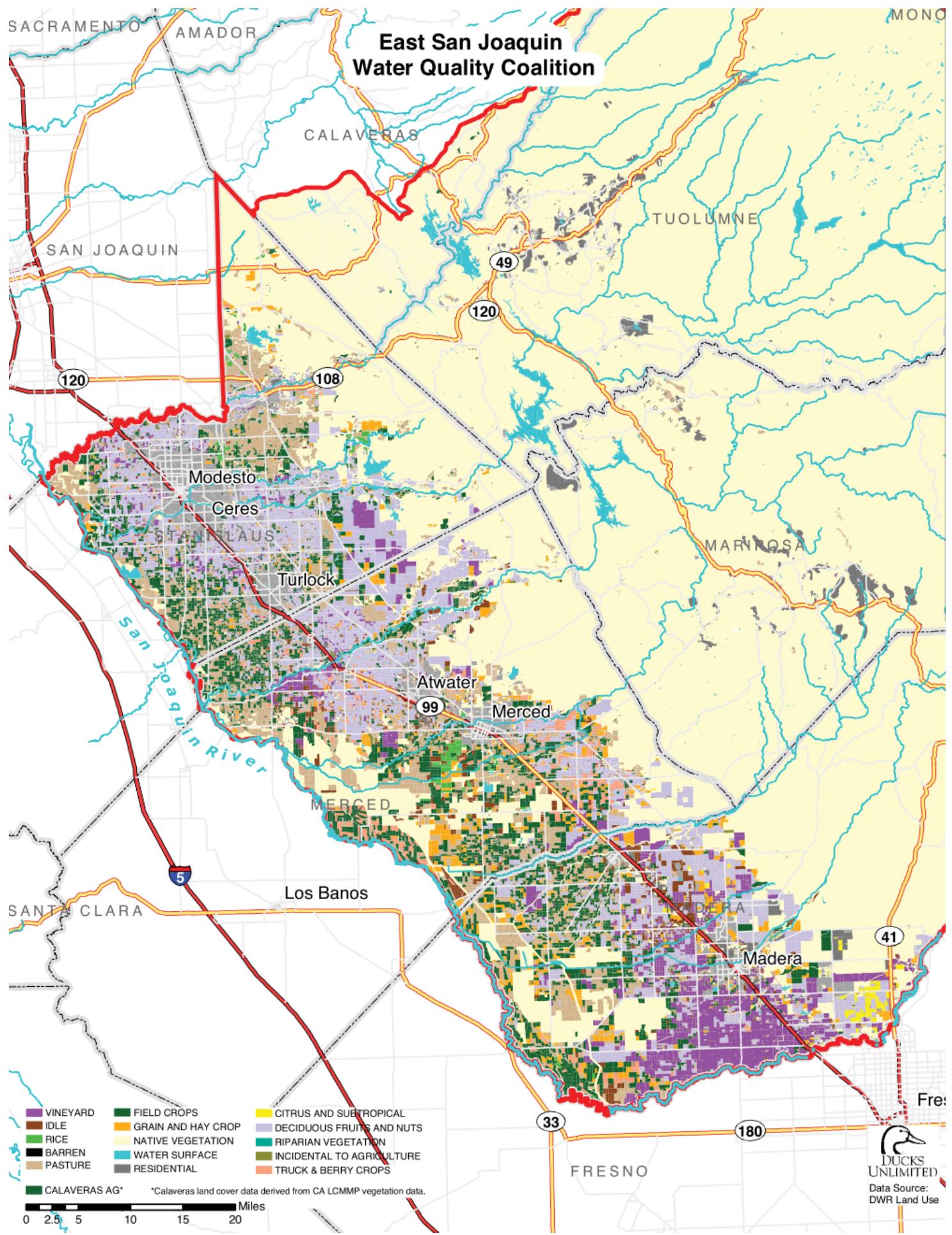




2011 SUMMARY ANNUAL REPORT



East San Joaquin Water Quality Coalition





2011 SUMMARY ANNUAL REPORT

This report is available at
East San Joaquin Water Quality Coalition
1201 L Street
Modesto, CA 95354
(209)522-7278

www.ESJCoalition.org
Members Only Password: ESJWATER



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Pesticides in Surface Water Continue Decline

Uncertainty about new Groundwater program

The first five years of ESJWQC water sampling found more than 20 waterways with exceedances of state standards for pesticides. Management plans were written and an aggressive outreach program was put in place to notify landowners with fields along the waterways that farm inputs were being found in creeks and sloughs at levels sometimes high enough to cause toxicity to test organisms (page 2).

Three years and hundreds of grower visits later, pesticide exceedances in ESJWQC are few and far between. Six waterways with pesticide management plans have shown no exceedances of targeted pesticides through Summer 2011. The exception, copper, has shown fewer waterways with exceedances but persists in others, possibly due to applications to waterways for algae control.

While the news is good for surface water, along comes the Regional Water Board with new requirements adding groundwater to the responsibility for watershed coalitions in the Central Valley. Nitrate levels above drinking water standards in many community wells in the Central Valley are being attributed in part to farming practices, both historic and current. Groundwater monitoring data for ESJWQC region shows a significant number of wells exceeding the drinking water standard for nitrates (page 5).

A major change to our overall regulation calls for each watershed coalition in the Central Valley to obtain separate "Water Discharge Requirements" based on each region's specific conditions and crops. Our "General Order," as it is often called, puts our

activities under more stringent requirements than when we operated under the "Conditional Waiver of Waste Discharge Requirements." Once our final General Order is passed in 2012, the clock starts ticking for the new groundwater/surface water program. Also unique for General Orders is that each coalition must individually present its order to the sitting board for a vote. Intense public scrutiny and comment is expected on our General Order because we and the California Rice Commission are the first orders to be voted on by the Regional Water Board. Votes on other coalition orders won't occur until 2013 and 2014.

The new groundwater program is focused primarily on nitrates, particularly where levels are elevated above the state drinking water standard of 10 mg/l. Over half of the ESJWQC region has wells above those limits (see page 5). Our groundwater profile is in part to blame for this issue. Depth to groundwater can be as little as 10 feet, particularly in areas with sandy soils (page 6). Fertilizer use in crops, dairy operation waste, water treatment plants, rural septic systems and other activities all can contribute to high nitrates in groundwater.

ESJWQC members can expect frequent updates in coming months as our new General Order begins to take shape. Check our website for updates beginning in January 2012. Stay tuned.



Steps of a Management Plan

The ESJWQC Management Plans follow a consistent strategy:

1. Evaluate water quality information (monitoring results);
2. Source potential causes of water quality impairments (pesticide use reports and mapping of parcels/waterway);
3. Identify members with potential drainage or direct drainage to the waterbody who might contribute to water quality impairments;
4. Conduct individual meetings to assess current practices and recommend practices if needed;
5. Implement additional management practices if necessary; and
6. Assess water quality; associate to upstream management practices.



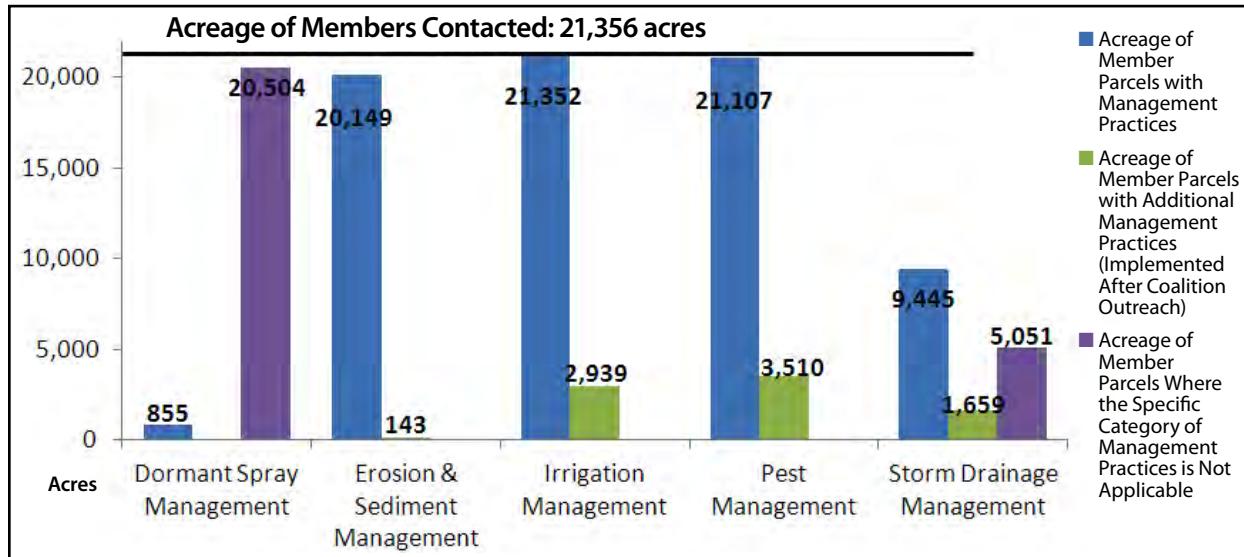
Site Subwatershed Name / Timeframe for Coalition Visits

Cottonwood Creek @ Rd 20	2010-2012	Hatch Drain @ Tuolumne Rd	2013-2015
Duck Slough @ Gurr Rd	2010-2012	Highline Canal @ Lombardy Rd	2013-2015
Highline Canal @ Hwy 99.....	2010-2012	Merced River @ Santa Fe.....	2013-2015
Bear Creek @ Kibby Rd.....	2010-2012	Miles Creek @ Reilly Rd.....	2013-2015
Lateral 2 ½ @ Keyes Rd.....	2011-2013	Mustang Creek @ East Ave.....	2014-2016
Berenda Slough along Ave 18 ½	2011-2013	Silva Drain @ Meadow Dr	2014-2016
Dry Creek @ Rd 18	2011-2013	Westport Drain @ Vivian Rd.....	2014-2016
Livingston Drain @ Robin Ave	2011-2013	Ash Slough @ Ave 21.....	2015-2017
Hilmar Drain @ Central Ave	2012-2014	Mootz Drain downstream of Langworth Pond	2015-2017
Black Rascal Creek @ Yosemite Rd.....	2012-2014	Howard Lateral @ Hwy 140.....	2015-2017
Deadman Creek @ Hwy 59	2012-2014	Re-evaluate All Site Subwatersheds and Revise Schedule.....	Annually
Deadman Creek (Dutchman) @ Gurr Rd	2012-2014		

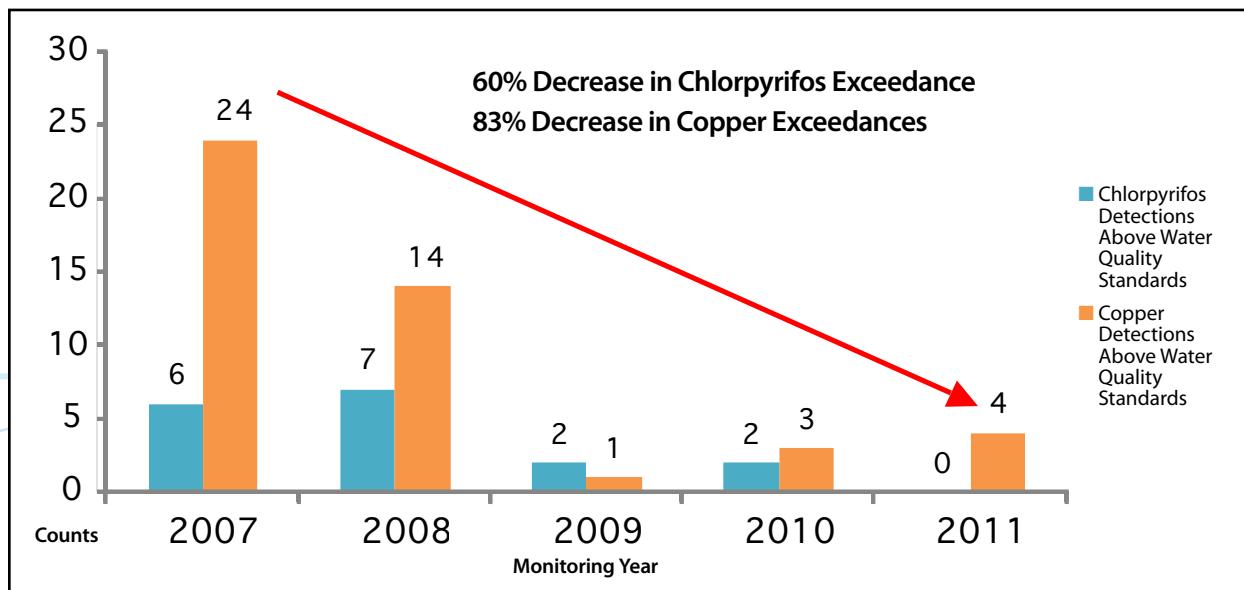


Priority Management Plan Subwatersheds

Categories of Management Practices and Associated Acreages with at Least One Practice Implemented

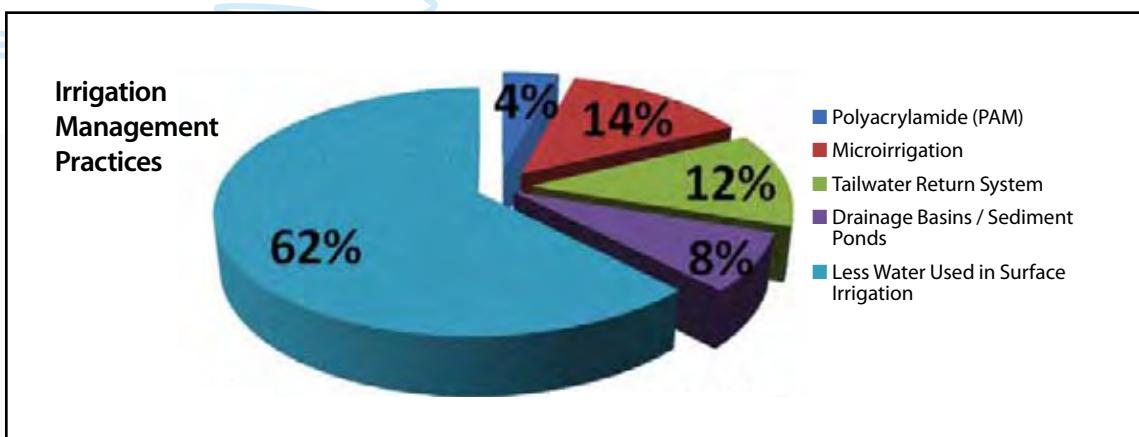
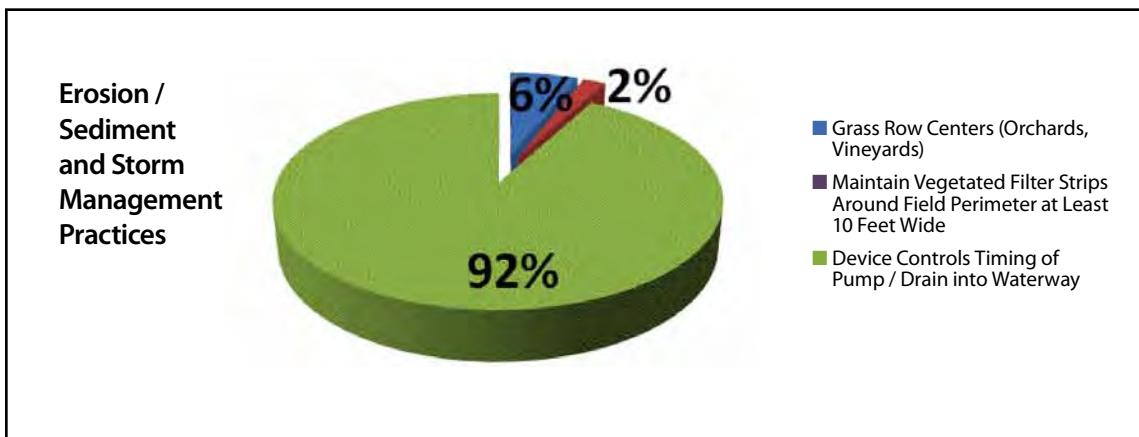
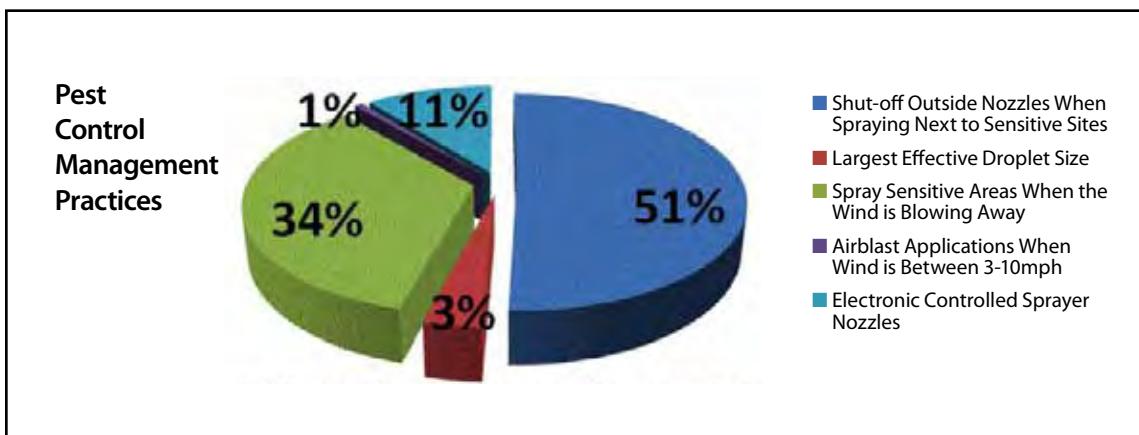


Comparison of Chlorpyrifos and Copper Detections Above Water Quality Standards in Samples 2007 to 2011

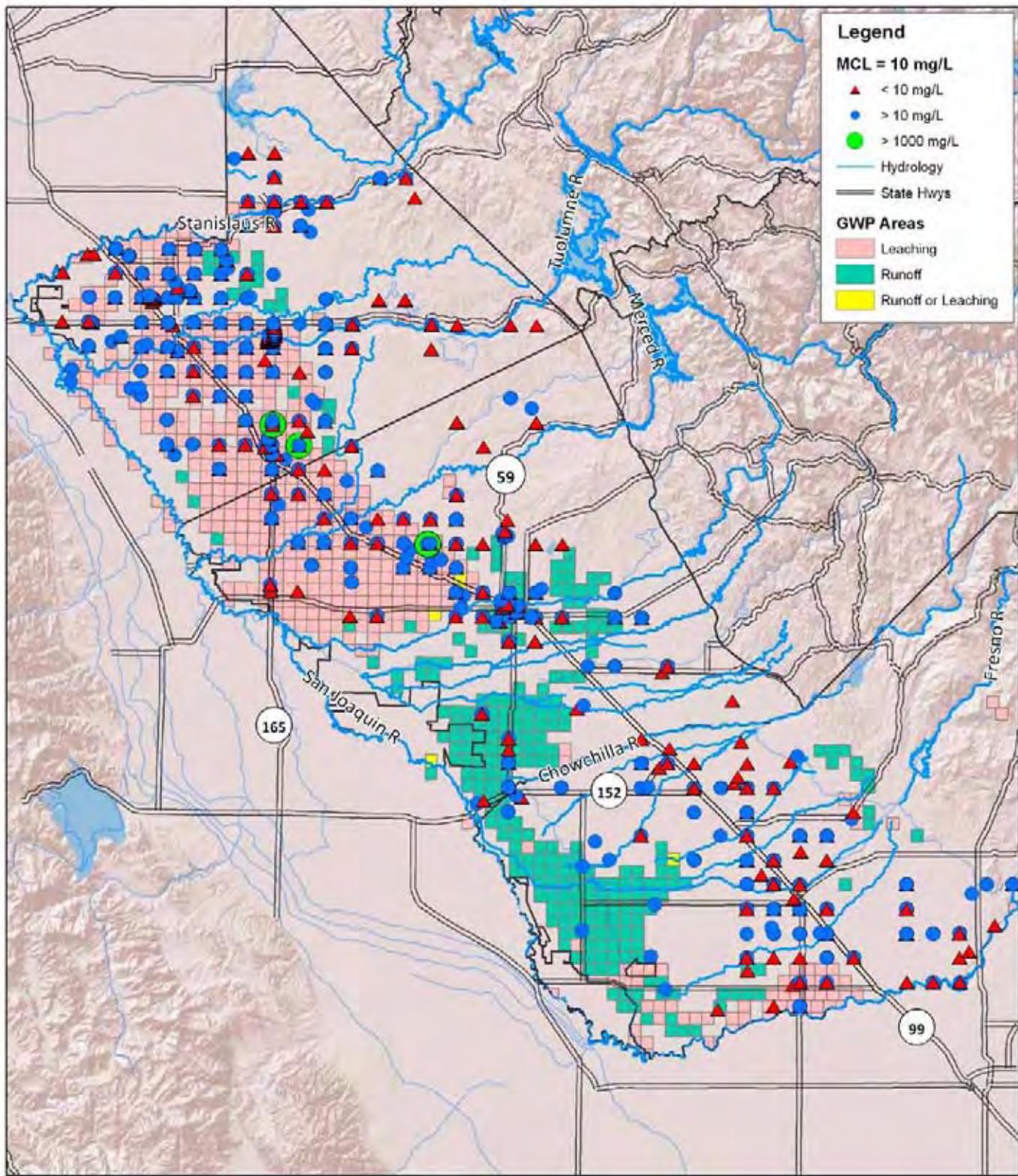


Management Plan Charts

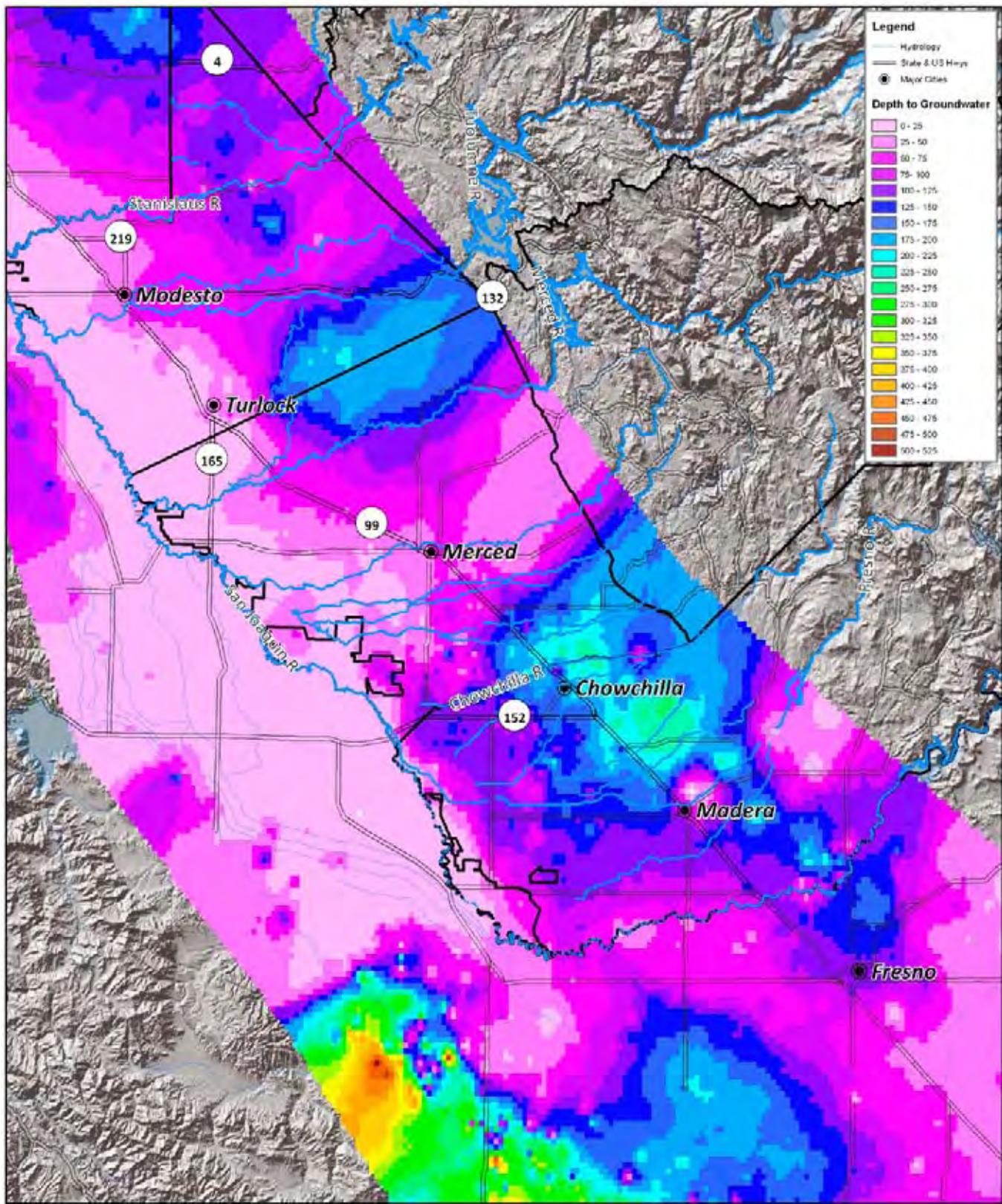
Management Practices Implemented After Coalition Outreach in Priority Subwatersheds



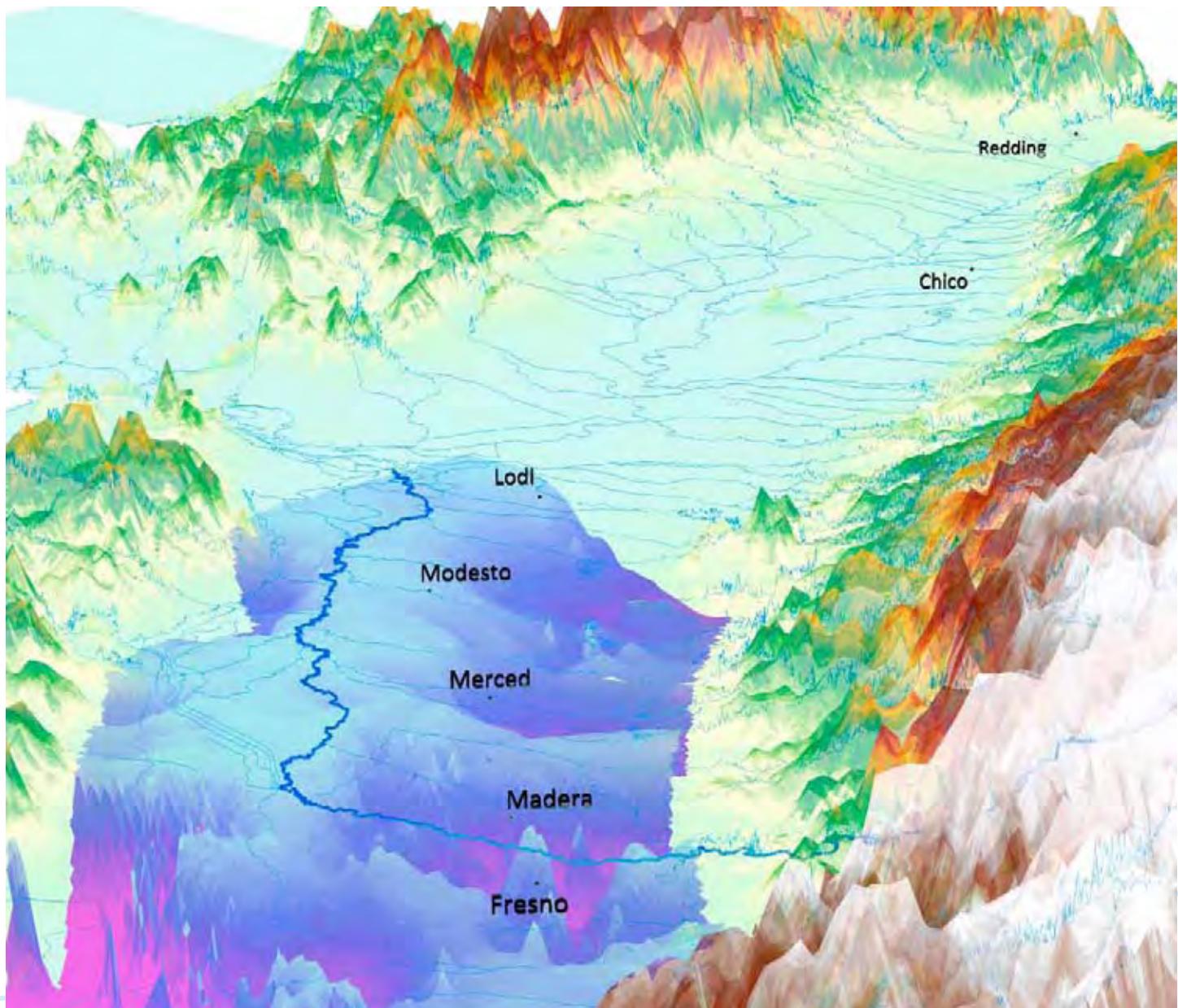
Groundwater Wells with Nitrate Concentrations Greater than 10 mg/L Relative to Groundwater Protection (GWP) Areas.



ESJWQC Depth to Groundwater



ESJWQC Depth to Groundwater



East San Joaquin Water Quality Coalition

Adopted 2004

As a member of the Coalition in good standing, irrigated acres that you own or manage are now legally covered under the requirements described for watershed coalitions in the Irrigated Lands Regulatory Program (ILRP), Central Valley Regional Water Quality Control Board Resolution No. R5-2003-0105.

Member Responsibilities

As a member of the East San Joaquin Water Quality Coalition (Coalition), you agree to:

- 1.** Respond to requests for information by ESJWQC that enable the Coalition to remain in compliance with requirements of the ILRP.
- 2.** Cooperate with the ESJWQC to take corrective action should water quality problems be tracked back to your farming operation.
- 3.** Implement management practices that minimize or eliminate fertilizer, pesticide and sediment runoff.

ESJWQC Responsibilities

- 1.** Perform activities that enable Coalition members to be in compliance with the ILRP.
- 2.** File required reports with the Central Valley Regional Water Quality Control Board to maintain ILRP coverage for Coalition members.
- 3.** Implement an economical and scientifically valid water monitoring program for waterways within the Coalition boundaries.
- 4.** Spread costs equitably among Coalition members.
- 5.** Communicate to Coalition members where water or sediment monitoring indicates problems in a watershed related to farming practices and facilitate efforts to solve those problems.



Membership

As of November 14, 2011, the Coalition membership stood at 2,297 landowner/operators and 540,782 irrigated acres.

Boundaries

The Coalition includes Madera County and portions of Stanislaus, Merced, Tuolumne, Mariposa and Calaveras counties. Coalition borders are the crest of the Sierra Nevada on the east and the San Joaquin River on the west and south, and the Stanislaus River on the north. There are four major tributaries in the watershed: Chowchilla River, Merced River, Tuolumne River and Stanislaus River. (Note: a limited number of landowners have opted to join adjacent water quality coalitions to obtain ILRP coverage.)

Structure

The Coalition was formed in 2003 in compliance with the ILRP implemented by the Central Valley Regional Water Quality Control Board. A volunteer Board of Directors agreed to structure the organization as a public benefit, non-profit entity to perform tasks required under the ILRP. In November 2005, the Coalition was granted non-profit status as a 501 c5 organization by the Internal Revenue Service. The Coalition is managed by a Board of Directors.

Board Officers

- * Parry Klassen, **(Board Chairman, Executive Director)**; Executive Director of Coalition for Urban/Rural Environmental Stewardship (CURES); fruit grower
- * Wayne Zipser, Stanislaus County Farm Bureau **(Vice-Chairman)**; almond grower
- * Bill McKinney, **(Secretary/Treasurer)**; almond grower

Board Members

- * Amanda Carvajal, Merced County Farm Bureau
- * John Eisenhut, Hilltop Ranch, Ballico; almonds
- * Brian Franzia, West Coast Grape Farming, Ceres; grapes
- * Richard Gemperle, Gemperle Enterprises, Turlock; almonds
- * Anja K. Raudabaugh, Madera County Farm Bureau
- * Alan Reynolds, Gallo Vineyards, Inc; Livingston; grapes
- * Albert Rossini, Rossini Ag LLC, Oakdale; grapes
- * Jim Wagner, Wilbur-Ellis Company, Hughson

Ex-officio Board Members

- * Gary Caseri, Stanislaus County Agricultural Commissioner
- * David Robinson, Merced County Agricultural Commissioner
- * Bob Rolan, Madera County Agricultural Commissioner
- * Diana Waller, District Conservationist, USDA-NRCS-Modesto Field Office



Goals

- * To operate an efficient, economical program that enables members to comply with the Irrigated Lands Regulatory Program (ILRP).
- * File required reports with the Central Valley Regional Water Quality Control Board to maintain ILRP coverage for Coalition members.
- * Implement an economical and scientifically valid water monitoring program for area rivers and agricultural drains (as required by the ILRP).
- * Spread costs equitably among owners/operators who are Coalition members.
- * Communicate to landowners where water monitoring indicates problems and work to solve those problems.

Fees Assessed by the State Water Resources Control Board

In 2011, the Coalition paid the 12 cent per acre fee for its members to cover State Water Resources Control Board cost for implementing the ILRP. The State established the following three-tiered annual fee structure for landowners seeking coverage by ILRP:

- * Member of water coalition *with* fee collected by coalition = \$100 per coalition + 12 cents per irrigated acre
- * Member of water coalition *but* coalition does not collect fee = \$100 per landowner + 20 cents per irrigated acre
- * Not member of coalition = \$100 per farm + 30 cents per irrigated acre

The 12 cent per acre fee is included as part of Coalition membership dues. By paying the state fee for members, the Coalition collectively saved member growers more than \$250,000.

Member Outreach and Best Management Practices

The Coalition is continuing its efforts to work with landowners in watersheds where monitoring indicates problems. Central to this effort will be promoting Best Management Practices (BMPs) with the best potential for solving the problem. When a problem is identified, the Coalition will:

- * Contact landowners upstream of the monitoring site and inform them of the constituent(s) identified.
- * Distribute BMP information through mailings and individual visits and local grower and crop advisor meetings.
- * Give educational presentations on monitoring results and potential BMPs at commodity and farm group meetings in the coalition region.



Monitoring Program Objectives

- * Characterize discharge from irrigated agriculture in the Coalition region
- * Identify locations where water quality objectives are violated
- * Identify potential source(s) of the exceedances
- * Promote to landowners the implementation of management practices to eliminate water quality problems.

Monitoring Program Management

- * Michael L. Johnson LLC, Davis, CA
 - Staff:* Mike Johnson – President
 - Francisca Johnson – Vice President
 - Melissa Turner – Vice President

Analytical Laboratories

- * AQUA-Science, Davis, CA (water column toxicity)
- * APPL Inc., Fresno, CA (pesticide analysis)
- * North Coast Laboratories Ltd., Arcata, CA (glyphosate and paraquat analysis)
- * Caltest Analytical Laboratory, Napa, CA (Physical parameters, metals, nutrients and sediment chemistry analysis)
- * Nautilus Environmental, San Diego, CA (sediment toxicity)

Monitoring Site Selection Criteria

- * Characterizes agricultural drainage of the area
- * Drains irrigated lands
- * Minimal or no urban influence on flows

Sampling Frequency

Water column

- * Monthly

Sediment

- * Twice annually (spring, late summer)

Questions, Comments, Changes in Membership

Members are welcome to contact the coalition Board of Directors or management with questions or to update membership information. The most efficient way to contact us is through the Coalition's website www.esjcoalition.org. Go to "Contact Us."

Outreach meeting dates and locations will be posted on the Coalition website and periodic announcements mailed to members.

Changes in membership information can be submitted to: **ESJWQC**

1201 L Street
Modesto, CA 95354

Or call: 209-522-7278

Be sure to use your membership number in any correspondence.



Financial Activities

Statement of Financial Activities

EAST SAN JOAQUIN WATER QUALITY COALITION (ESJWQC)

November 2010 thru October 2011 vs Budget

	ACTUAL* 2010/11	BUDGET 2010/11	
	\$ K, (Thousands)	\$ K, (Thousands)	DESCRIPTION
INCOME			
TOTAL INCOME	1,229	1,205	Membership dues plus interest on bank accounts for November 2010 thru October 2011.
EXPENSES			
Organizational	166	207	Executive director, legal, accounting, management of membership records & related communications, RWQCB fees and miscellaneous business costs.
Program	1,211	1,126	Program manager, site monitoring/special studies, quality control/assurance, data management, BMP assessments, communications with Coalition members regarding monitoring results, and reports to RWQCB.
Travel and Meeting	14	17	Expenses for executive director and miscellaneous.
TOTAL EXPENSES	1,391	1,350	
NET INCOME	(162)	(145)	Difference between TOTAL INCOME and TOTAL EXPENSES.

* At the end of October balances in checking and savings accounts totaled \$742 K.



2011 Monitoring Reporting Program Plan (MRPP)

A requirement for each Central Valley watershed coalition under the Irrigated Lands Regulatory Program (ILRP) is to provide the Regional Water Quality Control Board with a Monitoring and Reporting Program Plan (MRPP). This plan describes monitoring locations, timing of sampling, the rationale for site selection and the constituents to be sampled among other technical information.

In October 2008, the ESJWQC initiated a new MRPP. Key to this new plan is the approach of dividing the Coalition into six "zones". These zones are based on hydrology, crop types, land use, soil types and rainfall. Each of the six zones in the Coalition region (see map on the following page) encompass numerous smaller watersheds. Each zone is named after its Core Monitoring location, which are:

- 1. Dry Creek** @ Wellsford Rd Zone
- 2. Prairie Flower Drain** @ Crows Landing Zone
- 3. Highline Canal** @ Hwy 99 Zone
- 4. Merced River** @ Santa Fe Zone
- 5. Duck Slough** @ Gurr Rd Zone
- 6. Cottonwood Creek** @ Rd 20 Zone

Within each zone, three types of water and sediment sampling occur:

- **Assessment Monitoring**
- **Core Monitoring**
- **Management Plan Monitoring**

Each zone has one Core and one Assessment Monitoring site.

Assessment Monitoring occurs at sites representative of water quality within each zone and characterizes water quality for the zone. It involves testing for:

- numerous pesticides
- metals
- nutrients
- parameters such as hardness and organic carbon.

Core Monitoring occurs at the permanent Core Monitoring sites and involves a subset of the above constituents to track water quality over time. Core Monitoring sites are monitored for Assessment Monitoring constituents every third year. In 2011, Assessment Monitoring occurred at all Core Monitoring sites.

Table 1. Monitoring locations and constituents monitored at Core and Assessment Monitoring sites January through December 2011.

Zone	Monitoring Type	Monitoring Location	Core / Assessment Monitoring Constituent Groups								
			Physical Parameters	Nutrients*	Pathogens	Carbamates	Organophosphates	Herbicides	Metals (total and dissolved)**	Water Column Toxicity	Sediment Toxicity/Chemistry
1	A	Dry Creek @ Wellsford Rd	x	x	x	x	x	x	x	x	x
1	A	Rodden Creek @ Rodden Rd	x	x	x	x	x	x	x	x	x
2	A	Prairie Flower Drain @ Crows Landing Rd	x	x	x	x	x	x	x	x	x
3	A	Highline Canal @ Hwy 99	x	x	x	x	x	x	x	x	x
3	A	Highline Canal @ Lombardy Rd	x	x	x	x	x	x	x	x	x
4	A	Merced River @ Santa Fe Rd	x	x	x	x	x	x	x	x	x
4	A	McCoy Lateral @ Hwy 140	x	x	x	x	x	x	x	x	x
5	A	Duck Slough @ Gurr Rd	x	x	x	x	x	x	x	x	x
5	A	Deadman Creek @ Hwy 59	x	x	x	x	x	x	x	x	x
6	A	Cottonwood Creek @ Rd 20	x	x	x	x	x	x	x	x	x
6	A	Berenda Slough along Ave 18 ½	x	x	x	x	x	x	x	x	x

San Joaquin River Chlorpyrifos and Diazinon Total Maximum Daily Load (TMDL)

It is the Coalition's responsibility, as a representative of agricultural dischargers, to maintain compliance with any Total Maximum Daily Loads (TMDLs) that apply to discharge from irrigated agriculture into the San Joaquin River watershed. The requirements come from the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan). The Basin Plans are State law and are developed to ensure the protection of beneficial uses of water which include drinking water supplies, maintaining aquatic life, and supporting recreation activities.

In 2005, a TMDL was established for chlorpyrifos and diazinon runoff into the San Joaquin River. Beginning in 2010, the Coalition was responsible for ensuring compliance with the chlorpyrifos and diazinon water quality objectives (WQO) and loading capacity at compliance points within the San Joaquin River.

Water Quality Objectives (WQOs):

- Chlorpyrifos 0.015 ppb
- Diazinon 0.10 ppb

Loading capacities:

Concentration of chlorpyrifos	+	Concentration of diazinon	≤ 1.0
0.015 ppb		0.1 ppb	

ppb – parts per billion

In 2010, the ESJWQC and the Westside San Joaquin River Watershed Coalition (Westside Coalition) jointly developed a monitoring plan for assessing compliance

of the Lower San Joaquin River concentration-based loads at six compliance points identified in the Basin Plan Amendment.

The six compliance points are listed below; the Coalition conducting the monitoring is in parenthesis:

- San Joaquin River at Sack Dam (Westside Coalition),**
- San Joaquin River at Lander Ave (Westside Coalition),**
- San Joaquin River at Hills Ferry (ESJWQC),**
- San Joaquin River at Las Palmas Avenue (Westside),**
- San Joaquin River at Maze Boulevard (ESJWQC), and**
- San Joaquin River at Airport Way (ESJWQC).**

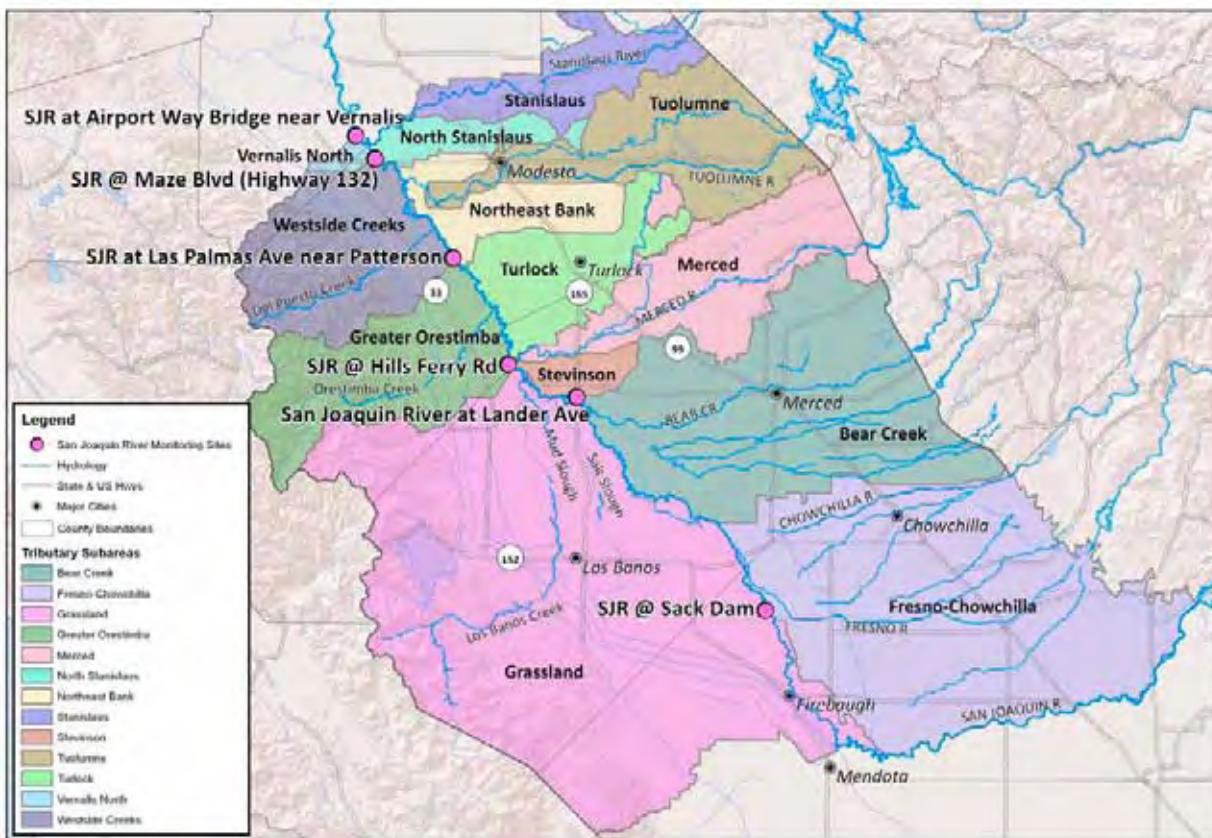
Monitoring is required on a quarterly basis by both Coalitions with at least one sample taken after a winter storm event (December through February) when dormant orchard sprays with either insecticides are typically made. In 2011, monitoring was conducted in February, May, July and October. Results are reported to the Regional Board based on a water year (October through September) and the 2011 report will be submitted on May 1, 2012.

The Coalition must determine on a yearly basis the following:

- Compliance with the established WQOs within the San Joaquin River and the upstream tributaries to the River,
- Assess what management practices have been implemented to reduce off-site movement of chlorpyrifos and diazinon,
- Determine the effectiveness of management practices implemented,



Figure 1. San Joaquin River monitoring locations for compliance with the chlorpyrifos and diazinon TMDL.



- Determine if product alternatives are impacting water quality,
- Determine whether or not products used as alternatives to chlorpyrifos and diazinon are causing or contributing to toxicity, and
- Demonstrate that management practices are achieving the lowest pesticide levels technically and economically achievable.

The ESJWQC will evaluate the results of the compliance monitoring in relation to upstream monitoring conducted in 2011 in its Management Plan Update Report which will be completed on April 1, 2012. The Coalition will use results obtained from management practice surveys to determine implementation and effectiveness of management practices implemented by Coalition members.

As of December 1, 2010 the direct or indirect discharge of diazinon or chlorpyrifos into the San Joaquin River is prohibited if there were exceedances of the loading capacity or the WQO occurred during the previous year. This prohibition applies to:

1. Dischargers who discharge chlorpyrifos or diazinon, whichever is contributing to the exceedance of the WQO.
2. Dischargers located in those subareas not meeting their load allocations.



The ESJWQC has sent notices to its members with parcels adjacent to all main tributaries to the San Joaquin River notifying them of this prohibition of discharge and reminding them about the importance of minimizing spray drift and irrigation or storm runoff after applying chlorpyrifos or diazinon.

Results for 2010 and 2011: 1-0

As of November, 2011, there has been only one exceedance of chlorpyrifos in two years of TMDL sampling for both pesticides. That exceedance occurred on July 22, 2010 in a sample taken at the Las Palmas Ave (Patterson) crossing of the San Joaquin River. A load calculation showed 2.73, which is greater than 1.0 standard. Diazinon was not detected in the sample.

In 2011, none of the coalition monitoring samples taken each quarter showed detections of either chlorpyrifos or diazinon.

In 2011, the Water Board requested that both east and westside coalitions develop a strategy of actions to follow should exceedances occur in the future. Actions range from general outreach on chlorpyrifos and/or diazinon detections to updating the Coalition's Management Plan. The intensity of actions will also be dependent on whether exceedances also occurred in tributaries to the San Joaquin River. Updates to management plans could include reprioritization of management plan subwatersheds, additional outreach and/or additional monitoring.

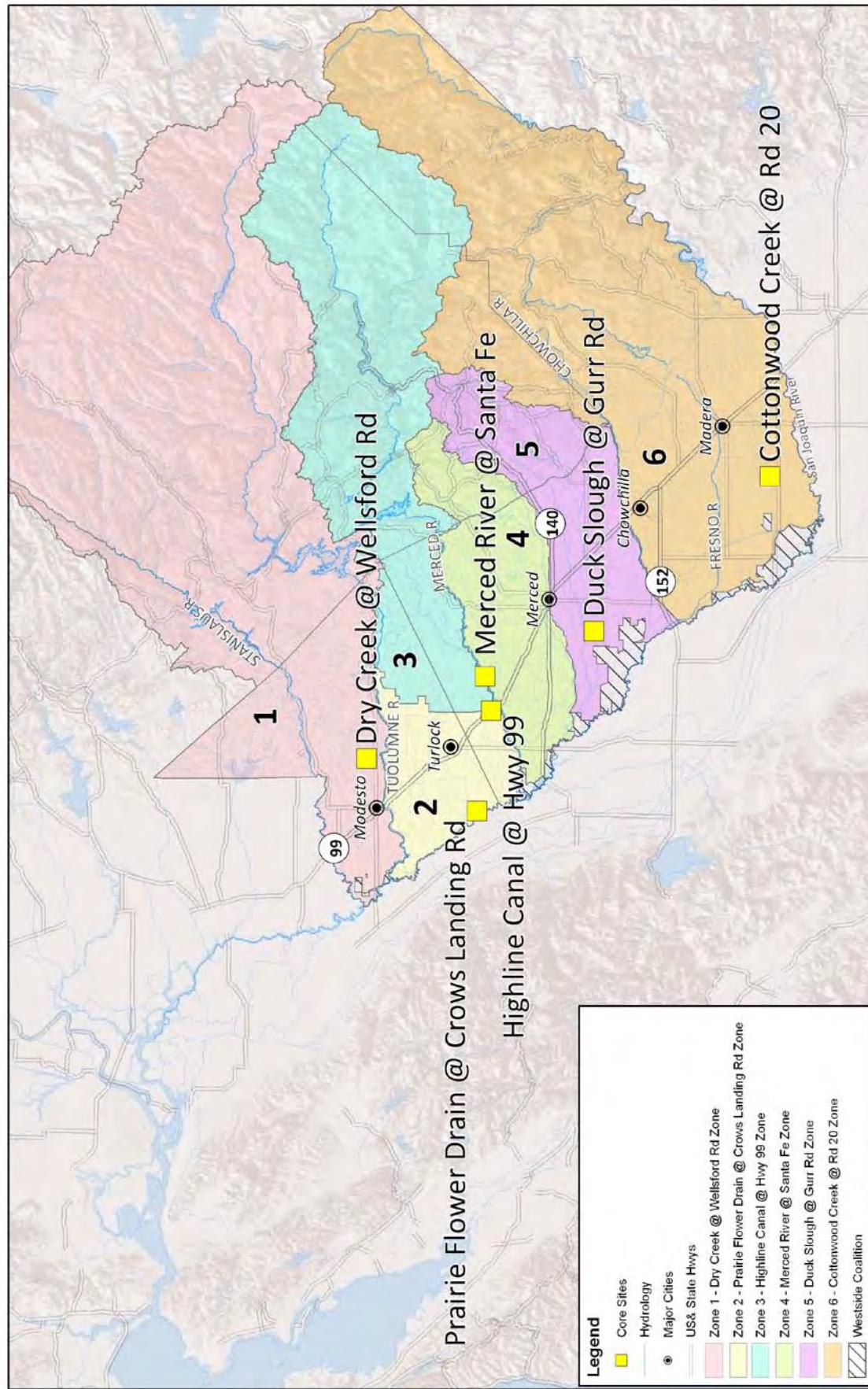
Table 2. Monitoring locations and constituents monitored at Core and Assessment Monitoring sites January through December 2011.

Station Name	Quarter	2010 Loading Capacity Compliance	2011 Loading Capacity Compliance
SJR @ Sack Dam	Qrt1	Compliant	Compliant
SJR @ Lander Ave	Qrt1	Compliant	Compliant
SJR @ Hills Ferry Rd	Qrt1	Compliant	Compliant
SJR @ Las Palmas Ave	Qrt1	Compliant	Compliant
SJR @ Maze Blvd	Qrt1	Compliant	Compliant
SJR @ Airport Way	Qrt1	Compliant	Compliant
SJR @ Sack Dam	Qrt2	Compliant	Compliant
SJR @ Lander Ave	Qrt2	Compliant	Compliant
SJR @ Hills Ferry Rd	Qrt2	Compliant	Compliant
SJR @ Las Palmas Ave	Qrt2	Compliant	Compliant
SJR @ Maze Blvd	Qrt2	Compliant	Compliant
SJR @ Airport Way	Qrt2	Compliant	Compliant
SJR @ Sack Dam	Qrt3	Compliant	Compliant
SJR @ Lander Ave	Qrt3	Compliant	Compliant
SJR @ Hills Ferry Rd	Qrt3	Compliant	Compliant
SJR @ Las Palmas Ave	Qrt3	Out of Compliance	Compliant
SJR @ Maze Blvd	Qrt3	Compliant	Compliant
SJR @ Airport Way	Qrt3	Compliant	Compliant
SJR @ Sack Dam	Qrt4	Compliant	Compliant
SJR @ Lander Ave	Qrt4	Compliant	Compliant
SJR @ Hills Ferry Rd	Qrt4	Compliant	Compliant
SJR @ Las Palmas Ave	Qrt4	Compliant	Compliant
SJR @ Maze Blvd	Qrt4	Compliant	Compliant
SJR @ Airport Way	Qrt4	Compliant	Compliant



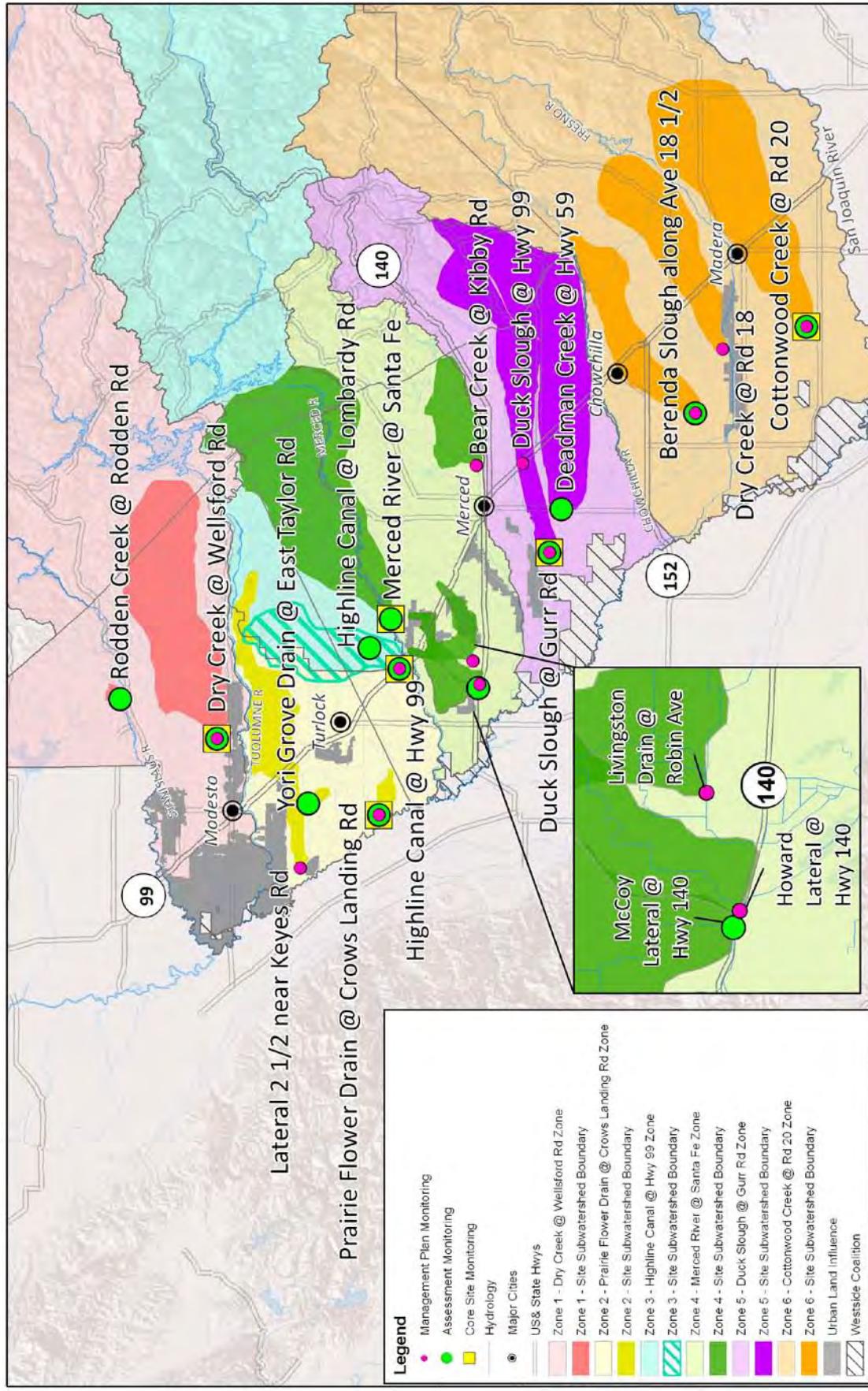
Subwatershed Zone Map

*Figure 2. Zone and site subwatershed delineations.
Only one Assessment Monitoring location will be monitored in each zone and rotated every two years.*



ESJWQC January - December 2011 Monitoring Sites

Figure 3. ESJWQC Monitoring locations (Core, Assessment and Management Plan) for 2011.

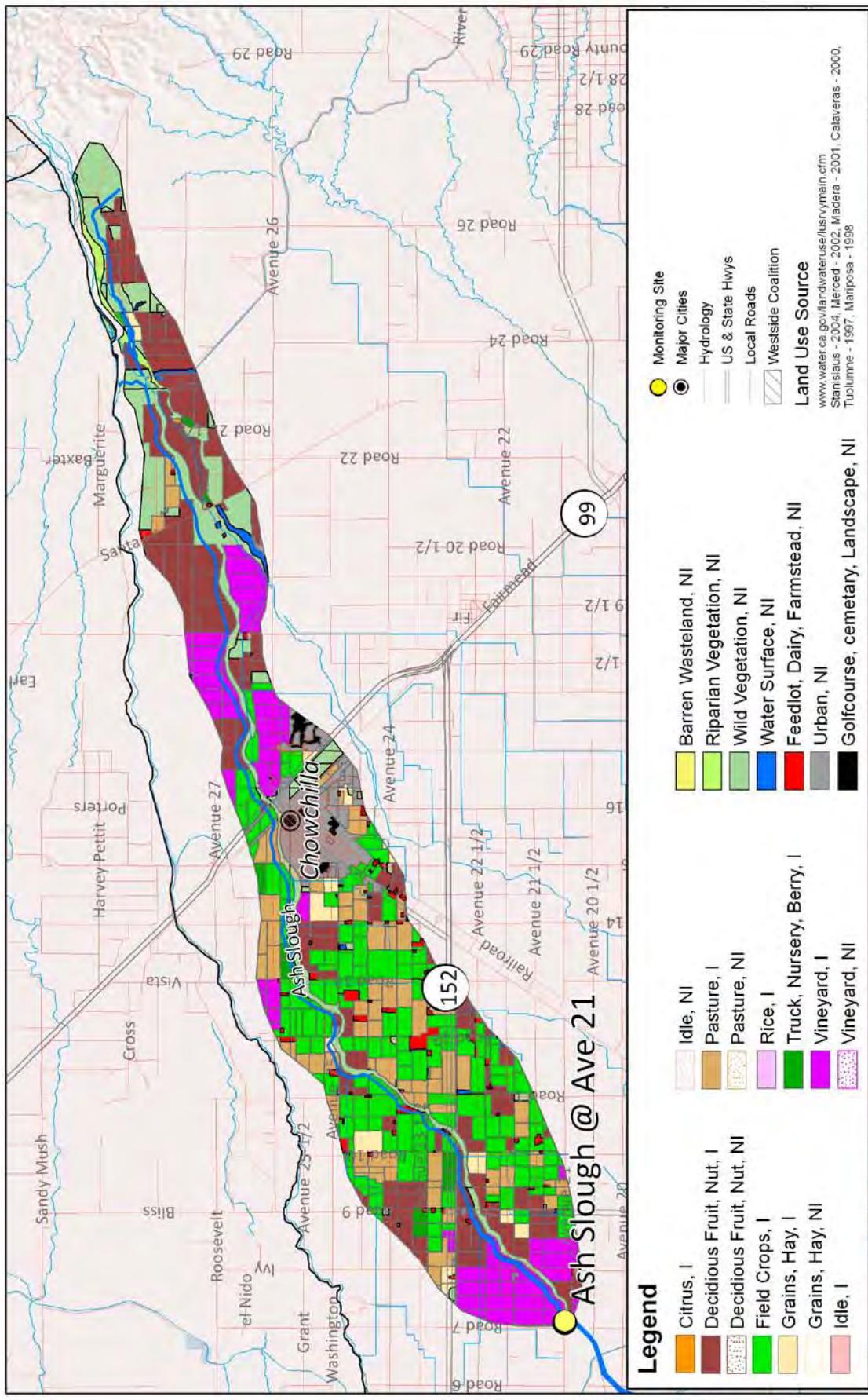


East San Joaquin Water Quality Coalition Monitoring Sites (2004-2011)

Site Location	County	Page
1. Ash Slough @ Avenue 21	Madera.....	20
2. Bear Creek @ Kirby Rd.....	Merced.....	22
3. Berenda Slough along Ave 18 ½	Madera.....	24
<i>Berenda Slough @ Rd 19</i>	Madera	
4. Black Rascal Creek @ Yosemite Rd.....	Merced.....	26
5. Cottonwood Creek @ Road 20.....	Madera.....	28
6. Deadman Creek @ Gurr Road.....	Merced.....	30
7. Deadman Creek @ Highway 59	Merced.....	32
8. Dry Creek @ Road 18	Madera.....	34
<i>Dry Creek @ Rd 22.....</i>	Madera	
<i>Dry Creek @ Rd 28 ½</i>	Madera	
9. Dry Creek @ Wellsford Road	Stanislaus/Merced	36
<i>Dry Creek @ Waterford Rd.....</i>	Stanislaus/Merced	
10. Duck Slough @ Gurr Road	Merced.....	38
<i>Duck Slough @ Hwy 59</i>	Merced	
11. Duck Slough @ Highway 99	Merced.....	40
12. Hatch Drain @ Tuolumne Rd.....	Stanislaus.....	42
13. Highline Canal @ Hwy 99.....	Merced.....	44
14. Highline Canal @ Lombardy Ave	Merced.....	46
15. Hilmar Drain @ Central Ave	Merced.....	48
<i>Hilmar Drain @ Tuolumne Rd.....</i>	Merced	
<i>Hilmar Drain @ Mitchell Rd.....</i>	Merced	
<i>Reclamation Drain @ Williams Ave.....</i>	Merced	
16. Howard Lateral @ Hwy 140	Merced.....	50
17. Lateral 2 ½ near Keyes Rd.....	Stanislaus.....	52
18. Livingston Drain @ Robin Ave.....	Merced.....	54
19. McCoy Lateral @ Hwy 140	Merced.....	56
20. Merced River @ Santa Fe.....	Merced.....	58
21. Miles Creek @ Reilly Rd	Merced.....	60
22. Mootz Drain @ Langworth Rd	Stanislaus.....	62
23. Mootz Drain downstream of Langworth Pond	Stanislaus.....	64
24. Mustang Creek @ East Ave.....	Merced.....	66
25. Prairie Flower Drain @ Crows Landing Road	Stanislaus.....	68
<i>Prairie Flower Drain @ Morgan Rd</i>	Stanislaus	
26. Rodden Creek @ Rodden Rd.....	Stanislaus.....	70
27. Silva Drain @ Meadow Drive	Merced.....	72
28. Westport Drain @ Vivian Rd.....	Stanislaus.....	74

Italics — Additional Management Plan monitoring site.

Ash Slough at Avenue 21

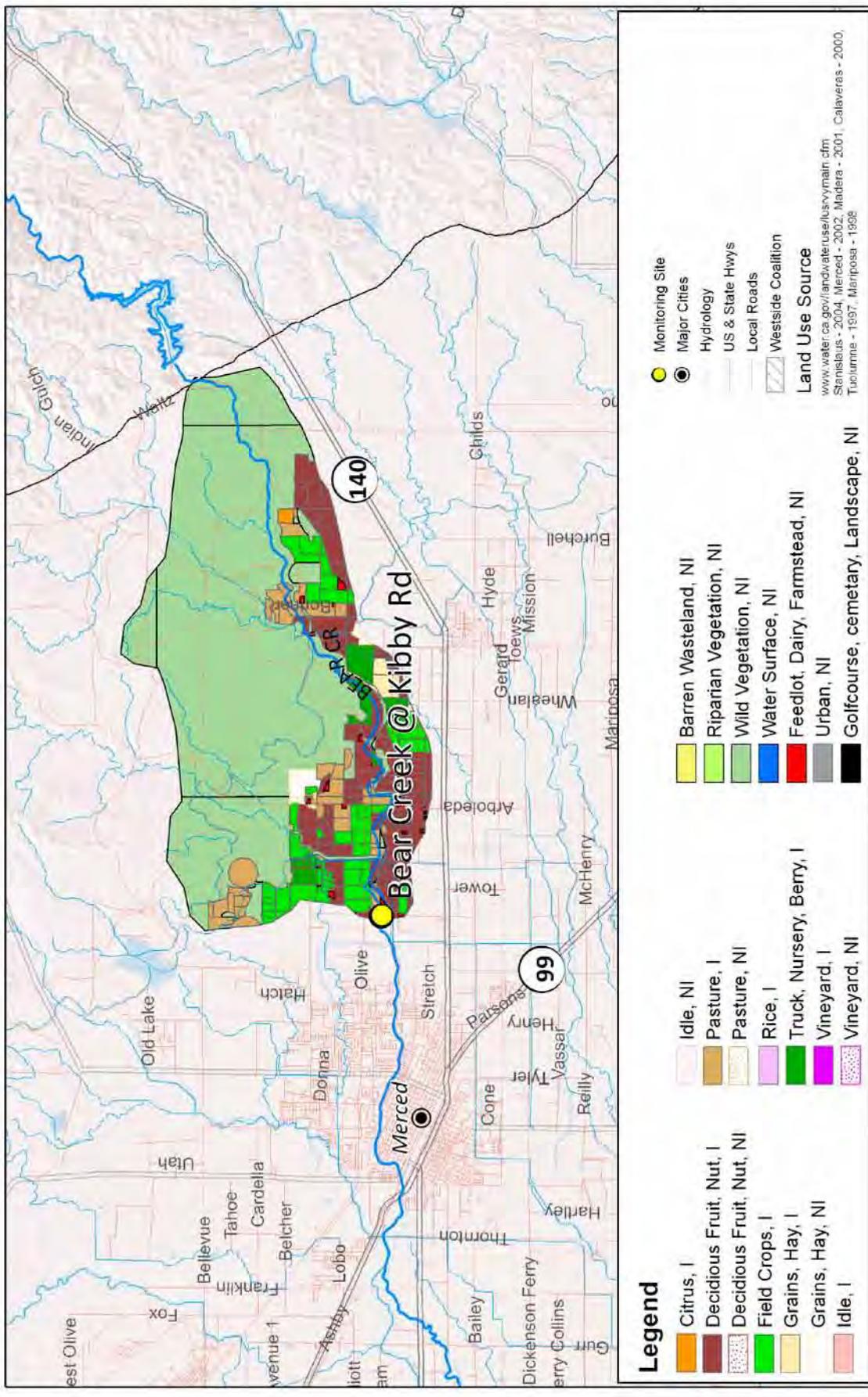


Ash Slough @ Ave 21						
Date Sampled	Oxygen, Dissolved 7 mg/L	E. coli 235 MPN /100 mL	Copper ¹ µg/L (variable)	Lead ¹ µg/L (variable)	Chlorpyrifos 0.015 µg/L	Algae toxicity Based on growth
7/12/2005		500			0.018	
8/16/2005		500			0.046	
2/28/2006		500			0.016	
3/15/2006					0.029	toxic
5/16/2006			4.8 (2.6)	0.68 (0.46)		
6/13/2006		770	17 (3.3)	1.6 (0.69)		
7/11/2006			6.7 (4.1)			
8/8/2006			6.3 (3.1)			
9/12/2006			9.3 (3.3)			
5/19/2009	6.99		3.0 (2.2)			
4/20/2010			3.2 (1.67)			

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Bear Creek at Kibby Road



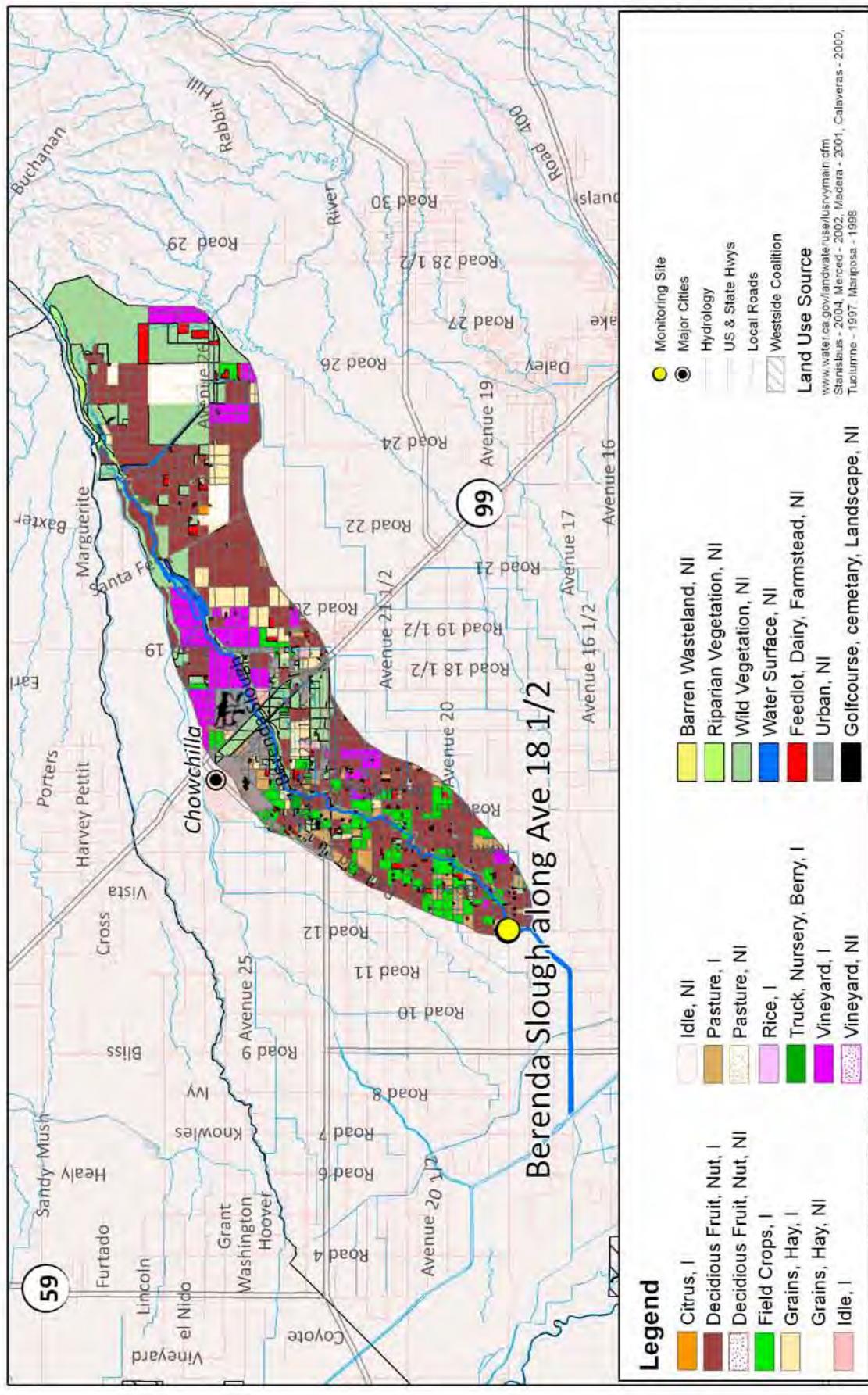
Bear Creek @ Kibby Road

Date Sampled	Oxygen, Dissolved 7 mg/L	pH 6.5 – 8.5 units	E. coli 235 MPN/100 mL	Arsenic 10 µg/L (variable)	Copper ¹ µg/L	Chlorpyrifos 0.015 µg/L	DDT 0.00059 µg/L	Water flea toxicity Based on survival	Algae toxicity Based on growth	Sediment toxicity Based on survival
3/21/2005	4.4		1600							
5/10/2005			280							
3/15/2006			1600							
5/17/2006							0.52			
6/13/2006	6.99	8.69								
2/12/2007			2400							
3/1/2007			1300							
7/24/2007							0.049			
8/21/2007	8.69									
1/24/2008			2400				8.6 (7.7)			
2/25/2008			>2400				7.2 (6.4)			
3/4/2008	8.72									
4/29/2008										
5/7/2008										
6/24/2008			17				7.1 (2.4)			
8/26/2008										
8/28/2008										
10/2/2008										

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Berenda Slough along Avenue 18 1/2 (Road 19)



Berenda Slough along Avenue 18 1/2 (Road 19)

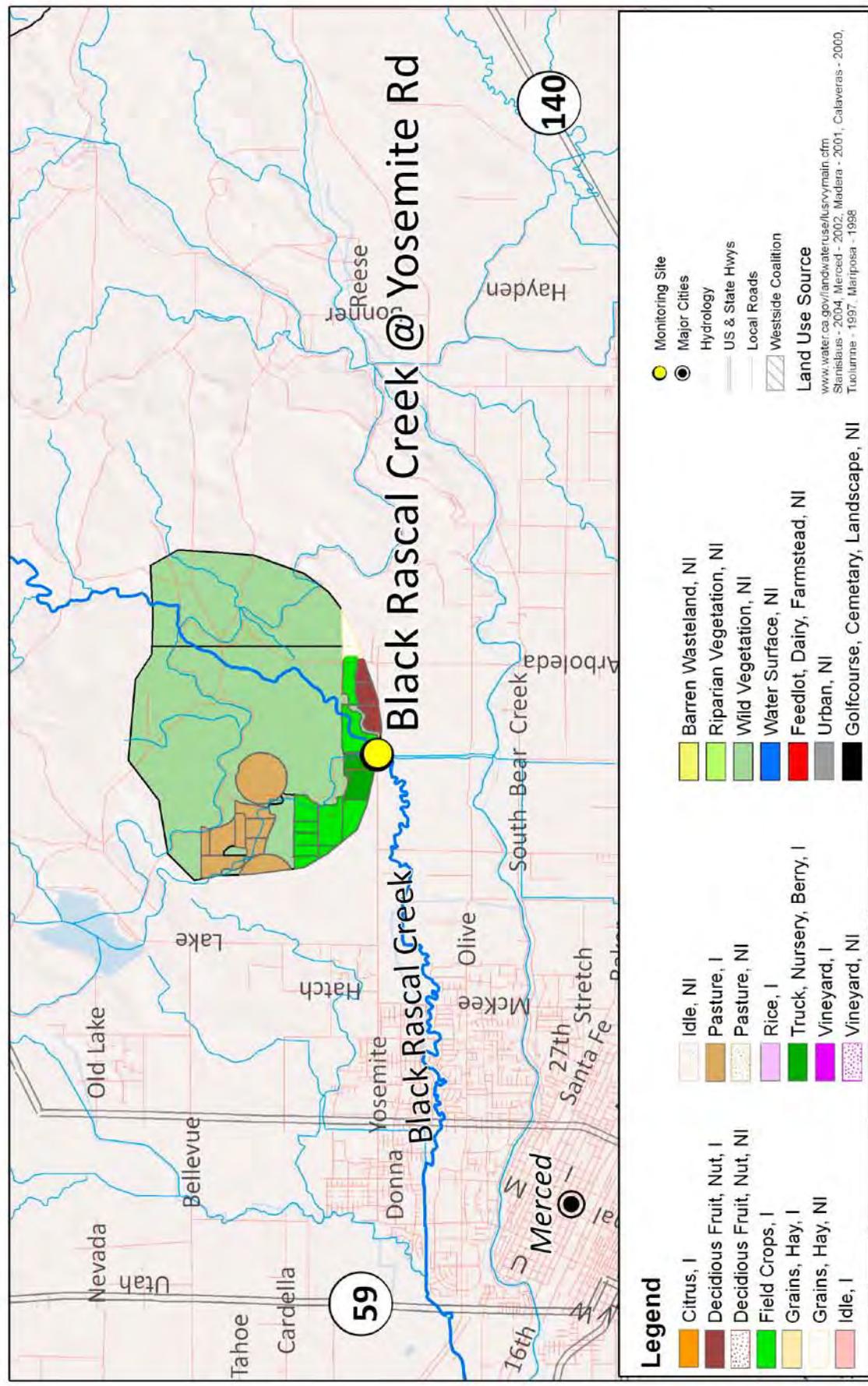
Site Name	Date Sampled	Oxygen, Dissolved	E. coli	Copper ¹	Azinphos methyl	Chlorpyrifos	Diuron	Water flea toxicity	Algae toxicity
		7 mg/L	235 MPN/100 mL	µg/L (variable)	0.01 µg/L	0.015 µg/L	2 µg/L	Based on survival	Based on growth
Along Ave 18 1/2	6/13/2006	5.49	460						
Along Ave 18 1/2	7/11/2006	6.54					0.043		
Along Ave 18 1/2	9/12/2006						0.14		toxic
Along Ave 18 1/2	5/29/2007	1.75						3.4	toxic
Along Ave 18 1/2	6/5/2007	3.07							
Along Ave 18 1/2	6/26/2007	5.2	390				0.028		toxic
Along Ave 18 1/2	7/24/2007	6.37							toxic
Along Ave 18 1/2	7/31/2007	4.72							
Along Ave 18 1/2	8/21/2007	6.13							
Along Ave 18 1/2 @ Rd 19	7/29/2008	1.1							
Along Ave 18 1/2	1/18/2011		520	6.8 (2.65)					
Along Ave 18 1/2	2/17/2011		400	3.6 (1.87)					
Along Ave 18 1/2	3/17/2011	6.72							
Along Ave 18 1/2	4/19/2011			3.3 (1.36)	0.19		0.021		
Along Ave 18 1/2	5/17/2011				3.8 (1.57)				
Along Ave 18 1/2	6/21/2011				3.6 (1.46)				
Along Ave 18 1/2	7/19/2011				2.6 (1.03)				
Along Ave 18 1/2	8/16/2011		290	2.3 (1.25)					
Along Ave 18 1/2	9/13/2011		370	2.1 (1.46)					

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Italics – Additional Management Plan Monitoring site.

¹WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Black Rascal Creek at Yosemite Road



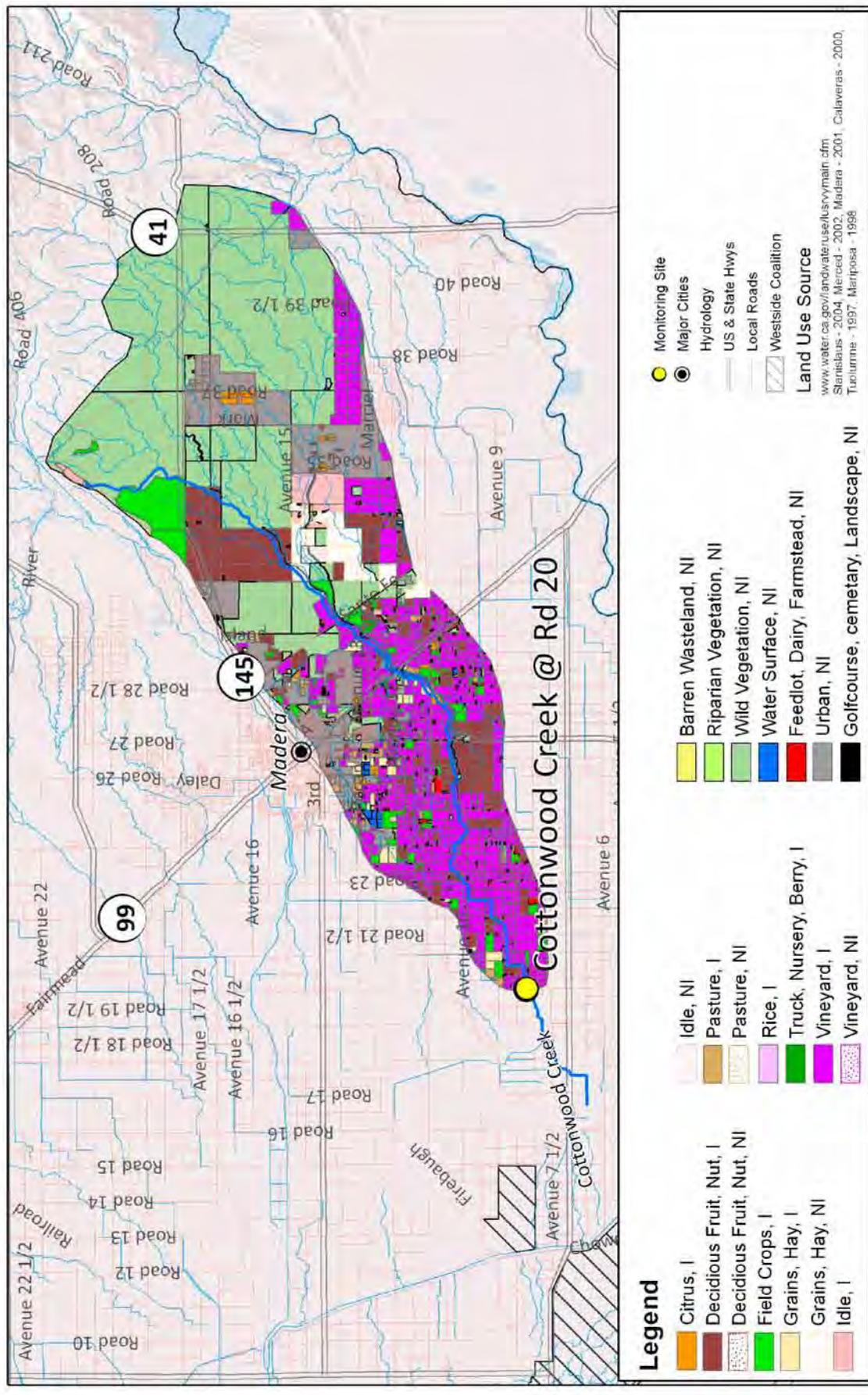
Black Rascal Creek @ Yosemite Road

Date Sampled	Oxygen, Dissolved 7 mg/L	pH 6.5 – 8.5 units	E. coli MPN/100 mL	Copper ¹ µg/L (variable)	Lead ¹ µg/L (variable)	Chlorpyrifos 0.015 µg/L	Water flea toxicity Based on survival	Algae toxicity Based on growth	Sediment toxicity Based on survival
5/18/2006	5.41		235						
6/14/2006			2400						
7/12/2006	5.53		490						
8/9/2006	5.65								
9/12/2006	5.56								
2/12/2007			2400						
3/1/2007			2400						
5/29/2007	3.93		770						
6/26/2007	6.95								
7/24/2007			580						
7/31/2007									
8/21/2007	6.42								
8/23/2007	5.69								
8/28/2007	6.18								
9/18/2007									
1/24/2008			>2400						
2/25/2008			>2400						
4/29/2008		8.75	770						
5/27/2008			920						
6/24/2008			490						
7/8/2008	2.3								
7/29/2008	4.49								
8/5/2008	5.58								
8/26/2008	2.58								
8/28/2008	2.26								
9/9/2008	4.18								
9/30/2008	5.02								
10/2/2008	5.05								

* Water Quality Trigger Limits (WQLs) are indicated below the column headers. WQLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹ WQL is based on hardness measured in each water sample and is indicated in parenthesis.

Cottonwood Creek at Road 20



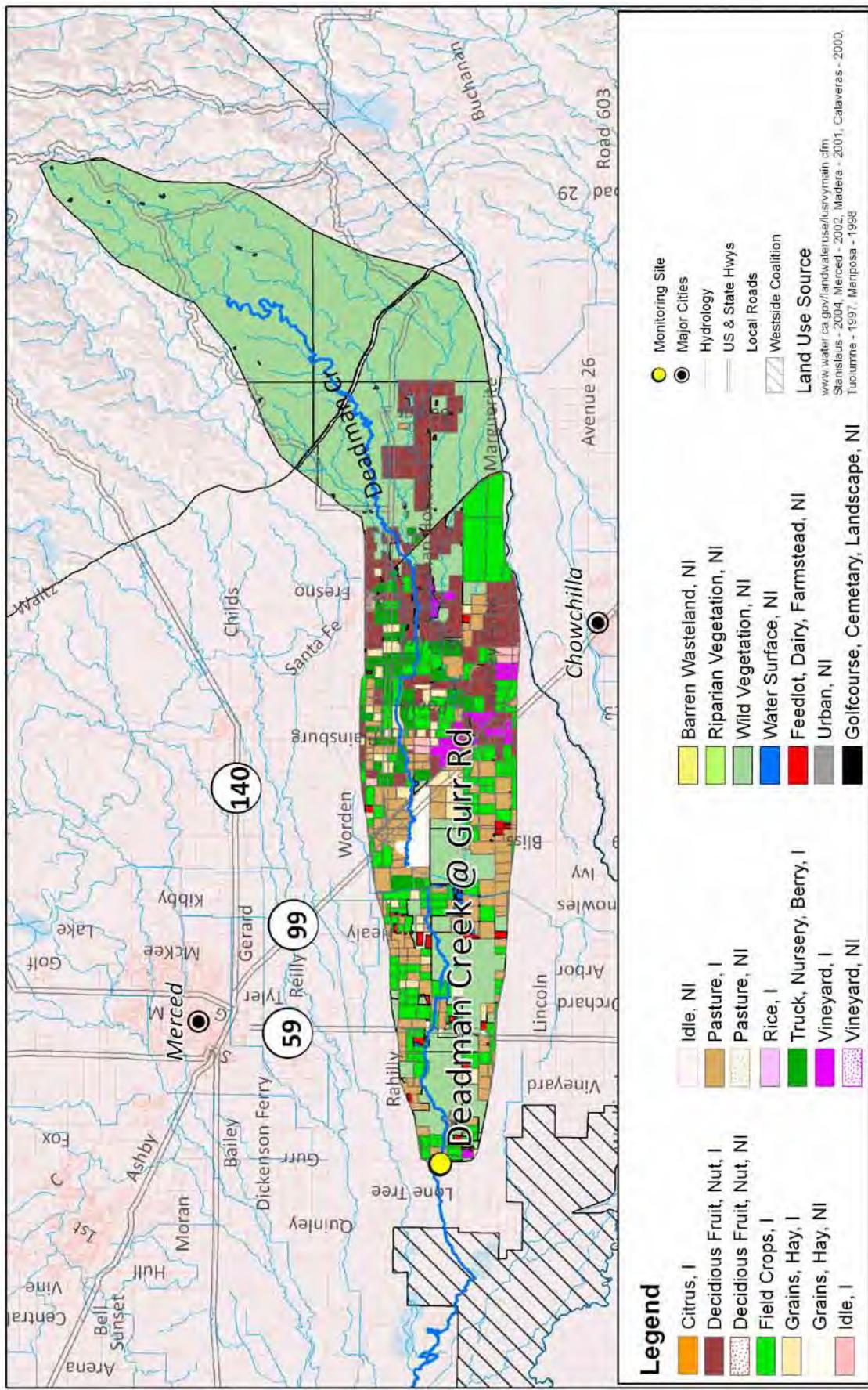
Cottonwood Creek @ Road 20

Date Sampled	Oxygen, Dissolved	pH	E. coli	Copper ¹	Lead ¹	Chlorpyrifos	Cyanazine	Diazinon	Diuron	Simazine	Fathead minnow toxicity	Algae toxicity	Sediment toxicity
	7 mg/L	6.5-8.5 units	235 MPN /100 mL	µg/L (variable)	µg/L (variable)	0.015 µg/L	1.0 µg/L	0.1 µg/L	2 µg/L	4.0 µg/L	Based on survival	Based on growth	Based on survival
5/29/2007	6.55			6.7 (5.5)									
6/19/2007				6.7 (4.4)									
6/26/2007				4.3 (4.1)									
7/24/2007	9.04			5.4 (4.6)									
8/21/2007	6.81			5.2 (4.6)									
8/23/2007	3.95												
1/25/2008		1200	24 (3.0)	5.4 (0.57)	0.019						68		
2/25/2008			21 (6.5)	1.9 (1.87)	0.040						0.2	65	5.1
3/4/2008													
4/29/2008		580	8 (6.9)										
5/7/2008													
5/27/2008		250											
6/24/2008		1300	39 (5.5)										
7/29/2008			1000										
8/26/2008	6.83			390	4.4 (3.7)								
2/7/2009				>2400									
5/19/2009	6.72												
11/17/2009		770											
1/19/2010									0.210				
4/20/2010	6.36												
5/18/2010													
6/15/2010											2000		
7/20/2010	6.80												
8/17/2010	6.04												
9/14/2010	6.44												
10/19/2010											290		
4/19/2011	6.70												
5/17/2011											4.6 (3.83)		
6/21/2011											3.8 (3.02)		
7/19/2011											550		
8/16/2011											4.3 (3.56)		
9/13/2011											250		
											5.8 (3.20)		

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Deadman Creek at Gurr Road



Deadman Creek @ Gurr Road

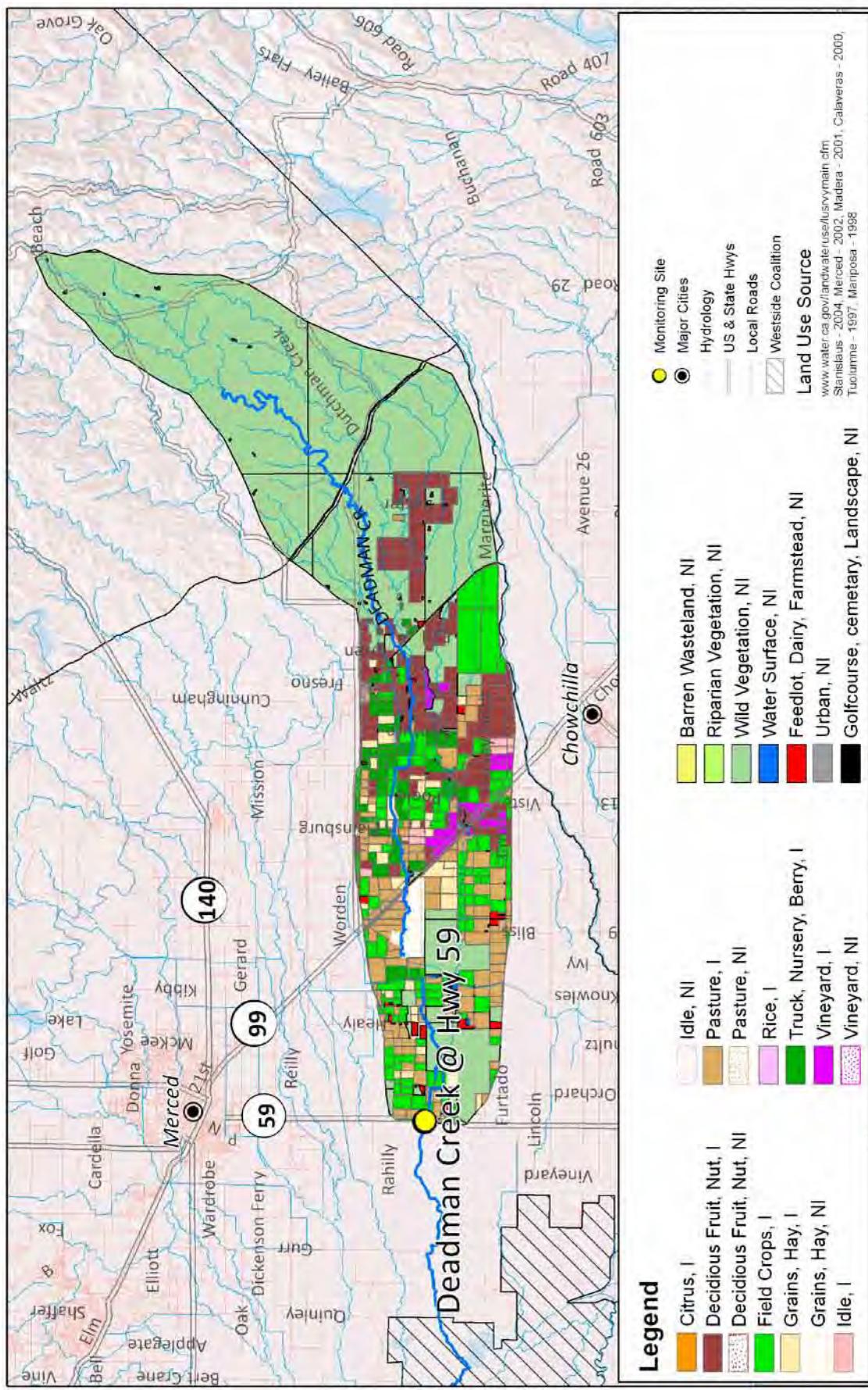
Date Sampled	Oxygen, Dissolved	pH	Specific Conductivity	E. coli	Total Dissolved Solids	Ammonia	Arsenic	Copper ¹	Chlorpyrifos	DDT	Dieldrin	Malathion ²	Fathead minnow toxicity	Algae toxicity	Water Flea
	7 mg/L	6.5–8.5	700 µmhos/cm	MPN/100mL	450 mg/L	1.5 mg/L	10 µg/L	(variable)	0.015 µg/L	0.00059 µg/L	0.00014 µg/L	0 µg/L	Based on growth	Based on survival	Based on survival
4/29/2008				>2400				18				0.03			
5/27/2008				801				520							
6/24/2008	4.85														
7/29/2008	6.87														
8/26/2008	5.21				330										
8/28/2008	5.9														
9/30/2008	5.46				330										
10/21/2008						1400					12				
11/11/2008						370					14				
12/16/2008						1400									
1/20/2009	5.61				762	>2400		470	5.5	18			toxic		
2/7/2009	1.01				1802	>2400		1100	50	30			toxic	toxic	toxic
3/17/2009						1600					14				
5/19/2009						490									
6/16/2009						730									
7/21/2009	6.04					460									
8/18/2009	6.94														
9/22/2009							490								
10/20/2009	6.08						2000								
11/17/2009								995	>2400	610	15		toxic		
12/15/2009	5.02								>2400						
1/19/2010									>2400						
2/23/2010									370						
3/23/2010	0.20					4023	>2400		2100	155.4					
4/20/2010									280						
5/18/2010									240						
6/15/2010	4.56								370						
7/20/2010	6.60								580						
8/17/2010	6.77														
9/14/2010	6.82									360					
10/19/2010									340						
11/16/2010	6.82					1547	>2400		840	31	14				
12/14/2010	5.20								>2400						

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹ WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

² Malathion is a prohibited discharge pesticide and any detection of the constituent in a water body is considered an exceedance.

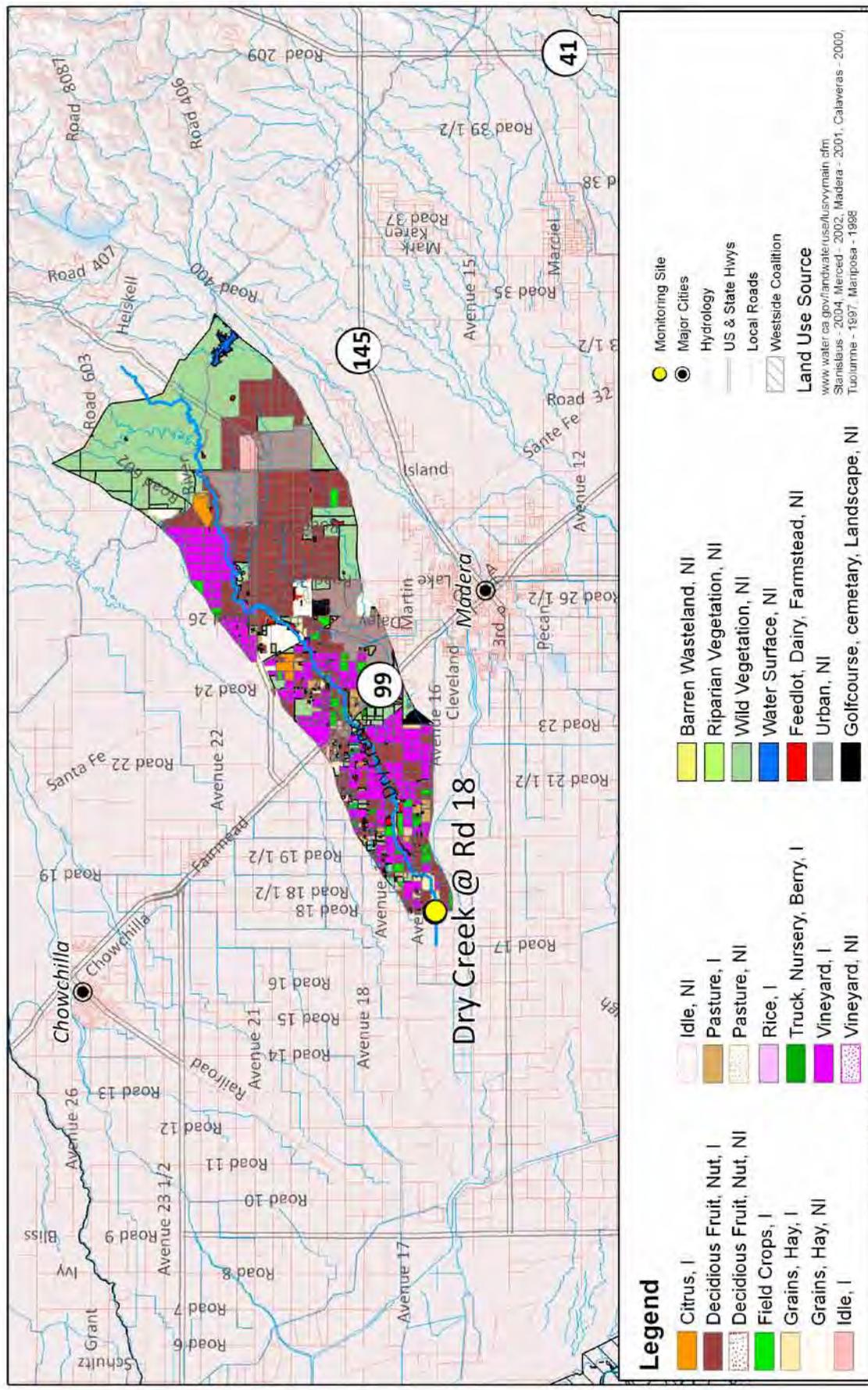
Deadman Creek at Highway 59



Deadman Creek @ Highway 59

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Dry Creek at Road 18



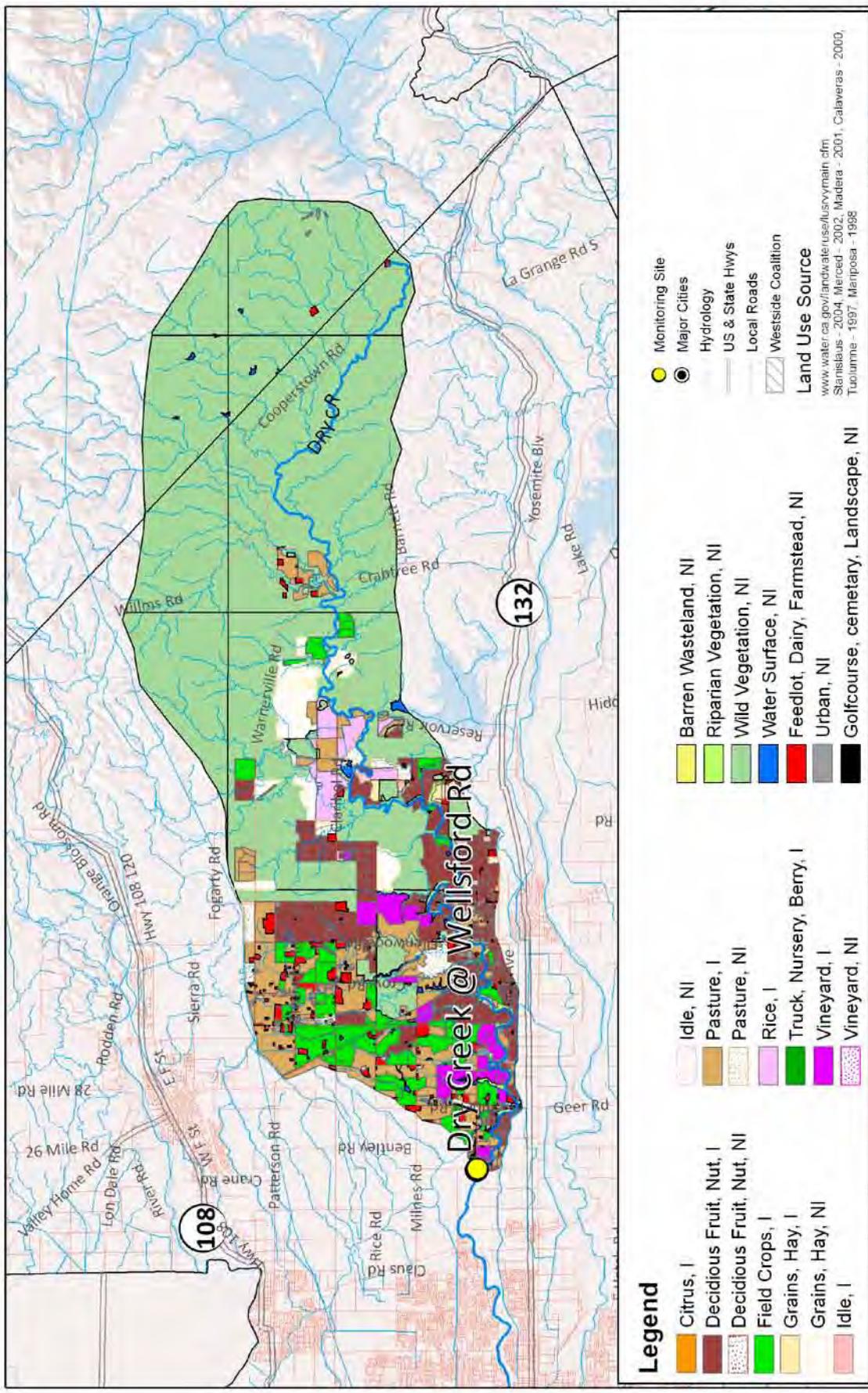
Dry Creek @ Road 18 (Rd 22 and 28 ½)													
Site Name	Date Sampled	Oxygen, Dissolved 7 mg/L	pH 6.5 – 8.5 units	E.coli 235 MPN/100mL	Copper ¹ µg/L (variable)	Lead ¹ µg/L (variable)	Zinc ¹ µg/L (variable)	Chlorpyrifos 0.015 µg/L	Diazinon 0.1 µg/L	Diuron 2 µg/L	Water flea Toxicity Based on survival	Algae toxicity Based on growth	Sediment toxicity Based on survival
Rd 18	2/11/2007				14 (3.9)						0.13		
Rd 18	4/24/2007			1400	17 (15.4)						0.017		
Rd 18	5/29/2007					4.7 (2.4)							
Rd 18	6/19/2007					4.9 (1.5)							
Rd 18	6/26/2007					3.6 (1.9)							
Rd 18	7/24/2007					5.6 (2.2)							
Rd 18	7/31/2007					4.5 (1.5)							
Rd 18	8/21/2007					5.5 (1.9)		0.34 (0.31)					
Rd 18	8/28/2007		8.53			4.3 (1.9)							
Rd 18	1/25/2008			>2400			33 (5.5)						
Rd 18	2/25/2008						33 (5.5)						
Rd 18	3/4/2008												
Rd 18	4/29/2008												
Rd 22	4/29/2008		8.8			6.8 (3.0)							
Rd 18	5/27/2008					5.2 (3.0)							
Rd 22	5/27/2008						5 (3.5)						
Rd 18	6/24/2008						5.7 (4.1)						
Rd 22	6/24/2008						4 (2.6)						
Rd 18	7/29/2008						6.5 (2.6)						
Rd 22	7/29/2008						5.9 (1.5)						
Rd 28 1/2	7/29/2008						7 (2.4)						
Rd 18	8/26/2008		5.82				5.3 (1.7)						
Rd 22	8/26/2008							5.1 (1.3)		0.36 (0.17)			
Rd 18	8/28/2008		5.62					6.5 (1.5)					
Rd 22	9/30/2008		3.97										
Rd 18	1/18/2011							36 (8.2)					
Rd 18	2/17/2011								12 (8.65)				
Rd 18	4/19/2011									3.9 (3.20)			
Rd 18	5/17/2011										2.9 (1.36)		
Rd 18	6/21/2011										4.8 (1.03)		
Rd 18	7/19/2011										4.3 (0.81)		
Rd 18	8/16/2011										5.0 (0.81)		
Rd 18	9/13/2011										4.6 (1.03)		

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org.

¹ WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Italics – Additional Management Plan Monitoring site.

Dry Creek at Wellsford Road (Waterford Road)



Dry Creek @ Wellsford Road (Waterford Rd)

Site Name	Date Sampled	DO	pH	SC	E. coli	Total Dissolved Solids	Copper ¹	Lead ¹	Chlorpyrifos	Diuron	Thiobencarb ²	Water flea toxicity	Algae toxicity	Sediment toxicity
		7 mg/L	6.5–8.5 units	700 µS/cm	235 MPN/100 mL	450 mg/L (variable)	µg/L (variable)	0.015 µg/L	2 µg/L	0 µg/L	Based on survival	Based on growth	Based on survival	Based on survival
Wellsford Rd	12/16/2008	2.77	8.68											
Wellsford Rd	1/20/2009	5.10		707										
Wellsford Rd	3/17/2009													
Wellsford Rd	5/19/2009	6.24												
Wellsford Rd	6/16/2009													
Wellsford Rd	7/21/2009	5.90												
Waterford Rd	7/21/2009	6.89												
Wellsford Rd	8/18/2009													
Wellsford Rd	10/20/2009	4.04												
Wellsford Rd	11/17/2009	3.04												
Wellsford Rd	12/15/2009	6.65												
Wellsford Rd	1/19/2010	2.05												
Wellsford Rd	4/20/2010	6.99												
Wellsford Rd	5/18/2010													
Wellsford Rd	6/15/2010	5.77												
Wellsford Rd	7/20/2010	6.30												
Wellsford Rd	8/17/2010	6.91												
Wellsford Rd	10/19/2010	6.01												
Wellsford Rd	11/16/2010	5.36		6.14										
Wellsford Rd	1/18/2011								660					
Wellsford Rd	3/17/2011													
Wellsford Rd	4/19/2011													
Wellsford Rd	5/10/2011													
Wellsford Rd	6/14/2011	6.36												
Wellsford Rd	7/12/2011	6.82												
Wellsford Rd	8/9/2011	6.52												
Wellsford Rd	9/6/2011													
														toxic

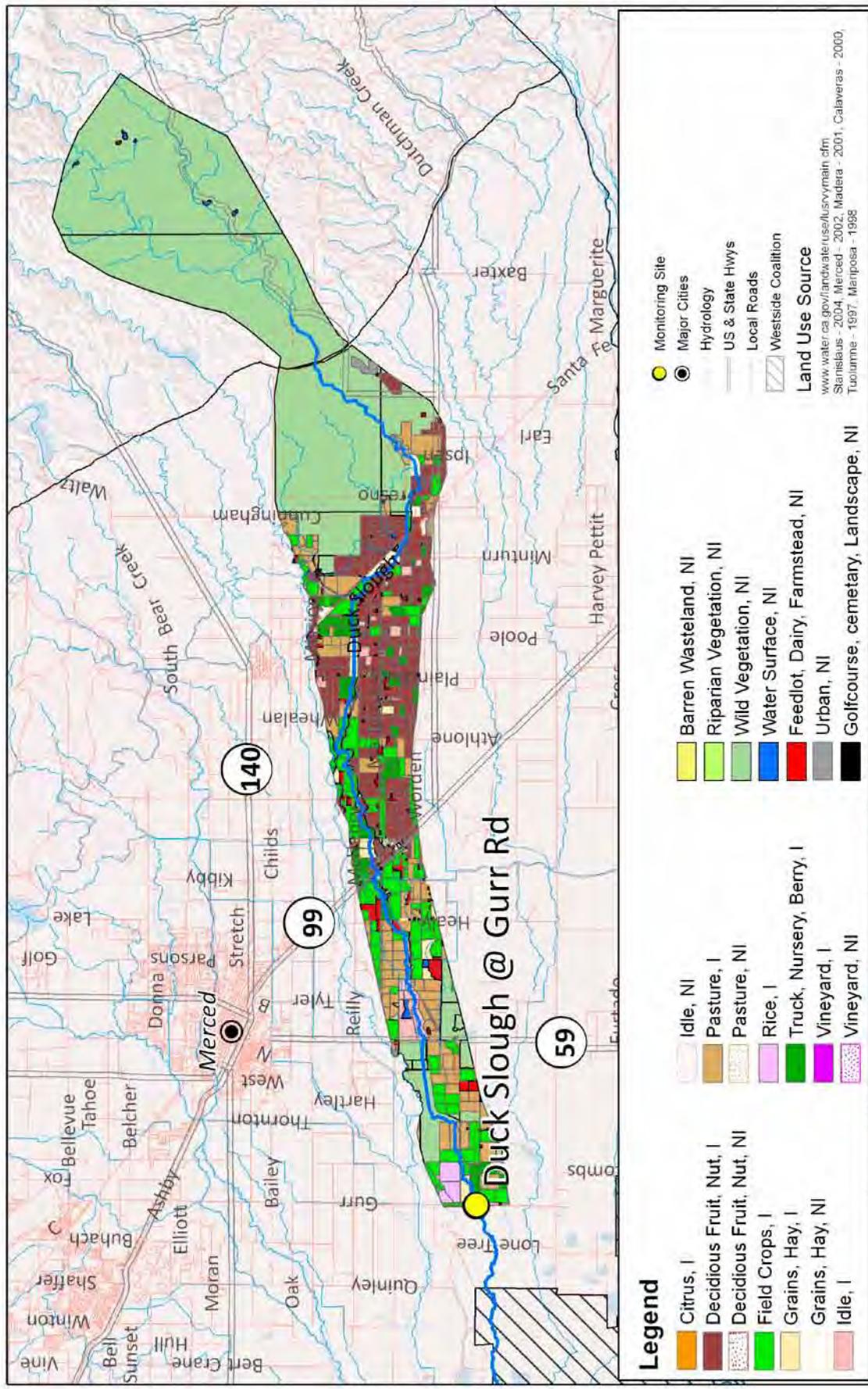
* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹ WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

²-Thiobencarb is a prohibited discharge pesticide and any detection of the constituent in a water body is considered an exceedance.

Italics – Additional Management Plan Monitoring site.

Duck Slough at Gurr Road (Highway 59)



Duck Slough @ Gurr Road (Highway 59)

Site Name	Date Sampled	Oxygen, Dissolved	pH	Specific Conductivity	E. coli	Total Dissolved Solids	Nitrate as N	Copper ¹	Lead ¹	Carbofuran ²	Chlorpyrifos	Thiobencarb ²	Water flea toxicity	Algae toxicity	Sediment toxicity
Gurr Rd	7/12/2006	7 mg/L	6.5 - 8.5 units	700 μ mhos/cm	235 MPN/100 mL	450 mg/L	10 mg/L	μ g/L (variable)	0 μ g/L	0.015 μ g/L	0 μ g/L	Based on survival	Based on growth	Based on survival	
Gurr Rd	9/13/2006		5.53						14 (9.3)				0.29		
Gurr Rd	2/12/2007					2400									
Gurr Rd	2/28/2007					2000									
Gurr Rd	3/7/2007		9.17												
Gurr Rd	5/29/2007					820									
Gurr Rd	6/19/2007		5.85												
Gurr Rd	6/26/2007														
Gurr Rd	7/24/2007														
Gurr Rd	9/18/2007					370									
Gurr Rd	1/25/2008					>2400									
Gurr Rd	2/25/2008					>2400									
Gurr Rd	4/29/2008														
Hwy 59	6/24/2008		4.22			841									
Hwy 59	7/29/2008		4.83												
Gurr Rd	8/28/2008														
Hwy 59	9/30/2008		3.33												
Gurr Rd	10/2/2008														
Gurr Rd	2/7/2009														
Gurr Rd	3/17/2009		9.7												
Gurr Rd	5/19/2009														
Gurr Rd	9/22/2009		9.03												
Gurr	11/17/2009					1215									
Gurr	12/15/2009														
Gurr	7/20/2010														
Gurr	9/14/2010														
Gurr	10/19/2010														
Gurr	2/17/2011														
Gurr	3/15/2011		6.78												
Gurr	6/21/2011														
Gurr	8/16/2011														
Gurr	9/6/2011														

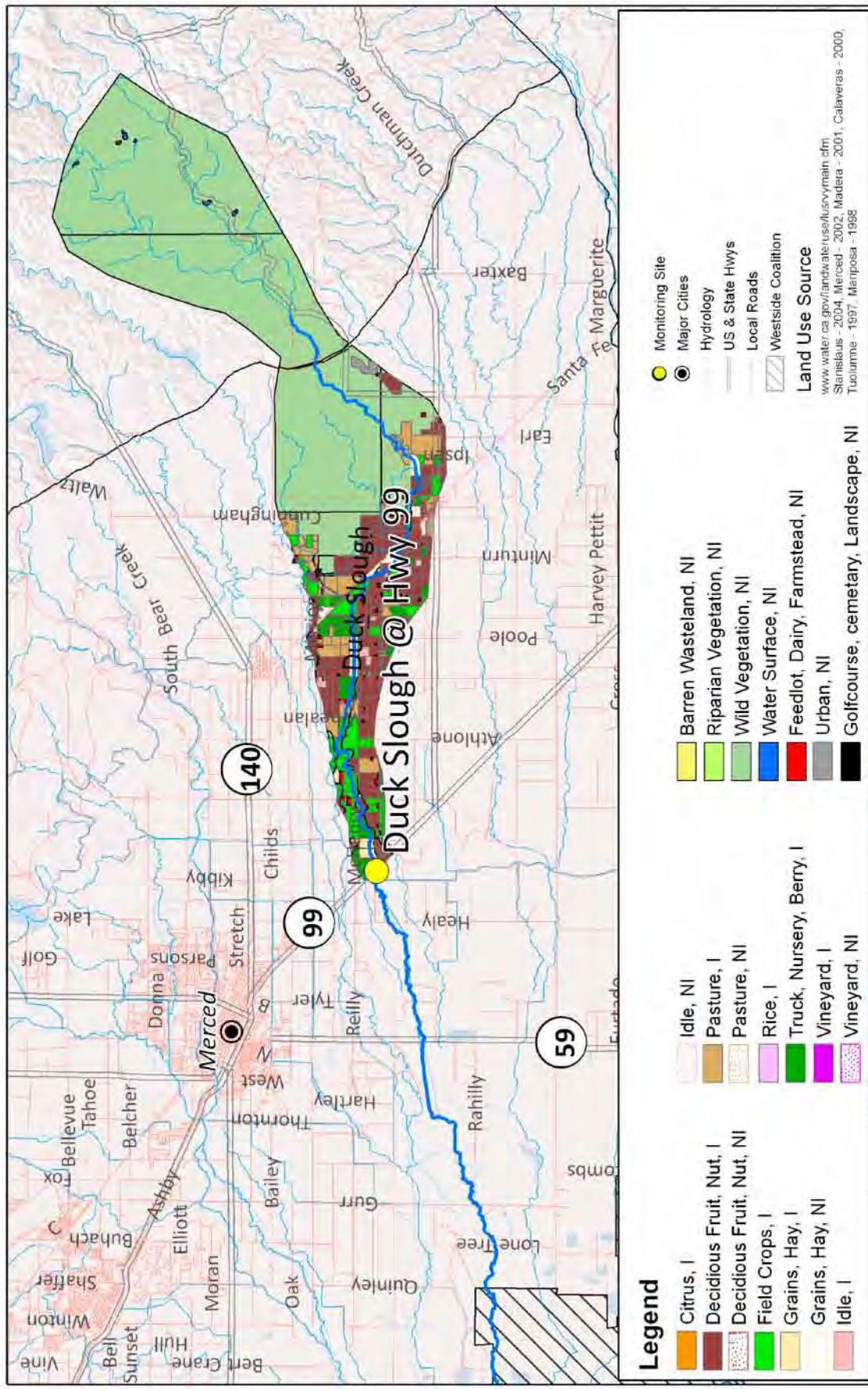
* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website: www.esjcoalition.org

¹ WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

² Thiobencarb and carbofuran are prohibited discharge pesticides and any detection of either constituent in a water body is considered an exceedance.

Italics – Additional Management Plan Monitoring site.

Duck Slough at Highway 99



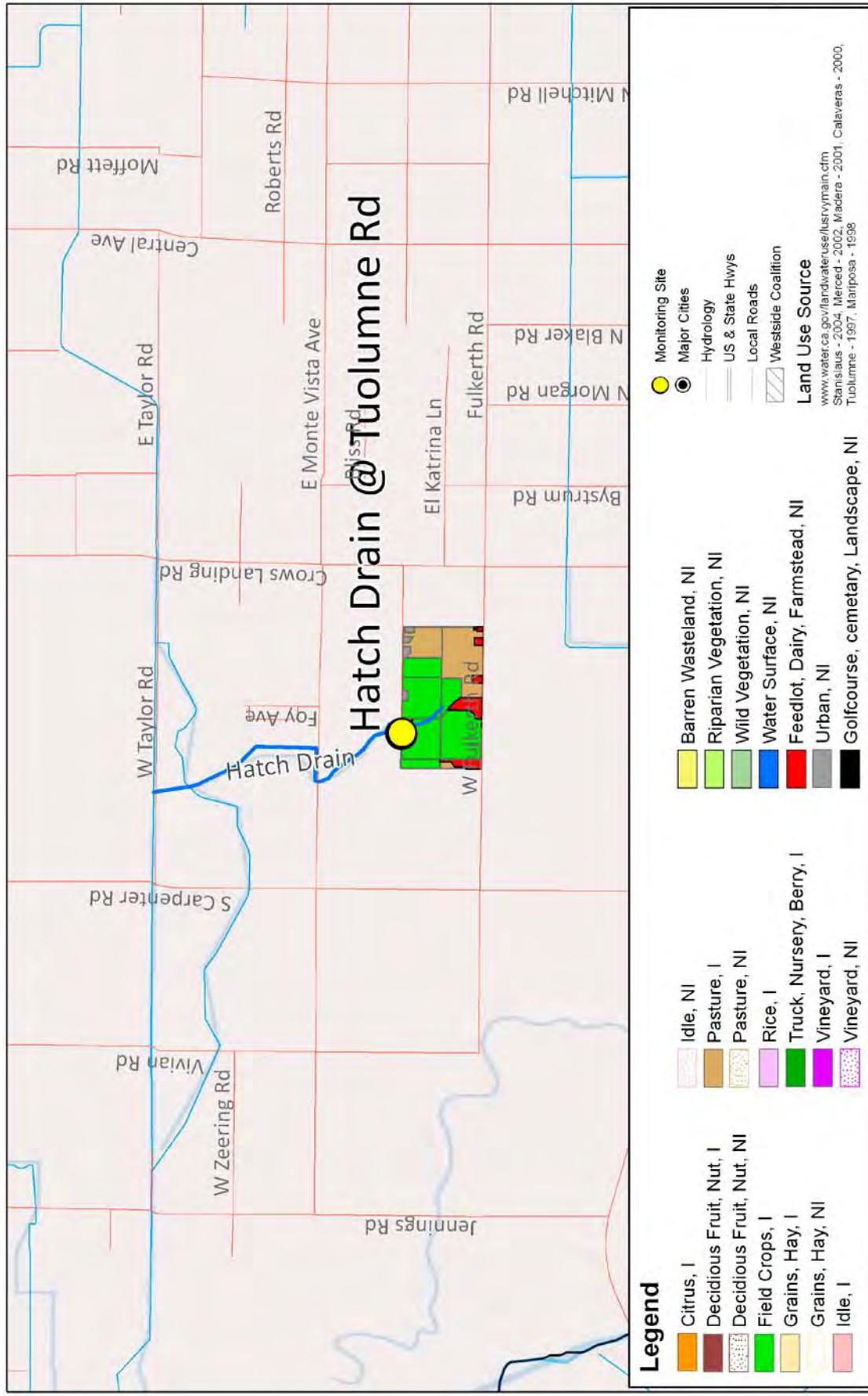
Duck Slough @ Hwy 99 (Whealan Rd)											
Site Name	Date Sampled	Oxygen, Dissolved 7 mg/L	pH 6.5 – 8.5	Specific Conductivity 700 μ mhos/cm	E. coli 235 MPN/100 mL	Copper ¹ μ g/L (variable)	Lead ¹ μ g/L (variable)	Chlorpyrifos 0.015 μ g/L	Water flea toxicity Based on survival	Algae toxicity Based on growth	Sediment toxicity Based on survival
Hwy 99	3/21/2005				1600						
Hwy 99	5/10/2005				1600						
Hwy 99	7/12/2005										
Hwy 99	3/15/2006										
Hwy 99	5/17/2006		8.57								
Hwy 99	6/14/2006				260						
Hwy 99	8/8/2006					3.4 (2.4)	2.3 (0.41)				
Hwy 99	9/13/2006	6.72				340	19 (5)	24 (1.25)			
Hwy 99	2/12/2007					2400	31 (10.1)	15 (3.59)			
Hwy 99	2/28/2007				2400						
Hwy 99	4/24/2007					4.1 (3.7)	1.5 (0.81)				
Hwy 99	6/26/2007					3 (2.4)	0.68 (0.41)				
Hwy 99	7/24/2007					3.5 (3)	0.64 (0.57)				
Hwy 99	7/31/2007	8.8					0.042				
Hwy 99	8/21/2007					5.5 (3.3)	1.1 (0.69)				
Hwy 99	8/28/2007					3.1 (2.4)					
Hwy 99	9/18/2007					610	6.9 (2.8)	1.8 (0.52)			
Hwy 99	1/25/2008					>2400					
Hwy 99	2/25/2008					>2400	9.9 (8.0)				
Hwy 99	3/4/2008				8.65						
Hwy 99	4/29/2008					280					
Hwy 99	5/7/2008										
Whealan Rd	6/24/2008						73 (5.0)				
Hwy 99	7/29/2008						2.7 (2.6)	0.69 (0.5)			
Hwy 99	8/26/2008							0.72 (0.69)			
Hwy 99	8/28/2008										
Whealan Rd	8/28/2008						3.4 (1.9)				
Hwy 99	9/30/2008	3.33						0.034			
Whealan Rd	9/30/2008						3.7 (1.3)				
Hwy 99	10/2/2008										
Hwy 99	6/16/2009	6.78									
Hwy 99	6/16/2009										

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJ/WQC website; www.esjcoalition.org

¹WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Italics – Additional Management Plan Monitoring site.

Hatch Drain at Tuolumne Road

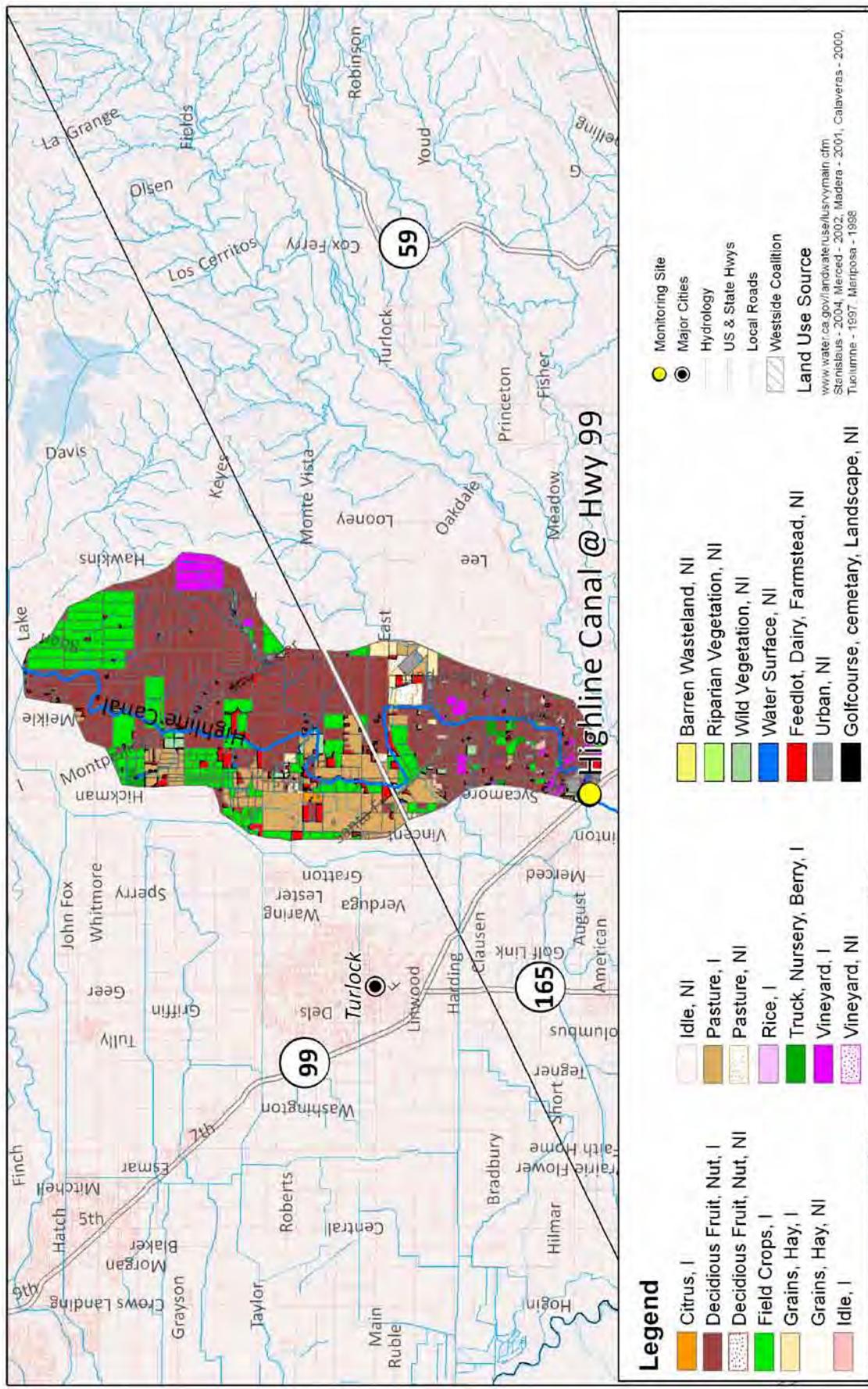


Hatch Drain @ Tuolumne Road

Date Sampled	Oxygen, Dissolved 7 mg/L	Specific Conductivity 700 μ hos/cm	Total Dissolved Solids 450 mg/L	E. coli 235 MPN /100 mL	Ammonia as N 1.5 mg/L	Nitrate as N 1.0 mg/L	Arsenic 0.00059 μ g/L	DDT 1.0 μ g/L	Dimethoate 0.03 μ g/L	Methoxychlor 1.0 μ g/L	Algae toxicity Based on growth	Sediment toxicity Based on survival
5/15/2007	6.46	1105	700	2400		13	2.2	12				
6/19/2007	5.54	1014	800	770		23		29				
7/17/2007	3.05	1111	720	260		44		18				
8/14/2007	4.22			2400	4.7	18		2.1				
8/16/2007	5.85	1280										
9/11/2007	3.53	1817	1300	1600		24		18				
1/24/2008	4.67	1199	820	410		24		15				
2/26/2008	1.9	1298	900	920		24		16				
3/4/2008	2.12	1271										
3/28/2008	5.22	1373										
4/22/2008	2.14	1274	880	1300		20		17	0.023			
4/29/2008	0.82	1323										
5/20/2008	1.67	1325	960	2400		18		18				
5/27/2008	0.73	1197										
6/17/2008	0.99	1292	930	390		18		17				
7/22/2008	0.67	1326	900	650		27		19				
7/29/2008	0.9	1301										
8/19/2008	1.4	1330	900	1400		15		17				
8/26/2008	1.1	1493										
8/28/2008	1.31	1391										
9/23/2008	1.69	1295	920			17		15				
10/2/2008	2.14	1455										

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Highline Canal at Highway 99 and at Lombardy Avenue



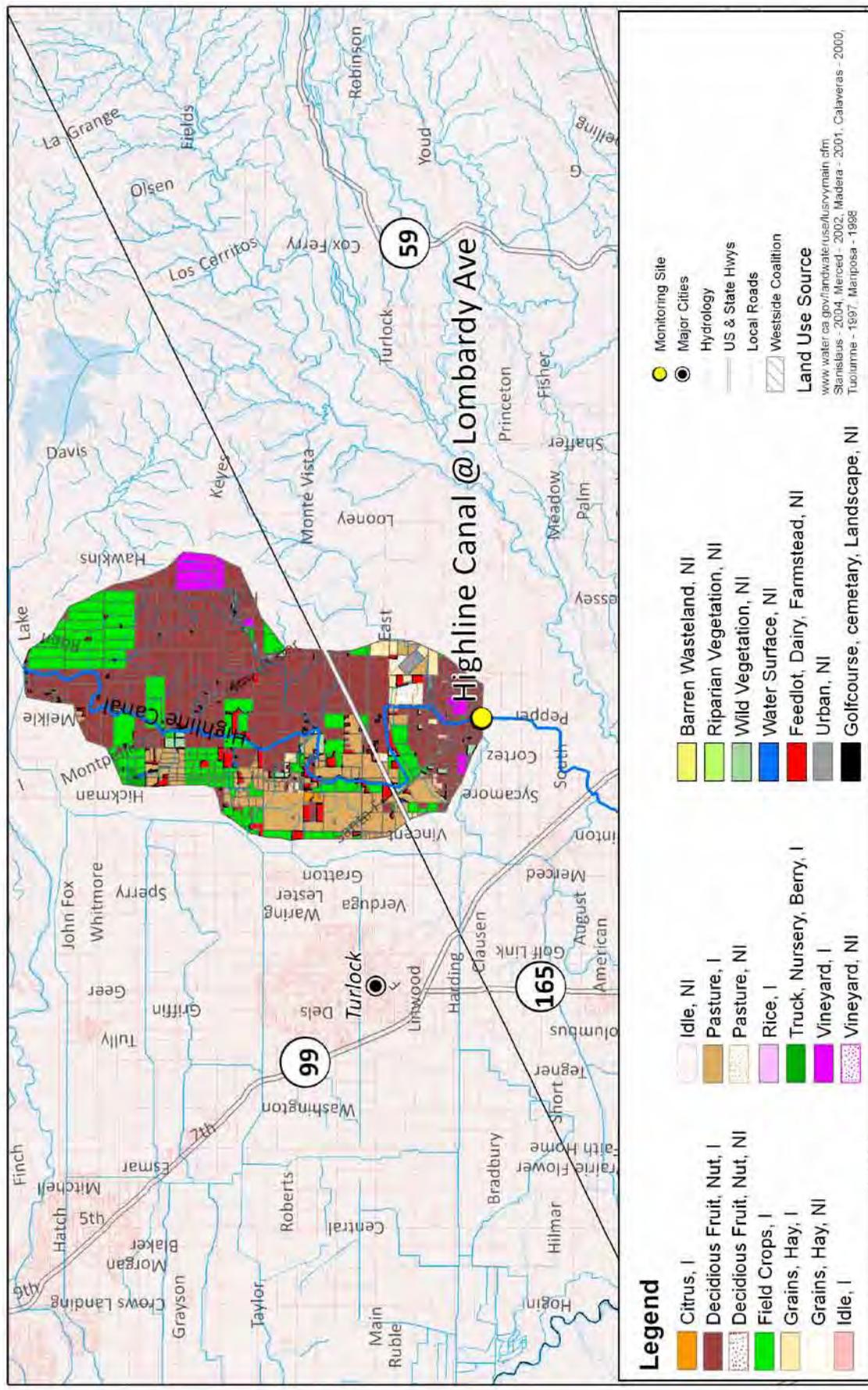
Highline Canal @ Highway 99

Date Sampled	Oxygen, Dissolved	pH	Specific Conductivity	Total Dissolved Solids	E. coli	Ammonia as N	Copper ¹	Lead ¹	Chlorpyrifos	Diuron	DDT	Water flea toxicity	Algae toxicity	Sediment toxicity
	7 mg/L	6.5-8.5 units	700 $\mu\text{mhos}/\text{cm}$	450 mg/L	235 MPN /100 mL	1.5 mg/L	$\mu\text{g/L}$ (variable)	$\mu\text{g/L}$ (variable)	0.015 $\mu\text{g/L}$	2 $\mu\text{g/L}$	0.00059 $\mu\text{g/L}$	Based on survival	Based on growth	Based on survival
2/11/2007									3 (2.2)	0.52 (0.36)				
4/17/2007									11 (10.1)	5.1 (3.59)				
5/15/2007		8.56			250									
6/19/2007						320		2.4 (1.9)	0.5 (0.31)					
7/17/2007						440		3.2 (2.2)	1 (0.36)	0.02				
8/14/2007		8.62						1.9 (1.7)	0.44 (0.26)					
9/25/2007		8.73												
1/24/2008					500	>2400	3.3	37 (14.7)	0.019	3.2				
2/26/2008					747	520	>2400	8.3	81 (16.1)					
3/4/2008		9.32												
4/22/2008								240						
5/7/2008		8.69												
5/20/2008														
6/3/2008		8.54												
7/22/2008														
8/19/2008		9.24												
8/28/2008														
9/9/2008		8.73												
10/2/2008														
2/7/2009		8.86												
5/19/2009						340								
6/16/2009														
7/21/2009												0.093		
8/18/2009														
9/22/2009														
12/15/2009														
1/19/2010														
2/23/2010														
3/15/2011														
6/14/2011													0.013	

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹ WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Highline Canal at Lombardy Avenue



Highline Canal @ Lombardy Avenue

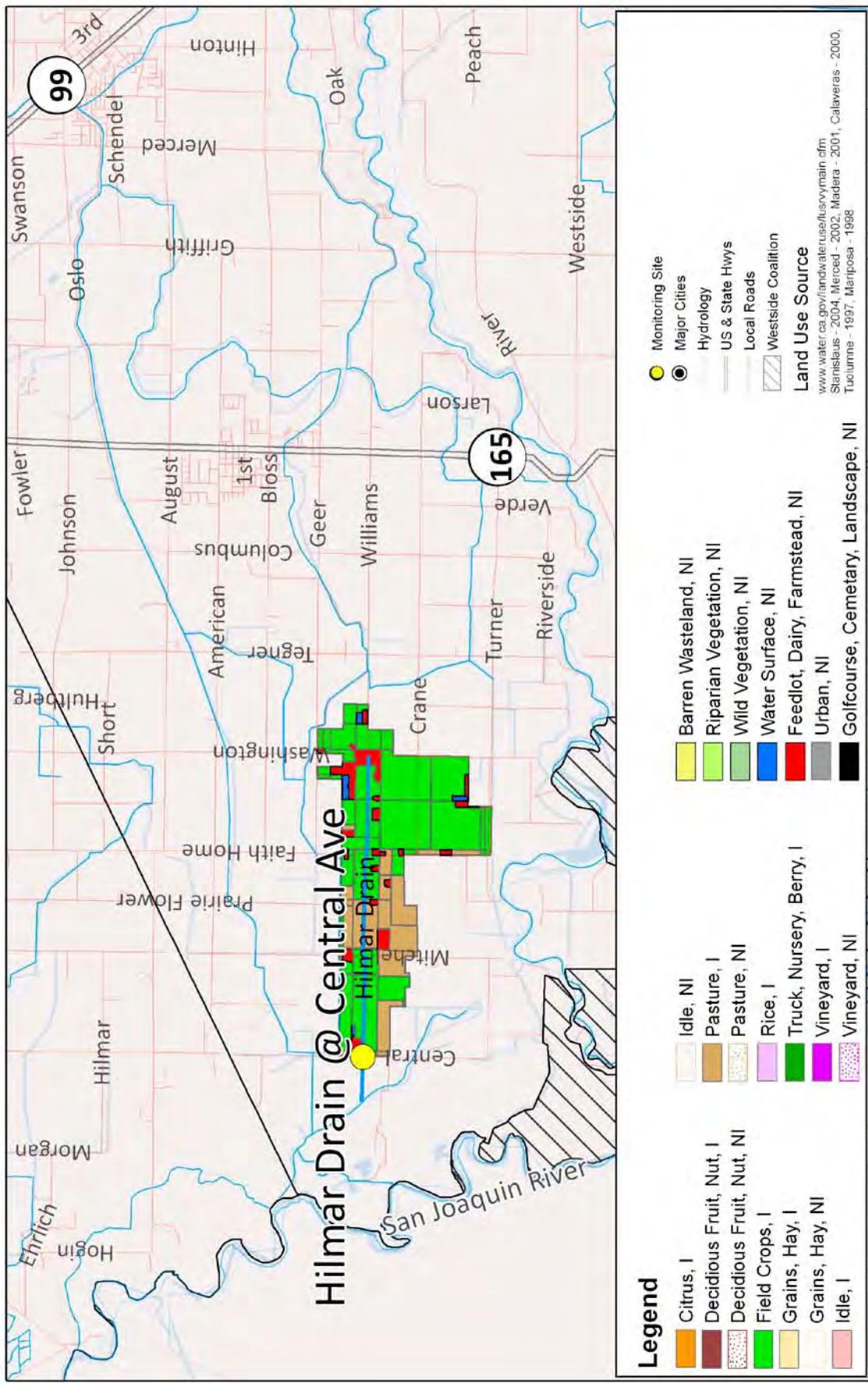
Date Sampled	DO	pH	SC	E. coli	Ammonia as N	Copper ¹	Lead ¹	Zinc ¹	Chlorpyrifos	DDE	DDT	Diuron	Malathion ²	Methyl parathion ²	Simazine	Water flea toxicity	Fathead minnow toxicity	Algae toxicity	Sediment toxicity
					MPN/100 mL	1.5 mg/L	µg/L (variable)	µg/L (variable)	0.015 µg/L	0.00059 µg/L	0.00059 µg/L	2 µg/L	0 µg/L	4.0 µg/L	Based on survival	Based on survival	Based on growth	Based on survival	
3/21/2005		7	6.5-8.5 mg/L	700 µmhos/cm	235 MPN/100 mL	1.5 mg/L	µg/L (variable)	µg/L (variable)											
5/10/2005																			toxic
8/17/2005																			toxic
3/1/2006																			
3/16/2006																			
5/2/2006																			
5/17/2006																			
6/14/2006																			
8/9/2006																			
9/13/2006																			
2/11/2007																			
2/28/2007																			
3/7/2007																			
5/15/2007																			
6/19/2007																			
7/17/2007																			
8/16/2007																			
9/11/2007																			
1/24/2008																			
1/30/2008																			
2/26/2008																			
3/4/2008	0.34		1402																
5/20/2008																			
7/8/2008			8.56																
8/19/2008			8.65																
8/28/2008																			
10/2/2008																			
4/21/2009																			
1/19/2010																			
2/23/2010			9.36																
2/17/2011																			
4/19/2011																			
6/14/2011																			

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ES/WQC website; www.escoalition.org

¹WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

² Malathion and methyl parathion are prohibited discharge pesticides and any detection of either constituent in a water body is considered an exceedance.

Hilmar Drain at Central Avenue



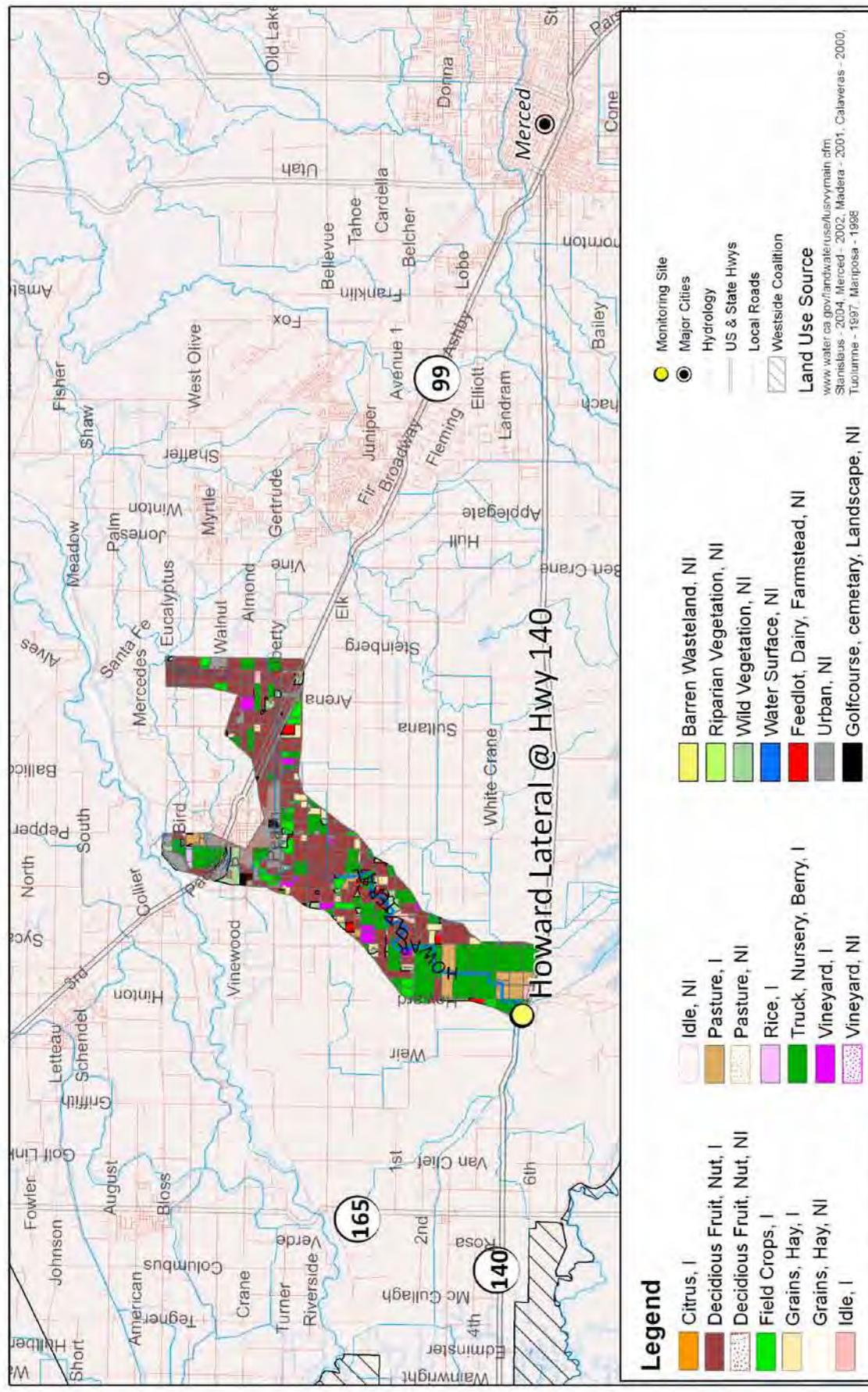
Hilmar Drain @ Central Avenue (Tuolumne Rd, Mitchell Rd, Reclamation Drain @ Williams Ave)

Site Name	Date Sampled	Oxygen Dissolved 7 mg/L	pH 6.5–8.5 units	Specific Conductivity 700 $\mu\text{hos}/\text{cm}$	Total Dissolved Solids 450 mg/L	E. coli MPN/100 mL	Ammonia as N 1.5 mg/L	Nitrate as N 10 mg/L
Central Ave	5/18/2006	6.28				2400		
Central Ave	6/15/2006	6.8						12
Central Ave	7/13/2006			1096	610	2400	3.8	11
Central Ave	8/10/2006					1000		13
Central Ave	9/14/2006			773	510			20
Central Ave	2/11/2007					2400	13	
Central Ave	3/1/2007			1396	790			
Central Ave	3/7/2007	8.79	1633					
Central Ave	4/17/2007		1106	700		1100		
Central Ave	5/15/2007		1030	640		440		22
Central Ave	6/19/2007		869	600		1700		21
Central Ave	7/17/2007		717	460		340		15
Central Ave	8/21/2007		793	520				18
Central Ave	9/11/2007		703	460		2400		18
Central Ave	1/24/2008		1528	970				
Tuolumne Rd	1/30/2008	5.18	1343					
Central Ave	2/26/2008		1476	910				
Central Ave	3/4/2008		1429					
Central Ave	3/28/2008	6.3	1111					
Central Ave	4/22/2008		1482	960		390		
Central Ave	4/29/2008	4.48	809					
Central Ave	5/20/2008		963	680		440		20
Central Ave	6/17/2008		1060	650		1000		
Central Ave	7/22/2008		1074	710		270		21
Mitchell Rd	7/22/2008	6.93	995					28
Reclamation Drain @ Williams Ave	7/22/2008			1558				
Mitchell Rd	7/29/2008	1.81	770					
Central Ave	8/19/2008		1590			1000		
Central Ave	8/28/2008	6.32	1172					
Central Ave	9/23/2008		943			640		26
Central Ave	9/30/2008		733					
Central Ave	10/2/2008			1241				
Central Ave	4/21/2009			904				
Central Ave	9/22/2009			934				

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website, www.esjcoalition.org

Italics – Additional Management Plan Monitoring site.

Howard Lateral at Highway 140

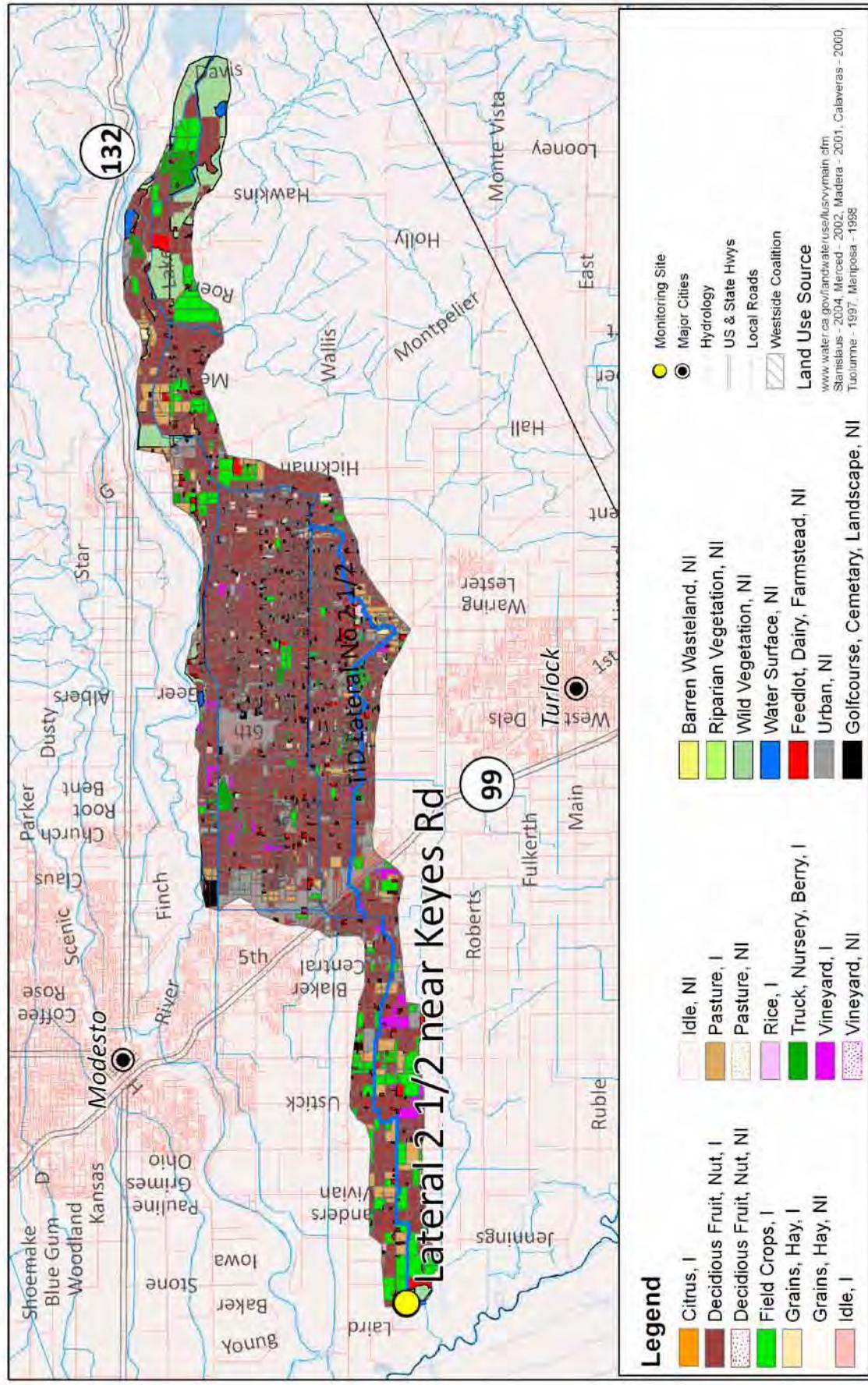


Howard Lateral @ Hwy 140								
Date Sampled	Oxygen, Dissolved	pH	Specific Conductivity	E. coli	Total Dissolved Solids	Nitrate as N	Chlorpyrifos	Copper ¹
	7 mg/L	6.5–8.5 units	700 µmhos/cm	MPN/100 mL	450 mg/L	10 mg/L	0.015 µg/L	µg/L (variable)
4/21/2009	1.55							
5/19/2009		810						
7/21/2009		8.88						
8/18/2009		9.14						
9/22/2009	9.15		330					
10/20/2009			240					
4/20/2010								
6/15/2010								0.022
7/20/2010		8.93						3.1 (2.5)
8/17/2010		9.05						
9/14/2010		9.28						
10/19/2010				280				

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹ WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

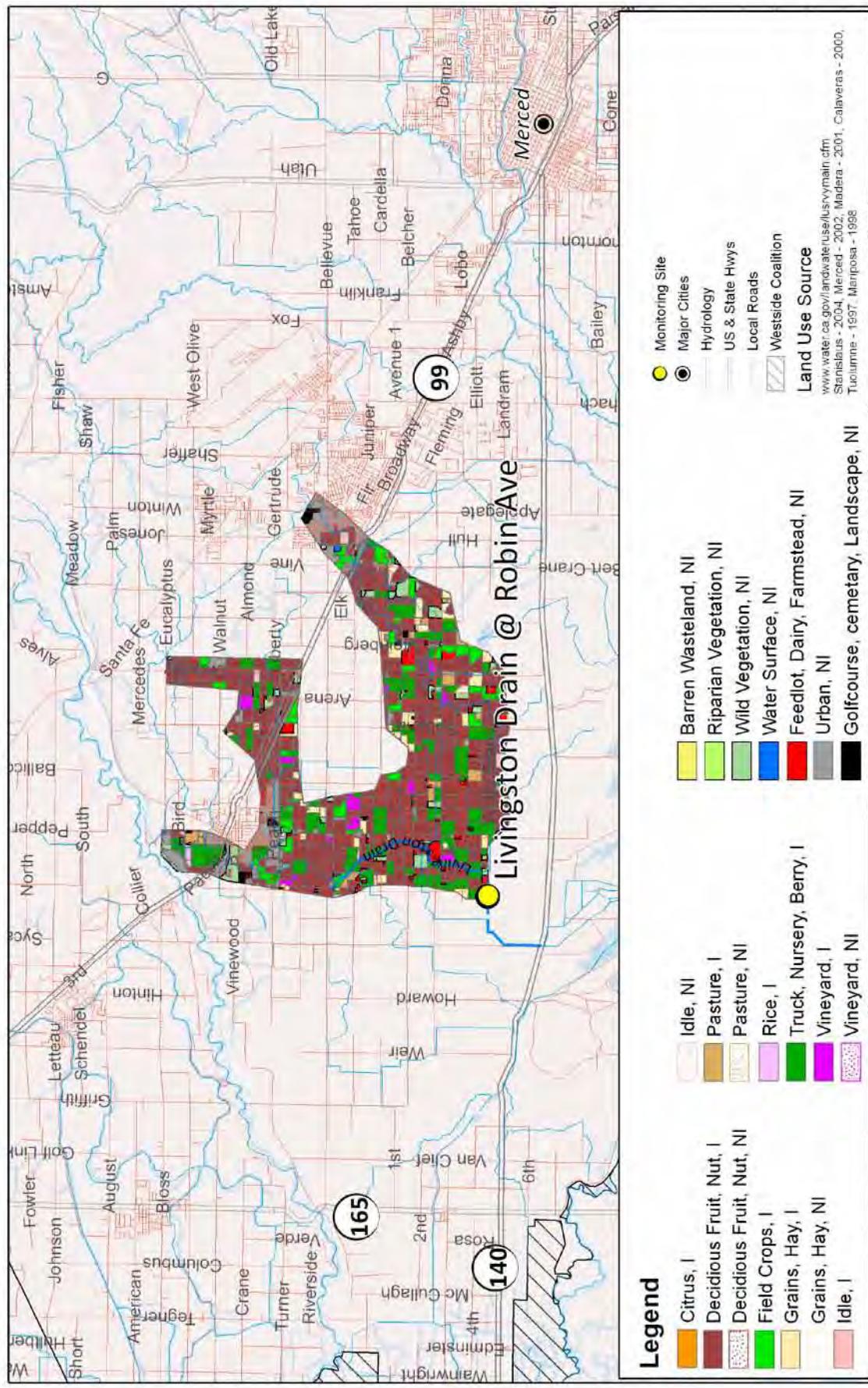
Lateral 2 1/2 near Keyes Road



Lateral 2 1/2 near Keyes Rd									
Date Sampled	DO mg/L	pH	SC 6.5–8.5 units	E. coli 700 µS/cm	Ammonia 235 MPN/100 mL	Nitrate as N 1.5 mg/L	Chlorpyrifos 0.015 µg/L	Hexachlorocyclohexane 0.0039 µg/L	Water flea toxicity Based on survival
10/21/2008	7	9.57	280						
11/11/2008	9.09	9.09	370	0.65 (0.57)				0.013	
4/21/2009	9.20								
5/19/2009									
7/21/2009									
8/18/2009							0.049		
10/20/2009	8.68						15		
4/20/2010								0.076	
7/20/2010								0.061	
4/19/2011	8.71								

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Livingston Drain at Robin Avenue

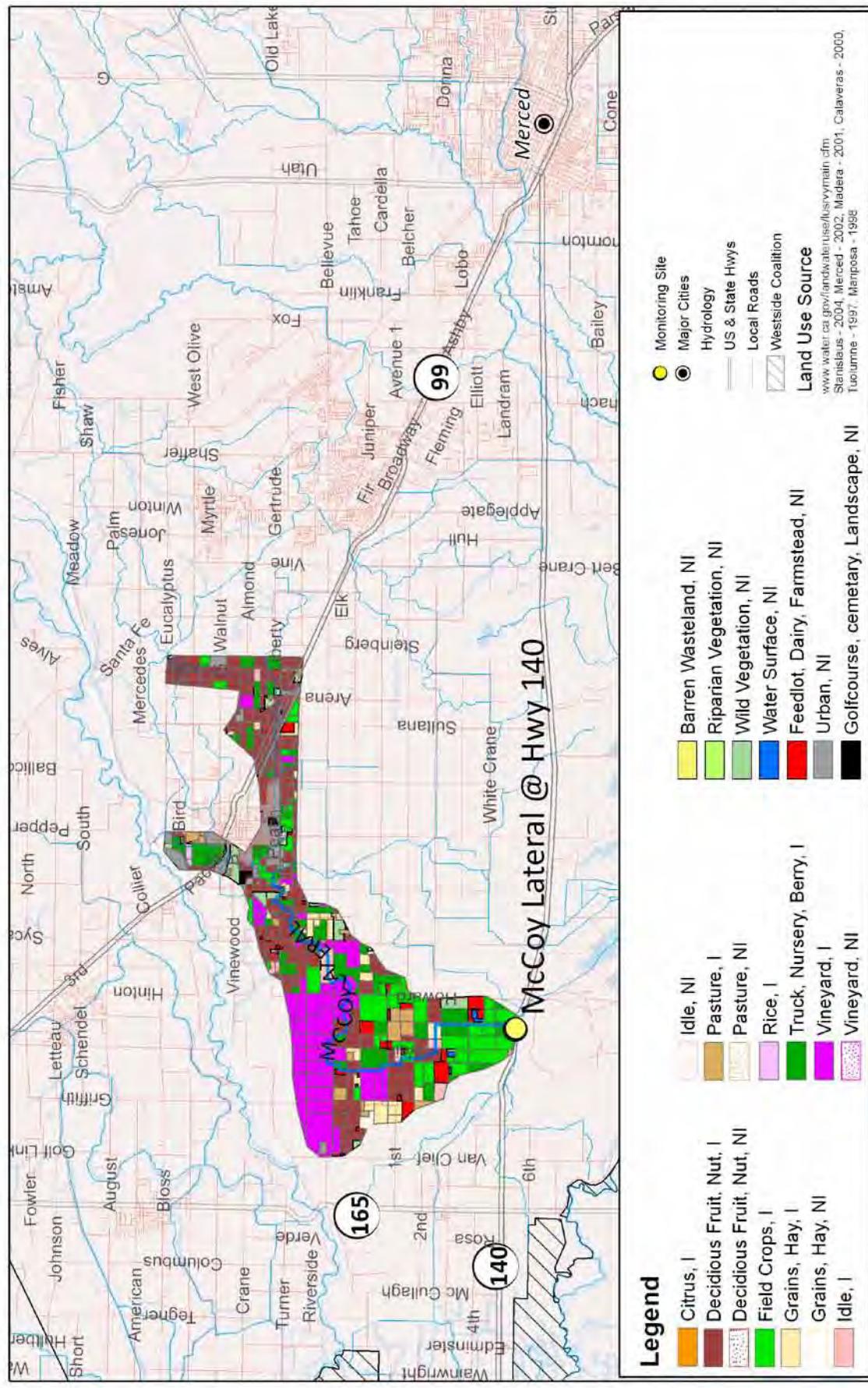


Livingston Drain @ Robin Avenue								
Date Sampled	Oxygen, Dissolved 7 mg/L	pH 6.5 – 8.5 units	E. coli MPN/100 mL	Nitrate as N 10 mg/L	Copper ¹ µg/L (variable)	Lead ¹ µg/L (variable)	Chlorpyrifos 0.015 µg/L	Algae toxicity Based on growth
5/15/2007		8.95			18 (13.2)			
6/19/2007					16 (4.4)			
7/17/2007		8.82			7.8 (5.3)			
8/14/2007						0.016		
9/11/2007		8.57			14 (6.4)			
1/24/2008			1700		6.7 (3.1)	2.4 (0.63)	0.02	
2/26/2008	5.68				15 (4.1)	1.1 (0.93)		toxic
4/22/2008								toxic
4/29/2008								toxic
5/20/2008		8.79						toxic
5/27/2008		8.68						
6/3/2008		8.61						
6/17/2008		8.97			11	45 (13)	0.23	
7/8/2008		8.97				110 (5.7)		
7/22/2008			440			17 (16.9)		
8/28/2008								
9/9/2008								
9/23/2008								
7/19/2011						2.6 (1.67)		
9/13/2011						1.7 (1.25)		

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

McCoy Lateral at Highway 140

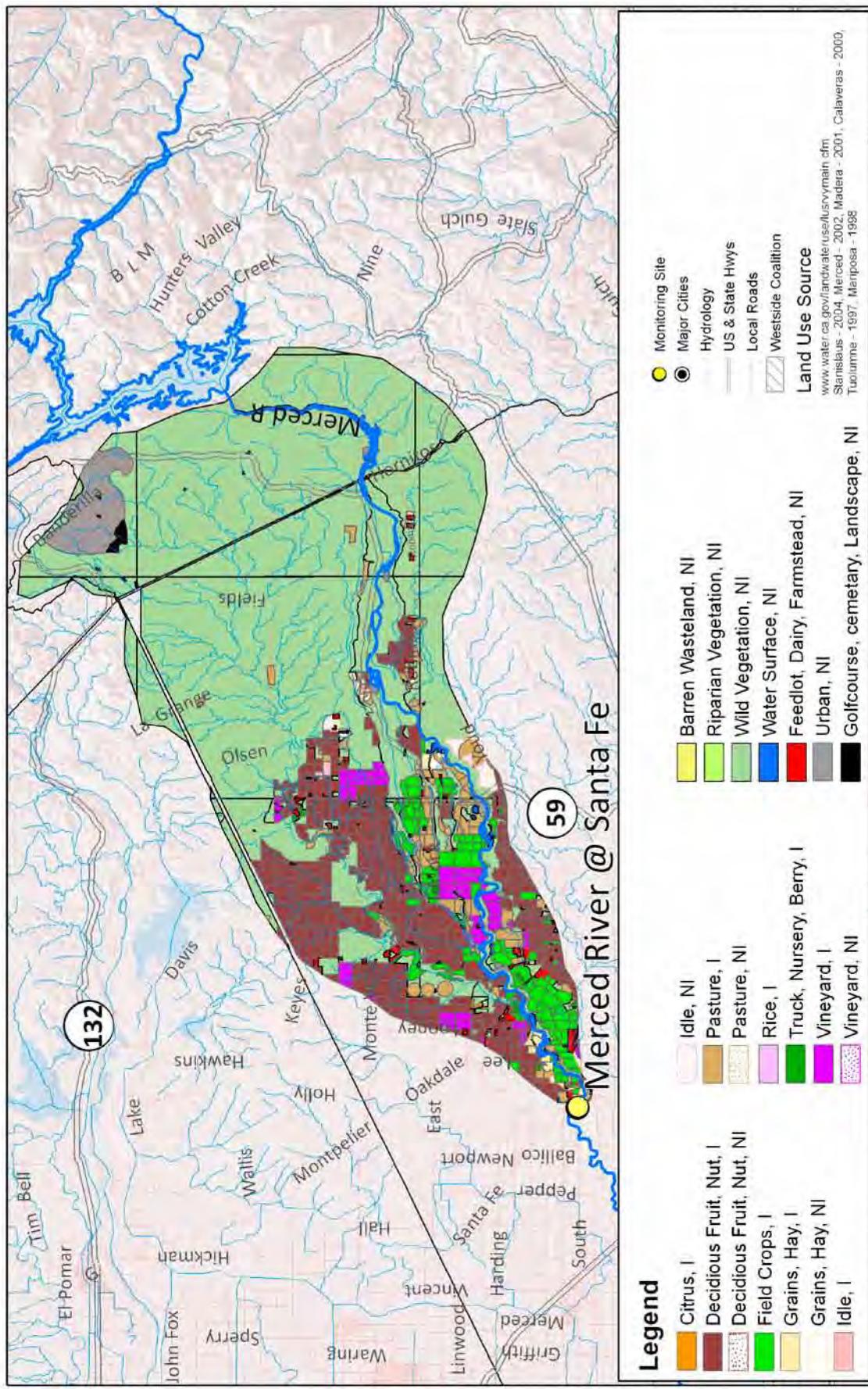


McCoy Lateral @ Hwy 140		
Date Sampled	pH	Copper ¹ µg/L (Variable)
1/18/2011	6.5 - 8.5 units	2.9 (1.97)
4/19/2011	8.95	
9/13/2011		1.2 (1.03)

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Merced River at Santa Fe

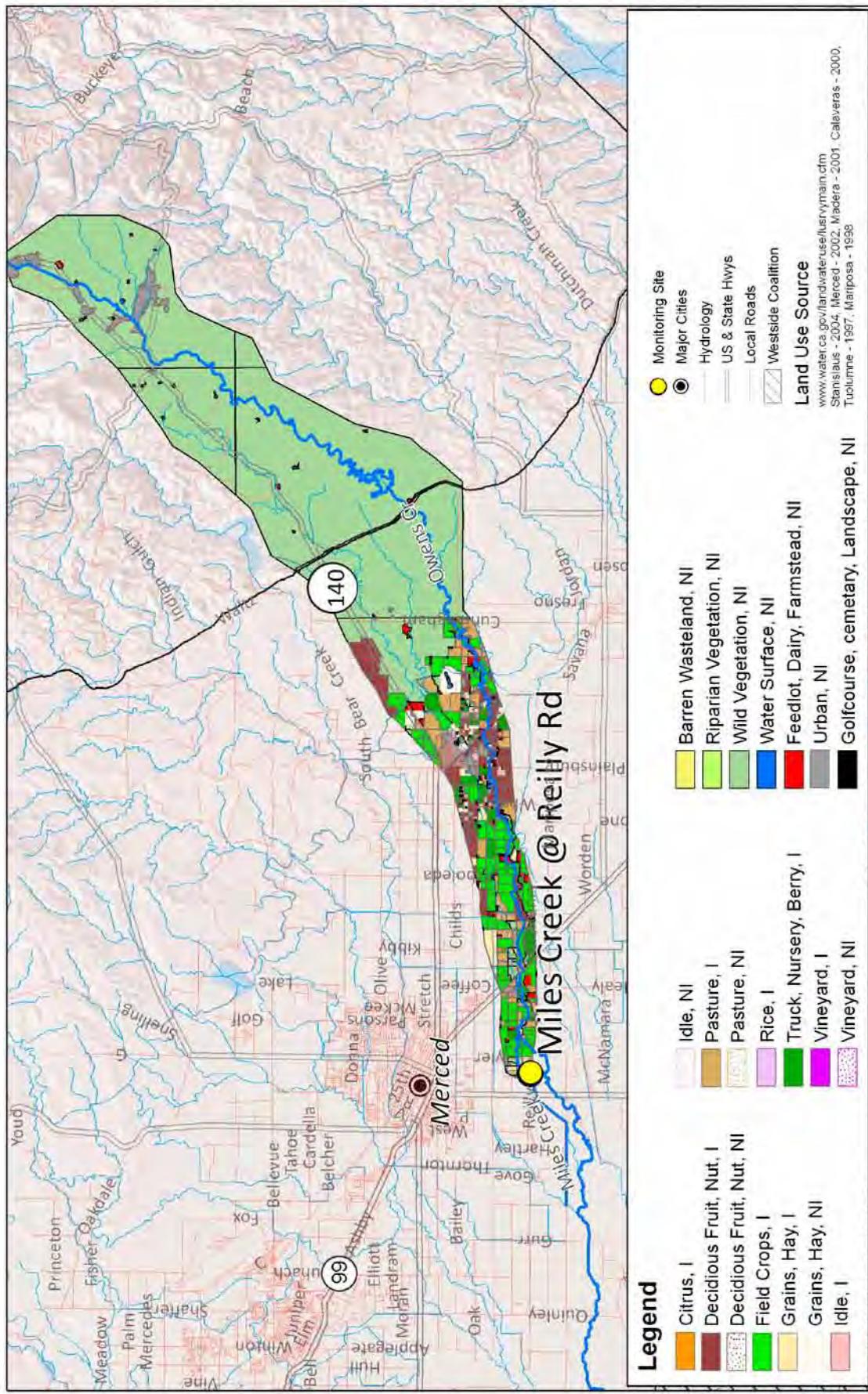


Merced River @ Santa Fe								
Date Sampled	Oxygen, Dissolved 7 mg/L	pH 6.5 – 8.5 units	E. coli 235 MPN/100 mL	Copper ¹ µg/L (variable)	Lead ¹ µg/L (variable)	Chlorpyrifos 0.015 µg/L	DDT 0.00059 µg/L	Hexachlorocyclohexane 0.0039 µg/L
								Water flea toxicity Based on survival
7/31/2004								toxic
8/31/2004								toxic
3/21/2005								toxic
8/17/2005	6.38							
3/1/2006		1600						
3/16/2006								toxic
6/14/2006	6.4							
2/12/2007			0.82 (0.63)					
7/17/2007				0.018				
1/24/2008			22 (4.4)	5.6 (1.05)	0.59			toxic
1/30/2008								toxic
4/22/2008	6.06							
11/11/2008				0.10				
7/21/2009	6.12							
10/20/2009	4.82							
1/19/2010			>2400					
4/20/2010			440					
6/14/2011			770				0.012	

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹ WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Miles Creek at Reilly Road



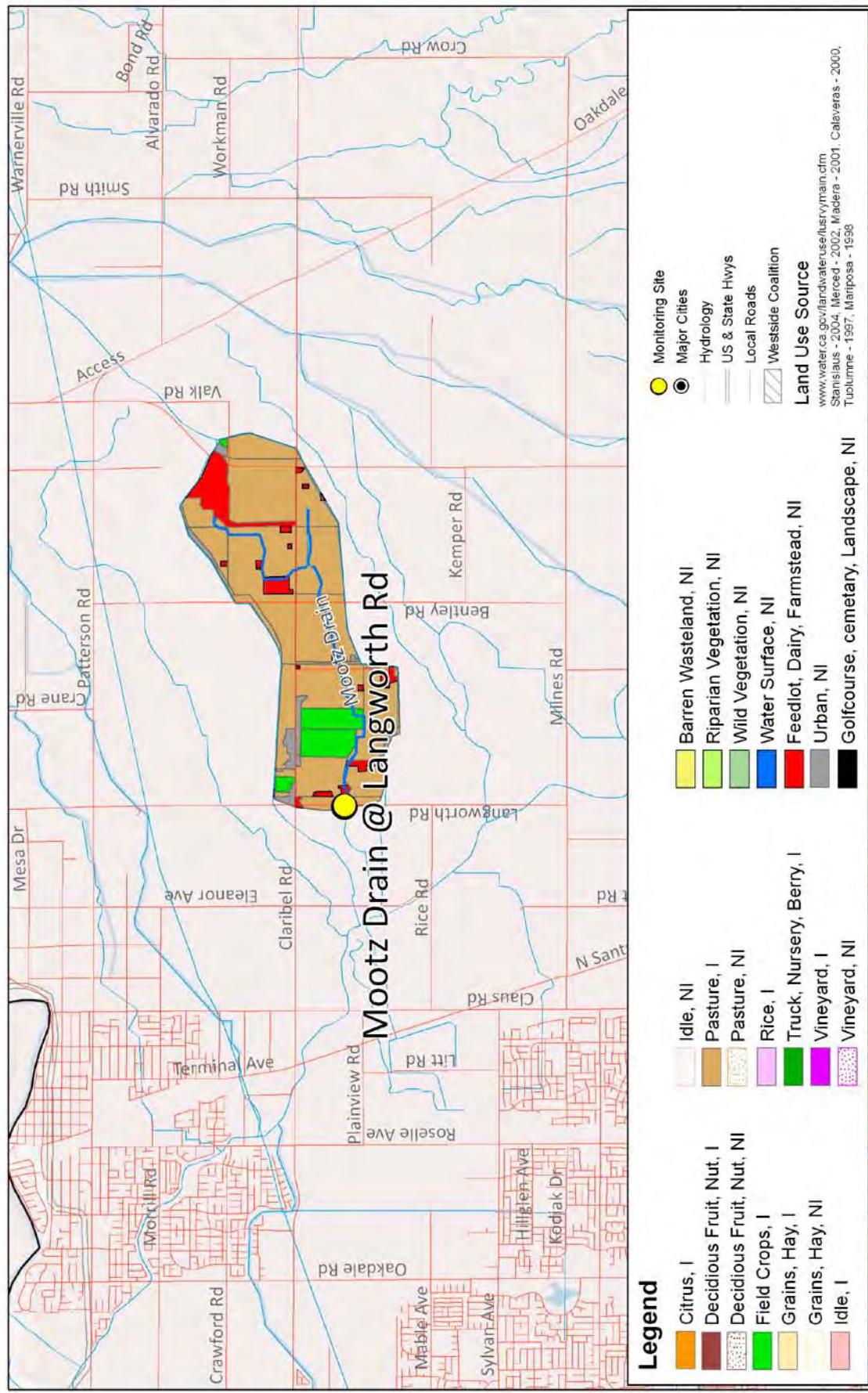
Miles Creek @ Reilly Road

Date Sampled	Oxygen Dissolved 7 mg/L	E. coli 235 MPN /100 mL	Copper ¹ µg/L (variable)	Lead ¹ µg/L (variable)	Chlorpyrifos 0.015 µg/L	Methidathion 0.7 µg/L	Aldicarb 3 µg/L	Water flea toxicity Based on survival	Algae toxicity Based on growth	Sediment toxicity Based on survival
5/29/2007		290	4.3 (3.5)							
6/26/2007		310	5.8 (4.3)	1 (0.99)						
7/24/2007		340								
8/21/2007			5.2 (4.4)							
8/23/2007										
9/18/2007					0.03					
1/25/2008		>2400	15 (6.2)	3.2 (1.7)			2.3			
1/30/2008										
2/25/2008		2000	34 (8.0)	7.7 (2.5)						
4/29/2008										
5/7/2008										
5/27/2008			>2400							
6/24/2008		4.76								
7/29/2008		5.34	250	7.5 (4.6)	1.7 (1.1)	0.021				
8/5/2008		6.93								
8/26/2008		5.86			7.5 (6.7)	2 (1.95)	0.042			
8/28/2008		5.33								
9/30/2008		6.34								
10/2/2008										
4/21/2009		6.30								
7/21/2009		6.45					0.028			
8/18/2009		6.58								
9/22/2009		6.35								

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹ WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Mootz Drain at Langworth Road

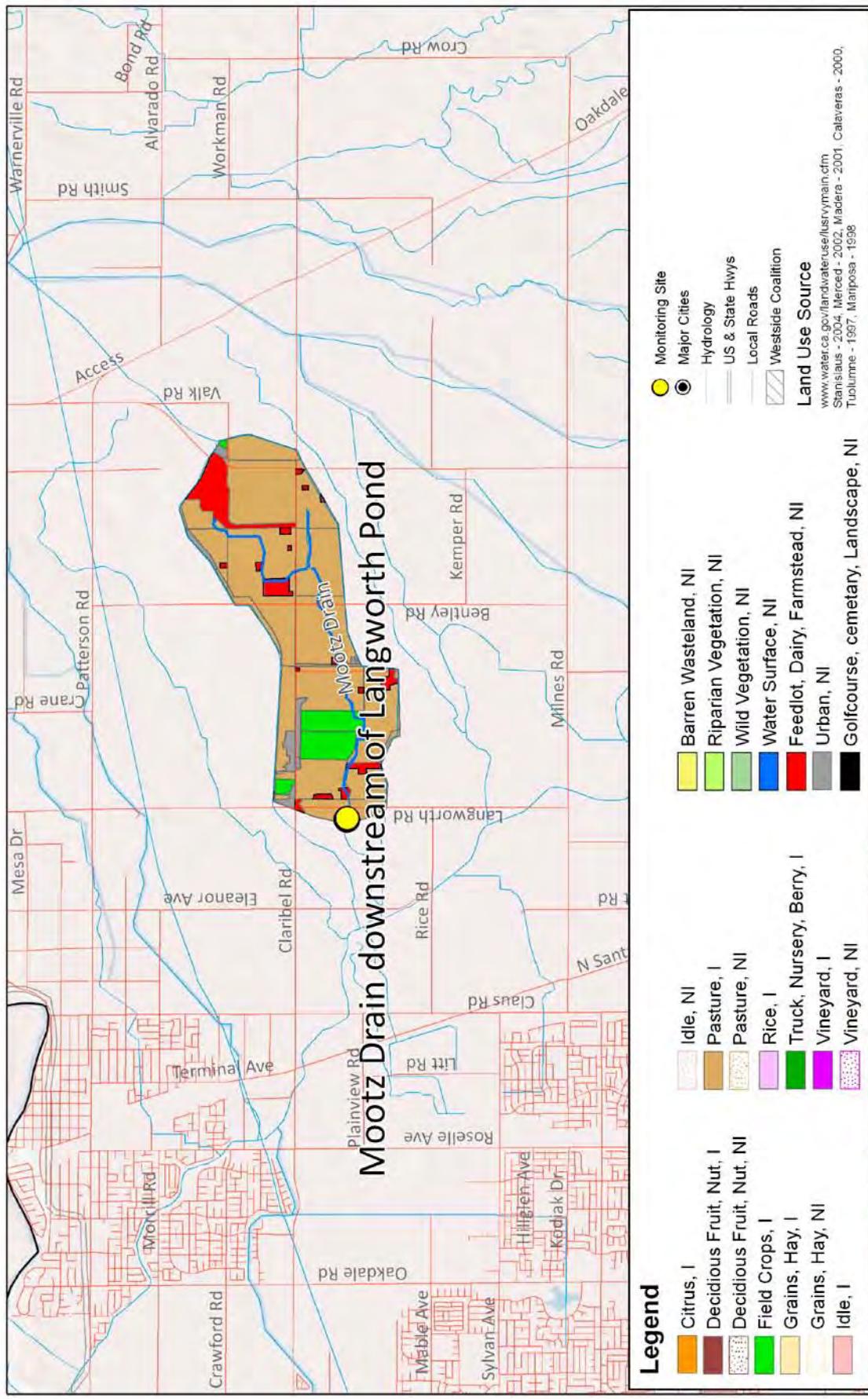


Mootz Drain @ Langworth Rd

Date Sampled	DO 7 mg/L	pH 6.5–8.5 units	E. coli 235 MPN/100 mL	Ammonia 1.5 mg/L	Chlorpyrifos 0.015 µg/L	Diuron 2 µg/L	Algae toxicity Based on growth
11/11/2008	3.55	4.32					
12/16/2008			>2400			0.017	
2/7/2009							2.10
3/17/2009	4.01						toxic
4/21/2009	3.14			>2400			
5/19/2009	4.59			>2400			
6/16/2009	5.40			390		0.033	
7/21/2009	2.18			2000			
8/18/2009	4.90			>2400			
9/22/2009	5.62			1700			
10/20/2009	6.35			240			
11/17/2009	4.98			>2400	2.1		

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

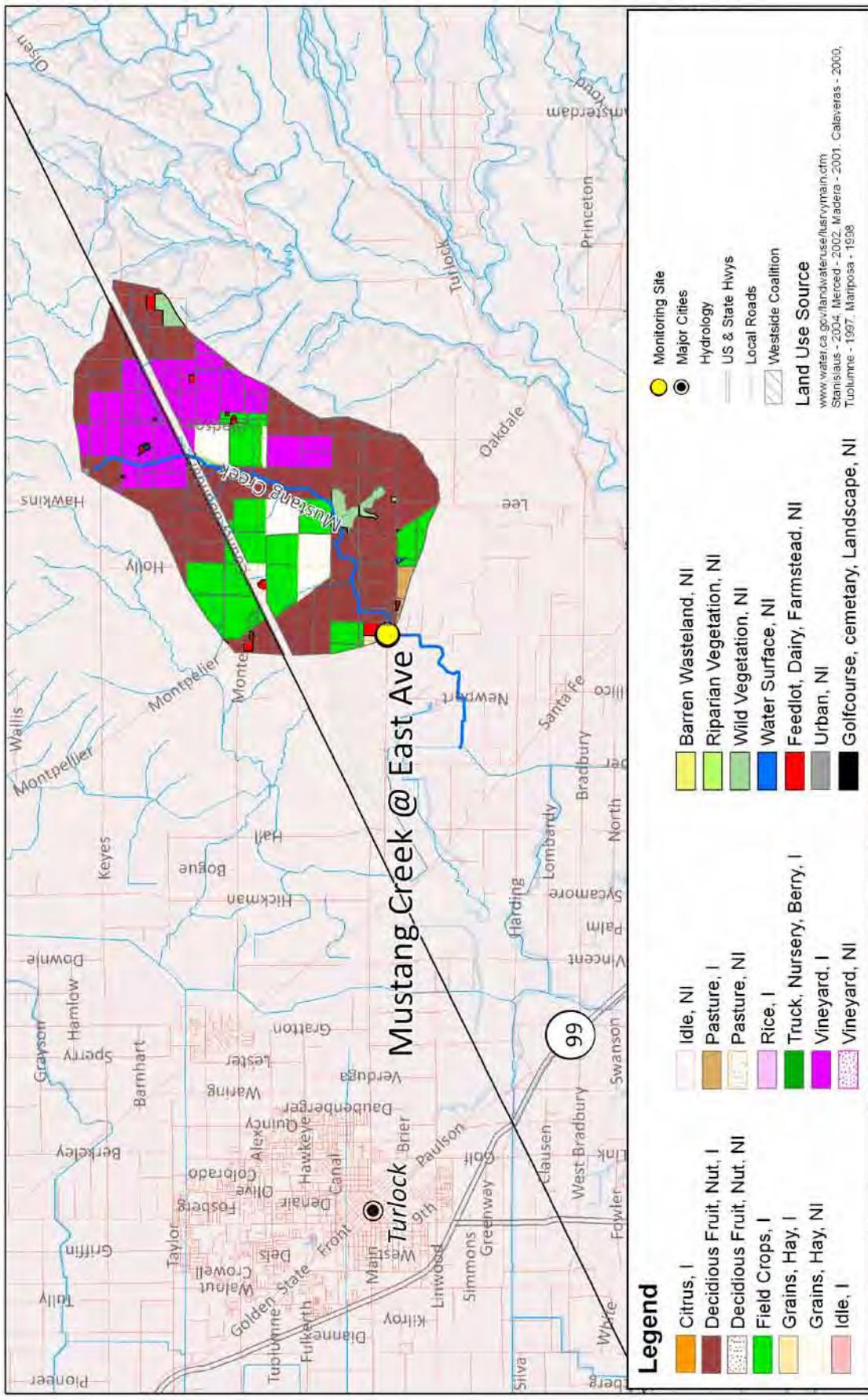
Mootz Drain downstream of Langworth Pond



Mootz Drain downstream of Langworth Pond					
Date Sampled	DO 7 mg/L	E. coli 235 MPN/100 mL	Ammonia 1.5 mg/L	Diuron 2 µg/L	
12/15/2009	5.51		>2400		
1/19/2010			>2400		
2/23/2010			980		
3/23/2010	5.94		520		
4/20/2010	6.54		1200		
5/18/2010	6.30		>2400		
6/15/2010	3.80		>2400		
7/20/2010	4.24		>2400		
8/17/2010	3.35		820		
9/14/2010	4.68		>2400		
12/14/2010	4.69		2.8		
			2.7		

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Mustang Creek at East Avenue



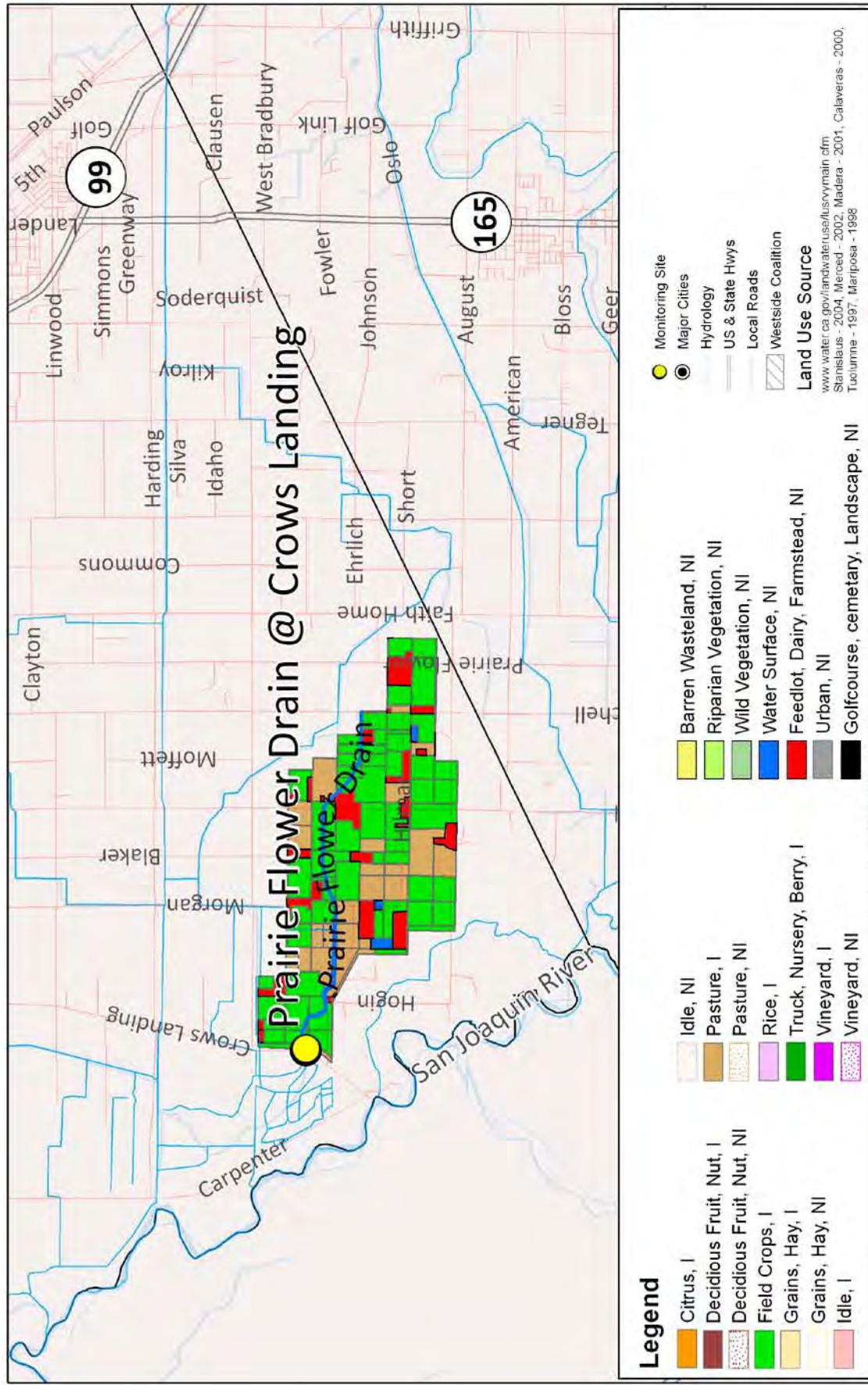
Mustang Creek @ East Avenue

Date Sampled	Oxygen Dissolved 7 mg/L	Specific Conductivity 700 $\mu\text{mhos/cm}$	Total Dissolved Solids 450 mg/L	E. coli MPN / 100 mL	Ammonia 1.5 mg/L	Copper ¹ $\mu\text{g/L}$ (variable)	Nitrate as N 10 mg/L	Chlorpyrifos 0.015 $\mu\text{g/L}$	DDE 0.00059 $\mu\text{g/L}$	Simazine 4.0 $\mu\text{g/L}$	Water flea toxicity Based on survival	Algae toxicity Based on growth	Sediment toxicity Based on survival
5/18/2006	5.82			2400									
6/15/2006	5			2400									
8/10/2006	2.61			980									
2/28/2007		760	460										
5/15/2007	1.16			1600									
6/19/2007	4.3			410									
1/24/2008				460									
1/30/2008													
2/26/2008	4.06												
3/4/2008	2.44												
3/28/2008	4.1	1467											
2/7/2009		704	560				25	12					
3/17/2009		1042	710					33					
4/21/2009	0.98	1433											
9/22/2009													
10/20/2009	2.95	870	670	250	2.3	44 (24.20)							
12/15/2009		892				25 (22.9)							
1/19/2010	5.22	856	570	1000									
2/23/2010				360				20 (17.57)					
3/23/2010	3.87	877	580										
4/20/2010				>2400									

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

¹WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Prairie Flower Drain at Crows Landing (Morgan Road)



Prairie Flower Drain @ Crows Landing Rd (Morgan Rd)

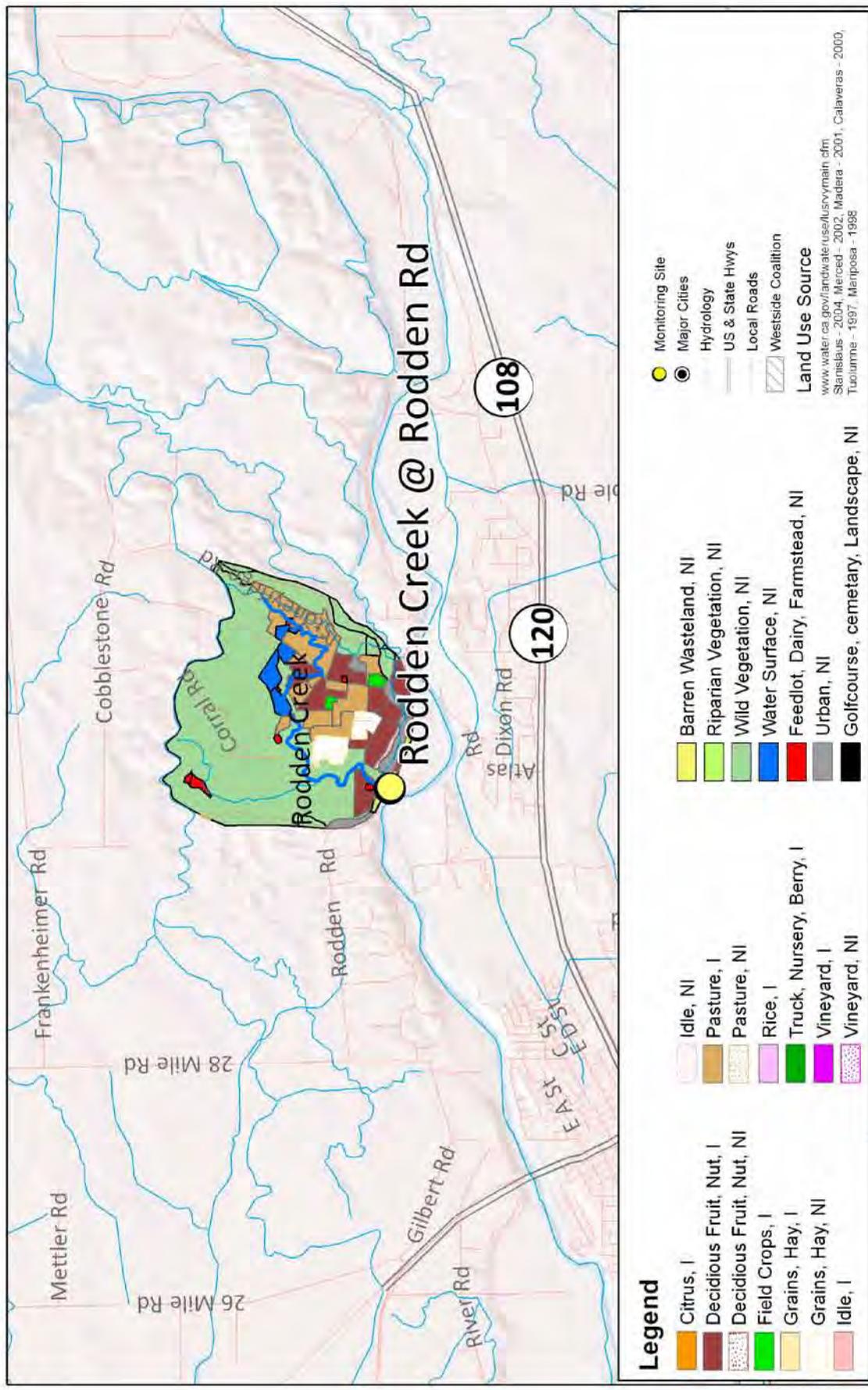
Station Name	Sample Date	D0	pH	SC	E. coli	Total Dissolved Solids	Ammonia	Nitrate as N	Arsenic	Molyb-denum	Carbamyl Chlорpyrifos	Dimethoate	DDT	Malathion	Water Flea toxicity	Fathead Minnow toxicity	Algae toxicity	Sediment toxicity
		7 mg/L	6.5 - 8.5 units	700 μ s/cm	235 MPN/100 mL	450 mg/L	1.5 mg/L	10 mg/L	1 mg/L	10 μ g/L	2.53 μ g/L	0.015 μ g/L	1 ng/L	0.00059 μ g/L	0 μ g/L	Based on Survival	Based on Growth	Based on Survival
Crows Landing Rd	7/21/2009				1366		820	1.8	14									
Crows Landing Rd	8/18/2009				1984		1200		22									
Crows Landing Rd	9/22/2009				2171	1300	1400											
Crows Landing Rd	10/20/2009				2459	1300	1400											
Crows Landing Rd	11/17/2009				2415	>2400	1500	8.8										
Crows Landing Rd	12/15/2009				2695	2000	1600											
Crows Landing Rd	1/19/2010				1837	2400	1300											
Crows Landing Rd	2/23/2010				2833	440	1700											
Crows Landing Rd	3/23/2010				2833	1400	1700											
Crows Landing Rd	4/20/2010				2399	1300	1500											
Crows Landing Rd	5/18/2010				2428	460	1500											
Crows Landing Rd	6/15/2010	4.25			2703	820	1600											
Crows Landing Rd	7/20/2010				2556	260	1500											
Crows Landing Rd	8/17/2010				2776	870	1700											
Crows Landing Rd	9/14/2010																	
Crows Landing Rd	10/19/2010				1795	580	1100											
Crows Landing Rd	11/16/2010				2710	460	1700											
Crows Landing Rd	12/14/2010				2688	>2400	1700											
Crows Landing Rd	1/18/2011	5.35			2951	870	1800	1.9	29									
Crows Landing Rd	2/17/2011				2647		1600		33									
Crows Landing Rd	3/15/2011				2685		1700		31									
Crows Landing Rd	3/17/2011				2643													
Crows Landing Rd	4/19/2011	2.14			1471	>2400	800	12										
Crows Landing Rd	5/10/2011				1775	370	1000	1.8	17									
Crows Landing Rd	6/14/2011				2035		1200		24							0.017		
Crows Landing Rd	6/15/2011				2423													
Crows Landing Rd	7/12/2011				1083	>2400	770	1.8	16									
Crows Landing Rd	8/9/2011				1141	1000	680	4.1								13	10	toxic
Crows Landing Rd	9/6/2011						370									1.1		

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Italics – Additional Management Plan Monitoring site.

¹WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

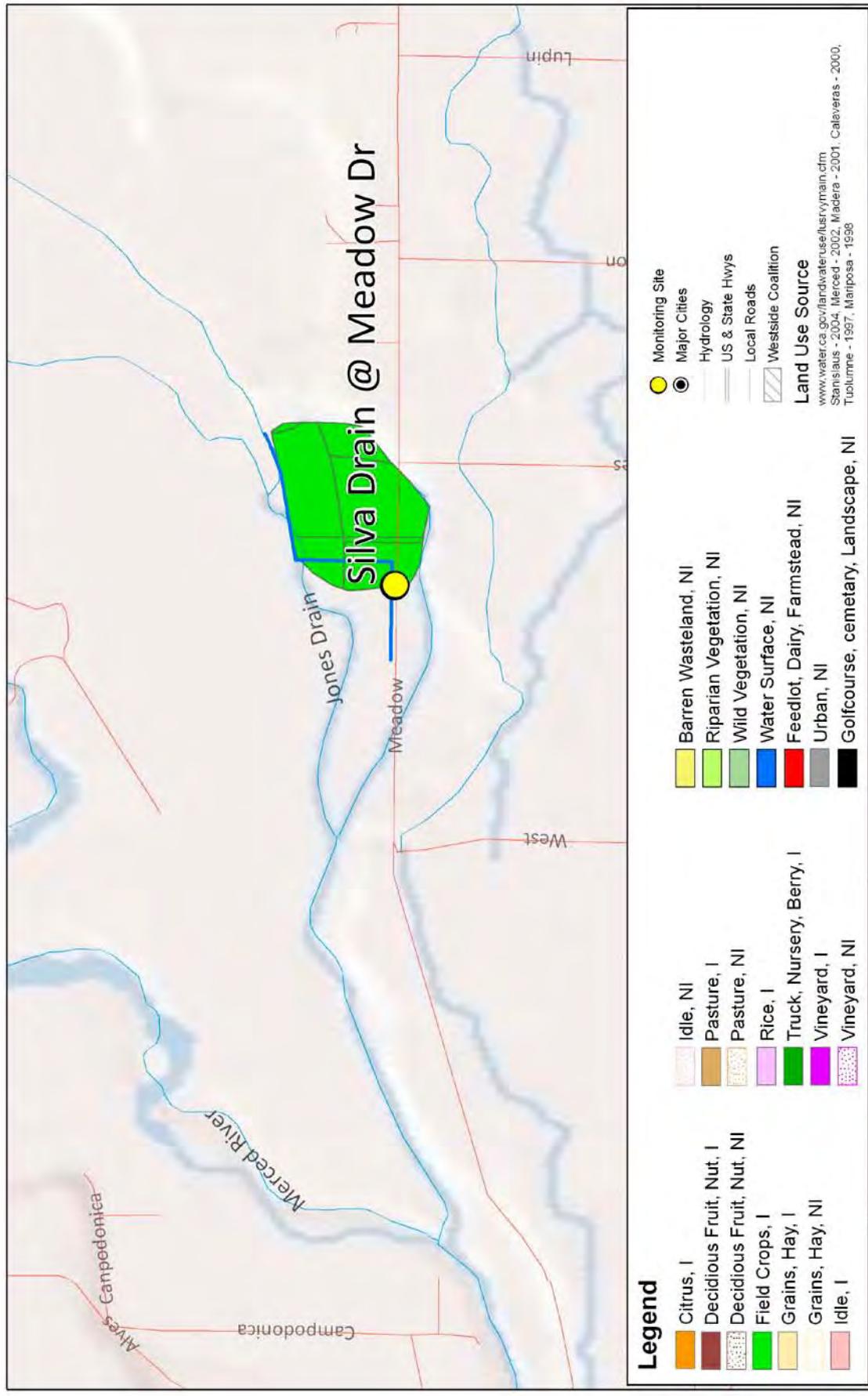
Rodden Creek at Rodden Road



Rodden Creek @ Rodden Rd			
Date Sampled	E. coli	Diuron	DDT
2/17/2011	235 MPN/100 mL	2 µg/L	0.00059 µg/L
3/15/2011	240	2.30	
6/14/2011		0.021	

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can

Silva Drain at Meadow Drive



Silva Drain @ Meadow Drive

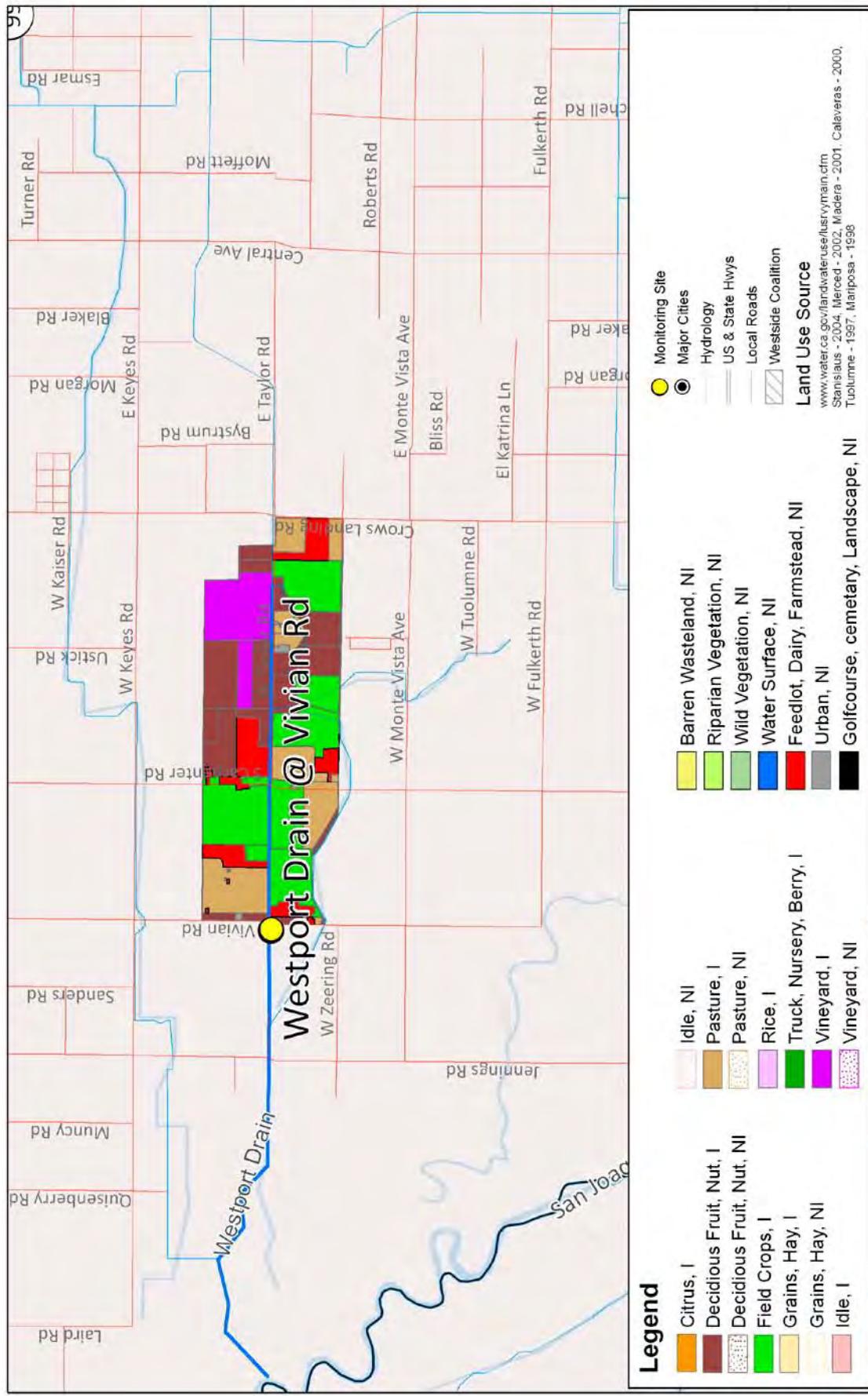
Date Sampled	Oxygen, Dissolved	pH	E. coli	Ammonia as N	Copper ¹	Lead ¹	Chlorpyrifos	Water flea toxicity	Fathead minnow toxicity	Sediment toxicity
	7 mg/L	6.5–8.5 units	MPN /100 mL	1.5 mg/L	µg/L (variable)	µg/L (variable)	0.015 µg/L	Based on survival	Based on survival	Based on survival
5/18/2006				1300						
7/13/2006	5.75			690						
8/9/2006				460						
9/5/2006										
9/13/2006	5.99			320						
4/17/2007				420						
5/15/2007				1400						
6/19/2007	4.2			1000						
7/17/2007	4.71			520						
7/31/2007	6.1									
8/14/2007				410						
8/16/2007	6.43									
8/28/2007							0.055			
9/11/2007	6.12									
4/22/2008	5.02					4.1				
5/20/2008	0.7									
6/17/2008				>2400	13	68 (27)				
7/8/2008	1.38									
7/22/2008	2.1			410						
7/29/2008	5.96									
8/5/2008	3.37									
8/19/2008	3.73			1400						
8/28/2008	3.32									
9/23/2008	6.19			310	3	15 (4.4)				
10/2/2008	6.11	8.51								toxic

* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the

ESJWQC website: www.esjcoalition.org

¹ WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

Westport Drain at Vivian Road



Westport Drain @ Vivian Road

Date Sampled	Oxygen, Dissolved	Specific Conductivity	Total Dissolved Solids	E. coli	Nitrate as N	Chlorpyrifos	Algae toxicity	Sediment toxicity
	7 mg/L	700 $\mu\text{mhos}/\text{cm}$	450 mg/L	MPN/100 mL	10 mg/L	0.015 $\mu\text{g}/\text{L}$	Based on growth	Based on survival
5/15/2007		1054	660		24			
5/23/2007		1081						
6/19/2007		991	660		27			
7/17/2007		1025	680	330	68	0.018		
8/14/2007		1129	760				32	
8/16/2007		1147						
9/11/2007		1106	740	330	30			
1/24/2008		1086	740	290	28			
2/26/2008	5.7	1104	730		26		toxic	
3/4/2008		1096					toxic	
4/22/2008	4.44	1079	750	1000	23		toxic	
4/29/2008	4.76	1106						
5/20/2008	6.95	1084	720		23			
6/17/2008	5.43	1107	750	260	25			
7/22/2008	5.02	1079	760	1000	25	0.016		
8/19/2008	3.59	1088	760	290	25			
8/28/2008		1100					toxic	
9/23/2008		1097	750		27			
10/2/2008		1093						

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2011 SUMMARY ANNUAL REPORT

This report is available at
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