San Joaquin Valley Drainage Authority

Westside San Joaquin River Watershed Coalition

Semi-Annual Monitoring Report
2012 Irrigation Season Report

Covering the period: March 2012 through August 2012
(Sampling Events 89 through 94)

November 30, 2012

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SECTION 1: EXECUTIVE SUMMARY

This report covers the 2012 irrigation season sampling events beginning March 2012 through August 2012 (Event 89 through Event 94). In accordance with Monitoring Order No. R5-2008-0831, assessment monitoring at all discharge sites was completed in February 2012. Data from the assessment monitoring period was reviewed and the Special Project Monitoring list was adjusted for the 2012 Irrigation Season (see **Attachment 7**), including the removal of the four monitoring sites in San Luis Water District. Nineteen of the 22 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. Four monitoring sites are located within San Luis Water District (SLWD). SLWD has implemented an aggressive tailwater prohibition policy and growers within the district do not discharge tailwater. Only one has discharged since their inclusion within the Westside Coalition and these sites have been removed from the Westside Coalition Monitoring Program.

The 2012 irrigation season was classified as a dry hydrologic year type for the westside of the San Joaquin Valley and Federal water districts were limited to 40% of federal water contact allocation. There were few significant storms during winter and spring and no rain event sample collections were triggered due to storm activity. See **Section 3** for a discussion of measured rainfall. Irrigation season 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 March 2012, as scheduled. Sediment toxicity was observed at Hospital Creek, Ingram Creek, Westley Wasteway and Orestimba Creek (at Highway 33). All four sediment samples 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 ten times during four events: twice for *Ceriodaphnia dubia*, seven times for algae, and once for fathead minnow. These are summarized in **Table 1** below.

Table 1: Summary of Toxicity

Event	Site	Species/% Survival or % Control Growth
Event 89 (Mar.)	Ingram Creek at River Rd.	*Selenastum* – 20% of Control
Event 89 (Mar.)	Westley Wasteway near Cox Rd.	*Selenastum* – 8% of Control
Event 89 (Mar.)	Los Banos Cr. at China Camp Rd.	*Selenastum* – 80% of Control
Event 90 (Apr.)	Poso Slough at Indiana Ave.	*Ceriodaphnia dubia* – 0% survival
Event 90 (Apr.)	Turner Slough nr. Edminster Rd.	Fathead Minnow – 83% survival
Event 91 (May)	Poso Slough at Indiana Ave.	*Selenastum* – 52% of Control
Event 91 (May)	Del Puerto Cr. near Cox Rd.	*Ceriodaphnia dubia* – 5% survival
Event 91 (May)	Orestimba Creek (Hwy 33)	*Selenastum* – 55% of Control
Event 92 (Jun.)	Orestimba Creek (Hwy 33)	*Selenastum* – 48% of Control
Event 92 (Jun.)	Los Banos Cr. at China Camp Rd.	*Selenastum* - 78% 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**.

Table 2 lists the sites that were sampled during the 2012 Irrigation Season.

Table 2: Collected Samples March through August 2012.

Map Designation	Monitoring Site	Event 89		Event 90	Event 91	Event 92	Event 93	Event 94
	Discharge Sites	March		April	May	June	July	August
1	Hospital Cr at River Road	NF	SS	S	S	S	S	S
2	Ingram Cr at River Road	S	SS	S	S	S	S	S
3	Westley Wasteway near Cox Road	S	SS	S	S	S	S	S
4	Del Puerto Cr near Cox Road	S	SS	S	S	S	S	S
5	Del Puerto Cr at Hwy 33	S	SS	NF	NF	NF	NF	NF
7	Ramona Lake near Fig Avenue	S	SS	S	S	S	S	S
8	Marshall Road Drain near River Road	S	NP	S	S	S	S	S
9	Orestimba Cr at River Road	S	SS	S	NF	S	S	S
10	Orestimba Cr at Hwy 33	S	SS	S	S	S	S	S
11	Newman Wasteway near Hills Ferry Road	S	SS	S	S	S	S	S
13	San Joaquin River at Lander Avenue	S	NP	S	S	S	S	S
14	Mud Slough u/s San Luis Drain	S	NP	S	S	S	S	S
15	Salt Slough at Lander Avenue	S	NP	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	NP	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	NP	S	S	S	S	S
20	Blewett Drain near Highway 132	S	SS	S	S	S	NF	S
21	Poso Slough at Indiana Avenue	S	SS	S	S	S	S	S
	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.
NF = Not sampled due to lack of flow.
NP = Not included in the sampling plan.

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 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 to 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, 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, modified after the 2011/12 assessment period. See **Attachment 7**.

The MRP Order includes a targeted monthly sampling plan for 22 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 19 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.

Two 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 22 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. 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	Special	Core	Rain**
Poso Slough at Indiana Avenue	PSAIA	Special	Core	Rain**
Hospital Cr at River Road	HCARR	Special	-	Rain**
Ingram Cr at River Road	ICARR	Core + Special	Core	Rain**
Westley Wasteway near Cox Road	WWNCR	Core + Special	Core	Rain**
Del Puerto Cr near Cox Road	DPCCR	Core + Special	Core	Rain**
Del Puerto Cr at Hwy 33	DPCHW	Special	-	Rain**
Ramona Lake near Fig Avenue	ROLFA	Core + Special	Core	Rain**
Marshall Road Drain near River Road	MRDRR	Core + Special	Core	Rain**
Orestimba Cr at River Road	OCARR	Core + Special	Core	Rain**
Orestimba Cr at Hwy 33	OCAHW	Special	-	Rain**
Newman Wasteway near Hills Ferry Road	NWHFR	Core + Special	Core	Rain**
San Joaquin River at Lander Avenue	SJRLA	Core + Special	Core + Special	Rain**
Mud Slough u/s San Luis Drain	MSUSL	Core + Special	Core + Special	Rain**
Salt Slough at Lander Avenue	SSALA	Core + Special	Core + Special	Rain**
Salt Slough at Sand Dam	SSASD	Special	-	Rain**
Los Banos Creek at Highway 140	LBCHW	Core + Special	Core + Special	Rain**
Los Banos Creek at China Camp Road	LBCCC	Core + Special	Core	Rain**
Turner Slough near Edminster Road	TSAER	Core + Special	Core	Rain**
~~Little Panoche Cr at Western Boundary~~	~~LPCWB~~	~~Assmt~~	~~Assmt~~	~~Rain**~~
~~Little Panoche Cr at San Luis Canal~~	~~LPCSL~~	~~Assmt~~	~~Assmt~~	~~Rain**~~
~~Russell Ave. Drain at San Luis Canal~~	~~RADSL~~	~~Assmt~~	~~Assmt~~	~~Rain**~~
~~Los Banos Creek at Sunset Ave~~	~~LBCSA~~	~~Assmt~~	~~Assmt~~	~~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

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, irrigation season monitoring was implemented at all discharge sites beginning in March 2012. 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
March	1.24	1.39	1.18
April	1.38	0.71	0.65
May	0.02	0.04	0.16
June	0.15	0.15	0.00
July	0.00	0.00	0.00
August	0.00	0.00	0.00
Report Period Total:	2.79	2.29	1.99

Rainfall during the 2012 irrigation season was typical of summers in the Central Valley, with moderate rainfall in the spring and dry summer months. None of the storms during the spring of 2012 produced sufficient runoff to collect storm event samples.

Event 89, March 12th and 13th, 2012.
Irrigation season water samples were collected at 18 sites and 3 source water sites on March 13th in accordance with the Westside Coalition MRP. There was insufficient flow for sample collection at Hospital Creek. Aquatic toxicity was tested for algae, invertebrates, and fish in accordance with the Monitoring Order (see **Attachment 7**). Aquatic toxicity to algae was observed at Ingram Creek (20% of control), Westley Wasteway (8% of control), and Los Banos Creek at China Camp Road (80% of control). A TIE was performed on the Ingram Creek and Westley Wasteway samples, and both indicated that a herbicide was the likely cause. Diuron was detected in both samples (21 µg/L at Ingram Creek and 19 µg/L at Westley Wasteway). No other aquatic toxicity was observed. Sediment samples were collected at 13 sites on March 12th. Significant toxicity was observed in the Westley Wasteway sample (15% survival), the Hospital Creek sample (81% survival), the Ingram Creek sample (60% survival), and the Orestimba Creek at Highway 33 sample (36%) survival. Sediment from the Westley Wasteway, Ingram Creek and Orestimba Creek samples was sent to CalTest Laboratories for pesticide analysis. In all three 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 90, April 10th, 2012.
Irrigation season water samples were collected at 18 monitoring sites and source water samples were collected at 3 sites on April 10th. There was insufficient flow to collect samples at Del Puerto Creek at Highway 33. Aquatic toxicity to water flea was observed at Poso Slough (0% survival) and chlorpyrifos (0.66 µg/L) was detected in the sample. A dilution series measured 2.9 toxic units and the TIE indicated that a pesticide was the likely cause. Aquatic toxicity to fathead minnow (82.5% survival) was observed at Turner Slough. Although this observation was statistically significant, it was small in magnitude and no cause is apparent.

Event 91, May 8th, 2012.
Irrigation season water samples were collected at 17 monitoring sites and 3 source water sites on May 8th. There was insufficient flow for sample collection at Del Puerto Creek at Highway 33 and Orestimba Creek at River Road. Aquatic toxicity to algae was observed at Orestimba Creek at Highway 33 (55% of control) and at Poso Slough (52% of control for the event sample and 72% for the field duplicate). Prowl was detected in the Orestimba Creek sample (2.1 µg/L) and diuron (3.1 µg/L) and Prowl (0.78 µg/L) were detected in the Poso Slough sample. Aquatic toxicity to water flea was observed at Del Puerto Creek near Cox Road (5% survival). A TIE was performed but the toxicity was not persistent and there were no insecticides detected in the sample.

Event 92, June 12th, 2012.
Irrigation season water samples were collected at 18 monitoring sites and 3 source water sites on June 12th in accordance with the Westside Coalition's MRP. There was insufficient flow at Del Puerto Creek at Highway 33 for sample collection. Aquatic toxicity to algae was observed at Orestimba Creek at Highway 33 (48% of control) and Los Banos Creek at China Camp Road (77% of control). A TIE was performed on the Orestimba Creek sample but toxicity was not persistent and the TIE was inconclusive. No herbicides were present in either sample and the cause of toxicity is not known.

Event 93, July 10th, 2012.
Irrigation season water samples were collected at 17 monitoring sites and 3 source water sites. There was insufficient flow at Blewett Drain and Del Puerto Creek at Highway 33 to collect samples. No aquatic toxicity was observed in any of the samples.

Event 94, August 14th, 2011.
Irrigation season water samples were collected at 18 monitoring sites and 3 source water sites. There was insufficient flow at Del Puerto Creek at Highway 33. No aquatic toxicity was observed in any of the samples.

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. At the Highway 33, flow is estimated using the float method. A beaver dam has been constructed (by a beaver) downstream of the Cox Road site, creating a backwater that prevents safe flow measurement at the site. The Coalition is considering options to address this issue.
- 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 and 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.
- 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 removed from the monitoring program in March 2012 and are no longer monitored.
- Russell Avenue Drain at San Luis Canal (RADSL). This is a small drain along Russell Avenue that discharges into the San Luis Canal. This site was removed from the monitoring program in March 2012 and is no longer monitored.
- 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 it was removed from the monitoring program in March 2012.
- 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
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 2012 irrigation season Agricultural Commissioner pesticide use data.

Table 7: Top 10 Crops Grown by County

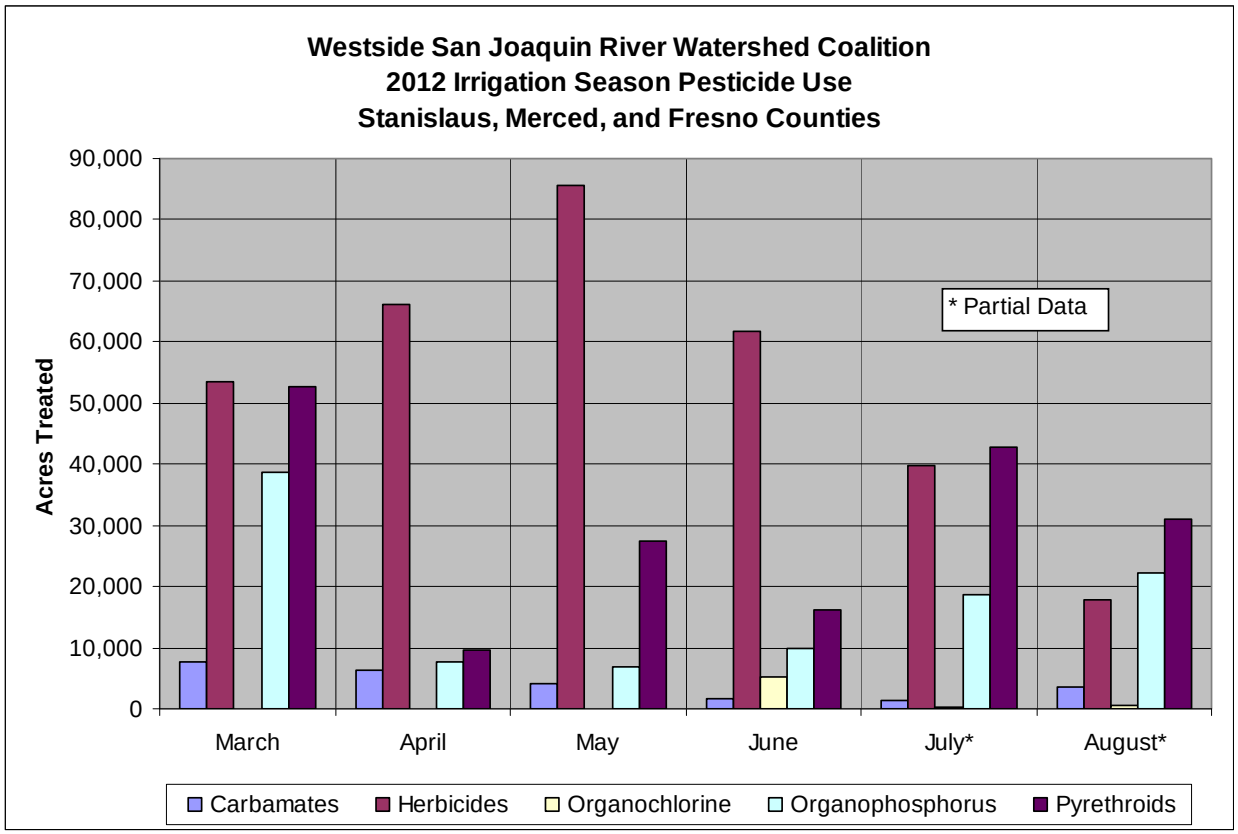
Fresno	Merced	Stanislaus
Almonds	Cotton	Lettuce
Tomatoes	Alfalfa	Almonds
Cotton	Tomatoes	Cabbage
Alfalfa	Almonds	Tomatoes
Grapes	Corn	Mixed Greens
Melons	Wheat	Beets
Pistachios	Pistachios	Apricots
Wheat	Oats	Walnuts
Rice	Walnuts	Corn
Pomegranate	Melons	Grapes

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.

The irrigation season is typically the peak of agricultural activity, with most planting occurring between March and May, and irrigation and cultivation activities beginning just after planting and carrying on until harvest. Harvest timing is dependant or crop and weather conditions and may be as early as July or as late as October. Pesticide applications during the irrigation season include both insecticides and herbicides and will be applied according to the growth stage of the affected crop and the actual pest pressures. **Figure 2** shows the 2012 irrigation season monthly pesticide application within the Westside Coalition by pesticide group.

Figure 2: 2012 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 2012 irrigation season (by acreage) within the three counties occupied by the Westside Coalition. A complete list of reported pesticide applications is included in **Attachment 6**.

Table 8: Most Commonly Applied Pesticides by County (2012 Irrigation Season)

Fresno County		Merced County		Stanislaus County	
Pesticide	**Class**	**Pesticide**	**Class**	**Pesticide**	**Class**
Lambda-Cyhalothrin	Pyrethroid	Lambda-Cyhalothrin	Pyrethroid	Glyphosate	Herbicide
Chlorpyrifos	Organophosphorus	Glyphosate	Herbicide	Lambda-Cyhalothrin	Pyrethroid
Pendimethalin	Herbicide	Trifluralin	Herbicide	Oxyflurofen	Herbicide
Befenthrin	Pyrethroid	Pendimethalin	Herbicide	Dimethoate	Organophosphorus
Glyphosate	Herbicide	Malathion	Organophosphorus	Esfenvalerate	Pyrethroid
Trifluralin	Herbicide	Oxyflurofen	Herbicide	Pendimethalin	Herbicide
Paraquat Dichloride	Herbicide	Paraquat Dichloride	Herbicide	Metolachlor	Herbicide
Oxyflurofen	Herbicide	Chlorpyrifos	Organophosphorus	Bifenthrin	Pyrethroid
Malathion	Organophosphorus	MCPA	Herbicide	Paraquat Dichloride	Herbicide
Cypermethrin	Pyrethroid	Beta-Cyfluthrin	Pyrethroid	Rimsulfuron	Herbicide

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 monitoring 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. 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 collected irrigation season samples starting with the March 2012 sample event. Aquatic toxicity, pesticides and metals are analyzed at specific sites according to the monitoring plan.

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 2% of the QA/QC analyses performed by each lab and do not affect data usability. 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. Six duplicate samples exceeded the 25% relative percent difference (RPD) established in the QAPP for:

Cadmium (total) Copper (total) E. Coli Turbidity TKN

These exceedances of the field duplicate quality control criteria account for approximately 4% of the field duplicates analyzed and 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 (155 results, total). Of these, five analyses resulted in values greater than 20% of the event sample result for:

Copper (dissolved) Copper (total) DOC Zinc (dissolved)

- **Pesticide Analyses.** Six field duplicate and field blank samples sets were collected during the reporting period and analyzed for pesticides (336 results each). During Event 89, Chlorpyrifos was detected in the field blank sample at 50% of the event sample concentration. For that sample event, the chlorpyrifos results for the event sample, field blank and field duplicate were all marked "DNQ" indicating that the reported values were measured below the instruments reporting limit and are estimated. Calculated RPD for field duplicate results did exceeded the 25% threshold for Prowl during Event 89. 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 May sampling event (Event 91) for the algae test (calculated RPD = 32.2%). Toxicity was observed in both the event sample and the field duplicate and the resulting low cell counts likely contributed to the higher RPD value.

- **Sediment Toxicity Analyses.** A field duplicate sample was collected for sediment toxicity during the March sampling event (Event 89). The measured RPD was 3.9%.

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: For the July sample event, the DOC and dissolved metals for one site were not collected by mistake. Excess volume for a second sample was used for the DOC analysis however there was not sufficient excess volume for the dissolved metals.

These issues account for less than 1% of the samples collected and completeness for this reporting period for sample collection and transit is 100%.

- Sample Analysis: Completeness for sample analysis during this reporting period is 100%.
- Field Quality Control Samples: All field quality control samples were collected and analyzed. 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 pesticide analyses and metals analyses were performed according to the Special Monitoring schedule included in the MRP Order (as modified in the March 2012 letter. See **Attachment 7**).

The Westside Coalition's monitoring program includes 22 monitoring sites on the Westside of the San Joaquin Valley (see **Table 2** and **Figure 1**). 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 2012 irrigation season

months, during which there was significant agricultural activity. Statistically significant aquatic toxicity occurred ten times during four events: two to *Ceriodaphnia dubia* and seven to algae and once to fathead minnow. All observations of aquatic toxicity are detailed in **Attachment 2**.

Ceriodaphnia dubia. Toxicity to *Ceriodaphnia dubia* was measured once in April 2012, and once in May 2012.

- Poso Slough at Indiana Avenue – Event 90 (April 10th), 0% survival. Dilution series analyses calculated 2.9 toxic units and the TIE indicated that a pesticide(s) were the likely cause. Chlorpyrifos was detected in the sample (0.66 µg/L) at a level that would be expected to cause full mortality and is assumed to be the source of the toxicity. Two herbicides were detected but no other insecticides were detected.
- Del Puerto Creek near Cox Road – Event 91 (May 8th), 5% survival. A TIE was performed on the sample, however toxicity was not persistent and the TIE was inconclusive. Diuron was the only detected pesticide and is not expected to have caused the mortality. The cause of toxicity is not known.

Selenastrum capricornutum (algae). Toxicity to algae was observed seven times during the report period.

- Ingram Creek at River Road – Event 89 (March 13th), 20% of control growth. A TIE was performed and indicated that pesticides were the likely cause. Diuron was detected in the sample (21 µg/L) and is expected to be the cause of toxicity.
- Westley Wasteway near Cox Road – Event 89 (March 13th), 8% of control growth. A TIE was performed and indicated that pesticides were the likely cause. Diuron was detected in the sample (19 µg/L) and is expected to have caused the toxicity.
- Los Banos Creek at China Camp Road – Event 89 (March 13th), 80% of control growth. Although statistically significant, to toxicity in this sample was not large in magnitude and follow up testing was not required. No pesticides were detected in the sample and the cause of toxicity is not known.
- Poso Slough at Indiana Avenue – Event 91 (May 8th), 52% of control growth. Diuron (3.1µg/L), Prowl (0.78 µg/L), and trifluralin (0.96 µg/L) were detected in the sample and are expected to have contributed to the toxicity.
- Orestimba Creek at Highway 33 – Event 91 (May 8th), 55% of control growth. Prowl (2.1 µg/L) was detected in the sample and may have contributed to the toxicity. No other pesticides were detected.
- Orestimba Creek at Highway 33 – Event 92 (June 12th), 48% of control growth. A TIE was performed on the sample but toxicity was not persistent in the ambient water sample and the cause of toxicity could not be determined. DDE was detected in the sample but not expected to have contributed to the toxicity. No other pesticides were detected and the cause of toxicity is not known.
- Los Banos Creek at China Camp Road – Event 92 (June 12th), 77% of control growth. No pesticides were detected and the cause of toxicity is not known.

Pimephales promelas (fathead minnow).

- Turner Slough near Edmnster – Event 90 (April 10th), 82.5% survival. The toxicity was not sufficient to require follow up testing and no pesticides were detected in the sample. The cause of toxicity is not known.

Sediment Toxicity (*Hyalella azteca*). The Westside Coalition's MRP Order specifies that sediment sample collection should occur at the beginning of the irrigation season, between March 1st and April 30th [2]. Fourteen samples were collected (including one duplicate) and tested for toxicity to *Hyalella azteca* on March 12th. Statistically significant toxicity was measured at four sites, and follow up pesticide analysis were performed on all four samples. **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 September 2006.

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

Site	Percent Survival
Orestimba Creek at Highway 33*	36.2%
Hospital Creek at River Road*	81.3%
Ingram Creek at River Road*	60%
Westley Wasteway near Cox Road*	15%

* Sample analyzed for specific pesticides.

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

	Orestimba Creek at Hwy 33	Hospital Creek at River Rd.	Ingram Creek	Westley Wasteway
Sediment Toxicity (% survival)	36.2	81.3	60	15
Percent Solids (%)	94	98	96	97
Bifenthrin (µg/kg)	24.8	0.31	2	21.8
Chlorpyrifos (µg/kg)	0.79	ND	0.91	0.61
Cyfluthrin (µg/kg)	0.57	ND	ND	0.12J
Cypermethrin (µg/kg)	ND	ND	ND	ND
Es/Fenvalerate (µg/kg)	5.7	4.2	1.2	1.5
Fenpropathrin	ND	ND	0.15j	ND
Lambda-Cyhalothrin (µg/kg)	0.61	0.6	7.1	2.3
Permethrin (µg/kg)	0.35	ND	ND	ND
Total Organic Carbon (mg/kg)	10,000	5,000	9,200	17,000

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	March 12 % Survival	March 12 Toxicity (Y/N)	Sept 11 % Survival	Sept 11 Toxicity (Y/N)	May 11 % Survival	May 11 Toxicity (Y/N)	Sept 10 % Survival	Sept 10 Toxicity (Y/N)
Blewett Drain (Vernalis at hwy 132)	93.8	N	56.3	**Y**	86.3	N		
Hospital Creek	**81.3**	**Y**	20	**Y**	8.75	**Y**	0	**Y**
Ingram Creek	**60**	**Y**	0	**Y**	16.3	**Y**	0	**Y**
Westley Wasteway	**15**	**Y**	90	N	93.8	N	41.2	**Y**
Del Puerto Creek (Cox Rd)	97.5	N	88.8	N	81.3	N	0	**Y**
Del Puerto Creek (Hwy 33)	98.6	N			96.3	N	81.2	**Y**
Orestimba Creek at River Rd.	97.5	N	96.3	N	100	N	95	N
Orestimba Creek at Hwy 33	**36.2**	**Y**	0	**Y**	92.5	N	93.8	N
Ramona Lake at Fig Ave.	95	N	96.3	N	92.5	**Y**	92.5	N
Newman Wasteway	100	N	97.5	N			97.5	N
Poso Slough	96.2	N	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	92.5	N	100	N	78.8	**Y**		
Los Banos Creek at Hwy 140			97.5	N	97.5	N		
Los Banos Creek at China Camp Rd.	100	N	97.5	N	98.15	N	98.8/96.2	N
Los Banos Creek at Sunset Ave.								
Mud Slough			98.8	N	96.3	N		

Site	March 10 % Survival	March 10 Toxicity (Y/N)	Sept 09 % Survival	Sept 09 Toxicity (Y/N)	Mar 09 % Survival	Mar 09 Toxicity (Y/N)	Sept 08 % Survival	Sept 08 Toxicity (Y/N)
Blewett Drain (Vernalis at hwy 132)					18.8	**Y**	16.2	**Y**
Hospital Creek	77.5	**Y**	10	**Y**	0	**Y**	25	**Y**
Ingram Creek	35	**Y**	0	**Y**	18.8	**Y**	0	**Y**
Westley Wasteway	N/A	N/A	92.5	N	82.5	**Y**	1.25	**Y**
Del Puerto Creek (Cox Rd)	77.5	**Y**	13.8	**Y**	97.5	N	62.5	**Y**
Del Puerto Creek (Hwy 33)	92.5	N	N/A	N/A	97.5	N	N/A	N/A
Orestimba Creek at River Rd.	96.2	N	87.5	N	91.2	**Y**	80	N
Orestimba Creek at Hwy 33	90	N	80	N	88.8	**Y**	92.5	N
Ramona Lake at Fig Ave.	93.8	N	92.5	N	97.5	N	98.8	N
Newman Wasteway	93.8	N	98.8	N	98.8	N	82.5	**Y**
Poso Slough					N/A	N/A	72.5	**Y**
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.	95	N	96.2	N	97.5	N	87.5	**Y**
Los Banos Creek at Sunset Ave.	96.2	N						
Mud Slough								

Pesticide Analyses.

A total of twelve different pesticides were detected in water samples during the 2012 irrigation season for a total of 119 detections. Thirty six of these detections (30%) were below the reporting limit (DNQ) and 25 (21%) 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 (8 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, and alfalfa) in the fall and as dormant sprays on fruit and nut trees in the mid to late winter.
- DDT/DDE/DDD (4 DDT detection, 20 DDE detections): 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.
- Dieldrin (2 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 (10 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 (53 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.
- Endrin (1 detection): Endrin is an organochlorine pesticides and was most commonly used on cotton and corn. Endrin has not been produced or available in the United States since 1986.
- Malathion (4 detections): Malathion is an organophosphate insecticide used on a variety of crops including alfalfa, walnuts, lettuce, grapes, and cotton.
- Prowl (12 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.
- Simazine (1 detection): Simazine is a triazine herbicide used to control broadleaf weeds and annual grasses in a variety of field crops.
- Trifluralin (3 detections): Trifluralin is a pre-emergent herbicide used to control broadleaf and grassy weeds and is approved for a variety of crops including fruit and nut trees, cotton, beans, and tomatoes.

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 almost 2,900 field and chemistry (non-pesticide) parameters during the reporting period, during which, 315 (11%) results were greater than the RWQVs. Electrical conductivity and total dissolved solids (TDS) accounted for 110 and 86, respectively, of these exceedances (approximately 62% of the exceedances, combined).

[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.

E. coli results accounted for 37 of these exceedances, 22 for boron and 13 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.

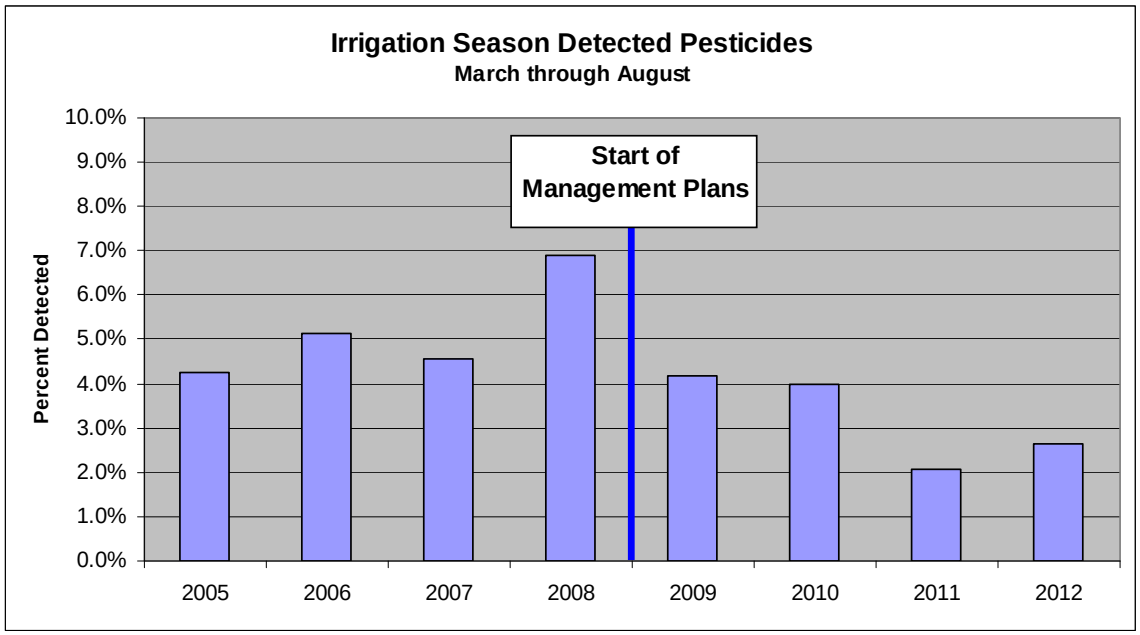
- **EC/TDS.** Electrical Conductivity and TDS are measures of the amount of salts dissolved in the water column. There are a variety of sources of salts that may be contributing to these results including natural marine sediments, accretion of shallow/perched ground water, and the irrigation source water. 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. In a 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 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.** Up to 48 different pesticides were tested at monitoring sites each month. Samples collected within the Westside Coalition during this report period provided almost 4500 pesticide results, 97% of which resulted in no detection. Of the detected pesticides (119), 44 were greater than established RWQVs. Of the 44 exceedances, 24 (54%) were caused by legacy pesticides (DDT, and DDE) which are not currently in use. Of the remaining 20, seven were caused by chlorpyrifos, one by dimethoate, five by diuron, and four by malathion.

As a fraction of the number of pesticide tests, there were slightly more pesticides detected during this reporting period when compared to the previous irrigation season (2.6% verses 2.1%). **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 were no detections of diazinon and eight detections of chlorpyrifos (none of which occurred at any of the San Joaquin River monitoring sites). The Westside Coalition mailed 83 letters to growers (affecting about 185 parcels) and more than 180 field "tailgate" meetings were held to increase awareness of the chlorpyrifos and diazinon discharge issues. Pesticide use report (PUR) data became available too late to provide useful information for effective follow up. 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 August 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 September 2009 through August 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, FP2, and 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 16th 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 which continued through February 2012. The results of the assessment monitoring period were reviewed and adjustments were made to the Special Project Monitoring table included in the MRP order (see **Attachment 7**).

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 was completed and submitted in August 2012. 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 was completed in April 2012 between the parties 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, general outreach to our entire coalition regarding chlorpyrifos exceedances and submittal of leter from the CVRWQCB, 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. Individual meeting affecting more than 11,000 acres were performed during this report period.

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.

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

Table 13: Outreach Meetings.

Date	Group	Location	Description	Attended	By
3/1/2012	Westside Stanislaus County Farm Bureau	Patterson	Annual Meeting	50	Joe Mc/Parry Klassen
3/13/2012	PCA's in Stanislaus County	Westley	Chlorpyrifos and sedmiment issues	8	Joe McGahan/ Parry Klassen
3/22/2012	San Luis Canal Co Annual Meeting	Dos Palos	Update of ILRP and issues in area	25	Joe McGahan
3/27/2012	CCID Landowners Meeting	Firebaugh	Dos Palos Area Update	50	Joe McGahan
3/28/2012	CCID Landowners Meeting	Los Banos	Los Banos Area Update	75	Joe McGahan
3/28/2012	Field tailgate meetings	Field	Survey follow up and BMPs	9	Rich Peltzer
3/29/2012	CCID Landowners Meeting	Gustine	Patterson Area Update	100	Joe McGahan
4/3/2012	Stanislaus County Ag Commissioner	Patterson	Ag Comm meeting to review new policies	25	Joe McGahan
4/5/2012	Field tailgate meetings	Field - Salt Sl.	Survey follow up and BMPs	18	Rich Peltzer
4/9/2012	Field tailgate meetings	Field - Salt Sl.	Survey follow up and BMPs	15	Rich Peltzer
4/16/2012	Field tailgate meetings	Field - Salt Sl.	Survey follow up and BMPs	14	Rich Peltzer
4/24/2012	Field tailgate meetings	Field - Salt Sl.	Survey follow up and BMPs	10	Rich Peltzer
4/25/2012	Grassland Habitat Management Coordination Committee Meeting	Los Banos	ILRP Status to wetland members	15	Joe McGahan
7/13/2012	ACWA Regions 6 & 7	Fresno	Presentation to Association of California Water Agencies region meetings on status of ILRP	40	Joe McGahan
7/25/2012	Tailgate Mtg.	Westley	BMP's Sediment	6	Rich Peltzer
8/1/2012	Tailgate Mtg.	Westley/Crows Landing	BMP's Sediment	15	Rich Peltzer
8/7/2012	Tailgate Mtg.	Westley/Crows Landing	BMP's Sediment	9	Rich Peltzer
8/15/2012	Tailgate Mtg.	Patterson/Crows Landing	BMP's Sediment	16	Rich Peltzer
8/21/2012	Tailgate Mtg.	Patterson/Crows Landing/Westley	BMP's Sediment	15	Rich Peltzer
8/30/2012	Tailgate Mtg.	Patterson/Crows Landing/Westley	BMP's Sediment	8	Rich Peltzer

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 four projects were completed during the 2012 non-irrigation season, expending $27,200 of the grant funds (about 91% of the available funds). Most of these projects were in the northerly region of the Westside Coalition, affecting about 6,000 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 2012 through 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, 35 projects have been funded, affecting a total of 3,620 acres within the Westside Coalition. A map showing the completed and in-progress projects funded through Proposition 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. No additional work has been performed on this issue.

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 acres 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. Several more projects are in the planning stages. Typically, irrigation improvements are installed during the non-irrigation season for use in the following irrigation season.
- **NRCS EQUIP Funding:** The Westside Coalition, in cooperation with Central California Irrigation District, submitted a proposal for funding assistance to NRCS to develop a targeted funding program. NRCS chose not to fund the proposal and the Westside Coalition continues to pursue additional funding assistance for growers.

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 14 samples (including one duplicate) collected in March (Event 89). Statistically significant toxicity was measured at four sites (See **Tables 10** and **11**), and follow up pesticide testing was performed on all four. These results 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.

    - Orestimba Creek at Highway 33 (36.2% Survival): A total of 5.1 sediment toxic units (TUs) were calculated based on the detected pesticides. Bifentrhin accounted for 4.5 toxic units.
    - Hospital Creek (81.3% Survival): 0.91 TUs were calculated, with esfenvalerate accounting for 0.53 TUs. Although statistically significant toxicity was observed, the survival at this site was the highest observed since 2006.
    - Ingram Creek (60% Survival): 2.18 TUs were calculated, with lambda-cyhalothrin and bifenthrin accouting for 1.65 TUs and 0.4 TUs, respectively. Similar to Hospital Creek, the observed survival in the sample is the highest on record since the Westside Coalition began sediment toxicity monitoring.

- Westley Wasteway near Cox Road (15% Survival): A total of 2.77 TUs, were calculated with lambda-cyhalothrin and bifenthrin accounting for 0.29 TUs and 2.39 TUs respectively.

Bifenthrin, Lambda-cyhalothrin, and Es/fenvlaerate 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 drip systems which do not generate significant tailwater. It is likely that the discharge of these materials were from field crops using furrow or other surface irrigation methods.

Figure 4 shows the number statistically significant observations during the spring sediment sampling events. The spring 2012 sediment results showed smaller number of sites with observed toxicity than the previous year. 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. There appears to be an improving trend in sediment toxicity, possibly due to the Coalition's outreach efforts.

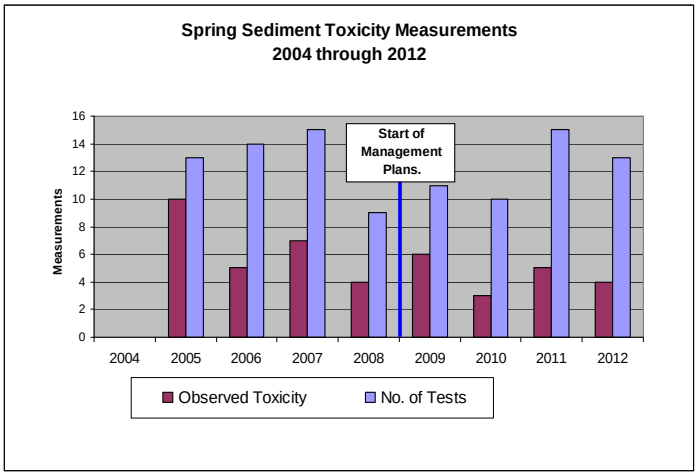


Figure 4: Spring Sediment Toxicity.

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.

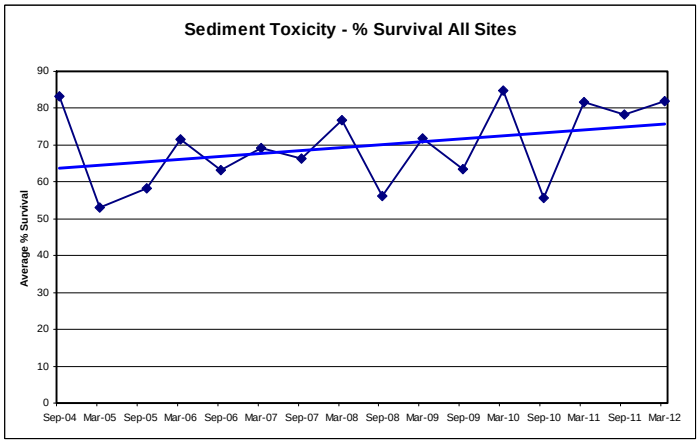


Figure 5: Average Sediment % Survival.

- **Aquatic Toxicity:** Aquatic toxicity to *Ceriodaphnia dubia*, fathead minnow, and algae were tested in accordance with the MRP Order (see **Attachment 7**). A total of 118 aquatic toxicity tests were performed, including 18 field duplicates. A total of 10 incidences of statistically significant toxicity (8.5%) were observed during the irrigation season – two for *Ceriodaphnia dubia*, seven for algae and one for fathead minnow. **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 twelve different pesticides were detected for a total of 119 detections. Forty four of these detections exceeded the established RWQV, however 54% 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 (chlorpyrifos). There were seven observations of algae toxicity, of which five could be tied to herbicides (diuron or Prowl) as the likely cause. 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 September 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 (110 and 86 exceedances, respectively). Bacteria continues to be a leading source of exceedances (37 for E. Coli during this period). There were also 22 boron exceedances. Boron is typically connected with shallow groundwater within the Westside San Joaquin Valley. Other constituent exceedances include dissolved oxygen (13 exceedances), pH (30 exceedances) and arsenic (9 exceedances). 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 13**).

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 94 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**). The Westside Coalition began implementation of management plans in 2008. For a basis of comparison, data from the most recent three year period (September 2009 to August 2012) was compared to the three year period prior to management plan implementation (September 2005 to August 2008) and there are some promising improvements:

- Algae toxicity: 18 exceedances out of 364 tests (5%) for the most current period, compared to 33 exceedances out of 345 tests (9.5%).
- Chlorpyrifos: 53 exceedances out of 614 tests (8.6%) for the most current period compared to 67 exceedances out of 390 tests (17%).
- Diazinon: 2 exceedances out of 615 tests (0.3%) for the most current period compared to 6 exceedances out of 391 tests (1.5%).
- Total pesticide detections: Approximately 2.7% of analyzed pesticides detected in the current period verses almost 5% of analyzed pesticides detected in the period prior to management plan implementation.
- Sediment toxicity: 24 toxicity observations out of 73 tests (33%) in the current period compared to 38 observations out of 85 tests (45%). Additionally, the average percent survival for the current period is 71% compared to the 65% for the period prior to implementation of the management plans.

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

Attachment 1
Sampling Event Details

Event 89	Map	Caltest		APPL	PER				
March, 2012	Desig.	Gen Phy	metals	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	x	x	x		x	x	x	
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	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	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	x	x	x		x	x	x	
Poso Slough at Indiana Avenue	PSAIA	x	x	x		x	x	x	x
~~Los Banos Creek at Sunset Ave~~	~~LBCSA~~								
~~Little Panoche Cr at Western Boundary~~	~~LPCWB~~								
~~Little Panoche Cr at San Luis Canal~~	~~LPCSL~~								
~~Russell Ave. Drain at San Luis Canal~~	~~RADSL~~								
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 90	Map	Caltest		APPL	PER				
April, 2012	Desig.	Gen Phy	metals	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	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	x	x	x		x	x	x	
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	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	x	x	x		x	x	x	
Poso Slough at Indiana Avenue	PSAIA	x	x	x		x	x	x	x
~~Los Banos Creek at Sunset Ave~~	LBCSA								
~~Little Panoche Cr at Western Boundary~~	LPCWB								
~~Little Panoche Cr at San Luis Canal~~	LPCSL								
~~Russell Ave. Drain at San Luis Canal~~	RADSL								
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 91	Map	Caltest		APPL	PER				
May, 2012	Desig.	Gen Phy	metals	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	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	x	x	x		x	x	x	
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	x	x	x		x	x	x	
Poso Slough at Indiana Avenue	PSAIA	x	x	x		x	x	x	x
~~Los Banos Creek at Sunset Ave~~	LBCSA								
~~Little Panoche Cr at Western Boundary~~	LPCWB								
~~Little Panoche Cr at San Luis Canal~~	LPCSL								
~~Russell Ave. Drain at San Luis Canal~~	RADSL								
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 92	Map	Caltest		APPL	PER				
June, 2012	Desig.	Gen Phy	metals	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	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	x	x	x		x	x	x	
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	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	x	x	x		x	x	x	
Poso Slough at Indiana Avenue	PSAIA	x	x	x		x	x	x	x
~~Los Banos Creek at Sunset Ave~~	LBCSA								
~~Little Panoche Cr at Western Boundary~~	LPCWB								
~~Little Panoche Cr at San Luis Canal~~	LPCSL								
~~Russell Ave. Drain at San Luis Canal~~	RADSL								
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 93	Map	Caltest		APPL	PER				Dup?
July, 2012	Desig.	Gen Phy	metals	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	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	x	x	x		x	x	x	
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	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	x
~~Los Banos Creek at Sunset Ave~~	LBCSA								
~~Little Panoche Cr at Western Boundary~~	LPCWB								
~~Little Panoche Cr at San Luis Canal~~	LPCSL								
~~Russell Ave. Drain at San Luis Canal~~	RADSL								
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 94	Map	Caltest		APPL	PER				Dup?
August, 2012	Desig.	Gen Phy	metals	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	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	x	x	x		x	x	x	
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	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	x	x	x		x	x	x	
Poso Slough at Indiana Avenue	PSAIA	x	x	x		x	x	x	x
~~Los Banos Creek at Sunset Ave~~	LBCSA								
~~Little Panoche Cr at Western Boundary~~	LPCWB								
~~Little Panoche Cr at San Luis Canal~~	LPCSL								
~~Russell Ave. Drain at San Luis Canal~~	RADSL								
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	

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
Ingram Creek at River Road	3/13/2012	89	Selenastrum capricornutum	469,000	2,308,000	80%	cells/ml

Followup: A TIE indicated that herbicides were the likely cause of toxicity. Diuron was detected in the sample and is expected to have contributed to the toxicity.

Field Data

DO	7	mg/l
EC	1269	µmhos/cm
Est Depth	1	ft
Flow	8.2	cfs
pH	6.45	
Staff Gage	0.4	ft
Temp	8.31	c

Water Chemistry

Bromide	0.92	DNQ	mg/L
Dissolved Organic Carbon	7.3		mg/L
E. coli	120		MPN/100m
Total Organic Carbon	7.0		mg/L
Dissolved Solids	1000		mg/L
Hardness (as CACO3)	390		mg/L
Suspended Solids	548		mg/L
Turbidity	130		NTU
Arsenic	5.3		ug/L
Boron	951		ug/L
Cadmium	0.08	DNQ	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	14		ug/L
Copper (Dissolved)	1.8		ug/L
Lead	4.4		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	24		ug/L
Nickel (Dissolved)	2.6		ug/L
Selenium	1.1		ug/L
Zinc	45		ug/L
Zinc (Dissolved)	3.7		ug/L
Ammonia as N	0.22		mg/L
Nitrate + Nitrite as N	2.6		mg/L
Nitrogen, Total Kjeldahl	2.4		mg/L
OrthoPhosphate as P	0.27		mg/L
Phosphate as P	0.66		mg/L

Detected Pesticides

DDE(p,p')	0.027	=
Diuron	21	=

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
Los Banos Creek at China Camp Road	3/13/2012	89	Selenastrum capricornutum	1,760,000	2,185,000	19%	cells/ml

Followup: Toxicity was not sufficient to require follow up testing. No pesticides were detected in the sample and the cause of toxicity is not known.

Field Data

DO	10	mg/l
EC	2132	µmhos/cm
Est Depth	2.58	ft
Flow	0	cfs
pH	8.28	
Staff Gage		ft
Temp	13.52	c

Water Chemistry

Bromide	0.92	DNQ	mg/L
Dissolved Organic Carbon	3.6		mg/L
E. coli	150		MPN/100m
Total Organic Carbon	4.2		mg/L
Dissolved Solids	1400		mg/L
Hardness (as CACO3)	460		mg/L
Suspended Solids	295		mg/L
Turbidity	60		NTU
Arsenic	11		ug/L
Boron	1910		ug/L
Cadmium	-0.04	ND	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	1.9		ug/L
Copper (Dissolved)	1.3		ug/L
Lead	0.22	DNQ	ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	3.8		ug/L
Nickel (Dissolved)	2.1		ug/L
Selenium	3.4		ug/L
Zinc	1.8		ug/L
Zinc (Dissolved)	-0.7	ND	ug/L
Ammonia as N	0.18		mg/L
Nitrate + Nitrite as N	5.9		mg/L
Nitrogen, Total Kjeldahl	1.4		mg/L
OrthoPhosphate as P	0.0080	DNQ	mg/L
Phosphate as P	0.30		mg/L

Detected Pesticides

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
Westley Wasteway near Cox Road	3/13/2012	89	Selenastrum capricornutum	191,000	2,308,000	92%	cells/ml

Followup: A TIE indicated that herbicides were the likely cause of toxicity. Diuron was detected in the sample and is expected to have contributed to the toxicity.

Field Data

DO	6	mg/l
EC	930	µmhos/cm
Est Depth	4	ft
Flow	5	cfs
pH	6.55	
Staff Gage		ft
Temp	8.1	c

Water Chemistry

Bromide	0.83	DNQ	mg/L
Dissolved Organic Carbon	7.3		mg/L
E. coli	250		MPN/100m
Total Organic Carbon	7.2		mg/L
Dissolved Solids	930		mg/L
Hardness (as CACO3)	330		mg/L
Suspended Solids	87		mg/L
Turbidity	24		NTU
Arsenic	3.7		ug/L
Boron	880		ug/L
Cadmium	-0.04	ND	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	7.5		ug/L
Copper (Dissolved)	2.0		ug/L
Lead	2.2		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	12		ug/L
Nickel (Dissolved)	2.9		ug/L
Selenium	0.96	DNQ	ug/L
Zinc	23		ug/L
Zinc (Dissolved)	5.0		ug/L
Ammonia as N	0.20		mg/L
Nitrate + Nitrite as N	2.3		mg/L
Nitrogen, Total Kjeldahl	1.9		mg/L
OrthoPhosphate as P	0.058		mg/L
Phosphate as P	0.22		mg/L

Detected Pesticides

DDE(p,p')	0.0074	DNQ
Dimethoate	0.12	=
Diuron	19	=

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	4/10/2012	90	Ceriodaphnia dubia	0	100	100%	%

Followup: A dilution series measured 2.9 toxic units and a TIE indicated that the probable cause of toxicity was metabolically activated compounds. Chlorpyrifos was detected in the sample and suspected of contributing to the toxicity.

Field Data

DO	10	mg/l
EC	1282	µmhos/cm
Est Depth	1.31	ft
Flow	6.4	cfs
pH	7.9	
Staff Gage		ft
Temp	20	c

Water Chemistry

Bromide	0.51	DNQ	mg/L
Dissolved Organic Carbon	6.5		mg/L
E. coli	360		MPN/100m
Total Organic Carbon	7.8		mg/L
Dissolved Solids	790		mg/L
Hardness (as CACO3)	310		mg/L
Suspended Solids	158		mg/L
Turbidity	45		NTU
Arsenic	5.0		ug/L
Boron	562		ug/L
Cadmium	0.04	DNQ	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	4.0		ug/L
Copper (Dissolved)	2.0		ug/L
Lead	0.87		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	6.0		ug/L
Nickel (Dissolved)	2.5		ug/L
Selenium	1.4		ug/L
Zinc	7.9		ug/L
Zinc (Dissolved)	1	DNQ	ug/L
Ammonia as N	1.2		mg/L
Nitrate + Nitrite as N	1.6		mg/L
Nitrogen, Total Kjeldahl	2.6		mg/L
OrthoPhosphate as P	0.26		mg/L
Phosphate as P	0.31		mg/L

Detected Pesticides

Chlorpyrifos	0.66	=
Diuron	0.29	DNQ
Prowl	1.0	=

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
Turner Slough at Edminster Road	4/10/2012	90	Pimephales promelas	83	100	18%	%

Followup: The toxicity was not sufficient to require follow up testing. No pesticides were detected and the cause is not known.

Field Data

DO	6	mg/l
EC	312	µmhos/cm
Est Depth		ft
Flow	0	cfs
pH	8.38	
Staff Gage		ft
Temp	16.01	c

Water Chemistry

Bromide	0.026	DNQ	mg/L
Dissolved Organic Carbon	4.8		mg/L
E. coli	580		MPN/100m
Total Organic Carbon	6.2		mg/L
Dissolved Solids	200		mg/L
Hardness (as CACO3)	120		mg/L
Suspended Solids	33		mg/L
Turbidity	12		NTU
Ammonia as N	0.11		mg/L
Nitrate + Nitrite as N	2.3		mg/L
Nitrogen, Total Kjeldahl	1.2		mg/L
OrthoPhosphate as P	0.19		mg/L
Phosphate as P	0.20		mg/L

Detected Pesticides

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
Del Puerto Creek near Cox Road	5/8/2012	91	Ceriodaphnia dubia	5	95	95%	%

Followup: A TIE was performed but toxicity was not persistent and the cause of toxicity could not be determined. No insecticides were detected in the sample.

Field Data

DO	5.79	mg/l
EC	833	µmhos/cm
Est Depth	1	ft
Flow	18	cfs
pH	7.08	
Staff Gage		ft
Temp	11.95	c

Water Chemistry

Bromide	0.44	DNQ	mg/L
Dissolved Organic Carbon	3.1		mg/L
E. coli	26		MPN/100m
Total Organic Carbon	3.3		mg/L
Dissolved Solids	660		mg/L
Hardness (as CACO3)	310		mg/L
Suspended Solids	104		mg/L
Turbidity	16		NTU
Ammonia as N	0.11		mg/L
Nitrate + Nitrite as N	6.1		mg/L
Nitrogen, Total Kjeldahl	0.75		mg/L
OrthoPhosphate as P	0.11		mg/L
Phosphate as P	0.19		mg/L

Detected Pesticides

Diuron	0.21	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
Orestimba Creek at Hwy 33	5/8/2012	91	Selenastrum capricornutum	1,278,000	2,320,000	45%	cells/ml

Followup: Toxicity was not sufficient to rquire follow up testing. Prowl was detected in the sample and may have contributed to the toxicity.

Field Data

DO	4.36	mg/l
EC	1187	µmhos/cm
Est Depth		ft
Flow	0	cfs
pH	6.99	
Staff Gage		ft
Temp	16.51	c

Water Chemistry

Hardness (as CACO3)	410		mg/L
Arsenic	2.2		ug/L
Boron	405		ug/L
Cadmium	-0.04	ND	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	3.5		ug/L
Copper (Dissolved)	2.0		ug/L
Lead	0.36		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	4.3		ug/L
Nickel (Dissolved)	3.3		ug/L
Selenium	6.1		ug/L
Zinc	17		ug/L
Zinc (Dissolved)	6.1		ug/L

Detected Pesticides

Prowl	2.1	=

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	5/8/2012	91	Selenastrum capricornutum	1,198,000	2,318,000	48%	cells/ml

Followup: Toxicity was not sufficient to require follow up testing. Diuron was present in the sample and is expected to have contributed to the toxicity.

Field Data

DO	5.66	mg/l
EC	912	µmhos/cm
Est Depth	2.21	ft
Flow	31.74	cfs
pH	7.61	
Staff Gage		ft
Temp	22.82	c

Water Chemistry

Bromide	0.32	DNQ	mg/L
Dissolved Organic Carbon	8.1		mg/L
E. coli	2400	>	MPN/100m
Total Organic Carbon	10		mg/L
Dissolved Solids	550		mg/L
Hardness (as CACO3)	210		mg/L
Suspended Solids	308		mg/L
Turbidity	24		NTU
Arsenic	9.3		ug/L
Boron	375		ug/L
Cadmium	0.11		ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	9.4		ug/L
Copper (Dissolved)	2.1		ug/L
Lead	2.9		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	12		ug/L
Nickel (Dissolved)	2.9		ug/L
Selenium	0.46	DNQ	ug/L
Zinc	24		ug/L
Zinc (Dissolved)	-0.7	ND	ug/L
Ammonia as N	1.1		mg/L
Nitrate + Nitrite as N	0.70		mg/L
Nitrogen, Total Kjeldahl	3.4		mg/L
OrthoPhosphate as P	1.3		mg/L
Phosphate as P	1.6		mg/L

Detected Pesticides

Diuron	3.1	=
Prowl	0.78	=
Trifluralin	0.96	=

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
Los Banos Creek at China Camp Road	6/12/2012	92	Selenastrum capricornutum	1,823,000	2,353,000	23%	cells/ml

Followup: Toxicity was not sufficient to require follow up testing and no pesticides were detected. Cause of toxicity is not known.

Field Data

DO	10.37	mg/l
EC	2299	µmhos/cm
Est Depth	2.5	ft
Flow	0	cfs
pH	8.19	
Staff Gage	1.59	ft
Temp	21.26	c

Water Chemistry

Bromide	0.71	DNQ	mg/L
Dissolved Organic Carbon	4.7		mg/L
E. coli	310		MPN/100m
Total Organic Carbon	43		mg/L
Dissolved Solids	1500		mg/L
Hardness (as CACO3)	770		mg/L
Suspended Solids	114		mg/L
Turbidity	50		NTU
Arsenic	22		ug/L
Boron	2440		ug/L
Cadmium	0.25		ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	24		ug/L
Copper (Dissolved)	1.5		ug/L
Lead	6.4		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	58		ug/L
Nickel (Dissolved)	2.2		ug/L
Selenium	5.1		ug/L
Zinc	53		ug/L
Zinc (Dissolved)	-0.7	ND	ug/L
Ammonia as N	0.82		mg/L
Nitrate + Nitrite as N	5.6		mg/L
Nitrogen, Total Kjeldahl	16		mg/L
OrthoPhosphate as P	0.015		mg/L
Phosphate as P	0.75		mg/L

Detected Pesticides

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	6/12/2012	92	Selenastrum capricornutum	1,063,000	2,208,000	52%	cells/ml

Followup: A TIE was performed but toxicity was not persistent. No herbicides were present in the sample and the cause of toxicity is not known.

Field Data

DO	4.55	mg/l
EC	1178	µmhos/cm
Est Depth	2	ft
Flow	0	cfs
pH	7.99	
Staff Gage		ft
Temp	13.1	c

Water Chemistry

Hardness (as CACO3)	470		mg/L
Arsenic	3.1		ug/L
Boron	455		ug/L
Cadmium	-0.04	ND	ug/L
Cadmium (Dissolved)	-0.04	ND	ug/L
Copper	6.3		ug/L
Copper (Dissolved)	2		ug/L
Lead	1.3		ug/L
Lead (Dissolved)	-0.03	ND	ug/L
Nickel	8.4		ug/L
Nickel (Dissolved)	2.8		ug/L
Selenium	7.8		ug/L
Zinc	12		ug/L
Zinc (Dissolved)	6.6		ug/L

Detected Pesticides

DDE(p,p')	0.028	=

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 Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD
Sample Date: 3/13/2012 Site: Poso Slough at Indiana Ave							
Ammonia as N	General Chemistry	8.7		8.9		mg/L	2%
Arsenic	General Chemistry	8.4		8.5		ug/L	1%
Boron	General Chemistry	433		432		ug/L	0%
Bromide	General Chemistry	0.80	DNQ	0.74	DNQ	mg/L	8%
Cadmium	General Chemistry	0.06	DNQ	0.07	DNQ	ug/L	15%
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Copper	General Chemistry	6.5		6.4		ug/L	2%
Copper (Dissolved)	General Chemistry	2.5		2.4		ug/L	4%
Dissolved Organic Carbon	General Chemistry	5.6		5.4		mg/L	4%
E. coli	General Chemistry	190		150		MPN/100mL	24%
Hardness (as CACO3)	General Chemistry	270		240		mg/L	12%
Lead	General Chemistry	1.6		1.6		ug/L	0%
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	8.0		7.9		ug/L	1%
Nickel (Dissolved)	General Chemistry	2.3		2.2		ug/L	4%
Nitrate + Nitrite as N	General Chemistry	2.4		2.4		mg/L	0%
Nitrogen, Total Kjeldahl	General Chemistry	9.5		9.8		mg/L	3%
OrthoPhosphate as P	General Chemistry	0.32		0.33		mg/L	3%
Phosphate as P	General Chemistry	0.48		0.49		mg/L	2%
Selenium	General Chemistry	1.1		1.1		ug/L	0%
Suspended Solids	General Chemistry	111		114		mg/L	3%
Total Organic Carbon	General Chemistry	5.5		5.8		mg/L	5%
Turbidity	General Chemistry	50		55		NTU	10%
Zinc	General Chemistry	15		15		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	0.0076	DNQ	0.0078	DNQ	ug/L	3%
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

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	
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA	
Diuron	Pesticide	0.24	DNQ	0.23	DNQ	ug/L	4%	
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	0.25	=	0.25	=	ug/L	0%	
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	1.2	=	1.2	=	ug/L	0%	
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA	
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA	
Trifluralin	Pesticide	0.049	DNQ	0.049	DNQ	ug/L	0%	
Sample Date: 4/10/2012	**Site: Poso Slough at Indiana Ave**							
Ammonia as N	General Chemistry	1.2		1.2		mg/L	0%	
Arsenic	General Chemistry	5.0		4.9		ug/L	2%	
Boron	General Chemistry	562		574		ug/L	2%	
Bromide	General Chemistry	0.51	DNQ	0.50	DNQ	mg/L	2%	
Cadmium	General Chemistry	0.04	DNQ	0.04	DNQ	ug/L	0%	
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Copper	General Chemistry	4.0		4.1		ug/L	2%	
Copper (Dissolved)	General Chemistry	2.0		2.0		ug/L	0%	
Dissolved Organic Carbon	General Chemistry	6.5		6.5		mg/L	0%	
E. coli	General Chemistry	360		520		MPN/100mL	36%	*
Hardness (as CACO3)	General Chemistry	310		320		mg/L	3%	
Lead	General Chemistry	0.87		0.84		ug/L	4%	

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	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	6.0		5.8		ug/L	3%	
Nickel (Dissolved)	General Chemistry	2.5		2.6		ug/L	4%	
Nitrate + Nitrite as N	General Chemistry	1.6		1.6		mg/L	0%	
Nitrogen, Total Kjeldahl	General Chemistry	2.6		2.7		mg/L	4%	
OrthoPhosphate as P	General Chemistry	0.26		0.28		mg/L	7%	
Phosphate as P	General Chemistry	0.31		0.33		mg/L	6%	
Selenium	General Chemistry	1.4		1.5		ug/L	7%	
Suspended Solids	General Chemistry	158		157		mg/L	1%	
Total Organic Carbon	General Chemistry	7.8		7.9		mg/L	1%	
Turbidity	General Chemistry	45		32		NTU	34%	*
Zinc	General Chemistry	7.9		8.0		ug/L	1%	
Zinc (Dissolved)	General Chemistry	1	DNQ	1.2		ug/L	18%	
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	0.66	=	0.67	=	ug/L	2%	
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	0.29	DNQ	0.28	DNQ	ug/L	4%	
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	

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	
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	1.0	=	0.55	=	ug/L	58%	*
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: 5/8/2012	**Site: Poso Slough at Indiana Ave**							
Ammonia as N	General Chemistry	1.1		1.1		mg/L	0%	
Arsenic	General Chemistry	9.3		9.7		ug/L	4%	
Boron	General Chemistry	375		364		ug/L	3%	
Bromide	General Chemistry	0.32	DNQ	0.33	DNQ	mg/L	3%	
Cadmium	General Chemistry	0.11		0.10		ug/L	10%	
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Copper	General Chemistry	9.4		10		ug/L	6%	
Copper (Dissolved)	General Chemistry	2.1		2.0		ug/L	5%	
Dissolved Organic Carbon	General Chemistry	8.1		8.2		mg/L	1%	
E. coli	General Chemistry	2400	>	2400	>	MPN/100mL	0%	
Hardness (as CACO3)	General Chemistry	210		230		mg/L	9%	
Lead	General Chemistry	2.9		3.1		ug/L	7%	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	12		12		ug/L	0%	
Nickel (Dissolved)	General Chemistry	2.9		2.8		ug/L	4%	
Nitrate + Nitrite as N	General Chemistry	0.70		0.75		mg/L	7%	
Nitrogen, Total Kjeldahl	General Chemistry	3.4		3.9		mg/L	14%	
OrthoPhosphate as P	General Chemistry	1.3		1.4		mg/L	7%	
Phosphate as P	General Chemistry	1.6		1.6		mg/L	0%	
Selenium	General Chemistry	0.46	DNQ	0.48	DNQ	ug/L	4%	
Suspended Solids	General Chemistry	308		300		mg/L	3%	
Total Organic Carbon	General Chemistry	10		8.7		mg/L	14%	
Turbidity	General Chemistry	24		24		NTU	0%	
Zinc	General Chemistry	24		26		ug/L	8%	
Zinc (Dissolved)	General Chemistry	-0.7	ND	1	DNQ	ug/L	NA	
Aldicarb	Pesticide	-0.20	ND	-0.20	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
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	3.1	=	3.1	=	ug/L	0%
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	0.78	=	0.77	=	ug/L	1%
Simazine	Pesticide	-0.08	ND	-0.08	ND	ug/L	NA
Toxaphene	Pesticide	-0.380	ND	-0.380	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
Trifluralin	Pesticide	0.96	=	0.84	=	ug/L	13%
Sample Date: 6/12/2012	**Site: Poso Slough at Indiana Ave**						
Ammonia as N	General Chemistry	1.8		1.9		mg/L	5%
Arsenic	General Chemistry	8.4		8.4		ug/L	0%
Boron	General Chemistry	331		332		ug/L	0%
Bromide	General Chemistry	0.28	DNQ	0.26	DNQ	mg/L	7%
Cadmium	General Chemistry	0.13		0.13		ug/L	0%
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Copper	General Chemistry	13		13		ug/L	0%
Copper (Dissolved)	General Chemistry	2.5		2.3		ug/L	8%
Dissolved Organic Carbon	General Chemistry	6.7		6.9		mg/L	3%
E. coli	General Chemistry	310		370		MPN/100mL	18%
Hardness (as CACO3)	General Chemistry	220		190		mg/L	15%
Lead	General Chemistry	3.9		3.9		ug/L	0%
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	17		16		ug/L	6%
Nickel (Dissolved)	General Chemistry	2.8		2.8		ug/L	0%
Nitrate + Nitrite as N	General Chemistry	4		3.9		mg/L	3%
Nitrogen, Total Kjeldahl	General Chemistry	4.4		4.4		mg/L	0%
OrthoPhosphate as P	General Chemistry	0.31		0.31		mg/L	0%
Phosphate as P	General Chemistry	0.5		0.53		mg/L	6%
Selenium	General Chemistry	0.76	DNQ	0.71	DNQ	ug/L	7%
Suspended Solids	General Chemistry	329		362		mg/L	10%
Total Organic Carbon	General Chemistry	7.6		8.4		mg/L	10%
Turbidity	General Chemistry	160		160		NTU	0%
Zinc	General Chemistry	34		34		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
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

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	
Dimethoate	Pesticide	-0.080	ND	-0.080	ND	ug/L	NA	
Disulfoton	Pesticide	-0.020	ND	-0.020	ND	ug/L	NA	
Diuron	Pesticide	0.27	DNQ	0.27	DNQ	ug/L	0%	
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: 7/10/2012	**Site: Poso Slough at Indiana Ave**							
Ammonia as N	General Chemistry	1.3		1.2		mg/L	8%	
Arsenic	General Chemistry	9.8		9.1		ug/L	7%	
Boron	General Chemistry	284		255		ug/L	11%	
Bromide	General Chemistry	0.25	DNQ	0.27	DNQ	mg/L	8%	
Cadmium	General Chemistry	0.16		0.14		ug/L	13%	
Cadmium (Dissolved)	General Chemistry	-0.05	ND	-0.05	ND	ug/L	NA	
Copper	General Chemistry	15		13		ug/L	14%	
Copper (Dissolved)	General Chemistry	2		2		ug/L	0%	
Dissolved Organic Carbon	General Chemistry	6		6		mg/L	0%	
E. coli	General Chemistry	81		210		MPN/100 mL	89%	*
Hardness as CaCO3	General Chemistry	170		170		mg/L	0%	

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
Lead	General Chemistry	5.1		4.4		ug/L	15%
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	18		17		ug/L	6%
Nickel (Dissolved)	General Chemistry	2.2		2.1		ug/L	5%
Nitrate + Nitrite as N	General Chemistry	1.8		1.8		mg/L	0%
Nitrogen, Total Kjeldahl	General Chemistry	3.6		3.7		mg/L	3%
OrthoPhosphate as P	General Chemistry	0.31		0.32		mg/L	3%
Phosphate as P	General Chemistry	0.59		0.57		mg/L	3%
Selenium	General Chemistry	0.41	DNQ	0.41	DNQ	ug/L	0%
Suspended Solids	General Chemistry	440		438		mg/L	0%
Total Organic Carbon	General Chemistry	6.9		6.7		mg/L	3%
Turbidity	General Chemistry	150		150		NTU	0%
Zinc	General Chemistry	42		37		ug/L	13%
Zinc (Dissolved)	General Chemistry	-0.5	ND	-0.5	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	0.28	DNQ	0.29	DNQ	ug/L	4%
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

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	
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: 8/14/2012 Site: Poso Slough at Indiana Ave

Ammonia as N	General Chemistry	0.24		0.198	DNQ	mg/L	19%	
Arsenic	General Chemistry	8.2		8.3		ug/L	1%	
Boron	General Chemistry	297		290		ug/L	2%	
Bromide	General Chemistry	0.32	DNQ	0.33	DNQ	mg/L	3%	
Cadmium	General Chemistry	0.12		0.22		ug/L	59%	*
Cadmium (Dissolved)	General Chemistry	-0.05	ND	-0.05	ND	ug/L	NA	
Copper	General Chemistry	13		17		ug/L	27%	*
Copper (Dissolved)	General Chemistry	1.7		1.7		ug/L	0%	
Dissolved Organic Carbon	General Chemistry	4.8		4.8		mg/L	0%	
E. coli	General Chemistry	2400	>	2400	>	MPN/100 mL	0%	
Hardness as CaCO3	General Chemistry	180		180		mg/L	0%	
Lead	General Chemistry	4.7		5.2		ug/L	10%	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	17		18		ug/L	6%	
Nickel (Dissolved)	General Chemistry	2		2		ug/L	0%	
Nitrate + Nitrite as N	General Chemistry	0.94		0.88		mg/L	7%	
Nitrogen, Total Kjeldahl	General Chemistry	1.7		2.5		mg/L	38%	*
OrthoPhosphate as P	General Chemistry	0.3		0.24		mg/L	22%	
Phosphate as P	General Chemistry	0.72		0.8		mg/L	11%	
Selenium	General Chemistry	0.52	DNQ	0.55	DNQ	ug/L	6%	
Suspended Solids	General Chemistry	378		380		mg/L	1%	
Total Organic Carbon	General Chemistry	4.7		4.4		mg/L	7%	
Turbidity	General Chemistry	150		150		NTU	0%	
Zinc	General Chemistry	39		37		ug/L	5%	
Zinc (Dissolved)	General Chemistry	-0.5	ND	-0.5	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
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	0.14	=	-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

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
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

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference	
Sample Date:	**3/13/2012**	**Site:**	**Poso Slough at Indiana Ave**					
Ammonia as N	General Chemistry	8.7		-0.040	ND	mg/L	NA	
Arsenic	General Chemistry	8.4		-0.02	ND	ug/L	NA	
Boron	General Chemistry	433		-0.7	ND	ug/L	NA	
Bromide	General Chemistry	0.80	DNQ	-0.010	ND	mg/L	NA	
Cadmium	General Chemistry	0.06	DNQ	-0.04	ND	ug/L	NA	
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA	
Copper	General Chemistry	6.5		3.2		ug/L	51%	*
Copper (Dissolved)	General Chemistry	2.5		3.0		ug/L	20%	*
Dissolved Organic Carbon	General Chemistry	5.6		-0.30	ND	mg/L	NA	
Dissolved Solids	General Chemistry	680		-4.0	ND	mg/L	NA	
E. coli	General Chemistry	190		-1.0	ND	MPN/100mL	NA	
Hardness (as CACO3)	General Chemistry	270		-1.7	ND	mg/L	NA	
Lead	General Chemistry	1.6		-0.03	ND	ug/L	NA	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	8.0		0.09	DNQ	ug/L	99%	
Nickel (Dissolved)	General Chemistry	2.3		0.06	DNQ	ug/L	97%	
Nitrate + Nitrite as N	General Chemistry	2.4		-0.020	ND	mg/L	NA	
Nitrogen, Total Kjeldahl	General Chemistry	9.5		-0.070	ND	mg/L	NA	
OrthoPhosphate as P	General Chemistry	0.32		-0.0060	ND	mg/L	NA	
Phosphate as P	General Chemistry	0.48		-0.0070	ND	mg/L	NA	
Selenium	General Chemistry	1.1		-0.06	ND	ug/L	NA	
Suspended Solids	General Chemistry	111		-1	ND	mg/L	NA	
Total Organic Carbon	General Chemistry	5.5		-0.30	ND	mg/L	NA	
Turbidity	General Chemistry	50		-0.030	ND	NTU	NA	
Zinc	General Chemistry	15		1.8		ug/L	88%	
Zinc (Dissolved)	General Chemistry	-0.7	ND	1.5		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	0.0076	DNQ	0.0038	DNQ	ug/L	50%	*
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	0.24	DNQ	-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	0.25	=	-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	1.2	=	-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	0.049	DNQ	-0.036	ND	ug/L	NA
Sample Date:	**4/10/2012**	**Site:**	**Poso Slough at Indiana Ave**				
Ammonia as N	General Chemistry	1.2		-0.040	ND	mg/L	NA
Arsenic	General Chemistry	5.0		-0.02	ND	ug/L	NA
Boron	General Chemistry	562		-0.7	ND	ug/L	NA
Bromide	General Chemistry	0.51	DNQ	-0.010	ND	mg/L	NA
Cadmium	General Chemistry	0.04	DNQ	-0.04	ND	ug/L	NA
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Copper	General Chemistry	4.0		-0.07	ND	ug/L	NA
Copper (Dissolved)	General Chemistry	2.0		-0.07	ND	ug/L	NA
Dissolved Organic Carbon	General Chemistry	6.5		-0.30	ND	mg/L	NA
Dissolved Solids	General Chemistry	790		-4.0	ND	mg/L	NA
E. coli	General Chemistry	360		-1.0	ND	MPN/100mL	NA
Hardness (as CACO3)	General Chemistry	310		-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	0.87		-0.03	ND	ug/L	NA
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	6.0		-0.04	ND	ug/L	NA
Nickel (Dissolved)	General Chemistry	2.5		-0.04	ND	ug/L	NA
Nitrate + Nitrite as N	General Chemistry	1.6		-0.020	ND	mg/L	NA
Nitrogen, Total Kjeldahl	General Chemistry	2.6		-0.070	ND	mg/L	NA
OrthoPhosphate as P	General Chemistry	0.26		-0.0060	ND	mg/L	NA
Phosphate as P	General Chemistry	0.31		-0.0070	ND	mg/L	NA
Selenium	General Chemistry	1.4		-0.06	ND	ug/L	NA
Suspended Solids	General Chemistry	158		-1	ND	mg/L	NA
Total Organic Carbon	General Chemistry	7.8		-0.30	ND	mg/L	NA
Turbidity	General Chemistry	45		-0.030	ND	NTU	NA
Zinc	General Chemistry	7.9		-0.7	ND	ug/L	NA
Zinc (Dissolved)	General Chemistry	1	DNQ	-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	0.66	=	-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	0.29	DNQ	-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	1.0	=	-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:	**5/8/2012**	**Site:**	**Poso Slough at Indiana Ave**				
Ammonia as N	General Chemistry	1.1		-0.040	ND	mg/L	NA
Arsenic	General Chemistry	9.3		0.02	DNQ	ug/L	100%
Boron	General Chemistry	375		-0.7	ND	ug/L	NA
Bromide	General Chemistry	0.32	DNQ	-0.010	ND	mg/L	NA
Cadmium	General Chemistry	0.11		-0.04	ND	ug/L	NA
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Copper (Dissolved)	General Chemistry	2.1		-0.07	ND	ug/L	NA
Dissolved Organic Carbon	General Chemistry	8.1		0.40	DNQ	mg/L	95%
Dissolved Solids	General Chemistry	550		-4.0	ND	mg/L	NA
E. coli	General Chemistry	2400	>	-1.0	ND	MPN/100mL	NA
Hardness (as CACO3)	General Chemistry	210		-1.7	ND	mg/L	NA
Lead	General Chemistry	2.9		0.03	DNQ	ug/L	99%
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	12		-0.04	ND	ug/L	NA
Nickel (Dissolved)	General Chemistry	2.9		-0.04	ND	ug/L	NA
Nitrate + Nitrite as N	General Chemistry	0.70		0.042	DNQ	mg/L	94%
Nitrogen, Total Kjeldahl	General Chemistry	3.4		-0.070	ND	mg/L	NA
OrthoPhosphate as P	General Chemistry	1.3		-0.0060	ND	mg/L	NA
Phosphate as P	General Chemistry	1.6		-0.0070	ND	mg/L	NA
Selenium	General Chemistry	0.46	DNQ	-0.06	ND	ug/L	NA
Suspended Solids	General Chemistry	308		-1	ND	mg/L	NA
Total Organic Carbon	General Chemistry	10		-0.30	ND	mg/L	NA
Turbidity	General Chemistry	24		-0.030	ND	NTU	NA
Zinc	General Chemistry	24		-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

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
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	3.1	=	-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	0.78	=	-0.04	ND	ug/L	NA
Simazine	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
Toxaphene	Pesticide	-0.380	ND	-0.380	ND	ug/L	NA
Trifluralin	Pesticide	0.96	=	-0.036	ND	ug/L	NA
Sample Date:	**6/12/2012**	**Site:**	**Poso Slough at Indiana Ave**				
Ammonia as N	General Chemistry	1.8		-0.04	ND	mg/L	NA
Arsenic	General Chemistry	8.4		0.1	DNQ	ug/L	99%
Boron	General Chemistry	331		-0.7	ND	ug/L	NA
Bromide	General Chemistry	0.28	DNQ	-0.01	ND	mg/L	NA
Cadmium	General Chemistry	0.13		-0.04	ND	ug/L	NA
Cadmium (Dissolved)	General Chemistry	-0.04	ND	-0.04	ND	ug/L	NA
Copper	General Chemistry	13		-0.07	ND	ug/L	NA
Copper (Dissolved)	General Chemistry	2.5		-0.07	ND	ug/L	NA
Dissolved Organic Carbon	General Chemistry	6.7		0.6		mg/L	91%
Dissolved Solids	General Chemistry	490		-4	ND	mg/L	NA
E. coli	General Chemistry	310		-1	ND	MPN/100mL	NA
Hardness (as CACO3)	General Chemistry	220		-1.7	ND	mg/L	NA
Lead	General Chemistry	3.9		-0.03	ND	ug/L	NA
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	17		-0.04	ND	ug/L	NA
Nickel (Dissolved)	General Chemistry	2.8		-0.04	ND	ug/L	NA
Nitrate + Nitrite as N	General Chemistry	4		-0.02	ND	mg/L	NA
Nitrogen, Total Kjeldahl	General Chemistry	4.4		-0.07	ND	mg/L	NA
OrthoPhosphate as P	General Chemistry	0.31		-0.006	ND	mg/L	NA
Phosphate as P	General Chemistry	0.5		-0.007	ND	mg/L	NA
Selenium	General Chemistry	0.76	DNQ	-0.06	ND	ug/L	NA
Suspended Solids	General Chemistry	329		-1	ND	mg/L	NA
Total Organic Carbon	General Chemistry	7.6		1		mg/L	87%
Turbidity	General Chemistry	160		-0.03	ND	NTU	NA
Zinc	General Chemistry	34		-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

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	
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	0.27	DNQ	-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:	**7/10/2012**	**Site:**	**Poso Slough at Indiana Ave**					
Ammonia as N	General Chemistry	1.3		-0.04	ND	mg/L	NA	
Arsenic	General Chemistry	9.8		-0.06	ND	ug/L	NA	
Boron	General Chemistry	284		-2	ND	ug/L	NA	
Bromide	General Chemistry	0.25	DNQ	-0.01	ND	mg/L	NA	
Cadmium	General Chemistry	0.16		-0.05	ND	ug/L	NA	
Cadmium (Dissolved)	General Chemistry	-0.05	ND	-0.05	ND	ug/L	NA	
Copper	General Chemistry	15		-0.07	ND	ug/L	NA	
Copper (Dissolved)	General Chemistry	2		0.26	DNQ	ug/L	87%	
Dissolved Organic Carbon	General Chemistry	6		1.6		mg/L	73%	*
Dissolved Solids	General Chemistry	400		-4	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
E. coli	General Chemistry	81		-1	ND	MPN/100 mL	NA
Hardness as CaCO3	General Chemistry	170		-1.7	ND	mg/L	NA
Lead	General Chemistry	5.1		-0.03	ND	ug/L	NA
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA
Nickel	General Chemistry	18		-0.06	ND	ug/L	NA
Nickel (Dissolved)	General Chemistry	2.2		-0.06	ND	ug/L	NA
Nitrate + Nitrite as N	General Chemistry	1.8		-0.02	ND	mg/L	NA
Nitrogen, Total Kjeldahl	General Chemistry	3.6		-0.07	ND	mg/L	NA
OrthoPhosphate as P	General Chemistry	0.31		-0.006	ND	mg/L	NA
Phosphate as P	General Chemistry	0.59		-0.007	ND	mg/L	NA
Selenium	General Chemistry	0.41	DNQ	-0.06	ND	ug/L	NA
Suspended Solids	General Chemistry	440		-2	ND	mg/L	NA
Total Organic Carbon	General Chemistry	6.9		0.37	DNQ	mg/L	95%
Turbidity	General Chemistry	150		-0.03	ND	NTU	NA
Zinc	General Chemistry	42		-0.5	ND	ug/L	NA
Zinc (Dissolved)	General Chemistry	-0.5	ND	-0.5	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	0.28	DNQ	-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

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, 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:	**8/14/2012**	**Site:**	**Poso Slough at Indiana Ave**					
Ammonia as N	General Chemistry	0.24		-0.08	ND	mg/L	NA	
Arsenic	General Chemistry	8.2		-0.06	ND	ug/L	NA	
Boron	General Chemistry	297		-2	ND	ug/L	NA	
Bromide	General Chemistry	0.32	DNQ	-0.01	ND	mg/L	NA	
Cadmium	General Chemistry	0.12		-0.05	ND	ug/L	NA	
Cadmium (Dissolved)	General Chemistry	-0.05	ND	-0.05	ND	ug/L	NA	
Copper	General Chemistry	13		0.08	DNQ	ug/L	99%	
Copper (Dissolved)	General Chemistry	1.7		-0.07	ND	ug/L	NA	
Dissolved Organic Carbon	General Chemistry	4.8		1		mg/L	79%	*
Dissolved Solids	General Chemistry	480		-4	ND	mg/L	NA	
E. coli	General Chemistry	2400	>	-1	ND	MPN/100 mL	NA	
Hardness as CaCO3	General Chemistry	180		-1.7	ND	mg/L	NA	
Lead	General Chemistry	4.7		-0.03	ND	ug/L	NA	
Lead (Dissolved)	General Chemistry	-0.03	ND	-0.03	ND	ug/L	NA	
Nickel	General Chemistry	17		-0.06	ND	ug/L	NA	
Nickel (Dissolved)	General Chemistry	2		-0.06	ND	ug/L	NA	
Nitrate + Nitrite as N	General Chemistry	0.94		-0.02	ND	mg/L	NA	
Nitrogen, Total Kjeldahl	General Chemistry	1.7		0.088	DNQ	mg/L	95%	
OrthoPhosphate as P	General Chemistry	0.3		-0.006	ND	mg/L	NA	
Phosphate as P	General Chemistry	0.72		-0.007	ND	mg/L	NA	
Selenium	General Chemistry	0.52	DNQ	-0.06	ND	ug/L	NA	
Suspended Solids	General Chemistry	378		-2	ND	mg/L	NA	
Total Organic Carbon	General Chemistry	4.7		-0.3	ND	mg/L	NA	
Turbidity	General Chemistry	150		-0.03	ND	NTU	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
Zinc	General Chemistry	39		-0.5	ND	ug/L	NA
Zinc (Dissolved)	General Chemistry	-0.5	ND	-0.5	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	0.14	=	-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

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
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

Event = Event Sample Result FB = Field Blank Sample Result

Attachment 4
Sediment Toxicity Follow-up Analyses

Sediment Toxicity Follow-up Analysis

Hospital Creek at River Road

Toxicity Results Hyalella azteca 81.25 %

Sample Event: 89 3/12/2012

Pesticide	Results	Units
4,4'-DDD	0.003 DNQ	mg/kg
4,4'-DDE	0.094	mg/kg
4,4'-DDT	0.022	mg/kg
Bifenthrin	0.31	ug/kg
Chlorpyrifos	ND	ug/kg
Cyfluthrin	ND	ug/kg
Cypermethrin	ND	ug/kg
Esfenvalerate:Fenvalerate	4.2	ug/kg
Fenpropathrin	ND	ug/kg
Lambda-Cyhalothrin	0.6	ug/kg
Permethrin	ND	ug/kg
Total Organic Carbon	5000	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 60 %

Sample Event: 89 3/12/2012

Pesticide	Results	Units
4,4'-DDD	0.0073	mg/kg
4,4'-DDE	0.14	mg/kg
4,4'-DDT	0.037	mg/kg
Bifenthrin	2	ug/kg
Chlorpyrifos	0.91	ug/kg
Esfenvalerate:Fenvalerate	1.2	ug/kg
Fenpropathrin	0.15 DNQ	ug/kg
Lambda-Cyhalothrin	7.1	ug/kg
Total Organic Carbon	9200	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 36.25 %

Sample Event: 89 3/12/2012

Pesticide	Results	Units
4,4'-DDD	0.017	mg/kg
4,4'-DDE	0.33	mg/kg
4,4'-DDT	0.12	mg/kg
Bifenthrin	24.8	ug/kg
Chlorpyrifos	0.79	ug/kg
Cyfluthrin	0.57	ug/kg
Esfenvalerate:Fenvalerate	5.7	ug/kg
Lambda-Cyhalothrin	0.61	ug/kg
Permethrin	0.35	ug/kg
Total Organic Carbon	10000	mg/kg

DNQ: Result is below the report limit and is estimated

Sediment Toxicity Follow-up Analysis

Westley Wasteway near Cox Road

Toxicity Results Hyalella azteca 15 %

Sample Event: 89 3/12/2012

Pesticide	Results	Units
4,4'-DDD	0.0038 DN	mg/kg
4,4'-DDE	0.1	mg/kg
Bifenthrin	21.8	ug/kg
Chlorpyrifos	0.61	ug/kg
Cyfluthrin	0.12 DNQ	ug/kg
Esfenvalerate:Fenvalerate	1.5	ug/kg
Lambda-Cyhalothrin	2.3	ug/kg
Total Organic Carbon	17000	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 3/1/2012 to 9/1/2012

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	2	106
Aquatic Toxicity	Pimephales promelas	1	18
Aquatic Toxicity	Selenastrum capricornutum	7	46
Field Data	DO	13	133
Field Data	EC	110	133
Field Data	pH	30	154
General Chemistry	Ammonia as N	4	88
General Chemistry	Arsenic	9	46
General Chemistry	Boron	22	64
General Chemistry	E. Coli	37	106
General Chemistry	Selenium	4	46
General Chemistry	Total Dissolved Solids	86	106
Pesticide	Chlorpyrifos	7	129
Pesticide	DDE(p,p')	20	71
Pesticide	DDT(p,p')	4	71
Pesticide	Dimethoate	1	130
Pesticide	Diuron	5	106
Pesticide	Malathion	4	130
Sediment Toxicity	Hyalella azteca	3	13

Westside San Joaquin River Watershed Coalition

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

Blewett Drain at Highway 132

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	6
Field Data	EC	5	6
General Chemistry	Ammonia as N	1	5
General Chemistry	E. Coli	1	5
General Chemistry	Total Dissolved Solids	4	5
Pesticide	Chlorpyrifos	2	5
Pesticide	Diuron	2	5

Del Puerto Creek at Hwy 33

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	2	2
Field Data	pH	1	2

Del Puerto Creek near Cox Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	6
Field Data	EC	7	7
Field Data	pH	2	7
General Chemistry	Total Dissolved Solids	6	6
Pesticide	DDE(p,p')	2	6
Pesticide	DDT(p,p')	1	6

Delta Mendota Canal at DPWD

Type	Constituent	# of Exceedances	# of Tests
General Chemistry	Total Dissolved Solids	1	6

Hospital Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	6
Field Data	EC	4	6
Field Data	pH	1	6
General Chemistry	Arsenic	2	5
General Chemistry	Boron	2	5
Pesticide	Chlorpyrifos	1	6

Ingram Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	1	6
Field Data	EC	7	7
Field Data	pH	2	7

General Chemistry	Arsenic	1	6
General Chemistry	Boron	4	6
General Chemistry	E. Coli	1	6
General Chemistry	Total Dissolved Solids	6	6
Pesticide	Chlorpyrifos	1	7
Pesticide	DDE(p,p')	6	6
Pesticide	DDT(p,p')	1	6
Pesticide	Diuron	1	6
Sediment Toxicity	Hyalella azteca	1	1

Los Banos Creek at China Camp Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	2	6
Field Data	EC	7	7
Field Data	pH	2	9
General Chemistry	Arsenic	3	6
General Chemistry	Boron	6	6
General Chemistry	E. Coli	4	6
General Chemistry	Selenium	1	6
General Chemistry	Total Dissolved Solids	6	6

Los Banos Creek at Hwy 140

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	6	6
Field Data	pH	1	8
General Chemistry	Arsenic	3	6
General Chemistry	Boron	6	6
General Chemistry	E. Coli	6	6
General Chemistry	Total Dissolved Solids	6	6

Marshall Road Drain near River Road

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

Mud Slough Upstream of San Luis Drain

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	6	6
Field Data	pH	3	8
General Chemistry	E. Coli	2	6
General Chemistry	Total Dissolved Solids	6	6

Westside San Joaquin River Watershed Coalition

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

Newman Wasteway near Hills Ferry Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	7
Field Data	EC	7	7
General Chemistry	E. Coli	4	6
General Chemistry	Total Dissolved Solids	6	6
Pesticide	Dimethoate	1	6

Orestimba Creek at Hwy 33

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	2	6
Field Data	DO	4	7
Field Data	EC	6	7
Field Data	pH	1	7
General Chemistry	Selenium	3	6
Pesticide	DDE(p,p')	5	6
Pesticide	DDT(p,p')	2	6
Sediment Toxicity	Hyalella azteca	1	1

Orestimba Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	6
Field Data	EC	5	6
Field Data	pH	3	6
General Chemistry	E. Coli	2	5
General Chemistry	Total Dissolved Solids	3	5
Pesticide	DDE(p,p')	4	5

Poso Slough at Indiana Ave

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	6
Aquatic Toxicity	Selenastrum capricornutum	1	6
Field Data	EC	5	6
Field Data	pH	2	8
General Chemistry	Ammonia as N	2	6
General Chemistry	E. Coli	4	6
General Chemistry	Total Dissolved Solids	5	6
Pesticide	Chlorpyrifos	1	6
Pesticide	Diuron	1	6
Pesticide	Malathion	1	6

Westside San Joaquin River Watershed Coalition

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

Ramona Lake near Fig Avenue

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	6
Field Data	EC	6	6
Field Data	pH	2	6
General Chemistry	Total Dissolved Solids	6	6
Pesticide	DDE(p,p')	1	6

Salt Slough at Lander Ave

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	6	6
General Chemistry	Total Dissolved Solids	6	6
Pesticide	Malathion	1	6

Salt Slough at Sand Dam

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	6	6
Field Data	pH	1	8
Pesticide	Chlorpyrifos	1	6
Pesticide	Malathion	1	6

San Joaquin River at Lander Ave

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	6	6
Field Data	pH	4	8
General Chemistry	E. Coli	3	6
General Chemistry	Total Dissolved Solids	6	6
Pesticide	Malathion	1	6

San Joaquin River at PID Pumps

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	6	6
Field Data	pH	1	6
General Chemistry	Boron	3	6
General Chemistry	E. Coli	2	6
General Chemistry	Total Dissolved Solids	6	6

San Joaquin River at Sack Dam

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	1	6
Field Data	pH	3	8
General Chemistry	Total Dissolved Solids	1	6

Westside San Joaquin River Watershed Coalition

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

Turner Slough at Edminster Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Pimephales promelas	1	6
Field Data	DO	4	6
Field Data	EC	2	5
General Chemistry	Ammonia as N	1	6
General Chemistry	E. Coli	2	6
General Chemistry	Total Dissolved Solids	2	6

Westley Wasteway near Cox Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	1	6
Field Data	EC	4	7
General Chemistry	Boron	1	6
General Chemistry	E. Coli	5	6
General Chemistry	Total Dissolved Solids	5	6
Pesticide	DDE(p,p')	2	6
Pesticide	Diuron	1	6
Sediment Toxicity	Hyalella azteca	1	1

Westside San Joaquin River Watershed Coalition

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

Blewett Drain at Highway 132

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	835		µmhos/cm		700	
EC	89	3/13/2012	810		µmhos/cm		700	
Total Dissolved Solids	89	3/13/2012	700		mg/L		450	
Chlorpyrifos	90	4/10/2012	0.024	=	ug/L		0.015	
Diuron	90	4/10/2012	16	=	ug/L		2	
DO	90	4/10/2012	4		mg/l			5
EC	90	4/10/2012	845		µmhos/cm		700	
Total Dissolved Solids	90	4/10/2012	700		mg/L		450	
Ammonia as N	91	5/8/2012	2.6		mg/L		1.5	
Diuron	91	5/8/2012	8.7	=	ug/L		2	
E. Coli	91	5/8/2012	>2400		MPN/100mL		235	
EC	92	6/12/2012	820		µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	620		mg/L		450	
Chlorpyrifos	94	8/14/2012	0.14	=	ug/L		0.015	
EC	94	8/14/2012	867		µmhos/cm		700	
Total Dissolved Solids	94	8/14/2012	580		mg/L		450	

Del Puerto Creek at Hwy 33

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	1100		µmhos/cm		700	
EC	89	3/13/2012	1190		µmhos/cm		700	
pH	89	3/13/2012	6.39				8.5	6.5

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 3/1/2012 to 9/1/2012

Del Puerto Creek near Cox Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	1211		µmhos/cm		700	
pH	89	3/12/2012	6.46				8.5	6.5
DDE(p,p')	89	3/13/2012	0.015	=	ug/L		0.00059	
DDT(p,p')	89	3/13/2012	0.007	DNQ	ug/L		0.00059	
EC	89	3/13/2012	1190		µmhos/cm		700	
pH	89	3/13/2012	6.46				8.5	6.5
Total Dissolved Solids	89	3/13/2012	1100		mg/L		450	
EC	90	4/10/2012	1313		µmhos/cm		700	
Total Dissolved Solids	90	4/10/2012	1100		mg/L		450	
Ceriodaphnia dubia	91	5/8/2012	5		%	yes		
EC	91	5/8/2012	833		µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	660		mg/L		450	
DDE(p,p')	92	6/12/2012	0.0059	DNQ	ug/L		0.00059	
EC	92	6/12/2012	1001		µmhos/cm		700	
Flow	92	6/12/2012	0		cfs			0.01
Total Dissolved Solids	92	6/12/2012	720		mg/L		450	
EC	93	7/10/2012	1195		µmhos/cm		700	
Total Dissolved Solids	93	7/10/2012	860		mg/L		450	
EC	94	8/14/2012	1055		µmhos/cm		700	
Total Dissolved Solids	94	8/14/2012	690		mg/L		450	

Delta Mendota Canal at DPWD

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
Total Dissolved Solids	90	4/10/2012	520		mg/L		450	

Hospital Creek at River Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	1165		µmhos/cm		700	
pH	89	3/12/2012	6.41				8.5	6.5
Flow	89	3/13/2012	0		cfs			0.01
Arsenic	90	4/10/2012	17		ug/L		10	
Chlorpyrifos	90	4/10/2012	0.071	=	ug/L		0.015	
EC	90	4/10/2012	885		µmhos/cm		700	
DO	91	5/8/2012	4.89		mg/l			5
Boron	92	6/12/2012	733		ug/L		700	
EC	92	6/12/2012	1029		µmhos/cm		700	
Arsenic	93	7/10/2012	16		ug/L		10	
Boron	93	7/10/2012	714		ug/L		700	
EC	93	7/10/2012	1048		µmhos/cm		700	

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 3/1/2012 to 9/1/2012

Ingram Creek at River Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	1269		µmhos/cm		700	
Hyalella azteca	89	3/12/2012	60		%	yes		
Boron	89	3/13/2012	951		ug/L		700	
DDE(p,p')	89	3/13/2012	0.027	=	ug/L		0.00059	
Diuron	89	3/13/2012	21	=	ug/L		2	
EC	89	3/13/2012	1269		µmhos/cm		700	
pH	89	3/13/2012	6.45				8.5	6.5
Selenastrum capricornutum	89	3/13/2012	469000		cells/ml	yes		
Total Dissolved Solids	89	3/13/2012	1000		mg/L		450	
Boron	90	4/10/2012	1030		ug/L		700	
DDE(p,p')	90	4/10/2012	0.017	=	ug/L		0.00059	
EC	90	4/10/2012	1307		µmhos/cm		700	
Total Dissolved Solids	90	4/10/2012	1000		mg/L		450	
DDE(p,p')	91	5/8/2012	0.0066	DNQ	ug/L		0.00059	
EC	91	5/8/2012	801		µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	590		mg/L		450	
Arsenic	92	6/12/2012	16		ug/L		10	
Boron	92	6/12/2012	1030		ug/L		700	
DDE(p,p')	92	6/12/2012	0.029	=	ug/L		0.00059	
E. Coli	92	6/12/2012	2000		MPN/100mL		235	
EC	92	6/12/2012	1075		µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	990		mg/L		450	
Boron	93	7/10/2012	835		ug/L		700	
Chlorpyrifos	93	7/10/2012	0.052	=	ug/L		0.015	
DDE(p,p')	93	7/10/2012	0.033	=	ug/L		0.00059	
DDT(p,p')	93	7/10/2012	0.012	=	ug/L		0.00059	
EC	93	7/10/2012	1134		µmhos/cm		700	
pH	93	7/10/2012	8.58				8.5	6.5
Total Dissolved Solids	93	7/10/2012	830		mg/L		450	
DDE(p,p')	94	8/14/2012	0.03	=	ug/L		0.00059	
EC	94	8/14/2012	1046		µmhos/cm		700	
Total Dissolved Solids	94	8/14/2012	720		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 3/1/2012 to 9/1/2012

Los Banos Creek at China Camp Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	2101	µmhos/cm		700	
pH	89	3/12/2012	8.87			8.5	6.5
Arsenic	89	3/13/2012	11	ug/L		10	
Boron	89	3/13/2012	1910	ug/L		700	
EC	89	3/13/2012	2132	µmhos/cm		700	
Flow	89	3/13/2012	0	cfs			0.01
Selenastrum capricornutum	89	3/13/2012	1760000	cells/ml	yes		
Total Dissolved Solids	89	3/13/2012	1400	mg/L		450	
Boron	90	4/10/2012	1830	ug/L		700	
EC	90	4/10/2012	2016	µmhos/cm		700	
Flow	90	4/10/2012	0	cfs			0.01
pH	90	4/10/2012	8.56			8.5	6.5
Total Dissolved Solids	90	4/10/2012	1200	mg/L		450	
Boron	91	5/8/2012	889	ug/L		700	
E. Coli	91	5/8/2012	920	MPN/100mL		235	
EC	91	5/8/2012	1202	µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	720	mg/L		450	
Arsenic	92	6/12/2012	22	ug/L		10	
Boron	92	6/12/2012	2440	ug/L		700	
E. Coli	92	6/12/2012	310	MPN/100mL		235	
EC	92	6/12/2012	2299	µmhos/cm		700	
Flow	92	6/12/2012	0	cfs			0.01
Selenastrum capricornutum	92	6/12/2012	1823000	cells/ml	yes		
Selenium	92	6/12/2012	5.1	ug/L		5	
Total Dissolved Solids	92	6/12/2012	1500	mg/L		450	
Boron	93	7/10/2012	916	ug/L		700	
E. Coli	93	7/10/2012	2000	MPN/100 mL		235	
EC	93	7/10/2012	1460	µmhos/cm		700	
Flow	93	7/10/2012	0	cfs			0.01
Total Dissolved Solids	93	7/10/2012	640	mg/L		450	
Arsenic	94	8/14/2012	14	ug/L		10	
Boron	94	8/14/2012	2350	ug/L		700	
E. Coli	94	8/14/2012	290	MPN/100 mL		235	
EC	94	8/14/2012	2284	µmhos/cm		700	
Flow	94	8/14/2012	0	cfs			0.01
Total Dissolved Solids	94	8/14/2012	1400	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 3/1/2012 to 9/1/2012

Los Banos Creek at Hwy 140

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
Boron	89	3/13/2012	2180		ug/L		700	
E. Coli	89	3/13/2012	2000		MPN/100mL		235	
EC	89	3/13/2012	2652		µmhos/cm		700	
Total Dissolved Solids	89	3/13/2012	1600		mg/L		450	
Arsenic	90	4/10/2012	13		ug/L		10	
Boron	90	4/10/2012	2360		ug/L		700	
E. Coli	90	4/10/2012	240		MPN/100mL		235	
EC	90	4/10/2012	2641		µmhos/cm		700	
pH	90	4/10/2012	8.86				8.5	6.5
Total Dissolved Solids	90	4/10/2012	1600		mg/L		450	
Arsenic	91	5/8/2012	12		ug/L		10	
Boron	91	5/8/2012	1820		ug/L		700	
E. Coli	91	5/8/2012	2400		MPN/100mL		235	
EC	91	5/8/2012	2115		µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	1300		mg/L		450	
Boron	92	6/12/2012	1100		ug/L		700	
E. Coli	92	6/12/2012	360		MPN/100mL		235	
EC	92	6/12/2012	1514		µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	810		mg/L		450	
Arsenic	93	7/10/2012	17		ug/L		10	
Boron	93	7/10/2012	1260		ug/L		700	
E. Coli	93	7/10/2012	2400	>	MPN/100 mL		235	
EC	93	7/10/2012	1568		µmhos/cm		700	
Total Dissolved Solids	93	7/10/2012	930		mg/L		450	
Boron	94	8/14/2012	812		ug/L		700	
E. Coli	94	8/14/2012	2400	>	MPN/100 mL		235	
EC	94	8/14/2012	1114		µmhos/cm		700	
Total Dissolved Solids	94	8/14/2012	680		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 3/1/2012 to 9/1/2012

Marshall Road Drain near River Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/13/2012	990		µmhos/cm		700	
pH	89	3/13/2012	6.25				8.5	6.5
Total Dissolved Solids	89	3/13/2012	1100		mg/L		450	
EC	90	4/10/2012	1329		µmhos/cm		700	
Total Dissolved Solids	90	4/10/2012	1000		mg/L		450	
Chlorpyrifos	91	5/8/2012	0.17	=	ug/L		0.015	
E. Coli	91	5/8/2012	2400		MPN/100mL		235	
EC	91	5/8/2012	817		µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	540		mg/L		450	
EC	92	6/12/2012	968		µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	670		mg/L		450	
EC	93	7/10/2012	1119		µmhos/cm		700	
Total Dissolved Solids	93	7/10/2012	820		mg/L		450	
EC	94	8/14/2012	952		µmhos/cm		700	

Mud Slough Upstream of San Luis Drain

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/13/2012	2464		µmhos/cm		700	
Total Dissolved Solids	89	3/13/2012	1600		mg/L		450	
EC	90	4/10/2012	2537		µmhos/cm		700	
pH	90	4/10/2012	8.53				8.5	6.5
Total Dissolved Solids	90	4/10/2012	1700		mg/L		450	
E. Coli	91	5/8/2012	250		MPN/100mL		235	
EC	91	5/8/2012	1166		µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	710		mg/L		450	
EC	92	6/12/2012	1403		µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	900		mg/L		450	
E. Coli	93	7/10/2012	2400		MPN/100 mL		235	
EC	93	7/10/2012	4410		µmhos/cm		700	
pH	93	7/10/2012	8.63				8.5	6.5
Total Dissolved Solids	93	7/10/2012	890		mg/L		450	
EC	94	8/14/2012	1235		µmhos/cm		700	
pH	94	8/14/2012	8.66				8.5	6.5
Total Dissolved Solids	94	8/14/2012	820		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 3/1/2012 to 9/1/2012

Newman Wasteway near Hills Ferry Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	903		µmhos/cm		700	
DO	89	3/13/2012	4.79		mg/l			5
EC	89	3/13/2012	1597		µmhos/cm		700	
Total Dissolved Solids	89	3/13/2012	970		mg/L		450	
Dimethoate	90	4/10/2012	3.3	=	ug/L		1	
EC	90	4/10/2012	1327		µmhos/cm		700	
Total Dissolved Solids	90	4/10/2012	800		mg/L		450	
E. Coli	91	5/8/2012	340		MPN/100mL		235	
EC	91	5/8/2012	1651		µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	1000		mg/L		450	
E. Coli	92	6/12/2012	410		MPN/100mL		235	
EC	92	6/12/2012	1330		µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	840		mg/L		450	
E. Coli	93	7/10/2012	770		MPN/100 mL		235	
EC	93	7/10/2012	1110		µmhos/cm		700	
Total Dissolved Solids	93	7/10/2012	730		mg/L		450	
E. Coli	94	8/14/2012	350		MPN/100 mL		235	
EC	94	8/14/2012	1029		µmhos/cm		700	
Total Dissolved Solids	94	8/14/2012	640		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 3/1/2012 to 9/1/2012

Orestimba Creek at Hwy 33

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	811		µmhos/cm		700	
Flow	89	3/12/2012	0		cfs			0.01
Hyalella azteca	89	3/12/2012	36.25		%	yes		
DDE(p,p')	89	3/13/2012	0.015	=	ug/L		0.00059	
EC	89	3/13/2012	809		µmhos/cm		700	
DDE(p,p')	90	4/10/2012	0.044	=	ug/L		0.00059	
DO	90	4/10/2012	4		mg/l			5
EC	90	4/10/2012	823		µmhos/cm		700	
Flow	90	4/10/2012	0		cfs			0.01
DO	91	5/8/2012	4.36		mg/l			5
EC	91	5/8/2012	1187		µmhos/cm		700	
Flow	91	5/8/2012	0		cfs			0.01
Selenastrum capricornutum	91	5/8/2012	1278000		cells/ml	yes		
Selenium	91	5/8/2012	6.1		ug/L		5	
DDE(p,p')	92	6/12/2012	0.028	=	ug/L		0.00059	
DO	92	6/12/2012	4.55		mg/l			5
EC	92	6/12/2012	1178		µmhos/cm		700	
Flow	92	6/12/2012	0		cfs			0.01
Selenastrum capricornutum	92	6/12/2012	1063000		cells/ml	yes		
Selenium	92	6/12/2012	7.8		ug/L		5	
DDE(p,p')	93	7/10/2012	0.09	=	ug/L		0.00059	
DDT(p,p')	93	7/10/2012	0.043	=	ug/L		0.00059	
DO	93	7/10/2012	4.81		mg/l			5
EC	93	7/10/2012	1241		µmhos/cm		700	
Flow	93	7/10/2012	0		cfs			0.01
pH	93	7/10/2012	8.55				8.5	6.5
Selenium	93	7/10/2012	7.7		ug/L		5	
DDE(p,p')	94	8/14/2012	0.27	=	ug/L		0.00059	
DDT(p,p')	94	8/14/2012	0.11	=	ug/L		0.00059	
Flow	94	8/14/2012	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 3/1/2012 to 9/1/2012

Orestimba Creek at River Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	890		µmhos/cm		700	
Flow	89	3/12/2012	0		cfs			0.01
pH	89	3/12/2012	6.14				8.5	6.5
DDE(p,p')	89	3/13/2012	0.0056	DNQ	ug/L		0.00059	
DO	89	3/13/2012	4		mg/l			5
EC	89	3/13/2012	850		µmhos/cm		700	
Flow	89	3/13/2012	0		cfs			0.01
pH	89	3/13/2012	6.25				8.5	6.5
Total Dissolved Solids	89	3/13/2012	730		mg/L		450	
DDE(p,p')	90	4/10/2012	0.0074	DNQ	ug/L		0.00059	
EC	90	4/10/2012	795		µmhos/cm		700	
Flow	90	4/10/2012	0		cfs			0.01
Total Dissolved Solids	90	4/10/2012	620		mg/L		450	
DDE(p,p')	92	6/12/2012	0.058	=	ug/L		0.00059	
EC	92	6/12/2012	845		µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	500		mg/L		450	
E. Coli	93	7/10/2012	2400		MPN/100 mL		235	
pH	93	7/10/2012	8.69				8.5	6.5
DDE(p,p')	94	8/14/2012	0.031	=	ug/L		0.00059	
E. Coli	94	8/14/2012	730		MPN/100 mL		235	
EC	94	8/14/2012	743		µmhos/cm		700	

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 3/1/2012 to 9/1/2012

Poso Slough at Indiana Ave

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	1207		µmhos/cm		700	
pH	89	3/12/2012	8.92				8.5	6.5
Ammonia as N	89	3/13/2012	8.7		mg/L		1.5	
EC	89	3/13/2012	1182		µmhos/cm		700	
Malathion	89	3/13/2012	0.25	=	ug/L		5E-07	
pH	89	3/13/2012	8.75				8.5	6.5
Total Dissolved Solids	89	3/13/2012	680		mg/L		450	
Ceriodaphnia dubia	90	4/10/2012	0		%	yes		
Chlorpyrifos	90	4/10/2012	0.66	=	ug/L		0.015	
E. Coli	90	4/10/2012	360		MPN/100mL		235	
EC	90	4/10/2012	1282		µmhos/cm		700	
Total Dissolved Solids	90	4/10/2012	790		mg/L		450	
Diuron	91	5/8/2012	3.1	=	ug/L		2	
E. Coli	91	5/8/2012	2400	>	MPN/100mL		235	
EC	91	5/8/2012	912		µmhos/cm		700	
Selenastrum capricornutum	91	5/8/2012	1198000		cells/ml	yes		
Total Dissolved Solids	91	5/8/2012	550		mg/L		450	
Ammonia as N	92	6/12/2012	1.8		mg/L		1.5	
E. Coli	92	6/12/2012	310		MPN/100mL		235	
Total Dissolved Solids	92	6/12/2012	490		mg/L		450	
E. Coli	94	8/14/2012	2400	>	MPN/100 mL		235	
EC	94	8/14/2012	786		µmhos/cm		700	
Total Dissolved Solids	94	8/14/2012	480		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 3/1/2012 to 9/1/2012

Ramona Lake near Fig Avenue

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	1413		µmhos/cm		700	
Total Dissolved Solids	89	3/13/2012	1200		mg/L		450	
EC	90	4/10/2012	1455		µmhos/cm		700	
Total Dissolved Solids	90	4/10/2012	1200		mg/L		450	
DO	91	5/8/2012	3.18		mg/l			5
EC	91	5/8/2012	1484		µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	1100		mg/L		450	
EC	92	6/12/2012	1392		µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	980		mg/L		450	
DDE(p,p')	93	7/10/2012	0.01	=	ug/L		0.00059	
EC	93	7/10/2012	1668		µmhos/cm		700	
pH	93	7/10/2012	8.8				8.5	6.5
Total Dissolved Solids	93	7/10/2012	1200		mg/L		450	
EC	94	8/14/2012	1639		µmhos/cm		700	
pH	94	8/14/2012	8.58				8.5	6.5
Total Dissolved Solids	94	8/14/2012	1100		mg/L		450	

Salt Slough at Lander Ave

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/13/2012	1855		µmhos/cm		700	
Malathion	89	3/13/2012	0.25	=	ug/L		5E-07	
Total Dissolved Solids	89	3/13/2012	1100		mg/L		450	
EC	90	4/10/2012	2016		µmhos/cm		700	
Total Dissolved Solids	90	4/10/2012	1300		mg/L		450	
EC	91	5/8/2012	1382		µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	830		mg/L		450	
EC	92	6/12/2012	1064		µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	640		mg/L		450	
EC	93	7/10/2012	1016		µmhos/cm		700	
Total Dissolved Solids	93	7/10/2012	590		mg/L		450	
EC	94	8/14/2012	900		µmhos/cm		700	
Total Dissolved Solids	94	8/14/2012	540		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 3/1/2012 to 9/1/2012

Salt Slough at Sand Dam

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	1202		µmhos/cm		700	
Chlorpyrifos	89	3/13/2012	0.018	=	ug/L		0.015	
EC	89	3/13/2012	1226		µmhos/cm		700	
Malathion	89	3/13/2012	0.41	=	ug/L		5E-07	
EC	90	4/10/2012	1184		µmhos/cm		700	
pH	90	4/10/2012	8.51				8.5	6.5
EC	91	5/8/2012	998		µmhos/cm		700	
EC	93	7/10/2012	762		µmhos/cm		700	
EC	94	8/14/2012	750		µmhos/cm		700	

San Joaquin River at Lander Ave

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
E. Coli	89	3/13/2012	770		MPN/100mL		235	
EC	89	3/13/2012	1798		µmhos/cm		700	
Malathion	89	3/13/2012	0.25	=	ug/L		5E-07	
Total Dissolved Solids	89	3/13/2012	1100		mg/L		450	
EC	90	4/10/2012	1730		µmhos/cm		700	
pH	90	4/10/2012	8.77				8.5	6.5
Total Dissolved Solids	90	4/10/2012	1000		mg/L		450	
E. Coli	91	5/8/2012	1600		MPN/100mL		235	
EC	91	5/8/2012	1915		µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	1100		mg/L		450	
E. Coli	92	6/12/2012	1000		MPN/100mL		235	
EC	92	6/12/2012	1517		µmhos/cm		700	
pH	92	6/12/2012	8.92				8.5	6.5
Total Dissolved Solids	92	6/12/2012	880		mg/L		450	
EC	93	7/10/2012	1543		µmhos/cm		700	
pH	93	7/10/2012	8.6				8.5	6.5
Total Dissolved Solids	93	7/10/2012	880		mg/L		450	
EC	94	8/14/2012	1586		µmhos/cm		700	
pH	94	8/14/2012	8.59				8.5	6.5
Total Dissolved Solids	94	8/14/2012	920		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 3/1/2012 to 9/1/2012

San Joaquin River at PID Pumps

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
Boron	89	3/13/2012	1020	ug/L		700	
E. Coli	89	3/13/2012	1100	MPN/100mL		235	
EC	89	3/13/2012	1259	µmhos/cm		700	
Total Dissolved Solids	89	3/13/2012	1000	mg/L		450	
Boron	90	4/10/2012	1030	ug/L		700	
EC	90	4/10/2012	1410	µmhos/cm		700	
Total Dissolved Solids	90	4/10/2012	1100	mg/L		450	
E. Coli	91	5/8/2012	1200	MPN/100mL		235	
EC	91	5/8/2012	715	µmhos/cm		700	
Total Dissolved Solids	91	5/8/2012	460	mg/L		450	
Boron	92	6/12/2012	722	ug/L		700	
EC	92	6/12/2012	1219	µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	800	mg/L		450	
EC	93	7/10/2012	1194	µmhos/cm		700	
pH	93	7/10/2012	9.45			8.5	6.5
Total Dissolved Solids	93	7/10/2012	780	mg/L		450	
EC	94	8/14/2012	1203	µmhos/cm		700	
Total Dissolved Solids	94	8/14/2012	730	mg/L		450	

San Joaquin River at Sack Dam

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/13/2012	829	µmhos/cm		700	
pH	89	3/13/2012	8.62			8.5	6.5
Total Dissolved Solids	89	3/13/2012	480	mg/L		450	
pH	90	4/10/2012	8.85			8.5	6.5
pH	92	6/12/2012	8.57			8.5	6.5
Flow	93	7/10/2012	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 3/1/2012 to 9/1/2012

Turner Slough at Edminster Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/13/2012	979		µmhos/cm		700	
Total Dissolved Solids	89	3/13/2012	560		mg/L		450	
E. Coli	90	4/10/2012	580		MPN/100mL		235	
Pimephales promelas	90	4/10/2012	82.5		%	yes		
Ammonia as N	91	5/8/2012	1.8		mg/L		1.5	
DO	91	5/8/2012	2.95		mg/l			5
E. Coli	91	5/8/2012	260		MPN/100mL		235	
DO	92	6/12/2012	3.58		mg/l			5
Flow	92	6/12/2012	0		cfs			0.01
DO	93	7/10/2012	2.9		mg/l			5
EC	93	7/10/2012	1262		µmhos/cm		700	
Flow	93	7/10/2012	0		cfs			0.01
Total Dissolved Solids	93	7/10/2012	720		mg/L		450	
DO	94	8/14/2012	3.25		mg/l			5

Westley Wasteway near Cox Road

Analyte/Species	Event	Sample Date	Result		Units	Significant Toxicity	WQV Max	WQV Min
EC	89	3/12/2012	968		µmhos/cm		700	
Hyalella azteca	89	3/12/2012	15		%	yes		
Boron	89	3/13/2012	880		ug/L		700	
DDE(p,p')	89	3/13/2012	0.0074	DNQ	ug/L		0.00059	
Diuron	89	3/13/2012	19	=	ug/L		2	
E. Coli	89	3/13/2012	250		MPN/100mL		235	
EC	89	3/13/2012	930		µmhos/cm		700	
Selenastrum capricornutum	89	3/13/2012	191000		cells/ml	yes		
Total Dissolved Solids	89	3/13/2012	930		mg/L		450	
EC	90	4/10/2012	739		µmhos/cm		700	
Total Dissolved Solids	90	4/10/2012	610		mg/L		450	
E. Coli	91	5/8/2012	250		MPN/100mL		235	
DDE(p,p')	92	6/12/2012	0.0052	DNQ	ug/L		0.00059	
E. Coli	92	6/12/2012	390		MPN/100mL		235	
EC	92	6/12/2012	979		µmhos/cm		700	
Total Dissolved Solids	92	6/12/2012	760		mg/L		450	
E. Coli	93	7/10/2012	440		MPN/100 mL		235	
Total Dissolved Solids	93	7/10/2012	520		mg/L		450	
E. Coli	94	8/14/2012	610		MPN/100 mL		235	
Total Dissolved Solids	94	8/14/2012	470		mg/L		450	

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

DNQ = Detected, Not Quantifiable

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
November 30, 2012

Prepared by:
Summers Engineering, Inc.
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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 and performance goals were finalized in June of 2012.

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 all 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 $27,200 in grant funding has been provided by the Westside Coalition for the cleanout of 34 sedimentation ponds in 26 parcels, affecting approximately 6,000 acres both within and outside of the focused plans' subwatersheds. Approximately 91% of the 2012 sediment pond grant program has been used.

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	14,400	23%	14,400	23%

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. Irrigation system improvements are typically installed during the winter months for use in the following irrigation system. The acreages represented in **Table A6-1** reflect non-irrigation season irrigation system improvements. 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 usage)	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	2012	710	1.2%

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 March, July and August on a variety of field and tree crops. Herbicide use continued throughout the irrigation season. A summary of the 2012 irrigation PUR data by watershed is attached.

Chlorpyrifos exceedances were measured seven times during the 2012 irrigation season (see **Table A6-3**). As with 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 were completed in June 2012. These surveys included questions about pesticide use including chlorpyrifos, diazinon, malathion, and diuron. A summary of the survey data is included under the **Management Practice Survey** section below. In addition to these surveys, a staff person from the Westside Coalition performed more than 180 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.

Table A6-3: 2012 Irrigation Season Chlorpyrifos Exceedances

Site	FP #	Date	Constituent	Concentration
Salt Slough @ Sand Dam	3	3/13/12	Chlorpyrifos	0.018 µg/L
Blewett Drain	NA	4/10/12	Chlorpyrifos	0.024 µg/L
Poso Slough	3	4/10/12	Chlorpyrifos	0.66 µg/L
Hospital Creek	1	4/10/12	Chlorpyrifos	0.071 µg/L
Marshall Road Drain	NA	5/8/12	Chlorpyrifos	0.17 µg/L
Ingram Creek	1	7/10/12	Chlorpyrifos	0.052 µg/L
Blewett Drain	NA	8/14/12	Chlorpyrifos	0.14 µg/L

The Westside Coalition reviewed pesticide use data within the Salt Slough subwatershed and summarized pesticide use for the 2010, 2011 and 2012 irrigation seasons in **Table A6-4**. Based on this data, pesticide applications were reduced by approximately 47% between 2011 and 2012, and by 37% between 2010 and 2012. However PUR data for all of the 2012 irrigation season is not yet available and these conclusions should be considered preliminary.

Table A6-4: Salt Slough Pesticide Use Summary.

Subwatershed	Pesticide Group	2012* Acres Treated	2011 Acres Treated	2010 Acres Treated
Poso Slough	Carbamates	1,685	335	770
	Herbicide	18,113	32,335	20,950
	Organochlorine	190		
	Organophosphorus	8,222	4,783	5,282
	Pyrethroid	8,680	12,115	14,171
Salt Sl. @ Sand Dam	Carbamates	382	1,049	1,806
	Herbicide	17,084	45,978	36,941
	Organochlorine	1,435		175
	Organophosphorus	4,433	5,294	5,984
	Pyrethroid	7,443	14,851	14,044
Salt Sl. @ Lander Ave	Carbamates	382	1,451	2,444
	Herbicide	22,886	59,600	45,261
	Organochlorine	1,568		175
	Organophosphorus	6,209	5,747	6,604
	Pyrethroid	8,871	19,021	16,843

* Partial data.

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. A draft irrigation method map for the Salt Slough subwatershed has been developed from the survey data and is included in this update.

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. The Focused Plan III subwatershed management practice survey was completed and submitted to the Regional Board in June 2012 and a summary of this data is presented in **Table A6-5**. Summaries for the Focused Plan I and II survey results were presented in previous updates and new information regarding acreage irrigated with high efficiency systems is presented in the **High-efficiency Irrigation Systems** section above.

Table A6-5: Summary of Focused Plan 3 Management Practice Surveys.

	Salt Slough at Lander Avenue*		Salt Slough at Sand Dam*		Poso Slough at Indiana Avenue	
	Acres	%	Acres	%	Acres	%
Survey Area (APN Acreage)	10,250		43,313		11,142	
Area Returned	10,248	100%	35,972	100%	11,475	100%
Surveys Sent	99		622		153	
Surveys Returned	99	100%	622	100%	153	100%
Irrigated Acreage	10,122	87%	42,446	98%	11,410	99%
Furrow/Flood (% Irrigated Acreage)	8,315	94%	33,384	79%	7,876	69%
Drip/Micro/Sprinkler (% Irrigated Ac.)	1,807	20%	9,062	21%	3,543	31%
Fallow/Non-irrigated (% Irrigated Ac.)	296	3.3%	695	2%	65	0.6%
Tree Crops (% Irrigated Ac.)	476	5.4%	531	1%	196	2%
Field Crops (% Irrigated Ac.)	9,647	109%	42.034	99%	11,209	98%
Open/Other (% Irrigated Ac.)	296	3.3%	673	2%	70	0.6%
Sedimentation Ponds (% Irrigated Ac.)	86	1%	284	1%	-	0%
Tile System (% Irrigated Ac.)	216	2%	3,214	8%	-	0%
PAM usage (% Irrigated Ac.)	0	0%	671	2%	39	0.3%
Tailwater leaves field (% Irrigated Ac.)	9,603	95%	39,827	94%	9,274	81%
Stormwater leaves field (% Irrigated Ac.)	8,768	87%	38,727	91%	9,995	88%
Berm Spray Usage (% Irrigated Ac.)	1,301	13%	1,365	3%	670	6%
Manure Usage (% Irrigated Ac.)	4,026	40%	18,321	43%	3,563	31%

* 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 A6-6.**

Table A6-6: Outreach Meetings.

Date	Group	Location	Description	Attended	By
3/1/2012	Westside Stanislaus County Farm Bureau	Patterson	Annual Meeting	50	Joe Mc/Parry Klassen
3/13/2012	PCA's in Stanislaus County	Westley	Chlorpyrifos and sedmiment issues	8	Joe McGahan/ Parry Klassen
3/22/2012	San Luis Canal Co Annual Meeting	Dos Palos	Update of ILRP and issues in area	25	Joe McGahan
3/27/2012	CCID Landowners Meeting	Firebaugh	Dos Palos Area Update	50	Joe McGahan
3/28/2012	CCID Landowners Meeting	Los Banos	Los Banos Area Update	75	Joe McGahan
3/28/2012	Field tailgate meetings	Field	Survey follow up and BMPs	9	Rich Peltzer
3/29/2012	CCID Landowners Meeting	Gustine	Patterson Area Update	100	Joe McGahan
4/3/2012	Stanislaus County Ag Commissioner	Patterson	Ag Comm meeting to review new policies	25	Joe McGahan
4/5/2012	Field tailgate meetings	Field - Salt Sl.	Survey follow up and BMPs	18	Rich Peltzer
4/9/2012	Field tailgate meetings	Field - Salt Sl.	Survey follow up and BMPs	15	Rich Peltzer
4/16/2012	Field tailgate meetings	Field - Salt Sl.	Survey follow up and BMPs	14	Rich Peltzer
4/24/2012	Field tailgate meetings	Field - Salt Sl.	Survey follow up and BMPs	10	Rich Peltzer
4/25/2012	Grassland Habitat Management Coordination Committee Meeting	Los Banos	ILRP Status to wetland members	15	Joe McGahan
7/13/2012	ACWA Regions 6 & 7	Fresno	Presentation to Association of California Water Agencies region meetings on status of ILRP	40	Joe McGahan
7/25/2012	Tailgate Mtg.	Westley	BMP's Sediment	6	Rich Peltzer
8/1/2012	Tailgate Mtg.	Westley/Crows Landing	BMP's Sediment	15	Rich Peltzer
8/7/2012	Tailgate Mtg.	Westley/Crows Landing	BMP's Sediment	9	Rich Peltzer
8/15/2012	Tailgate Mtg.	Patterson/Crows Landing	BMP's Sediment	16	Rich Peltzer
8/21/2012	Tailgate Mtg.	Patterson/Crows Landing/Westley	BMP's Sediment	15	Rich Peltzer
8/30/2012	Tailgate Mtg.	Patterson/Crows Landing/Westley	BMP's Sediment	8	Rich Peltzer

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. After 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 12 completed projects (1,053 acres) for the 2012 irrigation season funded through Proposition 84, and more than 35 projects since this program started. A map showing the project locations is included with this update.

During the 2011/12 non-irrigation season, a new funding program through NRCS to help with management practice installation was pursued. NRCS chose not to fund the proposal and the Westside Coalition is actively pursuing other funding opportunities as they become available.

Other Activities.

In addition to grower-level management practices, Westside Coalition districts are in the process of planning a number of regional projects that will help with drainage management and grower management practice implementation.

- Poso Canal and East Ditch Reservoirs project. CCID is in the process of designing two reservoirs that will capture excess flows and recirculate drain water while improving delivery flexibility. The reservoirs are expected to recover 4,000 acre feet per year of drain water and the improved delivery operation will help encourage growers to convert to high efficiency irrigation systems that will reduce tailwater volumes. Both reservoirs are expected to come on-line by the 2014 irrigation season.
- Moran and Oil Station delivery system improvements. CCID is reviewing project alternatives to improve the delivery systems in two areas of the District. The existing systems are antiquated and are generally not compatible with high efficiency irrigaiton systems. Improvements would encourage growers to upgrade their irrigation systems and reduce tailwater discharges.
- Marshall Road and Spanish Land Grant Drain Return System. Patterson Irrigation District is reviewing alternatives to capture and recirculate drainage flows into the Marshall Road Drain and Spanish Land Grant Drain. Although only in the planning stages, this project could potentially reduce drainage discharges to the San Joaquin River by 5,000 acre feet annually.

Table A6-7: Focused Plan III Performance Goals

	Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Targets
1	Implement Focuses Plan III for eliminating toxicity and pesticide detections by increasing grower participation and implementing additional management practices.	Address potential overspray by identifying the sensitive regions for all applicators.	1. No. of applicators contacted. 5 2. No. of miles of sensitive regions. ~700	1. Provide a detailed watershed map of the subwatersheds. Included in Attachment 6.	1. Contact 5 applicators. Complete.
		Submit survey form to growers that inquires about management practices relevant to Tier 1 parameters	1. Develop survey document. complete 2. No. of growers to survey. 874 3. No. of growers surveyed. 874	1. Percent of surveys submitted to growers. 100% 2. Percent of survey responses back from growers. 100%	1. Submit survey form to Regional Board by 9/30/11. complete. 2. Submit surveys to 100% of growers within site subwatershed by 12/21/11. Complete. 3. Receive 100% of survey responses back from growers by 3/31/12. Complete 4. Finalize survey findings and report on management practice baseline and provide a summary of existing management activities by 6/15/12. See Attachment 6. 5. SAMR Report on management practice baseline and provide a summary of existing management practices by 11/30 and 6/15. Summary to include: historical & known MPs, changes from previous update, summary of affected acres, may include crop/irrigation type. See Attachment 6.
		Conduct grower outreach in the form of group meetings, tailgate meetings.	1. Growers to have broad understanding of better management practices and its effect on water quality.	1. No. of group meetings. 2. No. of individual meetings.	1. Report grower outreach in SAMR. 2. Conduct 5 outreach meetings annually.
		Determine effective management practices and develop next steps (Performance Goals)	1. Develop management practices that can be implemented. 2. Detailed plan for next steps and communicate to Regional Board.	1. Prepare Performance Goals with Regional Board staff. Complete.	1. Submit/finalize Performance Goals by 6/30/12. Complete.
2	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.	Collect pesticide use data	1. No. of pounds of pesticide used in each subwatershed. See Attachment 6. 2. No. of pesticide pounds reduced. See Attachment 6. 3. Name of alternative pesticides used. Unable to determine.	1. Percent of pesticide use reduction. See Attachment 6.	1. SAMR report twice annually - 6/15 and 11/30. Report submitted 11/30/12
		Secure funding sources to implement MPs	1. Distribute grant funds annually to implement management practices.	1. Percent of grant funds distributed	1. Attempt to distribute 50% of grant funds annually to growers. 91% of sediment pond funds distributed.
3	Evaluate management practices effectiveness	Calibrate spray rigs utilized on farmed acres to address possible overspray.	1. No. of spray rigs calibrated. 2. No. of acres affected	1. Percent of acres affected.	1. Calibrate 10 spray rigs. Calibration machine in for repairs. No calibrations performed.
		Construct tailwater ponds to intercept and hold direct tailwater discharges.	1. No. of tailwater ponds constructed.	1. Map tailwater ponds and irrigation methods. In progress.	1. Provide map for each subwatershed in SAMRs.
		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.	1. No. of growers that will install high-efficiency irrigation systems such as sprinkler or drip irrigation, tailwater recirculation, gated pipes, shorter runs, etc. 2. No. of acres affected.	1. Percent of growers installing new/additional management practices. 2. Percent of acres affected.	1. Affect 60% of acres for the long term. 24% of Salt Slough subwatershed w/ high efficiency systems. Districts have internal funding assistance programs for growers.
		Collect and report monitoring data results	1. No. of tests conducted. 2. No. of detections observed. 3. No. of exceedances observed.	1. Percent decrease in detections. 2. Percent decrease in exceedances.	1. SAMR report twice annually - 6/15 and 11/30 2. Show a decrease in detections. See SAMR sections 8, 9, and 11.

Exceedance Tally

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 9/1/2009 to 8/31/2012

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	24	506
Aquatic Toxicity	Pimephales promelas	2	301
Aquatic Toxicity	Selenastrum capricornutum	18	364
Field Data	DO	73	765
Field Data	EC	435	769
Field Data	pH	82	781
General Chemistry	Ammonia as N	8	557
General Chemistry	Arsenic	17	365
General Chemistry	Boron	113	478
General Chemistry	E. Coli	230	661
General Chemistry	Selenium	4	248
General Chemistry	Total Dissolved Solids	403	662
Pesticide	a-Chlordane	1	426
Pesticide	Aldrin	1	426
Pesticide	Chlorpyrifos	53	614
Pesticide	DDD(p,p')	3	426
Pesticide	DDE(p,p')	118	426
Pesticide	DDT(p,p')	22	426
Pesticide	Diazinon	2	615
Pesticide	Dimethoate	2	615
Pesticide	Diuron	33	503
Pesticide	Endrin	1	426
Pesticide	g-Chlordane	3	426
Pesticide	Malathion	17	615
Pesticide	Methamidophos	1	635
Pesticide	Toxaphene	2	426
Sediment Toxicity	Hyalella azteca	23	73

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 9/1/2009 to 8/31/2012

Blewett Drain at Highway 132

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	10
Field Data	DO	3	22
Field Data	EC	6	22
Field Data	pH	3	22
General Chemistry	Ammonia as N	1	20
General Chemistry	E. Coli	10	20
General Chemistry	Total Dissolved Solids	5	20
Pesticide	Chlorpyrifos	3	11
Pesticide	DDE(p,p')	2	11
Pesticide	Diuron	2	11
Sediment Toxicity	Hyalella azteca	1	3

Del Puerto Creek at Hwy 33

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	8
Field Data	DO	1	13
Field Data	EC	4	13
Field Data	pH	3	13
General Chemistry	Boron	1	7
General Chemistry	E. Coli	1	5
General Chemistry	Total Dissolved Solids	4	5
Pesticide	DDD(p,p')	1	8
Pesticide	DDE(p,p')	1	8
Pesticide	DDT(p,p')	1	8
Sediment Toxicity	Hyalella azteca	1	4

Del Puerto Creek near Cox Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	26
Field Data	EC	19	38
Field Data	pH	5	38
General Chemistry	Ammonia as N	1	33
General Chemistry	Boron	3	20
General Chemistry	E. Coli	13	33
General Chemistry	Total Dissolved Solids	25	33
Pesticide	Chlorpyrifos	5	26
Pesticide	DDE(p,p')	12	26
Pesticide	DDT(p,p')	1	26
Pesticide	Diuron	1	26
Pesticide	Endrin	1	26
Pesticide	Malathion	1	26
Sediment Toxicity	Hyalella azteca	3	6

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 9/1/2009 to 8/31/2012

Delta Mendota Canal at DPWD

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	3
Field Data	pH	6	38
General Chemistry	Total Dissolved Solids	3	38
Pesticide	Chlorpyrifos	1	39

Hospital Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	3	19
Aquatic Toxicity	Selenastrum capricornutum	1	14
Field Data	DO	2	24
Field Data	EC	6	25
Field Data	pH	4	25
General Chemistry	Arsenic	3	19
General Chemistry	Boron	2	19
General Chemistry	E. Coli	9	9
General Chemistry	Total Dissolved Solids	3	9
Pesticide	Chlorpyrifos	6	20
Pesticide	DDE(p,p')	12	14
Pesticide	DDT(p,p')	2	14
Pesticide	Diuron	2	19
Pesticide	g-Chlordane	1	14
Pesticide	Malathion	1	20
Pesticide	Toxaphene	1	14
Sediment Toxicity	Hyalella azteca	5	6

Ingram Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	2	17
Field Data	DO	2	34
Field Data	EC	24	34
Field Data	pH	4	34
General Chemistry	Arsenic	2	23
General Chemistry	Boron	9	23
General Chemistry	E. Coli	11	29
General Chemistry	Total Dissolved Solids	24	29
Pesticide	Chlorpyrifos	6	24
Pesticide	DDE(p,p')	22	23
Pesticide	DDT(p,p')	5	23
Pesticide	Dimethoate	1	24
Pesticide	Diuron	4	23
Pesticide	g-Chlordane	1	23
Pesticide	Malathion	1	24

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
Aquatic Toxicity	Selenastrum capricornutum	2	28
Field Data	DO	8	46
Field Data	EC	36	46
Field Data	pH	9	47
General Chemistry	Arsenic	5	22
General Chemistry	Boron	16	22
General Chemistry	E. Coli	17	39
General Chemistry	Selenium	1	15
General Chemistry	Total Dissolved Solids	28	39
Pesticide	Aldrin	1	16
Pesticide	Chlorpyrifos	1	28

Los Banos Creek at Hwy 140

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	2	39
Field Data	DO	4	40
Field Data	EC	37	40
Field Data	pH	4	41
General Chemistry	Arsenic	4	22
General Chemistry	Boron	18	22
General Chemistry	E. Coli	26	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 9/1/2009 to 8/31/2012

Marshall Road Drain near River Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	19
Field Data	DO	1	22
Field Data	EC	12	22
Field Data	pH	3	22
General Chemistry	Ammonia as N	1	22
General Chemistry	E. Coli	9	22
General Chemistry	Total Dissolved Solids	16	22
Pesticide	Chlorpyrifos	7	19
Pesticide	DDE(p,p')	9	19
Pesticide	DDT(p,p')	4	19
Pesticide	Diuron	2	19
Pesticide	g-Chlordane	1	19
Pesticide	Malathion	3	20

Mud Slough Upstream of San Luis Drain

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	40
Field Data	EC	39	40
Field Data	pH	7	41
General Chemistry	Boron	14	16
General Chemistry	E. Coli	10	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	1	28
Field Data	DO	19	43
Field Data	EC	40	43
Field Data	pH	1	44
General Chemistry	Boron	10	22
General Chemistry	E. Coli	17	38
General Chemistry	Total Dissolved Solids	36	38
Pesticide	DDE(p,p')	2	28
Pesticide	Dimethoate	1	28

Orestimba Creek at Hwy 33

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	26
Aquatic Toxicity	Selenastrum capricornutum	2	26
Field Data	DO	8	32

Field Data	EC	6	32
Field Data	pH	3	32
General Chemistry	E. Coli	7	14
General Chemistry	Selenium	3	19
Pesticide	Chlorpyrifos	3	27
Pesticide	DDD(p,p')	2	26
Pesticide	DDE(p,p')	23	26
Pesticide	DDT(p,p')	6	26
Pesticide	Diazinon	1	27
Pesticide	Methamidophos	1	28
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	1	23
Field Data	DO	3	33
Field Data	EC	13	33
Field Data	pH	3	33
General Chemistry	E. Coli	14	29
General Chemistry	Total Dissolved Solids	10	29
Pesticide	Chlorpyrifos	4	23
Pesticide	DDE(p,p')	18	23
Pesticide	DDT(p,p')	1	23
Pesticide	Malathion	1	23

Poso Slough at Indiana Ave

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	3	23
Aquatic Toxicity	Selenastrum capricornutum	4	23
Field Data	DO	1	41
Field Data	EC	29	41
Field Data	pH	4	42
General Chemistry	Ammonia as N	3	39
General Chemistry	Arsenic	2	22
General Chemistry	E. Coli	26	39
General Chemistry	Total Dissolved Solids	24	39
Pesticide	Chlorpyrifos	3	22
Pesticide	DDE(p,p')	1	22
Pesticide	Diazinon	1	22
Pesticide	Diuron	6	22
Pesticide	Malathion	1	22
Sediment Toxicity	Hyalella azteca	1	3

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 9/1/2009 to 8/31/2012

Ramona Lake near Fig Avenue

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	26
Field Data	DO	5	39
Field Data	EC	38	39
Field Data	pH	5	39
General Chemistry	Boron	13	20
General Chemistry	E. Coli	3	34
General Chemistry	Total Dissolved Solids	34	34
Pesticide	Chlorpyrifos	2	26
Pesticide	DDE(p,p')	2	26
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	33
Field Data	EC	39	40
General Chemistry	Boron	11	32
General Chemistry	E. Coli	6	39
General Chemistry	Total Dissolved Solids	39	39
Pesticide	Chlorpyrifos	1	41
Pesticide	Diuron	3	41
Pesticide	Malathion	3	41

Salt Slough at Sand Dam

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	1	22
Field Data	DO	3	29
Field Data	EC	23	30
Field Data	pH	3	31
General Chemistry	Arsenic	1	16
General Chemistry	Total Dissolved Solids	12	16
Pesticide	Chlorpyrifos	4	28
Pesticide	Diuron	6	28
Pesticide	Malathion	2	28
Sediment Toxicity	Hyalella azteca	1	3

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	EC	14	36
Field Data	pH	4	37
General Chemistry	E. Coli	7	34
General Chemistry	Total Dissolved Solids	13	34
Pesticide	Malathion	2	34

San Joaquin River at PID Pumps

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	25	38
Field Data	pH	3	38
General Chemistry	Boron	10	38
General Chemistry	E. Coli	6	38
General Chemistry	Total Dissolved Solids	27	38
Pesticide	Chlorpyrifos	4	39

San Joaquin River at Sack Dam

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	3
Field Data	EC	4	39
Field Data	pH	5	41
General Chemistry	E. Coli	1	37
General Chemistry	Total Dissolved Solids	3	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	27
Aquatic Toxicity	Pimephales promelas	1	27
Field Data	DO	12	39
Field Data	EC	10	38
General Chemistry	Ammonia as N	2	36
General Chemistry	E. Coli	16	36
General Chemistry	Total Dissolved Solids	9	36
Pesticide	DDE(p,p')	1	15
Pesticide	DDT(p,p')	1	15

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 9/1/2009 to 8/31/2012

Westley Wasteway near Cox Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	3	21
Field Data	EC	6	32
Field Data	pH	2	32
General Chemistry	Boron	1	21
General Chemistry	E. Coli	20	27
General Chemistry	Total Dissolved Solids	9	27
Pesticide	a-Chlordane	1	21
Pesticide	Chlorpyrifos	2	21
Pesticide	DDE(p,p')	12	21
Pesticide	DDT(p,p')	1	21
Pesticide	Diuron	4	20
Sediment Toxicity	Hyalella azteca	2	5

Pesticide Use Report Summary

(Includes partial data, duplicate records and incomplete records)

Pesticide Use Summary

3/1/12 through 8/31/12

County **Fresno**

Monitoring Site **Poso Slough at Indiana Ave**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
(S)-CYPERMETHRIN	August	257.4	7		Cotton
BETA-CYFLUTHRIN	March	92	2		Alfalfa
BETA-CYFLUTHRIN	June	666	6		Cotton
BETA-CYFLUTHRIN	July	74	2		Cotton
BETA-CYFLUTHRIN	August	333	7		Cotton
BIFENTHRIN	July	774	6		Melons
BIFENTHRIN	August	774	6		Melons
CARBARYL	April	55.02	1		Tomatos
CHLORPYRIFOS	March	625.1	7		Alfalfa
CHLORPYRIFOS	April	3422	48		Alfalfa
CHLORPYRIFOS	June	280	4		Almonds
CHLORPYRIFOS	July	28.2	1		Alfalfa
CHLORPYRIFOS	August	328	14		Alfalfa
CLETHODIM	May	714	36		Cotton
CLETHODIM	June	20	2		Melons
CLETHODIM	August	36	2		Alfalfa
DIMETHOATE	July	166.5	2		Alfalfa
DIURON	April	312	4		Asparagus
DIURON	May	212	2		Asparagus
DIURON	August	247	13		Cotton
ESFENVALERATE	June	334	6		Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	March	1608	18		Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	April	262	2		Melons
GLYPHOSATE, ISOPROPYLAMINE SALT	April	40	8		Oats
GLYPHOSATE, ISOPROPYLAMINE SALT	April	2231	40		Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	May	12206	195		Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	May	150	10		Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	June	80	8		Oats
GLYPHOSATE, ISOPROPYLAMINE SALT	June	224	2		Melons
GLYPHOSATE, ISOPROPYLAMINE SALT	June	6075.1	193		Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1600	80		Alfalfa
IMAZAMOX, AMMONIUM SALT	May	162	1		Alfalfa
IMAZETHAPYR, AMMONIUM SALT	May	162	1		Alfalfa
LAMBDA-CYHALOTHRIN	March	8110.02	159		Alfalfa
LAMBDA-CYHALOTHRIN	April	665	25		Tomatos
LAMBDA-CYHALOTHRIN	April	1044	54		Pistachios
LAMBDA-CYHALOTHRIN	June	2472	108		Pistachios
LAMBDA-CYHALOTHRIN	August	100	2		Tomatos
MALATHION	March	5163.4	83		Alfalfa

***Includes duplicate and incomplete data**

**** Not available in all counties.**

MALATHION	March	561	15	Wheat
MALATHION	April	150	6	Alfalfa
MALATHION	April	249.6	16	Wheat
MALATHION	August	150	6	Alfalfa
PARAQUAT DICHLORIDE	March	251.56	8	Cotton
PARAQUAT DICHLORIDE	April	77	4	Corn
PARAQUAT DICHLORIDE	April	344	2	Cotton
PARAQUAT DICHLORIDE	July	81	3	Alfalfa
PARAQUAT DICHLORIDE	August	81	3	Alfalfa
PENDIMETHALIN	April	1232	29	Cotton
PENDIMETHALIN	April	660	9	Tomatos
PENDIMETHALIN	May	536	4	Tomatos
PENDIMETHALIN	May	1337	22	Alfalfa
PENDIMETHALIN	May	1440	20	Cotton
PENDIMETHALIN	June	422	4	Cotton
PENDIMETHALIN	July	260	4	Alfalfa
PENDIMETHALIN	August	296	4	Alfalfa
RIMSULFURON	April	150	5	Tomatos
THIDIAZURON	August	247	13	Cotton
TRIFLURALIN	March	430	4	Tomatos
TRIFLURALIN	April	60	1	Alfalfa
TRIFLURALIN	April	9192.64	115	Tomatos
TRIFLURALIN	April	100	5	Cotton
TRIFLURALIN	May	2139.1	52	Alfalfa
TRIFLURALIN	June	263.54	5	Cotton
TRIFLURALIN	June	250	5	Tomatos
TRIFLURALIN	July	192	3	Tomatos

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

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
CHLORPYRIFOS	April	5080	80		Alfalfa
CHLORPYRIFOS	August	500	20		Alfalfa
CLETHODIM	July	852	8		Alfalfa
GLYPHOSATE	March	876	19		Grapes
GLYPHOSATE	April	1260	54		Almonds
GLYPHOSATE	June	1260	54		Almonds
GLYPHOSATE	June	876	19		Grapes
GLYPHOSATE	August	1275	55		Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	80	16		Oats
GLYPHOSATE, ISOPROPYLAMINE SALT	April	8680	80		Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	June	160	16		Oats
GLYPHOSATE, ISOPROPYLAMINE SALT	August	2180	20		Alfalfa
LAMBDA-CYHALOTHRIN	March	2888.8	60		Alfalfa
MALATHION	March	8213.6	84		Alfalfa

***Includes duplicate and incomplete data**

**** Not available in all counties.**

OXYFLUORFEN	April	1260	54	Almonds
OXYFLUORFEN	June	876	19	Grapes
OXYFLUORFEN	June	1260	54	Almonds
OXYFLUORFEN	August	1275	55	Almonds
PENDIMETHALIN	March	648	13	Grapes
TRIFLURALIN	April	3140	44	Tomatos
TRIFLURALIN	May	912.8	36	Alfalfa

County **Madera**

Monitoring Site **Poso Slough at Indiana Ave**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
GLYPHOSATE, ISOPROPYLAMINE SALT	March	66	1	91.0259	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	544	8	750.274	Almonds
OXYFLUORFEN	June	1182	20	111.003	Almonds
PENDIMETHALIN	May	242	1	171.874	Tomatos
PENDIMETHALIN	June	242	1	114.583	Tomatos
PERMETHRIN	June	150	2	44.85	Pistachios

Monitoring Site **San Joaquin River at Lander**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
GLYPHOSATE, ISOPROPYLAMINE SALT	March	165.2	4	168.201	Alfalfa

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

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
ACEPHATE	June	1971	24	1919.75	Alfalfa
BETA-CYFLUTHRIN	June	91.6	2	2.16	Tomatos
CLETHODIM	April	336	4	89.5054	Alfalfa
CLETHODIM	June	286	4	76.1712	Alfalfa
DIMETHOATE	June	2226	27	1109.28	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	March	7928.12	76	19412.7	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	9648	144	13306.3	Almonds
LAMBDA-CYHALOTHRIN	March	266	6	8.1974	Alfalfa
MALATHION	March	566.8	4	686.215	Wheat
MALATHION	March	100	2	96.024	Alfalfa
NALED	June	180	2	271.997	Alfalfa
OXYFLUORFEN	March	800.04	12	50.0844	Almonds
OXYFLUORFEN	June	960	12	90.2952	Pistachios
OXYFLUORFEN	June	5940	94	557.705	Almonds
PARAQUAT DICHLORIDE	May	540	6	560.64	Alfalfa
PENDIMETHALIN	May	4725	59	15884.4	Alfalfa
PENDIMETHALIN	May	484	2	343.748	Tomatos

***Includes duplicate and incomplete data**
**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

PENDIMETHALIN	June	484	2	229.165	Tomatos
PENDIMETHALIN	June	720	8	2727.26	Alfalfa
PERMETHRIN	June	556	8	166.258	Pistachios
TRIFLURALIN	April	100	2	200	Alfalfa

County **Merced**

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

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
BETA-CYFLUTHRIN	March	971.2	28	22.8328	Alfalfa
BETA-CYFLUTHRIN	May	108	6	4.6572	Cherrys
BETA-CYFLUTHRIN	August	964	20	2.9342	Cotton
CHLORPYRIFOS	March	3076	80	1287.42	Alfalfa
CHLORPYRIFOS	August	1300	28	654.902	Alfalfa
CLETHODIM	July	16	2	1.9374	Spice
CYFLUTHRIN	March	5810.6	106	253.52	Alfalfa
DICAMBA, DIMETHYLAMINE SALT	March	821.9	25	117.196	Wheat
DICAMBA, DIMETHYLAMINE SALT	March	200.5	8	28.658	Oats
DIMETHOATE	March	200	2	99.6476	Alfalfa
ESFENVALERATE	May	558	18	27.9954	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	April	511.9	10	575.109	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	176	8	174.888	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	May	2015	31	3023.63	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1007.5	31	2015.34	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1604	32	1605.92	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	June	176	8	230.783	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	July	680.46	14	5577.15	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	July	650	5	852.272	Almonds
LAMBDA-CYHALOTHRIN	March	1958	45	59.0591	Alfalfa
LAMBDA-CYHALOTHRIN	May	550	5	20.6567	Almonds
LAMBDA-CYHALOTHRIN	June	258	8	7.7216	Corn
MALATHION	March	8243.46	176	8273.68	Alfalfa
NICOSULFURON	June	300	15	12.2625	Corn
OXYFLUORFEN	April	204.76	4	200.072	Almonds
PARAQUAT DICHLORIDE	August	130	2	448.494	Almonds
PENDIMETHALIN	March	1404.4	38	2659.83	Alfalfa
PENDIMETHALIN	July	230.22	18	218.010	Tomatos
PERMETHRIN	June	1215.6	36	188.4	Corn
TRIFLURALIN	April	680	5	675.905	Tomatos
TRIFLURALIN	April	200	2	400	Alfalfa
TRIFLURALIN	May	1372	32	2744	Alfalfa

***Includes duplicate and incomplete data**
****** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

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

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
(S)-CYPERMETHRIN	March	244	6	12.1406	Alfalfa
2,4-D, DIMETHYLAMINE SALT	April	31.82	2	54.49	Almonds
2,4-D, DIMETHYLAMINE SALT	May	1039.31	27	1728.46	Almonds
BETA-CYFLUTHRIN	March	971.2	28	22.8328	Alfalfa
BETA-CYFLUTHRIN	May	108	6	4.6572	Cherrys
BETA-CYFLUTHRIN	August	964	20	2.9342	Cotton
CHLORPYRIFOS	March	3356	84	1428.82	Alfalfa
CHLORPYRIFOS	May	540	16	1039.69	Walnuts
CHLORPYRIFOS	June	360	4	676.08	Walnuts
CHLORPYRIFOS	June	740	16	529.257	Corn
CHLORPYRIFOS	August	1300	28	654.902	Alfalfa
CLETHODIM	July	16	2	1.9374	Spice
COPPER SULFATE (BASIC)	March	88	4	375.408	Walnuts
COPPER SULFATE (BASIC)	April	88	4	375.408	Walnuts
CYFLUTHRIN	March	6895.4	122	300.768	Alfalfa
DICAMBA, DIMETHYLAMINE SALT	March	821.9	25	117.196	Wheat
DICAMBA, DIMETHYLAMINE SALT	March	200.5	8	28.658	Oats
DIMETHOATE	March	3714	70	1843.47	Alfalfa
DIMETHOATE	April	476	14	118.017	Tomatos
DIMETHOATE	May	1442	14	356.821	Tomatos
DIMETHOATE	July	1566	24	780.6	Beans
DIMETHOATE	August	5140	108	2561.30	Beans
DIMETHOATE	August	400	8	197.483	Tomatos
DIURON	April	32.75	5	39.2725	Walnuts
ESFENVALERATE	April	90	2	4.3924	Almonds
ESFENVALERATE	May	514	19	14.1932	Walnuts
ESFENVALERATE	May	1238	35	61.1828	Apricots
ESFENVALERATE	June	260	4	12.7024	Tomatos
ESFENVALERATE	June	412	12	20.1076	Walnuts
ESFENVALERATE	July	172	2	8.3946	Almonds
ESFENVALERATE	August	300	6	12.1818	Tomatos
FENPROPATHRIN	August	412	8	6275.45	Tomatos
GLYPHOSATE	April	31.82	2	66.1432	Almonds
GLYPHOSATE	May	153.95	3	320.191	Almonds
GLYPHOSATE	July	80	2	183.038	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	March	6718	53	4442.31	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	March	144	4	199.778	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	March	15	1	15.0026	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	March	1000	25	818.265	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	April	120	6	240.287	Persimmon
GLYPHOSATE, ISOPROPYLAMINE SALT	April	866.9	87	1262.53	Walnuts

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

GLYPHOSATE, ISOPROPYLAMINE SALT	April	11049.3	248	11120	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	176	8	174.888	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	April	962	122	1924.57	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	April	290	58	580.099	Pluot
GLYPHOSATE, ISOPROPYLAMINE SALT	April	511	91	1022.17	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	May	15309	300	23173.8	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	731.5	22	731.404	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1018	117	2036.35	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1032	20	1597.08	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	May	200	10	400.068	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	May	486.8	16	725.785	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	June	290	58	1160.2	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	June	5474	155	7214.87	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	June	176	8	230.783	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	June	25729.9	530	43127.9	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	480	60	960.162	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1168	98	2336.4	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	June	265	11	530.090	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	July	145	58	580.099	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	July	1588.86	44	6863.54	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	July	19768	400	39742.7	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	3505	154	5710.97	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	100	5	300.051	Walnuts
LAMBDA-CYHALOTHRIN	March	9262.8	208	281.170	Alfalfa
LAMBDA-CYHALOTHRIN	April	3080	64	124.007	Cherrys
LAMBDA-CYHALOTHRIN	April	272	8	8.0912	Tomatos
LAMBDA-CYHALOTHRIN	May	2792	40	83.0560	Tomatos
LAMBDA-CYHALOTHRIN	May	618	46	24.747	Cherrys
LAMBDA-CYHALOTHRIN	May	448	22	17.3006	Walnuts
LAMBDA-CYHALOTHRIN	May	10032	141	333.402	Almonds
LAMBDA-CYHALOTHRIN	June	398	12	11.9116	Corn
LAMBDA-CYHALOTHRIN	June	5482	182	184.881	Walnuts
LAMBDA-CYHALOTHRIN	July	9798	246	321.062	Almonds
LAMBDA-CYHALOTHRIN	July	1428	26	42.7374	Beans
LAMBDA-CYHALOTHRIN	July	220	2	6.5842	Corn
LAMBDA-CYHALOTHRIN	August	5236	111	291.929	Beans
LAMBDA-CYHALOTHRIN	August	1648	16	48.7864	Tomatos
MALATHION	March	11574.26	246	11792.4	Alfalfa
MALATHION	May	185	20	330.19	Cherrys
MALATHION	June	120	6	214.675	Cherrys
MCPA, DIMETHYLAMINE SALT	March	1836	51	1016.58	Oats
MCPA, DIMETHYLAMINE SALT	April	180	12	99.93	Oats
METOLACHLOR	May	820	20	1633.18	Beans
METOLACHLOR	June	120	3	239.966	Beans
NICOSULFURON	June	300	15	12.2625	Corn

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

OXYFLUORFEN	March	90	1	18.8116	Walnuts
OXYFLUORFEN	April	4889.76	100	794.770	Almonds
OXYFLUORFEN	May	4348	84	574.088	Almonds
OXYFLUORFEN	May	682	17	162.43	Walnuts
OXYFLUORFEN	June	16187	313	1861.46	Almonds
OXYFLUORFEN	June	342	62	39.5272	Peaches
OXYFLUORFEN	June	808	85	101.333	Cherrys
OXYFLUORFEN	June	201	14	20.5005	Walnuts
OXYFLUORFEN	July	3714	96	1176.54	Almonds
OXYFLUORFEN	July	60	4	20.0656	Walnuts
OXYFLUORFEN	August	80	4	20.0656	Walnuts
PARAQUAT DICHLORIDE	April	120	6	124.587	Cherrys
PARAQUAT DICHLORIDE	April	40	2	45.99	Walnuts
PARAQUAT DICHLORIDE	April	928	20	813.042	Almonds
PARAQUAT DICHLORIDE	June	180	8	113.263	Almonds
PARAQUAT DICHLORIDE	August	130	2	448.494	Almonds
PENDIMETHALIN	March	1614.4	50	3495.29	Alfalfa
PENDIMETHALIN	April	75	15	284.09	Pluot
PENDIMETHALIN	May	1364	29	3874.98	Alfalfa
PENDIMETHALIN	May	657	16	821.901	Beans
PENDIMETHALIN	June	120	3	150.092	Beans
PENDIMETHALIN	July	230.22	18	218.010	Tomatos
PERMETHRIN	June	1215.6	36	188.4	Corn
PERMETHRIN	August	94	4	18.7564	Almonds
SIMAZINE	April	32.75	5	99.823	Walnuts
TRIFLURALIN	April	200	2	400	Alfalfa
TRIFLURALIN	April	680	5	675.905	Tomatos
TRIFLURALIN	May	6062	92	12124	Alfalfa
TRIFLURALIN	May	1328	36	999.812	Beans

Monitoring Site **Newman Wasteway near Hill**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
CHLORPYRIFOS	March	500	20	146.484	Alfalfa
CHLORPYRIFOS	May	2300	20	4602.28	Walnuts
CHLORPYRIFOS	July	148	4	277.944	Almonds
CLETHODIM	June	64	2	9.074	Alfalfa
DIMETHOATE	March	368	4	91.0256	Alfalfa
ESFENVALERATE	May	280	7	17.0821	Almonds
ESFENVALERATE	July	920	8	56.1264	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	March	1274	52	1229.18	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	725	41	1081.05	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	May	2555	7	3829.23	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	96	6	144.025	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	2411	83	2909.3	Corn

***Includes duplicate and incomplete data**

**** Not available in all counties.**

GLYPHOSATE, ISOPROPYLAMINE SALT	July	539	7	520.039	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	July	630	12	472.640	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	July	2555	7	5105.64	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	1274	52	2551.04	Almonds
IMAZETHAPYR, AMMONIUM SALT	June	64	2	4.531	Alfalfa
LAMBDA-CYHALOTHRIN	March	4150	120	125.027	Alfalfa
LAMBDA-CYHALOTHRIN	June	1160	8	44.8996	Walnuts
LAMBDA-CYHALOTHRIN	June	784	32	23.3232	Almonds
LAMBDA-CYHALOTHRIN	June	462	6	11.5524	Corn
LAMBDA-CYHALOTHRIN	July	160	4	6.346	Almonds
ORYZALIN	March	392	16	815.402	Almonds
OXYFLUORFEN	April	120	8	30.5472	Walnuts
OXYFLUORFEN	June	128	8	32.1048	Almonds
OXYFLUORFEN	July	840	16	421.38	Walnuts
OXYFLUORFEN	August	392	16	196.644	Almonds
PENDIMETHALIN	April	110	2	437.498	Alfalfa
PENDIMETHALIN	April	30	2	56.8178	Walnuts

Monitoring Site **Poso Slough at Indiana Ave**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
BETA-CYFLUTHRIN	August	36	2	0.1096	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1800	60	1421.69	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	June	600	20	600.718	Cotton
RIMSULFURON	May	60	4	1.12	Tomatos
TRIFLURALIN	April	884	4	590.722	Tomatos

Monitoring Site **Salt Slough at Lander Ave**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
BETA-CYFLUTHRIN	March	1306.68	28	212.307	Alfalfa
BETA-CYFLUTHRIN	May	10	2	0.039	Tomatos
BETA-CYFLUTHRIN	July	767.6	32	2.3336	Cotton
BETA-CYFLUTHRIN	July	271.6	4	1.0324	Tomatos
BETA-CYFLUTHRIN	August	7912.2	172	24.1294	Cotton
BIFENTHRIN	June	176	8	14.1232	Cotton
BIFENTHRIN	August	244.88	8	18.3804	Tomatos
CHLORPYRIFOS	March	1708	37	737.804	Alfalfa
CLETHODIM	May	695.2	12	182.504	Cotton
CLETHODIM	July	531.28	26	140.096	Cotton
COPPER SULFATE (BASIC)	April	271.6	4	386.198	Tomatos
DIURON	March	96	8	57.5888	Alfalfa
GLYPHOSATE	April	300.8	6	312.828	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	March	5458.0000	60	6824.24	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	March	2054	52	3061.53	Corn

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

GLYPHOSATE, ISOPROPYLAMINE SALT	March	34210.200	418	34232.6	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	March	8461.8	144	8468.87	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	April	998.8	22	1499.85	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	April	7208.6	148	7193.95	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	April	675.4	22	676.647	Wheat
GLYPHOSATE, ISOPROPYLAMINE SALT	May	8618	195	9137.96	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	June	4680	40	4666.81	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	June	50473.7	593	50331.4	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	July	6579.6	196	5888.54	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	July	688	32	1030.85	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	July	128	4	191.787	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	August	4715.6	52	6196.51	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	August	6117.8	98	6105.34	Cotton
LAMBDA-CYHALOTHRIN	March	20398.6	344	629.919	Alfalfa
LAMBDA-CYHALOTHRIN	April	1722.4	14	51.2856	Wheat
LAMBDA-CYHALOTHRIN	August	1354.4	10	40.3184	Alfalfa
MALATHION	March	6702.48	123	7581.61	Alfalfa
MALATHION	April	2401	30	3524.11	Alfalfa
MALATHION	April	944	10	1111.81	Wheat
MCPA, DIMETHYLAMINE SALT	March	206.8	2	114.548	Wheat
METHOMYL	August	894.4	16	603.72	Alfalfa
OXYFLUORFEN	March	14736.1	186	2406.02	Cotton
OXYFLUORFEN	March	4527.2	99	709.663	Tomatos
OXYFLUORFEN	April	245.6	8	38.5264	Wheat
OXYFLUORFEN	April	616.1	19	96.4351	Tomatos
PARAQUAT DICHLORIDE	March	489.76	16	677.973	Tomatos
PARAQUAT DICHLORIDE	March	380	15	263.017	Alfalfa
PARAQUAT DICHLORIDE	May	289.2	4	664.972	Alfalfa
PARAQUAT DICHLORIDE	June	3207.84	36	7376.61	Alfalfa
PARAQUAT DICHLORIDE	August	8477.44	80	13632.4	Alfalfa
PENDIMETHALIN	March	756	28	1749.99	Alfalfa
PENDIMETHALIN	April	152	2	143.939	Alfalfa
PENDIMETHALIN	May	490.46	6	768.613	Alfalfa
PENDIMETHALIN	June	70	2	132.575	Alfalfa
PENDIMETHALIN	June	219.8	7	416.286	Cotton
PENDIMETHALIN	July	513.28	28	486.058	Tomatos
PERMETHRIN	June	176	2	26.4	Corn
PYRITHIOBAC-SODIUM	May	933.23	18	189.212	Cotton
TRIFLURALIN	April	3926.4	60	7852.8	Alfalfa
TRIFLURALIN	April	1596	22	725.464	Tomatos
TRIFLURALIN	May	2104.2	34	4208.4	Alfalfa
TRIFLURALIN	May	2647.73	43	1568.85	Tomatos
TRIFLURALIN	June	1089.8	17	2179.6	Alfalfa
TRIFLURALIN	June	344.8	8	58.06	Tomatos
TRIFLURALIN	June	8688.26	134	4761.08	Cotton

***Includes duplicate and incomplete data**

**** Not available in all counties.**

TRIFLURALIN	July	2278.22	26	1248.41	Cotton

Monitoring Site **Salt Slough at Sand Dam**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
BETA-CYFLUTHRIN	March	1306.68	28	212.307	Alfalfa
BETA-CYFLUTHRIN	May	10	2	0.039	Tomatos
BETA-CYFLUTHRIN	July	767.6	32	2.3336	Cotton
BETA-CYFLUTHRIN	July	271.6	4	1.0324	Tomatos
BETA-CYFLUTHRIN	August	6682.8	118	20.3602	Cotton
BIFENTHRIN	June	176	8	14.1232	Cotton
BIFENTHRIN	August	244.88	8	18.3804	Tomatos
CHLORPYRIFOS	March	1646	35	706.737	Alfalfa
CLETHODIM	July	271.28	14	71.383	Cotton
COPPER SULFATE (BASIC)	April	271.6	4	386.198	Tomatos
DIURON	March	96	8	57.5888	Alfalfa
GLYPHOSATE	April	300.8	6	312.828	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	March	7164.4	118	7169.4	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	March	5458.0000	60	6824.24	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	March	20089.7	255	20142	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	April	998.8	22	1499.85	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	April	675.4	22	676.647	Wheat
GLYPHOSATE, ISOPROPYLAMINE SALT	April	5716.2000	96	5701.89	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	May	8618	195	9137.96	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	June	4680	40	4666.81	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	June	35185.4	394	35086.0	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	July	6579.6	196	5888.54	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	July	688	32	1030.85	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	July	128	4	191.787	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	August	4715.6	52	6196.51	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	August	6117.8	98	6105.34	Cotton
LAMBDA-CYHALOTHRIN	March	17362.4	304	536.856	Alfalfa
LAMBDA-CYHALOTHRIN	April	1722.4	14	51.2856	Wheat
MALATHION	March	5166.08	103	5396.38	Alfalfa
MALATHION	April	2401	30	3524.11	Alfalfa
MALATHION	April	944	10	1111.81	Wheat
MCPA, DIMETHYLAMINE SALT	March	206.8	2	114.548	Wheat
METHOMYL	August	894.4	16	603.72	Alfalfa
OXYFLUORFEN	March	3828.6	85	600.105	Tomatos
OXYFLUORFEN	March	8008.5	100	1351.32	Cotton
OXYFLUORFEN	April	245.6	8	38.5264	Wheat
OXYFLUORFEN	April	330.5	5	51.7695	Tomatos
PARAQUAT DICHLORIDE	March	489.76	16	677.973	Tomatos
PARAQUAT DICHLORIDE	March	380	15	263.017	Alfalfa
PARAQUAT DICHLORIDE	May	289.2	4	664.972	Alfalfa

***Includes duplicate and incomplete data**

**** Not available in all counties.**

PARAQUAT DICHLORIDE	June	273.44	4	628.809	Alfalfa
PARAQUAT DICHLORIDE	August	1687.92	24	2914.24	Alfalfa
PENDIMETHALIN	March	756	28	1749.99	Alfalfa
PENDIMETHALIN	June	219.8	7	416.286	Cotton
PENDIMETHALIN	June	70	2	132.575	Alfalfa
PENDIMETHALIN	July	513.28	28	486.058	Tomatos
TRIFLURALIN	April	1596	22	725.464	Tomatos
TRIFLURALIN	April	3926.4	60	7852.8	Alfalfa
TRIFLURALIN	May	708.2	18	1416.4	Alfalfa
TRIFLURALIN	May	2647.73	43	1568.85	Tomatos
TRIFLURALIN	June	344.8	8	58.06	Tomatos
TRIFLURALIN	June	8688.26	134	4761.08	Cotton
TRIFLURALIN	June	636.8	7	1273.6	Alfalfa
TRIFLURALIN	July	2278.22	26	1248.41	Cotton

Monitoring Site **San Joaquin River at Lander**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
2,4-D, DIMETHYLAMINE SALT	May	1075	13	1572.79	Wheat
BETA-CYFLUTHRIN	July	575.6	8	2.1916	Tomatos
BETA-CYFLUTHRIN	July	999	12	3.0384	Cotton
BETA-CYFLUTHRIN	August	7054.0000	142	21.5166	Cotton
CHLORPYRIFOS	August	456	6	199.224	Alfalfa
CLETHODIM	March	140.98	1	37.5318	Alfalfa
CLETHODIM	August	468.6	6	77.9604	Alfalfa
COPPER SULFATE (BASIC)	March	232.8	6	496.562	Tomatos
COPPER SULFATE (BASIC)	April	718.8	20	1022.16	Tomatos
GLYPHOSATE	June	1209.8	23	1258.18	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	March	26834	307	27483.1	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	March	2866	47	3393.31	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	March	4715.6	52	5895.13	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	April	3917.6	65	5883.35	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	April	675.4	22	676.647	Wheat
GLYPHOSATE, ISOPROPYLAMINE SALT	June	27647.4	298	27569.6	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	July	776.6	22	968.084	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	2669.8	46	2662.38	Cotton
GLYPHOSATE, ISOPROPYLAMINE SALT	August	4715.6	52	6196.51	Alfalfa
LAMBDA-CYHALOTHRIN	March	11845.4	154	3579.74	Alfalfa
LAMBDA-CYHALOTHRIN	April	576	6	17.1348	Wheat
LAMBDA-CYHALOTHRIN	August	481.8	6	14.3584	Alfalfa
MALATHION	March	454.4	4	555.903	Wheat
MALATHION	March	6073.6	82	6035.83	Alfalfa
MALATHION	April	2349.6	20	2766.83	Wheat
MALATHION	April	4249.6	46	6238.8	Alfalfa
MCPA, DIMETHYLAMINE SALT	March	386.8	6	214.301	Wheat

***Includes duplicate and incomplete data**

**** Not available in all counties.**

MCPA, DIMETHYLAMINE SALT	March	247.2	4	136.961	Barley
METHOMYL	August	606.4	8	409.32	Alfalfa
METOLACHLOR	April	168.6	2	224.209	Beans
OXYFLUORFEN	March	10812.8	137	1739.85	Cotton
OXYFLUORFEN	March	648	8	101.613	Tomatos
OXYFLUORFEN	April	60	2	7.5046	Cotton
OXYFLUORFEN	April	245.6	8	38.5264	Wheat
OXYFLUORFEN	July	421.5	15	211.442	Cotton
PARAQUAT DICHLORIDE	May	289.2	4	664.972	Alfalfa
PARAQUAT DICHLORIDE	June	6226.88	88	14319	Alfalfa
PARAQUAT DICHLORIDE	August	4622.32	56	6976.42	Alfalfa
PENDIMETHALIN	May	351.6	6	166.469	Alfalfa
PENDIMETHALIN	June	351.6	6	665.878	Alfalfa
TRIFLURALIN	March	327.6	12	655.2	Alfalfa
TRIFLURALIN	April	168.6	2	92.3908	Beans
TRIFLURALIN	April	1212.8	16	2425.6	Alfalfa
TRIFLURALIN	April	3192.2	48	1696.01	Tomatos
TRIFLURALIN	May	4678.8	62	9357.6	Alfalfa
TRIFLURALIN	May	1935.8	26	722.601	Tomatos
TRIFLURALIN	June	1210.5	17	438.782	Tomatos
TRIFLURALIN	June	9252.3	129	5067.84	Cotton
TRIFLURALIN	July	316.8	8	57.8696	Tomatos
TRIFLURALIN	July	368	4	201.662	Cotton

County **San Joaquin**

Monitoring Site **Blewett Drain at Highway 13**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
GLYPHOSATE, ISOPROPYLAMINE SALT	May	420	7	1260.21	Apricots
PARAQUAT DICHLORIDE	April	616	8	1605.07	Apricots

Monitoring Site **Hospital Creek at River Roa**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
ESFENVALERATE	May	37	1	1.8806	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	2768	16	5545.45	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	May	840	14	2520.43	Apricots
LAMBDA-CYHALOTHRIN	May	1038	6	43.5366	Apricots
PARAQUAT DICHLORIDE	April	1232	16	3210.14	Apricots
TRIFLURALIN	March	346	2	173.290	Apricots

***Includes duplicate and incomplete data**
**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

County **Stanislaus**

Monitoring Site **Blewett Drain at Highway 13**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
2,4-D, DIMETHYLAMINE SALT	May	52	2	85.0342	Walnuts
2,4-D, DIMETHYLAMINE SALT	May	50	2	81.8072	Almonds
BIFENTHRIN	July	284.4	6	42.7242	Almonds
CHLORPYRIFOS	July	74	2	138.972	Almonds
ESFENVALERATE	May	990	18	48.3174	Walnuts
ESFENVALERATE	May	1726	21	97.4419	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	3596.65	37	3242.89	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1230	25	2677.37	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	624	8	934.961	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	July	3195	21	7084.14	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	July	624	8	934.961	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	July	5741	55	12181.6	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	3255	30	4878.33	Almonds
LAMBDA-CYHALOTHRIN	May	1730	14	43.9574	Almonds
LAMBDA-CYHALOTHRIN	May	2160	20	83.592	Walnuts
LAMBDA-CYHALOTHRIN	July	170	2	6.9632	Almonds
LAMBDA-CYHALOTHRIN	August	36	2	1.071	Tomatos
ORYZALIN	April	140.73	3	292.733	Almonds
ORYZALIN	July	450	3	1404.07	Walnuts
OXYFLUORFEN	April	516.01	11	64.713	Almonds
OXYFLUORFEN	May	329	5	165.040	Almonds
OXYFLUORFEN	July	3656	36	1931.03	Almonds
OXYFLUORFEN	July	2130	14	856.604	Walnuts
PARAQUAT DICHLORIDE	July	1080	8	2768.06	Almonds

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

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
2,4-D, DIMETHYLAMINE SALT	March	100	5	45.713	Apricots
2,4-D, DIMETHYLAMINE SALT	March	432	9	418.608	Grapes
2,4-D, DIMETHYLAMINE SALT	May	22.5	5	28.132	Turf grass
2,4-D, DIMETHYLAMINE SALT	July	120	2	139.882	Apricots
BIFENTHRIN	June	140	2	14.0212	Melons
BIFENTHRIN	July	568	14	60.0588	Almonds
DIMETHOATE	March	1836	20	898.967	Alfalfa
DIMETHOATE	May	1090.88	32	539.506	Tomatos
DIMETHOATE	July	2472	82	1226.17	Beans
DIMETHOATE	July	2400	32	1184.90	Tomatos
DIMETHOATE	August	3730	45	1841.53	Beans

***Includes duplicate and incomplete data**

**** Not available in all counties.**

ESFENVALERATE	March	296	4	12.0388	Apricots
ESFENVALERATE	May	120	4	4.8804	Cherrys
ESFENVALERATE	May	4540	117	193.785	Apricots
ESFENVALERATE	May	152	8	7.7048	Almonds
ESFENVALERATE	July	600	8	24.4156	Tomatos
ESFENVALERATE	July	32	4	0.1016	Apricots
ESFENVALERATE	July	300	2	19.5222	Almonds
ETHALFLURALIN	May	112	4	142.428	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	March	4494	49	5839	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	March	1344	28	2691.21	Grapes
GLYPHOSATE, ISOPROPYLAMINE SALT	March	189.99	3	380.105	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	March	92	23	46.0552	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	March	2980	44	2378.76	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	April	7100	69	6870.43	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	April	896	14	3588.28	Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	April	490	5	490.837	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1708.5	29	1166.23	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	3150	21	3150.54	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	896	14	3588.28	Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	June	266	14	266.045	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	230	23	331.596	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1287	47	1688.06	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	July	4238	66	5900.59	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	July	161	23	92.1104	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	July	1720	25	2525.43	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	July	15691.5	211	23911.7	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	1344	28	2016.34	Almonds
LAMBDA-CYHALOTHRIN	March	2424	53	70.4007	Alfalfa
LAMBDA-CYHALOTHRIN	March	14125	117	350.155	Peaches
LAMBDA-CYHALOTHRIN	March	150	3	3.7185	Apricots
LAMBDA-CYHALOTHRIN	April	372.5	10	14.4284	Cherrys
LAMBDA-CYHALOTHRIN	April	13000	108	771.582	Peaches
LAMBDA-CYHALOTHRIN	May	2683	32	98.7604	Apricots
LAMBDA-CYHALOTHRIN	May	630	9	6.8157	Tomatos
LAMBDA-CYHALOTHRIN	May	80	5	3.1425	Almonds
LAMBDA-CYHALOTHRIN	July	221	13	8.8192	Walnuts
LAMBDA-CYHALOTHRIN	July	1028	32	30.6338	Beans
LAMBDA-CYHALOTHRIN	August	1470	19	43.9939	Beans
MALATHION	July	55	1	78.2136	Beans
MALATHION	August	128	2	158.327	Beans
METOLACHLOR	April	900	18	1196.47	Tomatos
METOLACHLOR	May	100	2	122.653	Tomatos
METOLACHLOR	May	112	4	187.014	Beans
ORYZALIN	June	144	3	102.092	Almonds
OXYFLUORFEN	March	1950	13	76.4218	Almonds

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

OXYFLUORFEN	April	96	8	24.0792	Almonds
OXYFLUORFEN	May	1950	13	195.641	Almonds
OXYFLUORFEN	July	56	8	8.0264	Walnuts
OXYFLUORFEN	July	20	5	0.8365	Cherrys
OXYFLUORFEN	July	5960	80	698.537	Almonds
OXYFLUORFEN	July	339	9	143.971	Apricots
PARAQUAT DICHLORIDE	March	118	2	42.4554	Apricots
PARAQUAT DICHLORIDE	March	150	2	53.9688	Almonds
PARAQUAT DICHLORIDE	July	16	2	20.7644	Walnuts
PARAQUAT DICHLORIDE	July	54	18	74.7522	Cherrys
PARAQUAT DICHLORIDE	July	23	2	31.8388	Apricots
PARAQUAT DICHLORIDE	August	882	9	3042.23	Olive
PENDIMETHALIN	March	316.65	5	599.808	Peaches
PENDIMETHALIN	March	66	6	46.875	Cherrys
PENDIMETHALIN	March	240	5	909.086	Grapes
PENDIMETHALIN	March	89	4	63.21	Apricots
PENDIMETHALIN	April	700	14	662.876	Tomatos
PENDIMETHALIN	May	250	5	201.23	Tomatos
RIMSULFURON	May	958.16	26	28.7418	Tomatos
SIMAZINE	March	288	6	1153.46	Grapes
ZIRAM	March	961	14	3287.76	Apricots

Monitoring Site **Del Puerto Creek near Cox**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
2,4-D, DIMETHYLAMINE SALT	March	432	9	418.608	Grapes
2,4-D, DIMETHYLAMINE SALT	March	150	9	168.793	Turf grass
2,4-D, DIMETHYLAMINE SALT	March	100	5	45.713	Apricots
2,4-D, DIMETHYLAMINE SALT	May	229.5	20	261.066	Turf grass
2,4-D, DIMETHYLAMINE SALT	July	150	3	62.3298	Almonds
2,4-D, DIMETHYLAMINE SALT	July	120	2	139.882	Apricots
BIFENTHRIN	June	140	2	14.0212	Melons
BIFENTHRIN	July	820	22	85.2968	Almonds
BROMOXYNIL HEPTANOATE	April	40	2	7.0858	Alfalfa
BROMOXYNIL OCTANOATE	April	40	2	7.3482	Alfalfa
CHLORPYRIFOS	March	304.5	11	106.95	Alfalfa
CHLORPYRIFOS	August	88	4	44.0648	Alfalfa
CHLORPYRIFOS	August	226	6	228.267	Corn
DIMETHOATE	March	3876	44	1817.80	Alfalfa
DIMETHOATE	April	378.16	8	187.118	Tomatos
DIMETHOATE	April	402	18	198.752	Alfalfa
DIMETHOATE	May	666	12	329.592	Broccoli
DIMETHOATE	May	4498.64	150	2039.45	Tomatos
DIMETHOATE	June	2164	48	741.186	Tomatos
DIMETHOATE	July	11022	272	5378.57	Tomatos

***Includes duplicate and incomplete data**

**** Not available in all counties.**

DIMETHOATE	July	4392	170	2176.58	Beans
DIMETHOATE	August	3008	32	744.037	Tomatos
DIMETHOATE	August	6646	105	3283.11	Beans
ESFENVALERATE	March	296	4	12.0388	Apricots
ESFENVALERATE	May	3447	73	179.686	Almonds
ESFENVALERATE	May	120	4	4.8804	Cherrys
ESFENVALERATE	May	5643	181	244.712	Apricots
ESFENVALERATE	June	1056.25	36	42.9165	Tomatos
ESFENVALERATE	July	2744	28	143.787	Almonds
ESFENVALERATE	July	6218	171	260.587	Tomatos
ESFENVALERATE	July	32	4	0.1016	Apricots
ESFENVALERATE	July	485	30	28.5479	Walnuts
ESFENVALERATE	August	590	6	26.9796	Tomatos
ETHALFLURALIN	May	148	7	188.208	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	March	189.99	3	380.105	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	March	92	23	46.0552	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	March	2980	44	2378.76	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	March	1344	28	2691.21	Grapes
GLYPHOSATE, ISOPROPYLAMINE SALT	March	368	48	360.432	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	March	4494	49	5839	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	7100	69	6870.43	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1194	21	3201.55	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	April	260	13	390.467	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	April	896	14	3588.28	Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	April	234	18	432.517	Turf grass
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1390	20	1274.65	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	April	160	2	120.020	Alfalfa
GLYPHOSATE, ISOPROPYLAMINE SALT	April	100	16	65.0784	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	April	8788.5	86	21870.3	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1080	12	4325.16	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	May	2380	28	4765.69	Melons
GLYPHOSATE, ISOPROPYLAMINE SALT	May	4060	112	4434.33	Grapes
GLYPHOSATE, ISOPROPYLAMINE SALT	May	3150	21	3150.54	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	896	14	3588.28	Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	June	230	23	331.596	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	June	6986	53	20429.5	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	2022	79	2423.18	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	June	130	13	260.311	Turf grass
GLYPHOSATE, ISOPROPYLAMINE SALT	July	161	23	92.1104	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	July	1912	31	2717.46	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	July	4238	66	5900.59	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	July	16551.5	239	24818.3	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	234	18	468.56	Turf grass
GLYPHOSATE, ISOPROPYLAMINE SALT	August	4614	80	11171.4	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	342	18	684.817	Turf grass

***Includes duplicate and incomplete data**

**** Not available in all counties.**

GLYPHOSATE, ISOPROPYLAMINE SALT	August	182	26	208.035	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	840	28	1009.20	Grapes
GLYPHOSATE, ISOPROPYLAMINE SALT	August	1209	39	3623.06	Spice
LAMBDA-CYHALOTHRIN	March	14125	117	350.155	Peaches
LAMBDA-CYHALOTHRIN	March	8255	243	246.294	Alfalfa
LAMBDA-CYHALOTHRIN	March	1230	21	30.4917	Apricots
LAMBDA-CYHALOTHRIN	April	13000	108	771.582	Peaches
LAMBDA-CYHALOTHRIN	April	372.5	10	14.4284	Cherrys
LAMBDA-CYHALOTHRIN	April	856	32	25.464	Alfalfa
LAMBDA-CYHALOTHRIN	April	176	11	4.7718	Walnuts
LAMBDA-CYHALOTHRIN	May	680	7	18.8711	Almonds
LAMBDA-CYHALOTHRIN	May	1086.68	40	18.9773	Tomatos
LAMBDA-CYHALOTHRIN	May	3763	50	125.534	Apricots
LAMBDA-CYHALOTHRIN	May	30	3	1.1898	Cherrys
LAMBDA-CYHALOTHRIN	June	197.5	15	7.8122	Walnuts
LAMBDA-CYHALOTHRIN	July	100	2	3.9716	Almonds
LAMBDA-CYHALOTHRIN	July	910	26	26.9508	Tomatos
LAMBDA-CYHALOTHRIN	July	1928	80	57.4922	Beans
LAMBDA-CYHALOTHRIN	July	261	17	9.9096	Walnuts
LAMBDA-CYHALOTHRIN	August	330	11	5.4868	Walnuts
LAMBDA-CYHALOTHRIN	August	2460	37	75.3247	Beans
LAMBDA-CYHALOTHRIN	August	642	6	19.098	Tomatos
LINURON	March	208	13	208	Asparagus
MALATHION	May	22	4	21.4676	Cherrys
MALATHION	July	55	1	78.2136	Beans
MALATHION	August	128	2	158.327	Beans
MCPA, DIMETHYLAMINE SALT	April	116	8	44.8268	Oats
METOLACHLOR	April	900	18	1196.47	Tomatos
METOLACHLOR	May	100	2	122.653	Tomatos
METOLACHLOR	May	922	13	1539.70	Beans
METOLACHLOR	June	360	9	601.115	Beans
ORYZALIN	March	1200	4	3599.71	Almonds
ORYZALIN	June	144	3	102.092	Almonds
OXYFLUORFEN	March	20	4	1.8812	Cherrys
OXYFLUORFEN	March	1950	13	76.4218	Almonds
OXYFLUORFEN	April	4756	47	2204.12	Almonds
OXYFLUORFEN	May	4093	26	287.177	Almonds
OXYFLUORFEN	June	1390	14	588.928	Almonds
OXYFLUORFEN	July	8103	93	787.24	Almonds
OXYFLUORFEN	July	339	9	143.971	Apricots
OXYFLUORFEN	July	20	5	0.8365	Cherrys
OXYFLUORFEN	July	56	8	8.0264	Walnuts
OXYFLUORFEN	August	1142	20	166.514	Almonds
OXYFLUORFEN	August	480	16	144.474	Grapes
PARAQUAT DICHLORIDE	March	118	2	42.4554	Apricots

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

PARAQUAT DICHLORIDE	March	536	24	1232.53	Alfalfa
PARAQUAT DICHLORIDE	March	1050	5	3158.29	Almonds
PARAQUAT DICHLORIDE	July	23	2	31.8388	Apricots
PARAQUAT DICHLORIDE	July	54	18	74.7522	Cherrys
PARAQUAT DICHLORIDE	July	132	6	82.7596	Walnuts
PARAQUAT DICHLORIDE	August	116	4	151.396	Walnuts
PARAQUAT DICHLORIDE	August	882	9	3042.23	Olive
PENDIMETHALIN	March	204	24	281.071	Cherrys
PENDIMETHALIN	March	329	8	381.39	Apricots
PENDIMETHALIN	March	316.65	5	599.808	Peaches
PENDIMETHALIN	March	240	5	909.086	Grapes
PENDIMETHALIN	April	638	8	604.163	Beans
PENDIMETHALIN	April	1757.32	30	1664.08	Tomatos
PENDIMETHALIN	April	37.5	6	14.382	Cherrys
PENDIMETHALIN	May	234	6	221.59	Beans
PENDIMETHALIN	May	2629	124	2454.06	Tomatos
PENDIMETHALIN	June	576	12	545.452	Beans
RIMSULFURON	April	567.24	12	17.73	Tomatos
RIMSULFURON	May	3956.54	152	127.179	Tomatos
RIMSULFURON	June	562.5	9	17.5725	Tomatos
SIMAZINE	March	288	6	1153.46	Grapes
SIMAZINE	April	40	2	19.8946	Almonds
TRIFLURALIN	April	68	4	27.2796	Beans
ZIRAM	March	961	14	3287.76	Apricots

Monitoring Site **Hospital Creek at River Roa**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
2,4-D, DIMETHYLAMINE SALT	April	700	5	763.128	Almonds
BIFENTHRIN	July	706	10	92.3892	Almonds
BROMOXYNIL HEPTANOATE	March	130	2	22.3536	Alfalfa
BROMOXYNIL OCTANOATE	March	130	2	23.1814	Alfalfa
CARBARYL	May	420	3	357	Tomatos
CHLORPYRIFOS	June	210	5	394.38	Almonds
DIMETHOATE	March	130	2	40.2096	Alfalfa
DIMETHOATE	June	1872	24	926.088	Tomatos
DIMETHOATE	July	6076	96	3004.47	Beans
DIMETHOATE	July	11344	126	4898.3	Tomatos
DIMETHOATE	August	220	4	108.756	Beans
ESFENVALERATE	May	330	11	16.1062	Apricots
ESFENVALERATE	May	5687	56	298.86	Almonds
ESFENVALERATE	May	1980	36	96.6348	Walnuts
ESFENVALERATE	July	2255	22	114.674	Almonds
ESFENVALERATE	July	1080	12	43.9376	Tomatos
ETHALFLURALIN	May	5400	86	6867.07	Beans

***Includes duplicate and incomplete data**

**** Not available in all counties.**

GLYPHOSATE, ISOPROPYLAMINE SALT	March	1050	14	643.8	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	126	12	141.629	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	April	8719.65	73	8728.83	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	144	6	299.744	Right of Way
GLYPHOSATE, ISOPROPYLAMINE SALT	May	126	12	141.629	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	May	11097	119	18675.1	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1944	36	3888.66	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	255	24	464.389	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	July	5992	56	13120.9	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	3195	21	7084.14	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	1683.96	79	4261.12	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	2424	42	4608.05	Almonds
IMAZETHAPYR, AMMONIUM SALT	March	130	2	9.2314	Alfalfa
LAMBDA-CYHALOTHRIN	March	4780	62	142.194	Alfalfa
LAMBDA-CYHALOTHRIN	April	4185	54	124.494	Alfalfa
LAMBDA-CYHALOTHRIN	May	997	11	28.4424	Almonds
LAMBDA-CYHALOTHRIN	May	360	8	15.0992	Walnuts
LAMBDA-CYHALOTHRIN	May	3780	27	112.447	Tomatos
LAMBDA-CYHALOTHRIN	June	944	8	20.6024	Walnuts
LAMBDA-CYHALOTHRIN	June	1080	20	28.312	Almonds
LAMBDA-CYHALOTHRIN	June	6309.28	88	127.716	Tomatos
LAMBDA-CYHALOTHRIN	July	5646	90	168.187	Beans
LAMBDA-CYHALOTHRIN	July	12644	134	363.101	Tomatos
LAMBDA-CYHALOTHRIN	July	170	2	6.9632	Almonds
LAMBDA-CYHALOTHRIN	August	2160	40	70.778	Almonds
LAMBDA-CYHALOTHRIN	August	3780	27	112.447	Tomatos
LAMBDA-CYHALOTHRIN	August	960	8	41.9032	Walnuts
LAMBDA-CYHALOTHRIN	August	330	6	9.8169	Beans
METOLACHLOR	May	3614	52	5129.34	Tomatos
METOLACHLOR	May	8088	123	13505.3	Beans
METOLACHLOR	June	2730	26	3874.76	Tomatos
ORYZALIN	March	150	2	191.463	Almonds
ORYZALIN	April	140.73	3	292.733	Almonds
ORYZALIN	May	7542	30	23532.2	Almonds
ORYZALIN	July	450	3	1404.07	Walnuts
OXYFLUORFEN	April	3266.01	29	334.14	Almonds
OXYFLUORFEN	May	240	10	100.328	Right of Way
OXYFLUORFEN	May	8073	53	902.717	Almonds
OXYFLUORFEN	June	864	16	108.354	Almonds
OXYFLUORFEN	July	2130	14	856.604	Walnuts
OXYFLUORFEN	July	14432	74	2266.89	Almonds
OXYFLUORFEN	August	378	9	119.961	Walnuts
OXYFLUORFEN	August	1694	48	103.655	Almonds
OXYFLUORFEN	August	1049.4	6	526.484	Grapes
PARAQUAT DICHLORIDE	July	1080	8	2768.06	Almonds

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

PENDIMETHALIN	April	360	3	340.907	Beans
PENDIMETHALIN	May	720	8	681.815	Beans
RIMSULFURON	May	3740	34	87.125	Tomatos
RIMSULFURON	June	339.96	12	10.605	Tomatos
RIMSULFURON	August	2380	17	74.375	Tomatos

Monitoring Site **Ingram Creek at River Road**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
2,4-D, DIMETHYLAMINE SALT	April	700	5	763.128	Almonds
BIFENTHRIN	July	2354	32	269.115	Almonds
BROMOXYNIL HEPTANOATE	March	130	2	22.3536	Alfalfa
BROMOXYNIL OCTANOATE	March	130	2	23.1814	Alfalfa
CARBARYL	April	120	1	60	Tomatos
CARBARYL	May	590	5	501.5	Tomatos
CHLORPYRIFOS	May	340	4	319.26	Walnuts
DIMETHOATE	March	130	2	40.2096	Alfalfa
DIMETHOATE	May	120	6	59.3646	Tomatos
DIMETHOATE	June	2232	30	1015.14	Tomatos
DIMETHOATE	July	21979	251	9043.80	Tomatos
DIMETHOATE	July	16122	251	7983.78	Beans
DIMETHOATE	August	1550	32	769.827	Beans
ESFENVALERATE	May	902	12	46.9636	Almonds
ESFENVALERATE	May	240	6	11.7132	Walnuts
ESFENVALERATE	May	1320	84	85.8972	Cherrys
ESFENVALERATE	May	1684	31	80.4484	Apricots
ESFENVALERATE	July	150	6	7.3206	Almonds
ESFENVALERATE	July	1240	14	51.265	Tomatos
ETHALFLURALIN	May	15185	197	19146.4	Beans
ETHALFLURALIN	June	270	3	343.353	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	March	3724	133	3047.55	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	March	2040	24	2723.17	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	March	7460	142	5420.29	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	April	306	17	381.916	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	April	9568	428	11640	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	400	5	1601.91	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	April	360	6	1440.25	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	May	2166	36	2864.80	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	May	930	43	3724.45	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	May	390	6	425.969	Grapes
GLYPHOSATE, ISOPROPYLAMINE SALT	May	144	6	299.744	Right of Way
GLYPHOSATE, ISOPROPYLAMINE SALT	May	13307	208	11622.6	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	750	6	3003.59	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	June	9842	931	19687.4	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	June	3424	46	6111.32	Almonds

***Includes duplicate and incomplete data**

**** Not available in all counties.**

GLYPHOSATE, ISOPROPYLAMINE SALT	June	3578.67	423	7112.85	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	June	270	2	216.258	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	July	19046.880	733	35248.5	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	2661.3300	399	5323.58	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	July	390	6	732.124	Grapes
GLYPHOSATE, ISOPROPYLAMINE SALT	July	2926	133	1594.64	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	July	8778	798	17559	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	August	6724.58	200	8825.84	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	1683.96	79	4261.12	Walnuts
IMAZETHAPYR, AMMONIUM SALT	March	130	2	9.2314	Alfalfa
LAMBDA-CYHALOTHRIN	March	4780	62	142.194	Alfalfa
LAMBDA-CYHALOTHRIN	April	4185	54	124.494	Alfalfa
LAMBDA-CYHALOTHRIN	May	7785	80	188.373	Tomatos
LAMBDA-CYHALOTHRIN	May	360	8	15.0992	Walnuts
LAMBDA-CYHALOTHRIN	May	2674	81	78.76	Almonds
LAMBDA-CYHALOTHRIN	June	1080	20	28.312	Almonds
LAMBDA-CYHALOTHRIN	June	944	8	20.6024	Walnuts
LAMBDA-CYHALOTHRIN	June	6309.28	88	127.716	Tomatos
LAMBDA-CYHALOTHRIN	July	14346	217	427.078	Beans
LAMBDA-CYHALOTHRIN	July	24519	265	716.534	Tomatos
LAMBDA-CYHALOTHRIN	July	1680	60	62.916	Almonds
LAMBDA-CYHALOTHRIN	August	470	8	13.9633	Beans
LAMBDA-CYHALOTHRIN	August	3780	27	112.447	Tomatos
LAMBDA-CYHALOTHRIN	August	2160	40	70.778	Almonds
LAMBDA-CYHALOTHRIN	August	960	8	41.9032	Walnuts
MALATHION	May	6240	312	11163.1	Cherrys
METOLACHLOR	April	120	2	179.975	Tomatos
METOLACHLOR	May	28571	403	46182.5	Beans
METOLACHLOR	May	4585.65	62	6408.26	Tomatos
METOLACHLOR	June	810	9	1352.51	Beans
METOLACHLOR	June	3315	35	5240.94	Tomatos
ORYZALIN	March	9.48	3	29.5791	Cherrys
ORYZALIN	March	29.46	3	91.9197	Almonds
ORYZALIN	March	1490	25	1690.64	Apricots
ORYZALIN	April	684	57	1422.79	Almonds
ORYZALIN	June	836	76	1738.96	Cherrys
OXYFLUORFEN	April	5304	238	548.334	Almonds
OXYFLUORFEN	May	2936	20	123.397	Almonds
OXYFLUORFEN	May	240	10	100.328	Right of Way
OXYFLUORFEN	June	864	16	108.354	Almonds
OXYFLUORFEN	July	260	4	65.2136	Grapes
OXYFLUORFEN	July	8354.6400	384	1847.28	Almonds
OXYFLUORFEN	August	864	16	81.2656	Almonds
OXYFLUORFEN	August	1049.4	6	526.484	Grapes
OXYFLUORFEN	August	378	9	119.961	Walnuts

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

OXYFLUORFEN	August	685.24	74	171.872	Cherrys
PARAQUAT DICHLORIDE	June	55.6	8	76.9672	Cherrys
PARAQUAT DICHLORIDE	July	148.16	16	205.098	Cherrys
PARAQUAT DICHLORIDE	August	74.08	8	102.549	Cherrys
PENDIMETHALIN	April	360	3	340.907	Beans
PENDIMETHALIN	May	3730	64	3532.18	Beans
RIMSULFURON	May	9821	115	225.923	Tomatos
RIMSULFURON	June	339.96	12	10.605	Tomatos
RIMSULFURON	August	2380	17	74.375	Tomatos
TRIFLURALIN	May	250	2	68.441	Tomatos
TRIFLURALIN	June	260	4	136.882	Tomatos

Monitoring Site **Marshall Road Drain near R**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
2,4-D, DIMETHYLAMINE SALT	June	48	2	26.1644	Almonds
BIFENTHRIN	June	54	6	6.7602	Almonds
BIFENTHRIN	July	140	4	10.9366	Melons
BIFENTHRIN	July	772	20	89.3142	Almonds
BIFENTHRIN	July	270	12	27.4014	Walnuts
BIFENTHRIN	August	170	2	17.0256	Corn
BIFENTHRIN	August	560	8	45.5616	Melons
CHLORPYRIFOS	March	216	6	76.0216	Alfalfa
CHLORPYRIFOS	May	54	6	54.5418	Walnuts
DIMETHOATE	March	440	4	218.165	Alfalfa
DIMETHOATE	May	1348	28	168.79	Tomatos
DIMETHOATE	June	600	14	262.478	Tomatos
DIMETHOATE	July	1620	20	788.620	Tomatos
DIMETHOATE	July	480	6	118.49	Beans
DIMETHOATE	August	500	10	246.854	Tomatos
DIMETHOATE	August	706	12	348.744	Beans
ESFENVALERATE	May	23	2	0.9354	Cherrys
ESFENVALERATE	May	108	6	5.271	Almonds
ESFENVALERATE	June	90	10	4.36	Walnuts
ESFENVALERATE	July	864	18	36.7898	Tomatos
ESFENVALERATE	August	240	6	9.7608	Tomatos
ESFENVALERATE	August	900	6	58.5666	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	March	42	14	83.9286	Pasture
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1575	21	2365.32	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	April	310	4	464.079	Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	April	44	2	66.0112	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	240	20	360.062	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	May	3360	42	13456.1	Melons
GLYPHOSATE, ISOPROPYLAMINE SALT	May	40	2	159.549	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	May	100	2	83.3542	Walnuts

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

GLYPHOSATE, ISOPROPYLAMINE SALT	May	2306	16	2606.45	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1540	22	1540.26	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1980	35	3721.37	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	190	2	760.13	Melons
GLYPHOSATE, ISOPROPYLAMINE SALT	June	100	2	125.213	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	June	440	11	440.075	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	July	4402.48	120	6385.92	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	706	24	706.12	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	August	42	14	83.9286	Pasture
GLYPHOSATE, ISOPROPYLAMINE SALT	August	2730	36	3992.16	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	935	11	935.16	Corn
LAMBDA-CYHALOTHRIN	March	2171	44	65.2807	Alfalfa
LAMBDA-CYHALOTHRIN	April	360	12	10.7088	Tomatos
LAMBDA-CYHALOTHRIN	May	180	12	7.0632	Walnuts
LAMBDA-CYHALOTHRIN	May	564	12	22.0272	Almonds
LAMBDA-CYHALOTHRIN	May	375	5	4.0565	Tomatos
LAMBDA-CYHALOTHRIN	June	28	4	1.1924	Walnuts
LAMBDA-CYHALOTHRIN	July	80	4	2.1692	Tomatos
LAMBDA-CYHALOTHRIN	August	452	12	13.4464	Beans
LAMBDA-CYHALOTHRIN	August	480	12	14.3652	Melons
LAMBDA-CYHALOTHRIN	August	720	12	21.5484	Tomatos
ORYZALIN	May	22.5	3	9.3606	Almonds
ORYZALIN	August	600	4	624.031	Almonds
OXYFLUORFEN	March	33	11	11.0363	Pasture
OXYFLUORFEN	May	2084	18	266.944	Almonds
OXYFLUORFEN	July	2845.94	61	424.148	Almonds
OXYFLUORFEN	August	33	11	11.0363	Pasture
OXYFLUORFEN	August	1698	13	177.582	Almonds
PARAQUAT DICHLORIDE	April	20	2	20.7644	Walnuts
PENDIMETHALIN	April	32	2	75.7572	Alfalfa
PENDIMETHALIN	April	980	9	1344.69	Tomatos
PENDIMETHALIN	May	273.34	6	258.862	Tomatos
PENDIMETHALIN	May	200	8	378.786	Alfalfa
PENDIMETHALIN	June	40	1	37.8786	Tomatos
PENDIMETHALIN	June	444	10	370.794	Beans
RIMSULFURON	April	180	6	5.625	Tomatos
RIMSULFURON	May	1395	18	31.7034	Tomatos
RIMSULFURON	July	140	2	2.625	Tomatos

Monitoring Site **Newman Wasteway near Hill**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
BIFENTHRIN	April	280	4	26.2796	Broccoli
BIFENTHRIN	May	480	8	37.4964	Corn
CHLORPYRIFOS	March	340	10	104.673	Alfalfa

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

DIAZINON	April	80	2	120	Cherrys
DIMETHOATE	March	360	6	178.094	Broccoli
DIMETHOATE	March	264	4	130.339	Alfalfa
DIMETHOATE	April	420	6	207.776	Broccoli
DIMETHOATE	April	48	4	23.698	Alfalfa
DIMETHOATE	May	960	12	118.729	Tomatos
DIMETHOATE	May	720	12	356.188	Corn
ESFENVALERATE	April	30	12	0.732	Cherrys
ESFENVALERATE	May	1636	10	53.2284	Almonds
ESFENVALERATE	June	1840	24	65.4128	Tomatos
ESFENVALERATE	July	560	8	36.4416	Almonds
ESFENVALERATE	August	920	12	37.4308	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	April	720	8	1440.25	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	979	15	1958.33	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	2126	28	4252.73	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	5260	34	6876.82	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	1800	18	3600.61	Almonds
LAMBDA-CYHALOTHRIN	March	1062	29	30.2309	Alfalfa
LAMBDA-CYHALOTHRIN	April	156	4	4.9074	Alfalfa
LAMBDA-CYHALOTHRIN	May	1300	14	30.1246	Tomatos
LAMBDA-CYHALOTHRIN	June	640	4	24.79	Almonds
LAMBDA-CYHALOTHRIN	July	824	14	28.5756	Almonds
OXYFLUORFEN	March	708.6	12	179.873	Almonds
OXYFLUORFEN	April	270	3	33.8607	Almonds
OXYFLUORFEN	June	1976	28	294.965	Almonds
PARAQUAT DICHLORIDE	March	436.2	8	1002.95	Almonds
PARAQUAT DICHLORIDE	April	400	4	1379.7	Almonds
PARAQUAT DICHLORIDE	May	200	4	689.849	Almonds
PARAQUAT DICHLORIDE	June	100	4	69.2148	Almonds
PENDIMETHALIN	March	277.15	5	524.96	Almonds
TRIFLURALIN	April	132	2	264	Alfalfa

Monitoring Site **Orestimba Creek at Hwy 33**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
2,4-D, DIMETHYLAMINE SALT	June	340	17	555.994	Walnuts
CHLORPYRIFOS	May	210	8	211.947	Walnuts
CHLORPYRIFOS	May	1968	36	3042.17	Citrus
CHLORPYRIFOS	July	1140	12	4534.3	Citrus
CHLORPYRIFOS	July	352	24	840.597	Almonds
DIMETHOATE	March	650	26	324.373	Alfalfa
DIMETHOATE	May	1526	51	377.678	Tomatos
DIMETHOATE	June	136	2	67.28	Beans
DIMETHOATE	June	1962	40	485.044	Tomatos
DIMETHOATE	July	8130	45	2008.49	Beans

***Includes duplicate and incomplete data**

**** Not available in all counties.**

DIMETHOATE	July	800	8	394.967	Tomatos
DIMETHOATE	August	3570	17	1762.54	Beans
DIMETHOATE	August	360	3	89.0469	Tomatos
DIURON	April	15	1	11.9977	Walnuts
DIURON	July	320	2	234.546	Walnuts
ESFENVALERATE	May	8032	108	493.079	Almonds
ESFENVALERATE	May	294	6	19.1316	Walnuts
ESFENVALERATE	June	1230	18	49.9636	Tomatos
ESFENVALERATE	July	510	4	33.1876	Almonds
ESFENVALERATE	July	1030	14	43.3522	Tomatos
ESFENVALERATE	July	1482	34	89.1774	Walnuts
ESFENVALERATE	August	940	8	43.0008	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	March	1500	20	360.062	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	March	408	6	816.139	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	March	585	45	499.886	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	March	150	15	225.039	Right of Way
GLYPHOSATE, ISOPROPYLAMINE SALT	March	21105	268	27783.8	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1100	11	4030.78	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	April	4589	78	5048.76	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1620	40	1620.28	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1000	40	1120.19	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1283.38	80	2090.93	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	May	8559	138	10638.5	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1500	20	1120.19	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	May	6790	41	20529.3	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	May	6211.56	114	10034.1	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	June	290	2	1160.2	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	June	3120	39	3123.73	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	June	2262	78	3042.52	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	June	4195	39	8391.43	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1500	20	600.102	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	July	1500	20	360.062	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	July	45184.75	592	91860.8	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	5405.5	178	7690.19	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	July	816	4	1137.05	Citrus
GLYPHOSATE, ISOPROPYLAMINE SALT	August	1146.28	71	2355.96	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	August	6580	91	12282.1	Almonds
LAMBDA-CYHALOTHRIN	March	1980	48	89.406	Alfalfa
LAMBDA-CYHALOTHRIN	March	900	12	26.4936	Broccoli
LAMBDA-CYHALOTHRIN	April	240	20	7.14	Tomatos
LAMBDA-CYHALOTHRIN	April	2968	58	74.223	Walnuts
LAMBDA-CYHALOTHRIN	May	3880	50	151.897	Walnuts
LAMBDA-CYHALOTHRIN	May	25326	830	785.474	Almonds
LAMBDA-CYHALOTHRIN	June	1056	32	28.598	Walnuts
LAMBDA-CYHALOTHRIN	June	640	8	19.0384	Tomatos

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

LAMBDA-CYHALOTHRIN	July	1410	22	44.3226	Almonds
LAMBDA-CYHALOTHRIN	July	500	10	14.874	Tomatos
METOLACHLOR	May	8967	189	15970.7	Beans
METOLACHLOR	June	1785	42	4535.36	Beans
NORFLURAZON	March	750	3	294.75	Almonds
NORFLURAZON	May	486	12	190.998	Almonds
OXYFLUORFEN	March	90	9	33.9507	Right of Way
OXYFLUORFEN	March	455	7	30.4801	Walnuts
OXYFLUORFEN	April	1458	36	146.165	Almonds
OXYFLUORFEN	April	186	2	11.6782	Fallow
OXYFLUORFEN	May	6111	78	874.094	Almonds
OXYFLUORFEN	May	3463	39	535.934	Walnuts
OXYFLUORFEN	June	798	21	100.659	Walnuts
OXYFLUORFEN	June	1955	23	263.763	Almonds
OXYFLUORFEN	July	4580	40	464.709	Almonds
OXYFLUORFEN	July	815	39	289.365	Walnuts
OXYFLUORFEN	August	414	18	41.4792	Almonds
PARAQUAT DICHLORIDE	April	520	8	1766.01	Tomatos
PARAQUAT DICHLORIDE	June	110	2	52.554	Almonds
PARAQUAT DICHLORIDE	August	304	2	315.62	Walnuts
PARAQUAT DICHLORIDE	August	1790	68	2572.56	Almonds
PENDIMETHALIN	March	32	4	121.211	Almonds
PENDIMETHALIN	April	420	2	397.725	Beans
PENDIMETHALIN	April	344.37	16	652.213	Walnuts
PENDIMETHALIN	May	520	16	984.844	Walnuts
PENDIMETHALIN	May	6158	128	6583.57	Beans
PENDIMETHALIN	May	220	2	416.665	Alfalfa
PENDIMETHALIN	May	1160	13	1098.48	Fallow
PENDIMETHALIN	May	850	10	804.92	Tomatos
PENDIMETHALIN	June	1190	28	1540.94	Beans
RIMSULFURON	April	36	3	1.125	Tomatos
RIMSULFURON	May	480	6	22.4925	Tomatos
RIMSULFURON	June	360	3	16.875	Tomatos

Monitoring Site **Orestimba Creek at River R**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
2,4-D, DIMETHYLAMINE SALT	June	790	35	1291.87	Walnuts
BIFENTHRIN	May	336	2	26.2796	Corn
BIFENTHRIN	July	40	4	4.086	Almonds
BIFENTHRIN	July	632	12	64.0116	Walnuts
CHLORPYRIFOS	May	210	8	211.947	Walnuts
CHLORPYRIFOS	May	1968	36	3042.17	Citrus
CHLORPYRIFOS	July	352	24	840.597	Almonds
CHLORPYRIFOS	July	1140	12	4534.3	Citrus

***Includes duplicate and incomplete data**

**** Not available in all counties.**

DIMETHOATE	March	3321	77	1649.15	Alfalfa
DIMETHOATE	May	6334	143	1512.63	Tomatos
DIMETHOATE	May	840	5	415.553	Corn
DIMETHOATE	June	7360	183	1817.72	Tomatos
DIMETHOATE	June	511	11	159.624	Beans
DIMETHOATE	July	9405	62	2639.57	Beans
DIMETHOATE	July	3928	63	1938.89	Tomatos
DIMETHOATE	August	360	3	89.0469	Tomatos
DIMETHOATE	August	4845	34	2391.68	Beans
DIURON	April	15	1	11.9977	Walnuts
DIURON	July	320	2	234.546	Walnuts
ESFENVALERATE	May	10360	146	640.981	Almonds
ESFENVALERATE	May	294	6	19.1316	Walnuts
ESFENVALERATE	June	4670	62	189.69	Tomatos
ESFENVALERATE	July	1914	58	110.261	Walnuts
ESFENVALERATE	July	510	4	33.1876	Almonds
ESFENVALERATE	July	5144	78	232.861	Tomatos
ESFENVALERATE	August	940	8	43.0008	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	March	150	15	225.039	Right of Way
GLYPHOSATE, ISOPROPYLAMINE SALT	March	21105	268	27783.8	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	March	1500	20	360.062	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	March	2096	32	8385.43	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	March	585	45	499.886	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	March	408	6	816.139	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	April	4589	78	5048.76	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1435	31	5740.98	Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1000	40	1120.19	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1460	17	5472.50	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1283.38	80	2090.93	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	April	2660	53	2363.48	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	2266	31	3071.63	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	May	4200	60	7565.35	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	May	9730.56	218	15830.7	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	May	11535	101	36927.1	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	May	9144	151	11808.7	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1500	20	1120.19	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	June	9850	103	19703.4	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	June	3140	124	4798.82	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1500	20	600.102	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	June	4158	63	4158.63	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1310	17	5240.89	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	July	1500	20	360.062	Nursery
GLYPHOSATE, ISOPROPYLAMINE SALT	July	9879.5	232	14419.4	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	July	48649.75	631	93751.1	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	816	4	1137.05	Citrus

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

GLYPHOSATE, ISOPROPYLAMINE SALT	August	7620	104	14288.9	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	1210.28	87	2451.98	Walnuts
LAMBDA-CYHALOTHRIN	March	4995.2	97	179.516	Alfalfa
LAMBDA-CYHALOTHRIN	March	900	12	26.4936	Broccoli
LAMBDA-CYHALOTHRIN	April	336	29	9.996	Tomatos
LAMBDA-CYHALOTHRIN	April	3124	61	78.1137	Walnuts
LAMBDA-CYHALOTHRIN	May	25646	834	797.964	Almonds
LAMBDA-CYHALOTHRIN	May	480	12	14.9424	Corn
LAMBDA-CYHALOTHRIN	May	4036	53	158.093	Walnuts
LAMBDA-CYHALOTHRIN	June	1056	32	28.598	Walnuts
LAMBDA-CYHALOTHRIN	June	200	4	5.8704	Corn
LAMBDA-CYHALOTHRIN	June	640	8	19.0384	Tomatos
LAMBDA-CYHALOTHRIN	July	500	10	14.874	Tomatos
LAMBDA-CYHALOTHRIN	July	1410	22	44.3226	Almonds
METOLACHLOR	April	712	10	1160.1	Beans
METOLACHLOR	May	9722	198	17088.6	Beans
METOLACHLOR	May	1260	9	1675.61	Tomatos
METOLACHLOR	June	1785	42	4535.36	Beans
NORFLURAZON	March	750	3	294.75	Almonds
NORFLURAZON	May	486	12	190.998	Almonds
ORYZALIN	April	160	2	158.504	Almonds
OXYFLUORFEN	March	455	7	30.4801	Walnuts
OXYFLUORFEN	March	90	9	33.9507	Right of Way
OXYFLUORFEN	April	2578	50	521.14	Almonds
OXYFLUORFEN	April	186	2	11.6782	Fallow
OXYFLUORFEN	May	6111	78	874.094	Almonds
OXYFLUORFEN	May	4019	50	580.688	Walnuts
OXYFLUORFEN	June	1127	39	157.846	Walnuts
OXYFLUORFEN	June	1955	23	263.763	Almonds
OXYFLUORFEN	July	3932	71	1476.40	Walnuts
OXYFLUORFEN	July	4580	40	464.709	Almonds
OXYFLUORFEN	August	1534	32	322.399	Almonds
OXYFLUORFEN	August	420	5	15.0495	Walnuts
PARAQUAT DICHLORIDE	April	520	8	1766.01	Tomatos
PARAQUAT DICHLORIDE	June	110	2	52.554	Almonds
PARAQUAT DICHLORIDE	August	2150	74	3400.38	Almonds
PARAQUAT DICHLORIDE	August	304	2	315.62	Walnuts
PENDIMETHALIN	March	32	4	121.211	Almonds
PENDIMETHALIN	April	470	3	445.073	Beans
PENDIMETHALIN	April	344.37	16	652.213	Walnuts
PENDIMETHALIN	May	6533	133	6938.68	Beans
PENDIMETHALIN	May	520	16	984.844	Walnuts
PENDIMETHALIN	May	1930	19	1827.64	Tomatos
PENDIMETHALIN	May	1422	17	1346.58	Fallow
PENDIMETHALIN	May	220	2	416.665	Alfalfa

***Includes duplicate and incomplete data**

**** Not available in all counties.**

PENDIMETHALIN	June	1190	28	1540.94	Beans
RIMSULFURON	April	228	11	7.125	Tomatos
RIMSULFURON	May	1207	21	56.565	Tomatos
RIMSULFURON	June	412	5	19.31	Tomatos
TRIFLURALIN	April	576	7	286.265	Beans
TRIFLURALIN	May	190	2	94.4676	Beans

Monitoring Site **Ramona Lake near Fig Aven**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
BIFENTHRIN	July	140	4	10.9366	Melons
BIFENTHRIN	August	170	2	17.0256	Corn
CHLORPYRIFOS	March	1963	87	689.827	Alfalfa
CHLORPYRIFOS	July	234	12	109.750	Corn
ESFENVALERATE	May	375	17	19.8348	Almonds
ESFENVALERATE	May	72	9	3.4362	Apricots
ESFENVALERATE	July	107	7	5.4534	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	March	240	30	248.901	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	420	30	630.108	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	April		0		Right of Way
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1540	22	1540.26	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	May	270	30	480.081	Walnuts
GLYPHOSATE, ISOPROPYLAMINE SALT	June	80	2	5.006	Fallow
GLYPHOSATE, ISOPROPYLAMINE SALT	June	5440	167	5440.93	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	June	250	10	397.568	Wheat
GLYPHOSATE, ISOPROPYLAMINE SALT	June	1500	15	3000.51	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	694	26	694.118	Corn
GLYPHOSATE, ISOPROPYLAMINE SALT	July	728	43	1283.76	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	August	935	11	935.16	Corn
LAMBDA-CYHALOTHRIN	March	8031.5	222	243.392	Alfalfa
LAMBDA-CYHALOTHRIN	May	51.5	5	1.573	Tomatos
LAMBDA-CYHALOTHRIN	June	160	4	3.9904	Fallow
LAMBDA-CYHALOTHRIN	July	28.5	3	0.8808	Sudan Grass
LAMBDA-CYHALOTHRIN	July	54	3	1.6248	Corn
LAMBDA-CYHALOTHRIN	August	66	2	1.9634	Beans
MCPA, DIMETHYLAMINE SALT	March	352	32	145.997	Oats
OXYFLUORFEN	May	54	6	12.0396	Walnuts
OXYFLUORFEN	July	72	4	36.1184	Almonds
PENDIMETHALIN	May	9	1	7.5757	Walnuts
PENDIMETHALIN	May	430	11	407.195	Tomatos
PENDIMETHALIN	May	200	8	378.786	Alfalfa
PENDIMETHALIN	June	33	1	20.3029	Beans
RIMSULFURON	May	20.6	2	0.645	Tomatos
RIMSULFURON	July	140	2	2.625	Tomatos

***Includes duplicate and incomplete data**
**** Not available in all counties.**

Pesticide Use Summary

3/1/12 through 8/31/12

Monitoring Site **Westley Wasteway near Cox**

Pesticide AI	Month	Acres Treated*	No of Applications *	AI Use Qty** (lbs)	Commodity
2,4-D, DIMETHYLAMINE SALT	April	1262	13	1163.4	Almonds
2,4-D, DIMETHYLAMINE SALT	July	150	3	62.3298	Almonds
2,4-D, DIMETHYLAMINE SALT	July	120	2	139.882	Apricots
BIFENTHRIN	June	348	6	40.8426	Almonds
BIFENTHRIN	July	1618	22	181.024	Almonds
BIFENTHRIN	July	216	2	16.9054	Melons
BIFENTHRIN	August	260	4	20.7912	Melons
DIMETHOATE	March	2480	32	1138.22	Alfalfa
DIMETHOATE	April	378.16	8	187.118	Tomatos
DIMETHOATE	May	1396.96	48	608.21	Tomatos
DIMETHOATE	June	2072	29	718.351	Tomatos
DIMETHOATE	July	2304	18	1263.4	Beans
DIMETHOATE	July	2610	34	1288.62	Tomatos
DIMETHOATE	August	300	4	148.491	Beans
ESFENVALERATE	March	296	4	12.0388	Apricots
ESFENVALERATE	May	4133	103	176.093	Apricots
ESFENVALERATE	May	120	4	4.8804	Cherrys
ESFENVALERATE	May	1948	16	100.985	Almonds
ESFENVALERATE	June	624	6	25.3788	Tomatos
ESFENVALERATE	July	1600	12	85.6112	Almonds
ESFENVALERATE	July	1180	18	47.9464	Tomatos
ESFENVALERATE	July	90	2	3.6604	Apples
GLYPHOSATE, ISOPROPYLAMINE SALT	March	3450	27	3510.97	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	March	4620	51	3577.67	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	March	572	11	555.567	Grapes
GLYPHOSATE, ISOPROPYLAMINE SALT	April	1008	21	990.898	Peaches
GLYPHOSATE, ISOPROPYLAMINE SALT	April	5403.5	71	8119.59	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	April	2362	19	2057.07	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	May	480	4	1440.25	Melons
GLYPHOSATE, ISOPROPYLAMINE SALT	May	480	4	1920.33	Tomatos
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1779	15	7117.21	Beans
GLYPHOSATE, ISOPROPYLAMINE SALT	May	9178.5	85	10530.6	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	May	1000	20	522.54	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	May	400	20	436.922	Grapes
GLYPHOSATE, ISOPROPYLAMINE SALT	June	2530	22	6107.56	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	22346.5	283	37536.5	Almonds
GLYPHOSATE, ISOPROPYLAMINE SALT	July	176	8	117.5	Cherrys
GLYPHOSATE, ISOPROPYLAMINE SALT	July	4003	61	5195.47	Apricots
GLYPHOSATE, ISOPROPYLAMINE SALT	August	3710	32	11215.4	Almonds
LAMBDA-CYHALOTHRIN	March	2606	42	76.5098	Alfalfa
LAMBDA-CYHALOTHRIN	March	5040	58	124.950	Apricots

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Pesticide Use Summary

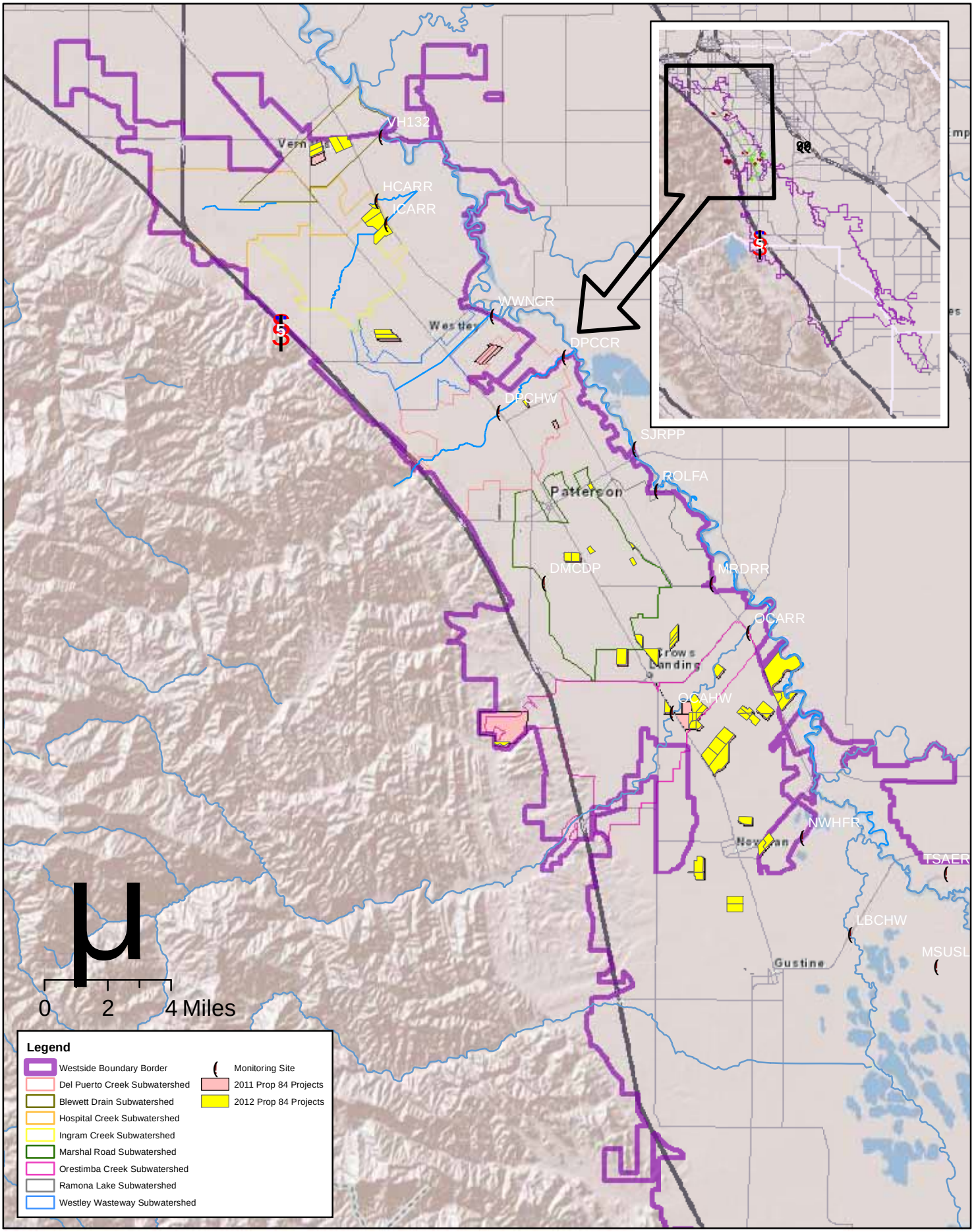
3/1/12 through 8/31/12

LAMBDA-CYHALOTHRIN	March	1472	20	38.0768	Peaches
LAMBDA-CYHALOTHRIN	April	1268.5	58	49.462	Cherrys
LAMBDA-CYHALOTHRIN	April	220	4	2.38	Tomatos
LAMBDA-CYHALOTHRIN	April	1472	20	38.0768	Peaches
LAMBDA-CYHALOTHRIN	May	10931	113	290.257	Apricots
LAMBDA-CYHALOTHRIN	May	366.68	10	5.2286	Tomatos
LAMBDA-CYHALOTHRIN	May	2544	12	68.241	Almonds
LAMBDA-CYHALOTHRIN	July	2156	16	64.1364	Beans
LAMBDA-CYHALOTHRIN	July	460	12	15.8836	Almonds
LAMBDA-CYHALOTHRIN	July	40	4	1.0904	Walnuts
MALATHION	July	55	1	78.2136	Beans
METOLACHLOR	May	675	6	1025.23	Beans
METOLACHLOR	June	184	5	256.184	Beans
ORYZALIN	March	1514	6	4541.64	Almonds
OXYFLUORFEN	March	1950	13	76.4218	Almonds
OXYFLUORFEN	April	2816	24	677.946	Almonds
OXYFLUORFEN	May	8759	69	571.9	Almonds
OXYFLUORFEN	June	1390	14	588.928	Almonds
OXYFLUORFEN	July	104	4	26.0852	Apricots
OXYFLUORFEN	July	12726	123	1021.99	Almonds
OXYFLUORFEN	July	196	13	30.2525	Cherrys
OXYFLUORFEN	August	1582	18	187.972	Almonds
PARAQUAT DICHLORIDE	March	1986	11	6387.06	Almonds
PARAQUAT DICHLORIDE	March	118	2	42.4554	Apricots
PARAQUAT DICHLORIDE	June	168	3	215.875	Beans
PARAQUAT DICHLORIDE	July	23	2	31.8388	Apricots
PENDIMETHALIN	March	308	5	366.475	Apricots
PENDIMETHALIN	April	100	1	94.6965	Beans
PENDIMETHALIN	April	385.32	5	364.847	Tomatos
PENDIMETHALIN	May	979	7	927.079	Beans
PENDIMETHALIN	June	150	3	142.045	Beans
RIMSULFURON	April	567.24	12	17.73	Tomatos
RIMSULFURON	May	1520.22	45	48.3117	Tomatos
RIMSULFURON	June	712.5	15	22.2525	Tomatos
SIMAZINE	April	256	4	256.058	Almonds
ZIRAM	March	765	12	2394	Apricots

***Includes duplicate and incomplete data**

**** Not available in all counties.**

Management Practice Maps

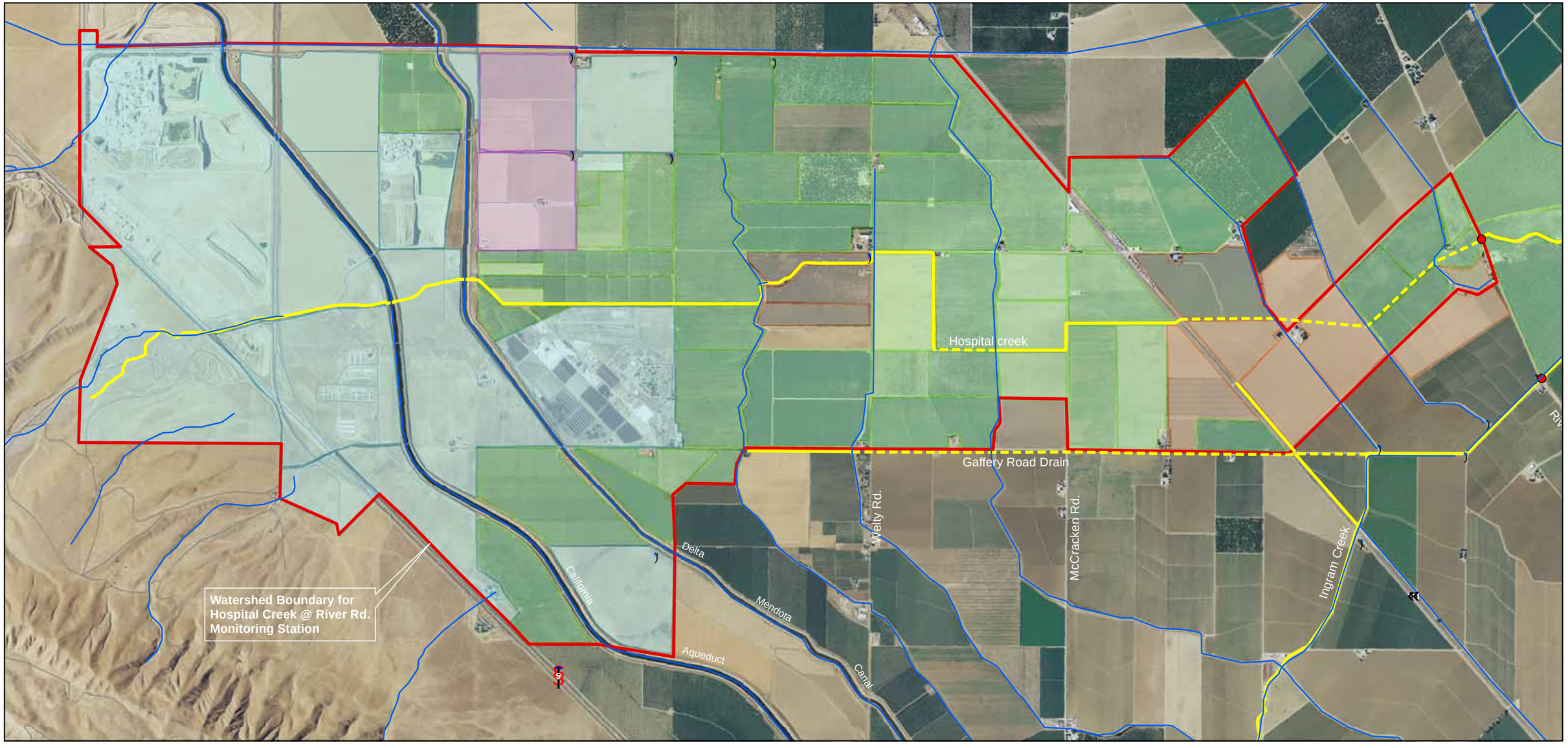


WESTSIDE SAN JOAQUIN RIVER WATERSHED COALITION

Proposition 84 Projects

Summers Engineering, Inc.
Consulting Engineers
Hanford California

Westside San Joaquin River Watershed Coalition



Legend

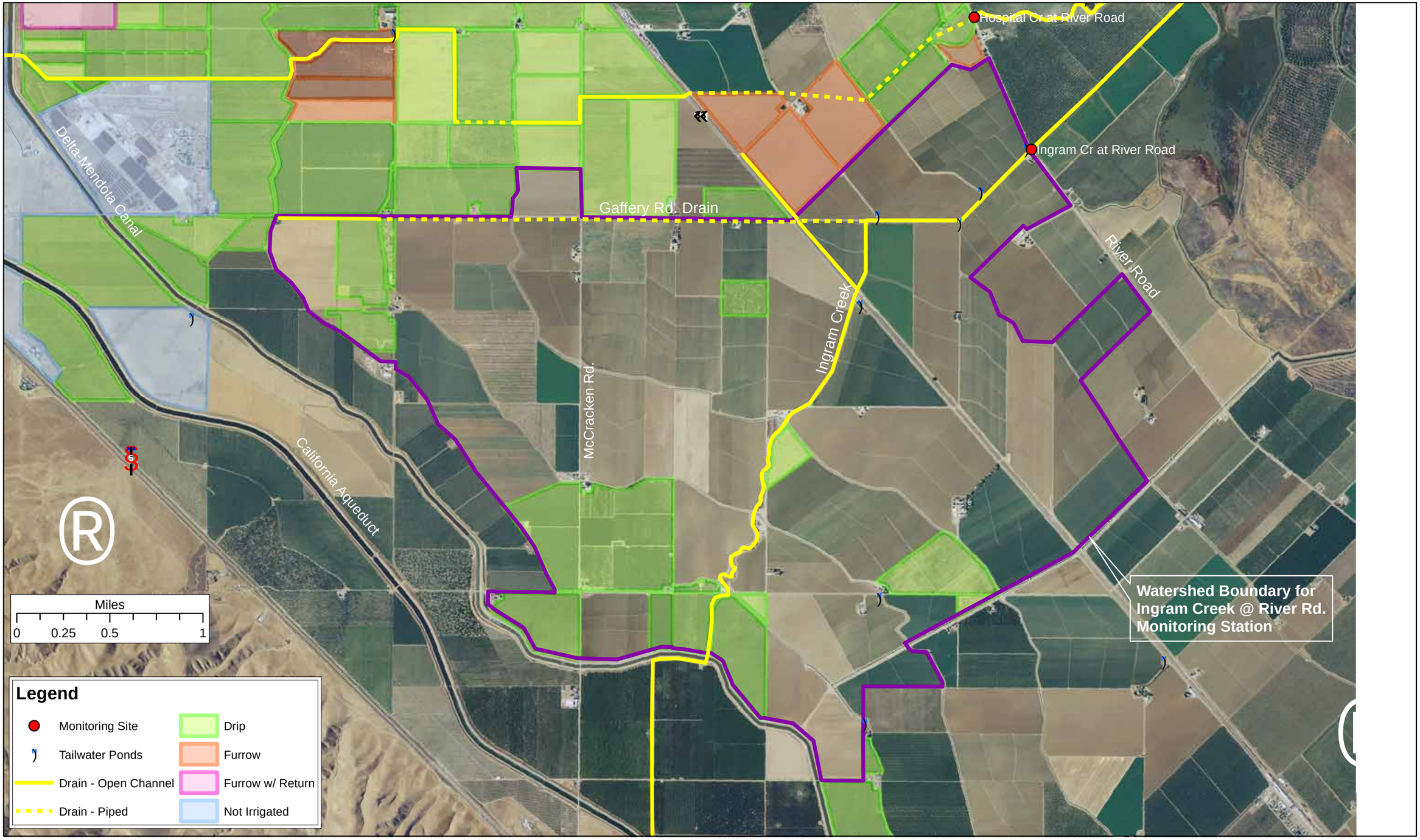
- Open
- Pipe
- Monitoring Site
- Tailwater Pond
- Drip/Microsprinklers
- Furrow
- Furrow w/ Return
- Not Irrigated

Hospital Creek Subwatershed
August 2010

Miles
0 0.25 0.5 1

Summers Engineering, Inc.
Consulting Engineers
Hanford California

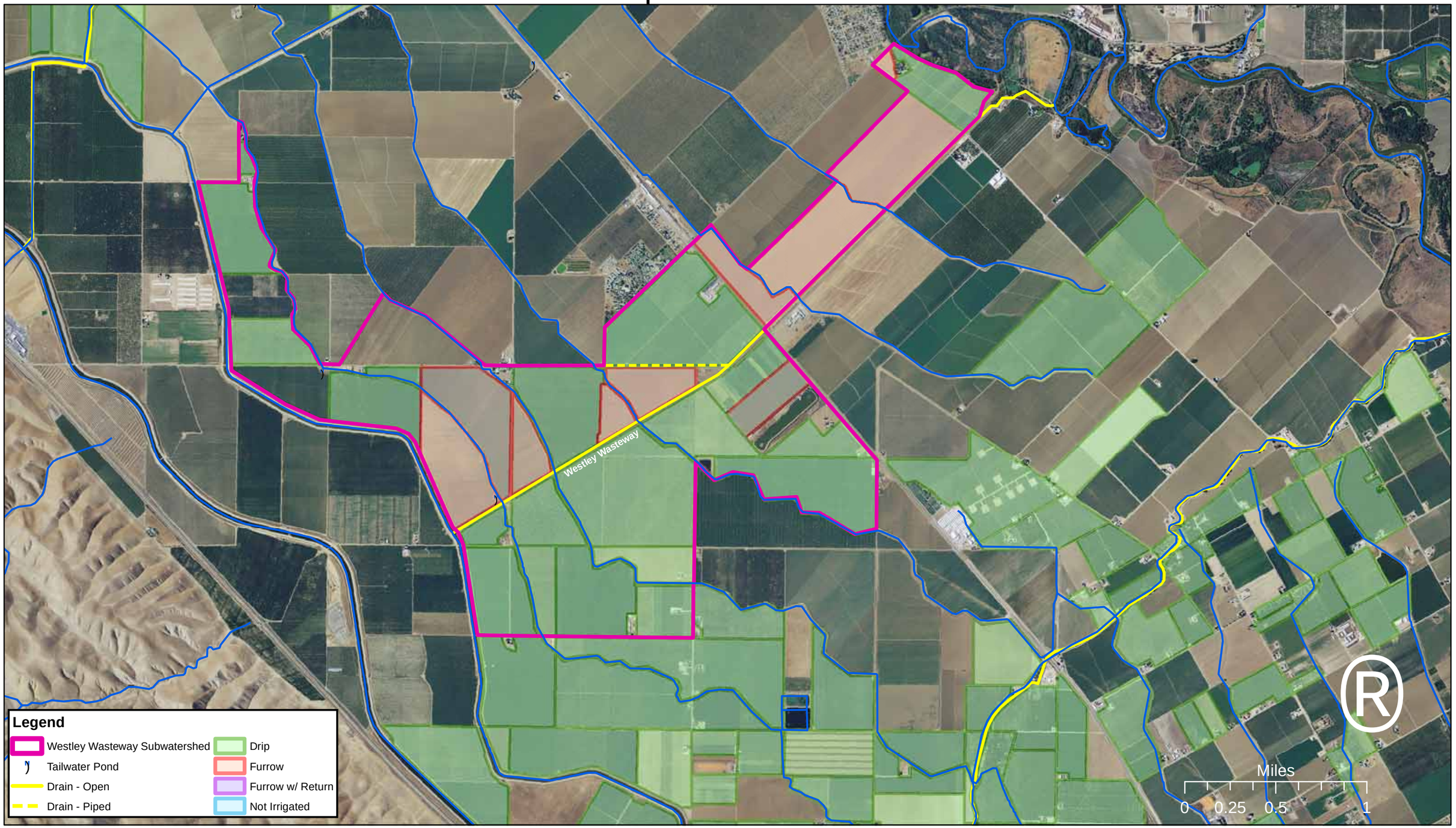
Westside San Joaquin River Watershed Coalition



Ingram Creek Subwatershed Map
August 2010

Summers Engineering, Inc
Consulting Engineers
Hanford California

Westside San Joaquin River Watershed Coalition



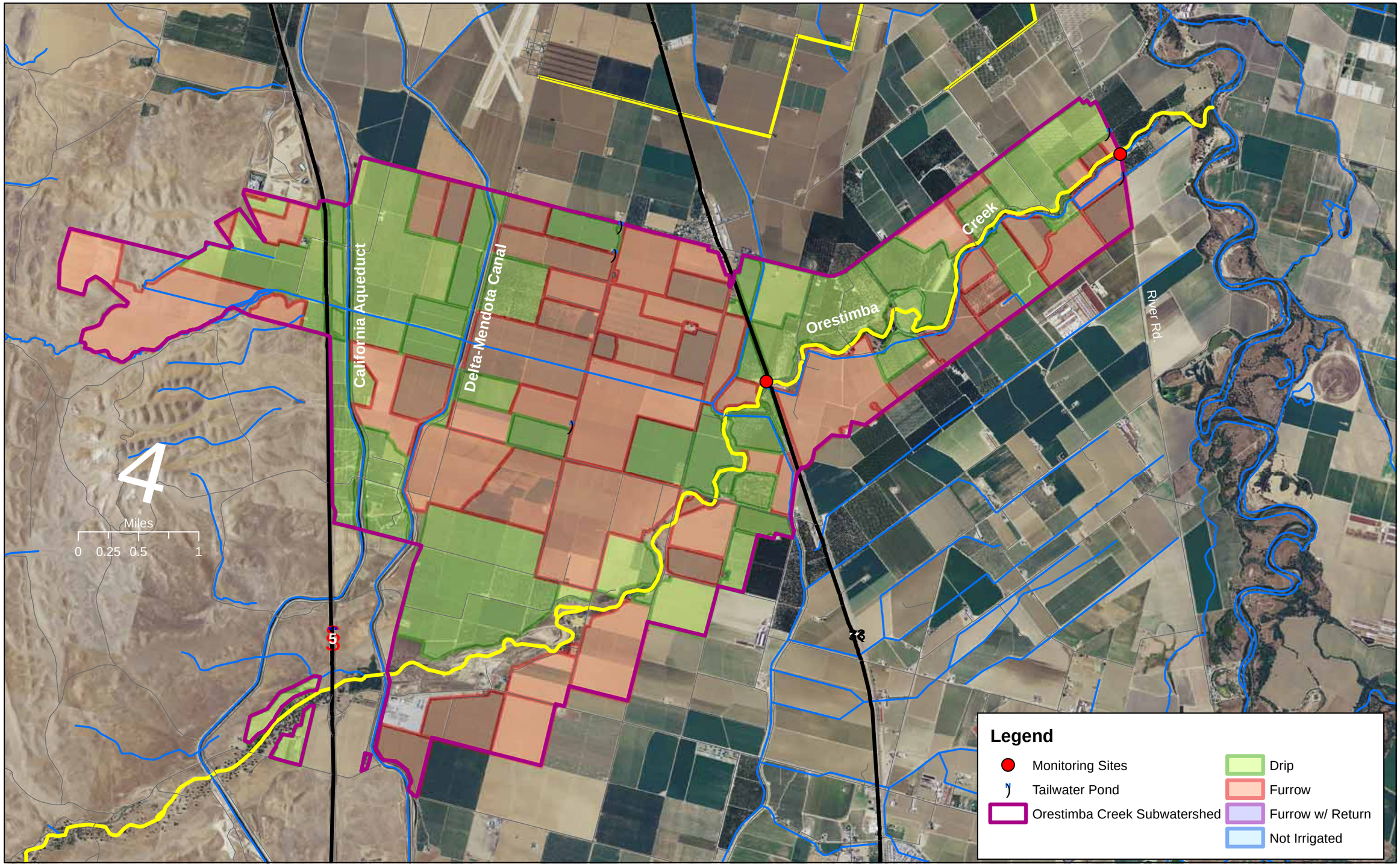
Westley Wasteway Subwatershed
August 2010

Summers Engineering, Inc.
Consulting Engineers
Hanford California

Westside San Joaquin River Watershed Coalition

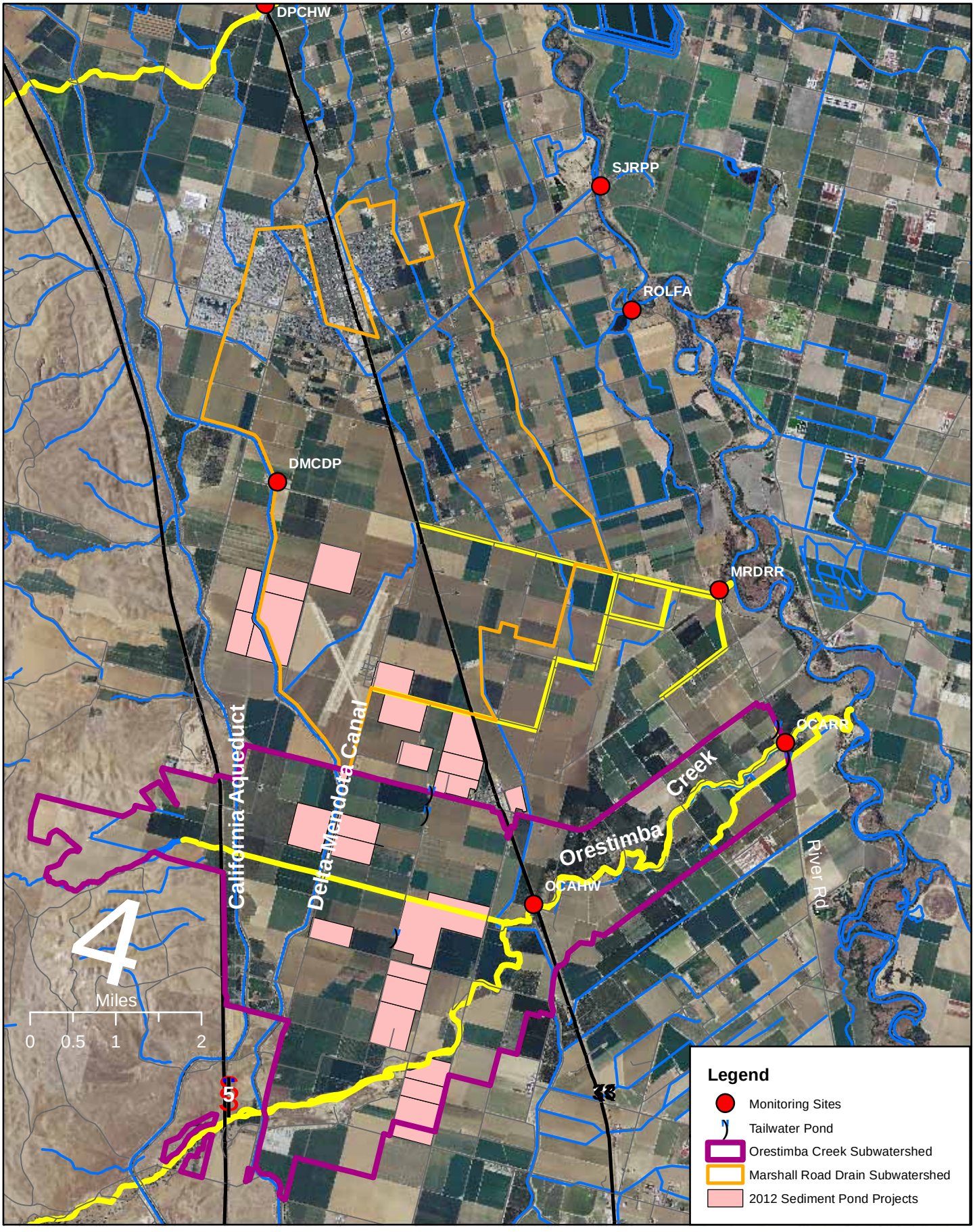
Del Puerto Creek Subwatershed
August 2010

Summers Engineering, Inc.
Consulting Engineers
Hanford California



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

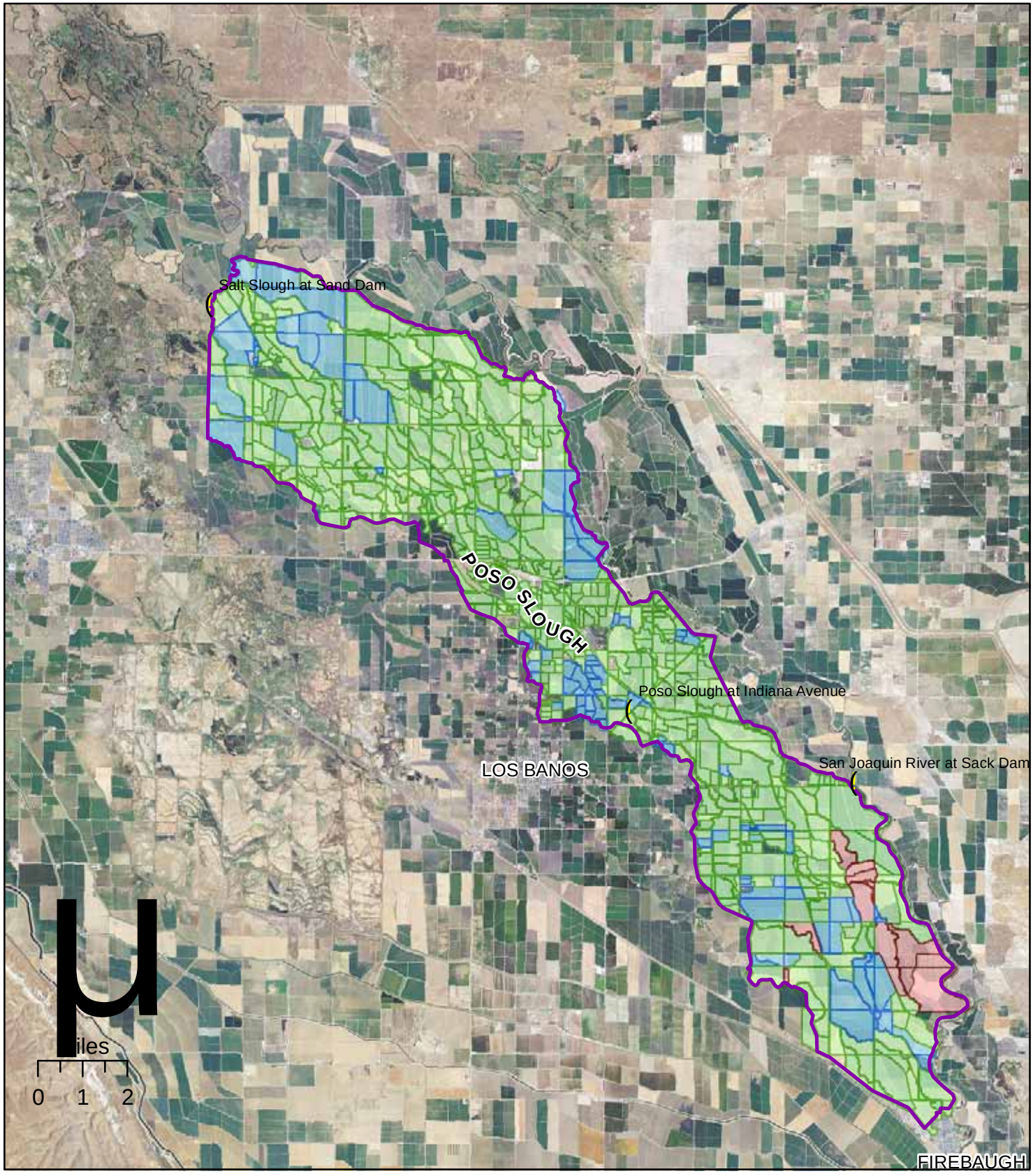
Orestimba Creek Subwhatershed
August 2010



2012 Sediment Pond Projects

Indicated projects may affect portions of the shaded parcel.

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



Legend

- Monitoring Sites
- Salt Slough Survey Area
- Drip
- Surface
- Drip & Surface

Westside San Joaquin River Watershed Coalition

Salt Slough Subwatershed
Primary Agricultural Area
DRAFT

Attachment 7
Special Project Monitoring and Constituents

TABLE 4a: Monitoring Site Tests March 2012-February 2014

Monitoring Site	Site Code	Season: Irrigation (Mar-Aug)*	Season: Non-Irrigation (Sep-Feb)*	Season: Rain Event (2x per year)	Non-Irrig Season Core	Irrig Season Core	Special Study Analytes - March 2012 through February 2014: Metals**	Ceriodaphnia Toxicity	Fathead Toxicity	Algae Toxicity	Sediment Toxicity	Pesticides: OP	Pesticides: OC	Pesticides: Group A	Pesticides: Carb	Pesticides: Herb
Discharge Sites																
Vernalis at Highway 132	VH132	Special	Core	Rain**	x			x			x	x	x	x		x
Poso Slough at Indiana Avenue	PSAIA	Special	Core	Rain**	x		x	x		x	x	x	x	x	x	x
Hospital Cr at River Road	HCARR	Special	-	Rain**			x	x		x	x	x			x	x
Ingram Cr at River Road	ICARR	Core + Special	Core	Rain**	x	x	x	x		x	x	x	x	x	x	x
Westley Wasteway near Cox Road	WWNCR	Core + Special	Core	Rain**	x	x	x	x		x	x	x	x	x		x
Del Puerto Cr near Cox Road	DPCCR	Core + Special	Core	Rain**	x	x		x			x	x	x	x	x	x
Del Puerto Cr at Hwy 33	DPCHW	Special	-	Rain**				x			x	x	x	x	x	x
Ramonal Lake near Fig Avenue	ROLFA	Core + Special	Core	Rain**	x	x		x			x	x	x	x		x
Marshall Road Drain near River Road	MRDRR	Core + Special	Core	Rain**	x	x		x				x	x	x		x
Orestimba Cr at River Road	OCARR	Core + Special	Core	Rain**	x	x	x	x		x	x	x	x	x	x	x
Orestimba Cr at Hwy 33	OCAHW	Special	-	Rain**			x	x		x	x	x	x	x	x	x
Newman Wasteway near Hills Ferry Road	NWHFR	Core + Special	Core	Rain**	x	x		x			x	x	x	x		x
San Joaquin River at Lander Avenue	SJRLA	Core + Special	Core + Special	Rain**	x	x		x				x				x
Mud Slough u/s San Luis Drain	MSUSL	Core + Special	Core + Special	Rain**	x	x		x				x	x	x	x	x
Salt Slough at Lander Avenue	SSALA	Core + Special	Core + Special	Rain**	x	x		x				x	x	x	x	x
Salt Slough at Sand Dam	SSASD	Special	-	Rain**				x			x	x			x	x
Los Banos Creek at Highway 140	LBCHW	Core + Special	Core + Special	Rain**	x	x	x	x		x		x				x
Los Banos Creek at China Camp Road	LBCCC	Core + Special	Core	Rain**	x	x	x	x	x	x	x	x				x
Turner Slough near Edminster Road	TSAER	Core + Special	Core	Rain**	x	x		x	x			x				x
~~Little Panoche Cr at Western Boundary~~	~~LPCWB~~	~~Assmt~~	~~Assmt~~	~~Rain**~~												
~~Little Panoche Cr at San Luis Canal~~	~~LPCSL~~	~~Assmt~~	~~Assmt~~	~~Rain**~~												
~~Russell Ave. Drain at San Luis Canal~~	~~RADSL~~	~~Assmt~~	~~Assmt~~	~~Rain**~~												
~~Los Banos Creek at Sunset Ave~~	~~LBCSA~~	~~Assmt~~	~~Assmt~~	~~Rain**~~												
Source Water Sites																
San Joaquin River at Sack Dam	SJRSD	Source	Source	Source	x	x						x				
Delta Mendota Canal at Del Puerto WD	DMCDP	Source	Source	Source	x	x						x				
San Joaquin River at PID Pumps	SJRPP	Source	Source	Source	x	x						x				

* Irrigation season will run from March through August. Non-irrigation season will run from September through February. The Westside Coalition, in colaboration with the Regional Water Quality Control Board, may shift the seasons up or back 1 month to ac

** During rain event sample collection, Discharge sites will be sampled for the constituents listed

* Rain events only

** Special Site list. See Table 5

TABLE 5: Chemical Analyses

	Material	Matrix	Ass'ment	Core	Rain Event	Special Study	Source Water
Field Measurements	Flow (cfs)	Water	x	x	x	x	x
	Photo Documentation	Site	x	x	x	x	x
	Electrical Conductivity (µs/cm)	Water	x	x	x	x	x
	Temperature (ºc)	Water	x	x	x	x	x
	pH	Water	x	x	x	x	x
	Dissolved Oxygen (mg/L)	Water	x	x	x	x	x
Drinking Water	Bromide (Br)	Water	x	x	x	x	
	Dissolved Organic Carbon (DOC)	Water	x	x	x	x	
	E. Coli	Water	x	x	x	x	x
	Total Organic Carbon (TOC)	Water	x	x	x	x	
Gen Phys	Hardness (as CACO3)	Water	x	x	x	x	x
	Total Dissolved Solids (TDS)	Water	x	x	x	x	x
	Total Suspended (TSS)	Water	x	x	x	x	x
	Turbidity	Water	x	x	x	x	x
Metals	Arsenic	Water	x		x		
	Boron	Water	x		x	x	x
	Cadmium	Water	x		x		
	Copper	Water	x		x	x	x
	Lead	Water	x		x		
	Nickel	Water	x		x	x	x
	Selenium	Water	x		x		
	Zinc	Water	x		x	x	x
Nutrients	Ammonia (as N)	Water	x	x	x	x	
	Nitrogen, Nitrate-Nitrite	Water	x	x	x	x	
	Total Kjeldahl Nitrogen	Water	x	x	x	x	
	Total Phosphate as P	Water	x	x	x	x	
	Ortho Phosphate as P (Soluble)	Water	x	x	x	x	
Toxicity	Ceriodaphnia dubia	Water	x		x	See Attachment 1	
	Pimephales promelas	Water	x		x		
	Selenastrum capricornutum	Water	x		x		

TABLE 6: Pesticide Analyses

	Material	Matrix	Assessment	Core	Rain Event	Source
OP Pesticides	Azinphosmethyl	Water	x	(no pesticides)	x	x
	Chlorpyrifos	Water	x		x	x
	Demeton-S	Water	x		x	x
	Diazinon	Water	x		x	x
	Dichlorovos	Water	x		x	x
	Dimethoate	Water	x		x	x
	Disulfoton	Water	x		x	x
	Malathion	Water	x		x	x
	Methidathion	Water	x		x	x
	Methamidophos	Water	x		x	x
	Parathion, ethyl	Water	x		x	x
	Parathion, methyl	Water	x		x	x
	Phorate	Water	x		x	x
	Phosmet	Water	x		x	x
	EPTC	Water	x		x	x
Herbicides	Atrizine	Water	x		x	
	Cyanazine	Water	x		x	
	Diuron	Water	x		x	
	Linuron	Water	x		x	
	Prowl	Water	x		x	x
	Simazine	Water	x		x	
	Trifluralin	Water	x		x	x
Addnl Group A OC Pesticides	Aldrin	Water	x		x	
	a-BHC	Water	x		x	
	b-BHC	Water	x		x	
	d-BHC	Water	x		x	
	g-BHC (Lindane)	Water	x		x	
	a-Chlordane	Water	x		x	
	g-Chlordane	Water	x		x	
	Endosulfan I	Water	x		x	
	Endosulfan II	Water	x		x	
	Endosulfan Sulfate	Water	x		x	
	Heptachlor	Water	x		x	
	Heptachlor epoxide	Water	x		x	
	Toxaphene	Water	x		x	
OC Pest (Base)	Dicofol	Water	x		x	
	DDD(p,p')	Water	x		x	
	DDE(p,p')	Water	x		x	
	DDT(p,p')	Water	x		x	
	Dieldrin	Water	x		x	
	Endrin	Water	x		x	
	Methoxychlor	Water	x		x	
Carbamate Pest.	Aldicarb	Water	x		x	
	Carbaryl	Water	x		x	
	Carbofuran	Water	x		x	
	Methiocarb	Water	x		x	
	Methomyl	Water	x		x	
	Oxamyl	Water	x		x	