

SAN JOAQUIN VALLEY DRAINAGE AUTHORITY

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November 26, 2008

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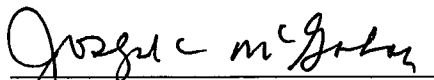
Subject: Westside San Joaquin River Watershed Coalition
Submittal of November 30, 2008 semi-annual monitoring report

Dear Pamela,

Attached is the November 30, 2008 semi-annual monitoring report as required under our Monitoring and Reporting Plan. This report covers the irrigation season monitoring from March 2008 through August 2008.

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

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



Joseph C. McGahan
Watershed Coordinator
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San Joaquin Valley Drainage Authority

Westside San Joaquin River Watershed Coalition

**Semi-Annual Monitoring Report
2008 Irrigation Season Report**

Covering the period: March 2008 through August 2008
(Sampling Events 42 through 47)

November 30, 2008

Prepared by:
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SECTION 1: EXECUTIVE SUMMARY

In June, 2003, the San Joaquin Valley Drainage Authority (SJVDA) submitted a Conditional Waiver Report for the Westside San Joaquin River Watershed Coalition (Westside Coalition). The Westside Coalition watershed generally lies on the westside of the San Joaquin River from approximately the Stanislaus River on the north to 10 miles south of Mendota and encompasses an area of approximately 460,500 acres. There are approximately 4,000 landowners and 1,500 operators within the watershed. Most of the watershed receives water supplies from the Central Valley Project, while certain areas receive water from the State Water Project. In addition, some areas receive supplies from the San Joaquin River and local water sources, one area receives a Kings River supply, and some areas receive water from groundwater wells. The Delta-Mendota Canal and San Luis Canal run through the center of the watershed. Water deliveries are made to Federal Central Valley Project Contractors and to San Joaquin River Exchange Contractors from these facilities. State water deliveries are also made to one area.

The Grassland Drainage Area encompasses 97,400 acres that are geographically within the watershed. The Grassland Drainage Area is covered under waste discharge requirements (No. 5-01-234), which regulates the discharge of subsurface drainage water through the San Luis Drain to the San Joaquin River. The area coordinates its separate monitoring and reporting program under the above waste discharge requirements.

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

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

Interstate Highway 5 and State Highways 33, 140, 165 and 152 and many county roads run through the geographic area of the Westside Watershed. Storm water discharges from these roads and highways could 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.

This report covers the 2008 irrigation season sampling events beginning March 2008 through August 2008 (Events 42 through 47).

The Revised MRP includes a targeted monthly sampling plan for 26 monitoring sites within the Coalition area as well as plans for sampling for two rain events during each year. The monitoring sites include three source water sites and 23 sites that discharge agricultural drain water. Four of the discharge sites are within San Luis Water District, which maintains a tailwater discharge prohibition. These sites generally only discharge during severe storm events. None of the San Luis Water District sites discharged during this report period.

During any given sampling event, each accessible site is visited, visually assessed, and samples are collected in accordance with the field sampling manual. **Table 1**, shows the monitoring events summary by site for the reporting period.

The objectives of the original monitoring program are:

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

Three sampling crews have been trained by the analytical laboratories to collect samples according to the Westside Coalition's QAPP and Field Sampling Manual. These crews are responsible for collecting samples at each of the 26 sites; the field coordinator for the northerly region is responsible for collecting samples from north of Newman Wasteway. The field coordinator for the southerly region and is responsible for collecting samples south of (and including) Newman Wasteway, and staff from San Luis Water District are responsible for monitoring and sampling sites within that district. The sampling responsibilities include completion of the field data sheets, collection of water and sediment samples, completion of labels and chain of custody sheets, and coordination with the labs for sample pickup. The parameters analyzed at each site are shown in **Table 2**. The laboratory, method, and constituents analyzed are shown in **Table 3**.

Table 1: March 2008 through August 2008 Sampling Events Summary

Map Designation	Monitoring Site	Event 42		Event 43	Event 44	Event 45	Event 46	Event 47
		Mar	Apr	May	June	Jul	Aug	
Discharge Sites								
1	Hospital Cr at River Road	SS	NF	S	S	S	S	S
2	Ingram Cr at River Road	SS	NF	S	S	S	S	S
3	Westley Wasteway near Cox Road	SS	NF	S	S	S	S	S
4	Del Puerto Cr near Cox Road	NF	NF	S	S	S	S	S
5	Del Puerto Cr at Hwy 33	NF	NF	NF	NF	NF	NF	NF
7	Ramona Lake near Fig Avenue	SS	NF	S	S	S	S	S
8	Marshall Road Drain near River Road	NP	NF	S	S	S	S	S
9	Orestimba Cr at River Road	SS	S	S	S	S	S	S
10	Orestimba Cr at Hwy 33	SS	S	S	S	S	S	S
11	Newman Wasteway near Hills Ferry Road	SS	S	S	S	S	S	S
13	San Joaquin River at Lander Avenue	NP	S	S	S	S	S	S
14	Mud Slough u/s San Luis Drain	NP	S	S	S	S	S	S
15	Salt Slough at Lander Avenue	NP	S	S	S	S	S	S
16	Salt Slough at Sand Dam	NP	S	S	S	S	S	S
17	Los Banos Creek at Highway 140	NP	S	S	S	S	S	S
18	Los Banos Creek at China Camp Road	SS	S	NF	S	NF	NF	NF
19	Turner Slough near Edminster Road	NP	NF	NF	NF	NF	S	NF
20	Blewett Drain near Highway 132	NF	NF	S	NF	S	S	S
21	Poso Slough at Indiana Avenue	SS	S	S	S	S	S	S
24	Los Banos Creek at Sunset Ave	NF	NF	NF	NF	NF	NF	NF
25	Little Panoche Cr at Western Boundary	NF	NF	NF	NF	NF	NF	NF
26	Little Panoche Cr at San Luis Canal	NF	NF	NF	NF	NF	NF	NF
27	Russell Ave. Drain at San Luis Canal	NF	NF	NF	NF	NF	NF	NF
Source Water Sites								
12	San Joaquin River at Sack Dam	NP	S	S	S	S	S	S
22	San Joaquin River at PID Pumps	NP	S	S	S	S	S	S
23	Delta Mendota Canal at Del Puerto WD	NP	S	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 sampling plan.

Table 2: Monitoring Stations and Samples

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

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

Table 3: 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	°C	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
Gen. Phy. / D.W.	Color (A.P.H.A.)	Caltest	SM 2120B	-	COLOR-rev4E
	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
Fecal coliform	Caltest	SM20-9221B/E	mpn/100ml	MMOMUG-rev8E	
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	<i>Ceriodaphnia d.</i>	PER	EPA-821-R-02-012	% survival	Acute Cerio SOP
	<i>Selenastrum c.</i>	PER	EPA-821-R-02-013 & EPA-600-4-91-002	cell growth	Chronic Selenastrum SOP
	<i>Pimephales p.</i>	PER	EPA-821-R-02-012	% survival	Acute FHM SOP
	<i>Hyalella a.</i>	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).

Nineteen of the 26 monitoring sites are located on streams that are dominated by summer agricultural drainage runoff. The irrigation season within the Westside Coalition typically starts in March, with pre-irrigation and typically ends in August, just before harvest of the late season crops (such as cotton and fall corn). Because the irrigation period is also when pesticides are applied, and most likely to be carried off by tailwater drainage, the Westside Coalition has targeted this period for pesticide and toxicity analysis (see the Revised MRP). All monitoring events during this reporting period occurred during the irrigation season.

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 twelve times, during the six sampling events and at seven sites during the reporting period. Nine of these measurements affected *Ceriodaphnia dubia*, two affected algae (Poso Slough and Westley Wasteway), and one affected the fathead minnow (Poso Slough)¹. These results, along with associated water quality and flow data, are summarized in **Attachment 2**. Details of the aquatic toxicity analyses are shown in **Appendix C**.

Quality control samples were collected in addition to the event analysis sample. The quality control samples included field blanks, field duplicates, and matrix spike/matrix spike duplicate samples (MS/MSD). No significant quality control events were encountered, although there were some of minor quality control issues, including apparent contamination of field blank samples, exceedance of the field duplicate relative percent difference (RPD) value, or control sample failure. Results of the Quality Control samples are discussed in Section 4 and **Attachment 3**.

Four sites within San Luis Water District (SLWD) were monitored monthly in accordance with the Monitoring and Reporting Plan. SLWD has implemented an aggressive tailwater prohibition and none of these sites discharged during this reporting period. No samples have been collected at any of the SLWD sites since they joined the Westside Coalition.

Monitoring Toxicity Event Summaries.

The extremely dry conditions and recent legal decision regarding pumping from the Sacramento/San Joaquin Delta resulted in significant water supply cutbacks for the 2008 irrigation season. Observed flow at many of the Westside Coalition monitoring sites was lower than in prior years.

Event 42, March 11th and 18th, 2008.

Due to a schedule conflict with sampling staff, March samples were collected in the Northerly region of the Westside Coalition on March 11th, and on March 18th in the Southerly region. Twelve sites were not sampled for water quality because of lack of flow: Blewett Drain at Hwy 132, Ingram Creek, Hospital Creek, Marshall Road Drain, Del Puerto Creek (both sites), Westley Wasteway, Turner Slough, and all four San Luis Water District Sites (Los Bano Creek at Sunset

¹ Both event and field duplicate samples were tested for fathead minnow toxicity at Poso Slough. The event sample did not measure toxicity, however the field duplicate sample did indicate some toxicity. See Appendix A.

Ave., Little Panoche Creek at Western Boundary, Little Panoche Creek at San Luis Canal, and the Russell Avenue Drain). Irrigation season water samples were collected at the remaining sites and tested in accordance with the Revised MRP (approved February 2008). Significant toxicity was measured at Poso Slough for algae (94% reduction in cell growth) and fathead minnow (87.5% survival in the Field Duplicate sample – 97.5% survival in the Event sample). Although statistically significant, the fathead minnow observed toxicity was slight and all mortalities were due to pathogen interference. Water samples from Poso Slough detected diuron (24µg/L). A TIE, dilution series, and resample test were performed. The resample showed no toxicity indicating the toxicity was not persistent. There were some quality control issues with the laboratory control sample and both the dilution series and TIE were rerun. The dilution series showed 4.1 toxic units. The TIE showed significant toxicity through all treatments, indicating that the probable cause was a combination of both metals and organic materials (probably herbicides). Sediment samples were collected at nine locations (see Section 6 for a discussion of the sediment toxicity results). Significant toxicity was measured in the sediment samples at Hospital Creek (80% survival), Ingram Creek (2.5% survival), Westley Wasteway (65% survival), and Ramona Lake (68.8% survival). The original Ramona Lake sediment sample was broken during transport. A second sample was collected on March 18th.

Event 43, April 8th, 2008.

Irrigation season water samples were collected in accordance with the Revised MRP on April 8th. All four San Luis Water District sites had no flow, in addition to Del Puerto Creek at Highway 33, Turner Slough, and Los Banos Creek at China Camp Road. The fecal coliform sample for Orestimba Creek at River Road was not collected during the original sample event. That site was revisited on April 17th and a fecal coliform sample was collected. Toxicity to *Ceriodaphnia dubia* was measured at Newman Wasteway (60% survival), and Orestimba Creek at River Road (20% survival). A TIE was performed on the Orestimba Creek sample, however the toxicity was not persistent and the TIE was inconclusive. Dicofol (0.037µg/L) was the only detected pesticide in the Orestimba sample, and Prowl (0.14µg/L) was the only detected pesticide in the Newman Wasteway sample.

Event 44, May 13th, 2008.

Irrigation season water samples were collected in accordance with the Revised MRP on May 13th. There was no flow at all four San Luis Water District sites, Del Puerto Creek at Highway 33, the Blewette drain, and Turner Slough. Algae toxicity was observed at Westley Wasteway (41% different from control), and toxicity to *Ceriodaphnia dubia* was observed at Orestimba Creek (0% survival at both sites). No follow up for the algae test at Westley Wasteway was required, however diuron (1.2 µg/L) was detected in the sample. A dilution series and TIE were performed on both Orestimba Creek samples. The Orestimba Creek at River Road sample measured 10.6 toxic units and the TIE indicated the likely cause was a combination of cationic and non-polar organic materials. Chlorpyrifos (1.8 µg/L), DDE (0.0057 µg/L) and diuron (0.2 µg/L) were detected in the sample. The dilution series for the Orestimba Creek at Highway 33 sample indicated 1 toxic unit and the TIE was inconclusive. Chlorpyrifos (0.11 µg/L), dicofol (0.38 µg/L), DDE (0.018 µg/L) and Prowl (1.9 µg/L) were detected in the sample.

Event 45, June 10th, 2008.

Irrigation season water samples were collected in accordance with the Revised MRP on June 10th. There was no flow at all four San Luis Water District sites, Del Puerto Creek at Highway 33, Turner Slough, and Los Banos Creek at China Camp Road. Statistically significant toxicity to *Ceriodaphnia dubia* was observed at Orestimba Creek at Highway 33 (75% survival). Neither follow up testing nor resampling were required. DDE (0.038 µg/L), DDT (0.02 µg/L), dieldrin (0.0073 µg/L), Prowl (0.076 µg/L) and trifluralin (0.066 µg/L) were detected in the sample. No other sites measured toxicity.

Event 46, July 8th, 2008.

Irrigation season water samples were collected in accordance with the Revised MRP on July 8th. There was no flow at all four San Luis Water District sites, Del Puerto Creek at Highway 33, Turner Slough, and Los Banos Creek at China Camp Road. Significant toxicity to *Ceriodaphnia dubia* was measured at Salt Slough at Sand Dam (0% survival), and both Orestimba Creek sites (0% survival at both). The dilution series performed on the Salt Slough sample measured 2.1 toxic units, and the TIE indicated that the likely cause was a combination of non-polar, metabolically activated, and cationic materials. Methomyl (0.22 µg/L), chlorpyrifos (0.48 µg/L), diuron (0.38 µg/L) and trifluralin (0.14 µg/L) were detected in the Salt Slough sample. A dilution series was performed on the Orestimba Creek at River Road sample and measured 2.8 toxic units and 2.3 toxic units at Highway 33. The TIE for both sites indicated that the probable cause was a combination of cationic, non-polar organic, and metabolically activated materials. At Orestimba Creek at Highway 33, DDT (0.014 µg/L), DDE (0.028 µg/L), dimethoate (0.41 µg/L), dicofol (0.34 µg/L), chlorpyrifos (0.47 µg/L) and Prowl (0.22 µg/L) were detected. At Orestimba Creek at River Road, DDE (0.013 µg/L), dicofol (0.1 µg/L), dimethoate (0.24 µg/L), and chlorpyrifos (0.42 µg/L) were detected. Resamples indicated persistent toxicity at both Orestimba Creek sites, but not at Salt Slough.

Event 47, August 12th, 2008.

Irrigation season water samples were collected in accordance with the Revised MRP on August 12th. There was no flow at all four San Luis Water District sites, Del Puerto Creek at Highway 33, Turner Slough, and Los Banos Creek at China Camp Road. Significant toxicity to *Ceriodaphnia dubia* at Salt Slough at Lander Avenue (45% survival) was measured. Reduced survival at Newman Wasteway (55% survival) was also measured, however due to control sample variability, this was not statistically significant. The TIE performed on the Salt Slough sample measured a significant reduction in toxicity in the baseline sample and all treatments successfully removed the toxicity. Resamples at both Newman Wasteway and Salt Slough measured no significant toxicity. Dimethoate (0.33 µg/L) and chlorpyrifos (0.018 µg/L) were detected in the Newman Wasteway sample. Chlorpyrifos (0.32 µg/L) was detected in the Salt Slough sample.

SECTION 2: SAMPLING SITE 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 (also called Vernalis at Highway 132 [VH132]). This site is located at the northerly boundary of the Westside Coalition, and has not been regularly monitored. Regional Board staff have observed turbid water discharges at this site on a number of occasions.
- 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.
- 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.
- 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.
- 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.
- 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.
- Ramona Lake near Fig Ave (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.
- 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.
- 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.

- 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.
- 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. 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. 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.
- 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.
- Los Banos Creek at China Camp Road (LBCCC). This site monitors agricultural and storm runoff from the Los Banos Subarea. There is a farmer-maintained dam downstream of this site which is frequently used to stop flows so that they may be diverted for irrigation. Because of this practice, a limited number of irrigation season samples have been collected. Some sediment toxicity and pesticides have been measured at this site.
- 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.
- Little Panoche Creek at Western Boundary (LPCWB) and at San Luis Canal (LPCSL). These two sites were incorporated from the San Luis Water District Water Quality Coalition. Because San Luis Water District has a strict no-discharge policy, these sites

will typically measure only storm runoff or releases from the Little Panoche reservoir. These sites typically convey storm water and have not been extensively monitored.

- Russell Avenue Drain at San Luis Canal (RADSL). This is a small drain along Russell Avenue that discharges into the San Luis Canal. These two sites were incorporated from the San Luis Water District Water Quality Coalition. Because San Luis Water District has a strict no-discharge policy, this site will typically measure only storm runoff.
- Los Banos Creek at Sunset Avenue (LBCSA). This monitoring site was incorporated from the San Luis Water District Water Quality Coalition, and is located near the western boundary of the Westside Coalition, downstream of the Los Banos Reservoir. There is not a large amount of actively farmed land at or upstream of this site, and discharges here are likely to be storm runoff or releases from the Los Banos Reservoir.
- San Joaquin River at Sack Dam (SJRSB). 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.
- 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 will characterize the source water quality typical of the Delta Mendota Canal, and is monitored for source water constituents.
- 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.

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 4** shows the top twenty crops within the watershed area based on 2006 Department of Pesticide Regulations (DPR) pesticide use data.

Table 4: Top 20 Crops Grown by County

Fresno	Merced	Stanislaus
Cotton	Almonds	Almonds
Grapes	Cotton	Walnuts
Almonds	Alfalfa	Corn
Tomatoes	Tomatoes	Alfalfa
Alfalfa	Grapes	Peaches
Lettuce	Corn	Tomatoes
Corn	Pistachios	Grapes
Citrus	Oats	Dry Beans
Mellons	Peaches	Apricots
Nectarines	Wheat	Oats
Peaches	Mellons	Nursery
Pistachios	Walnuts	Mellons
Onion	Sugar Beets	Broccoli
Sugar Beets	Green Beans	Cherrys
Wheat	Sweet Potato	Green Beans
Plums	Rice	Apples
Garlic	Prunes	Lettuce
Broccoli	Onion	Wheat
Peppers	Nursery	Spinach

Data from 2006 DPR Pesticide Use database.

These crops are dispersed approximately evenly throughout the watershed area, with the exceptions of cotton (mostly in the Los Banos, Dos Palos and Tranquillity Subareas), rice (Dos Palos Subarea only), and fruit trees (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 are usually furrow irrigated using

either a plowed head ditch or gated pipe, but may also be sprinkler 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 many of the older orchards are still flood irrigated.

Table 5 shows the types of pesticides used in 2006 reported from the California Department of Pesticide Regulation, by sub-watershed and crop type. This area includes 10 of the 19 monitoring sites within the Westside Coalition, 3 of which are on the 303d list for pesticides.

Table 5: Stanislaus County 2006 Pesticide Use by Subwatershed

	Pesticide Type	Fallow / Native	Field Crops	Pasture	Orchard Crops	Vineyards	Nursery
Del Puerto Cr. Subwatershed	Carbamates		X		X		
	Herbicides	X	X	X	X	X	
	Organochlorine		X		X		
	Organophosphorus		X	X	X		
	Pyrethroid		X		X	X	
Hospital/Ingram Cr. Subwatershed	Carbamates		X		X		
	Herbicides	X	X		X	X	
	Organochlorine		X		X		
	Organophosphorus		X		X		
	Pyrethroid		X		X	X	
Orestimba Cr. Subwatershed	Carbamates		X		X		
	Herbicides	X	X	X	X		X
	Organochlorine		X		X		
	Organophosphorus		X		X		
	Pyrethroid		X		X		
Salado Creek Subwatershed	Carbamates		X		X		
	Herbicides	X	X	X	X		
	Organochlorine		X		X		
	Organophosphorus		X		X		
	Pyrethroid		X		X		
Westley Wasteway Subwatershed	Carbamates		X		X		
	Herbicides	X	X		X	X	
	Organochlorine		X				
	Organophosphorus		X		X		
	Pyrethroid		X		X	X	

Note: Shaded regions indicate no recorded pesticide application on that crop type in that subwatershed.

FIGURE 1: WATERSHED MAP W/ MONITORING SITES.

Table 6 shows the 10 most commonly applied pesticides (by acreage) for the three major counties occupied by the Westside Coalition.

Table 6: Most Commonly Applied Pesticides by County (2006)

Fresno		Merced		Stanislaus	
Pesticide	Class	Pesticide	Class	Pesticide	Class
Ethephon	OP	Ethephon	OP	Lambda-cyhalothrin	Pyrethroid
Chlorpyrifos	OP	Chlorpyrifos	OP	Dimethoate	OP
Methomyl	Carbamates	Lambda-cyhalothrin	Pyrethroid	Esfenvalerate	Pyrethroid
Lambda-cyhalothrin	Pyrethroid	Cyfluthrin	Pyrethroid	Chlorpyrifos	OP
Esfenvalerate	Pyrethroid	Methomyl	Carbamate	Methomyl	Carbamates
Naled	OP	Dicofol	OC	Permethrin	Pyrethroid
Cyfluthrin	Pyrethroid	Malithion	OP	Parathion-Methyl	OP
Permethrin	Pyrethroid	Aldicarb	Carbamate	Bifenthrin	Pyrethroid
Bifenthrin	Pyrethroid	Dimethoate	OP	Ethephon	OP
Diazinon	OP	Esfenvalerate	Pyrethroid	Dicofol	OC

SECTION 3: FIELD SAMPLING PROCEDURE

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

SECTION 4: 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 measurements of site water variability.

- **Water Chemistry Analyses.** Field duplicate and field blank samples were collected during all six sampling events within 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 127 duplicate analyses were completed and compared to the event sample results. Seventeen duplicate samples exceeded the 25% relative percent difference (RPD) established in the QAPP for:

Cadmium	E. Coli	Fecal coliform
Hardness	Nickel	Selenium
TDS	Total Suspended Solids	Turbidity

These exceedances of the field duplicate quality control criteria are reflective of the complicated nature of the site water and the naturally occurring variations of the water column quality. The Westside Coalition does not expect these variations to impact data usability.

Six field blank sample sets were analyzed during the report period (127 results, total). Of these, four resulted in values greater than 20% of the event sample result, including:

Boron	Fecal Coliform	TDS
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- **Pesticide Analyses.** Six field duplicate and field blank samples sets were collected during the reporting period and analyzed for pesticides. There was only one detection in all of the field blank samples (3/8/08 DDD 0.015 µg/L). Calculated RPD for field duplicate results were greater than 25% for nine analytes during the reporting period. These variations likely demonstrate the site water variability and are not expected to affect data usability. 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 three species during all six sampling events within the reporting period. Field duplicate results were acceptable for all of the tests except for the March Algae sample (Orestimba Creek at Highway 33, RPD = 29.2%). As significant toxicity to algae was not observed in either the event or field duplicate sample, no impact to the data usability is anticipated.
- **Sediment Toxicity Analyses.** A field duplicate sample was collected for sediment toxicity during the March sampling event. The measured RPD was 6%.

SECTION 5: ANALYTICAL METHODS

Table 3 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 test results (including results from the initial screening tests, dilution series, and TIE's). 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 6: 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.

The Westside Coalition's monitoring program includes 26 monitoring sites on the Westside of the San Joaquin Valley (see **Table 1** 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 2008 irrigation season months with significant agricultural activity. Twelve measurements of significant aquatic toxicity were measured. Nine of the toxicity measurements were to *Ceriodaphnia dubia*, two to algae, and one to fathead minnow.

Ceriodaphnia dubia. Toxicity to *Ceriodaphnia dubia* was measured during Event 43, 44, 45, 46, and 47, for a total of nine measurements. Six of these were observed in Orestimba Creek (three at River Road and three at Highway 33), with one observation at Newman Wasteway and two at Salt Slough (one at Sand Dam and one at Lander Avenue). In most cases, pesticides were also detected in the sample and could be attributed to the toxicity measurement. However, 2 of the observed toxicity incidents had no apparent cause, despite the variety of pesticides analyzed. See **Attachment 2**.

Selenastrum capricornutum (algae). Toxicity was measured to algae twice during the reporting period; Poso Slough during Event 42 (March) and Westley Wasteway in Event 44 (May). Diuron was detected at both sites and appeared to be the probable cause of toxicity. See **Attachment 2**.

Pimephales Promelas (fathead minnow). Statistically significant (although slight) toxicity was measured to fathead minnow in the field duplicate sample at Poso Slough during Event 42 (March). The measured survival was 87.5% in the field duplicate and the mortality was apparently due to pathogen interference. The event sample measured 97.5% survival and was not toxic. See **Attachment 2**.

Sediment Toxicity. Sediment samples were collected during Event 42 (March) and tested for toxicity to *Hyalella azteca*. Ten samples were collected, and significant toxicity was measured at four sites (Hospital creek, Ingram Creek, Westley Wasteway, and Ramona Lake). The sites measuring toxicity were similar to those of other events, however the magnitude of the observed toxicity appears to have improved. In past events, sediment toxicity at Ingram Creek, Hospital Creek, and Westley Wasteway usually measured near 0% survival. The Event 42 results measured 65% survival at Westley Wasteway and 80% survival at Hospital Creek (the field duplicate sample at Hospital Creek measured 85% survival and was not toxic). Of all four samples measuring significant toxicity, only Ingram Creek measured severe toxicity (2.5% survival). **Table 7** shows the sediment toxicity results since the beginning of the monitoring program. In addition to the toxicity testing, the Ingram Creek sediment sample was analyzed for a variety of organochlorine pesticides, pyrethroids, and chlorpyrifos. Bifenthrin (0.002mg/kg) and cyhalothrin (0.01 mg/kg) were measured in the sample.

Table 7: Sediment Toxicity Results.

Site	Mar 08 % Survival	Mar 08 Toxicity (Y/N)	Sept 07 % Survival	Sept 07 Toxicity (Y/N)	Mar 07 % Survival	Mar 07 Toxicity (Y/N)	Sep 06 % Survival	Sep 06 Toxicity (Y/N)
Hospital Creek	80	Y	16.2	Y	0	Y	1.25	Y
Ingram Creek	2.5	Y	0	Y	0	Y	0	Y
Westley Wasteway	65	Y	0	Y	0	Y	1.25	Y
Del Puerto Creek (Cox Rd)	N/A	N/A	93.8	N	81.2	Y	55	Y
Del Puerto Creek (Hwy 33)	N/A	N/A	58.8	Y	91.2	Y	1.25	Y
Orestimba Creek at River Rd.	95	N	98.8	N	90	N	96.25	N
Orestimba Creek at Hwy 33	90	N	95	N	13.8	Y	6.25	Y
Ramona Lake at Fig Ave.	68.8	Y	91.2	Y	N/A	N/A	N/A	N/A
Newman Wasteway	97.5	N	51.2	Y	93.8	N	98.75	N
Poso Slough	98.8	N	N/A	N/A	N/A	N/A	N/A	N/A
Turner Slough			92.5	N	96.2	N	98.75	N
SJR at Lander			95	N	90	Y	95	N
Salt Slough at Lander			86.2	N	96.2	N	97.5	N
Salt Slough at Sand Dam			92.5	N	96.2	N	98.75	N
Los Banos Creek at Hwy 140			87.5	N	96.2	N	98.75	N
Los Banos Creek at China Camp Rd.	92.5	N	13.8	Y	98.8	N	100	N
Mud Slough			90	N	96.2	N	100	N

Site	Mar 06 % Survival	Mar 06 Toxicity (Y/N)	Oct 05 % Survival	Oct 05 Toxicity (Y/N)	Mar 05 % Survival	Mar 05 Toxicity (Y/N)	Sep 04 % Survival	Sep 04 Toxicity (Y/N)
Hospital Creek	82.5	Y	0	Y	16.2	Y	85	N
Ingram Creek	23.8	Y	0	Y	32.5	Y	0	Y
Westley Wasteway	0	Y	0	Y	0	Y	95.7	N
Del Puerto Creek (Cox Rd)	0	Y	1.3	Y	N/A	N/A	93.75	N
Del Puerto Creek (Hwy 33)	68.8	Y	0	Y	0	Y	N/A	N/A
Orestimba Creek at River Rd.	97.5	N	93.8	N	51.2	Y	95	N
Orestimba Creek at Hwy 33	66.3	N	32.5	Y	N/A	N/A	52.5	Y
Ramona Lake at Fig Ave.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Newman Wasteway	90	N	76.3	Y	72.5	Y	90	N
Turner Slough	91.3	N	95	N	85	N	93.75	N
SJR at Lander	N/A	N/A	97.5	N	91.2	N	88.75	N
Salt Slough at Lander	100	N	98.8	N	62.5	Y	92.5	N
Salt Slough at Sand Dam	95	N	91.3	N	87.5	N	95	N
Los Banos Creek at Hwy 140	95	N	97.5	N	56.2	Y	93.75	N
Los Banos Creek at China Camp Rd.	93.8	N	91.3	Y	58.8	Y	95	N
Mud Slough	98.8	N	97.5	N	76.2	Y	92.8	N

N/A indicates no sample taken or criteria not applicable.

Shaded cells indicate that the site is no longer monitored for sediment toxicity.

A total of 23 different pesticides were detected during the 2008 irrigation season for a total of 266 detections.

- Carbaryl (1 detection): Carbaryl is a carbamate insecticide used to control insects on a variety of row and fruit crops including melons, tomatoes, grapes, corn, cotton, and rice.
- Chlorpyrifos (39 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.
- DDT/DDD/DDE (48 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

relatively low levels. DDE and DDD have no commercial value but are compounds normally associated with the degradation of DDT.

- Demeton-s (1 detection): Demeton-s is an organophosphate insecticide. It is not registered for use in California. Available pesticide use reports indicate no use of this material in 2008.
- Diazinon (5 detections): Diazinon is an organophosphate pesticide used to control a wide range of insects and is frequently applied to nut trees, melons, and tomatoes, and is often used as a dormant spray for trees.
- Dicofol (5 detections): Dicofol is an organochlorine insecticide that is registered for use on a variety of field crops such as cotton, tomatoes, beans, and melons.
- Dieldrin (5 detections): Dieldrin is an organochlorine 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 (28 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 (56 detections): Diuron is a substitute urea herbicide used to control weeds in a variety of field crops including cotton, alfalfa, and wheat. It is also effective in controlling algae.
- Endosulfan II (2 detections) and Endosulfan sulfate (3 detections): Endosulfan II and Endosulfan sulfate are Group A organochlorine pesticides used to control a variety of insects on vegetable crops, grains, and cotton. Based on available pesticide use reports, this material is not widely used.
- Endrin (1 detection): Endrin is an organochlorine pesticide. This material is not registered for use in the United States. Based on available pesticide use reports there were no applications of this material in 2008.
- EPTC (2 detections): EPTC is a selective thiocarbamate herbicide used to control grassy and broadleaf weeds in a variety of field crops including beans and corn.
- Ethyl parathion (1 detection): Ethyl parathion is an organophosphate insecticide used on cotton, alfalfa, wheat and similar non-food crops.
- Malathion (4 detections): Malathion is an organophosphate insecticide used on a variety of crops including alfalfa, walnuts, lettuce, grapes, and cotton.
- Methidathion (1 detection): Methidathion is an organophosphate pesticide used to control insects on alfalfa, fruit trees and nut trees, alfalfa, safflower, and vegetable crops.
- Methomyl (7 detections): Methomyl is a carbamate insecticide used on a variety of crops including corn, tomatoes, grapes, beans, and cotton.
- Methyl parathion (3 detections): Methyl parathion is an organophosphate pesticide used to control a wide range of insects. It is approved for a variety of non-food crops including alfalfa, cotton, and silage corn.
- Prowl (34 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 (6 detections): Simazine is a triazine herbicide used to control broadleaf weeds and annual grasses in a variety of field crops.

- Trifluralin (14 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.

Exceedences of Recommended Water Quality Values

Water chemistry analyses were compared to recommended water quality values² (RWQV).

- **Field, General Physical and Drinking Water Quality Exceedences.** Comparisons were made to seven RWQVs. **Attachment 4** tabulates the results for these constituents and the comparison to the RWQVs. The Westside Coalition performed analyses or observed almost 1,500 field and chemistry (non-pesticide) parameters during the reporting period, during which, 74 (5%) results were greater than the RWQVs. Electrical Conductivity and total dissolved solids (TDS) accounted for 24 and 28 of these exceedences (respectively). E. coli results accounted for 17 of these exceedences, 1 for total suspended solids (TSS), 1 for dissolved oxygen (DO), and 2 for pH, and 1 for boron.
- **Pesticide exceedences.** The Westside Coalition tested for almost 3,700 pesticides during the reporting period. These analyses resulted in 266 detections, of which, 87 were greater than established RWQVs. Of the 87 exceedences, 47 were caused by legacy pesticides (either DDT, DDD, or DDE), which are not currently in use. Nine pesticides constituted the 87 exceedences, which are listed in **Table 8** (below).

Table 8: Pesticide Exceedences

Pesticide	Number of Exceedences	Pesticide	Number of Exceedences
Chlorpyrifos	27	DDD	1
Diazinon	2	Dimethoate	6
Methyl Parathion	3	Diuron	1
DDT	11	Methidathion	1
DDE	35		
Total: 87			

SECTION 7: ACTIONS TAKEN TO ADDRESS WATER QUALITY IMPACTS

Reporting and Outreach:

Outreach included regular updates at the monthly meeting of the Westside Coalition and at regular board meetings of the West Stanislaus Resource Conservation District. Presentations to these groups focused on providing updates and results of BMP studies undertaken in this project. Additional outreach meeting were held per the attached tabulation shown in **Table 9**. At each meeting, the latest information on the BMP studies conducted in this grant as well as other BMPs applicable to managing sediment and pesticide runoff were provided.

² Water Quality Limits were taken from a Central Valley Regional Water Quality Control Board letter to the Westside Coalition, dated 30 September 2005.

BMP publications continued to be developed and distributed. Through the funding of Westside Coalition, CURES, pesticide manufacturers and grant programs from the State of California the “Grower Handbook: Management Practices for Protecting Water Quality” is updated and made available for distribution.

Table 9: Outreach Meetings

Date	Group	Location	Description	Approximate Attendance
February 13, 2008	Westside Stan RCD	Patterson	Update on Westside Coalition	6
February 20, 2008	El Solyo Water District	Vernalis	Met with Board to review drainage issues and BMP's	9
February 20, 2008	Blewett Mutual Water Co	Vernalis	Meeting with Frank Bettencourt, operator of system to review drainage	1
March 17, 2008	CCID Landowners Meeting	Firebaugh	Dos Palos Area Update	100
March 18, 2008	CCID Landowners Meeting	Los Banos	Los Banos Area Update	150
March 19, 2008	CCID Landowners Meeting	Gustine	Patterson Area Update	200
April 2, 2008	Newman Landowner Meeting	Newman	Provided information on water quality exceedences and best management practices	25
April 3, 2008	Westley Landowner Meeting	Westley	Provided information on water quality exceedences and best management practices	20
July 10, 2008	BMP Field Day	Patterson	BMP treatments for sediment, PAM, sediment ponds, recirculation systems, funding sources	23

2. Management Plan Activities:

The Westside Coalition has been in the process of developing a management plan since the Winter of 2007. Although the management plan was not in place during this reporting period, the Westside Coalition began implementation of some of its components.

- Management Practice Survey:** A focused watershed plan was included within the management plan, which focused on addressing the specific issues of a small number of subwatersheds at a time. The first focused watersheds will be Hospital and Ingram Creeks. Management practice survey forms were circulated to all of the growers within these two subwatersheds to determine the current operational practices. Approximately 80% of the surveys have been returned and the Westside Coalition is in contact with the remaining growers.
- Pesticide Use Data:** The Westside Coalition has been in contact with the Agricultural Commissioners of Fresno, Merced, and Stanislaus counties to obtain recent pesticide use data for those regions of the Coalition. The Westside Coalition hopes to use this data to help identify regions where pesticide discharges into the water ways could be occurring.
- Management Practice Funding Assistance:** The Westside Coalition is in the process of developing a funding assistance program to help growers construct and maintain tailwater sedimentation ponds and return systems within the Coalition. The mechanics of this program are still in development and available funding will be dependent upon the financial resources available to the Coalition.
- Regional Tailwater Return Systems:** As was reported in prior monitoring reports, a number of regional tailwater ponds and recirculation systems have been constructed recently in the Patterson Subarea of the Westside Coalition (most recently the Northside Recovery System and the Westley Tailwater Pond). These systems have shown

significant impact in improving water quality in the receiving waterbody, but also increased water management flexibility.

- **Conversion to high efficiency irrigation systems:** Drip and micro-sprinkler irrigation systems virtually eliminate tailwater discharges as well as providing some advantages in the applications of chemicals that can reduce impacts to water quality. Several of the districts within the Westside Coalition have implemented grant and loan programs that to assist growers in upgrading their irrigation systems. During the 2008 irrigation system more than 2000 acres of high efficiency irrigation systems came on line.

3. Monitoring Results:

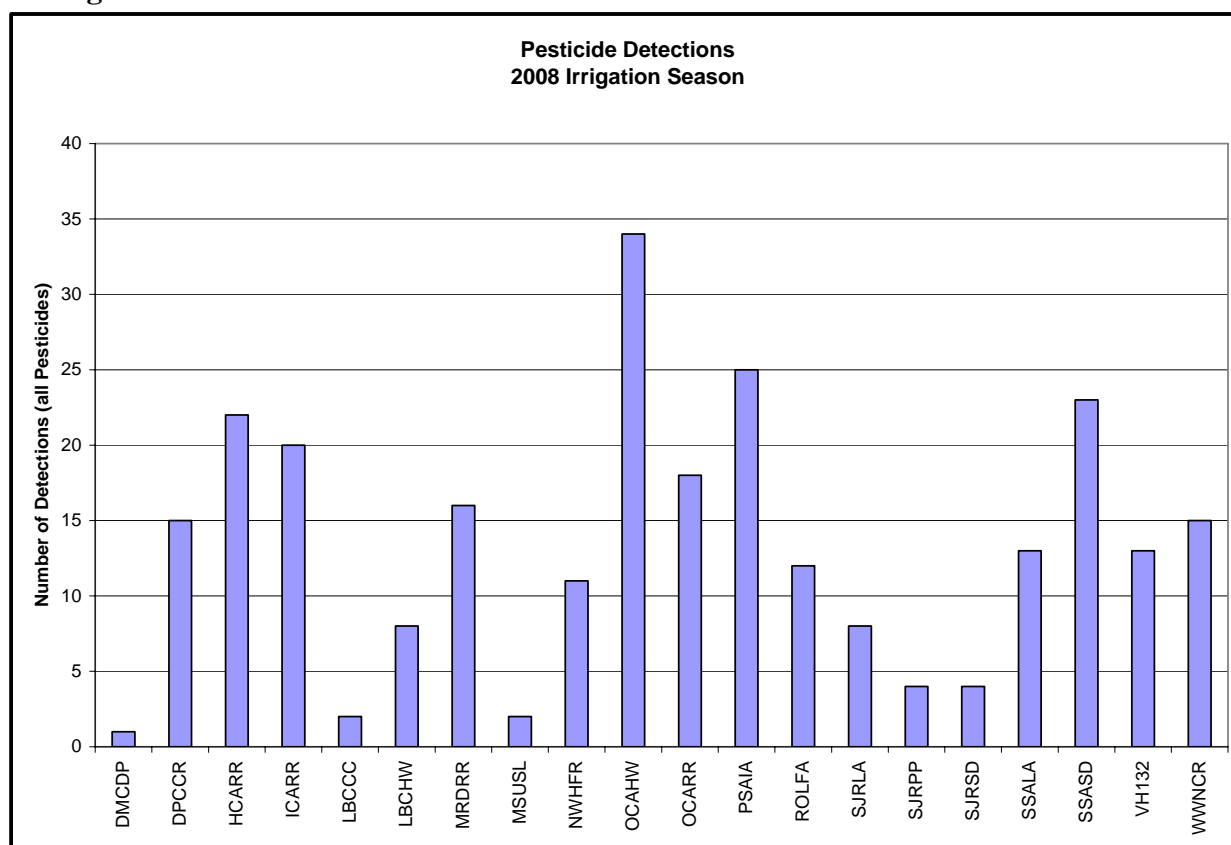
Data gathered since the inception of the monitoring program has allowed the Westside Coalition to identify problem areas and issues. Details of sites exhibiting significant toxicity during this monitoring period are included in **Attachment 2** and all results that exceeded RWQVs are included in **Attachment 4**. 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 with 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 nine samples in March (Event 42). The results of these tests were similar to previous sediment toxicity results in that sites which showed significant toxicity had a fairly consistent history of toxic results since the beginning of the program. Samples from Hospital Creek, Ingram Creek, Westley Wasteway, and Ramona Lake all measured significant toxicity and all had shown toxic results in the past. However, of these four sites, only Ingram Creek measured severe toxicity (2.5% survival), with the other three sites measuring greater than 50% survival. Historically, all of these sites except Ramona Lake had exhibited chronic and severe (<50% survival) toxicity. The Ingram Creek sediment sample was also analyzed for selected pesticides. There were measurable concentrations of cyhalothrin (0.01 µg/L) and bifethrin (0.002 µg/L) in the sample, which are probably related to the toxic results. Grower awareness of the issue combined with implemented management practices may have contributed to this improvement. The proposed Management Plan and Focused Watershed Plan include management approaches to address sediment toxicity.
- **Aquatic Toxicity:** During this reporting period, 11 samples indicated significant toxicity; two to algae and nine for *Ceriodaphnia dubia*. **Attachment 2** provides monitoring results for all of the sites that measured significant toxicity, including a discussion of the TIE and dilution series findings. Toxicity to algae was measured at Poso Slough in March and at Westley Wasteway in May. Diuron was detected in both of these samples and is suspected to have contributed to the measured toxicity. Toxicity to *Ceriodaphnia dubia* was measured at Newman Wasteway (April), Orestimba Creek at River Road (April, May, and July), Orestimba Creek at Highway 33 (May, June, and July), Salt Slough at Sand Dam (July) and Salt Slough at Lander Avenue (August). Orestimba Creek (either at River Road or at Highway 33) accounted for six of the nine measurements of toxicity. With the exception of the

observed toxicity at Newman Wasteway³, insecticides were detected in each of the samples, and are suspected to have contributed to the toxicity.

- Pesticide Analyses:** During this reporting period, a total of 23 different pesticides were detected (266 detection, total) with 87 exceedances of the established RWQV (see **Table 8**). In most case, no toxicity was observed despite the presence of pesticides within the sample. However, all but one of the observations of toxicity could be tied to the detection of one or more pesticides in the sample. Of the nine observations of *Ceriodaphnia dubia* toxicity, chlorpyrifos was present in six of them, and dicofol was present in four of them. See **Attachment 2**. **Figure 2** shows a count of the total number of pesticide detections by site for the 2008 irrigation season. As **Figure 2** shows, detection of pesticides in tailwater discharges is a wide-spread issue. The Westside Coalition is attempting to address this issue through the implementation of its Management Plan. Management practices such as tailwater recirculation (i.e. the Northside Recovery System) and installation of high efficiency irrigation systems are expected to have an immediate impact on tailwater discharges within localized areas.

Figure 2.



³ The pesticide analysis of the April Newman Wasteway sample detected only Prowl (0.14µg/L) in the pesticide analysis. Prowl is a herbicide and not expected to have contributed to the *ceriodaphnia dubia* toxicity.

- **General Chemistry and Field Observations:** The monitoring results during this reporting period indicated similar issues as in previous reports and no significant changes compared to the 2007 irrigation season. EC/TDS measured the largest number of exceedances for this reporting period (76 and 82 exceedances, respectively), which is not surprising given the very dry hydrologic year. E. Coli continues to be a leading source of exceedances (37 during this period). Other constituent exceedances include TSS (5 exceedances), pH (35 exceedances), DO (24 exceedances) and Boron (7 exceedances). The Revised MRP also added analyses for Fecal Coliform, which measured 41 exceedances. 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).

SECTION 8: 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 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 9**).

SECTION 9: CONCLUSIONS AND RECOMMENDATIONS

The Westside Coalition's monitoring program has identified constituents of concern (see **Attachments 2 and 4** and **Table 8**). The Westside Coalition is in the process of developing a Management Plan and Focused Watershed Plan to address the water quality concerns discovered by previous monitoring. The Westside Coalition is in the process of meeting with Regional Board staff to finalize the details of these plans. The management and monitoring plans are expected to be implemented in March of 2009.

Attachment 1

Sampling Event Details

Event 42 March 08	Map Desig.	Caltest		APPL	PER				Dup?
		Gen Phy	Drnk Wtr	Pest	Sed Tox	CD Tox	PP Tox	SC Tox	
Hospital Cr at River Road	HCARR				x				
Ingram Cr at River Road	ICARR	no flow			x				
Westley Wasteway near Cox Road	WWNCR	no flow		x	x	x		x	
Del Puerto Cr near Cox Road	DPCCR	no flow							
Del Puerto Cr at Hwy 33	DPCHW	no flow							
Ramona Lake near Fig Avenue	ROLFA	no flow		x	x	x			
Marshall Road Drain near River Road	MRDRR	no flow							
Orestimba Cr at River Road	OCARR	x	x	x	x	x			
Orestimba Cr at Hwy 33	OCAHW	x	x	x	x	x		x	x
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x	x	x			
San Joaquin River at Lander Avenue	SJRLA	x	x	x		x		x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x		x			
Salt Slough at Lander Avenue	SSALA	x	x	x		x		x	
Salt Slough at Sand Dam	SSASD	x	x	x		x		x	
Los Banos Creek at Highway 140	LBCHW	x	x	x		x			
Los Banos Creek at China Camp Road	LBCCC	x	x	x	x	x	x	x	
Turner Slough near Edminster Road	TSAER	no flow							
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	no flow							
Little Panoche Cr at Western Boundary	LPCWB	no flow							
Little Panoche Cr at San Luis Canal	LPCSL	no flow							
Russell Ave. Drain at San Luis Canal	RADSL	no flow							
San Joaquin River at Sack Dam	SJRSD	x	x	x					
San Joaquin River at PID Pumps	SJRPP	x	x	x					
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x					

Event 43 April 08	Map Desig.	Caltest		APPL	PER				Dup?
		Gen Phy	Drnk Wtr	Pest	Sed Tox	CD Tox	PP Tox	SC Tox	
Hospital Cr at River Road	HCARR	x	x	x					
Ingram Cr at River Road	ICARR	x	x	x		x			
Westley Wasteway near Cox Road	WWNCR	x	x	x		x		x	
Del Puerto Cr near Cox Road	DPCCR	x	x	x		x			
Del Puerto Cr at Hwy 33	DPCHW	no flow							
Ramona Lake near Fig Avenue	ROLFA	x	x	x		x			
Marshall Road Drain near River Road	MRDRR	x	x	x		x			
Orestimba Cr at River Road	OCARR	x	x	x		x			
Orestimba Cr at Hwy 33	OCAHW	x	x	x		x		x	
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x		x			
San Joaquin River at Lander Avenue	SJRLA	x	x	x		x		x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x		x			
Salt Slough at Lander Avenue	SSALA	x	x	x		x		x	
Salt Slough at Sand Dam	SSASD	x	x	x		x		x	
Los Banos Creek at Highway 140	LBCHW	x	x	x		x			
Los Banos Creek at China Camp Road	LBCCC	no flow							
Turner Slough near Edminster Road	TSAER	no flow							
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	no flow							
Little Panoche Cr at Western Boundary	LPCWB	no flow							
Little Panoche Cr at San Luis Canal	LPCSL	no flow							
Russell Ave. Drain at San Luis Canal	RADSL	no flow							
San Joaquin River at Sack Dam	SJRSD	x	x	x					
San Joaquin River at PID Pumps	SJRPP	x	x	x					
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x					

Event 44 May 08	Map Desig.	Caltest			APPL Pest	PER				Dup?
		Gen Phy	Drnk Wtr			Sed Tax	CD Tax	PP Tax	SC Tax	
Hospital Cr at River Road	HCARR	x	x	x			x			x
Ingram Cr at River Road	ICARR	x	x	x			x			
Westley Wasteway near Cox Road	WWNCR	x	x	x			x		x	
Del Puerto Cr near Cox Road	DPCCR	x	x	x			x			
Del Puerto Cr at Hwy 33	DPCHW	no flow								
Ramona Lake near Fig Avenue	ROLFA	x	x	x			x			
Marshall Road Drain near River Road	MRDRR	x	x	x			x			
Orestimba Cr at River Road	OCARR	x	x	x			x			
Orestimba Cr at Hwy 33	OCAHW	x	x	x			x		x	
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x			x			
San Joaquin River at Lander Avenue	SJRLA	x	x	x			x		x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x			x			
Salt Slough at Lander Avenue	SSALA	x	x	x			x		x	
Salt Slough at Sand Dam	SSASD	x	x	x			x		x	
Los Banos Creek at Highway 140	LBCHW	x	x	x			x			
Los Banos Creek at China Camp Road	LBCCC	x	x	x			x		x	
Turner Slough near Edminster Road	TSAER	no flow								
Blewett Drain near Highway 132	VH132	no flow								
Poso Slough at Indiana Avenue	PSAIA	x	x	x			x		x	
Los Banos Creek at Sunset Ave	LBCSA	no flow								
Little Panoche Cr at Western Boundary	LPCWB	no flow								
Little Panoche Cr at San Luis Canal	LPCSL	no flow								
Russell Ave. Drain at San Luis Canal	RADSL	no flow								
San Joaquin River at Sack Dam	SJRSD	x	x	x						
San Joaquin River at PID Pumps	SJRPP	x	x	x						
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x						

Event 45 June 08	Map Desig.	Caltest			APPL Pest	PER				Dup?
		Gen Phy	Drnk Wtr			Sed Tax	CD Tax	PP Tax	SC Tax	
Hospital Cr at River Road	HCARR	x	x	x			x			
Ingram Cr at River Road	ICARR	x	x	x			x			
Westley Wasteway near Cox Road	WWNCR	x	x	x			x		x	
Del Puerto Cr near Cox Road	DPCCR	x	x	x			x			
Del Puerto Cr at Hwy 33	DPCHW	no flow								
Ramona Lake near Fig Avenue	ROLFA	x	x	x			x			
Marshall Road Drain near River Road	MRDRR	x	x	x			x			
Orestimba Cr at River Road	OCARR	x	x	x			x			
Orestimba Cr at Hwy 33	OCAHW	x	x	x			x		x	
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x			x			
San Joaquin River at Lander Avenue	SJRLA	x	x	x			x		x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x			x			
Salt Slough at Lander Avenue	SSALA	x	x	x			x		x	
Salt Slough at Sand Dam	SSASD	x	x	x			x		x	
Los Banos Creek at Highway 140	LBCHW	x	x	x			x			
Los Banos Creek at China Camp Road	LBCCC	no flow								
Turner Slough near Edminster Road	TSAER	no flow								
Blewett Drain near Highway 132	VH132	x	x	x			x		x	
Poso Slough at Indiana Avenue	PSAIA	x	x	x			x		x	
Los Banos Creek at Sunset Ave	LBCSA	no flow								
Little Panoche Cr at Western Boundary	LPCWB	no flow								
Little Panoche Cr at San Luis Canal	LPCSL	no flow								
Russell Ave. Drain at San Luis Canal	RADSL	no flow								
San Joaquin River at Sack Dam	SJRSD	x	x	x						
San Joaquin River at PID Pumps	SJRPP	x	x	x						
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x						

Event 46 July 08	Map Desig.	Caltest			APPL Pest	PER				Dup?
		Gen Phy	Drnk Wtr			Sed Tax	CD Tax	PP Tax	SC Tax	
Hospital Cr at River Road	HCARR	x	x	x			x			
Ingram Cr at River Road	ICARR	x	x	x			x			
Westley Wasteway near Cox Road	WWNCR	x	x	x			x		x	
Del Puerto Cr near Cox Road	DPCCR	x	x	x			x			
Del Puerto Cr at Hwy 33	DPCHW	no flow								
Ramona Lake near Fig Avenue	ROLFA	x	x	x			x			
Marshall Road Drain near River Road	MRDRR	x	x	x			x			
Orestimba Cr at River Road	OCARR	x	x	x			x			
Orestimba Cr at Hwy 33	OCAHW	x	x	x			x		x	
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x			x			
San Joaquin River at Lander Avenue	SJRLA	x	x	x			x		x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x			x			
Salt Slough at Lander Avenue	SSALA	x	x	x			x		x	
Salt Slough at Sand Dam	SSASD	x	x	x			x		x	
Los Banos Creek at Highway 140	LBCHW	x	x	x			x			
Los Banos Creek at China Camp Road	LBCC	no flow								
Turner Slough near Edminster Road	TSAER	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	no flow								
Little Panoche Cr at Western Boundary	LPCWB	no flow								
Little Panoche Cr at San Luis Canal	LPCSL	no flow								
Russell Ave. Drain at San Luis Canal	RADSL	no flow								
San Joaquin River at Sack Dam	SJRSD	x	x	x						
San Joaquin River at PID Pumps	SJRPP	x	x	x						
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x						

Event 47 August 08	Map Desig.	Caltest			APPL Pest	PER				Dup?
		Gen Phy	Drnk Wtr			Sed Tax	CD Tax	PP Tax	SC Tax	
Hospital Cr at River Road	HCARR	x	x	x			x			
Ingram Cr at River Road	ICARR	x	x	x			x			
Westley Wasteway near Cox Road	WWNCR	x	x	x			x		x	
Del Puerto Cr near Cox Road	DPCCR	x	x	x			x			
Del Puerto Cr at Hwy 33	DPCHW	no flow								
Ramona Lake near Fig Avenue	ROLFA	x	x	x			x			
Marshall Road Drain near River Road	MRDRR	x	x	x			x			
Orestimba Cr at River Road	OCARR	x	x	x			x			
Orestimba Cr at Hwy 33	OCAHW	x	x	x			x		x	
Newman Wasteway near Hills Ferry Road	NWHFR	x	x	x			x			
San Joaquin River at Lander Avenue	SJRLA	x	x	x			x		x	
Mud Slough u/s San Luis Drain	MSUSL	x	x	x			x			
Salt Slough at Lander Avenue	SSALA	x	x	x			x		x	
Salt Slough at Sand Dam	SSASD	x	x	x			x		x	
Los Banos Creek at Highway 140	LBCHW	x	x	x			x			
Los Banos Creek at China Camp Road	LBCC	no flow								
Turner Slough near Edminster Road	TSAER	no flow								
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	no flow								
Little Panoche Cr at Western Boundary	LPCWB	no flow								
Little Panoche Cr at San Luis Canal	LPCSL	no flow								
Russell Ave. Drain at San Luis Canal	RADSL	no flow								
San Joaquin River at Sack Dam	SJRSD	x	x	x						
San Joaquin River at PID Pumps	SJRPP	x	x	x						
Delta Mendota Canal at Del Puerto WD	DMCDP	x	x	x						

Attachment 2

Significant Aquatic Toxicity Results

Westside San Joaquin River Watershed Coalition Significant Aquatic Toxicity Results

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Poso Slough at Indiana Ave	3/18/2008	42	Selenastrum capricornutum	245,000	4,130,000	94%	cells/ml

Followup: Dilution series measured 4.1 TUa. The TIE indicated that metals and pesticides are the likely cause.

Field Data			Water Chemistry			Detected Pesticides		
DO	9.7	mg/l	Bromide	ND	mg/L	Diazinon	0.015	µg/L
EC	954	µmhos/cm	Dissolved Organic Carbon	8.2	mg/L	Diuron	24	µg/L
Est Depth	2.4	ft	E. Coli	120	MPN/100mL	Prowl	1.5	µg/L
Flow	50	cfs	Fecal Coliform	130	MPN/100mL	Trifluralin	0.7	µg/L
pH	6.51		Total Organic Carbon	8.1	mg/L			
Staff Gage	2.38	ft	Hardness (as CaCO3)	300	mg/L			
Temp	15.03	c	Total Dissolved Solids	620	mg/L			
			Total Suspended Solids	130	mg/L			
			Turbidity	56	NTU			
			Arsenic	7.5	ug/L			
			Boron	420	ug/L			
			Cadmium	J0.07	ug/L			
			Copper	7.2	ug/L			
			Lead	1.7	ug/L			
			Nickel	8.7	ug/L			
			Selenium	1.5	ug/L			
			Zinc	15	ug/L			
			Ammonia (as N)	1	mg/L			
			Nitrogen, Nitrate (as N)	2.4	mg/L			
			Nitrogen, Nitrite	0.072	mg/L			
			Ortho Phosphate as P	0.35	mg/L			
			Total Kjeldahl Nitrogen	2.2	mg/L			

J = Estimated value, below PQL.

Y = % Difference primary and confirmation column is >40%.

B = Constituent also detected in blank sample.

Tuesday, November 18, 2008

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Newman Wasteway near Hills Ferry Road	4/8/2008	43	Ceriodaphnia dubia	60	100	40%	%

Followup: No followup was required.

Field Data			Water Chemistry			Detected Pesticides		
DO	9.96	mg/l	Bromide	J0.057	mg/L	Prowl	0.14	µg/L
EC	1415	µmhos/cm	Dissolved Organic Carbon	5.1	mg/L			
Est Depth	1.6	ft	E. Coli	650	MPN/100mL			
Flow	119	cfs	Fecal Coliform	900	MPN/100mL			
pH	7.34		Total Organic Carbon	5.6	mg/L			
Staff Gage	0.38	ft	Hardness (as CaCO3)	480	mg/L			
Temp	12.63	c	Total Dissolved Solids	940	mg/L			
			Total Suspended Solids	45	mg/L			
			Turbidity	28	NTU			
			Arsenic	2.6	ug/L			
			Boron	900	ug/L			
			Cadmium	ND	ug/L			
			Copper	4.2	ug/L			
			Lead	0.91	ug/L			
			Nickel	9	ug/L			
			Selenium	2	ug/L			
			Zinc	7	ug/L			
			Ammonia (as N)	0.13	mg/L			
			Nitrogen, Nitrate-Nitrite	4.4	mg/L			
			Ortho Phosphate as P	0.048	mg/L			
			Total Kjeldahl Nitrogen	0.9	mg/L			

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

Tuesday, November 18, 2008

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Orestimba Creek at River Road	4/8/2008	43	Ceriodaphnia dubia	20	100	80%	%

Followup: Toxicity was not persistent in the TIE - results were inconclusive.

Field Data

DO	7.3	mg/l
EC	826	µmhos/cm
Est Depth	1	ft
Flow	2	cfs
pH	8.62	
Staff Gage		ft
Temp	15.52	c

Water Chemistry

Bromide	ND	mg/L
Dissolved Organic Carbon	2.8	mg/L
E. Coli	72	MPN/100mL
Total Organic Carbon	3.2	mg/L
Hardness (as CaCO3)	490	mg/L
Total Dissolved Solids	730	mg/L
Total Suspended Solids	10	mg/L
Turbidity	4.1	NTU
Arsenic	1.8	ug/L
Boron	330	ug/L
Cadmium	ND	ug/L
Copper	2.9	ug/L
Lead	0.33	ug/L
Nickel	3.7	ug/L
Selenium	2.3	ug/L
Zinc	6	ug/L
Ammonia (as N)	J0.088	mg/L
Nitrogen, Nitrate-Nitrite	11	mg/L
Ortho Phosphate as P	0.02	mg/L
Total Kjeldahl Nitrogen	0.42	mg/L

Detected Pesticides

Dicofol	0.037	µg/L
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J = Estimated value, below PQL.

Y = % Difference primary and confirmation column is >40%.

B = Constituent also detected in blank sample.

Tuesday, November 18, 2008

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Orestimba Creek at Hwy 33	5/13/2008	44	Ceriodaphnia dubia	0	100	100%	%

Followup: The Dilution series measured 1 TUa. The TIE was inconclusive.

Field Data

DO	6.34	mg/l
EC	725	µmhos/cm
Est Depth	1	ft
Flow	4	cfs
pH	8.7	
Staff Gage	3	ft
Temp	20.81	c

Water Chemistry

Bromide	ND	mg/L
Dissolved Organic Carbon	3.8	mg/L
E. Coli	1200	MPN/100mL
Fecal Coliform	500	MPN/100mL
Total Organic Carbon	4.4	mg/L
Hardness (as CaCO3)	380	mg/L
Total Dissolved Solids	560	mg/L
Total Suspended Solids	100	mg/L
Turbidity	65	NTU
Arsenic	3	ug/L
Boron	310	ug/L
Cadmium	10.08	ug/L
Copper	9.8	ug/L
Lead	2.2	ug/L
Nickel	13	ug/L
Selenium	1.9	ug/L
Zinc	20	ug/L
Ammonia (as N)	0.2	mg/L
Nitrogen, Nitrate-Nitrite	4.9	mg/L
Ortho Phosphate as P	0.14	mg/L
Total Kjeldahl Nitrogen	1.2	mg/L

Detected Pesticides

Chlorpyrifos	0.11	µg/L
DDE(p,p')	0.018	µg/L
Dicofol	0.38	µg/L
Prowl	1.9	µg/L

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

Tuesday, November 18, 2008

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Orestimba Creek at River Road	5/13/2008	44	Ceriodaphnia dubia	0	100	100%	%

Followup: The Dilution series measured 10.6 TUa. The TIE indicated that single or multiple non-polar organic constituents are the likley cause of toxicity.

Field Data

DO	7.08	mg/l
EC	775	µmhos/cm
Est Depth	1	ft
Flow	7.7	cfs
pH	8.64	
Staff Gage	4.3	ft
Temp	19.44	c

Water Chemistry

Bromide	ND	mg/L
Dissolved Organic Carbon	4.9	mg/L
E. Coli	730	MPN/100mL
Fecal Coliform	>=1600	MPN/100mL
Total Organic Carbon	5.4	mg/L
Hardness (as CaCO3)	380	mg/L
Total Dissolved Solids	630	mg/L
Total Suspended Solids	48	mg/L
Turbidity	38	NTU
Arsenic	3.2	ug/L
Boron	350	ug/L
Cadmium	10.06	ug/L
Copper	13	ug/L
Lead	2	ug/L
Nickel	16	ug/L
Selenium	2	ug/L
Zinc	19	ug/L
Ammonia (as N)	0.13	mg/L
Nitrogen, Nitrate-Nitrite	4.8	mg/L
Ortho Phosphate as P	0.14	mg/L
Total Kjeldahl Nitrogen	1.2	mg/L

Detected Pesticides

Chlorpyrifos	1.8	µg/L
DDE(p,p')	0.0057	µg/L
Diuron	0.2	µg/L

J = Estimated value, below PQL.

Y = % Difference primary and confirmation column is >40%.

B = Constituent also detected in blank sample.

Tuesday, November 18, 2008

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Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Westley Wasteway near Cox Road	5/13/2008	44	Selenastrum capricornutum	1,210,000	2,060,000	41%	cells/ml

Followup: Followup testing was not required.

Field Data

DO	8.79	mg/l
EC	463	µmhos/cm
Est Depth	1.12	ft
Flow	2.2	cfs
pH	8.2	
Staff Gage	3.85	ft
Temp	14.53	c

Water Chemistry

Bromide	ND	mg/L
Dissolved Organic Carbon	4.1	mg/L
E. Coli	17	MPN/100mL
Fecal Coliform	140	MPN/100mL
Total Organic Carbon	5	mg/L
Hardness (as CaCO3)	220	mg/L
Total Dissolved Solids	380	mg/L
Total Suspended Solids	25	mg/L
Turbidity	13	NTU
Arsenic	2.9	ug/L
Boron	310	ug/L
Cadmium	ND	ug/L
Copper	5.3	ug/L
Lead	1	ug/L
Nickel	6.4	ug/L
Selenium	1.5	ug/L
Zinc	15	ug/L
Ammonia (as N)	0.23	mg/L
Nitrogen, Nitrate-Nitrite	5.2	mg/L
Ortho Phosphate as P	0.1	mg/L
Total Kjeldahl Nitrogen	1.1	mg/L

Detected Pesticides

Chlorpyrifos	0.05	µg/L
DDE(p,p')	0.0049	µg/L
Diuron	1.2	µg/L

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

Tuesday, November 18, 2008

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Orestimba Creek at Hwy 33	6/10/2008	45	Ceriodaphnia dubia	75	100	25%	%

Followup: Followup testing was not required.

Field Data

DO	5.12	mg/l
EC	986	µmhos/cm
Est Depth	1	ft
Flow	6	cfs
pH	8.81	
Staff Gage		ft
Temp	23.85	c

Water Chemistry

Bromide	ND	mg/L
Dissolved Organic Carbon	2.2	mg/L
E. Coli	980	MPN/100mL
Fecal Coliform	300	MPN/100mL
Total Organic Carbon	2.3	mg/L
Hardness (as CaCO3)	530	mg/L
Total Dissolved Solids	760	mg/L
Total Suspended Solids	210	mg/L
Turbidity	110	NTU
Arsenic	2.8	ug/L
Boron	310	ug/L
Cadmium	J0.07	ug/L
Copper	9.4	ug/L
Lead	2.8	ug/L
Nickel	11	ug/L
Selenium	2.5	ug/L
Zinc	19	ug/L
Ammonia (as N)	ND	mg/L
Nitrogen, Nitrate-Nitrite	9	mg/L
Ortho Phosphate as P	0.066	mg/L
Total Kjeldahl Nitrogen	0.62	mg/L

Detected Pesticides

DDE(p,p')	0.038	µg/L
DDT(p,p')	0.02	µg/L
Dieldrin	0.0073	µg/L
Prowl	0.076	µg/L
Trifluralin	0.066	µg/L

J = Estimated value, below PQL.

Y = % Difference primary and confirmation column is >40%.

B = Constituent also detected in blank sample.

Tuesday, November 18, 2008

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Orestimba Creek at Hwy 33	7/8/2008	46	Ceriodaphnia dubia	0	100	100%	%

Followup: The TIE indicated that single or multiple constituents with cationic and/or non-polar organic properties caused the toxicity.

Field Data			Water Chemistry			Detected Pesticides		
DO	3.87	mg/l	Bromide	J0.58	mg/L	Chlorpyrifos	0.47	µg/L
EC	905	µmhos/cm	Dissolved Organic Carbon	4.9	mg/L	DDE(p,p')	0.028	µg/L
Est Depth	1	ft	E. Coli	730	MPN/100mL	DDT(p,p')	0.014	µg/L
Flow	10	cfs	Fecal Coliform	1600	MPN/100mL	Dicofol	0.34	µg/L
pH	8.51		Total Organic Carbon	8.2	mg/L	Dimethoate	0.41	µg/L
Staff Gage		ft	Hardness (as CaCO3)	360	mg/L	Prowl	0.22	µg/L
Temp	27.8	c	Total Dissolved Solids	610	mg/L			
			Total Suspended Solids	98	mg/L			
			Turbidity	56	NTU			
			Arsenic	3.6	ug/L			
			Boron	320	ug/L			
			Cadmium	ND	ug/L			
			Copper	9.1	ug/L			
			Lead	2.4	ug/L			
			Nickel	8.9	ug/L			
			Selenium	3.1	ug/L			
			Zinc	18	ug/L			
			Ammonia (as N)	J0.088	mg/L			
			Nitrogen, Nitrate-Nitrite	5.7	mg/L			
			Ortho Phosphate as P	0.16	mg/L			
			Total Kjeldahl Nitrogen	0.79	mg/L			

J = Estimated value, below PQL.

Y = % Difference primary and confirmation column is >40%.

B = Constituent also detected in blank sample.

Tuesday, November 18, 2008

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Orestimba Creek at River Road	7/8/2008	46	Ceriodaphnia dubia	0	100	100%	%

Followup: Dilution series measured 2.85 TUa. The TIE indicated that single or multiple constituents with cationic and/or non-polar organic properties caused the toxicity.

Field Data			Water Chemistry			Detected Pesticides		
DO	4.1	mg/l	Bromide	J0.30	mg/L	Chlorpyrifos	0.42	µg/L
EC	900	µmhos/cm	Dissolved Organic Carbon	3.8	mg/L	DDE(p,p')	0.013	µg/L
Est Depth	1.5	ft	E. Coli	280	MPN/100mL	Dicofol	0.1	µg/L
Flow	6.5	cfs	Fecal Coliform	240	MPN/100mL	Dimethoate	0.24	µg/L
pH	8.51		Total Organic Carbon	5.7	mg/L			
Staff Gage	4.41	ft	Hardness (as CaCO3)	460	mg/L			
Temp	26.92	c	Total Dissolved Solids	650	mg/L			
			Total Suspended Solids	110	mg/L			
			Turbidity	67	NTU			
			Arsenic	4.8	ug/L			
			Boron	330	ug/L			
			Cadmium	J0.09	ug/L			
			Copper	16	ug/L			
			Lead	5.4	ug/L			
			Nickel	32	ug/L			
			Selenium	2.4	ug/L			
			Zinc	35	ug/L			
			Ammonia (as N)	ND	mg/L			
			Nitrogen, Nitrate-Nitrite	5.5	mg/L			
			Ortho Phosphate as P	0.14	mg/L			
			Total Kjeldahl Nitrogen	0.16	mg/L			

J = Estimated value, below PQL.

Y = % Difference primary and confirmation column is >40%.

B = Constituent also detected in blank sample.

Tuesday, November 18, 2008

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Salt Slough at Sand Dam	7/8/2008	46	Ceriodaphnia dubia	0	100	100%	%

Followup: The Dilution series measured 2.1 TUa. The TIE indicated that single or multiple constituents with cationic and/or non-polar organic properties caused the toxicity.

Field Data			Water Chemistry			Detected Pesticides		
DO	5.91	mg/l	Bromide	10.35	mg/L	Chlorpyrifos	0.48	µg/L
EC	803	µmhos/cm	Dissolved Organic Carbon	6.8	mg/L	Diuron	0.38	µg/L
Est Depth	7.4	ft	E. Coli	280	MPN/100mL	Methomyl	0.22	µg/L
Flow	46.9	cfs	Fecal Coliform	500	MPN/100mL	Trifluralin	0.14	µg/L
pH	7.21		Total Organic Carbon	6.5	mg/L			
Staff Gage	2.9	ft	Hardness (as CaCO3)	270	mg/L			
Temp	26.95	c	Total Dissolved Solids	530	mg/L			
			Total Suspended Solids	46	mg/L			
			Turbidity	33	NTU			
			Arsenic	7.4	ug/L			
			Boron	310	ug/L			
			Cadmium	ND	ug/L			
			Copper	4	ug/L			
			Lead	0.9	ug/L			
			Nickel	5.5	ug/L			
			Selenium	1.2	ug/L			
			Zinc	9	ug/L			
			Ammonia (as N)	0.46	mg/L			
			Nitrogen, Nitrate-Nitrite	2.6	mg/L			
			Ortho Phosphate as P	0.35	mg/L			
			Total Kjeldahl Nitrogen	1.3	mg/L			

J = Estimated value, below PQL.

Y = % Difference primary and confirmation column is >40%.

B = Constituent also detected in blank sample.

Tuesday, November 18, 2008

Monitoring Site	Sample Date	Event	Reactive Species	Results	Control Results	Percent Difference	Units
Salt Slough at Lander Ave	8/12/2008	47	Ceriodaphnia dubia	45	100	55%	%

Followup: The TIE showed a reduction in baseline toxicity, making it hard to interpret. The probable cause appeared to be a particulate associated constituent that is metabolically activated.

Field Data

DO	7.48	mg/l
EC	994	µmhos/cm
Est Depth	2.8	ft
Flow	109	cfs
pH	6.85	
Staff Gage	65.44	ft
Temp	24.2	c

Water Chemistry

Bromide	J0.64	mg/L
Dissolved Organic Carbon	5.3	mg/L
E. Coli	91	MPN/100mL
Fecal Coliform	50	MPN/100mL
Total Organic Carbon	5.7	mg/L
Hardness (as CaCO3)	320	mg/L
Total Dissolved Solids	690	mg/L
Total Suspended Solids	100	mg/L
Turbidity	60	NTU
Arsenic	5.1	ug/L
Boron	370	ug/L
Cadmium	ND	ug/L
Copper	4	ug/L
Lead	1	ug/L
Nickel	6	ug/L
Selenium	J0.43	ug/L
Zinc	10	ug/L
Ammonia (as N)	J0.099	mg/L
Nitrogen, Nitrate-Nitrite	1.6	mg/L
Ortho Phosphate as P	0.17	mg/L
Total Kjeldahl Nitrogen	1.3	mg/L

Detected Pesticides

Chlorpyrifos	0.54	µg/L
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J = Estimated value, below PQL.
Y = % Difference primary and confirmation column is >40%.
B = Constituent also detected in blank sample.

Tuesday, November 18, 2008

Attachment 3
Field Quality Control Sample Results

Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Sample Date: 3/11/2008 Site: Orestimba Creek at Hwy 33							
Ammonia (as N)	General Chemistry	0.14		ND		mg/L	NA
Arsenic	General Chemistry	2.9		ND		ug/L	NA
Boron	General Chemistry	350		J1		ug/L	NA
Bromide	General Chemistry	ND		ND		mg/L	NA
Cadmium	General Chemistry	J0.03		ND		ug/L	NA
Copper	General Chemistry	6.9		ND		ug/L	NA
Dissolved Organic Carbon	General Chemistry	6.7		J0.38		mg/L	NA
E. Coli	General Chemistry	160		ND		MPN/100mL	NA
Fecal Coliform	General Chemistry	80		80		MPN/100mL	100% *
Hardness (as CaCO3)	General Chemistry	190		ND		mg/L	NA
Lead	General Chemistry	1.9		J0.03		ug/L	NA
Nickel	General Chemistry	10		J0.02		ug/L	NA
Nitrogen, Nitrate (as N)	General Chemistry	2		ND		mg/L	NA
Nitrogen, Nitrite	General Chemistry	J0.019		ND		mg/L	NA
Ortho Phosphate as P	General Chemistry	0.12		ND		mg/L	NA
Selenium	General Chemistry	1.4		J0.32		ug/L	NA
Total Dissolved Solids	General Chemistry	420		ND		mg/L	NA
Total Kjeldahl Nitrogen	General Chemistry	1.1		ND		mg/L	NA
Total Organic Carbon	General Chemistry	6.9		J0.46		mg/L	NA
Total Suspended Solids	General Chemistry	51		ND		mg/L	NA
Turbidity	General Chemistry	43		ND		NTU	NA
Zinc	General Chemistry	24		1		ug/L	4%
Aldicarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	µg/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	µg/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Carbaryl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	µg/L	NA
Chlorpyrifos	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	µg/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA
DDE(p,p')	Pesticide	0.0054	DNQ	0.015		µg/L	278% *
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Demeton-s	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Dimethoate	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Diuron	Pesticide	1		-0.2	ND	µg/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
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	µg/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Linuron	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Malathion	Pesticide	0.21		-0.05	ND	µg/L	NA
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Methomyl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Simazine	Pesticide	0.2	DNQ	-0.08	ND	µg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA

Sample Date: 4/8/2008 Site: Poso Slough at Indiana Ave

Ammonia (as N)	General Chemistry	1.1		ND		mg/L	NA
Arsenic	General Chemistry	10		ND		ug/L	NA
Boron	General Chemistry	490		460		ug/L	94% *
Bromide	General Chemistry	ND		ND		mg/L	NA
Cadmium	General Chemistry	0.1		ND		ug/L	NA
Copper	General Chemistry	7.6		J0.4		ug/L	NA
Dissolved Organic Carbon	General Chemistry	10		J0.46		mg/L	NA
E. Coli	General Chemistry	190		ND		MPN/100mL	NA
Fecal Coliform	General Chemistry	80		80		MPN/100mL	100% *
Hardness (as CaCO3)	General Chemistry	380		ND		mg/L	NA
Lead	General Chemistry	0.58		ND		ug/L	NA
Nickel	General Chemistry	6.7		ND		ug/L	NA
Nitrogen, Nitrate-Nitrite	General Chemistry	1.2		J0.060		mg/L	NA
Ortho Phosphate as P	General Chemistry	0.84		ND		mg/L	NA
Selenium	General Chemistry	1.4		J0.64		ug/L	NA
Total Dissolved Solids	General Chemistry	880		ND		mg/L	NA
Total Kjeldahl Nitrogen	General Chemistry	2.8		ND		mg/L	NA
Total Organic Carbon	General Chemistry	12		0.91		mg/L	8%
Total Suspended Solids	General Chemistry	57		3		mg/L	5%
Turbidity	General Chemistry	18		0.28		NTU	2%

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	9		J0.96		ug/L	NA
Aldicarb	Pesticide	-0.2	ND	-0.2	ND	μg/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	μg/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	μg/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	μg/L	NA
Carbaryl	Pesticide	-0.05	ND	-0.05	ND	μg/L	NA
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	μg/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	μg/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	μg/L	NA
Chlorpyrifos	Pesticide	0.004	DNQ	-0.003	ND	μg/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	μg/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	μg/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	μg/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	μg/L	NA
Demeton-s	Pesticide	-0.01	ND	-0.01	ND	μg/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	μg/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	μg/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	μg/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	μg/L	NA
Dimethoate	Pesticide	-0.08	ND	-0.08	ND	μg/L	NA
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	μg/L	NA
Diuron	Pesticide	0.43		-0.2	ND	μg/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	μg/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	μg/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	μg/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	μg/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	μg/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	μg/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	μg/L	NA
Linuron	Pesticide	-0.2	ND	-0.2	ND	μg/L	NA
Malathion	Pesticide	-0.05	ND	-0.05	ND	μg/L	NA
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	μg/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	μg/L	NA
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	μg/L	NA
Methomyl	Pesticide	-0.05	ND	-0.05	ND	μg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	μg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	μg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	μg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	μg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	μg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	μg/L	NA
Prowl	Pesticide	0.5		-0.04	ND	μg/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	μg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	μg/L	NA
Trifluralin	Pesticide	0.38		-0.04	ND	μg/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
Sample Date: 5/13/2008 Site: Hospital Creek at River Road							
Ammonia (as N)	General Chemistry	0.47		ND		mg/L	NA
Arsenic	General Chemistry	5.6		ND		ug/L	NA
Boron	General Chemistry	510		J2		ug/L	NA
Bromide	General Chemistry	ND		J0.039		mg/L	NA
Cadmium	General Chemistry	0.2		ND		ug/L	NA
Copper	General Chemistry	45		4.2		ug/L	9%
Dissolved Organic Carbon	General Chemistry	8.7		ND		mg/L	NA
E. Coli	General Chemistry	>2400		ND		MPN/100mL	NA
Fecal Coliform	General Chemistry	900		ND		MPN/100mL	NA
Hardness (as CaCO3)	General Chemistry	360		ND		mg/L	NA
Lead	General Chemistry	9.7		J0.02		ug/L	NA
Nickel	General Chemistry	52		J0.05		ug/L	NA
Nitrogen, Nitrate-Nitrite	General Chemistry	16		0.5		mg/L	3%
Ortho Phosphate as P	General Chemistry	0.46		ND		mg/L	NA
Selenium	General Chemistry	1.9		J0.19		ug/L	NA
Total Dissolved Solids	General Chemistry	580		590		mg/L	102% *
Total Kjeldahl Nitrogen	General Chemistry	3.2		J0.077		mg/L	NA
Total Organic Carbon	General Chemistry	12		ND		mg/L	NA
Total Suspended Solids	General Chemistry	56		ND		mg/L	NA
Turbidity	General Chemistry	44		ND		NTU	NA
Zinc	General Chemistry	62		1		ug/L	2%
Aldicarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	µg/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	µg/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Carbaryl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	µg/L	NA
Chlorpyrifos	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	µg/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA
DDE(p,p')	Pesticide	0.018		-0.004	ND	µg/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Dimethoate	Pesticide	0.52		-0.08	ND	µg/L	NA
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Diuron	Pesticide	0.23	DNQ	-0.2	ND	µg/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	µg/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
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	µg/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Linuron	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Malathion	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Methomyl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	2.5		-0.04	ND	µg/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA

Sample Date: 6/10/2008 **Site:** Poso Slough at Indiana Ave

Ammonia (as N)	General Chemistry	0.72		ND		mg/L	NA
Arsenic	General Chemistry	8.1		ND		ug/L	NA
Boron	General Chemistry	370		J2		ug/L	NA
Bromide	General Chemistry	ND		ND		mg/L	NA
Cadmium	General Chemistry	0.1		ND		ug/L	NA
Copper	General Chemistry	11		ND		ug/L	NA
Dissolved Organic Carbon	General Chemistry	10		ND		mg/L	NA
E. Coli	General Chemistry	>2400		ND		MPN/100mL	NA
Fecal Coliform	General Chemistry	300		2		MPN/100mL	1%
Hardness (as CaCO3)	General Chemistry	390		ND		mg/L	NA
Lead	General Chemistry	2.4		ND		ug/L	NA
Nickel	General Chemistry	12		J0.03		ug/L	NA
Nitrogen, Nitrate-Nitrite	General Chemistry	1.6		J0.080		mg/L	NA
Ortho Phosphate as P	General Chemistry	0.51		ND		mg/L	NA
Selenium	General Chemistry	1		J0.43		ug/L	NA
Total Dissolved Solids	General Chemistry	640		ND		mg/L	NA
Total Kjeldahl Nitrogen	General Chemistry	2.6		ND		mg/L	NA
Total Organic Carbon	General Chemistry	9.7		ND		mg/L	NA
Total Suspended Solids	General Chemistry	180		ND		mg/L	NA
Turbidity	General Chemistry	68		ND		NTU	NA
Zinc	General Chemistry	24		1		ug/L	4%

Event = Event Sample Result

FB = Field Blank Sample Result

Tuesday, November 18, 2008

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Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Aldicarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	µg/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	µg/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Carbaryl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	µg/L	NA
Chlorpyrifos	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	µg/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Dimethoate	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Diuron	Pesticide	1.6		-0.2	ND	µg/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	µg/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Linuron	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Malathion	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Methidathion	Pesticide	0.24		-0.04	ND	µg/L	NA
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Methomyl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	0.37		-0.04	ND	µg/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	0.28		-0.04	ND	µg/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
Sample Date:	7/8/2008	Site: Poso Slough at Indiana Ave					
Ammonia (as N)	General Chemistry	2.1		ND		mg/L	NA
Arsenic	General Chemistry	9.4		J0.08		ug/L	NA
Boron	General Chemistry	340		J0.9		ug/L	NA
Bromide	General Chemistry	J0.31		ND		mg/L	NA
Cadmium	General Chemistry	0.2		ND		ug/L	NA
Copper	General Chemistry	14		ND		ug/L	NA
Dissolved Organic Carbon	General Chemistry	6.8		0.64		mg/L	9%
E. Coli	General Chemistry	390		ND		MPN/100mL	NA
Fecal Coliform	General Chemistry	500		ND		MPN/100mL	NA
Hardness (as CaCO3)	General Chemistry	250		ND		mg/L	NA
Lead	General Chemistry	4.9		ND		ug/L	NA
Nickel	General Chemistry	19		J0.05		ug/L	NA
Nitrogen, Nitrate-Nitrite	General Chemistry	1.7		ND		mg/L	NA
Ortho Phosphate as P	General Chemistry	0.34		ND		mg/L	NA
Selenium	General Chemistry	1		J0.29		ug/L	NA
Total Dissolved Solids	General Chemistry	1000		ND		mg/L	NA
Total Kjeldahl Nitrogen	General Chemistry	3.6		ND		mg/L	NA
Total Organic Carbon	General Chemistry	7.1		1		mg/L	14%
Total Suspended Solids	General Chemistry	350		ND		mg/L	NA
Turbidity	General Chemistry	150		ND		NTU	NA
Zinc	General Chemistry	38		2		ug/L	5%
Aldicarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	µg/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	µg/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Carbaryl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	µg/L	NA
Chlorpyrifos	Pesticide	0.075		-0.003	ND	µg/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	µg/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Dimethoate	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Diuron	Pesticide	0.34	DNQ	-0.2	ND	µg/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	µg/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
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	µg/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Linuron	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Malathion	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Methomyl	Pesticide	0.27		-0.05	ND	µg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA

Sample Date: 8/12/2008 **Site:** Poso Slough at Indiana Ave

Ammonia (as N)	General Chemistry	0.64		ND		mg/L	NA
Arsenic	General Chemistry	7.7		ND		ug/L	NA
Boron	General Chemistry	290		J1		ug/L	NA
Bromide	General Chemistry	J0.72		J0.010		mg/L	NA
Cadmium	General Chemistry	J0.097		ND		ug/L	NA
Copper	General Chemistry	8.6		J0.3		ug/L	NA
Dissolved Organic Carbon	General Chemistry	8.7		0.57		mg/L	7%
E. Coli	General Chemistry	270		ND		MPN/100mL	NA
Fecal Coliform	General Chemistry	300		ND		MPN/100mL	NA
Hardness (as CaCO3)	General Chemistry	250		ND		mg/L	NA
Lead	General Chemistry	2.5		J0.07		ug/L	NA
Nickel	General Chemistry	9.9		J0.03		ug/L	NA
Nitrogen, Nitrate-Nitrite	General Chemistry	1.3		ND		mg/L	NA
Ortho Phosphate as P	General Chemistry	0.42		ND		mg/L	NA
Selenium	General Chemistry	1.1		J0.46		ug/L	NA
Total Dissolved Solids	General Chemistry	540		ND		mg/L	NA
Total Kjeldahl Nitrogen	General Chemistry	2.4		ND		mg/L	NA
Total Organic Carbon	General Chemistry	7.1		J0.23		mg/L	NA
Total Suspended Solids	General Chemistry	230		ND		mg/L	NA
Turbidity	General Chemistry	67		ND		NTU	NA
Zinc	General Chemistry	22		2		ug/L	9%

Event = Event Sample Result

FB = Field Blank Sample Result

Tuesday, November 18, 2008

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Field Quality Control Samples

Field Blank

Analyte/Species	Type	Event	QC Code	FB	QC Code	Units	% Difference
Aldicarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	µg/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	µg/L	NA
Azinphos methyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Carbaryl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Chlordane, Alpha-	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Chlordane, gamma-	Pesticide	-0.006	ND	-0.006	ND	µg/L	NA
Chlorpyrifos	Pesticide	0.3		-0.003	ND	µg/L	NA
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	µg/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Dimethoate	Pesticide	0.38		-0.08	ND	µg/L	NA
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Diuron	Pesticide	0.25	DNQ	-0.2	ND	µg/L	NA
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endosulfan II	Pesticide	0.0079	DNQ	-0.004	ND	µg/L	NA
Endosulfan Sulfate	Pesticide	0.019		-0.005	ND	µg/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	µg/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Linuron	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Malathion	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Methomyl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	0.39		-0.04	ND	µg/L	NA

Event = Event Sample Result

FB = Field Blank Sample Result

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD
Sample Date: 3/10/2008		Site: Hospital Creek at River Road					
Hyaella azteca	Sediment Toxicity	80		85		%	6%
Sample Date: 3/11/2008		Site: Orestimba Creek at Hwy 33					
Ceriodaphnia dubia	Aquatic Toxicity	95		95		%	0%
Selenastrum capricornutum	Aquatic Toxicity	4240000		3160000		cells/ml	29% *
Ammonia (as N)	General Chemistry	0.14		0.13		mg/L	7%
Arsenic	General Chemistry	2.9		2.8		ug/L	4%
Boron	General Chemistry	350		350		ug/L	0%
Bromide	General Chemistry	ND		J0.069		mg/L	NA
Cadmium	General Chemistry	J0.03		J0.04		ug/L	NA
Copper	General Chemistry	6.9		6.4		ug/L	8%
Dissolved Organic Carbon	General Chemistry	6.7		6.7		mg/L	0%
E. Coli	General Chemistry	160		130		MPN/100mL	21%
Fecal Coliform	General Chemistry	80		220		MPN/100mL	93% *
Hardness (as CaCO3)	General Chemistry	190		260		mg/L	31% *
Lead	General Chemistry	1.9		1.5		ug/L	24%
Nickel	General Chemistry	10		9.1		ug/L	9%
Nitrogen, Nitrate (as N)	General Chemistry	2		1.9		mg/L	5%
Nitrogen, Nitrite	General Chemistry	J0.019		J0.018		mg/L	NA
Ortho Phosphate as P	General Chemistry	0.12		0.13		mg/L	8%
Selenium	General Chemistry	1.4		1.5		ug/L	7%
Total Dissolved Solids	General Chemistry	420		430		mg/L	2%
Total Kjeldahl Nitrogen	General Chemistry	1.1		0.93		mg/L	17%
Total Organic Carbon	General Chemistry	6.9		7.2		mg/L	4%
Total Suspended Solids	General Chemistry	51		55		mg/L	8%
Turbidity	General Chemistry	43		43		NTU	0%
Zinc	General Chemistry	24		27		ug/L	12%
Aldicarb	Pesticide	-0.2	ND	-0.2	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	-0.05	ND	-0.05	ND	ug/L	NA
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	ug/L	NA
Chlorpyrifos	Pesticide	-0.003	ND	-0.003	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	0.0054	DNQ	0.007	DNQ	ug/L	26% *
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
Demeton-s	Pesticide	-0.01	ND	-0.01	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 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
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Dimethoate	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Diuron	Pesticide	1		1.1		µg/L	10%
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	µg/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Linuron	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Malathion	Pesticide	0.21		0.22		µg/L	5%
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Methomyl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Simazine	Pesticide	0.2	DNQ	0.14	DNQ	µg/L	35% *
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA

Sample Date: 3/18/2008 Site: Poso Slough at Indiana Ave

Pimephales promelas	Aquatic Toxicity	97.5		87.5		%	11%
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Sample Date: 4/8/2008 Site: Poso Slough at Indiana Ave

Ceriodaphnia dubia	Aquatic Toxicity	100		100		%	0%
Pimephales promelas	Aquatic Toxicity	90		97.5		%	8%
Selenastrum capricornutum	Aquatic Toxicity	3230000		2870000		cells/ml	12%
Ammonia (as N)	General Chemistry	1.1		1		mg/L	10%
Arsenic	General Chemistry	10		10		ug/L	0%
Boron	General Chemistry	490		550		ug/L	12%
Bromide	General Chemistry	ND		J0.20		mg/L	NA
Cadmium	General Chemistry	0.1		0.1		ug/L	0%
Copper	General Chemistry	7.6		7.9		ug/L	4%
Dissolved Organic Carbon	General Chemistry	10		11		mg/L	10%
E. Coli	General Chemistry	190		67		MPN/100mL	96% *

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	
Fecal Coliform	General Chemistry	80		21		MPN/100mL	117%	*
Hardness (as CaCO3)	General Chemistry	380		370		mg/L	3%	
Lead	General Chemistry	0.58		0.74		ug/L	24%	
Nickel	General Chemistry	6.7		7.6		ug/L	13%	
Nitrogen, Nitrate-Nitrite	General Chemistry	1.2		1.3		mg/L	8%	
Ortho Phosphate as P	General Chemistry	0.84		0.83		mg/L	1%	
Selenium	General Chemistry	1.4		1.7		ug/L	19%	
Total Dissolved Solids	General Chemistry	880		840		mg/L	5%	
Total Kjeldahl Nitrogen	General Chemistry	2.8		2.9		mg/L	4%	
Total Organic Carbon	General Chemistry	12		14		mg/L	15%	
Total Suspended Solids	General Chemistry	57		44		mg/L	26%	*
Turbidity	General Chemistry	18		15		NTU	18%	
Zinc	General Chemistry	9		11		ug/L	20%	
Aldicarb	Pesticide	-0.2	ND	-0.2	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	-0.05	ND	-0.05	ND	ug/L	NA	
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	ug/L	NA	
Chlorpyrifos	Pesticide	0.004	DNQ	0.0044	DNQ	ug/L	10%	
Cyanazine	Pesticide	-0.09	ND	0.61		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	-0.01	ND	-0.01	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	-0.08	ND	-0.08	ND	ug/L	NA	
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Diuron	Pesticide	0.43		0.64		ug/L	39%	*
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	
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	-0.2	ND	-0.2	ND	ug/L	NA	
Malathion	Pesticide	-0.05	ND	-0.05	ND	ug/L	NA	
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA	
Methidathion	Pesticide	-0.04	ND	-0.04	ND	ug/L	NA	
Methiocarb	Pesticide	-0.2	ND	-0.2	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
Methomyl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	0.5		0.61		µg/L	20%
Simazine	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	0.38		0.44		µg/L	15%

Sample Date: 5/13/2008

Site: Hospital Creek at River Road

Ceriodaphnia dubia	Aquatic Toxicity	95		100		%	5%
Pimephales promelas	Aquatic Toxicity	90		95		%	5%
Selenastrum capricornutum	Aquatic Toxicity	3690000		3560000		cells/ml	4%
Ammonia (as N)	General Chemistry	0.47		0.49		mg/L	4%
Arsenic	General Chemistry	5.6		6.6		ug/L	16%
Boron	General Chemistry	510		540		ug/L	6%
Bromide	General Chemistry	ND		J0.032		mg/L	NA
Cadmium	General Chemistry	0.2		0.3		ug/L	40% *
Copper	General Chemistry	45		56		ug/L	22%
Dissolved Organic Carbon	General Chemistry	8.7		9.6		mg/L	10%
E. Coli	General Chemistry	>2400		>2400		MPN/100mL	NA
Fecal Coliform	General Chemistry	900		500		MPN/100mL	57% *
Hardness (as CaCO3)	General Chemistry	360		360		mg/L	0%
Lead	General Chemistry	9.7		12		ug/L	21%
Nickel	General Chemistry	52		68		ug/L	27% *
Nitrogen, Nitrate-Nitrite	General Chemistry	16		20		mg/L	22%
Ortho Phosphate as P	General Chemistry	0.46		0.46		mg/L	0%
Selenium	General Chemistry	1.9		2		ug/L	5%
Total Dissolved Solids	General Chemistry	580		570		mg/L	2%
Total Kjeldahl Nitrogen	General Chemistry	3.2		2.9		mg/L	10%
Total Organic Carbon	General Chemistry	12		13		mg/L	8%
Total Suspended Solids	General Chemistry	56		680		mg/L	170% *
Turbidity	General Chemistry	44		190		NTU	125% *
Zinc	General Chemistry	62		77		ug/L	22%
Aldicarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	µg/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	µg/L	NA
Carbaryl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Chlorpyrifos	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA

Event = Event Sample Results

FD = Field Duplicate Sample Results

RPD = Relative percent difference

Tuesday, November 18, 2008

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Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	µg/L	NA
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA
DDE(p,p')	Pesticide	0.018		0.014		µg/L	25% *
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Dimethoate	Pesticide	0.52		0.24		µg/L	74% *
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Diuron	Pesticide	0.23	DNQ	0.25	DNQ	µg/L	8%
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	µg/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Linuron	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Malathion	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Methomyl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	2.5		1.9		µg/L	27% *
Simazine	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA

Sample Date: 6/10/2008 Site: Poso Slough at Indiana Ave

Ammonia (as N)	General Chemistry	0.72	0.74	mg/L	3%
Arsenic	General Chemistry	8.1	8.2	ug/L	1%
Boron	General Chemistry	370	380	ug/L	3%
Bromide	General Chemistry	ND	ND	mg/L	NA
Cadmium	General Chemistry	0.1	0.1	ug/L	0%
Copper	General Chemistry	11	11	ug/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
Dissolved Organic Carbon	General Chemistry	10		10		mg/L	0%
E. Coli	General Chemistry	>2400		>2400		MPN/100mL	NA
Fecal Coliform	General Chemistry	300		>=1600		MPN/100mL	NA
Hardness (as CaCO3)	General Chemistry	390		360		mg/L	8%
Lead	General Chemistry	2.4		2.1		ug/L	13%
Nickel	General Chemistry	12		12		ug/L	0%
Nitrogen, Nitrate-Nitrite	General Chemistry	1.6		1.6		mg/L	0%
Ortho Phosphate as P	General Chemistry	0.51		0.51		mg/L	0%
Selenium	General Chemistry	1		1.4		ug/L	33% *
Total Dissolved Solids	General Chemistry	640		660		mg/L	3%
Total Kjeldahl Nitrogen	General Chemistry	2.6		2.9		mg/L	11%
Total Organic Carbon	General Chemistry	9.7		9.6		mg/L	1%
Total Suspended Solids	General Chemistry	180		180		mg/L	0%
Turbidity	General Chemistry	68		62		NTU	9%
Zinc	General Chemistry	24		21		ug/L	13%
Aldicarb	Pesticide	-0.2	ND	-0.2	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	-0.05	ND	-0.05	ND	ug/L	NA
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	ug/L	NA
Chlorpyrifos	Pesticide	-0.003	ND	-0.003	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	-0.08	ND	-0.08	ND	ug/L	NA
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA
Diuron	Pesticide	1.6		1.5		ug/L	6%
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	ug/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	ug/L	NA
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	-0.2	ND	-0.2	ND	ug/L	NA
Malathion	Pesticide	-0.05	ND	-0.05	ND	ug/L	NA
Methamidophos	Pesticide	-0.01	ND	-0.01	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
Methidathion	Pesticide	0.24		-0.04	ND	µg/L	NA
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Methomyl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	0.37		0.2		µg/L	60% *
Simazine	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	0.28		0.3		µg/L	7%

Sample Date: 7/8/2008

Site: Poso Slough at Indiana Ave

Ammonia (as N)	General Chemistry	2.1		1.9		mg/L	10%
Arsenic	General Chemistry	9.4		9.8		ug/L	4%
Boron	General Chemistry	340		340		ug/L	0%
Bromide	General Chemistry	J0.31		J0.34		mg/L	NA
Cadmium	General Chemistry	0.2		0.2		ug/L	0%
Copper	General Chemistry	14		14		ug/L	0%
Dissolved Organic Carbon	General Chemistry	6.8		6.5		mg/L	5%
E. Coli	General Chemistry	390		390		MPN/100mL	0%
Fecal Coliform	General Chemistry	500		300		MPN/100mL	50% *
Hardness (as CaCO3)	General Chemistry	250		290		mg/L	15%
Lead	General Chemistry	4.9		4.9		ug/L	0%
Nickel	General Chemistry	19		20		ug/L	5%
Nitrogen, Nitrate-Nitrite	General Chemistry	1.7		1.7		mg/L	0%
Ortho Phosphate as P	General Chemistry	0.34		0.34		mg/L	0%
Selenium	General Chemistry	1		1.3		ug/L	26% *
Total Dissolved Solids	General Chemistry	1000		490		mg/L	68% *
Total Kjeldahl Nitrogen	General Chemistry	3.6		3.6		mg/L	0%
Total Organic Carbon	General Chemistry	7.1		7.2		mg/L	1%
Total Suspended Solids	General Chemistry	350		340		mg/L	3%
Turbidity	General Chemistry	150		150		NTU	0%
Zinc	General Chemistry	38		38		ug/L	0%
Aldicarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Aldrin	Pesticide	-0.009	ND	-0.009	ND	µg/L	NA
Atrazine	Pesticide	-0.07	ND	-0.07	ND	µg/L	NA
Carbaryl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Chlorpyrifos	Pesticide	0.075		0.06		µg/L	22%
Cyanazine	Pesticide	-0.09	ND	-0.09	ND	µg/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
DDD(p,p')	Pesticide	-0.003	ND	-0.003	ND	µg/L	NA
DDE(p,p')	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
DDT(p,p')	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Demeton-s	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Diazinon	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Dichlorvos	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Dicofol	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Dieldrin	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Dimethoate	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Diuron	Pesticide	0.34	DNQ	0.35	DNQ	µg/L	3%
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endosulfan II	Pesticide	-0.004	ND	-0.004	ND	µg/L	NA
Endosulfan Sulfate	Pesticide	-0.005	ND	-0.005	ND	µg/L	NA
Endrin	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
EPTC	Pesticide	-0.03	ND	-0.03	ND	µg/L	NA
Heptachlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Heptachlor epoxide	Pesticide	-0.007	ND	-0.007	ND	µg/L	NA
Linuron	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Malathion	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	µg/L	NA
Methidathion	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Methomyl	Pesticide	0.27		0.24		µg/L	12%
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA

Sample Date: 8/12/2008 Site: Poso Slough at Indiana Ave

Ammonia (as N)	General Chemistry	0.64	0.57	mg/L	12%
Arsenic	General Chemistry	7.7	7.8	ug/L	1%
Boron	General Chemistry	290	270	ug/L	7%
Bromide	General Chemistry	J0.72	J0.76	mg/L	NA
Cadmium	General Chemistry	J0.097	J0.09	ug/L	NA
Copper	General Chemistry	8.6	8.4	ug/L	2%
Dissolved Organic Carbon	General Chemistry	8.7	7.6	mg/L	13%

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

Field Quality Control Samples

Field Duplicate and RPD Calculation

Analyte/Species	Type	Event	QC Code	FD	QC Code	Units	RPD	
E. Coli	General Chemistry	270		190		MPN/100mL	35%	*
Fecal Coliform	General Chemistry	300		500		MPN/100mL	50%	*
Hardness (as CaCO3)	General Chemistry	250		230		mg/L	8%	
Lead	General Chemistry	2.5		2.5		ug/L	0%	
Nickel	General Chemistry	9.9		9.6		ug/L	3%	
Nitrogen, Nitrate-Nitrite	General Chemistry	1.3		1.4		mg/L	7%	
Ortho Phosphate as P	General Chemistry	0.42		0.43		mg/L	2%	
Selenium	General Chemistry	1.1		J0.99		ug/L	NA	
Total Dissolved Solids	General Chemistry	540		550		mg/L	2%	
Total Kjeldahl Nitrogen	General Chemistry	2.4		2.3		mg/L	4%	
Total Organic Carbon	General Chemistry	7.1		6.9		mg/L	3%	
Total Suspended Solids	General Chemistry	230		240		mg/L	4%	
Turbidity	General Chemistry	67		90		NTU	29%	*
Zinc	General Chemistry	22		23		ug/L	4%	
Aldicarb	Pesticide	-0.2	ND	-0.2	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	-0.05	ND	-0.05	ND	ug/L	NA	
Carbofuran	Pesticide	-0.05	ND	-0.05	ND	ug/L	NA	
Chlorpyrifos	Pesticide	0.3		0.082		ug/L	114%	*
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	0.38		0.36		ug/L	5%	
Disulfoton	Pesticide	-0.02	ND	-0.02	ND	ug/L	NA	
Diuron	Pesticide	0.25	DNQ	0.37	DNQ	ug/L	39%	*
Endosulfan I	Pesticide	-0.005	ND	-0.005	ND	ug/L	NA	
Endosulfan II	Pesticide	0.0079	DNQ	0.0074	DNQ	ug/L	7%	
Endosulfan Sulfate	Pesticide	0.019		0.02		ug/L	5%	
Endrin	Pesticide	-0.007	ND	-0.007	ND	ug/L	NA	
EPTC	Pesticide	-0.03	ND	-0.03	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	-0.2	ND	-0.2	ND	ug/L	NA	
Malathion	Pesticide	-0.05	ND	-0.05	ND	ug/L	NA	
Methamidophos	Pesticide	-0.01	ND	-0.01	ND	ug/L	NA	
Methidathion	Pesticide	-0.04	ND	-0.04	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
Methiocarb	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Methomyl	Pesticide	-0.05	ND	-0.05	ND	µg/L	NA
Methoxychlor	Pesticide	-0.008	ND	-0.008	ND	µg/L	NA
Oxamyl	Pesticide	-0.2	ND	-0.2	ND	µg/L	NA
Parathion, Ethyl	Pesticide	-0.02	ND	-0.02	ND	µg/L	NA
Parathion, Methyl	Pesticide	-0.075	ND	-0.075	ND	µg/L	NA
Phorate	Pesticide	-0.072	ND	-0.072	ND	µg/L	NA
Phosmet	Pesticide	-0.06	ND	-0.06	ND	µg/L	NA
Prowl	Pesticide	-0.04	ND	-0.04	ND	µg/L	NA
Simazine	Pesticide	-0.08	ND	-0.08	ND	µg/L	NA
Toxaphene	Pesticide	-0.38	ND	-0.38	ND	µg/L	NA
Trifluralin	Pesticide	0.39		-0.04	ND	µg/L	NA

Event = Event Sample Results

FD = Field Duplicate Sample Results

RPD = Relative percent difference

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Attachment 4
Exceedance of Recommended Water Quality
Values

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	9	90
Aquatic Toxicity	Selenastrum capricornutum	2	42
Field Data	DO	24	117
Field Data	EC	76	117
Field Data	pH	35	117
General Chemistry	Boron	7	104
General Chemistry	E. Coli	37	104
General Chemistry	Fecal Coliform	41	103
General Chemistry	Total Dissolved Solids	82	104
General Chemistry	Total Suspended Solids	5	104
Pesticide	Chlorpyrifos	27	106
Pesticide	DDD(p,p')	1	77
Pesticide	DDE(p,p')	35	78
Pesticide	DDT(p,p')	11	78
Pesticide	Diazinon	2	106
Pesticide	Dimethoate	6	106
Pesticide	Diuron	1	89
Pesticide	Methidathion	1	106
Pesticide	Parathion, methyl	3	106
Sediment Toxicity	Hyalella azteca	4	9

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

Blewett Drain at Highway 132

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	4
Field Data	EC	3	4
Field Data	pH	2	4
Pesticide	Chlorpyrifos	4	4
Pesticide	DDD(p,p')	1	5
Pesticide	DDE(p,p')	2	5
Pesticide	DDT(p,p')	1	5

Del Puerto Creek near Cox Road

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

Delta Mendota Canal at DPWD

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	5
Field Data	pH	3	5
General Chemistry	Total Dissolved Solids	1	6

Hospital Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	2	5
Field Data	EC	3	5
Field Data	pH	1	5
General Chemistry	E. Coli	3	5
General Chemistry	Fecal Coliform	4	5
General Chemistry	Total Dissolved Solids	5	5
General Chemistry	Total Suspended Solids	2	5
Pesticide	Chlorpyrifos	2	5
Pesticide	DDE(p,p')	5	5
Pesticide	DDT(p,p')	2	5
Pesticide	Diazinon	1	5
Pesticide	Dimethoate	1	5
Pesticide	Parathion, methyl	1	5
Sediment Toxicity	Hyalella azteca	1	1

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

Ingram Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	5
Field Data	EC	4	5
Field Data	pH	3	5
General Chemistry	E. Coli	1	5
General Chemistry	Fecal Coliform	1	5
General Chemistry	Total Dissolved Solids	4	5
General Chemistry	Total Suspended Solids	1	5
Pesticide	Chlorpyrifos	1	5
Pesticide	DDE(p,p')	5	6
Pesticide	DDT(p,p')	2	6
Pesticide	Dimethoate	1	5
Pesticide	Parathion, methyl	1	5
Sediment Toxicity	Hyalella azteca	1	1

Los Banos Creek at China Camp Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	4	4
General Chemistry	E. Coli	1	2
General Chemistry	Fecal Coliform	1	2
General Chemistry	Total Dissolved Solids	2	2

Los Banos Creek at Hwy 140

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	2	6
Field Data	EC	6	6
General Chemistry	Boron	2	6
General Chemistry	E. Coli	5	6
General Chemistry	Fecal Coliform	6	6
General Chemistry	Total Dissolved Solids	6	6
Pesticide	Chlorpyrifos	1	6
Pesticide	Dimethoate	1	6

Marshall Road Drain near River Road

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	1	5
Field Data	EC	4	5
Field Data	pH	3	5
General Chemistry	E. Coli	1	5
General Chemistry	Fecal Coliform	1	5
General Chemistry	Total Dissolved Solids	4	5
General Chemistry	Total Suspended Solids	1	5

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

Pesticide	Chlorpyrifos	2	5
Pesticide	DDE(p,p')	2	5
Pesticide	Dimethoate	1	5
Pesticide	Parathion, methyl	1	5

Mud Slough Upstream of San Luis Drain

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	6	6
General Chemistry	Boron	5	6
General Chemistry	Fecal Coliform	2	6
General Chemistry	Total Dissolved Solids	5	6

Newman Wasteway near Hills Ferry Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	6
Field Data	DO	2	8
Field Data	EC	7	8
Field Data	pH	1	8
General Chemistry	E. Coli	2	6
General Chemistry	Fecal Coliform	3	6
General Chemistry	Total Dissolved Solids	5	6
Pesticide	Chlorpyrifos	1	6
Pesticide	DDE(p,p')	1	6

Orestimba Creek at Hwy 33

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

Orestimba Creek at River Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	3	6
Field Data	DO	3	8
Field Data	EC	2	8
Field Data	pH	5	8

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

General Chemistry	E. Coli	4	6
General Chemistry	Fecal Coliform	3	5
General Chemistry	Total Dissolved Solids	5	6
Pesticide	Chlorpyrifos	3	6
Pesticide	DDE(p,p')	5	6
Pesticide	DDT(p,p')	1	6

Poso Slough at Indiana Ave

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	1	6
Field Data	DO	2	7
Field Data	EC	4	7
Field Data	pH	1	7
General Chemistry	E. Coli	4	6
General Chemistry	Fecal Coliform	3	6
General Chemistry	Total Dissolved Solids	6	6
Pesticide	Chlorpyrifos	3	6
Pesticide	Diuron	1	6
Pesticide	Methidathion	1	6

Ramona Lake near Fig Avenue

Type	Constituent	# of Exceedances	# of Tests
Field Data	DO	2	5
Field Data	EC	5	5
Field Data	pH	4	5
General Chemistry	E. Coli	4	5
General Chemistry	Fecal Coliform	4	5
General Chemistry	Total Dissolved Solids	5	5
Pesticide	Dimethoate	1	5
Sediment Toxicity	Hyalella azteca	1	1

Salt Slough at Lander Ave

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

Salt Slough at Sand Dam

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Ceriodaphnia dubia	1	6
Field Data	EC	4	6
General Chemistry	E. Coli	3	6
General Chemistry	Fecal Coliform	2	6

Westside San Joaquin River Watershed Coalition

Number of Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

General Chemistry	Total Dissolved Solids	5	6
Pesticide	Chlorpyrifos	2	6

San Joaquin River at Lander Ave

Type	Constituent	# of Exceedances	# of Tests
Field Data	EC	6	6
General Chemistry	E. Coli	1	6
General Chemistry	Fecal Coliform	1	6
General Chemistry	Total Dissolved Solids	6	6
Pesticide	Diazinon	1	6

San Joaquin River at PID Pumps

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

San Joaquin River at Sack Dam

Type	Constituent	# of Exceedances	# of Tests
Pesticide	Chlorpyrifos	1	6

Westley Wasteway near Cox Road

Type	Constituent	# of Exceedances	# of Tests
Aquatic Toxicity	Selenastrum capricornutum	1	5
Field Data	DO	1	5
Field Data	EC	2	5
General Chemistry	E. Coli	2	5
General Chemistry	Fecal Coliform	3	5
General Chemistry	Total Dissolved Solids	3	5
Pesticide	Chlorpyrifos	1	5
Pesticide	DDE(p,p')	5	5
Pesticide	Dimethoate	1	5
Sediment Toxicity	Hyalella azteca	1	1

Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

Blewett Drain at Highway 132

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
Chlorpyrifos	43	4/8/2008	0.034	µg/L		0.014	
DDD(p,p')	43	4/8/2008	0.0074	DNQ	µg/L	0.00059	
DDE(p,p')	43	4/8/2008	0.071	µg/L		0.00059	
DDT(p,p')	43	4/8/2008	0.019	µg/L		0.00059	
EC	43	4/8/2008	934	µmhos/cm		900	
Chlorpyrifos	45	6/10/2008	0.045	µg/L		0.014	
EC	45	6/10/2008	1044	µmhos/cm		900	
pH	45	6/10/2008	9.41			8.5	6.5
Chlorpyrifos	46	7/8/2008	0.038	µg/L		0.014	
DO	46	7/8/2008	3.94	mg/l			5
EC	46	7/8/2008	1115	µmhos/cm		900	
pH	46	7/8/2008	9.21			8.5	6.5
Chlorpyrifos	47	8/12/2008	0.081	µg/L		0.014	
DDE(p,p')	47	8/12/2008	0.0063	DNQ	µg/L	0.00059	

Del Puerto Creek near Cox Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
DDE(p,p')	43	4/8/2008	0.0059	DNQ	µg/L	0.00059	
EC	43	4/8/2008	950	µmhos/cm		900	
pH	43	4/8/2008	9.13			8.5	6.5
Total Dissolved Solids	43	4/8/2008	970	mg/L		500	
DDE(p,p')	45	6/10/2008	0.0067	DNQ	µg/L	0.00059	
EC	45	6/10/2008	1337	µmhos/cm		900	
pH	45	6/10/2008	9.14			8.5	6.5
Total Dissolved Solids	45	6/10/2008	990	mg/L		500	
DDE(p,p')	46	7/8/2008	0.014	µg/L		0.00059	
DDT(p,p')	46	7/8/2008	0.0086	DNQ	µg/L	0.00059	
DO	46	7/8/2008	4.93	mg/l			5
EC	46	7/8/2008	1449	µmhos/cm		900	
Fecal Coliform	46	7/8/2008	500	MPN/100mL		220	
pH	46	7/8/2008	9			8.5	6.5
Total Dissolved Solids	46	7/8/2008	1100	mg/L		500	
DDE(p,p')	47	8/12/2008	0.011	µg/L		0.00059	
E. Coli	47	8/12/2008	410	MPN/100mL		220	
EC	47	8/12/2008	1065	µmhos/cm		900	
Fecal Coliform	47	8/12/2008	>=1600	MPN/100mL		220	
Total Dissolved Solids	47	8/12/2008	820	mg/L		500	

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

DNQ = Detected, Not Quantifiable

Monday, November 17, 2008

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Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

Delta Mendota Canal at DPWD

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
Total Dissolved Solids	42	3/11/2008	590	mg/L		500	
pH	44	5/13/2008	8.67			8.5	6.5
pH	45	6/10/2008	8.92			8.5	6.5
DO	46	7/8/2008	3.89	mg/l			5
pH	46	7/8/2008	8.66			8.5	6.5

Hospital Creek at River Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
Hyaella azteca	42	3/10/2008	80	%	Yes		
DDE(p,p')	43	4/8/2008	0.012	µg/L		0.00059	
EC	43	4/8/2008	1025	µmhos/cm		900	
pH	43	4/8/2008	8.76			8.5	6.5
Total Dissolved Solids	43	4/8/2008	890	mg/L		500	
DDE(p,p')	44	5/13/2008	0.018	µg/L		0.00059	
E. Coli	44	5/13/2008	>2400	MPN/100mL		220	
Fecal Coliform	44	5/13/2008	900	MPN/100mL		220	
Total Dissolved Solids	44	5/13/2008	580	mg/L		500	
DDE(p,p')	45	6/10/2008	0.027	µg/L		0.00059	
DDT(p,p')	45	6/10/2008	0.01	µg/L		0.00059	
Diazinon	45	6/10/2008	0.11	µg/L		0.05	
DO	45	6/10/2008	2.34	mg/l			5
E. Coli	45	6/10/2008	>2400	MPN/100mL		220	
EC	45	6/10/2008	994	µmhos/cm		900	
Fecal Coliform	45	6/10/2008	900	MPN/100mL		220	
Total Dissolved Solids	45	6/10/2008	780	mg/L		500	
Total Suspended Solids	45	6/10/2008	620	mg/L		400	
Chlorpyrifos	46	7/8/2008	0.048	µg/L		0.014	
DDE(p,p')	46	7/8/2008	0.01	µg/L		0.00059	
DO	46	7/8/2008	4.75	mg/l			5
EC	46	7/8/2008	1174	µmhos/cm		900	
Fecal Coliform	46	7/8/2008	500	MPN/100mL		220	
Parathion, methyl	46	7/8/2008	0.18	µg/L		0.08	
Total Dissolved Solids	46	7/8/2008	780	mg/L		500	
Chlorpyrifos	47	8/12/2008	0.22	µg/L		0.014	
DDE(p,p')	47	8/12/2008	0.054	µg/L		0.00059	
DDT(p,p')	47	8/12/2008	0.011	µg/L		0.00059	
Dimethoate	47	8/12/2008	3.0	µg/L		1	
E. Coli	47	8/12/2008	460	MPN/100mL		220	
Fecal Coliform	47	8/12/2008	900	MPN/100mL		220	
Total Dissolved Solids	47	8/12/2008	510	mg/L		500	

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 3/1/2008 to 8/31/2008

Total Suspended Solids	47	8/12/2008	800	mg/L	400
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Ingram Creek at River Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
Hyalella azteca	42	3/10/2008	2.5	%	Yes		
DDE(p,p')	43	4/8/2008	0.022	µg/L		0.00059	
DDT(p,p')	43	4/8/2008	0.0084DNQ	µg/L		0.00059	
EC	43	4/8/2008	1171	µmhos/cm		900	
Total Dissolved Solids	43	4/8/2008	1000	mg/L		500	
DDE(p,p')	44	5/13/2008	0.021	µg/L		0.00059	
E. Coli	44	5/13/2008	>2400	MPN/100mL		220	
pH	44	5/13/2008	8.74			8.5	6.5
DDE(p,p')	45	6/10/2008	0.012	µg/L		0.00059	
EC	45	6/10/2008	1173	µmhos/cm		900	
Parathion, methyl	45	6/10/2008	0.22	µg/L		0.08	
pH	45	6/10/2008	9.25			8.5	6.5
Total Dissolved Solids	45	6/10/2008	910	mg/L		500	
Chlorpyrifos	46	7/8/2008	0.023	µg/L		0.014	
DDE(p,p')	46	7/8/2008	0.019	µg/L		0.00059	
DO	46	7/8/2008	4.27	mg/l			5
EC	46	7/8/2008	1169	µmhos/cm		900	
pH	46	7/8/2008	9.08			8.5	6.5
Total Dissolved Solids	46	7/8/2008	900	mg/L		500	
DDE(p,p')	47	8/12/2008	0.059	µg/L		0.00059	
DDT(p,p')	47	8/12/2008	0.024	µg/L		0.00059	
Dimethoate	47	8/12/2008	4.0	µg/L		1	
EC	47	8/12/2008	941	µmhos/cm		900	
Fecal Coliform	47	8/12/2008	>=1600	MPN/100mL		220	
Total Dissolved Solids	47	8/12/2008	770	mg/L		500	
Total Suspended Solids	47	8/12/2008	860	mg/L		400	

Los Banos Creek at China Camp Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
EC	42	3/17/2008	1066	µmhos/cm		900	
EC	42	3/17/2008	1066	µmhos/cm		900	
EC	42	3/18/2008	1087	µmhos/cm		900	
Total Dissolved Solids	42	3/18/2008	710	mg/L		500	
E. Coli	44	5/13/2008	820	MPN/100mL		220	
EC	44	5/13/2008	1144	µmhos/cm		900	
Fecal Coliform	44	5/13/2008	500	MPN/100mL		220	
Total Dissolved Solids	44	5/13/2008	770	mg/L		500	

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 3/1/2008 to 8/31/2008

Los Banos Creek at Hwy 140

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
Boron	42	3/18/2008	2200	ug/L		2000	
E. Coli	42	3/18/2008	250	MPN/100mL		220	
EC	42	3/18/2008	2304	µmhos/cm		900	
Fecal Coliform	42	3/18/2008	>=1600	MPN/100mL		220	
Total Dissolved Solids	42	3/18/2008	1500	mg/L		500	
Boron	43	4/8/2008	2100	ug/L		2000	
E. Coli	43	4/8/2008	>2400	MPN/100mL		220	
EC	43	4/8/2008	2425	µmhos/cm		900	
Fecal Coliform	43	4/8/2008	>=1600	MPN/100mL		220	
Total Dissolved Solids	43	4/8/2008	1700	mg/L		500	
EC	44	5/13/2008	1349	µmhos/cm		900	
Fecal Coliform	44	5/13/2008	1600	MPN/100mL		220	
Total Dissolved Solids	44	5/13/2008	930	mg/L		500	
E. Coli	45	6/10/2008	260	MPN/100mL		220	
EC	45	6/10/2008	1222	µmhos/cm		900	
Fecal Coliform	45	6/10/2008	>=1600	MPN/100mL		220	
Total Dissolved Solids	45	6/10/2008	830	mg/L		500	
DO	46	7/8/2008	1.57	mg/l			5
E. Coli	46	7/8/2008	>2400	MPN/100mL		220	
EC	46	7/8/2008	1309	µmhos/cm		900	
Fecal Coliform	46	7/8/2008	1600	MPN/100mL		220	
Total Dissolved Solids	46	7/8/2008	900	mg/L		500	
Chlorpyrifos	47	8/12/2008	0.31	µg/L		0.014	
Dimethoate	47	8/12/2008	3.6	µg/L		1	
DO	47	8/12/2008	1.14	mg/l			5
E. Coli	47	8/12/2008	>2400	MPN/100mL		220	
EC	47	8/12/2008	1109	µmhos/cm		900	
Fecal Coliform	47	8/12/2008	>=1600	MPN/100mL		220	
Total Dissolved Solids	47	8/12/2008	720	mg/L		500	

Marshall Road Drain near River Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
DDE(p,p')	43	4/8/2008	0.01	µg/L		0.00059	
Dimethoate	43	4/8/2008	2.2	µg/L		1	
EC	43	4/8/2008	1232	µmhos/cm		900	
pH	43	4/8/2008	8.78			8.5	6.5
Total Dissolved Solids	43	4/8/2008	1000	mg/L		500	
Total Suspended Solids	43	4/8/2008	620	mg/L		400	
E. Coli	44	5/13/2008	260	MPN/100mL		220	
EC	45	6/10/2008	1200	µmhos/cm		900	

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DNQ = Detected, Not Quantifiable

Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

Parathion, methyl	45	6/10/2008	0.21	µg/L	0.08	
pH	45	6/10/2008	9.73		8.5	6.5
Total Dissolved Solids	45	6/10/2008	3900	mg/L	500	
Chlorpyrifos	46	7/8/2008	0.043	µg/L	0.014	
DDE(p,p')	46	7/8/2008	0.0049	DNQ µg/L	0.00059	
DO	46	7/8/2008	4.03	mg/l		5
EC	46	7/8/2008	1346	µmhos/cm	900	
pH	46	7/8/2008	8.68		8.5	6.5
Total Dissolved Solids	46	7/8/2008	900	mg/L	500	
Chlorpyrifos	47	8/12/2008	0.04	µg/L	0.014	
EC	47	8/12/2008	994	µmhos/cm	900	
Fecal Coliform	47	8/12/2008	1300	MPN/100mL	220	
Total Dissolved Solids	47	8/12/2008	640	mg/L	500	

Mud Slough Upstream of San Luis Drain

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
Boron	42	3/18/2008	2100	ug/L		2000	
EC	42	3/18/2008	2132	µmhos/cm		900	
Total Dissolved Solids	42	3/18/2008	1500	mg/L		500	
Boron	43	4/8/2008	2500	ug/L		2000	
EC	43	4/8/2008	2784	µmhos/cm		900	
Fecal Coliform	43	4/8/2008	240	MPN/100mL		220	
Total Dissolved Solids	43	4/8/2008	1900	mg/L		500	
Boron	44	5/13/2008	2200	ug/L		2000	
EC	44	5/13/2008	2725	µmhos/cm		900	
Total Dissolved Solids	44	5/13/2008	1900	mg/L		500	
EC	45	6/10/2008	1626	µmhos/cm		900	
Total Dissolved Solids	45	6/10/2008	1100	mg/L		500	
Boron	46	7/8/2008	2700	ug/L		2000	
EC	46	7/8/2008	2888	µmhos/cm		900	
Fecal Coliform	46	7/8/2008	500	MPN/100mL		220	
Boron	47	8/12/2008	2400	ug/L		2000	
EC	47	8/12/2008	2848	µmhos/cm		900	
Total Dissolved Solids	47	8/12/2008	2100	mg/L		500	

Newman Wasteway near Hills Ferry Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
EC	42	3/17/2008	1101	µmhos/cm		900	
EC	42	3/17/2008	1101	µmhos/cm		900	
EC	42	3/18/2008	1108	µmhos/cm		900	
Total Dissolved Solids	42	3/18/2008	730	mg/L		500	
Ceriodaphnia dubia	43	4/8/2008	60	%	Yes		
E. Coli	43	4/8/2008	650	MPN/100mL		220	

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Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

EC	43	4/8/2008	1415	µmhos/cm	900	
Fecal Coliform	43	4/8/2008	900	MPN/100mL	220	
Total Dissolved Solids	43	4/8/2008	940	mg/L	500	
DDE(p,p')	44	5/13/2008	0.004	µg/L	0.00059	
EC	44	5/13/2008	1203	µmhos/cm	900	
Fecal Coliform	44	5/13/2008	240	MPN/100mL	220	
pH	44	5/13/2008	6.48		8.5	6.5
Total Dissolved Solids	44	5/13/2008	810	mg/L	500	
DO	45	6/10/2008	4.58	mg/l		5
E. Coli	45	6/10/2008	>2400	MPN/100mL	220	
EC	45	6/10/2008	1221	µmhos/cm	900	
Fecal Coliform	45	6/10/2008	900	MPN/100mL	220	
Total Dissolved Solids	45	6/10/2008	840	mg/L	500	
DO	46	7/8/2008	2.03	mg/l		5
EC	46	7/8/2008	1145	µmhos/cm	900	
Total Dissolved Solids	46	7/8/2008	780	mg/L	500	
Chlorpyrifos	47	8/12/2008	0.018	µg/L	0.014	

Orestimba Creek at Hwy 33

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
DDE(p,p')	42	3/11/2008	0.0054	µg/L		0.00059	
DDE(p,p')	43	4/8/2008	0.021	µg/L		0.00059	
DDT(p,p')	43	4/8/2008	0.011	µg/L		0.00059	
E. Coli	43	4/8/2008	650	MPN/100mL		220	
Fecal Coliform	43	4/8/2008	300	MPN/100mL		220	
pH	43	4/8/2008	8.6			8.5	6.5
Total Dissolved Solids	43	4/8/2008	610	mg/L		500	
Ceriodaphnia dubia	44	5/13/2008	0	%	Yes		
Chlorpyrifos	44	5/13/2008	0.11	µg/L		0.014	
DDE(p,p')	44	5/13/2008	0.018	µg/L		0.00059	
E. Coli	44	5/13/2008	1200	MPN/100mL		220	
Fecal Coliform	44	5/13/2008	500	MPN/100mL		220	
pH	44	5/13/2008	8.7			8.5	6.5
Total Dissolved Solids	44	5/13/2008	560	mg/L		500	
Ceriodaphnia dubia	45	6/10/2008	75	%	Yes		
DDE(p,p')	45	6/10/2008	0.038	µg/L		0.00059	
DDT(p,p')	45	6/10/2008	0.02	µg/L		0.00059	
E. Coli	45	6/10/2008	980	MPN/100mL		220	
EC	45	6/10/2008	986	µmhos/cm		900	
Fecal Coliform	45	6/10/2008	300	MPN/100mL		220	
pH	45	6/10/2008	8.81			8.5	6.5
Total Dissolved Solids	45	6/10/2008	760	mg/L		500	
Ceriodaphnia dubia	46	7/8/2008	0	%	Yes		

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Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

Chlorpyrifos	46	7/8/2008	0.47	µg/L	0.014	
DDE(p,p')	46	7/8/2008	0.028	µg/L	0.00059	
DDT(p,p')	46	7/8/2008	0.014	µg/L	0.00059	
DO	46	7/8/2008	3.87	mg/l		5
E. Coli	46	7/8/2008	730	MPN/100mL	220	
EC	46	7/8/2008	905	µmhos/cm	900	
Fecal Coliform	46	7/8/2008	1600	MPN/100mL	220	
pH	46	7/8/2008	8.51		8.5	6.5
Total Dissolved Solids	46	7/8/2008	610	mg/L	500	
DO	46	7/14/2008	3.42	mg/l		5
pH	46	7/14/2008	8.51		8.5	6.5
Chlorpyrifos	47	8/12/2008	0.11	µg/L	0.014	
DDE(p,p')	47	8/12/2008	0.032	µg/L	0.00059	
DDT(p,p')	47	8/12/2008	0.012	µg/L	0.00059	
DO	47	8/12/2008	4.29	mg/l		5
E. Coli	47	8/12/2008	920	MPN/100mL	220	
Fecal Coliform	47	8/12/2008	500	MPN/100mL	220	
Total Dissolved Solids	47	8/12/2008	520	mg/L	500	
Total Suspended Solids	47	8/12/2008	420	mg/L	400	

Orestimba Creek at River Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
DDE(p,p')	42	3/11/2008	0.031	µg/L		0.00059	
DDT(p,p')	42	3/11/2008	0.043	µg/L		0.00059	
Ceriodaphnia dubia	43	4/8/2008	20	%	Yes		
pH	43	4/8/2008	8.62			8.5	6.5
Total Dissolved Solids	43	4/8/2008	730	mg/L		500	
Ceriodaphnia dubia	44	5/13/2008	0	%	Yes		
Chlorpyrifos	44	5/13/2008	1.8	µg/L		0.014	
DDE(p,p')	44	5/13/2008	0.0057DNQ	µg/L		0.00059	
E. Coli	44	5/13/2008	730	MPN/100mL		220	
Fecal Coliform	44	5/13/2008	>=1600	MPN/100mL		220	
pH	44	5/13/2008	8.64			8.5	6.5
Total Dissolved Solids	44	5/13/2008	630	mg/L		500	
DDE(p,p')	45	6/10/2008	0.025	µg/L		0.00059	
E. Coli	45	6/10/2008	730	MPN/100mL		220	
EC	45	6/10/2008	996	µmhos/cm		900	
pH	45	6/10/2008	9.01			8.5	6.5
Total Dissolved Solids	45	6/10/2008	760	mg/L		500	
Ceriodaphnia dubia	46	7/8/2008	0	%	Yes		
Chlorpyrifos	46	7/8/2008	0.42	µg/L		0.014	
DDE(p,p')	46	7/8/2008	0.013	µg/L		0.00059	
DO	46	7/8/2008	4.1	mg/l			5

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Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

E. Coli	46	7/8/2008	280	MPN/100mL	220	
Fecal Coliform	46	7/8/2008	240	MPN/100mL	220	
pH	46	7/8/2008	8.51		8.5	6.5
Total Dissolved Solids	46	7/8/2008	650	mg/L	500	
DO	46	7/14/2008	4.95	mg/l		5
EC	46	7/14/2008	912	µmhos/cm	900	
pH	46	7/14/2008	8.7		8.5	6.5
Chlorpyrifos	47	8/12/2008	0.34	µg/L	0.014	
DDE(p,p')	47	8/12/2008	0.015	µg/L	0.00059	
DO	47	8/12/2008	4.42	mg/l		5
E. Coli	47	8/12/2008	690	MPN/100mL	220	
Fecal Coliform	47	8/12/2008	240	MPN/100mL	220	
Total Dissolved Solids	47	8/12/2008	520	mg/L	500	

Poso Slough at Indiana Ave

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
EC	42	3/17/2008	901	µmhos/cm		900	
pH	42	3/17/2008	6.39			8.5	6.5
Diuron	42	3/18/2008	24	µg/L		16	
EC	42	3/18/2008	954	µmhos/cm		900	
Selenastrum capricornutum	42	3/18/2008	245000	cells/ml	Yes		
Total Dissolved Solids	42	3/18/2008	620	mg/L		500	
EC	43	4/8/2008	1256	µmhos/cm		900	
Total Dissolved Solids	43	4/8/2008	880	mg/L		500	
Chlorpyrifos	44	5/13/2008	0.11	µg/L		0.014	
E. Coli	44	5/13/2008	>2400	MPN/100mL		220	
Total Dissolved Solids	44	5/13/2008	560	mg/L		500	
DO	45	6/10/2008	4.85	mg/l			5
E. Coli	45	6/10/2008	>2400	MPN/100mL		220	
EC	45	6/10/2008	947	µmhos/cm		900	
Fecal Coliform	45	6/10/2008	300	MPN/100mL		220	
Methidathion	45	6/10/2008	0.24	µg/L		0.07	
Total Dissolved Solids	45	6/10/2008	640	mg/L		500	
Chlorpyrifos	46	7/8/2008	0.075	µg/L		0.014	
E. Coli	46	7/8/2008	390	MPN/100mL		220	
Fecal Coliform	46	7/8/2008	500	MPN/100mL		220	
Total Dissolved Solids	46	7/8/2008	1000	mg/L		500	
Chlorpyrifos	47	8/12/2008	0.3	µg/L		0.014	
DO	47	8/12/2008	4.18	mg/l			5
E. Coli	47	8/12/2008	270	MPN/100mL		220	
Fecal Coliform	47	8/12/2008	300	MPN/100mL		220	
Total Dissolved Solids	47	8/12/2008	540	mg/L		500	

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Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

Ramona Lake near Fig Avenue

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
Hyalella azteca	42	3/18/2008	68.8	%	Yes		
EC	43	4/8/2008	1252	µmhos/cm		900	
pH	43	4/8/2008	9.07			8.5	6.5
Total Dissolved Solids	43	4/8/2008	1100	mg/L		500	
E. Coli	44	5/13/2008	250	MPN/100mL		220	
EC	44	5/13/2008	1174	µmhos/cm		900	
Fecal Coliform	44	5/13/2008	300	MPN/100mL		220	
pH	44	5/13/2008	8.72			8.5	6.5
Total Dissolved Solids	44	5/13/2008	890	mg/L		500	
E. Coli	45	6/10/2008	>2400	MPN/100mL		220	
EC	45	6/10/2008	1558	µmhos/cm		900	
Fecal Coliform	45	6/10/2008	300	MPN/100mL		220	
pH	45	6/10/2008	9.07			8.5	6.5
Total Dissolved Solids	45	6/10/2008	1100	mg/L		500	
DO	46	7/8/2008	3.77	mg/l			5
E. Coli	46	7/8/2008	550	MPN/100mL		220	
EC	46	7/8/2008	1999	µmhos/cm		900	
Fecal Coliform	46	7/8/2008	300	MPN/100mL		220	
pH	46	7/8/2008	8.92			8.5	6.5
Total Dissolved Solids	46	7/8/2008	1300	mg/L		500	
Dimethoate	47	8/12/2008	1.1	µg/L		1	
DO	47	8/12/2008	4.18	mg/l			5
E. Coli	47	8/12/2008	580	MPN/100mL		220	
EC	47	8/12/2008	1720	µmhos/cm		900	
Fecal Coliform	47	8/12/2008	900	MPN/100mL		220	
Total Dissolved Solids	47	8/12/2008	1200	mg/L		500	

Salt Slough at Lander Ave

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
EC	42	3/18/2008	1494	µmhos/cm		900	
Total Dissolved Solids	42	3/18/2008	1000	mg/L		500	
EC	43	4/8/2008	1399	µmhos/cm		900	
Total Dissolved Solids	43	4/8/2008	910	mg/L		500	
EC	44	5/13/2008	1274	µmhos/cm		900	
Total Dissolved Solids	44	5/13/2008	870	mg/L		500	
EC	45	6/10/2008	1337	µmhos/cm		900	
Total Dissolved Solids	45	6/10/2008	890	mg/L		500	
Chlorpyrifos	46	7/8/2008	0.11	µg/L		0.014	
EC	46	7/8/2008	1001	µmhos/cm		900	
Total Dissolved Solids	46	7/8/2008	670	mg/L		500	

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Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

Ceriodaphnia dubia	47	8/12/2008	45	%	Yes	
Chlorpyrifos	47	8/12/2008	0.54	µg/L		0.014
EC	47	8/12/2008	994	µmhos/cm		900
Total Dissolved Solids	47	8/12/2008	690	mg/L		500

Salt Slough at Sand Dam

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
EC	42	3/18/2008	1045	µmhos/cm		900	
Fecal Coliform	42	3/18/2008	300	MPN/100mL		220	
Total Dissolved Solids	42	3/18/2008	690	mg/L		500	
EC	43	4/8/2008	1030	µmhos/cm		900	
Total Dissolved Solids	43	4/8/2008	690	mg/L		500	
E. Coli	44	5/13/2008	>2400	MPN/100mL		220	
EC	44	5/13/2008	969	µmhos/cm		900	
Total Dissolved Solids	44	5/13/2008	640	mg/L		500	
E. Coli	45	6/10/2008	240	MPN/100mL		220	
EC	45	6/10/2008	951	µmhos/cm		900	
Total Dissolved Solids	45	6/10/2008	650	mg/L		500	
Ceriodaphnia dubia	46	7/8/2008	0	%	Yes		
Chlorpyrifos	46	7/8/2008	0.48	µg/L		0.014	
E. Coli	46	7/8/2008	280	MPN/100mL		220	
Fecal Coliform	46	7/8/2008	500	MPN/100mL		220	
Total Dissolved Solids	46	7/8/2008	530	mg/L		500	
Chlorpyrifos	47	8/12/2008	0.32	µg/L		0.014	

San Joaquin River at Lander Ave

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
EC	42	3/18/2008	1353	µmhos/cm		900	
Total Dissolved Solids	42	3/18/2008	890	mg/L		500	
EC	43	4/8/2008	1190	µmhos/cm		900	
Total Dissolved Solids	43	4/8/2008	1000	mg/L		500	
E. Coli	44	5/13/2008	290	MPN/100mL		220	
EC	44	5/13/2008	1437	µmhos/cm		900	
Fecal Coliform	44	5/13/2008	500	MPN/100mL		220	
Total Dissolved Solids	44	5/13/2008	920	mg/L		500	
EC	45	6/10/2008	1388	µmhos/cm		900	
Total Dissolved Solids	45	6/10/2008	970	mg/L		500	
Diazinon	46	7/8/2008	0.12	µg/L		0.05	
EC	46	7/8/2008	1287	µmhos/cm		900	
Total Dissolved Solids	46	7/8/2008	830	mg/L		500	
EC	47	8/12/2008	1431	µmhos/cm		900	
Total Dissolved Solids	47	8/12/2008	950	mg/L		500	

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

DNQ = Detected, Not Quantifiable

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Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

San Joaquin River at PID Pumps

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
EC	42	3/11/2008	1137	µmhos/cm		900	
Total Dissolved Solids	42	3/11/2008	930	mg/L		500	
pH	43	4/8/2008	8.76			8.5	6.5
Total Dissolved Solids	43	4/8/2008	990	mg/L		500	
DO	45	6/10/2008	4.93	mg/l			5
EC	45	6/10/2008	1418	µmhos/cm		900	
pH	45	6/10/2008	9.31			8.5	6.5
Total Dissolved Solids	45	6/10/2008	1000	mg/L		500	
DO	46	7/8/2008	3.98	mg/l			5
EC	46	7/8/2008	1541	µmhos/cm		900	
pH	46	7/8/2008	9.06			8.5	6.5
Total Dissolved Solids	46	7/8/2008	1000	mg/L		500	
Chlorpyrifos	47	8/12/2008	0.048	µg/L		0.014	
EC	47	8/12/2008	1107	µmhos/cm		900	
pH	47	8/12/2008	8.8			8.5	6.5
Total Dissolved Solids	47	8/12/2008	710	mg/L		500	

San Joaquin River at Sack Dam

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
Chlorpyrifos	47	8/12/2008	0.022	µg/L		0.014	

Westley Wasteway near Cox Road

Analyte/Species	Event	Sample Date	Result	Units	Significant Toxicity	WQV Max	WQV Min
Hyaella azteca	42	3/10/2008	65	%	Yes		
DDE(p,p')	43	4/8/2008	0.0074DNQ	µg/L		0.00059	
E. Coli	43	4/8/2008	2000	MPN/100mL		220	
EC	43	4/8/2008	1089	µmhos/cm		900	
Fecal Coliform	43	4/8/2008	1600	MPN/100mL		220	
Total Dissolved Solids	43	4/8/2008	980	mg/L		500	
Chlorpyrifos	44	5/13/2008	0.05	µg/L		0.014	
DDE(p,p')	44	5/13/2008	0.0049DNQ	µg/L		0.00059	
Selenastrum capricornutum	44	5/13/2008	1210000	cells/ml	Yes		
DDE(p,p')	45	6/10/2008	0.013	µg/L		0.00059	
Fecal Coliform	45	6/10/2008	300	MPN/100mL		220	
DDE(p,p')	46	7/8/2008	0.018	µg/L		0.00059	
DO	46	7/8/2008	4.86	mg/l			5
EC	46	7/8/2008	1013	µmhos/cm		900	
Total Dissolved Solids	46	7/8/2008	520	mg/L		500	
DDE(p,p')	47	8/12/2008	0.02	µg/L		0.00059	
Dimethoate	47	8/12/2008	1.2	µg/L		1	

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DNQ = Detected, Not Quantifiable

Westside San Joaquin River Watershed Coalition

Water Quality Value Exceedances for the period of 3/1/2008 to 8/31/2008

E. Coli	47	8/12/2008	410	MPN/100mL	220
Fecal Coliform	47	8/12/2008	500	MPN/100mL	220
Total Dissolved Solids	47	8/12/2008	550	mg/L	500

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

DNQ = Detected, Not Quantifiable

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Appendix A
Chain of Custody Sheets and Data Summary

Appendix A Definitions

Sample Type:

E: Event sample

FD: Field duplicate sample

FB: Field blank sample.

Result Flags:

B: Potential blank contamination. Constituent was detected in field blank sample.

E: The reported value exceeds the linear range. The sample has been reanalyzed.

J: Estimated value. The result is below detection limit.

Y: The percent difference between the primary and confirmation column is >40%. The higher value has been reported.

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

Appendix A
Chain of Custody Sheets

Appendix A
Sediment and Aquatic Toxicity Results by Event

Appendix A

Data Summary

Appendix B
Communication Reports
Organized by Event Date

Appendix C
Laboratory Data Reports
Organized by Event Date

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

Appendix D
Bioassessment Report

**Characterization of Benthic Communities and Physical Habitat in
Agricultural Streams in California's San Joaquin Valley in 2008**

November 2008

Appendix E

Selected Event Photos