also detected in blank sample.

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
San Joaquin River at Fremont Ford	2/14/2012	88	Selenastrum capricornutum	850,800	1,773,000	52%	cells/ml

Followup: TIE indicated that pesticide(s) likely caused the toxicty.

Field Data

DO	10.21	mg/l
EC	1534	µmhos/cm
Est Depth		ft
Flow	249	cfs
pH	7.9	
Staff Gage		ft
Temp	11.1	c

Water Chemistry

Bromide	0.65	DNQ	mg/L
Dissolved Organic Carbon	7.1		mg/L
E. coli	28		MPN/100m
Total Organic Carbon	6.9		mg/L
Dissolved Solids	940		mg/L
Hardness (as CACO3)	350		mg/L
Suspended Solids	74		mg/L
Turbidity	34		NTU
Arsenic	4.1		ug/L
Boron	713		ug/L
Cadmium	-0.04	ND	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	3.1		ug/L
Copper (Dissolved)	1.3		ug/L
Lead	0.76		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	5.0		ug/L
Nickel (Dissolved)	2.2		ug/L
Selenium	0.50	DNQ	ug/L
Zinc	9.8		ug/L
Zinc (Dissolved)	-0.7	ND	ug/L
Ammonia as N	0.11		mg/L
Nitrate + Nitrite as N	2.0		mg/L
Nitrogen, Total Kjeldahl	1.0		mg/L
OrthoPhosphate as P	0.16		mg/L
Phosphate as P	0.45		mg/L

Detected Pesticides

Diuron	8.7	=
Prowl	0.26	=

DNQ = Estimated value, below reporting limit.
Y = % Difference primary and confirmation column is >40%.
B = Constituent also detected in blank sample.

Attachment 3
Field Quality Control Sample Results

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Sample Date: 9/13/2011 Site: Salt Slough at Lander Ave							
Ammonia as N	General Chemistry	-0.04	ND	-0.04	ND	mg/L	NA
Arsenic	General Chemistry	4.7		0.03	DNQ	ug/L	1%
Boron	General Chemistry	433		1.2	DNQ	ug/L	0%
Bromide	General Chemistry	0.31	DNQ	-0.01	ND	mg/L	NA
Cadmium	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Copper	General Chemistry	2.7		0.23	DNQ	ug/L	9%
Copper (Dissolved)	General Chemistry	0.77		-0.07	ND	ug/L	NA
Dissolved Organic Carbon	General Chemistry	4.8		0.15	DNQ	mg/L	3%
Dissolved Solids	General Chemistry	500		-4	ND	mg/L	NA
E. coli	General Chemistry	190		-1	ND	MPN/100mL	NA
Hardness as CaCO3	General Chemistry	190		-1.7	ND	mg/L	NA
Lead	General Chemistry	0.70		-0.03	ND	ug/L	NA
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	4.0		0.13	DNQ	ug/L	3%
Nickel (Dissolved)	General Chemistry	1.5		-0.04	ND	ug/L	NA
Nitrate + Nitrite as N	General Chemistry	0.44		0.087		mg/L	20%
Nitrogen, Total Kjeldahl	General Chemistry	0.69		-0.07	ND	mg/L	NA
OrthoPhosphate as P	General Chemistry	0.16		-0.006	ND	mg/L	NA
Phosphate as P	General Chemistry	0.27		0.0070	DNQ	mg/L	3%
Selenium	General Chemistry	0.28	DNQ	-0.06	ND	ug/L	NA
Suspended Solids	General Chemistry	46		-1	ND	mg/L	NA
Total Organic Carbon	General Chemistry	4.9		0.16	DNQ	mg/L	3%
Turbidity	General Chemistry	29		-0.03	ND	NTU	NA
Zinc	General Chemistry	5.5		-0.7	ND	ug/L	NA
Zinc (Dissolved)	General Chemistry	-0.7	ND	-0.7	ND	ug/L	NA
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	ug/L	NA
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA
Diuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methamidophos	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Methomyl	Pesticide	0.10	=	-0.050	ND	ug/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA
Prowl	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA
Sample Date: 10/11/2011 Site: Salt Slough at Lander Ave							
Ammonia as N	General Chemistry	0.055	DNQ	-0.04	ND	mg/L	NA
Arsenic	General Chemistry	3.9		-0.02	ND	ug/L	NA
Boron	General Chemistry	440		-0.7	ND	ug/L	NA
Bromide	General Chemistry	0.30	DNQ	-0.01	ND	mg/L	NA
Cadmium	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Copper	General Chemistry	2.8		-0.07	ND	ug/L	NA
Copper (Dissolved)	General Chemistry	0.74		-0.07	ND	ug/L	NA
Dissolved Organic Carbon	General Chemistry	4.5		-0.3	ND	mg/L	NA
Dissolved Solids	General Chemistry	520		-4	ND	mg/L	NA
E. coli	General Chemistry	120		-1	ND	MPN/100mL	NA
Hardness (as CACO3)	General Chemistry	180		-1.7	ND	mg/L	NA

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Lead	General Chemistry	0.96		-0.03	ND	ug/L	NA
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	4.9		-0.04	ND	ug/L	NA
Nickel (Dissolved)	General Chemistry	1.3		-0.04	ND	ug/L	NA
Nitrate + Nitrite as N	General Chemistry	0.38		0.029	DNQ	mg/L	8%
Nitrogen, Total Kjeldahl	General Chemistry	0.78		-0.07	ND	mg/L	NA
OrthoPhosphate as P	General Chemistry	0.12		-0.006	ND	mg/L	NA
Phosphate as P	General Chemistry	0.21		-0.007	ND	mg/L	NA
Selenium	General Chemistry	0.28	DNQ	-0.06	ND	ug/L	NA
Suspended Solids	General Chemistry	42		-1	ND	mg/L	NA
Total Organic Carbon	General Chemistry	4.3		-0.3	ND	mg/L	NA
Turbidity	General Chemistry	26		-0.03	ND	NTU	NA
Zinc	General Chemistry	9.0		-0.7	ND	ug/L	NA
Zinc (Dissolved)	General Chemistry	-0.7	ND	-0.7	ND	ug/L	NA
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	ug/L	NA
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA
Diuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methamidophos	Pesticide	-0.10	ND	-0.10	ND	ug/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Methomyl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA
Prowl	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA
Sample Date: 11/8/2011 Site: Salt Slough at Lander Ave							
Ammonia as N	General Chemistry	-0.040	ND	-0.040	ND	mg/L	NA
Arsenic	General Chemistry	2.9		-0.02	ND	ug/L	NA
Boron	General Chemistry	561		-0.7	ND	ug/L	NA
Bromide	General Chemistry	0.18	DNQ	-0.010	ND	mg/L	NA
Cadmium	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Copper	General Chemistry	1.8		-0.07	ND	ug/L	NA
Copper (Dissolved)	General Chemistry	0.68		-0.07	ND	ug/L	NA
Dissolved Organic Carbon	General Chemistry	6.0		-0.30	ND	mg/L	NA
Dissolved Solids	General Chemistry	560		5.0	DNQ	mg/L	1%
E. coli	General Chemistry	58		-1.0	ND	MPN/100mL	NA
Hardness (as CACO3)	General Chemistry	200		-1.7	ND	mg/L	NA
Lead	General Chemistry	0.41		-0.03	ND	ug/L	NA
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	2.8		-0.04	ND	ug/L	NA
Nickel (Dissolved)	General Chemistry	1.3		-0.04	ND	ug/L	NA
Nitrate + Nitrite as N	General Chemistry	0.53		0.067		mg/L	13%
Nitrogen, Total Kjeldahl	General Chemistry	0.71		-0.070	ND	mg/L	NA
OrthoPhosphate as P	General Chemistry	0.12		-0.0060	ND	mg/L	NA
Phosphate as P	General Chemistry	0.19		-0.0070	ND	mg/L	NA
Selenium	General Chemistry	0.37	DNQ	-0.06	ND	ug/L	NA
Suspended Solids	General Chemistry	24		-1	ND	mg/L	NA
Total Organic Carbon	General Chemistry	6.1		-0.30	ND	mg/L	NA
Turbidity	General Chemistry	16		-0.030	ND	NTU	NA
Zinc	General Chemistry	3.8		-0.7	ND	ug/L	NA
Zinc (Dissolved)	General Chemistry	-0.7	ND	-0.7	ND	ug/L	NA

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	ug/L	NA
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA
Diuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methamidophos	Pesticide	-0.10	ND	-0.10	ND	ug/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Methomyl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA
Prowl	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA
Sample Date: 12/13/2011 Site: Salt Slough at Lander Ave							
Ammonia as N	General Chemistry	0.088	DNQ	-0.040	ND	mg/L	NA
Arsenic	General Chemistry	2.7		-0.02	ND	ug/L	NA
Boron	General Chemistry	1080		1.5	DNQ	ug/L	0%
Bromide	General Chemistry	0.66	DNQ	-0.010	ND	mg/L	NA
Cadmium	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Copper	General Chemistry	1.2		0.13	DNQ	ug/L	11%
Copper (Dissolved)	General Chemistry	0.67		J0.10	DNQ	ug/L	NA
Dissolved Organic Carbon	General Chemistry	5.9		-0.30	ND	mg/L	NA
Dissolved Solids	General Chemistry	1200		-4.0	ND	mg/L	NA
E. coli	General Chemistry	160		-1.0	ND	MPN/100mL	NA
Hardness (as CACO3)	General Chemistry	410		-1.7	ND	mg/L	NA
Lead	General Chemistry	0.20	DNQ	-0.03	ND	ug/L	NA
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	2.4		0.04	DNQ	ug/L	2%
Nickel (Dissolved)	General Chemistry	1.7		-0.04	ND	ug/L	NA
Nitrate + Nitrite as N	General Chemistry	0.66		0.030	DNQ	mg/L	5%
Nitrogen, Total Kjeldahl	General Chemistry	0.40		-0.070	ND	mg/L	NA
OrthoPhosphate as P	General Chemistry	0.14		-0.0060	ND	mg/L	NA
Phosphate as P	General Chemistry	0.18		-0.0070	ND	mg/L	NA
Selenium	General Chemistry	0.21	DNQ	-0.06	ND	ug/L	NA
Suspended Solids	General Chemistry	25		-2	ND	mg/L	NA
Total Organic Carbon	General Chemistry	6.0		-0.30	ND	mg/L	NA
Turbidity	General Chemistry	9.4		-0.030	ND	NTU	NA
Zinc	General Chemistry	2.0		-0.7	ND	ug/L	NA
Zinc (Dissolved)	General Chemistry	-0.7	ND	-0.7	ND	ug/L	NA
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	ug/L	NA
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference	
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Dicofol	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA	
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA	
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA	
Diuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA	
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Methamidophos	Pesticide	-0.10	ND	-0.10	ND	ug/L	NA	
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Methomyl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA	
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA	
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA	
Prowl	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA	
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA	
Sample Date:	**1/10/2012**	**Site:**	**Poso Slough at Indiana Ave**					
Ammonia as N	General Chemistry	0.14		-0.040	ND	mg/L	NA	
Arsenic	General Chemistry	2.8		-0.02	ND	ug/L	NA	
Boron	General Chemistry	431		1.4	DNQ	ug/L	0%	
Bromide	General Chemistry	0.44	DNQ	-0.010	ND	mg/L	NA	
Cadmium	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Copper	General Chemistry	2.9		2.0		ug/L	69%	*
Copper (Dissolved)	General Chemistry	1.1		1.9		ug/L	173%	*
Dissolved Organic Carbon	General Chemistry	4.3		-0.30	ND	mg/L	NA	

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference	
Dissolved Solids	General Chemistry	780		-4.0	ND	mg/L	NA	
E. coli	General Chemistry	32		-1.0	ND	MPN/100mL	NA	
Hardness (as CACO3)	General Chemistry	300		-1.7	ND	mg/L	NA	
Lead	General Chemistry	0.66		0.04	DNQ	ug/L	6%	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	4.6		0.05	DNQ	ug/L	1%	
Nickel (Dissolved)	General Chemistry	2.3		-0.04	ND	ug/L	NA	
Nitrate + Nitrite as N	General Chemistry	1.7		0.030	DNQ	mg/L	2%	
Nitrogen, Total Kjeldahl	General Chemistry	0.69		-0.070	ND	mg/L	NA	
OrthoPhosphate as P	General Chemistry	-0.0060	ND	-0.0060	ND	mg/L	NA	
Phosphate as P	General Chemistry	0.097		-0.0070	ND	mg/L	NA	
Selenium	General Chemistry	1.3		-0.06	ND	ug/L	NA	
Suspended Solids	General Chemistry	44		-1	ND	mg/L	NA	
Total Organic Carbon	General Chemistry	3.9		-0.30	ND	mg/L	NA	
Turbidity	General Chemistry	23		-0.030	ND	NTU	NA	
Zinc	General Chemistry	4.9		1.4		ug/L	29%	*
Zinc (Dissolved)	General Chemistry	-0.7	ND	1.1		ug/L	NA	*
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA	
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA	
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	ug/L	NA	
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA	
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA	
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA	
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Dicofol	Pesticide	0.053	DNQ	-0.01	ND	ug/L	NA	
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA	
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA	
Diuron	Pesticide	1.9	=	-0.20	ND	ug/L	NA	
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA	
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference	
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Methamidophos	Pesticide	-0.10	ND	-0.10	ND	ug/L	NA	
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Methomyl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA	
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA	
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA	
Prowl	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA	
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA	
Sample Date:	**2/14/2012**	**Site:**	**Poso Slough at Indiana Ave**					
Ammonia as N	General Chemistry	0.31		-0.040	ND	mg/L	NA	
Arsenic	General Chemistry	6.2		-0.02	ND	ug/L	NA	
Boron	General Chemistry	259		-0.7	ND	ug/L	NA	
Bromide	General Chemistry	0.39	DNQ	-0.010	ND	mg/L	NA	
Cadmium	General Chemistry	0.05	DNQ	-0.04	ND	ug/L	NA	
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Copper	General Chemistry	6.2		-0.07	ND	ug/L	NA	
Copper (Dissolved)	General Chemistry	2.6		-0.07	ND	ug/L	NA	
Dissolved Organic Carbon	General Chemistry	6.9		-0.30	ND	mg/L	NA	
Dissolved Solids	General Chemistry	470		-4.0	ND	mg/L	NA	
E. coli	General Chemistry	390		-1.0	ND	MPN/100mL	NA	
Hardness (as CACO3)	General Chemistry	190		-1.7	ND	mg/L	NA	
Lead	General Chemistry	1.5		-0.03	ND	ug/L	NA	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	7.1		-0.04	ND	ug/L	NA	
Nickel (Dissolved)	General Chemistry	2.4		-0.04	ND	ug/L	NA	
Nitrate + Nitrite as N	General Chemistry	3.8		-0.020	ND	mg/L	NA	
Nitrogen, Total Kjeldahl	General Chemistry	1.2		-0.070	ND	mg/L	NA	
OrthoPhosphate as P	General Chemistry	0.40		-0.0060	ND	mg/L	NA	
Phosphate as P	General Chemistry	0.55		-0.0070	ND	mg/L	NA	
Selenium	General Chemistry	0.74	DNQ	-0.06	ND	ug/L	NA	
Suspended Solids	General Chemistry	122		-1	ND	mg/L	NA	
Total Organic Carbon	General Chemistry	6.6		3.0		mg/L	45%	*

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Turbidity	General Chemistry	70		-0.030	ND	NTU	NA
Zinc	General Chemistry	13		-0.7	ND	ug/L	NA
Zinc (Dissolved)	General Chemistry	-0.7	ND	-0.7	ND	ug/L	NA
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	ug/L	NA
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA
Diuron	Pesticide	6.8	=	-0.20	ND	ug/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methamidophos	Pesticide	-0.10	ND	-0.10	ND	ug/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Methomyl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA
Prowl	Pesticide	1.3	=	-0.04	ND	ug/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA

Event = Event Sample Result FB = Field Blank Sample Result

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD	
Sample Date: 9/12/2011 Site: Salt Slough at Lander Ave								
Total Organic Carbon	General Chemistry	15000		15000		mg/kg	0%	
Sample Date: 9/13/2011 Site: Salt Slough at Lander Ave								
Ammonia as N	General Chemistry	-0.04	ND	-0.04	ND	mg/L	NA	
Arsenic	General Chemistry	4.7		4.7		ug/L	0%	
Boron	General Chemistry	433		437		ug/L	1%	
Bromide	General Chemistry	0.31	DNQ	0.28	DNQ	mg/L	10%	
Cadmium	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Copper	General Chemistry	2.7		2.5		ug/L	8%	
Copper (Dissolved)	General Chemistry	0.77		0.81		ug/L	5%	
Dissolved Organic Carbon	General Chemistry	4.8		4.7		mg/L	2%	
E. coli	General Chemistry	190		210		MPN/100mL	10%	
Hardness as CaCO3	General Chemistry	190		190		mg/L	0%	
Lead	General Chemistry	0.70		0.65		ug/L	7%	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	4.0		3.7		ug/L	8%	
Nickel (Dissolved)	General Chemistry	1.5		1.6		ug/L	6%	
Nitrate + Nitrite as N	General Chemistry	0.44		0.46		mg/L	4%	
Nitrogen, Total Kjeldahl	General Chemistry	0.69		0.90		mg/L	26%	*
OrthoPhosphate as P	General Chemistry	0.16		0.16		mg/L	0%	
Phosphate as P	General Chemistry	0.27		0.26		mg/L	4%	
Selenium	General Chemistry	0.28	DNQ	0.29	DNQ	ug/L	4%	
Suspended Solids	General Chemistry	46		54		mg/L	16%	
Total Organic Carbon	General Chemistry	4.9		4.5		mg/L	9%	
Turbidity	General Chemistry	29		29		NTU	0%	
Zinc	General Chemistry	5.5		4.8		ug/L	14%	
Zinc (Dissolved)	General Chemistry	-0.7	ND	-0.7	ND	ug/L	NA	
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA	
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA	
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA	
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA	
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA	
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD
Dicofol	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA
Diuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methamidophos	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Methomyl	Pesticide	0.10	=	0.12	=	ug/L	18%
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA
Prowl	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA

Sample Date: 10/11/2011 Site: Salt Slough at Lander Ave

Ammonia as N	General Chemistry	0.055	DNQ	0.066	DNQ	mg/L	18%
Arsenic	General Chemistry	3.9		3.5		ug/L	11%
Boron	General Chemistry	440		437		ug/L	1%
Bromide	General Chemistry	0.30	DNQ	0.28	DNQ	mg/L	7%
Cadmium	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Copper	General Chemistry	2.8		2.3		ug/L	20%
Copper (Dissolved)	General Chemistry	0.74		0.75		ug/L	1%
Dissolved Organic Carbon	General Chemistry	4.5		4.2		mg/L	7%

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD	
E. coli	General Chemistry	120		100		MPN/100mL	18%	
Hardness (as CACO3)	General Chemistry	180		190		mg/L	5%	
Lead	General Chemistry	0.96		0.61		ug/L	45%	*
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	4.9		3.3		ug/L	39%	*
Nickel (Dissolved)	General Chemistry	1.3		1.3		ug/L	0%	
Nitrate + Nitrite as N	General Chemistry	0.38		0.38		mg/L	0%	
Nitrogen, Total Kjeldahl	General Chemistry	0.78		0.64		mg/L	20%	
OrthoPhosphate as P	General Chemistry	0.12		0.12		mg/L	0%	
Phosphate as P	General Chemistry	0.21		0.21		mg/L	0%	
Selenium	General Chemistry	0.28	DNQ	0.27	DNQ	ug/L	4%	
Suspended Solids	General Chemistry	42		42		mg/L	0%	
Total Organic Carbon	General Chemistry	4.3		4.1		mg/L	5%	
Turbidity	General Chemistry	26		25		NTU	4%	
Zinc	General Chemistry	9.0		4.9		ug/L	59%	*
Zinc (Dissolved)	General Chemistry	-0.7	ND	-0.7	ND	ug/L	NA	
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA	
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA	
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA	
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA	
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA	
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Dicofol	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA	
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA	
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA	
Diuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA	
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD	
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Methamidophos	Pesticide	-0.10	ND	-0.10	ND	ug/L	NA	
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Methomyl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA	
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA	
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA	
Prowl	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA	
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA	
Sample Date: 11/8/2011	**Site: Salt Slough at Lander Ave**							
Ammonia as N	General Chemistry	-0.040	ND	-0.040	ND	mg/L	NA	
Arsenic	General Chemistry	2.9		2.8		ug/L	4%	
Boron	General Chemistry	561		550		ug/L	2%	
Bromide	General Chemistry	0.18	DNQ	0.28	DNQ	mg/L	43%	*
Cadmium	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Copper	General Chemistry	1.8		1.7		ug/L	6%	
Copper (Dissolved)	General Chemistry	0.68		0.69		ug/L	1%	
Dissolved Organic Carbon	General Chemistry	6.0		5.9		mg/L	2%	
E. coli	General Chemistry	58		41		MPN/100mL	34%	*
Hardness (as CACO3)	General Chemistry	200		200		mg/L	0%	
Lead	General Chemistry	0.41		0.38		ug/L	8%	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	2.8		2.6		ug/L	7%	
Nickel (Dissolved)	General Chemistry	1.3		1.3		ug/L	0%	
Nitrate + Nitrite as N	General Chemistry	0.53		0.53		mg/L	0%	
Nitrogen, Total Kjeldahl	General Chemistry	0.71		1.3		mg/L	59%	*
OrthoPhosphate as P	General Chemistry	0.12		0.12		mg/L	0%	
Phosphate as P	General Chemistry	0.19		0.20		mg/L	5%	
Selenium	General Chemistry	0.37	DNQ	0.34	DNQ	ug/L	8%	
Suspended Solids	General Chemistry	24		26		mg/L	8%	
Total Organic Carbon	General Chemistry	6.1		5.8		mg/L	5%	
Turbidity	General Chemistry	16		15		NTU	6%	

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD
Zinc	General Chemistry	3.8		3.4		ug/L	11%
Zinc (Dissolved)	General Chemistry	-0.7	ND	-0.7	ND	ug/L	NA
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA
Diuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methamidophos	Pesticide	-0.10	ND	-0.10	ND	ug/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Methomyl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD	
Prowl	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA	
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA	
Sample Date: 12/13/2011 Site: Salt Slough at Lander Ave								
Ammonia as N	General Chemistry	0.088	DNQ	0.066	DNQ	mg/L	29%	*
Arsenic	General Chemistry	2.7		2.7		ug/L	0%	
Boron	General Chemistry	1080		1040		ug/L	4%	
Bromide	General Chemistry	0.66	DNQ	1.1		mg/L	50%	*
Cadmium	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Copper	General Chemistry	1.2		1.3		ug/L	8%	
Copper (Dissolved)	General Chemistry	0.67		0.64		ug/L	5%	
Dissolved Organic Carbon	General Chemistry	5.9		6.0		mg/L	2%	
E. coli	General Chemistry	160		140		MPN/100mL	13%	
Hardness (as CACO3)	General Chemistry	410		400		mg/L	2%	
Lead	General Chemistry	0.20	DNQ	0.21	DNQ	ug/L	5%	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	2.4		2.4		ug/L	0%	
Nickel (Dissolved)	General Chemistry	1.7		1.5		ug/L	13%	
Nitrate + Nitrite as N	General Chemistry	0.66		0.55		mg/L	18%	
Nitrogen, Total Kjeldahl	General Chemistry	0.40		0.37		mg/L	8%	
OrthoPhosphate as P	General Chemistry	0.14		0.12		mg/L	15%	
Phosphate as P	General Chemistry	0.18		0.19		mg/L	5%	
Selenium	General Chemistry	0.21	DNQ	0.22	DNQ	ug/L	5%	
Suspended Solids	General Chemistry	25		15		mg/L	50%	*
Total Organic Carbon	General Chemistry	6.0		6.0		mg/L	0%	
Turbidity	General Chemistry	9.4		9.3		NTU	1%	
Zinc	General Chemistry	2.0		2.0		ug/L	0%	
Zinc (Dissolved)	General Chemistry	-0.7	ND	-0.7	ND	ug/L	NA	
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA	
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA	
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA	
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA	
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA	
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD	
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Dicofol	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA	
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA	
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA	
Diuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA	
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Methamidophos	Pesticide	-0.10	ND	-0.10	ND	ug/L	NA	
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Methomyl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA	
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA	
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA	
Prowl	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA	
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA	
Sample Date: 1/10/2012	**Site: Poso Slough at Indiana Ave**							
Ammonia as N	General Chemistry	0.14		0.15		mg/L	7%	
Arsenic	General Chemistry	2.8		3.2		ug/L	13%	
Boron	General Chemistry	431		444		ug/L	3%	
Bromide	General Chemistry	0.44	DNQ	0.48	DNQ	mg/L	9%	
Cadmium	General Chemistry	-0.04	ND	0.04	DNQ	ug/L	NA	
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Copper	General Chemistry	2.9		4.1		ug/L	34%	*
Copper (Dissolved)	General Chemistry	1.1		1.2		ug/L	9%	

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD	
Dissolved Organic Carbon	General Chemistry	4.3		4.2		mg/L	2%	
E. coli	General Chemistry	32		24		MPN/100mL	29%	*
Hardness (as CACO3)	General Chemistry	300		300		mg/L	0%	
Lead	General Chemistry	0.66		1.2		ug/L	58%	*
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	4.6		6.4		ug/L	33%	*
Nickel (Dissolved)	General Chemistry	2.3		2.2		ug/L	4%	
Nitrate + Nitrite as N	General Chemistry	1.7		1.6		mg/L	6%	
Nitrogen, Total Kjeldahl	General Chemistry	0.69		0.70		mg/L	1%	
OrthoPhosphate as P	General Chemistry	-0.0060	ND	-0.0060	ND	mg/L	NA	
Phosphate as P	General Chemistry	0.097		0.11		mg/L	13%	
Selenium	General Chemistry	1.3		1.4		ug/L	7%	
Suspended Solids	General Chemistry	44		52		mg/L	17%	
Total Organic Carbon	General Chemistry	3.9		3.8		mg/L	3%	
Turbidity	General Chemistry	23		23		NTU	0%	
Zinc	General Chemistry	4.9		9.0		ug/L	59%	*
Zinc (Dissolved)	General Chemistry	-0.7	ND	-0.7	ND	ug/L	NA	
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA	
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA	
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA	
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA	
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA	
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Dicofol	Pesticide	0.053	DNQ	-0.01	ND	ug/L	NA	
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA	
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA	
Diuron	Pesticide	1.9	=	2.2	=	ug/L	15%	
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA	
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA	
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD	
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Methamidophos	Pesticide	-0.10	ND	-0.10	ND	ug/L	NA	
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Methomyl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA	
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA	
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA	
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA	
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA	
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA	
Prowl	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA	
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA	
Sample Date: 2/14/2012	**Site: Poso Slough at Indiana Ave**							
Ammonia as N	General Chemistry	0.31		0.34		mg/L	9%	
Arsenic	General Chemistry	6.2		6.4		ug/L	3%	
Boron	General Chemistry	259		262		ug/L	1%	
Bromide	General Chemistry	0.39	DNQ	0.39	DNQ	mg/L	0%	
Cadmium	General Chemistry	0.05	DNQ	0.05	DNQ	ug/L	0%	
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Copper	General Chemistry	6.2		6.5		ug/L	5%	
Copper (Dissolved)	General Chemistry	2.6		2.6		ug/L	0%	
Dissolved Organic Carbon	General Chemistry	6.9		6.6		mg/L	4%	
E. coli	General Chemistry	390		550		MPN/100mL	34%	*
Hardness (as CACO3)	General Chemistry	190		190		mg/L	0%	
Lead	General Chemistry	1.5		1.6		ug/L	6%	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	7.1		7.4		ug/L	4%	
Nickel (Dissolved)	General Chemistry	2.4		2.4		ug/L	0%	
Nitrate + Nitrite as N	General Chemistry	3.8		3.7		mg/L	3%	
Nitrogen, Total Kjeldahl	General Chemistry	1.2		1.3		mg/L	8%	
OrthoPhosphate as P	General Chemistry	0.40		0.44		mg/L	10%	
Phosphate as P	General Chemistry	0.55		0.56		mg/L	2%	
Selenium	General Chemistry	0.74	DNQ	0.76	DNQ	ug/L	3%	
Suspended Solids	General Chemistry	122		143		mg/L	16%	
Total Organic Carbon	General Chemistry	6.6		6.7		mg/L	2%	

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD
Turbidity	General Chemistry	70		55		NTU	24%
Zinc	General Chemistry	13		13		ug/L	0%
Zinc (Dissolved)	General Chemistry	-0.7	ND	0.9	DNQ	ug/L	NA
Aldicarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	ug/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	ug/L	NA
Carbaryl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Carbofuran	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Chlorpyrifos	Pesticide	-0.0026	ND	-0.0026	ND	ug/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	ug/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	ug/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA
Diuron	Pesticide	6.8	=	7.2	=	ug/L	6%
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA
HCH, alpha	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, beta	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
HCH, delta	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
HCH, gamma	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Linuron	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Malathion	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methamidophos	Pesticide	-0.10	ND	-0.10	ND	ug/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA
Methiocarb	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Methomyl	Pesticide	-0.050	ND	-0.050	ND	ug/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	ug/L	NA
Oxamyl	Pesticide	-0.20	ND	-0.20	ND	ug/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	ug/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	ug/L	NA

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD
Phosmet	Pesticide	-0.06	ND	-0.06	ND	ug/L	NA
Prowl	Pesticide	1.3	=	1.1	=	ug/L	17%
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA
Trifluralin	Pesticide	-0.036	ND	-0.036	ND	ug/L	NA

Event = Event Sample Results FD = Field Duplicate Sample Results RPD = Relative percent difference

Attachment 4
Sediment Toxicity Follow-up Analyses

Sediment Toxicity Follow-up Analysis

Blewett Drain at Highway 132

Toxicity Results Hyalella azteca 56.3 %

Sample Event: 83 9/12/2011

Pesticide	Results	Units
Bifenthrin	5.1	ug/kg
Chlorpyrifos	0.32 DNQ	ug/kg
Cyfluthrin	ND	ug/kg
Cypermethrin	ND	ug/kg
Esfenvalerate:Fenvalerate	0.23 DNQ	ug/kg
Fenpropathrin	ND	ug/kg
Lambda-Cyhalothrin	0.66	ug/kg
Permethrin	2.6	ug/kg
Total Organic Carbon	8000	mg/kg

DNQ: Result is below the report limit and is estimated

Sediment Toxicity Follow-up Analysis

Hospital Creek at River Road

Toxicity Results Hyalella azteca 20 %

Sample Event: 83 9/12/2011

Pesticide	Results	Units
Bifenthrin	0.16 DNQ	ug/kg
Chlorpyrifos	0.53	ug/kg
Cyfluthrin	ND	ug/kg
Cypermethrin	ND	ug/kg
Esfenvalerate:Fenvalerate	ND	ug/kg
Fenpropathrin	ND	ug/kg
Lambda-Cyhalothrin	1.3	ug/kg
Permethrin	ND	ug/kg
Total Organic Carbon	630	mg/kg

DNQ: Result is below the report limit and is estimated

Sediment Toxicity Follow-up Analysis

Ingram Creek at River Road

Toxicity Results Hyalella azteca 0 %

Sample Event: 83 9/12/2011

Pesticide	Results	Units
Bifenthrin	3.0	ug/kg
Chlorpyrifos	1.4	ug/kg
Cyfluthrin	ND	ug/kg
Cypermethrin	ND	ug/kg
Esfenvalerate:Fenvalerate	1.5	ug/kg
Fenpropathrin	ND	ug/kg
Lambda-Cyhalothrin	32.2	ug/kg
Permethrin	0.18 DNQ	ug/kg
Total Organic Carbon	7300	mg/kg

DNQ: Result is below the report limit and is estimated

Sediment Toxicity Follow-up Analysis

Orestimba Creek at Hwy 33

Toxicity Results Hyalella azteca 0 %

Sample Event: 83 9/12/2011

Pesticide	Results	Units
Bifenthrin	25.5	ug/kg
Chlorpyrifos	1.3	ug/kg
Cyfluthrin	0.24 DNQ	ug/kg
Cypermethrin	ND	ug/kg
Esfenvalerate:Fenvalerate	27.4	ug/kg
Fenpropathrin	ND	ug/kg
Lambda-Cyhalothrin	0.67	ug/kg
Permethrin	0.49	ug/kg
Total Organic Carbon	7800	mg/kg

DNQ: Result is below the report limit and is estimated

Attachment 5
Exceedance of Recommended Water Quality Values

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 9/1/2011 to 3/1/2012

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	2	81
Aquatic Toxicity	Selenastrum capricornutum	4	81
Field Data	DO	8	116
Field Data	EC	61	116
Field Data	pH	12	116
General Chemistry	Arsenic	1	81
General Chemistry	Boron	30	99
General Chemistry	E. Coli	22	99
General Chemistry	Total Dissolved Solids	57	99
Pesticide	Chlorpyrifos	7	99
Pesticide	DDD(p,p')	1	81
Pesticide	DDE(p,p')	13	81
Pesticide	DDT(p,p')	1	81
Pesticide	Diazinon	1	99
Pesticide	Diuron	5	81
Sediment Toxicity	Hyalella azteca	4	17

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Blewett Drain at Highway 132

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	1
Sediment Toxicity	Hyalella azteca	1	1

Del Puerto Creek near Cox Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	4	6
Field Data	pH	1	6
General Chemistry	Boron	2	5
General Chemistry	E. Coli	1	5
General Chemistry	Total Dissolved Solids	4	5
Pesticide	DDE(p,p')	2	5

Delta Mendota Canal at DPWD

Type	Constituent	# of Exceedances	# of Tests
Field Data	pH	2	6
General Chemistry	Total Dissolved Solids	1	6

Hospital Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
General Chemistry	E. Coli	3	3
General Chemistry	Total Dissolved Solids	2	3
Pesticide	Chlorpyrifos	1	3
Pesticide	DDE(p,p')	1	3
Sediment Toxicity	Hyalella azteca	1	1

Ingram Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	4	4
General Chemistry	Boron	2	3
General Chemistry	Total Dissolved Solids	3	3
Pesticide	Chlorpyrifos	1	3
Pesticide	DDE(p,p')	2	3
Sediment Toxicity	Hyalella azteca	1	1

Los Banos Creek at China Camp Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	7
Field Data	EC	4	7
Field Data	pH	3	7
General Chemistry	Arsenic	1	6

General Chemistry	Boron	2	6
General Chemistry	E. Coli	3	6
General Chemistry	Total Dissolved Solids	3	6

Los Banos Creek at Hwy 140

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	4	7
General Chemistry	Boron	3	6
General Chemistry	E. Coli	6	6
General Chemistry	Total Dissolved Solids	4	6

Marshall Road Drain near River Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	1	1
General Chemistry	E. Coli	1	1
General Chemistry	Total Dissolved Solids	1	1
Pesticide	Chlorpyrifos	1	1

Mud Slough Upstream of San Luis Drain

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	5	6
General Chemistry	Boron	4	6
General Chemistry	E. Coli	1	6
General Chemistry	Total Dissolved Solids	5	6

Newman Wasteway near Hills Ferry Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	3	7
Field Data	EC	7	7
General Chemistry	Boron	4	6
General Chemistry	Total Dissolved Solids	6	6

Orestimba Creek at Hwy 33

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	4
Field Data	DO	1	5
Field Data	pH	1	5
General Chemistry	E. Coli	1	4
Pesticide	Chlorpyrifos	1	4
Pesticide	DDD(p,p')	1	4
Pesticide	DDE(p,p')	4	4
Sediment Toxicity	Hyalella azteca	1	1

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Orestimba Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	2	3
General Chemistry	E. Coli	1	2
General Chemistry	Total Dissolved Solids	1	2
Pesticide	DDE(p,p')	2	2

Poso Slough at Indiana Ave

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	7
Aquatic Toxicity	Selenastrum capricornutum	1	6
Field Data	EC	3	7
Field Data	pH	1	7
General Chemistry	E. Coli	3	6
General Chemistry	Total Dissolved Solids	2	6
Pesticide	Chlorpyrifos	1	6
Pesticide	Diazinon	1	6
Pesticide	Diuron	2	6

Ramona Lake near Fig Avenue

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	6
Field Data	EC	6	6
General Chemistry	Boron	4	5
General Chemistry	Total Dissolved Solids	5	5
Pesticide	Chlorpyrifos	1	5

Salt Slough at Lander Ave

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	1	6
Field Data	EC	7	7
General Chemistry	Boron	2	6
General Chemistry	Total Dissolved Solids	6	6
Pesticide	Diuron	1	6

Salt Slough at Sand Dam

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	1	6
Field Data	EC	4	7
Field Data	pH	1	7
General Chemistry	Total Dissolved Solids	4	6
Pesticide	Chlorpyrifos	1	6
Pesticide	Diuron	1	6

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

San Joaquin River at Fremont Ford

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	1	4
Field Data	EC	4	4
General Chemistry	Boron	3	4
General Chemistry	Total Dissolved Solids	4	4
Pesticide	Diuron	1	4

San Joaquin River at PID Pumps

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	6	6
General Chemistry	Boron	4	6
General Chemistry	Total Dissolved Solids	6	6

San Joaquin River at Sack Dam

Type	Constituent	# of Exceedances	# of Tests
Field Data	pH	2	6

Turner Slough at Edminster Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	8
Pesticide	DDE(p,p')	1	6
Pesticide	DDT(p,p')	1	6

Westley Wasteway near Cox Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	pH	1	6
General Chemistry	E. Coli	2	5
Pesticide	DDE(p,p')	1	5

Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Blewett Drain at Highway 132

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
DO	83	9/12/2011	4.93		mg/l			5
Flow	83	9/12/2011	0		cfs			0.01
Hyalella azteca	83	9/12/2011	56.3		%	yes		
Flow	88	2/14/2012	0		cfs			0.01

Del Puerto Creek at Hwy 33

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
Flow	86	12/13/2011	0		cfs			0.01

Del Puerto Creek near Cox Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
DDE(p,p')	83	9/13/2011	0.0061	DNQ	ug/L		0.00059	
E. Coli	84	10/11/2011	550		MPN/100mL		235	
EC	84	10/11/2011	1029		µmhos/cm		700	
Total Dissolved Solids	84	10/11/2011	800		mg/L		450	
EC	85	11/8/2011	810		µmhos/cm		700	
pH	85	11/8/2011	6.38				8.5	6.5
Total Dissolved Solids	85	11/8/2011	750		mg/L		450	
Boron	86	12/13/2011	716		ug/L		700	
EC	86	12/13/2011	918		µmhos/cm		700	
Total Dissolved Solids	86	12/13/2011	940		mg/L		450	
Boron	87	1/11/2012	1200		ug/L		700	
DDE(p,p')	87	1/11/2012	0.009	DNQ	ug/L		0.00059	
EC	87	1/11/2012	925		µmhos/cm		700	
Total Dissolved Solids	87	1/11/2012	1400		mg/L		450	

Delta Mendota Canal at DPWD

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
pH	86	12/13/2011	6.32				8.5	6.5
pH	87	1/11/2012	6.41				8.5	6.5
Total Dissolved Solids	88	2/14/2012	470		mg/L		450	

WQV = Water Quality Value as established by the Central Valley Regional Water Quality Control Board

DNQ = Detected, Not Quantifiable

Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Hospital Creek at River Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
Hyalella azteca	83	9/12/2011	20		%	yes		
Chlorpyrifos	83	9/13/2011	0.27	=	ug/L		0.015	
E. Coli	83	9/13/2011	>2400		MPN/100mL		235	
E. Coli	85	11/8/2011	370		MPN/100mL		235	
Total Dissolved Solids	85	11/8/2011	490		mg/L		450	
DDE(p,p')	88	2/14/2012	0.008	DNQ	ug/L		0.00059	
E. Coli	88	2/14/2012	340		MPN/100mL		235	
Total Dissolved Solids	88	2/14/2012	640		mg/L		450	

Ingram Creek at River Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	83	9/12/2011	870		µmhos/cm		700	
Hyalella azteca	83	9/12/2011	0		%	yes		
DDE(p,p')	83	9/13/2011	0.018	=	ug/L		0.00059	
EC	83	9/13/2011	874		µmhos/cm		700	
Total Dissolved Solids	83	9/13/2011	590		mg/L		450	
Boron	84	10/11/2011	1260		ug/L		700	
Chlorpyrifos	84	10/11/2011	0.28	=	ug/L		0.015	
EC	84	10/11/2011	1328		µmhos/cm		700	
Total Dissolved Solids	84	10/11/2011	1000		mg/L		450	
Boron	86	12/13/2011	847		ug/L		700	
DDE(p,p')	86	12/13/2011	0.0081	DNQ	ug/L		0.00059	
EC	86	12/13/2011	882		µmhos/cm		700	
Flow	86	12/13/2011	0		cfs			0.01
Total Dissolved Solids	86	12/13/2011	930		mg/L		450	

WQV = Water Quality Value as established by the Central Valley Regional Water Quality Control Board

DNQ = Detected, Not Quantifiable

Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Los Banos Creek at China Camp Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
EC	83	9/12/2011	1902	µmhos/cm		700	
Flow	83	9/12/2011	0	cfs			0.01
pH	83	9/12/2011	8.69			8.5	6.5
Arsenic	83	9/13/2011	14	ug/L		10	
Boron	83	9/13/2011	1130	ug/L		700	
E. Coli	83	9/13/2011	>2400	MPN/100mL		235	
EC	83	9/13/2011	1095	µmhos/cm		700	
Flow	83	9/13/2011	0	cfs			0.01
pH	83	9/13/2011	8.7			8.5	6.5
Total Dissolved Solids	83	9/13/2011	760	mg/L		450	
E. Coli	84	10/11/2011	260	MPN/100mL		235	
DO	85	11/8/2011	4.26	mg/l			5
pH	85	11/8/2011	8.66			8.5	6.5
EC	87	1/10/2012	869	µmhos/cm		700	
Flow	87	1/10/2012	0	cfs			0.01
Total Dissolved Solids	87	1/10/2012	500	mg/L		450	
Boron	88	2/14/2012	1350	ug/L		700	
E. Coli	88	2/14/2012	550	MPN/100mL		235	
EC	88	2/14/2012	1643	µmhos/cm		700	
Flow	88	2/14/2012	0	cfs			0.01
Total Dissolved Solids	88	2/14/2012	1000	mg/L		450	

WQV = Water Quality Value as established by the Central Valley Regional Water Quality Control Board

DNQ = Detected, Not Quantifiable

Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Los Banos Creek at Hwy 140

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
E. Coli	83	9/13/2011	480		MPN/100mL		235	
E. Coli	84	10/11/2011	260		MPN/100mL		235	
E. Coli	85	11/8/2011	>2400		MPN/100mL		235	
EC	85	11/8/2011	763		µmhos/cm		700	
Total Dissolved Solids	85	11/8/2011	500		mg/L		450	
Boron	86	12/13/2011	733		ug/L		700	
E. Coli	86	12/13/2011	820		MPN/100mL		235	
EC	86	12/13/2011	1005		µmhos/cm		700	
Total Dissolved Solids	86	12/13/2011	690		mg/L		450	
Boron	87	1/10/2012	1010		ug/L		700	
E. Coli	87	1/10/2012	>2400		MPN/100mL		235	
EC	87	1/10/2012	1396		µmhos/cm		700	
Total Dissolved Solids	87	1/10/2012	870		mg/L		450	
Boron	88	2/14/2012	1890		ug/L		700	
E. Coli	88	2/14/2012	1400		MPN/100mL		235	
EC	88	2/14/2012	2737		µmhos/cm		700	
Total Dissolved Solids	88	2/14/2012	1800		mg/L		450	

Marshall Road Drain near River Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
Chlorpyrifos	83	9/13/2011	0.27	=	ug/L		0.015	
E. Coli	83	9/13/2011	>2400		MPN/100mL		235	
EC	83	9/13/2011	718		µmhos/cm		700	
Total Dissolved Solids	83	9/13/2011	470		mg/L		450	
Flow	88	2/14/2012	0		cfs			0.01

WQV = Water Quality Value as established by the Central Valley Regional Water Quality Control Board

DNQ = Detected, Not Quantifiable

Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Mud Slough Upstream of San Luis Drain

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
E. Coli	83	9/13/2011	>2400	MPN/100mL		235	
EC	83	9/13/2011	816	µmhos/cm		700	
Total Dissolved Solids	83	9/13/2011	510	mg/L		450	
Boron	85	11/8/2011	745	ug/L		700	
EC	85	11/8/2011	951	µmhos/cm		700	
Total Dissolved Solids	85	11/8/2011	610	mg/L		450	
Boron	86	12/13/2011	1220	ug/L		700	
EC	86	12/13/2011	1484	µmhos/cm		700	
Total Dissolved Solids	86	12/13/2011	970	mg/L		450	
Boron	87	1/10/2012	1290	ug/L		700	
EC	87	1/10/2012	1631	µmhos/cm		700	
Total Dissolved Solids	87	1/10/2012	1000	mg/L		450	
Boron	88	2/14/2012	1710	ug/L		700	
EC	88	2/14/2012	1947	µmhos/cm		700	
Total Dissolved Solids	88	2/14/2012	1200	mg/L		450	

Newman Wasteway near Hills Ferry Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
DO	83	9/12/2011	4.94	mg/l			5
EC	83	9/12/2011	1026	µmhos/cm		700	
DO	83	9/13/2011	4.93	mg/l			5
EC	83	9/13/2011	1026	µmhos/cm		700	
Total Dissolved Solids	83	9/13/2011	640	mg/L		450	
Boron	84	10/11/2011	1170	ug/L		700	
DO	84	10/11/2011	4.63	mg/l			5
EC	84	10/11/2011	1881	µmhos/cm		700	
Total Dissolved Solids	84	10/11/2011	1200	mg/L		450	
Boron	85	11/8/2011	884	ug/L		700	
EC	85	11/8/2011	1487	µmhos/cm		700	
Total Dissolved Solids	85	11/8/2011	970	mg/L		450	
Boron	86	12/13/2011	749	ug/L		700	
EC	86	12/13/2011	1372	µmhos/cm		700	
Total Dissolved Solids	86	12/13/2011	890	mg/L		450	
EC	87	1/10/2012	913	µmhos/cm		700	
Total Dissolved Solids	87	1/10/2012	540	mg/L		450	
Boron	88	2/14/2012	1110	ug/L		700	
EC	88	2/14/2012	1663	µmhos/cm		700	
Total Dissolved Solids	88	2/14/2012	1100	mg/L		450	

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DNQ = Detected, Not Quantifiable

Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Orestimba Creek at Hwy 33

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
Hyalella azteca	83	9/12/2011	0		%	yes		
Chlorpyrifos	83	9/13/2011	0.09	=	ug/L		0.015	
DDE(p,p')	83	9/13/2011	0.026	=	ug/L		0.00059	
E. Coli	83	9/13/2011	330		MPN/100mL		235	
DDE(p,p')	84	10/11/2011	0.017	=	ug/L		0.00059	
Flow	84	10/11/2011	0		cfs			0.01
DDE(p,p')	85	11/8/2011	0.021	=	ug/L		0.00059	
DO	85	11/8/2011	4.1		mg/l			5
Flow	85	11/8/2011	0		cfs			0.01
Ceriodaphnia dubia	86	12/13/2011	60		%	yes		
DDD(p,p')	86	12/13/2011	0.0059	DNQ	ug/L		0.00083	
DDE(p,p')	86	12/13/2011	0.048	=	ug/L		0.00059	
Flow	86	12/13/2011	0		cfs			0.01
pH	86	12/13/2011	5.83				8.5	6.5

Orestimba Creek at River Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	83	9/12/2011	801		µmhos/cm		700	
DDE(p,p')	83	9/13/2011	0.0082	DNQ	ug/L		0.00059	
E. Coli	83	9/13/2011	400		MPN/100mL		235	
EC	83	9/13/2011	845		µmhos/cm		700	
Total Dissolved Solids	83	9/13/2011	640		mg/L		450	
DDE(p,p')	84	10/11/2011	0.0049	DNQ	ug/L		0.00059	
Flow	84	10/11/2011	0		cfs			0.01

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Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Poso Slough at Indiana Ave

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
Chlorpyrifos	83	9/13/2011	0.12	=	ug/L		0.015	
E. Coli	84	10/11/2011	490		MPN/100mL		235	
EC	84	10/11/2011	721		µmhos/cm		700	
Ceriodaphnia dubia	85	11/8/2011	0		%	yes		
Diazinon	85	11/8/2011	1.2	=	ug/L		0.1	
E. Coli	85	11/8/2011	330		MPN/100mL		235	
Diuron	86	12/13/2011	2.5		ug/L		2	
pH	86	12/13/2011	9.22				8.5	6.5
EC	87	1/10/2012	1248		µmhos/cm		700	
Total Dissolved Solids	87	1/10/2012	780		mg/L		450	
Diuron	88	2/14/2012	6.8	=	ug/L		2	
E. Coli	88	2/14/2012	390		MPN/100mL		235	
EC	88	2/14/2012	818		µmhos/cm		700	
Selenastrum capricornutum	88	2/14/2012	408500		cells/ml	yes		
Total Dissolved Solids	88	2/14/2012	470		mg/L		450	

Ramona Lake near Fig Avenue

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	83	9/12/2011	1035		µmhos/cm		700	
Chlorpyrifos	83	9/13/2011	0.089	=	ug/L		0.015	
DO	83	9/13/2011	4.99		mg/l			5
EC	83	9/13/2011	1028		µmhos/cm		700	
Total Dissolved Solids	83	9/13/2011	700		mg/L		450	
Boron	84	10/11/2011	797		ug/L		700	
EC	84	10/11/2011	1121		µmhos/cm		700	
Total Dissolved Solids	84	10/11/2011	850		mg/L		450	
Boron	86	12/13/2011	1020		ug/L		700	
EC	86	12/13/2011	1309		µmhos/cm		700	
Total Dissolved Solids	86	12/13/2011	1300		mg/L		450	
Boron	87	1/11/2012	1030		ug/L		700	
EC	87	1/11/2012	1350		µmhos/cm		700	
Total Dissolved Solids	87	1/11/2012	1200		mg/L		450	
Boron	88	2/14/2012	937		ug/L		700	
EC	88	2/14/2012	1352		µmhos/cm		700	
Total Dissolved Solids	88	2/14/2012	1200		mg/L		450	

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Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Salt Slough at Lander Ave

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	83	9/12/2011	901		µmhos/cm		700	
EC	83	9/13/2011	832		µmhos/cm		700	
Total Dissolved Solids	83	9/13/2011	500		mg/L		450	
EC	84	10/11/2011	823		µmhos/cm		700	
Total Dissolved Solids	84	10/11/2011	520		mg/L		450	
EC	85	11/8/2011	872		µmhos/cm		700	
Total Dissolved Solids	85	11/8/2011	560		mg/L		450	
Boron	86	12/13/2011	1080		ug/L		700	
EC	86	12/13/2011	1888		µmhos/cm		700	
Total Dissolved Solids	86	12/13/2011	1200		mg/L		450	
Boron	87	1/10/2012	1270		ug/L		700	
EC	87	1/10/2012	2092		µmhos/cm		700	
Total Dissolved Solids	87	1/10/2012	1300		mg/L		450	
Diuron	88	2/14/2012	6.9	=	ug/L		2	
EC	88	2/14/2012	1404		µmhos/cm		700	
Selenastrum capricornutum	88	2/14/2012	796000		cells/ml	yes		
Total Dissolved Solids	88	2/14/2012	880		mg/L		450	

Salt Slough at Sand Dam

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
Chlorpyrifos	83	9/13/2011	0.087	=	ug/L		0.015	
EC	83	9/13/2011	908		µmhos/cm		700	
Flow	83	9/13/2011	0		cfs			0.01
Total Dissolved Solids	83	9/13/2011	560		mg/L		450	
EC	86	12/13/2011	1424		µmhos/cm		700	
Flow	86	12/13/2011	0		cfs			0.01
Total Dissolved Solids	86	12/13/2011	870		mg/L		450	
EC	87	1/10/2012	1197		µmhos/cm		700	
pH	87	1/10/2012	8.94				8.5	6.5
Total Dissolved Solids	87	1/10/2012	740		mg/L		450	
Diuron	88	2/14/2012	5.5	=	ug/L		2	
EC	88	2/14/2012	974		µmhos/cm		700	
Selenastrum capricornutum	88	2/14/2012	915500		cells/ml	yes		
Total Dissolved Solids	88	2/14/2012	610		mg/L		450	

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Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

San Joaquin River at Fremont Ford

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	85	11/8/2011	815		µmhos/cm		700	
Total Dissolved Solids	85	11/8/2011	500		mg/L		450	
Boron	86	12/13/2011	799		ug/L		700	
EC	86	12/13/2011	2070		µmhos/cm		700	
Total Dissolved Solids	86	12/13/2011	1300		mg/L		450	
Boron	87	1/10/2012	1140		ug/L		700	
EC	87	1/10/2012	2821		µmhos/cm		700	
Total Dissolved Solids	87	1/10/2012	1800		mg/L		450	
Boron	88	2/14/2012	713		ug/L		700	
Diuron	88	2/14/2012	8.7	=	ug/L		2	
EC	88	2/14/2012	1534		µmhos/cm		700	
Selenastrum capricornutum	88	2/14/2012	850800		cells/ml	yes		
Total Dissolved Solids	88	2/14/2012	940		mg/L		450	

San Joaquin River at PID Pumps

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	83	9/13/2011	912		µmhos/cm		700	
Total Dissolved Solids	83	9/13/2011	560		mg/L		450	
EC	84	10/11/2011	709		µmhos/cm		700	
Total Dissolved Solids	84	10/11/2011	500		mg/L		450	
Boron	85	11/8/2011	711		ug/L		700	
EC	85	11/8/2011	1016		µmhos/cm		700	
Total Dissolved Solids	85	11/8/2011	810		mg/L		450	
Boron	86	12/13/2011	764		ug/L		700	
EC	86	12/13/2011	948		µmhos/cm		700	
Total Dissolved Solids	86	12/13/2011	860		mg/L		450	
Boron	87	1/11/2012	879		ug/L		700	
EC	87	1/11/2012	975		µmhos/cm		700	
Total Dissolved Solids	87	1/11/2012	990		mg/L		450	
Boron	88	2/14/2012	847		ug/L		700	
EC	88	2/14/2012	1148		µmhos/cm		700	
Total Dissolved Solids	88	2/14/2012	970		mg/L		450	

San Joaquin River at Sack Dam

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
Flow	83	9/13/2011	0		cfs			0.01
pH	83	9/13/2011	8.87				8.5	6.5
pH	86	12/13/2011	8.63				8.5	6.5

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DNQ = Detected, Not Quantifiable

Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 9/1/2011 to 2/29/2012

Turner Slough at Edminster Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
DDE(p,p')	85	11/8/2011	0.0067	DNQ	ug/L		0.00059	
DDT(p,p')	85	11/8/2011	0.016	=	ug/L		0.00059	
Flow	86	12/13/2011	0		cfs			0.01
DO	87	1/10/2012	4.22		mg/l			5
Flow	87	1/10/2012	0		cfs			0.01
Flow	88	2/14/2012	0		cfs			0.01

Westley Wasteway near Cox Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
DDE(p,p')	84	10/11/2011	0.005	DNQ	ug/L		0.00059	
E. Coli	84	10/11/2011	>2400		MPN/100mL		235	
E. Coli	85	11/8/2011	550		MPN/100mL		235	
pH	85	11/8/2011	6.43				8.5	6.5
Flow	87	1/11/2012	0		cfs			0.01

WQV = Water Quality Value as established by the Central Valley Regional Water Quality Control Board

DNQ = Detected, Not Quantifiable

Attachment 6
Management Plan Activities

San Joaquin Valley Drainage Authority

Westside San Joaquin River Watershed Coalition

Hospital and Ingram Creek Focused Watershed Plan
Westley Wasteway, Del Puerto Creek, and Orestimba Creek Focused Watershed Plan
Salt Slough Focused Watershed Plan

Status Report
June 15, 2012

Prepared by:
Summers Engineering, Inc.
Consulting Engineers
Hanford California

Introduction and Background

In October, 2008, the San Joaquin Valley Drainage Authority (SJVDA) submitted a Focused Watershed Management Plan (Focused Plan I) for Ingram and Hospital Creeks for the Westside San Joaquin River Watershed Coalition (Westside Coalition). A Focused Watershed Plan (Focused Plan II) for Westley Wasteway, Del Puerto Creek, and Orestimba Creek was finalized in February 2011. Both of these plans outline management practice performance goals and schedules. A Focused Plan for the Salt Slough watershed (including discharges into Poso Slough) was adopted in December 2011 is in the process of being finalized.

The long term goals addressed in Section 5 of the Focused Plan I for Ingram and Hospital Creeks are as follows (in order of priority):

- Construct sediment basins to intercept direct tailwater discharges into Hospital and Ingram Creeks.
- Install high-efficiency irrigation systems such as sprinkler or drip irrigation, tailwater recirculation, gated pipes, shorter runs, etc., where warranted by the crops that are grown.
- Implement additional use of PAM to address sedimentation discharge.
- Reduce use of pesticides, or incorporate use of pesticides that are less likely to be transported to the waters of the State, or which breakdown quickly and are less likely to impact water quality.
- Calibrate ground spray rigs utilized on farmed acres to address possible overspray.
- Address potential aerial overspray by identifying the sensitive regions for all aerial applicators, or elimination of this as an acceptable application procedure for Ingram and Hospital Creeks.
- Increase size of vegetated buffer zones along the perimeters of Ingram and Hospital Creeks.

For the Focused Plan II for Westley Wasteway, and Del Puerto and Orestimba Creeks, the long term goals are listed as:

- Implement additional use of PAM to address sediment discharge
- Reduce use of pesticides, or incorporate use of pesticides that are less likely to be transported to the waters of the State, or which breakdown quickly and are less likely to impact water quality.
- Calibrate ground spray rigs utilized on farmed acres to address possible overspray.
- Address potential aerial overspray by identifying the sensitive regions for all aerial applicators, or elimination of this as an acceptable application procedure for these subwatersheds.
- Increase size of vegetated buffer zones along the perimeters of Westley Wasteway, Del Puerto Creek, and Orestimba Creek.
- Install high-efficiency irrigation systems such as sprinkler or drip irrigation, tailwater recirculation, gated pipes, shorter runs, etc., where warranted by the crops that are grown.

The long term goals for the Focused Plan III for the Salt Slough watershed are listed as:

- Reduce use of pesticides, or incorporate use of pesticides that are less likely to be transported to the waters of the State, or which breakdown quickly and are less likely to impact water quality.
- Calibrate spray rigs utilized on farmed acres to address possible overspray.
- Address potential aerial overspray by identifying the sensitive regions for all aerial applicators.
- Construct tailwater ponds to intercept and hold direct tailwater discharges.
- Install high-efficiency irrigation systems such as sprinkler or drip irrigation, tailwater recirculation, gated pipes, shorter runs, etc, where warranted by the crops that are grown.

This report summarizes the status of each of these goals for both of the focused plans.

Sediment Basins.
Sediment and tailwater basins collect and detain surface irrigation runoff prior to discharge into regional drains and creeks. Detention time provided by these ponds allows suspended sediment to settle out of the water column, reducing the sediment load discharged as well as a portion of the hydrophobic pesticides (such as pyrethroids). Since 2008, the Westside Coalition has provided funding assistance to growers who want to install new sedimentation ponds or clean out existing ponds. Typically, sediment ponds are cleaned and constructed during the non-irrigation season.

- New Activities - Funding Assistance. Approximately $21,200 in grant funding has been provided by the Westside Coalition for the cleanout of 33 sedimentation ponds in 25 parcels, affecting approximately 5,600 acres both within and outside of the focused plans' subwatersheds. A map of the affected parcels is attached.

High-efficiency irrigation systems.
High-efficiency irrigation systems have evolved significantly in recent years and now can replace conventional surface irrigation methods on practically every crop (with alfalfa and pasture as the largest exceptions). There are a several benefits to high-efficiency irrigation systems, however, in terms of drainage, the primary benefit is the virtual elimination of tailwater discharge. These advanced systems are designed to deliver water directly to each individual plant at a rate that is both uniform throughout the irrigated field and slow enough for soil to absorb, resulting in almost no surface runoff. Additionally, these systems allow for the direct application of fertilizer and other chemicals through the drip hoses (a process called fertigation). High-efficiency irrigation systems require a significant financial investment on the part of the grower (generally $1,000 to $2,000 per acre).

The acreage of high-efficiency irrigation systems continues to increase within the Westside Coalition. The Coalition is in the process of mapping the fields with these systems within the focused plans' subwatersheds.

Management Practice Surveys have provided some detail on the usage of high efficiency irrigation systems. **Table A6-1** shows the acreage (and percent of irrigated acreage) of these irrigation systems by watershed, based on the initial management practice surveys within each

watershed and the estimated 2012 acreage. The estimated increase was based on a sampling of irrigation and water districts within the subject subwatersheds. Based on information provided by individual districts, the acreage of high efficiency irrigation systems has increased by approximately 17,000 acres Coalition-wide, largely due to aggressive funding assistance programs through individual Districts and other funding programs such as AWEP or EQUIP. These increases in irrigation improvements are reported at the District level and the geographic distribution is generally not available.

Table A6-1: High Efficiency Irrigation Systems by Subwatershed - Baseline.

Subwatershed	Survey Year	Acreage	Percent of Irrigated Acreage	2012 Estimated Drip Acreage	2012 Estimated Percent Drip
Hospital Creek	2010	3515	68%	3600	70%
Ingram Creek	2010	927	17%	1800	33%
Westley Wasteway	2011	2891	63%	2950	64%
Del Puerto Creek	2011	3934	50%	5700	72%
Orestimba Creek	2011	5821	50%	6300	54%
Salt Slough (partial data)	2012	12,812	24%		

The estimates presented in **Table A6-1** are based on the geographic location of each district, an assumed distribution of the reported irrigation improvements, and mapping information provided by some districts. Much of the acreage that converted to high efficiency irrigation systems occurred outside of these six subwatersheds. The Westside Coalition is working with Districts to develop more complete GIS maps and other methods to geographically identify irrigation methods and this data will be updated as it becomes available.

PAM Usage.

PAM is a flocculating agent added to irrigation or drain water. When added to drain water with high suspended solids, PAM binds the suspended sediment materials together into larger particles which then settle out of the water column. When added to the irrigation water, PAM prevents the suspension of soil as the water travels down the furrow.

	
Tailwater with high suspended solids (no PAM useage)	Tailwater with PAM

In addition to the removal of suspended solids, PAM also helps to control the discharge of pyrethroids, which tend to adhere to the sediment particles which should result in a reduction of sediment toxicity within the subwatersheds.

PAM usage is difficult to track. Typically, PAM is added to irrigation or drain water on an "as needed" basis, which could be every third or fourth irrigation, depending on the soil, field slope, and crop. Additionally, PAM is not a material for which growers are required to report usage (as they must do for most pesticides), so there is no "clearinghouse" through which usage can be tracked. The only available mechanism for tracking PAM usage is through direct contact with the growers. **Table A6-2** shows the acreage that reported PAM usage through management practice surveys, and the associated percent of surface irrigation acreage reported in the baseline Management Practice surveys. To date, the Westside Coalition has not performed any follow-up surveys and no additional data on PAM usage trends is available.

Table A6-2: PAM by Subwatershed.

Subwatershed	Survey Year	Acreage	Percent of Irrigated Acreage
Hospital Creek	2010	488	29%
Ingram Creek	2010	4375	95%
Westley Wasteway	2011	3346	73%
Del Puerto Creek	2011	2955	37%
Orestimba Creek	2011	3408	29%
Salt Slough (partial data)	2012	709	1%

Applications of PAM is only appropriate on fields that are surface irrigated (such as furrow or gated pipe) and produce tailwater. As a result, as more fields within the coalition are converted to drip irrigation systems, PAM usage will decrease.

Pesticide Use Activities.
Pesticide use activities vary depending on the crop planted, time of year, current and anticipated pest pressures, and available materials. Most growers utilize a pest control advisor (PCA) who is trained to identify insect, weed, and disease threats, and make recommendations on what material(s) should be applied and what cultural practices should be implemented. It should be noted that pesticides are applied in reaction to actual pest pressures and the material selected to target specific pests as well as rotate through a variety of materials to prevent pesticide resistance. Based on available Pesticide Use Report (PUR) data, most insecticide use (including pyrethroids and organophosphorus pesticides) occurred in September and October on a variety of field and tree crops. Herbicide use continued throughout the non-irrigation season. A summary of the 2011/12 non-irrigation PUR data by watershed is attached. It should be noted that of the 20,600 PUR records, there were numerous duplicate records, incomplete records and apparent errors that likely skew pesticide use results. Any data from PUR records should be used cautiously, if at all.

Chlorpyrifos exceedances were measured in September (6 exceedances) and October (1 exceedance) throughout the Coalition. In November, a diazinon exceedance was measured in Poso Slough. As will past pesticide exceedances, the Westside Coalition is working aggressively to increase awareness and encourage growers to implement management practices to avoid future exceedances. These activities included a number of meetings and workshops (addressed both to growers and PCAs) and letters distributed to targeted areas within the coalition. In October 2011, the Westside Coalition began circulating management plan surveys in the Salt Slough subwatershed, which includes Salt Slough at Lander Avenue, Salt Slough at Sand Dam, and Poso Slough. These surveys included questions about pesticide use including chlorpyrifos, diazinon, malathion, and diuron. Surveys are still being collected but a summary based on partial data is included under the **Management Practice Survey** section below. In addition to these surveys, a staff person from the Westside Coalition performed 19 field visits to regions of the Coalition with known problems. These visits reviewed the status of irrigation activities, general watershed conditions, visually assessed drainage discharges, and provided a visible public presence.

Calibrate Ground Spray Rigs to Address Overspray
In addition to stressing proper spray applications near waterways in group and individual grower meetings, the Westside Coalition has contracted with CURES to provide a trained sprayer calibration technician and a high-tech instrument for calibrating orchard sprayers for members operating near priority waterways. To date there has been little interest from growers to calibrate the spray rigs and no calibrations have been performed. The Westside Coalition still believes that this service is important for pesticide use management and will continue to encourage growers to utilize the program.

Address Potential Aerial Overspray and Identify Sensitive Regions
In the last update, the Westside Coalition reported that aerial photo maps of Ingram, Hospital, Del Puerto, and Orestimba creeks along with Westley Wasteway had been circulated to growers, PCAs and applicators. No new maps have been developed since then, however, with the completion of the survey data in the Salt Slough subwatershed, the Westside Coalition will develop a similar map for that subwatershed.

Vegetated Buffer Zones along Creek Perimeters.
Vegetated buffer zones are intended to provide unfarmed space between the edge of a field and the creek. Conceptually, the buffer zone would reduce the amount of pesticides drifting into the creeks. The Westside Coalition is in the process of identifying buffer zones along the focused plans' targeted water ways. In the previous update, vegetated buffers for Ingram, Hospital, Del Puerto, and Orestimba creeks, along with Westley Wasteway were described. Vegetated buffer regions along Salt Slough and Poso Slough are in the process of being identified and a map will be submitted once it is complete.

Management Practice Surveys.
Management practice surveys (surveys) were circulated throughout the Ingram and Hospital Creek subwatersheds (Focused Plan I Surveys) in 2009 and in the Focused Plan II subwatersheds during the summer of 2010. Summaries for these survey results were presented in the previous update and new information regarding acreage irrigated with high efficiency systems is presented in the **High-efficiency irrigation systems** section above. In October 2011, surveys for the Salt Slough subwatershed, including irrigated areas that discharge into both Salt Slough Monitoring sites as well as Poso Slough. A total of 867 parcels were surveyed and not all of the surveys have been returned. The Westside Coalition is scheduling field meetings with the remaining owners or operators to collect the remaining survey data. A summary of the available data is shown in **Table A6-3**, below. This table will be updated once the remaining data has been collected and updated in the next Management Plan Update.

Table A6-3: Summary of Focused Plan 3 Management Practice Surveys (Partial Data).

	Salt Slough at Lander Avenue*		Salt Slough at Sand Dam*		Poso Slough at Indiana Avenue	
	Acres	%	Acres	%	Acres	%
Survey Area (APN Acreage)	10,245		43,313		11,243	
Area Returned (as of 5/31/12)	8,404	82%	35,972	83%	9,485	84%
Surveys Sent	99		611		157	
Surveys Returned	71	71%	480	77%	125	78%
Irrigated Acreage	8,344	81%	35,783	83%	9,434	84%
Furrow/Flood (% Irrigated Acreage)	6,711	80%	27,758	78%	5,981	63%
Drip/Micro/Sprinkler (% Irrigated Ac.)	1,574	19%	7,836	22%	3,402	36%
Fallow/Non-irrigated (% Irrigated Ac.)	60	1%	189	0.5%	51	0.5%
Tree Crops (% Irrigated Ac.)	350	4%	398	1%	196	2%
Field Crops (% Irrigated Ac.)	7,935	95%	35,316	99%	9,182	97%
Open/Other (% Irrigated Ac.)	-		70	0.2%	56	0.6%
Sedimentation Ponds (% Irrigated Ac.)	-	0%	14	0%	-	0%
Tile System (% Irrigated Ac.)	216	3%	3,025	9%	-	0%
PAM usage (% Irrigated Ac.)	-	0%	671	2%	38	0.4%
Tailwater leaves field (% Irrigated Ac.)	7,721	93%	33,206	93%	7,272	77%
Stormwater leaves field (% Irrigated Ac.)	7,864	94%	33,359	93%	8,341	88%
Berm Spray Usage (% Irrigated Ac.)	1,109	13%	1,174	3%	526	1%
Manure Usage (% Irrigated Ac.)	4,025	48%	16,788	47%	3,536	38%

* Geographically, the Salt Slough at Lander Avenue subwatershed is inclusive of the Salt Slough at Sand Dam subwatershed, which is inclusive of the Poso Slough Subwatershed. For the sake of data clarity, the data presented in this table represents practices exclusive to each subwatershed without any data overlap. The Salt Slough at Sand Dam data does not include lands in the Poso Slough Subwatershed and the Salt Slough at Lander Avenue data does not include data for lands within the Salt Slough at Sand Dam subwatershed.

Outreach and Grower Education.
The Westside Coalition organizes outreach meetings throughout the year to inform growers and PCA about the materials that have been detected at the monitoring sites and to suggest possible practices that may prevent future detections. Additionally, the exceedance reports that are submitted to the Central Valley Regional Water Quality Control Board are also sent to the Westside Coalition member districts. A list of the meetings is included in **Table A6-5.**

Table A6-5: Outreach Meetings.

Date	Group	Location	Description	Attended	By
September 2011	Del Puerto Creek Growers	Field	Management Practices	2	Rich Peltzer
September 2011	Ingram Creek Growers	Field	Management Practices	2	Rich Peltzer
September 2011	Hospital Creek Growers	Field	Management Practices	1	Rich Peltzer
September 2011	Marshall Road Drain Growers	Field	Management Practices	3	Rich Peltzer
9/20/2011	Certified Letter to Blewett Farmers	Letter	Sediment Exceedances	25	Letter
9/21/2011	Certified Letter to Orestimba Watershed Farmers	Letter	Sediment Exceedances	35	Letter
9/23/2011	Blewett Drain Watershed	Field	Discussion of sedminent exceedances	2	Rich Peltzer
10/14/2011	Orestimba Creek Watershed	Field	Chlorpyrifos and sedmiment issues	1	Rich Peltzer
2/1/2012	Orestimba/ Hospital Creek Watersheds	Letters	Chlorpyrifos Exceedances	83	Letter
2/19/2012	Field tailgate meetings	Field	BMPs + Chlorpyrifos/Malathion/ Sediment	19	Rich Peltzer
2/28/2012	Cotton Project Meet	Dos Palos	Stakeholder outreach meeting	50	Chris Linneman

The Coalition began conducting individual meetings with growers in March of 2010. These meetings target parcels adjacent to the creeks and major drains in the Focused Plan watersheds and resulting from observations during the Coalition's Field Visits. The intent of these meetings was to increase awareness of the water quality concerns related to agricultural practices. The individual contacts also help to gain parcel-specific information in regards to agricultural discharges and management practices currently implemented on the properties adjacent to the priority watersheds. In the individual grower visits the Coalition offer resources (i.e. management practice handbooks, information to obtain NRCS-EQIP funds) to aid them in implementing additional management practices if it is determined that additional practices are

needed. This determination is made after the discussion and a review of the property by a Coalition representative.

Overview of decision tree for adopting management practices

Management practices are adopted at the discretion of the landowner or operator. The Westside Coalition provides resources regarding applicable management practices given the specific water quality issue for a given subwatershed.

1. Management practice surveys mailed to landowners
2. Individual meeting held to discuss current/potential practices
3. Options reviewed with landowner
4. Landowner makes decision on implementing practice

Overview of Outreach Procedure resulting from Pesticide Exceedances.

Pesticide results are typically available to the Westside Coalition approximately 6 weeks after the sample collection. Upon receipt of this data, it is imported into the Coalition's database and reviewed for exceedances. When a pesticide detection is determined to have exceeded the recommended water quality value, the Westside Coalition begins a review procedure.

1. Determine the material, time of year, and subwatershed in which the material was applied.
2. Identify the crops that are registered for the subject material.
3. Review the subwatershed for the identified crops.

These steps can usually be performed within a week of the exceedance determination and will generally reduce the pool of growers who are likely to have contributed to the exceedance. With that information, the Coalition can target outreach efforts directly to those growers.

Grant Program Outreach.

Information on grant funding availability has been communicated to landowners and operators through direct mailings, grower group meetings and individual contacts with landowners. A letter was sent in April 2011 to landowners with property along the Westside Coalitions priority watersheds regarding availability of Proposition 84 grant funds for irrigation system improvements and other water conservation related projects. This letter and other efforts from the Coalition resulted in 51 projects (3,670 acres) funded through Proposition 84. A map showing the project locations is included with this update.

A new funding program through NRCS is being pursued by Westside Coalition. These funds will provide growers within the Salt Slough subwatershed with funding assistance for irrigation improvements. This program is currently in development however it is expected to function similar to the EQUIP program and Proposition 84. The amount of funding and subsequent project areas have not yet been determined. The Westside Coalition expects to provide more detailed information in the November 2012 update.

Exceedance Tally

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2009 to 2/29/2012

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	28	484
Aquatic Toxicity	Pimephales promelas	1	294
Aquatic Toxicity	Selenastrum capricornutum	11	353
Field Data	DO	94	755
Field Data	EC	423	757
Field Data	pH	84	741
General Chemistry	Ammonia (as N)	2	38
General Chemistry	Ammonia as N	4	511
General Chemistry	Arsenic	9	366
General Chemistry	Boron	111	476
General Chemistry	E. Coli	218	653
General Chemistry	Selenium	2	226
General Chemistry	Total Dissolved Solids	395	654
Pesticide	a-Chlordane	1	417
Pesticide	Aldrin	1	417
Pesticide	Chlorpyrifos	60	588
Pesticide	DDD(p,p')	3	417
Pesticide	DDE(p,p')	125	417
Pesticide	DDT(p,p')	18	417
Pesticide	Diazinon	2	588
Pesticide	Dimethoate	3	588
Pesticide	Diuron	31	482
Pesticide	Endrin	1	417
Pesticide	g-Chlordane	7	417
Pesticide	Malathion	13	588
Pesticide	Methamidophos	2	611
Pesticide	Toxaphene	2	417
Sediment Toxicity	Hyalella azteca	26	71

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2009 to 2/29/2012

Blewett Drain at Highway 132

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	5
Field Data	DO	2	21
Field Data	EC	4	21
Field Data	pH	4	21
General Chemistry	E. Coli	9	20
General Chemistry	Total Dissolved Solids	5	20
Pesticide	Chlorpyrifos	1	6
Pesticide	DDE(p,p')	2	6
Sediment Toxicity	Hyalella azteca	2	3

Del Puerto Creek at Hwy 33

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	7
Field Data	DO	1	12
Field Data	EC	2	12
Field Data	pH	2	12
General Chemistry	Boron	1	7
General Chemistry	E. Coli	1	5
General Chemistry	Total Dissolved Solids	4	5
Pesticide	DDD(p,p')	1	7
Pesticide	DDE(p,p')	1	7
Pesticide	DDT(p,p')	1	7
Sediment Toxicity	Hyalella azteca	1	4

Del Puerto Creek near Cox Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	16	36
Field Data	pH	4	36
General Chemistry	Ammonia as N	1	29
General Chemistry	Boron	5	24
General Chemistry	E. Coli	14	31
General Chemistry	Total Dissolved Solids	23	31
Pesticide	Chlorpyrifos	5	24
Pesticide	DDE(p,p')	13	24
Pesticide	Diuron	1	24
Pesticide	Endrin	1	24
Pesticide	Malathion	1	24
Pesticide	Methamidophos	1	25
Sediment Toxicity	Hyalella azteca	3	6

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2009 to 2/29/2012

Delta Mendota Canal at DPWD

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	3
Field Data	DO	1	38
Field Data	pH	6	38
General Chemistry	Total Dissolved Solids	2	38
Pesticide	Chlorpyrifos	1	38

Hospital Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	4	18
Aquatic Toxicity	Selenastrum capricornutum	1	9
Field Data	DO	1	22
Field Data	EC	5	23
Field Data	pH	3	23
General Chemistry	Arsenic	1	18
General Chemistry	E. Coli	9	9
General Chemistry	Total Dissolved Solids	3	9
Pesticide	Chlorpyrifos	8	18
Pesticide	DDE(p,p')	15	18
Pesticide	DDT(p,p')	2	18
Pesticide	Diuron	2	18
Pesticide	g-Chlordane	1	18
Pesticide	Malathion	1	18
Pesticide	Toxaphene	1	18
Sediment Toxicity	Hyalella azteca	6	6

Ingram Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	22
Aquatic Toxicity	Selenastrum capricornutum	1	11
Field Data	DO	3	32
Field Data	EC	21	32
Field Data	pH	3	32
General Chemistry	Arsenic	2	22
General Chemistry	Boron	8	22
General Chemistry	E. Coli	13	28
General Chemistry	Total Dissolved Solids	23	28
Pesticide	Chlorpyrifos	6	22
Pesticide	DDE(p,p')	20	22
Pesticide	DDT(p,p')	4	22
Pesticide	Dimethoate	3	22
Pesticide	Diuron	3	22
Pesticide	g-Chlordane	1	22

Pesticide	Malathion	1	22
Sediment Toxicity	Hyalella azteca	6	6

Little Panoche Creek at W. Boundary

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	1
Aquatic Toxicity	Selenastrum capricornutum	1	1
Field Data	EC	1	1
Field Data	pH	1	1
General Chemistry	Boron	1	1
General Chemistry	E. Coli	1	1
General Chemistry	Total Dissolved Solids	1	1
Pesticide	DDE(p,p')	1	1

Los Banos Creek at China Camp Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Pimephales promelas	1	29
Field Data	DO	11	46
Field Data	EC	36	46
Field Data	pH	8	45
General Chemistry	Arsenic	2	16
General Chemistry	Boron	10	16
General Chemistry	E. Coli	14	39
General Chemistry	Total Dissolved Solids	27	39
Pesticide	Aldrin	1	16
Pesticide	Chlorpyrifos	2	28

Los Banos Creek at Hwy 140

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	2	39
Field Data	DO	6	40
Field Data	EC	37	40
Field Data	pH	5	38
General Chemistry	Arsenic	1	16
General Chemistry	Boron	12	16
General Chemistry	E. Coli	23	39
General Chemistry	Total Dissolved Solids	36	39
Pesticide	Diuron	1	38

Los Banos Creek at Sunset Ave.

Type	Constituent	# of Exceedances	# of Tests
General Chemistry	Boron	1	2

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2009 to 2/29/2012

Marshall Road Drain near River Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	2	17
Field Data	DO	3	22
Field Data	EC	12	22
Field Data	pH	3	22
General Chemistry	Ammonia as N	1	19
General Chemistry	Boron	3	18
General Chemistry	E. Coli	8	21
General Chemistry	Total Dissolved Solids	16	21
Pesticide	Chlorpyrifos	7	18
Pesticide	DDE(p,p')	11	18
Pesticide	DDT(p,p')	4	18
Pesticide	Diuron	2	18
Pesticide	g-Chlordane	3	18
Pesticide	Malathion	3	18

Mud Slough Upstream of San Luis Drain

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	2	40
Field Data	EC	39	40
Field Data	pH	7	38
General Chemistry	Boron	14	16
General Chemistry	E. Coli	9	39
General Chemistry	Total Dissolved Solids	38	39
Pesticide	Malathion	1	39

Newman Wasteway near Hills Ferry Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	2	27
Field Data	DO	19	43
Field Data	EC	40	43
Field Data	pH	3	41
General Chemistry	Boron	13	27
General Chemistry	E. Coli	17	37
General Chemistry	Total Dissolved Solids	35	37
Pesticide	DDE(p,p')	5	27

Orestimba Creek at Hwy 33

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	26
Field Data	DO	6	32
Field Data	EC	5	32

Field Data	pH	3	32
General Chemistry	E. Coli	7	14
General Chemistry	Selenium	2	16
Pesticide	Chlorpyrifos	3	26
Pesticide	DDD(p,p')	2	26
Pesticide	DDE(p,p')	22	26
Pesticide	DDT(p,p')	4	26
Pesticide	Diazinon	1	26
Pesticide	g-Chlordane	1	26
Pesticide	Methamidophos	1	27
Pesticide	Toxaphene	1	26
Sediment Toxicity	Hyalella azteca	2	7

Orestimba Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	3	23
Field Data	DO	3	33
Field Data	EC	12	33
General Chemistry	E. Coli	16	29
General Chemistry	Total Dissolved Solids	11	29
Pesticide	Chlorpyrifos	6	23
Pesticide	DDE(p,p')	18	23
Pesticide	DDT(p,p')	1	23
Pesticide	Malathion	1	23
Sediment Toxicity	Hyalella azteca	1	6

Poso Slough at Indiana Ave

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	2	17
Aquatic Toxicity	Selenastrum capricornutum	3	17
Field Data	DO	3	41
Field Data	EC	29	40
Field Data	pH	5	39
General Chemistry	Ammonia (as N)	2	3
General Chemistry	Ammonia as N	1	36
General Chemistry	Arsenic	2	16
General Chemistry	E. Coli	26	39
General Chemistry	Total Dissolved Solids	24	39
Pesticide	Chlorpyrifos	2	16
Pesticide	DDE(p,p')	1	16
Pesticide	Diazinon	1	16
Pesticide	Diuron	5	16
Sediment Toxicity	Hyalella azteca	1	2

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2009 to 2/29/2012

Ramona Lake near Fig Avenue

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	25
Field Data	DO	7	38
Field Data	EC	37	38
Field Data	pH	5	38
General Chemistry	Boron	18	25
General Chemistry	E. Coli	4	33
General Chemistry	Total Dissolved Solids	33	33
Pesticide	Chlorpyrifos	2	25
Pesticide	DDE(p,p')	1	25
Pesticide	Diuron	1	25
Sediment Toxicity	Hyalella azteca	1	6

Salt Slough at Lander Ave

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	2	40
Aquatic Toxicity	Selenastrum capricornutum	1	39
Field Data	DO	3	41
Field Data	EC	40	41
Field Data	pH	2	39
General Chemistry	Boron	11	32
General Chemistry	E. Coli	6	39
General Chemistry	Total Dissolved Solids	39	39
Pesticide	Chlorpyrifos	4	41
Pesticide	Diuron	3	41
Pesticide	g-Chlordane	1	42
Pesticide	Malathion	2	41

Salt Slough at Sand Dam

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	1	28
Field Data	DO	6	30
Field Data	EC	23	30
Field Data	pH	5	28
General Chemistry	Arsenic	1	16
General Chemistry	Total Dissolved Solids	12	16
Pesticide	Chlorpyrifos	5	28
Pesticide	Diuron	8	28
Pesticide	Malathion	1	28
Sediment Toxicity	Hyalella azteca	1	2

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2009 to 2/29/2012

San Joaquin River at Fremont Ford

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	1	4
Field Data	EC	4	4
General Chemistry	Boron	3	4
General Chemistry	Total Dissolved Solids	4	4
Pesticide	Diuron	1	4

San Joaquin River at Lander Ave

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	34
Field Data	DO	2	36
Field Data	EC	13	36
Field Data	pH	2	34
General Chemistry	E. Coli	5	34
General Chemistry	Total Dissolved Solids	11	34
Pesticide	Malathion	1	34

San Joaquin River at PID Pumps

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	38
Field Data	EC	24	38
Field Data	pH	3	38
General Chemistry	Boron	10	38
General Chemistry	E. Coli	4	38
General Chemistry	Total Dissolved Solids	26	38
Pesticide	Chlorpyrifos	5	38

San Joaquin River at Sack Dam

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	3
Field Data	DO	2	39
Field Data	EC	4	38
Field Data	pH	6	38
General Chemistry	E. Coli	1	37
General Chemistry	Total Dissolved Solids	2	38
Pesticide	Chlorpyrifos	1	37
Pesticide	Diuron	1	3
Pesticide	Malathion	1	37

Turner Slough at Edminster Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	2	26

Field Data	DO	12	38
Field Data	EC	13	38
Field Data	pH	1	36
General Chemistry	Ammonia as N	1	32
General Chemistry	E. Coli	16	35
General Chemistry	Total Dissolved Solids	12	35
Pesticide	DDE(p,p')	1	15
Pesticide	DDT(p,p')	1	15

Westley Wasteway near Cox Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	2	20
Field Data	EC	6	30
Field Data	pH	3	30
General Chemistry	Boron	1	20
General Chemistry	E. Coli	15	26
General Chemistry	Total Dissolved Solids	8	26
Pesticide	a-Chlordane	1	20
Pesticide	Chlorpyrifos	2	20
Pesticide	DDE(p,p')	14	20
Pesticide	DDT(p,p')	1	20
Pesticide	Diuron	3	19
Sediment Toxicity	Hyalella azteca	2	5

Pesticide Use Report Summary

(Includes partial data, duplicate records and incomplete records)

Pesticide Use Summary

8/1/11 through 2/29/12

County **Fresno**

Monitoring Site **Poso Slough at Indiana Ave**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
(S)-CYPERMETHRIN	August	354.2	7	11.9	Gallon	Cotton
2,4-D, DIMETHYLAMINE SALT	November	285	5	194.24	Gallon	Tomatos
BETA-CYFLUTHRIN	August	630	11	15.76	Gallon	Cotton
BETA-CYFLUTHRIN	August	130.8	4	418.56	Ounce	Cotton
BIFENTHRIN	August	168	2	7.85	Gallon	Melons
BIFENTHRIN	August	131	1	660	Ounce	
BIFENTHRIN	August	79	2	3.09	Gallon	Cotton
BIFENTHRIN	August	79	2	395	Ounce	Cotton
BIFENTHRIN	August	178	8	178	Pounds	Pistachios
BIFENTHRIN	September	344	4	4	Pounds	Almonds
BIFENTHRIN	November	134	1	5.44	Gallon	Tomatos
CHLORPYRIFOS	August	670.2	9	183.43	Gallon	Alfalfa
CHLORPYRIFOS	August	235	2	58.75	Gallon	Cotton
CHLORPYRIFOS	August	70	1	35	Gallon	Almonds
CHLORPYRIFOS	September	17	1	34	Pint	Cotton
CHLORPYRIFOS	September	555	6	138.75	Gallon	Alfalfa
CHLORPYRIFOS	September	17	1	34	Gallon	Cotton
CHLORPYRIFOS	October	428	7	107	Gallon	Alfalfa
CLETHODIM	August	163	4	11.5	Gallon	Tomatos
CLETHODIM	September	32	1	512	Ounce	Cotton
DIAZINON	August	131	1	131	Pounds	Melons
DIAZINON	December	410	4	41.62	Gallon	Tomatos
DIURON	September	1687	44	69.62	Gallon	Cotton
DIURON	September	88	1	264	Ounce	Cotton
DIURON	October	5645.06	118	314.68	Gallon	Cotton
DIURON	October	98	6	434	Ounce	Cotton
DIURON	December	171	2	64.12	Gallon	Alfalfa
ENDOSULFAN	September	72.4	2	108.6	Pounds	Melons
ESFENVALERATE	August	37	1	2.31	Gallon	Tomatos
ESFENVALERATE	September	71	2	4.99	Gallon	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	January	134	4	33.5	Gallon	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	August	80	4	2560	Ounce	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	254	3	63.5	Gallon	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	100	1	3200	Pounds	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	204	2	2	Quart	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	October	880	13	416.75	Gallon	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	November	61	1	61	Quart	Wheat
GLYPHOSATE, ISOPROPYLAMINE SALT	November	285	5	305.84	Gallon	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	December	107.2	2	26.8	Gallon	Alfalfa

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

GLYPHOSATE, ISOPROPYLAMINE SALT	December	38	1	10	Gallon	Cotton
IMAZAMOX, AMMONIUM SALT	November	155	4	7.24	Gallon	Alfalfa
IMAZAMOX, AMMONIUM SALT	November	106.9	2	641.4	Ounce	Alfalfa
LAMBDA-CYHALOTHRIN	August	74	1	640.1	Pounds	Tomatos
LAMBDA-CYHALOTHRIN	September	154	3	10	Gallon	Tomatos
LAMBDA-CYHALOTHRIN	September	30	1	3.56	Pounds	Tomatos
LAMBDA-CYHALOTHRIN	October	89	3	2.38	Gallon	Tomatos
MALATHION	August	182.1	2	223.98	Pint	Alfalfa
MALATHION	September	31	1	3.87	Gallon	Alfalfa
MCPA, DIMETHYLAMINE SALT	January	134	5	10.72	Gallon	Wheat
METHOMYL	September	72.4	2	54.3	Pounds	Melons
NALED	August	235	2	29.37	Gallon	Cotton
NALED	September	34	2	34	Pint	Cotton
OXYFLUORFEN	November	155	3	310	Pint	
OXYFLUORFEN	November	61	1	15.25	Gallon	Wheat
OXYFLUORFEN	November	303.9	9	56.99	Gallon	Cotton
OXYFLUORFEN	December	529	7	1058	Pint	Tomatos
OXYFLUORFEN	December	35.9	1	8.98	Gallon	Tomatos
PARAQUAT DICHLORIDE	January	107	2	26.75	Gallon	Alfalfa
PARAQUAT DICHLORIDE	October	5	1	5	Quart	Cotton
PARAQUAT DICHLORIDE	October	30	2	30	Pint	Cotton
PARAQUAT DICHLORIDE	October	1479.1	29	316.79	Gallon	Cotton
PARAQUAT DICHLORIDE	November	345	8	86.25	Gallon	Cotton
PARAQUAT DICHLORIDE	December	1434.75	26	337.99	Gallon	Alfalfa
PENDIMETHALIN	December	752.25	15	468.5	Gallon	Alfalfa
PENDIMETHALIN	December	103.4	2	103.4	Gallon	Almonds
PENDIMETHALIN	December	351	6	1404	Pint	Alfalfa
PROMETRYN	November	413.9	12	111.99	Gallon	Cotton
SODIUM CHLORATE	October	30	2	75	Quart	Cotton
THIDIAZURON	September	88	1	264	Ounce	Cotton
THIDIAZURON	September	1687	44	69.62	Gallon	Cotton
THIDIAZURON	October	5645.06	118	314.68	Gallon	Cotton
THIDIAZURON	October	98	6	434	Ounce	Cotton

Monitoring Site **San Joaquin River at Sack D**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
BIFENTHRIN	September	408	4	4	Pounds	Almonds
CHLORPYRIFOS	September	547	9	136.75	Gallon	Alfalfa
CHLORPYRIFOS	October	508	8	127	Gallon	Alfalfa
DIURON	September	176	2	528	Ounce	Cotton
DIURON	September	92	4	2.16	Gallon	Cotton
DIURON	October	256.9	3	7.28	Gallon	Cotton
DIURON	October	92	4	276	Ounce	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	408	4	4	Quart	Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

IMAZAMOX, AMMONIUM SALT	November	96	6	4.48	Gallon	Alfalfa
LAMBDA-CYHALOTHRIN	August	140	6	350	Ounce	Almonds
MALATHION	August	156.2	4	192.12	Pint	Alfalfa
OXYFLUORFEN	November	150	4	300	Pint	
OXYFLUORFEN	December	560	8	1120	Pint	Tomatos
OXYFLUORFEN	December	324	2	648	Pint	
PARAQUAT DICHLORIDE	October	25	1	25	Pint	Cotton
PARAQUAT DICHLORIDE	December	285	3	71.25	Gallon	Alfalfa
PENDIMETHALIN	November	156	3	113.46	Quart	Grapes
PENDIMETHALIN	November	100	4	200	Quart	Almonds
PENDIMETHALIN	December	508	8	2032	Pint	Alfalfa
PENDIMETHALIN	December	103.4	2	103.4	Gallon	Almonds
PENDIMETHALIN	December	285	3	142.5	Gallon	Alfalfa
SODIUM CHLORATE	October	25	1	62.5	Quart	Cotton
THIDIAZURON	September	176	2	528	Ounce	Cotton
THIDIAZURON	September	92	4	2.16	Gallon	Cotton
THIDIAZURON	October	256.9	3	7.28	Gallon	Cotton
THIDIAZURON	October	92	4	276	Ounce	Cotton

County **Madera**

Monitoring Site **Poso Slough at Indiana Ave**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
BIFENTHRIN	September	70	2	70	LB	Almonds
CHLORPYRIFOS	August	280	2	70	GA	Cotton
DIURON	September	57	1	2.85	GA	Cotton
DIURON	October	40	1	400	OZ	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	December	57.43	2	10.76	GA	Almonds
NALED	August	40	1	5	GA	Cotton
ORYZALIN	December	57.43	2	43.07	GA	Almonds
OXYFLUORFEN	December	40	1	10	GA	Cotton
OXYFLUORFEN	December	57.43	2	2.68	GA	Almonds
PROMETRYN	November	85	2	42.5	GA	Cotton
THIDIAZURON	September	57	1	2.85	GA	Cotton
THIDIAZURON	October	40	1	400	OZ	Cotton

Monitoring Site **San Joaquin River at Lander**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
PENDIMETHALIN	November	21.35	1	21.35	GA	Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

Monitoring Site **San Joaquin River at Sack D**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
ACEPHATE	August	40	1	40	LB	Alfalfa
BIFENTHRIN	August	575	7	26.95	GA	Cotton
BIFENTHRIN	August	200	2	20	GA	Almonds
BIFENTHRIN	September	140	4	140	LB	Almonds
CHLORPYRIFOS	August	560	4	140	GA	Cotton
CHLORPYRIFOS	September	575	7	71.89	GA	Cotton
COPPER SULFATE (BASIC)	December	242	2	847	LB	Almonds
DIMETHOATE	August	40	1	5	GA	Alfalfa
DIQUAT DIBROMIDE	August	40	1	7.5	GA	Alfalfa
DIURON	October	80	2	800	OZ	Cotton
DIURON	December	200	2	62.5	GA	Alfalfa
DIURON	December	292	3	438	LB	Alfalfa
ESFENVALERATE	December	242	2	18.9	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	September	184	2	58.94	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	796	10	206.96	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	December	718.58	18	221.38	GA	Almonds
HEXAZINONE	December	200	2	50	GA	Alfalfa
MALATHION	September	100	2	15.96	GA	Alfalfa
NALED	August	40	1	7.5	GA	Alfalfa
NALED	August	80	2	10	GA	Cotton
ORYZALIN	December	718.58	18	537.88	GA	Almonds
OXYFLUORFEN	November	308	4	14.42	GA	Almonds
OXYFLUORFEN	December	91.54	2	183.06	PT	Fallow
OXYFLUORFEN	December	434.58	16	20.28	GA	Almonds
OXYFLUORFEN	December	80	2	20	GA	Cotton
OXYFLUORFEN	December	130.6	2	261.2	PT	Cotton
PARAQUAT DICHLORIDE	August	40	1	15	GA	Alfalfa
PARAQUAT DICHLORIDE	October	969.4	11	242.36	GA	Cotton
PARAQUAT DICHLORIDE	October	44	1	88	PT	Cotton
PARAQUAT DICHLORIDE	November	113	1	28.25	GA	Cotton
PARAQUAT DICHLORIDE	December	300	4	100	GA	Alfalfa
PENDIMETHALIN	November	488	6	244	GA	Almonds
PENDIMETHALIN	December	100	2	50	GA	Alfalfa
PROMETRYN	November	56	2	28	GA	Cotton
PROMETRYN	December	130.6	2	391.78	PT	Cotton
THIDIAZURON	October	80	2	800	OZ	Cotton

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

County **Merced**

Monitoring Site **Los Banos Creek at China C**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
(S)-CYPERMETHRIN	September	100	2			Tomatos
(S)-CYPERMETHRIN	September	100	2	441.02	GA	Tomatos
BETA-CYFLUTHRIN	August	24	1	0.6	GA	Cotton
BETA-CYFLUTHRIN	August	24	1			Cotton
BIFENTHRIN	September	100	2			Tomatos
BIFENTHRIN	September	100	2	441.02	GA	Tomatos
BIFENTHRIN	September	50	1	2	GA	Melons
BIFENTHRIN	September	50	1			Melons
BROMOXYNIL HEPTANOATE	November	13	1	1.22	GA	Alfalfa
BROMOXYNIL OCTANOATE	November	13	1	1.22	GA	Alfalfa
CHLORPYRIFOS	September	209.5	5	53.13	GA	Alfalfa
CHLORPYRIFOS	September	209.5	5			Alfalfa
CHLORPYRIFOS	October	80	2			Cotton
CHLORPYRIFOS	October	80	2	10	GA	Cotton
CLETHODIM	September	181.3	5			Alfalfa
CLETHODIM	September	181.3	5	2912	OZ	Alfalfa
CLETHODIM	October	65	2			Wheat
CLETHODIM	October	65	2	8.12	GA	Wheat
CLETHODIM	November	68	2	1088	OZ	Alfalfa
DICAMBA, DIMETHYLAMINE SALT	December	40	2	1.24	GA	Oats
DICAMBA, DIMETHYLAMINE SALT	December	18	1	0.56	GA	Alfalfa
DICAMBA, DIMETHYLAMINE SALT	December	22	3	0.68	GA	Wheat
DIURON	October	71	2	284	OZ	Cotton
DIURON	October	785	18	43.59	GA	Cotton
DIURON	October	856	20			Cotton
DIURON	December	116	3	371.2	PT	Alfalfa
ESFENVALERATE	October	50	1			Tomatos
ESFENVALERATE	October	50	1	3.75	GA	Tomatos
GLYPHOSATE	August	23	1	11.5	GA	Almonds
GLYPHOSATE	August	23	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	120	1	30	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	120	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	74	1	2368	OZ	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	November	24	1	7.5	GA	Wheat
GLYPHOSATE, ISOPROPYLAMINE SALT	November	139	1	132.38	PT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	December	115.08	2	28.77	GA	Almonds
IMAZAMOX, AMMONIUM SALT	November	85	3	510	OZ	Alfalfa
IMAZAMOX, AMMONIUM SALT	November	13	1	0.61	GA	Alfalfa
IMAZETHAPYR, AMMONIUM SALT	October	65	2			Wheat

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

IMAZETHAPYR, AMMONIUM SALT	October	65	2	3.04	GA	Wheat
IMAZETHAPYR, AMMONIUM SALT	November	74	1	3.47	GA	Alfalfa
IMAZETHAPYR, AMMONIUM SALT	December	25	1	150	OZ	Melons
MCPA, DIMETHYLAMINE SALT	December	170	3	340	PT	Wheat
MCPA, DIMETHYLAMINE SALT	December	107	1	26.75	GA	Oats
MCPA, DIMETHYLAMINE SALT	December	115	2	230	PT	Oats
METHOMYL	September	4.7	1	4.7	LB	Pomegranate
METHOMYL	October	50	1			Tomatos
METHOMYL	October	50	1	37.5	LB	Tomatos
ORYZALIN	November	139	1	264.76	PT	Almonds
OXYFLUORFEN	November	74	1	148	PT	Alfalfa
OXYFLUORFEN	November	139	1	959.76	OZ	Almonds
OXYFLUORFEN	November	78	1	156	PT	Corn
OXYFLUORFEN	December	22	1	2.75	GA	Alfalfa
OXYFLUORFEN	December	71	2	17.75	GA	Cotton
OXYFLUORFEN	December	157	7	322	PT	Cotton
PARAQUAT DICHLORIDE	August	120	1	60	GA	Almonds
PARAQUAT DICHLORIDE	August	120	1			Almonds
PARAQUAT DICHLORIDE	December	116	3	348	PT	Alfalfa
PENDIMETHALIN	November	22	1	8.25	GA	Alfalfa
PENDIMETHALIN	December	116	3	464	PT	Alfalfa
PENDIMETHALIN	December	44	1	132	PT	Cotton
PENDIMETHALIN	December	115.08	2	57.54	GA	Almonds
THIDIAZURON	October	785	18	43.59	GA	Cotton
THIDIAZURON	October	71	2	284	OZ	Cotton
THIDIAZURON	October	856	20			Cotton
TRIFLURALIN	October	120	1	2880	OZ	Cotton
TRIFLURALIN	October	120	1			Cotton

Monitoring Site **Los Banos Creek at Hwy 140**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
(S)-CYPERMETHRIN	September	132	3			Tomatos
(S)-CYPERMETHRIN	September	132	3	443.52	GA	Tomatos
2,4-D, DIMETHYLAMINE SALT	November	8.1	1	2.03	GA	Almonds
2,4-D, DIMETHYLAMINE SALT	November	20	1	40	PT	Beans
2,4-D, DIMETHYLAMINE SALT	December	20	1	2.5	GA	Walnuts
2,4-D, DIMETHYLAMINE SALT	December	5	1	2.5	GA	Right of Way
2,4-D, DIMETHYLAMINE SALT	December	99.2	3	12.39	GA	Almonds
ACEPHATE	August	87	1			Beans
ACEPHATE	August	87	1	87	LB	Beans
BETA-CYFLUTHRIN	August	132	5	3.11	GA	Cotton
BETA-CYFLUTHRIN	August	132	5			Cotton
BIFENTHRIN	August	47	1			Almonds
BIFENTHRIN	August	47	1	4.7	GA	Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

BIFENTHRIN	September	50	1			Melons
BIFENTHRIN	September	132	3			Tomatos
BIFENTHRIN	September	50	1			Almonds
BIFENTHRIN	September	50	1	2	GA	Melons
BIFENTHRIN	September	50	1	5	GA	Almonds
BIFENTHRIN	September	132	3	443.52	GA	Tomatos
BROMOXYNIL HEPTANOATE	November	13	1	1.22	GA	Alfalfa
BROMOXYNIL OCTANOATE	November	13	1	1.22	GA	Alfalfa
CHLORPYRIFOS	August	290	4	290	PT	Alfalfa
CHLORPYRIFOS	August	290	4			Alfalfa
CHLORPYRIFOS	September	398.5	9	100.38	GA	Alfalfa
CHLORPYRIFOS	September	39.5	5	7.9	GA	Corn
CHLORPYRIFOS	September	39.5	5			Corn
CHLORPYRIFOS	September	398.5	9			Alfalfa
CHLORPYRIFOS	October	80	2	10	GA	Cotton
CHLORPYRIFOS	October	80	2			Cotton
CLETHODIM	August	18	1			Beans
CLETHODIM	August	18	1	2.25	GA	Beans
CLETHODIM	September	346.3	8			Alfalfa
CLETHODIM	September	346.3	8	5568	OZ	Alfalfa
CLETHODIM	October	65	2	8.12	GA	Wheat
CLETHODIM	October	65	2			Wheat
CLETHODIM	November	68	2	1088	OZ	Alfalfa
CLETHODIM	December	86	1	5.38	GA	Alfalfa
CYFLUTHRIN	September	38	1			Tomatos
CYFLUTHRIN	September	38	1	1.48	GA	Tomatos
CYFLUTHRIN	October	27	1			Tomatos
CYFLUTHRIN	October	27	1	1.27	GA	Tomatos
DICAMBA, DIMETHYLAMINE SALT	December	444.1	12	13.83	GA	Oats
DICAMBA, DIMETHYLAMINE SALT	December	22	3	0.68	GA	Wheat
DICAMBA, DIMETHYLAMINE SALT	December	18	1	0.56	GA	Alfalfa
DIMETHOATE	August	511	12			Beans
DIMETHOATE	August	100	2			Tomatos
DIMETHOATE	August	20	1	5	GA	
DIMETHOATE	August	203	4	27.88	GA	Beans
DIMETHOATE	August	308	8	308	PT	Beans
DIMETHOATE	August	100	2	12.5	GA	Tomatos
DIMETHOATE	August	20	1			
DIMETHOATE	September	40	1			Beans
DIMETHOATE	September	40	1	5	GA	Beans
DIMETHOMORPH	September	32	1			Tomatos
DIMETHOMORPH	September	32	1	1.5	GA	Tomatos
DIMETHOMORPH	October	27	1	1.27	GA	Tomatos
DIMETHOMORPH	October	27	1			Tomatos
DIURON	October	1049	23			Cotton

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

DIURON	October	71	2	284	OZ	Cotton
DIURON	October	978	21	55.64	GA	Cotton
DIURON	November	17	1	4.91	GA	Walnuts
DIURON	December	90	1	216	OZ	Alfalfa
DIURON	December	152.5	4	462.45	PT	Alfalfa
DIURON	December	549.6	13	174.8	GA	Alfalfa
ESFENVALERATE	August	311	5	21.05	GA	Tomatos
ESFENVALERATE	August	311	5			Tomatos
ESFENVALERATE	October	50	1	3.75	GA	Tomatos
ESFENVALERATE	October	50	1			Tomatos
FENPROPATHRIN	August	38	1			Tomatos
FENPROPATHRIN	August	38	1	3.16	GA	Tomatos
FENPROPATHRIN	October	38	1			Tomatos
FENPROPATHRIN	October	38	1	3.16	GA	Tomatos
GLYPHOSATE	August	23	1			Almonds
GLYPHOSATE	August	23	1	11.5	GA	Almonds
GLYPHOSATE	October	4.86	1	1.94	GA	Almonds
GLYPHOSATE	October	4.86	1			Almonds
GLYPHOSATE	November	8.1	1	3	GA	Almonds
GLYPHOSATE	December	99.2	3	29.43	GA	Almonds
GLYPHOSATE	December	20	1	5.94	GA	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	13	1			Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	August	13	1	26	QT	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	August	47	2			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	861	10			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	418	2	1254	PT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	212	2	52	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	47	2	94	QT	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	231	6	462	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	17	1	3.28	GA	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	November	29	4	39.5	QT	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	November	74	1	2368	OZ	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	November	12	1	24	OZ	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	November	20	1	80	PT	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	November	24	1	7.5	GA	Wheat
GLYPHOSATE, ISOPROPYLAMINE SALT	November	318	6	353.56	PT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	133	8	199.5	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	60	3	120	QT	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	November	13	1	13	QT	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	November	142.43	3	79.9	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	December	5	1	2.5	GA	Right of Way
GLYPHOSATE, ISOPROPYLAMINE SALT	December	115.08	2	28.77	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	December	1.5	1	3	QT	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	December	80	1	86.4	GA	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	December	109	3	138.6	PT	Walnuts

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

GLYPHOSATE, ISOPROPYLAMINE SALT	December	20	1	640	OZ	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	December	1	1	1.5	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	December	35	2	52.5	QT	Walnuts
HEXAZINONE	December	36.5	1	80.3	PT	Alfalfa
HEXAZINONE	December	549.6	13	137.4	GA	Alfalfa
HEXAZINONE	December	90	1	1800	OZ	Alfalfa
IMAZAMOX, AMMONIUM SALT	November	85	3	510	OZ	Alfalfa
IMAZAMOX, AMMONIUM SALT	November	13	1	0.61	GA	Alfalfa
IMAZETHAPYR, AMMONIUM SALT	October	65	2			Wheat
IMAZETHAPYR, AMMONIUM SALT	October	65	2	3.04	GA	Wheat
IMAZETHAPYR, AMMONIUM SALT	November	74	1	3.47	GA	Alfalfa
IMAZETHAPYR, AMMONIUM SALT	December	25	1	150	OZ	Melons
IMAZETHAPYR, AMMONIUM SALT	December	86	1	4.03	GA	Alfalfa
LAMBDA-CYHALOTHRIN	August	20	1			
LAMBDA-CYHALOTHRIN	August	20	1	1.2	GA	
LAMBDA-CYHALOTHRIN	August	424	11			Beans
LAMBDA-CYHALOTHRIN	August	60	1	120	OZ	Almonds
LAMBDA-CYHALOTHRIN	August	60	1			Almonds
LAMBDA-CYHALOTHRIN	August	293	7	1125.12	OZ	Beans
LAMBDA-CYHALOTHRIN	August	116	3	3.23	GA	Beans
LAMBDA-CYHALOTHRIN	August	15	1	57.6	PT	Beans
LAMBDA-CYHALOTHRIN	September	40	1	1.2	GA	Beans
LAMBDA-CYHALOTHRIN	September	18	1	0.36	GA	Walnuts
LAMBDA-CYHALOTHRIN	September	40	1			Beans
LAMBDA-CYHALOTHRIN	September	18	1			Walnuts
MCPA, DIMETHYLAMINE SALT	November	36	1	36	PT	Oats
MCPA, DIMETHYLAMINE SALT	December	135	2	2160	OZ	Oats
MCPA, DIMETHYLAMINE SALT	December	170	3	340	PT	Wheat
MCPA, DIMETHYLAMINE SALT	December	107	1	26.75	GA	Oats
MCPA, DIMETHYLAMINE SALT	December	115	2	230	PT	Oats
METHAMIDOPHOS	August	31	1			Tomatos
METHAMIDOPHOS	August	31	1	3.88	GA	Tomatos
METHOMYL	August	69	2	53.5	LB	Tomatos
METHOMYL	August	69	2			Tomatos
METHOMYL	September	38	1			Tomatos
METHOMYL	September	38	1	28.5	LB	Tomatos
METHOMYL	September	4.7	1	4.7	LB	Pomegranate
METHOMYL	October	50	1	37.5	LB	Tomatos
METHOMYL	October	50	1			Tomatos
NORFLURAZON	November	1	1	2.5	LB	Peaches
NORFLURAZON	November	3	1	7.5	LB	Cherrys
ORYZALIN	November	7.25	1	7.25	GA	Almonds
ORYZALIN	November	154	2	302.94	PT	Almonds
ORYZALIN	November	133	8	266	QT	Almonds
ORYZALIN	December	22.5	1	55.23	PT	Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

ORYZALIN	December	209	5	453.24	PT	Walnuts
OXYFLUORFEN	August	510	3			Almonds
OXYFLUORFEN	August	92	1	92	GA	Almonds
OXYFLUORFEN	August	418	2	2675.2	OZ	Almonds
OXYFLUORFEN	November	272	9	2023.76	OZ	Almonds
OXYFLUORFEN	November	74	1	148	PT	Alfalfa
OXYFLUORFEN	November	41	6	570	OZ	Cherrys
OXYFLUORFEN	November	15	1	28.64	PT	Almonds
OXYFLUORFEN	November	60	3	962	OZ	Walnuts
OXYFLUORFEN	November	17	1	1.64	GA	Walnuts
OXYFLUORFEN	November	8	1	128	OZ	Fallow
OXYFLUORFEN	November	14	2	94	OZ	Peaches
OXYFLUORFEN	November	78	1	156	PT	Corn
OXYFLUORFEN	November	16.28	2	5.54	GA	Almonds
OXYFLUORFEN	December	22	1	2.75	GA	Alfalfa
OXYFLUORFEN	December	71	2	17.75	GA	Cotton
OXYFLUORFEN	December	157	7	322	PT	Cotton
OXYFLUORFEN	December	35	2	280	OZ	Walnuts
OXYFLUORFEN	December	22.5	1	9.2	PT	Almonds
OXYFLUORFEN	December	1	1	16	OZ	Almonds
OXYFLUORFEN	December	1.5	1	40	OZ	Peaches
OXYFLUORFEN	December	99.2	3	37.19	GA	Almonds
OXYFLUORFEN	December	58	1	7.25	GA	Tomatos
OXYFLUORFEN	December	151	4	116.82	PT	Walnuts
OXYFLUORFEN	December	110	2	43.5	GA	Walnuts
OXYFLUORFEN	December	112	2	13.99	GA	Corn
PARAQUAT DICHLORIDE	August	120	1	60	GA	Almonds
PARAQUAT DICHLORIDE	August	120	1			Almonds
PARAQUAT DICHLORIDE	September	60	2	1920	OZ	Almonds
PARAQUAT DICHLORIDE	September	120	4			Almonds
PARAQUAT DICHLORIDE	September	60	2	180	PT	Almonds
PARAQUAT DICHLORIDE	October	90	1			Cotton
PARAQUAT DICHLORIDE	October	80	2			Almonds
PARAQUAT DICHLORIDE	October	80	2	29.99	GA	Almonds
PARAQUAT DICHLORIDE	October	90	1	180	PT	Cotton
PARAQUAT DICHLORIDE	December	85	1	17	GA	Almonds
PARAQUAT DICHLORIDE	December	418	2	6420.48	OZ	Almonds
PARAQUAT DICHLORIDE	December	116	3	348	PT	Alfalfa
PENDIMETHALIN	November	13	1	26	QT	Peaches
PENDIMETHALIN	November	26.96	3	20.34	GA	Almonds
PENDIMETHALIN	November	86	1	187.64	PT	Almonds
PENDIMETHALIN	November	22	1	8.25	GA	Alfalfa
PENDIMETHALIN	November	8	1	8	GA	Cherrys
PENDIMETHALIN	November	5	1	10	QT	Cherrys
PENDIMETHALIN	December	15	1	60	QT	Walnuts

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

PENDIMETHALIN	December	116	3	464	PT	Alfalfa
PENDIMETHALIN	December	86	1	21.5	GA	Alfalfa
PENDIMETHALIN	December	44	1	132	PT	Cotton
PENDIMETHALIN	December	1	1	2.5	QT	Almonds
PENDIMETHALIN	December	214.28	5	107.13	GA	Almonds
PENDIMETHALIN	December	20	1	10	GA	Walnuts
RIMSULFURON	November	10.68	1	2.67	LB	Almonds
RIMSULFURON	November	40	6	160	OZ	Cherrys
RIMSULFURON	November	1	1	4	OZ	Peaches
RIMSULFURON	December	15	1	60	OZ	Walnuts
RIMSULFURON	December	1.5	1	6	OZ	Peaches
SIMAZINE	November	17	1	4.99	GA	Walnuts
SIMAZINE	November	86	1	62.55	PT	Almonds
SIMAZINE	December	189	4	136.08	PT	Walnuts
SIMAZINE	December	20	1	40	QT	Walnuts
THIDIAZURON	October	1049	23			Cotton
THIDIAZURON	October	71	2	284	OZ	Cotton
THIDIAZURON	October	978	21	55.64	GA	Cotton
TRIFLURALIN	October	120	1	2880	OZ	Cotton
TRIFLURALIN	October	120	1			Cotton

Monitoring Site **Mud Slough Upstream of Sa**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
DIURON	October	45	1			Cotton
DIURON	October	45	1	2.81	GA	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	50	1	100	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	50	1			Almonds
THIDIAZURON	October	45	1			Cotton
THIDIAZURON	October	45	1	2.81	GA	Cotton

Monitoring Site **Newman Wasteway near Hill**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
BIFENTHRIN	August	77	1	3.85	GA	Corn
BIFENTHRIN	August	77	1			Corn
CHLORPYRIFOS	August	77	1			Corn
CHLORPYRIFOS	August	77	1	9.63	GA	Corn
CHLORPYRIFOS	September	24	1	6	GA	Corn
CHLORPYRIFOS	September	24	1			Corn
CLETHODIM	September	50	2			Alfalfa
CLETHODIM	September	50	2	6.26	GA	Alfalfa
DIMETHOATE	August	77	1	9.63	GA	Corn
DIMETHOATE	August	77	1			Corn
DIMETHOATE	September	38	1			Broccoli

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

DIMETHOATE	September	38	1	4.75	GA	Broccoli
DIURON	December	55	1	20.63	GA	Alfalfa
ESFENVALERATE	September	76	2			Broccoli
ESFENVALERATE	September	76	2	4.76	GA	Broccoli
GLYPHOSATE, ISOPROPYLAMINE SALT	September	350	2	131.25	GA	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	September	350	2			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	November	250	1	316.42	PT	Almonds
HEXAZINONE	December	55	1	13.75	GA	Alfalfa
OXYFLUORFEN	September	350	2			Walnuts
OXYFLUORFEN	September	350	2	10.94	GA	Walnuts
OXYFLUORFEN	December	230	2	79.86	GA	Almonds
SETHOXYDIM	September	38	1			Broccoli
SETHOXYDIM	September	38	1	7.13	GA	Broccoli

Monitoring Site **Poso Slough at Indiana Ave**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
BETA-CYFLUTHRIN	August	241	9			Cotton
BETA-CYFLUTHRIN	August	241	9	6.07	GA	Cotton
BIFENTHRIN	August	58	2			Cotton
BIFENTHRIN	August	29	1	1.13	GA	Cotton
BIFENTHRIN	August	29	1	145	OZ	Cotton
BIFENTHRIN	September	73	4	9.69	GA	Melons
BIFENTHRIN	September	52	3			Melons
DIURON	September	389	12			Cotton
DIURON	September	389	12	19.24	GA	Cotton
DIURON	October	681.26	23	4524.94	OZ	Cotton
DIURON	October	767.26	28			Cotton
DIURON	October	86	5	3.84	GA	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	175	7	43.75	GA	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	175	7			Cotton
PARAQUAT DICHLORIDE	October	18	1	2.25	GA	Cotton
PARAQUAT DICHLORIDE	October	18	1			Cotton
PARAQUAT DICHLORIDE	December	28	1	7	GA	Alfalfa
PENDIMETHALIN	December	78	2	53	GA	Alfalfa
THIDIAZURON	September	389	12	19.24	GA	Cotton
THIDIAZURON	September	389	12			Cotton
THIDIAZURON	October	681.26	23	4524.94	OZ	Cotton
THIDIAZURON	October	86	5	3.84	GA	Cotton
THIDIAZURON	October	767.26	28			Cotton

Monitoring Site **Salt Slough at Lander Ave**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
(S)-CYPERMETHRIN	August	200.33	4			Tomatos

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

(S)-CYPERMETHRIN	August	200.33	4	15.66	GA	Tomatos
(S)-CYPERMETHRIN	September	87	1	6.8	GA	Cotton
(S)-CYPERMETHRIN	September	87	1			Cotton
(S)-CYPERMETHRIN	October	127.5	1			Tomatos
(S)-CYPERMETHRIN	October	127.5	1	9.56	GA	Tomatos
BETA-CYFLUTHRIN	August	660.43	9			Cotton
BETA-CYFLUTHRIN	August	660.43	9	16.53	GA	Cotton
BETA-CYFLUTHRIN	October	127.5	1	3.98	GA	Tomatos
BETA-CYFLUTHRIN	October	127.5	1			Tomatos
BIFENTHRIN	August	200.33	4			Tomatos
BIFENTHRIN	August	200.33	4	15.66	GA	Tomatos
BIFENTHRIN	September	291.5	2			Corn
BIFENTHRIN	September	42.5	3	2.12	GA	Alfalfa
BIFENTHRIN	September	42.5	3			Alfalfa
BIFENTHRIN	September	87	1	6.8	GA	Cotton
BIFENTHRIN	September	87	1			Cotton
BIFENTHRIN	September	291.5	2	14.57	GA	Corn
BIFENTHRIN	October	127.5	1	9.56	GA	Tomatos
BIFENTHRIN	October	127.5	1			Tomatos
CHLORPYRIFOS	August	434	7	86	GA	Alfalfa
CHLORPYRIFOS	August	434	7			Alfalfa
CLETHODIM	August	138.94	2			Cotton
CLETHODIM	August	138.94	2	17.37	GA	Cotton
CYFLUTHRIN	October	1193.93	16	18.67	GA	Cotton
CYFLUTHRIN	October	1193.93	16			Cotton
DIMETHOATE	September	291.5	2			Corn
DIMETHOATE	September	291.5	2	24.41	GA	Corn
DIURON	September	2529.88	61			Cotton
DIURON	September	1691.58	44	7706.68	OZ	Cotton
DIURON	September	860.3	18	25.98	GA	Cotton
DIURON	October	4618	89	292.59	GA	Cotton
DIURON	October	98	2	7.65	GA	Tomatos
DIURON	October	5438.2	107			Cotton
DIURON	October	820.2	18	5924.4	OZ	Cotton
DIURON	October	98	2			Tomatos
EPTC	September	65.49	1			Tomatos
EPTC	September	65.49	1	229.21	PT	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	August	154.4	4			Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	154.4	4	47.38	GA	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	November	89	1	2847.95	OZ	Wheat
GLYPHOSATE, ISOPROPYLAMINE SALT	November	64	2	2560	OZ	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	December	43.1	1	129.31	PT	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	December	88	1	3520	OZ	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	December	150	4	37.5	GA	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	December	140.7	2	26.38	GA	Alfalfa

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

HEXAZINONE	December	536.5	7	144.01	GA	Alfalfa
IMAZAMOX, AMMONIUM SALT	November	63.6	1	2.48	GA	Tomatos
LAMBDA-CYHALOTHRIN	September	127.5	1			Tomatos
LAMBDA-CYHALOTHRIN	September	127.5	1	7.97	GA	Tomatos
METHOMYL	August	75.83	3			Tomatos
METHOMYL	August	562	10	421.52	LB	Alfalfa
METHOMYL	August	75.83	3	56.88	LB	Tomatos
METHOMYL	August	562	10			Alfalfa
OXYFLUORFEN	November	5	1	1	PT	Right of Way
OXYFLUORFEN	November	1140.1	18	2280.14	PT	Cotton
OXYFLUORFEN	November	89	1	178	PT	Wheat
OXYFLUORFEN	November	72.4	3	144.81	PT	Sudan Grass
OXYFLUORFEN	November	58.3	1	116.6	PT	Melons
OXYFLUORFEN	November	650.6	11	1301.17	PT	Tomatos
OXYFLUORFEN	November	136.7	1	273.4	PT	Alfalfa
OXYFLUORFEN	December	166.95	4	333.9	PT	Tomatos
OXYFLUORFEN	December	553.7	11	1107.4	PT	Cotton
OXYFLUORFEN	December	150.2	2	39.43	GA	Tomatos
OXYFLUORFEN	December	140.7	2	35.18	GA	Alfalfa
OXYFLUORFEN	December	95	3	24.94	GA	Cotton
PARAQUAT DICHLORIDE	October	4872.62	75			Cotton
PARAQUAT DICHLORIDE	October	51.5	2	77.25	PT	Cotton
PARAQUAT DICHLORIDE	October	4821.12	73	1142.03	GA	Cotton
PARAQUAT DICHLORIDE	December	50	1	100	PT	Alfalfa
PARAQUAT DICHLORIDE	December	406.5	6	82.28	GA	Alfalfa
PENDIMETHALIN	December	50	1	200	PT	Alfalfa
PENDIMETHALIN	December	437.9	4	283.95	GA	Alfalfa
PROMETRYN	December	173.8	3	695.2	PT	Cotton
SODIUM CHLORATE	October	239	4			Cotton
SODIUM CHLORATE	October	239	4	239	GA	Cotton
THIDIAZURON	September	2529.88	61			Cotton
THIDIAZURON	September	860.3	18	25.98	GA	Cotton
THIDIAZURON	September	1691.58	44	7706.68	OZ	Cotton
THIDIAZURON	October	5438.2	107			Cotton
THIDIAZURON	October	98	2	7.65	GA	Tomatos
THIDIAZURON	October	4618	89	292.59	GA	Cotton
THIDIAZURON	October	820.2	18	5924.4	OZ	Cotton
THIDIAZURON	October	98	2			Tomatos

Monitoring Site **Salt Slough at Sand Dam**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
(S)-CYPERMETHRIN	August	174	3	13.6	GA	Tomatos
(S)-CYPERMETHRIN	August	174	3			Tomatos
(S)-CYPERMETHRIN	September	87	1			Cotton

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

(S)-CYPERMETHRIN	September	87	1	6.8	GA	Cotton
(S)-CYPERMETHRIN	October	127.5	1	9.56	GA	Tomatos
(S)-CYPERMETHRIN	October	127.5	1			Tomatos
BETA-CYFLUTHRIN	August	275.3	4	6.88	GA	Cotton
BETA-CYFLUTHRIN	August	275.3	4			Cotton
BETA-CYFLUTHRIN	October	127.5	1			Tomatos
BETA-CYFLUTHRIN	October	127.5	1	3.98	GA	Tomatos
BIFENTHRIN	August	174	3	13.6	GA	Tomatos
BIFENTHRIN	August	174	3			Tomatos
BIFENTHRIN	September	87	1	6.8	GA	Cotton
BIFENTHRIN	September	42.5	3	2.12	GA	Alfalfa
BIFENTHRIN	September	291.5	2	14.57	GA	Corn
BIFENTHRIN	September	42.5	3			Alfalfa
BIFENTHRIN	September	291.5	2			Corn
BIFENTHRIN	September	87	1			Cotton
BIFENTHRIN	October	127.5	1			Tomatos
BIFENTHRIN	October	127.5	1	9.56	GA	Tomatos
CHLORPYRIFOS	August	434	7	86	GA	Alfalfa
CHLORPYRIFOS	August	434	7			Alfalfa
CLETHODIM	August	64.64	1	8.08	GA	Cotton
CLETHODIM	August	64.64	1			Cotton
CYFLUTHRIN	October	625.6	9			Cotton
CYFLUTHRIN	October	625.6	9	9.77	GA	Cotton
DIMETHOATE	September	291.5	2	24.41	GA	Corn
DIMETHOATE	September	291.5	2			Corn
DIURON	September	1504.56	38	6958.6	OZ	Cotton
DIURON	September	860.3	18	25.98	GA	Cotton
DIURON	September	2342.86	55			Cotton
DIURON	October	98	2			Tomatos
DIURON	October	98	2	7.65	GA	Tomatos
DIURON	October	820.2	18	5924.4	OZ	Cotton
DIURON	October	3792.2	75	228.56	GA	Cotton
DIURON	October	4612.4	93			Cotton
EPTC	September	65.49	1			Tomatos
EPTC	September	65.49	1	229.21	PT	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	August	82	3	24.75	GA	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	82	3			Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	November	64	2	2560	OZ	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	December	43.1	1	129.31	PT	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	December	140.7	2	26.38	GA	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	December	88	1	3520	OZ	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	December	150	4	37.5	GA	Corn
HEXAZINONE	December	536.5	7	144.01	GA	Alfalfa
IMAZAMOX, AMMONIUM SALT	November	63.6	1	2.48	GA	Tomatos
LAMBDA-CYHALOTHRIN	September	127.5	1	7.97	GA	Tomatos

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

LAMBDA-CYHALOTHRIN	September	127.5	1			Tomatos
METHOMYL	August	49.5	2			Tomatos
METHOMYL	August	49.5	2	37.13	LB	Tomatos
METHOMYL	August	387.5	8	290.64	LB	Alfalfa
METHOMYL	August	387.5	8			Alfalfa
OXYFLUORFEN	November	744.4	11	1488.75	PT	Cotton
OXYFLUORFEN	November	136.7	1	273.4	PT	Alfalfa
OXYFLUORFEN	November	481.3	6	962.58	PT	Tomatos
OXYFLUORFEN	November	5	1	1	PT	Right of Way
OXYFLUORFEN	December	140.62	3	281.24	PT	Tomatos
OXYFLUORFEN	December	150.2	2	39.43	GA	Tomatos
OXYFLUORFEN	December	140.7	2	35.18	GA	Alfalfa
OXYFLUORFEN	December	482.57	8	965.14	PT	Cotton
OXYFLUORFEN	December	95	3	24.94	GA	Cotton
PARAQUAT DICHLORIDE	October	3460.99	51	714.76	GA	Cotton
PARAQUAT DICHLORIDE	October	51.5	2	77.25	PT	Cotton
PARAQUAT DICHLORIDE	October	3512.49	53			Cotton
PARAQUAT DICHLORIDE	December	406.5	6	82.28	GA	Alfalfa
PARAQUAT DICHLORIDE	December	50	1	100	PT	Alfalfa
PENDIMETHALIN	December	50	1	200	PT	Alfalfa
PENDIMETHALIN	December	437.9	4	283.95	GA	Alfalfa
SODIUM CHLORATE	October	239	4			Cotton
SODIUM CHLORATE	October	239	4	239	GA	Cotton
THIDIAZURON	September	1504.56	38	6958.6	OZ	Cotton
THIDIAZURON	September	2342.86	55			Cotton
THIDIAZURON	September	860.3	18	25.98	GA	Cotton
THIDIAZURON	October	98	2	7.65	GA	Tomatos
THIDIAZURON	October	4612.4	93			Cotton
THIDIAZURON	October	3792.2	75	228.56	GA	Cotton
THIDIAZURON	October	820.2	18	5924.4	OZ	Cotton
THIDIAZURON	October	98	2			Tomatos

Monitoring Site **San Joaquin River at Lander**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
(S)-CYPERMETHRIN	August	10	1	0.23	GA	Cotton
(S)-CYPERMETHRIN	August	124.5	1			Tomatos
(S)-CYPERMETHRIN	August	124.5	1	9.73	GA	Tomatos
(S)-CYPERMETHRIN	August	10	1			Cotton
BETA-CYFLUTHRIN	August	1392.6	21			Cotton
BETA-CYFLUTHRIN	August	1167.6	17	28.99	GA	Cotton
BIFENTHRIN	August	272	1			Almonds
BIFENTHRIN	August	272	1	3481.6	OZ	Almonds
BIFENTHRIN	August	130	1			Corn
BIFENTHRIN	August	260	2	13	GA	Corn

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

BIFENTHRIN	August	124.5	1			Tomatos
BIFENTHRIN	August	124.5	1	9.73	GA	Tomatos
BIFENTHRIN	September	373.2	3	18.65	GA	Corn
BIFENTHRIN	September	373.2	3			Corn
CHLORPYRIFOS	August	272	1			Almonds
CHLORPYRIFOS	August	272	1	136	GA	Almonds
CHLORPYRIFOS	September	195.5	2	28.48	GA	Alfalfa
CHLORPYRIFOS	September	235.5	3			Alfalfa
CLETHODIM	August	182	3			Alfalfa
CLETHODIM	August	100	1			Cotton
CLETHODIM	August	77	1	7.92	GA	Alfalfa
CLETHODIM	September	270.3	5	21.12	GA	Alfalfa
CLETHODIM	September	270.3	5			Alfalfa
CLETHODIM	November	140.98	1	17.62	GA	Alfalfa
CYFLUTHRIN	October	2036.26	29	26.87	GA	Cotton
CYFLUTHRIN	October	2036.26	29			Cotton
DIMETHOATE	August	130	1			Corn
DIMETHOATE	August	260	2	32.5	GA	Corn
DIMETHOATE	September	373.2	3	31.25	GA	Corn
DIMETHOATE	September	373.2	3			Corn
DIURON	September	790.03	18			Cotton
DIURON	September	227	8	1122	OZ	Cotton
DIURON	September	563.03	10	21.55	GA	Cotton
DIURON	October	2679.63	42			Cotton
DIURON	October	2322.2	35	312.34	GA	Cotton
DIURON	October	132.43	3	1449.16	OZ	Cotton
DIURON	December	77	1	77	LB	Alfalfa
DIURON	December	187	2	70.12	GA	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	August	214.4	4	58.13	GA	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	214.4	4			Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	November	105.7	1	39.64	GA	Wheat
GLYPHOSATE, ISOPROPYLAMINE SALT	December	140.7	2	26.38	GA	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	December	272	1	11424	OZ	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	December	117.79	2	353.39	PT	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	December	47.3	1	8.87	GA	Tomatos
HEXAZINONE	December	815.2	10	145.16	GA	Alfalfa
HEXAZINONE	December	77	1	23.1	LB	Alfalfa
IMAZAMOX, AMMONIUM SALT	December	5	1	0.23	GA	Alfalfa
LAMBDA-CYHALOTHRIN	September	69.2	1			Alfalfa
LAMBDA-CYHALOTHRIN	September	69.2	1	1.04	GA	Alfalfa
MALATHION	September	223.7	2	41.94	GA	Alfalfa
MALATHION	September	223.7	2			Alfalfa
METHOMYL	August	276.8	4	207.98	LB	Alfalfa
METHOMYL	August	276.8	4			Alfalfa
METHOMYL	September	108.8	1			Alfalfa

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

METHOMYL	September	108.8	1	100.1	LB	Alfalfa
ORYZALIN	December	272	1	17408	OZ	Almonds
OXYFLUORFEN	November	58.3	1	116.6	PT	Melons
OXYFLUORFEN	November	5	1	1	PT	Right of Way
OXYFLUORFEN	November	89.6	1	179.2	PT	Cotton
OXYFLUORFEN	November	53.2	2	106.41	PT	Sudan Grass
OXYFLUORFEN	December	319.1	5	83.18	GA	Tomatos
OXYFLUORFEN	December	121.4	2	31.87	GA	Corn
OXYFLUORFEN	December	272	1	4624	OZ	Almonds
OXYFLUORFEN	December	140.7	2	35.18	GA	Alfalfa
OXYFLUORFEN	December	231.97	4	463.95	PT	Tomatos
PARAQUAT DICHLORIDE	October	51.5	2	77.25	PT	Cotton
PARAQUAT DICHLORIDE	October	3789.08	58			Cotton
PARAQUAT DICHLORIDE	October	3737.58	56	1006.53	GA	Cotton
PARAQUAT DICHLORIDE	November	129.7	1	64.85	GA	Melons
PARAQUAT DICHLORIDE	December	705.2	9	136.82	GA	Alfalfa
PENDIMETHALIN	December	673	8	336.5	GA	Alfalfa
RIMSULFURON	December	272	1	644	OZ	Almonds
SODIUM CHLORATE	October	51.5	2	51.5	GA	Cotton
SODIUM CHLORATE	October	51.5	2			Cotton
THIDIAZURON	September	563.03	10	21.55	GA	Cotton
THIDIAZURON	September	790.03	18			Cotton
THIDIAZURON	September	227	8	1122	OZ	Cotton
THIDIAZURON	October	2679.63	42			Cotton
THIDIAZURON	October	132.43	3	1449.16	OZ	Cotton
THIDIAZURON	October	2322.2	35	312.34	GA	Cotton

County **San Joaquin**

Monitoring Site **Blewett Drain at Highway 13**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
BIFENTHRIN	August	164	2	8.2	GA	Corn
DIMETHOATE	August	164	2	20.5	GA	Corn

Monitoring Site **Hospital Creek at River Roa**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
TRIFLURALIN	October	346	2	21.62	GA	Apricots

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

County **Stanislaus**

Monitoring Site **Blewett Drain at Highway 13**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
2,4-D, DIMETHYLAMINE SALT	August	30	1	15	PT	Corn
2,4-D, DIMETHYLAMINE SALT	August	30	1			Corn
DIMETHOATE	August	110	1			Beans
DIMETHOATE	August	110	1	13.75	GA	Beans
EPTC	August	170	1	63.75	GA	Almonds
EPTC	August	170	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	30	1			Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	August	30	1	30	QT	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	November	32	1	48	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	18.5	1	9.25	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	50.5	2			Almonds
LAMBDA-CYHALOTHRIN	August	110	1	3.3	GA	Beans
LAMBDA-CYHALOTHRIN	August	110	1			Beans
OXYFLUORFEN	November	50.5	2			Almonds
OXYFLUORFEN	November	32	1	384	OZ	Almonds
OXYFLUORFEN	November	18.5	1	6.93	GA	Almonds
PARAQUAT DICHLORIDE	August	60	1			Almonds
PARAQUAT DICHLORIDE	August	60	1	120	QT	Almonds
PENDIMETHALIN	November	50.5	2			Almonds
PENDIMETHALIN	November	50.5	2	50.5	GA	Almonds
SIMAZINE	November	32	1	64	QT	Almonds
SIMAZINE	November	32	1			Almonds

Monitoring Site **Del Puerto Creek at Hwy 33**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
(S)-CYPERMETHRIN	August	129	2	4.19	GA	Beans
(S)-CYPERMETHRIN	August	129	2			Beans
ACEPHATE	August	59	1			Beans
ACEPHATE	August	59	1	59	LB	Beans
CLETHODIM	August	24	1			Alfalfa
CLETHODIM	August	24	1	24	KG	Alfalfa
DIMETHOATE	August	343	6	42.89	GA	Beans
DIMETHOATE	August	115	1	14.38	GA	Tomatos
DIMETHOATE	August	343	6			Beans
DIMETHOATE	August	115	1			Tomatos
DIMETHOMORPH	September	100	1	4.69	GA	Tomatos
DIMETHOMORPH	September	100	1			Tomatos
ESFENVALERATE	August	150	1			Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

ESFENVALERATE	August	150	1	1920	OZ	Almonds
ESFENVALERATE	August	115	1	8.09	GA	Tomatos
ESFENVALERATE	August	115	1			Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	August	150	1	150	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	150	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	September	8.5	1			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	September	8.5	1	3.19	GA	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	October	4.8	1			Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	October	4.8	1	2.4	GA	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	October	50	1	62.5	GA	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	October	50	1			Beans
LAMBDA-CYHALOTHRIN	August	155	3			Beans
LAMBDA-CYHALOTHRIN	August	155	3	4.65	GA	Beans
ORYZALIN	August	150	1			Almonds
ORYZALIN	August	150	1	150	QT	Almonds
ORYZALIN	October	4.8	1			Cherrys
ORYZALIN	October	4.8	1	3.6	GA	Cherrys
OXYFLUORFEN	October	4.8	1			Cherrys
OXYFLUORFEN	October	4.8	1	2.4	GA	Cherrys

Monitoring Site **Del Puerto Creek near Cox**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
(S)-CYPERMETHRIN	August	129	2			Beans
(S)-CYPERMETHRIN	August	129	2	4.19	GA	Beans
2,4-D, DIMETHYLAMINE SALT	November	1	1	2	PT	Right of Way
2,4-D, DIMETHYLAMINE SALT	November	1	1			Right of Way
ACEPHATE	August	59	1	59	LB	Beans
ACEPHATE	August	59	1			Beans
BIFENTHRIN	August	53	2	2.65	GA	Corn
BIFENTHRIN	August	53	2			Corn
BIFENTHRIN	August	30	1	1.41	GA	Beans
BIFENTHRIN	August	30	1			Beans
CHLORPYRIFOS	August	67	2			Alfalfa
CHLORPYRIFOS	August	15	2	60	PT	Walnuts
CHLORPYRIFOS	August	15	2			Walnuts
CHLORPYRIFOS	August	67	2	6.7	GA	Alfalfa
CLETHODIM	August	24	1	24	KG	Alfalfa
CLETHODIM	August	24	1			Alfalfa
DIMETHOATE	August	154	2	19.26	GA	Tomatos
DIMETHOATE	August	154	2			Tomatos
DIMETHOATE	August	561	11			Beans
DIMETHOATE	August	561	11	70.15	GA	Beans
DIMETHOMORPH	September	100	1	4.69	GA	Tomatos
DIMETHOMORPH	September	100	1			Tomatos

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

ESFENVALERATE	August	150	1	1920	OZ	Almonds
ESFENVALERATE	August	150	1			Almonds
ESFENVALERATE	August	154	2	10.83	GA	Tomatos
ESFENVALERATE	August	154	2			Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	August	150	1	150	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	40	1	7	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	190	2			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	13.41	2			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	2	1	112	OZ	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	August	7	1	2	GA	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	6.41	1	244.76	OZ	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	2	1			Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	September	8.5	1			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	September	8.5	1	3.19	GA	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	October	50	1	62.5	GA	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	October	50	1			Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	October	20	1	10	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	October	4.8	1			Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	October	4.8	1	2.4	GA	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	October	20	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	262.5	4	127.25	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	262.5	4			Almonds
LAMBDA-CYHALOTHRIN	August	90	1			Tomatos
LAMBDA-CYHALOTHRIN	August	343	7	10.29	GA	Beans
LAMBDA-CYHALOTHRIN	August	343	7			Beans
LAMBDA-CYHALOTHRIN	August	90	1	2.7	GA	Tomatos
ORYZALIN	August	150	1	150	QT	Almonds
ORYZALIN	August	150	1			Almonds
ORYZALIN	October	4.8	1			Cherrys
ORYZALIN	October	4.8	1	3.6	GA	Cherrys
OXYFLUORFEN	October	4.8	1			Cherrys
OXYFLUORFEN	October	4.8	1	2.4	GA	Cherrys
OXYFLUORFEN	October	20	1	7.5	GA	Almonds
OXYFLUORFEN	October	20	1			Almonds
OXYFLUORFEN	November	262.5	4	100.93	GA	Almonds
OXYFLUORFEN	November	262.5	4			Almonds
PENDIMETHALIN	October	20	1			Almonds
PENDIMETHALIN	October	20	1	20	GA	Almonds
PENDIMETHALIN	November	242.5	3	242.5	GA	Almonds
PENDIMETHALIN	November	242.5	3			Almonds
SETHOXYDIM	August	23.75	2	4.45	GA	Asparagus
SETHOXYDIM	August	23.75	2			Asparagus
SIMAZINE	November	20	1	5	GA	Almonds
SIMAZINE	November	20	1			Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

Monitoring Site **Hospital Creek at River Roa**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
BIFENTHRIN	August	65	1			Corn
BIFENTHRIN	August	65	1	2.89	GA	Corn
BIFENTHRIN	August	165	2	7.74	GA	Beans
BIFENTHRIN	August	165	2			Beans
DIMETHOATE	August	1167	15	145.92	GA	Beans
DIMETHOATE	August	1167	15			Beans
DIMETHOATE	August	70	1	8.75	GA	Alfalfa
DIMETHOATE	August	70	1			Alfalfa
DIMETHOATE	September	70	1			Beans
DIMETHOATE	September	70	1	8.75	GA	Beans
EPTC	August	170	1	63.75	GA	Almonds
EPTC	August	170	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	108	2	216	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	55	1	165	PT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	97	1	60	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	260	4			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	September	0.5	1	0.5	QT	Right of Way
GLYPHOSATE, ISOPROPYLAMINE SALT	September	4	2			Nectarines
GLYPHOSATE, ISOPROPYLAMINE SALT	September	4	2	8	PT	Nectarines
GLYPHOSATE, ISOPROPYLAMINE SALT	September	5.45	1	10.9	QT	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	September	4.5	2			Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	September	5.45	1			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	September	4.5	2	9	PT	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	September	0.5	1			Right of Way
GLYPHOSATE, ISOPROPYLAMINE SALT	October	80	1	100	GA	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	October	80	1			Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	November	194.78	6			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	123.5	3	61.75	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	71.28	3	106.91	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	5.45	1			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	November	5.45	1	8.18	QT	Walnuts
LAMBDA-CYHALOTHRIN	August	1002	13			Beans
LAMBDA-CYHALOTHRIN	August	108	2	216	OZ	Almonds
LAMBDA-CYHALOTHRIN	August	108	2			Almonds
LAMBDA-CYHALOTHRIN	August	200	2			Tomatos
LAMBDA-CYHALOTHRIN	August	137	1			Walnuts
LAMBDA-CYHALOTHRIN	August	1002	13	30.1	GA	Beans
LAMBDA-CYHALOTHRIN	August	200	2	6	GA	Tomatos
LAMBDA-CYHALOTHRIN	August	137	1	350.72	OZ	Walnuts
LAMBDA-CYHALOTHRIN	September	70	1			Beans
LAMBDA-CYHALOTHRIN	September	70	1	2.1	GA	Beans

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

NORFLURAZON	November	39.28	2			Almonds
NORFLURAZON	November	39.28	2	98.19	LB	Almonds
OXYFLUORFEN	August	97	1	10	GA	Almonds
OXYFLUORFEN	August	152	2			Almonds
OXYFLUORFEN	August	55	1	27.5	PT	Almonds
OXYFLUORFEN	September	5.45	1			Walnuts
OXYFLUORFEN	September	5.45	1	5.45	QT	Walnuts
OXYFLUORFEN	November	194.78	6			Almonds
OXYFLUORFEN	November	39.28	2	39.28	PT	Almonds
OXYFLUORFEN	November	5.45	1	43.6	OZ	Walnuts
OXYFLUORFEN	November	32	1	384	OZ	Almonds
OXYFLUORFEN	November	5.45	1			Walnuts
OXYFLUORFEN	November	123.5	3	46.31	GA	Almonds
PARAQUAT DICHLORIDE	August	60	1	120	QT	Almonds
PARAQUAT DICHLORIDE	August	130	1	65	GA	Almonds
PARAQUAT DICHLORIDE	August	190	2			Almonds
PENDIMETHALIN	November	155.5	4			Almonds
PENDIMETHALIN	November	155.5	4	155.5	GA	Almonds
SIMAZINE	November	71.28	3	142.56	QT	Almonds
SIMAZINE	November	71.28	3			Almonds
SIMAZINE	November	5.45	1	10.9	QT	Walnuts
SIMAZINE	November	5.45	1			Walnuts

Monitoring Site **Ingram Creek at River Road**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
BIFENTHRIN	August	365	6			Beans
BIFENTHRIN	August	365	6	17.11	GA	Beans
BIFENTHRIN	August	56	1			Tomatos
BIFENTHRIN	August	65	1			Corn
BIFENTHRIN	August	65	1	2.89	GA	Corn
BIFENTHRIN	August	56	1	2.41	GA	Tomatos
DIMETHOATE	August	70	1			Alfalfa
DIMETHOATE	August	2533	32			Beans
DIMETHOATE	August	324	4	40.52	GA	Tomatos
DIMETHOATE	August	324	4			Tomatos
DIMETHOATE	August	70	1	8.75	GA	Alfalfa
DIMETHOATE	August	2533	32	316.7	GA	Beans
DIMETHOATE	September	131	2			Beans
DIMETHOATE	September	131	2	16.38	GA	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	August	280	9	560	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	377	10			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	97	1	60	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	112.8	7			Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	August	112.8	7	225.6	QT	Cherrys

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

GLYPHOSATE, ISOPROPYLAMINE SALT	August	15	3	30	QT	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	15	3			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	September	4	2			Nectarines
GLYPHOSATE, ISOPROPYLAMINE SALT	September	5.45	1			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	September	0.5	1			Right of Way
GLYPHOSATE, ISOPROPYLAMINE SALT	September	0.5	1	0.5	QT	Right of Way
GLYPHOSATE, ISOPROPYLAMINE SALT	September	4.5	2	9	PT	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	September	4.5	2			Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	September	5.45	1	10.9	QT	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	September	4	2	8	PT	Nectarines
GLYPHOSATE, ISOPROPYLAMINE SALT	October	80	1	100	GA	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	October	80	1			Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	November	25.46	4	48.2	QT	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	November	76.8	7	153.6	QT	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	November	94.56	7			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	106.8	10			Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	November	25.46	4			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	November	94.56	7	141.83	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	30	3	480	OZ	Cherrys
LAMBDA-CYHALOTHRIN	August	137	1			Walnuts
LAMBDA-CYHALOTHRIN	August	137	1	350.72	OZ	Walnuts
LAMBDA-CYHALOTHRIN	August	2168	26	65.08	GA	Beans
LAMBDA-CYHALOTHRIN	August	2168	26			Beans
LAMBDA-CYHALOTHRIN	August	400	4			Tomatos
LAMBDA-CYHALOTHRIN	August	400	4	12	GA	Tomatos
LAMBDA-CYHALOTHRIN	August	196	6			Almonds
LAMBDA-CYHALOTHRIN	August	196	6	392	OZ	Almonds
LAMBDA-CYHALOTHRIN	September	131	2	3.93	GA	Beans
LAMBDA-CYHALOTHRIN	September	131	2			Beans
METHOMYL	August	65	1			Tomatos
METHOMYL	August	65	1	48.75	LB	Tomatos
NORFLURAZON	November	39.28	2	98.19	LB	Almonds
NORFLURAZON	November	39.28	2			Almonds
NORFLURAZON	November	82.8	7	169.5	LB	Cherrys
NORFLURAZON	November	82.8	7			Cherrys
ORYZALIN	November	52.8	4			Cherrys
ORYZALIN	November	52.8	4	158.4	QT	Cherrys
OXYFLUORFEN	August	97	1			Almonds
OXYFLUORFEN	August	97	1	10	GA	Almonds
OXYFLUORFEN	September	5.45	1	5.45	QT	Walnuts
OXYFLUORFEN	September	5.45	1			Walnuts
OXYFLUORFEN	November	94.56	7			Almonds
OXYFLUORFEN	November	54	6	66	PT	Cherrys
OXYFLUORFEN	November	39.28	2	39.28	PT	Almonds
OXYFLUORFEN	November	55.28	5	663.36	OZ	Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

OXYFLUORFEN	November	25.46	4			Walnuts
OXYFLUORFEN	November	54	6			Cherrys
OXYFLUORFEN	November	25.46	4	203.68	OZ	Walnuts
PENDIMETHALIN	November	30	3			Cherrys
PENDIMETHALIN	November	30	3	30	GA	Cherrys
RIMSULFURON	November	30	3			Cherrys
RIMSULFURON	November	30	3	120	OZ	Cherrys
SIMAZINE	November	25.46	4	40.9	QT	Walnuts
SIMAZINE	November	94.56	7			Almonds
SIMAZINE	November	94.56	7	189.12	QT	Almonds
SIMAZINE	November	25.46	4			Walnuts

Monitoring Site **Marshall Road Drain near R**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
2,4-D, DIMETHYLAMINE SALT	August	28	2	18.75	PT	Walnuts
2,4-D, DIMETHYLAMINE SALT	August	28	2			Walnuts
BIFENTHRIN	August	120	2	5.86	GA	Beans
BIFENTHRIN	August	35	1			Corn
BIFENTHRIN	August	120	2			Beans
BIFENTHRIN	August	80	1	4	GA	Melons
BIFENTHRIN	August	35	1	224	OZ	Corn
BIFENTHRIN	August	80	1			Melons
BIFENTHRIN	September	85	2			Beans
BIFENTHRIN	September	85	2	3.97	GA	Beans
CHLORPYRIFOS	August	36	1			Alfalfa
CHLORPYRIFOS	August	36	1	3.6	GA	Alfalfa
DIMETHOATE	August	260	4	32.51	GA	Beans
DIMETHOATE	August	260	4			Beans
DIMETHOATE	August	285	4			Tomatos
DIMETHOATE	August	285	4	35.63	GA	Tomatos
ESFENVALERATE	August	425	5			Tomatos
ESFENVALERATE	August	425	5	27.58	GA	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	August	314	7	78.5	GA	
GLYPHOSATE, ISOPROPYLAMINE SALT	August	314	7			
GLYPHOSATE, ISOPROPYLAMINE SALT	August	252	5	140	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	252	5			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	28	2			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	28	2	40.18	PT	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	October	140	1	35	GA	Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	October	140	1			Fallow
LAMBDA-CYHALOTHRIN	August	140	2	4.2	GA	Beans
LAMBDA-CYHALOTHRIN	August	140	2			Beans
LAMBDA-CYHALOTHRIN	August	48.27	2			Almonds
LAMBDA-CYHALOTHRIN	August	48.27	2	1.92	GA	Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

LAMBDA-CYHALOTHRIN	September	15	1	0.59	GA	Walnuts
LAMBDA-CYHALOTHRIN	September	15	1			Walnuts
METHOMYL	September	1.5	1			
METHOMYL	September	1.5	1	12	OZ	
METRIBUZIN	October	140	1	46.2	LB	Fallow
METRIBUZIN	October	140	1			Fallow
ORYZALIN	August	154	1	154	QT	Almonds
ORYZALIN	August	154	1			Almonds
OXYFLUORFEN	August	180	3			Almonds
OXYFLUORFEN	August	180	3	22.51	GA	Almonds
OXYFLUORFEN	September	95	2			Almonds
OXYFLUORFEN	September	95	2	23.75	GA	Almonds
OXYFLUORFEN	October	140	1	13.12	GA	Fallow
OXYFLUORFEN	October	140	1			Fallow
PARAQUAT DICHLORIDE	September	100	1	37.5	GA	Almonds
PARAQUAT DICHLORIDE	September	100	1			Almonds
PENDIMETHALIN	September	95	2			Almonds
PENDIMETHALIN	September	95	2	47.5	GA	Almonds
SIMAZINE	September	50	1			Almonds
SIMAZINE	September	50	1	12.5	GA	Almonds

Monitoring Site **Newman Wasteway near Hill**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
BIFENTHRIN	August	130	2	6.1	GA	Beans
BIFENTHRIN	August	130	2			Beans
DIMETHOATE	August	130	2	16.26	GA	Beans
DIMETHOATE	August	130	2			Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	August	10	1	5	GA	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	August	341	4			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	46	1	69	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	295	3	147.5	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	10	1			Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	September	75	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	September	75	1	37.5	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	250	1			Olive
GLYPHOSATE, ISOPROPYLAMINE SALT	November	250	1	125	GA	Olive
OXYFLUORFEN	August	155	2			Almonds
OXYFLUORFEN	August	155	2	19.38	GA	Almonds
OXYFLUORFEN	November	250	1			Olive
OXYFLUORFEN	November	250	1	93.75	GA	Olive
PARAQUAT DICHLORIDE	August	70	2			Almonds
PARAQUAT DICHLORIDE	August	70	2	22.19	GA	Almonds
PENDIMETHALIN	November	250	1	187.5	GA	Olive
PENDIMETHALIN	November	250	1			Olive

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

SETHOXYDIM	August	140	1	26.25	GA	Almonds
SETHOXYDIM	August	140	1			Almonds
SETHOXYDIM	August	10	1			Cherrys
SETHOXYDIM	August	10	1	1.25	GA	Cherrys

Monitoring Site **Orestimba Creek at Hwy 33**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
2,4-D, DIMETHYLAMINE SALT	November	15	1			Almonds
2,4-D, DIMETHYLAMINE SALT	November	25	1			Walnuts
2,4-D, DIMETHYLAMINE SALT	November	25	1	75	PT	Walnuts
2,4-D, DIMETHYLAMINE SALT	November	15	1	45	PT	Almonds
BETA-CYFLUTHRIN	August	50	1			Beans
BETA-CYFLUTHRIN	August	50	1	140	OZ	Beans
BIFENTHRIN	August	386	6	18.1	GA	Beans
BIFENTHRIN	August	190	3			Melons
BIFENTHRIN	August	482	8			Beans
BIFENTHRIN	August	96	2	576	OZ	Beans
BIFENTHRIN	August	18	2	1.79	GA	Pistachios
BIFENTHRIN	August	18	2			Pistachios
BIFENTHRIN	August	190	3	8.36	GA	Melons
CHLORPYRIFOS	August	80	1			Alfalfa
CHLORPYRIFOS	August	80	1	10	GA	Alfalfa
CHLORPYRIFOS	August	40	1			Almonds
CHLORPYRIFOS	August	18.9	1			Citrus
CHLORPYRIFOS	August	18.9	1	18.9	GA	Citrus
CHLORPYRIFOS	August	40	1	20	GA	Almonds
CHLORPYRIFOS	September	40	1			Walnuts
CHLORPYRIFOS	September	40	1	25	GA	Walnuts
DIAZINON	August	45	1	45	LB	Melons
DIAZINON	August	45	1			Melons
DIMETHOATE	August	564	6	58.01	GA	Tomatos
DIMETHOATE	August	564	6			Tomatos
DIMETHOATE	August	599	10	74.89	GA	Beans
DIMETHOATE	August	526	11	550	PT	Beans
DIMETHOATE	August	1200	22			Beans
DIMETHOATE	August	75	1	75	OZ	Beans
ESFENVALERATE	August	769	8			Tomatos
ESFENVALERATE	August	165	1			Almonds
ESFENVALERATE	August	165	1	16.5	GA	Almonds
ESFENVALERATE	August	769	8	46.26	GA	Tomatos
ESFENVALERATE	September	75	1			Broccoli
ESFENVALERATE	September	75	1	3.98	GA	Broccoli
GLYPHOSATE, ISOPROPYLAMINE SALT	August	20	1	10	GA	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	20	1			Walnuts

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

GLYPHOSATE, ISOPROPYLAMINE SALT	August	38	4	114	PT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	10	1			Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	August	305	5	152.5	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	245	2	245	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	588	11			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	10	1	5	GA	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	August	155.78	2			Citrus
GLYPHOSATE, ISOPROPYLAMINE SALT	August	155.78	2	58.41	GA	Citrus
GLYPHOSATE, ISOPROPYLAMINE SALT	September	25	1	0.5	GA	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	September	25	1			Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	October	205	2	51.25	GA	Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	October	25	1	7.5	GA	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	October	205	2			Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	October	25	1			Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	October	70	1			Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	October	70	1	17.5	GA	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	November	15	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	15	1	70	PT	Almonds
LAMBDA-CYHALOTHRIN	August	61	6	244	OZ	Almonds
LAMBDA-CYHALOTHRIN	August	75	1	2.99	GA	Almonds
LAMBDA-CYHALOTHRIN	August	136	7			Almonds
LAMBDA-CYHALOTHRIN	August	216	4	246.51	GA	Beans
LAMBDA-CYHALOTHRIN	August	442	9	1697.28	OZ	Beans
LAMBDA-CYHALOTHRIN	August	658	13			Beans
LAMBDA-CYHALOTHRIN	September	167	3	6.65	GA	Walnuts
LAMBDA-CYHALOTHRIN	September	167	3			Walnuts
METRIBUZIN	October	70	1			Beans
METRIBUZIN	October	205	2	67.65	LB	Fallow
METRIBUZIN	October	205	2			Fallow
METRIBUZIN	October	70	1	23.1	LB	Beans
ORYZALIN	August	175	1			Almonds
ORYZALIN	August	175	1	175	QT	Almonds
OXYFLUORFEN	August	150	3	18.76	GA	Almonds
OXYFLUORFEN	August	70	1	14	QT	Almonds
OXYFLUORFEN	August	220	4			Almonds
OXYFLUORFEN	September	100	1	25	GA	Almonds
OXYFLUORFEN	September	100	1			Almonds
OXYFLUORFEN	October	70	1	6.56	GA	Beans
OXYFLUORFEN	October	70	1			Beans
OXYFLUORFEN	October	205	2	19.21	GA	Fallow
OXYFLUORFEN	October	205	2			Fallow
OXYFLUORFEN	November	15	1	8	PT	Almonds
OXYFLUORFEN	November	15	1			Almonds
PARAQUAT DICHLORIDE	August	271.5	5			Almonds
PARAQUAT DICHLORIDE	August	36.5	3	109.5	PT	Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

PARAQUAT DICHLORIDE	August	235	2	73.44	GA	Almonds
PARAQUAT DICHLORIDE	September	148	3	55.51	GA	Walnuts
PARAQUAT DICHLORIDE	September	163	4			Walnuts
PARAQUAT DICHLORIDE	September	15	1	45	PT	Walnuts
PENDIMETHALIN	September	100	1	50	GA	Almonds
PENDIMETHALIN	September	100	1			Almonds
PENDIMETHALIN	November	25	1			Walnuts
PENDIMETHALIN	November	15	1	75	PT	Almonds
PENDIMETHALIN	November	25	1	125	PT	Walnuts
PENDIMETHALIN	November	15	1			Almonds
SETHOXYDIM	August	140	1			Almonds
SETHOXYDIM	August	140	1	26.25	GA	Almonds
SIMAZINE	September	100	1	25	GA	Almonds
SIMAZINE	September	100	1			Almonds

Monitoring Site **Orestimba Creek at River R**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
2,4-D, DIMETHYLAMINE SALT	November	15	1	45	PT	Almonds
2,4-D, DIMETHYLAMINE SALT	November	15	1			Almonds
2,4-D, DIMETHYLAMINE SALT	November	60	2	180	PT	Walnuts
2,4-D, DIMETHYLAMINE SALT	November	60	2			Walnuts
ACEPHATE	August	185	2	185	LB	Beans
ACEPHATE	August	185	2			Beans
ACEPHATE	September	30	1	30	LB	Beans
ACEPHATE	September	30	1			Beans
BETA-CYFLUTHRIN	August	50	1			Beans
BETA-CYFLUTHRIN	August	50	1	140	OZ	Beans
BIFENTHRIN	August	39	1	249.6	OZ	Corn
BIFENTHRIN	August	39	1			Corn
BIFENTHRIN	August	786	12			Beans
BIFENTHRIN	August	605	8	28.36	GA	Beans
BIFENTHRIN	August	181	4	1086	OZ	Beans
BIFENTHRIN	August	190	3	8.36	GA	Melons
BIFENTHRIN	August	18	2	1.79	GA	Pistachios
BIFENTHRIN	August	18	2			Pistachios
BIFENTHRIN	August	190	3			Melons
CHLORPYRIFOS	August	18.9	1			Citrus
CHLORPYRIFOS	August	40	1			Almonds
CHLORPYRIFOS	August	18.9	1	18.9	GA	Citrus
CHLORPYRIFOS	August	80	1	10	GA	Alfalfa
CHLORPYRIFOS	August	80	1			Alfalfa
CHLORPYRIFOS	August	40	1	20	GA	Almonds
CHLORPYRIFOS	September	115	2			Walnuts
CHLORPYRIFOS	September	115	2	85	GA	Walnuts

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

8/1/11 through 2/29/12

DIAZINON	August	45	1	45	LB	Melons
DIAZINON	August	45	1			Melons
DIMETHOATE	August	2249	34			Beans
DIMETHOATE	August	825	10	90.63	GA	Tomatos
DIMETHOATE	August	75	1	75	OZ	Beans
DIMETHOATE	August	611	13	635	PT	Beans
DIMETHOATE	August	825	10			Tomatos
DIMETHOATE	August	1563	20	182.9	GA	Beans
DIMETHOATE	September	87	1			Cauliflower
DIMETHOATE	September	87	1	10.88	GA	Cauliflower
DIMETHOATE	September	30	1			Beans
DIMETHOATE	September	30	1	3.75	GA	Beans
ESFENVALERATE	August	1225	15	75.96	GA	Tomatos
ESFENVALERATE	August	1225	15			Tomatos
ESFENVALERATE	August	165	1	16.5	GA	Almonds
ESFENVALERATE	August	165	1			Almonds
ESFENVALERATE	September	75	1	3.98	GA	Broccoli
ESFENVALERATE	September	75	1			Broccoli
ESFENVALERATE	September	87	1			Cauliflower
ESFENVALERATE	September	87	1	5.44	GA	Cauliflower
GLYPHOSATE, ISOPROPYLAMINE SALT	August	155.78	2			Citrus
GLYPHOSATE, ISOPROPYLAMINE SALT	August	10	1			Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	August	245	2	245	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	45	2			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	155.78	2	58.41	GA	Citrus
GLYPHOSATE, ISOPROPYLAMINE SALT	August	10	1	5	GA	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	August	38	4	114	PT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	603	12			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	320	6	163.75	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	45	2	22.5	GA	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	September	80	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	September	80	1	15.24	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	September	25	1	0.5	GA	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	September	25	1			Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	October	70	1			Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	October	610	7			Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	October	70	1	17.5	GA	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	October	610	7	152.5	GA	Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	October	25	1			Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	October	25	1	7.5	GA	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	November	35	1	160	PT	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	November	35	1			Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	November	15	1	70	PT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	15	1			Almonds
LAMBDA-CYHALOTHRIN	August	90	2	3.59	GA	Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

LAMBDA-CYHALOTHRIN	August	61	6	244	OZ	Almonds
LAMBDA-CYHALOTHRIN	August	442	9	1697.28	OZ	Beans
LAMBDA-CYHALOTHRIN	August	676	8	257.01	GA	Beans
LAMBDA-CYHALOTHRIN	August	151	8			Almonds
LAMBDA-CYHALOTHRIN	August	1118	17			Beans
LAMBDA-CYHALOTHRIN	September	167	3			Walnuts
LAMBDA-CYHALOTHRIN	September	167	3	6.65	GA	Walnuts
METRIBUZIN	October	610	7	201.3	LB	Fallow
METRIBUZIN	October	610	7			Fallow
METRIBUZIN	October	70	1			Beans
METRIBUZIN	October	70	1	23.1	LB	Beans
ORYZALIN	August	175	1	175	QT	Almonds
ORYZALIN	August	175	1			Almonds
OXYFLUORFEN	August	220	4			Almonds
OXYFLUORFEN	August	150	3	18.76	GA	Almonds
OXYFLUORFEN	August	70	1	14	QT	Almonds
OXYFLUORFEN	September	180	2			Almonds
OXYFLUORFEN	September	180	2	40.24	GA	Almonds
OXYFLUORFEN	October	70	1	6.56	GA	Beans
OXYFLUORFEN	October	70	1			Beans
OXYFLUORFEN	October	65	2			Almonds
OXYFLUORFEN	October	65	2	16.25	GA	Almonds
OXYFLUORFEN	October	610	7	57.16	GA	Fallow
OXYFLUORFEN	October	610	7			Fallow
OXYFLUORFEN	November	15	1	8	PT	Almonds
OXYFLUORFEN	November	15	1			Almonds
PARAQUAT DICHLORIDE	August	395	4	133.44	GA	Almonds
PARAQUAT DICHLORIDE	August	431.5	7			Almonds
PARAQUAT DICHLORIDE	August	36.5	3	109.5	PT	Almonds
PARAQUAT DICHLORIDE	September	110	2	41.25	GA	Almonds
PARAQUAT DICHLORIDE	September	163	4			Walnuts
PARAQUAT DICHLORIDE	September	110	2			Almonds
PARAQUAT DICHLORIDE	September	15	1	45	PT	Walnuts
PARAQUAT DICHLORIDE	September	148	3	55.51	GA	Walnuts
PENDIMETHALIN	September	100	1	50	GA	Almonds
PENDIMETHALIN	September	100	1			Almonds
PENDIMETHALIN	October	65	2	32.5	GA	Almonds
PENDIMETHALIN	October	65	2			Almonds
PENDIMETHALIN	November	60	2	300	PT	Walnuts
PENDIMETHALIN	November	15	1	75	PT	Almonds
PENDIMETHALIN	November	15	1			Almonds
PENDIMETHALIN	November	60	2			Walnuts
SETHOXYDIM	August	140	1	26.25	GA	Almonds
SETHOXYDIM	August	140	1			Almonds
SIMAZINE	September	100	1	25	GA	Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

SIMAZINE	September	100	1			Almonds
SIMAZINE	October	65	2	16.25	GA	Almonds
SIMAZINE	October	65	2			Almonds

Monitoring Site **Ramona Lake near Fig Aven**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
CHLORPYRIFOS	August	90	3	9	GA	Alfalfa
CHLORPYRIFOS	August	90	3			Alfalfa
DIMETHOATE	August	158	3	19.75	GA	Beans
DIMETHOATE	August	158	3			Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	August	376	8			
GLYPHOSATE, ISOPROPYLAMINE SALT	August	376	8	94	GA	
LAMBDA-CYHALOTHRIN	August	158	3	4.73	GA	Beans
LAMBDA-CYHALOTHRIN	August	158	3			Beans
LAMBDA-CYHALOTHRIN	September	11	1			Sudan Grass
LAMBDA-CYHALOTHRIN	September	11	1	0.1	GA	Sudan Grass
METHOMYL	September	1.5	1			
METHOMYL	September	1.5	1	12	OZ	
OXYFLUORFEN	September	95	2			Almonds
OXYFLUORFEN	September	95	2	23.75	GA	Almonds
PARAQUAT DICHLORIDE	September	100	1	37.5	GA	Almonds
PARAQUAT DICHLORIDE	September	100	1			Almonds
PENDIMETHALIN	September	95	2	47.5	GA	Almonds
PENDIMETHALIN	September	95	2			Almonds
SIMAZINE	September	50	1	12.5	GA	Almonds
SIMAZINE	September	50	1			Almonds

Monitoring Site **Westley Wasteway near Cox**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty **	AI Use Units	Commodity
(S)-CYPERMETHRIN	August	59	1	1.84	GA	Beans
(S)-CYPERMETHRIN	August	59	1			Beans
ACEPHATE	August	149	2	149	LB	Beans
ACEPHATE	August	149	2			Beans
BIFENTHRIN	August	155	2			Beans
BIFENTHRIN	August	155	2	7.41	GA	Beans
BIFENTHRIN	August	60	1	2.58	GA	Tomatos
BIFENTHRIN	August	60	1			Tomatos
CHLORPYRIFOS	August	60	1	30	GA	Almonds
CHLORPYRIFOS	August	60	1			Almonds
DIMETHOATE	August	424	6	53.01	GA	Beans
DIMETHOATE	August	100	1	12.5	GA	Tomatos
DIMETHOATE	August	100	1			Tomatos
DIMETHOATE	August	424	6			Beans

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

Pesticide Use Summary

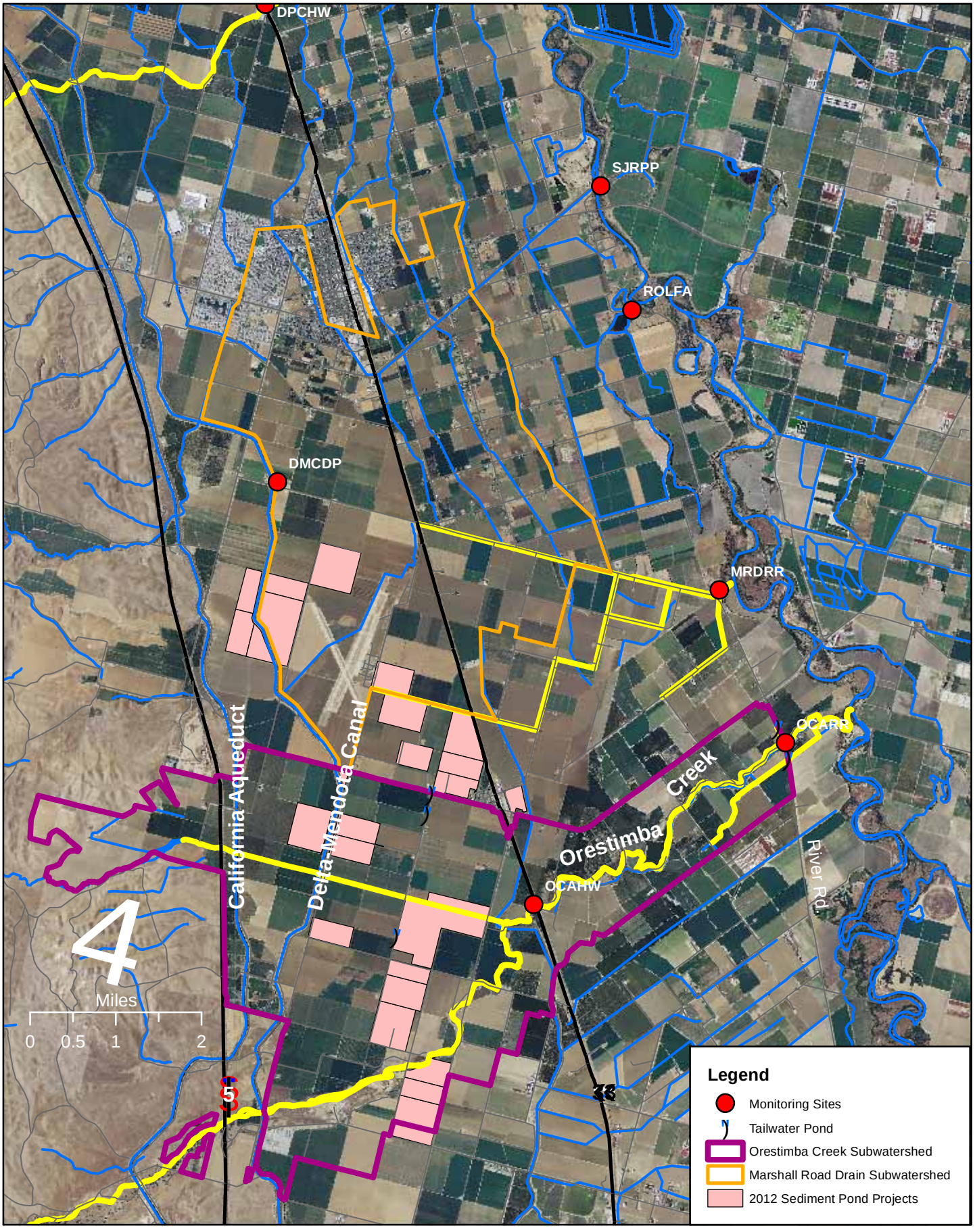
8/1/11 through 2/29/12

ESFENVALERATE	August	100	1	6.25	GA	Tomatos
ESFENVALERATE	August	100	1			Tomatos
ESFENVALERATE	August	150	1	1920	OZ	Almonds
ESFENVALERATE	August	150	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	410	5			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	60	1	22.5	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	350	4	481.43	QT	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	October	57.5	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	October	57.5	1	28.75	GA	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	70	1			Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	November	70	1	35	GA	Almonds
LAMBDA-CYHALOTHRIN	August	125	1	3.75	GA	Tomatos
LAMBDA-CYHALOTHRIN	August	151	2	4.53	GA	Beans
LAMBDA-CYHALOTHRIN	August	125	1			Tomatos
LAMBDA-CYHALOTHRIN	August	151	2			Beans
ORYZALIN	August	150	1	150	QT	Almonds
ORYZALIN	August	150	1			Almonds
OXYFLUORFEN	August	60	1	3.75	GA	Almonds
OXYFLUORFEN	August	200	3	1154.29	OZ	Almonds
OXYFLUORFEN	August	260	4			Almonds
OXYFLUORFEN	September	193	1	72.38	GA	Almonds
OXYFLUORFEN	September	193	1			Almonds
OXYFLUORFEN	October	57.5	1			Almonds
OXYFLUORFEN	October	57.5	1	21.56	GA	Almonds
OXYFLUORFEN	November	70	1			Almonds
OXYFLUORFEN	November	70	1	26.25	GA	Almonds
PENDIMETHALIN	September	193	1			Almonds
PENDIMETHALIN	September	193	1	193	GA	Almonds
PENDIMETHALIN	October	57.5	1	57.5	GA	Almonds
PENDIMETHALIN	October	57.5	1			Almonds
PENDIMETHALIN	November	70	1			Almonds
PENDIMETHALIN	November	70	1	70	GA	Almonds

*** Includes duplicate data**

**** Includes duplicate and incomplete data**

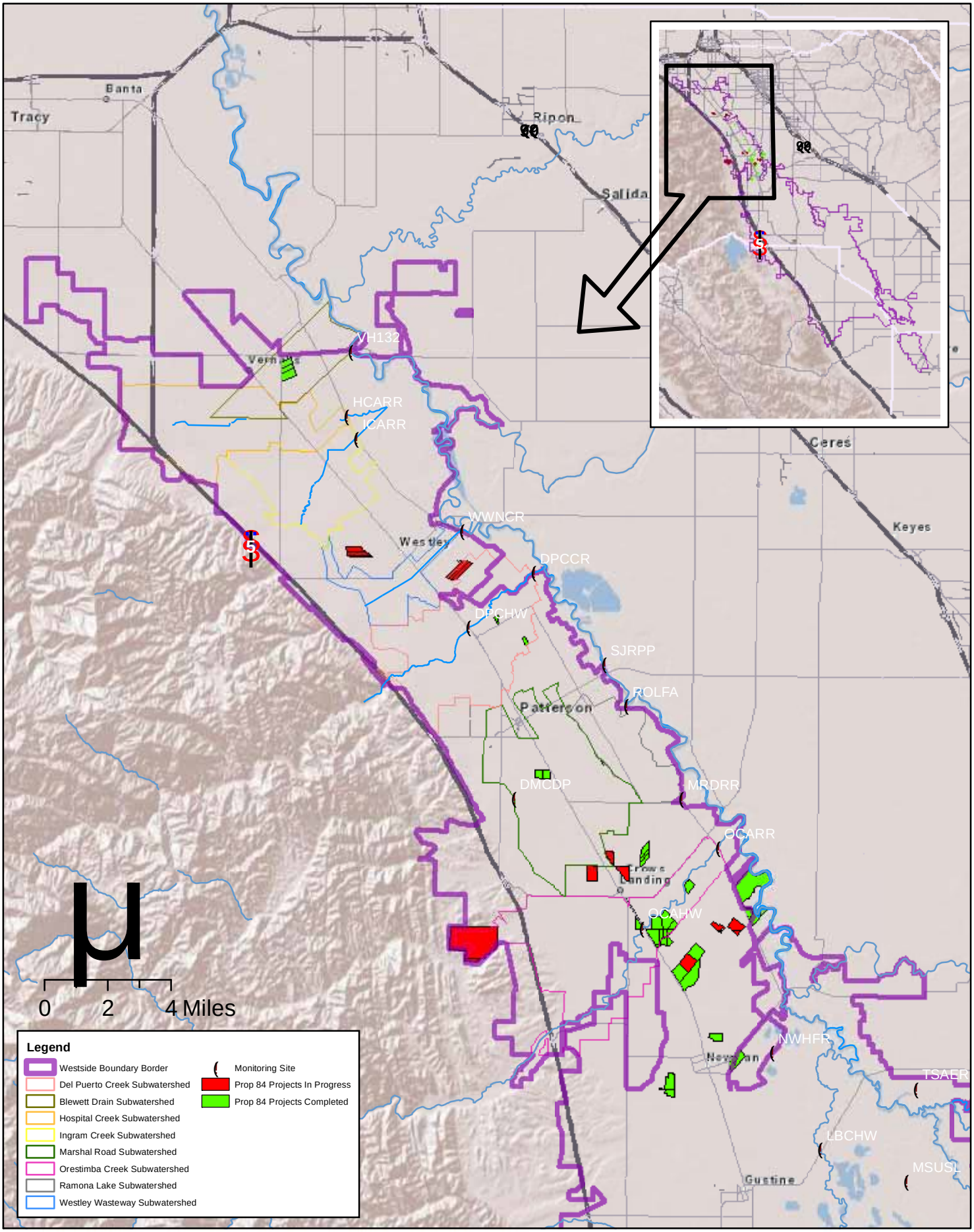
Management Practice Maps



2012 Sediment Pond Projects

Indicated projects may affect portions of the shaded parcel.

Prepared By:
Summers Engineering, Inc.
Consulting Engineers
Hanford California



WESTSIDE SAN JOAQUIN RIVER WATERSHED COALITION

Proposition 84 Projects

Summers Engineering, Inc.
Consulting Engineers
Hanford California

Attachment 7
List of Tested Pesticides

Westside San Joaquin River Watershed Coalition - Tested Pesticides

From MRP Order R5-2008-0831 - Table 5

Class	Pesticide	Assessment*	Core	Rain	Source
Organophosphates	Azinphos-methyl	X	(no pesticides)	X	X
	Chlorpyrifos	X		X	X
	Demeton-s	X		X	X
	Diazinon	X		X	X
	Dichlorvos	X		X	X
	Dimethoate	X		X	X
	Disulfoton	X		X	X
	EPTC	X		X	X
	malathion	X		X	X
	Methamidophos	X		X	X
	Methidathion	X		X	X
	Parathion-ethyl	X		X	X
	Parathion-methyl	X		X	X
	Phorate	X		X	X
	Phosmet	X		X	X
	Prowl (Pendamethalin)	X		X	X
	Trifluralin	X		X	X
Herbicides	Atrazine	X		X	
	Cyanazine	X		X	
	Diuron	X		X	
	Glyphosate	X		X	
	Linuron	X		X	
	Prowl (Pendamethalin)	X		X	X
	Simazine	X		X	
	Trifluralin	X		X	X
Groupp A Pesticides	Aldrin	X		X	
	a-BHC	X		X	
	b-BHC	X		X	
	d-BHC	X		X	
	g-BHC (Lindane)	X		X	
	a-Chlordane	X		X	
	g-Chlordane	X		X	
	Endosulfan I	X		X	
	Endosulfan II	X		X	
	Endosulfan sulfate	X		X	
	Heptachlor	X		X	
	Heptachlor epoxide	X		X	
	Toxaphene	X		X	
Organochlorines	Dicofol	X		X	
	DDD (p,p')	X		X	
	DDE (p,p')	X		X	
	DDT (p,p')	X		X	
	Dieldrin	X		X	
	Endrin	X		X	
	Methoxychlor	X		X	
Carbamates	Aldicarb	X		X	
	Carbaryl	X		X	
	Carbofuran	X		X	
	Methiocarb	X		X	
	Methomyl	X		X	
	Oxamyl	X		X	

* Assessment monitoring for different pesticide groups (e.g. organophosphate, herbicides, etc.) is site-specific

Appendix A
Chain of Custody Sheets and Data Summary

Appendix A
Definitions

Sample Type:
E: Event sample
FD: Field duplicate sample
FB: Field blank sample.

Result Flags:
ND: Not Detected.
DNQ: Estimated result, detected below Reporting Limit.

Note: Pesticides with results indicating "Non-Detect" are not reported in this summary. See **Table 7** for a list of analytes. See **Appendix C** for the laboratory data reports.

Appendix A
Chain of Custody Sheets

Appendix A
Sediment and Aquatic Toxicity Results

Appendix A
Data Summary

Appendix B
Communication Reports
Organized by Event Date

Appendix C
Laboratory Data Reports and EDDs

Field Data Sheets
CalTest General Physical, Drinking Water Data, Nutrient Data, Metals Data
APPL Pesticide Analyses
Pacific Ecorisk Toxicity Reports
Electronic Data Deliverable Files

Appendix D
Laboratory Quality Assurance Review

Appendix E
Sampling Event Photos

Appendix F
Wetland Subarea Water Quality Data