

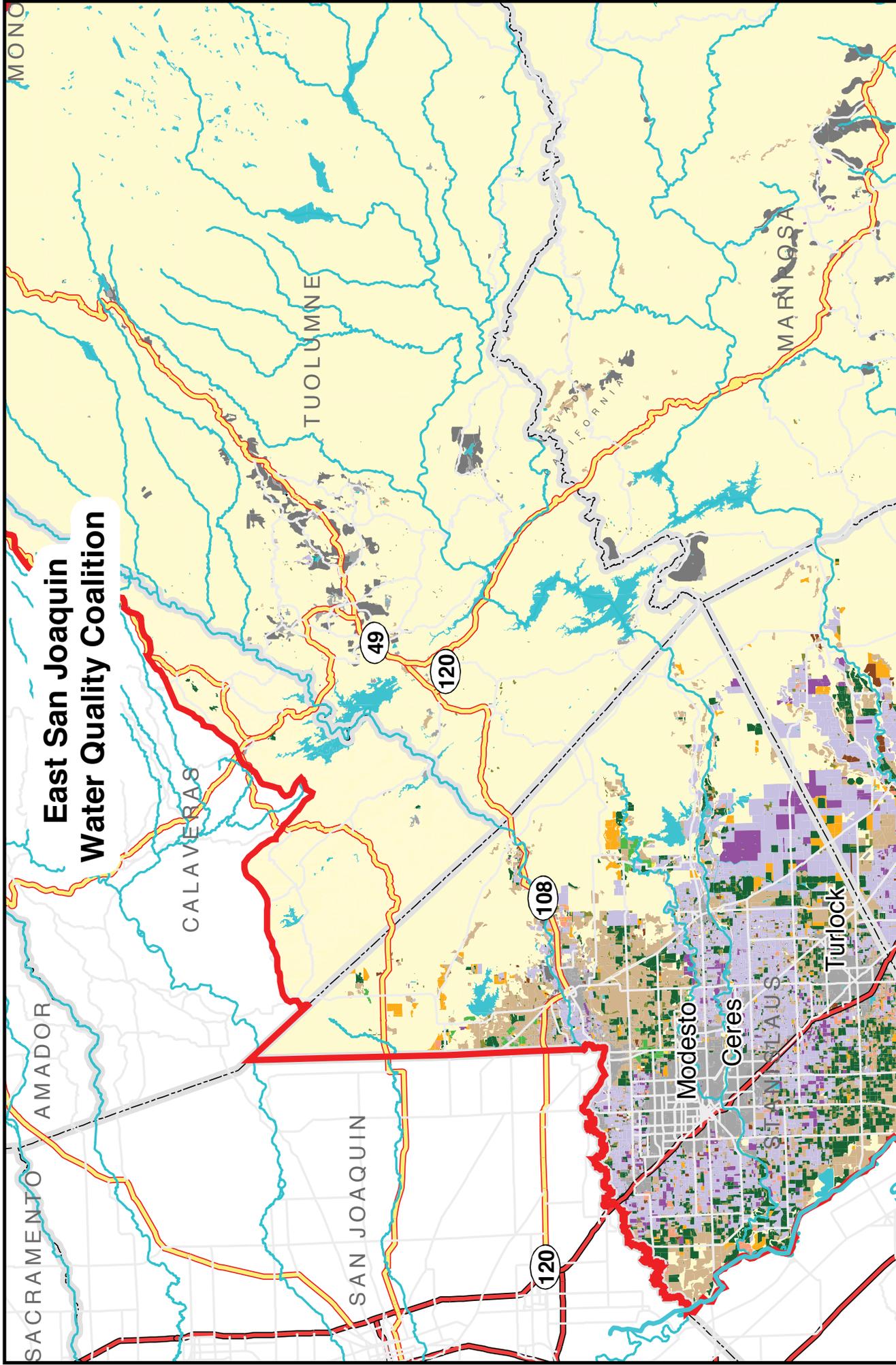


**SUMMARY ANNUAL REPORT**

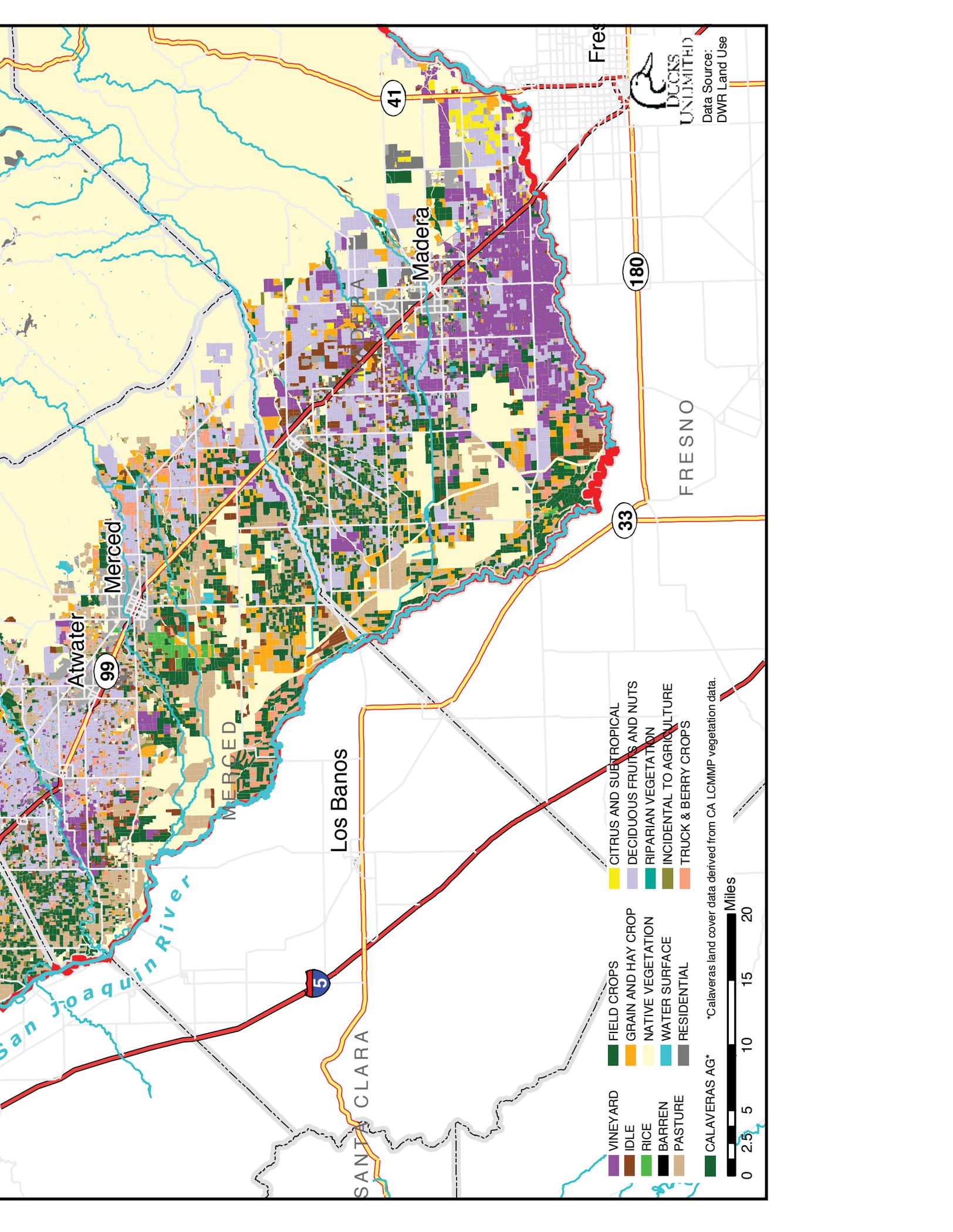
**2008**

**Including Data from 2004-2007**





**East San Joaquin  
Water Quality Coalition**



DUCKS  
UNLIMITED  
Data Source:  
DWR Land Use

- CITRUS AND SUBTROPICAL
- DECIDUOUS FRUITS AND NUTS
- RIPARIAN VEGETATION
- INCIDENTAL TO AGRICULTURE
- TRUCK & BERRY CROPS

- FIELD CROPS
- GRAIN AND HAY CROP
- NATIVE VEGETATION
- WATER SURFACE
- RESIDENTIAL

- VINEYARD
- IDLE
- RICE
- BARREN
- PASTURE
- CALAVERAS AG\*

\*Calaveras land cover data derived from CA LCMMP vegetation data.



**East San Joaquin  
Water Quality Coalition  
Map**





SUMMARY ANNUAL REPORT

2008

Including Water Monitoring Data from 2004-2007

# East San Joaquin Water Quality Coalition Summary Annual Report 2008

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## 2008 Year in Review

2008 marks year five of water and sediment monitoring by the East San Joaquin Water Quality Coalition (Coalition) as part of compliance for the Irrigated Lands Regulatory Program (ILRP). As in previous years, the Coalition continues to find farm inputs at levels exceeding state standards in all waterways tested. Most significant is the repeated exceedances of State standards for chlorpyrifos (Lorsban, Govern, Lock-On) insecticide and sediment toxicity, believed to be caused by pyrethroid insecticides. In 2008, the Coalition collected samples from 21 monitoring sites in Merced, Madera, and Stanislaus counties.

Whenever the Coalition finds two or more exceedances of water quality standards, we are required by the Central Valley Regional Water Quality Control Board to develop a Management Plan for those waterways. Much of summer 2008 was spent developing our Management Plans. On November 25, 2008, we received our official approval for those plans. Due to the large size of the document (+400 pages), we are only providing the Management Plan to Coalition members as a download from the coalition website site ([www.esjcoalition.org](http://www.esjcoalition.org)) in the "Members Only" area. Specific sections for each watershed can be downloaded in addition to an overview of activities we will be undertaking.

These mandatory Management Plans hold significant responsibilities for the Coalition and its members. We have already sent out Management Practice Surveys to landowners with property in watersheds under the plans. The surveys will help develop information to better understand potential sources of the problem. The Regional Water Board also views the surveys as a gauge of member participation in the ILRP and expects a 100% response rate. Ultimately, landowners must adopt management practices to mitigate the water quality problems should their farm drainage be contributing.

As you know, membership dues were raised in 2008 to \$2 per acre plus \$50 per member. This increase was due to the addition of more monitoring sites in 2008 and loss of crop land associated with dairy operations (Dairies and their crop land are now under Waste Discharge Requirements). We are maintaining the \$2 an acre dues level for 2009 even though our budget is showing a gradual decline in reserves. See page 6 for a summary review of our 2008 budget. A more detailed 2009 budget breakdown will be available after our annual Board of Directors meeting in January.

The Regional Water Board adopted in 2008 a revised Monitoring and Reporting Program Plan for the ILRP. The MRPP provides more flexibility in focusing Coalition monitoring and uses an "Assessment" and "Core" site approach. See page 7 for a description of this approach and the "Zones" we now have in our Coalition region.

Results for monitoring from 2003 - 2008 plus maps of the watersheds begin on page 12. Highlighted parcels indicate fields that likely drain into the sampled waterway during heavy storm events, have potential for irrigation discharges or the possibility of spray drift reaching the waterway.

The Coalition Board of Directors thanks you for your participation in this program. In 2009, we look forward to making significant progress in solving water quality problems originating from irrigated lands in the Coalition region.

# East San Joaquin Water Quality Coalition

## Membership Policy

January 2009

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.

# Coalition Overview

## Membership

As of July 31, 2008, the Coalition membership stood at 2407 landowner/operators and 559,527 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

- \* Julia Berry, Madera County Farm Bureau
- \* Brian Franzia, West Coast Grape Farming, Ceres; grapes
- \* Richard Gemperle, Gemperle Enterprises, Turlock; almonds
- \* Boyd Corkins, S&J Ranch, Pinedale; citrus
- \* Bruce Pace, A.L. Gilbert Co.; corn, row crops
- \* Diana Westmoreland Pedrozo, Merced County Farm Bureau
- \* Alan Reynolds, Gallo Vineyards, Inc.; grapes
- \* Jim Wagner, Hughson Chemical Co., Hughson

## Ex-officio Board Members

- \* David Robinson, Merced County Agricultural Commissioner
- \* Bob Rolan, Madera County Agricultural Commissioner
- \* Gary Caseri, Stanislaus County Agricultural Commissioner
- \* Christopher G. Hartley, District Conservationist, USDA-NRCS-Modesto Field Office

## Coalition Overview

### 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 2008, 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.

# Water Monitoring Program Overview

## **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 toxicity)
- \* APPL Inc., Fresno, CA (pesticide analysis)
- \* North Coast Laboratories Ltd., Arcata, CA (glyphosate analysis)
- \* Caltest Analytical Laboratory, Napa, CA (water analysis; metals, bacteria, nutrients and physical parameters)
- \* 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
- \* In watersheds with Management Plans, twice monthly in months with previous exceedances

### **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](http://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.

## STATEMENT OF FINANCIAL ACTIVITIES EAST SAN JOAQUIN WATER QUALITY COALITION (ESJWQC)

January thru October 2008 VS 2008 Budget thru October\*

	<b>ACTUAL*</b> <b>2008</b>	<b>BUDGET</b> <b>2008</b>	
	\$ K, (Thousands)	\$ K, (Thousands)	<b>DESCRIPTION</b>
<b>INCOME</b>			
TOTAL INCOME	1,289	1,081	Membership dues and interest on bank accounts.
<b>EXPENSES</b>			
Organizational	55	121	Executive director, legal, accounting, management of membership records & related communications, and miscellaneous business costs.
Program	1,152	1,179	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	31	21	Expenses for executive director and program manager and contractors doing work for the Coalition.
<b>TOTAL EXPENSES</b>	1,238	1,321	
<b>NET INCOME</b>	51	(240)	Difference between TOTAL INCOME and TOTAL EXPENSES.

\* At the end of October balances in checking and savings accounts totaled \$642 K. Anticipated expenses thru the remainder of the 2008 calendar year are approximately \$300 K.

## 2009 Monitoring Reporting Program Plan (MRPP)

A requirement for each Central Valley Watershed Coalition under the Irrigated Lands Regulatory Program is to provide the Regional Water Board with a Monitoring and Reporting Program Plan (MRPP). This plan describes each coalition's monitoring site location and timing of sampling, the rationale for that site selection, the constituents to be sampled among other technical information. In 2008, the Regional Water Board modified the MRPP requirements, enabling Coalitions to design a plan that considers the unique conditions within each Coalition plus results from monitoring that occurred since the program's adoption in 2003.

Beginning in 2009, the ESJWQC will initiate its 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. Within each zone, three types of water column and sediment sampling will occur:

- \* Core Monitoring;
- \* Assessment Monitoring and;
- \* Management Plan Monitoring.

**Core Monitoring:** This will occur at sites that have undergone intensive monitoring by the ESJWQC since 2003.

**Assessment Monitoring:** This will occur at sites that have not been well characterized by previous monitoring. Samples collected from Assessment Monitoring locations will be analyzed for a broad suite of constituents to adequately characterize water quality at those sites. This monitoring strategy allows for comprehensive monitoring in the short term and general trend monitoring over successive years.

**Management Plan Monitoring:** This monitoring will be specific to the site and constituents listed in a Management Plan and will be used to determine the effectiveness of management practices implemented in the specific watershed.

Combined, these three levels of monitoring are designed to characterize discharges from irrigated agriculture as a result of irrigation and storm water runoff and to determine the effectiveness of management practices implemented in the Coalition region.

Each of the six zones in the Coalition region (see map on following page) encompass numerous smaller watersheds. Each zone is named after its Core Monitoring site location, which covers a single "Site Subwatershed" in the zone. These include:

- 1) Dry Creek @ Wellsford Zone;
- 2) Prairie Flower Drain @ Crows Landing Zone;
- 3) Highline Canal @ Highway 99 Zone;
- 4) Merced River @ Santa Fe Zone;
- 5) Duck Slough @ Gurr Road Zone; and
- 6) Cottonwood Creek @ Road 20 Zone.

Each zone contains one Core Monitoring location and one Assessment Monitoring location. Assessment Monitoring sites will rotate every two years. Water samples will be collected monthly and analyzed for the constituents listed the table below. Sediment will be collected twice per year to test for *Hyalella* toxicity, TOC and grain size. If a sediment sample is toxic, an analysis will be performed for pyrethroids and chlorpyrifos (Lorsban, Govern, Lock-On) insecticides.

The ESJWQC MRPP is posted on the Coalition website in the Members Only section.

**Table 1. Monitoring locations and constituents to be monitored for at Core and Assessment Monitoring locations from October 2008 to December 2010.**

Zone	Monitoring Type	Monitoring Location	Group A Pesticides*	Physical Parameters	Nutrients	Pathogens	Carbamates	Organochlorines	Organophosphates	Herbicides	Metals (total and dissolved)	Water Column Toxicity	Sediment Toxicity/Chemistry
1	C	Dry Creek @ Wellsford Rd		x	x	x							
1	A	Mootz Drain @ Langworth Rd	x	x	x	x	x	x	x	x	x	x	x
2	C	Prairie Flower Drain @ Crows Landing		x	x	x							
2	A	Lateral 2 1/2 near Keyes Rd	x	x	x	x	x	x	x	x	x	x	x
3	C	Highline Canal @ Hwy 99		x	x	x							
3	A	Mustang Creek @ East Ave		x	x	x	x	x	x	x	x	x	x
4	C	Merced River @ Santa Fe Rd	x	x	x	x			<b>x</b>		<b>x</b>		
4	A	Howard Lateral @ Hwy 140		x	x	x	x	x	x	x	x	x	x
5	C	Duck Slough @ Gurr Rd		x	x	x			<b>x</b>		<b>x</b>		
5	A	Deadman Creek @ Gurr Rd		x	x	x	x	x	x	x	x	x	x
6	C	Cottonwood Creek @ Rd 20		x	x	x						<b>x</b>	<b>x</b>
6	A	Ash Slough @ Ave 21		x	x	x	x	x	x	x	x	x	x

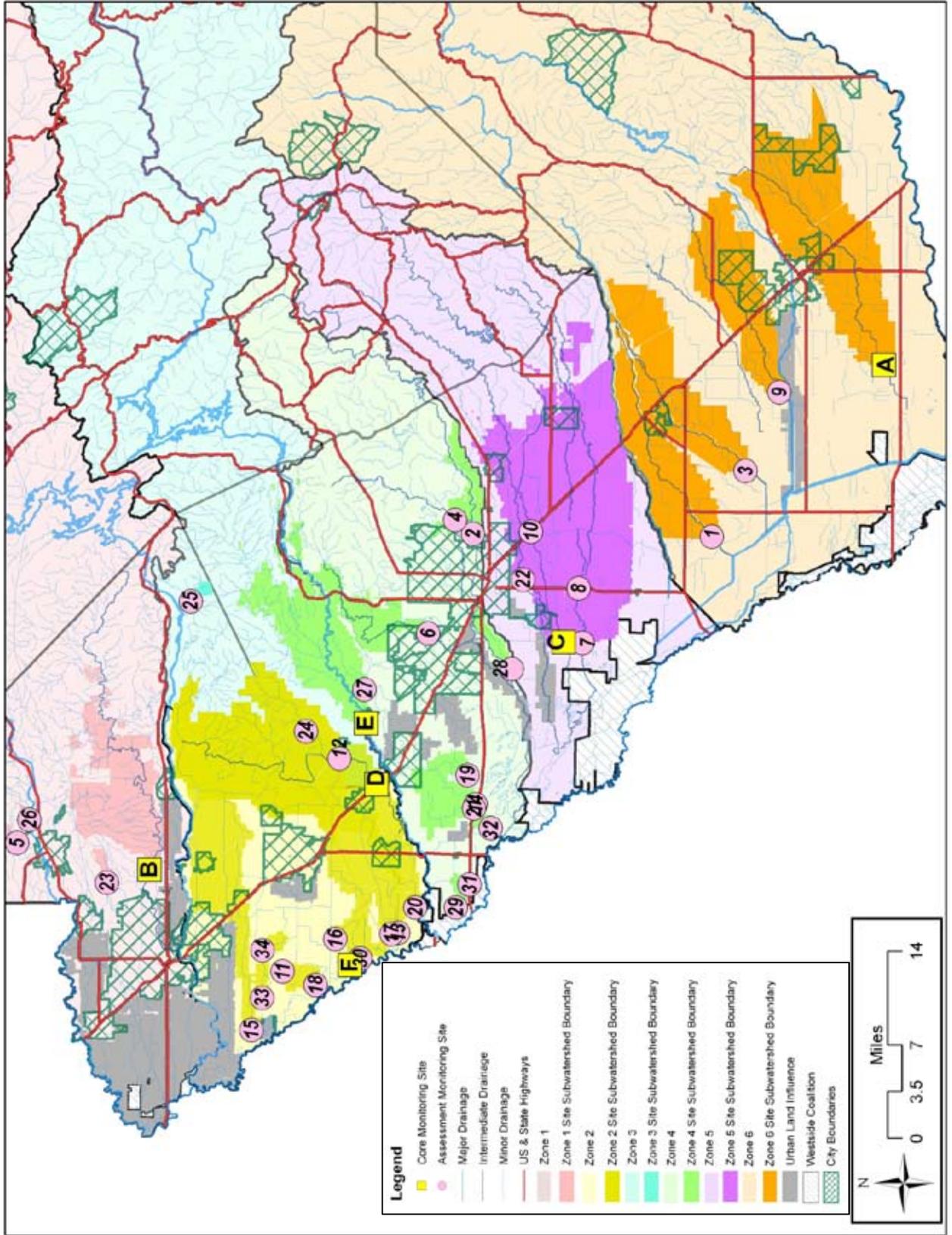
\*Group A pesticides will be monitored for during 2008/2009 and if none are detected the Coalition will request to remove them from monitoring in 2010.

Bolded Xs are for additional constituents at Core Monitoring locations due to one exceedance during previous monitoring.

A = Assessment Monitoring

C = Core Monitoring

Figure 1. Zone and site subwatershed delineations. Only one Assessment Monitoring location will be monitored in each zone and rotated every two years.



## East San Joaquin Water Quality Coalition – Monitoring Sites

<b>Site Location</b>	<b>County</b>	<b>Page</b>
1. Ash Slough @ Avenue 21 .....	Madera.....	12
2. Bear Creek @ Kibby Rd.....	Merced.....	14
3. Berenda Slough Subwatershed .....		16
a. Berenda Slough along Ave 18 ½ .....	Madera	
b. Berenda Slough @ Rd 19 .....	Madera	
4. Black Rascal Creek @ Yosemite Rd.....	Merced.....	18
5. Cottonwood Creek @ Road 20.....	Madera.....	20
6. Deadman Creek @ Gurr Road.....	Merced.....	22
7. Deadman Creek @ Highway 59 .....	Merced.....	24
8. Dry Creek Subwatershed Madera County .....		26
a. Dry Creek @ Road 18 .....	Madera	
b. Dry Creek @ Rd 22 .....	Madera	
c. Dry Creek @ Rd 28 ½ .....	Madera	
9. Dry Creek Subwatershed Stanislaus and Merced Counties .....		28
a. Dry Creek @ Wellsford Road .....	Stanislaus/Merced	
b. Dry Creek @ Waterford Rd.....	Stanislaus/Merced	
10. Duck Slough Subwatershed .....		30
a. Duck Slough @ Gurr Road .....	Merced	
b. Duck Slough @ Hwy 59 .....	Merced	
c. Duck Slough @ Highway 99 .....	Merced	
11. Hatch Drain @ Tuolumne Rd.....	Stanislaus.....	32
12. Highline Canal Subwatershed.....		34
a. Highline Canal @ Hwy 99.....	Merced	
b. Highline Canal @ Lombardy Ave.....	Merced	
13. Hilmar Drain Subwatershed.....		36
a. Hilmar Drain@ Central Ave.....	Merced	
b. Hilmar Drain @ Tuolumne Rd.....	Merced	
c. Hilmar Drain @ Mitchell Rd .....	Merced	
d. Reclamation Drain @ Williams Ave .....	Merced	
14. Livingston Drain @ Robin Ave.....	Merced.....	38
15. Merced River @ Santa Fe.....	Merced.....	40
16. Miles Creek @ Reilly Rd .....	Merced.....	42
17. Mustang Creek @ East Ave.....	Merced.....	44
18. Prairie Flower Drain Subwatershed.....		46
a. Prairie Flower Drain@ Crows Landing Road.....	Stanislaus	
b. Prairie Flower Drain @ Morgan Rd .....	Stanislaus	
19. Silva Drain @ Meadow Drive .....	Merced.....	48
20. South Slough @ Quinley Rd .....	Merced.....	50
21. Westport Drain @ Vivian Rd.....	Stanislaus.....	52

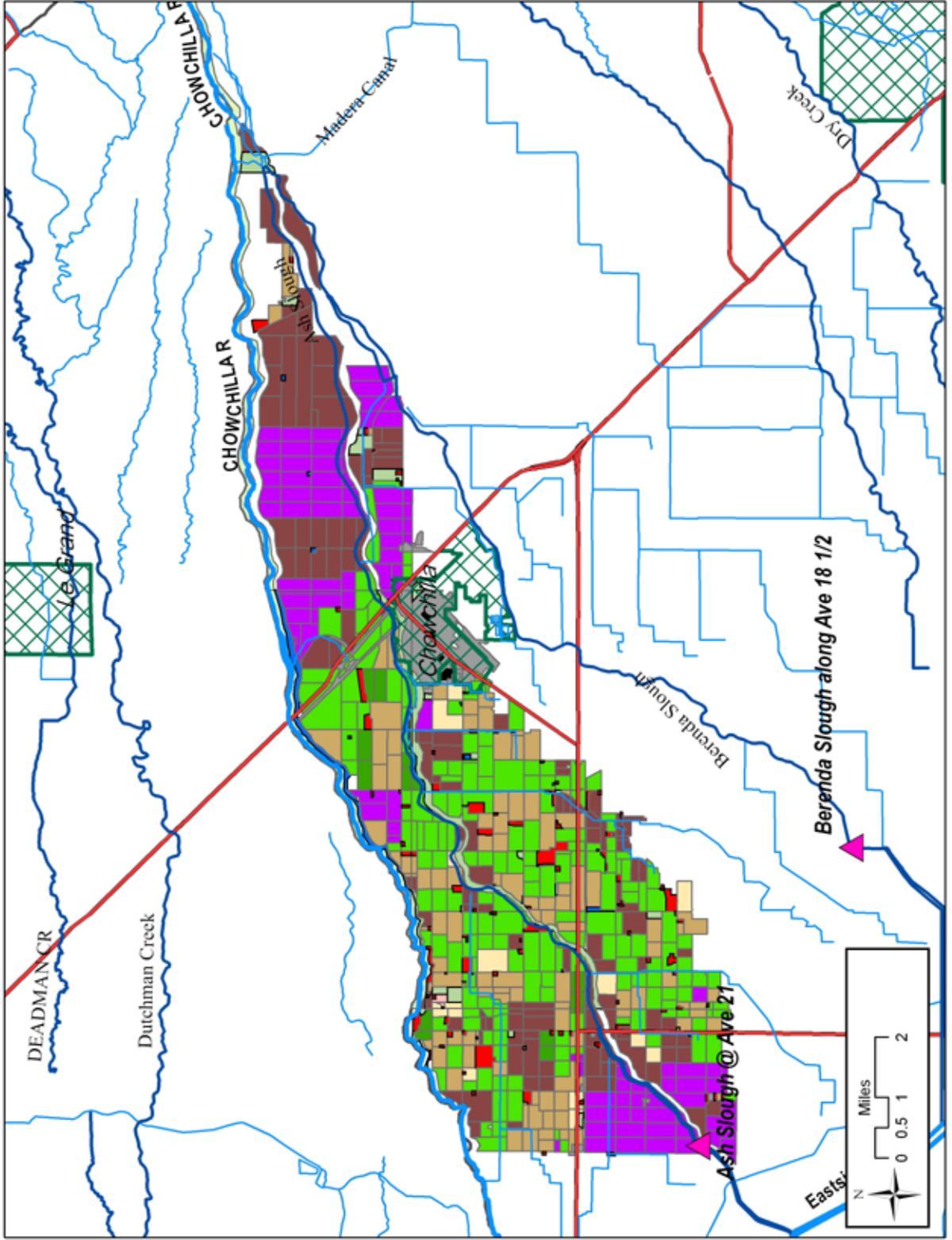
# Map Legends

These legends apply to all the maps in this document:

## Land Use

 Citrus, I	 Truck, Nursery, Berry, I	 Major Drainage
 Deciduous Fruit, Nut, I	 Vineyard, I	 Intermediate Drainage
 Deciduous Fruit, Nut, NI	 Vineyard, NI	 Minor Drainage
 Field Crops, I	 Barren Wasteland, NI	 US & State Highways
 Grains, Hay, I	 Riparian Vegetation, NI	 Westside Coalition
 Grains, Hay, NI	 Wild Vegetation, NI	 City Boundaries
 Idle, I	 Water Surface, NI	 Monitoring Site
 Idle, NI	 Feedlot, Dairy, Farmstead, NI	
 Pasture, I	 Urban, NI	
 Pasture, NI	 Golfcourse, Cemetery, Landscape, NI	
 Rice, I		

# Ash Slough at Avenue 21

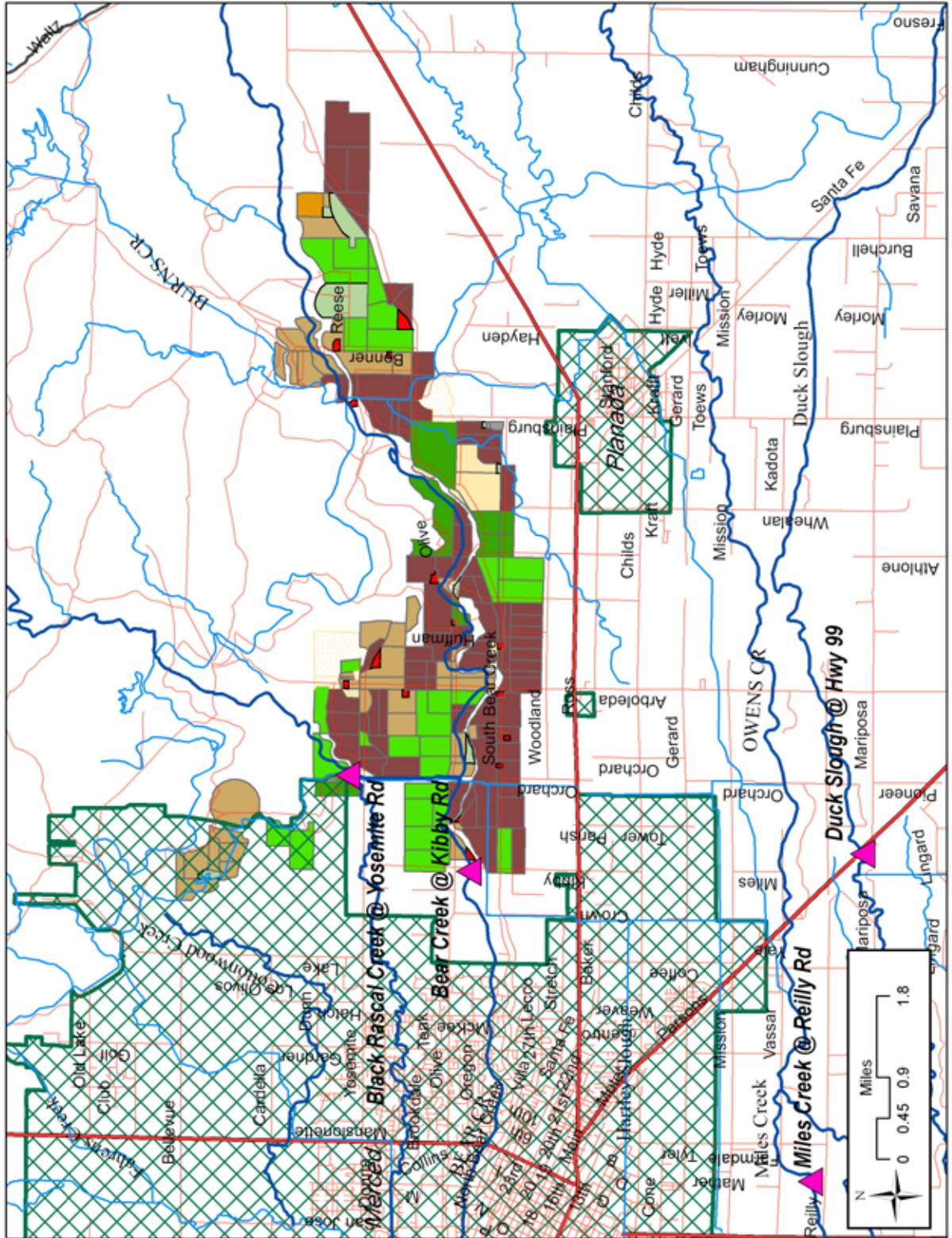


Ash Slough at Ave 21						
Date Sampled	E. coli 235 MPN /100 mL	Copper <sup>1</sup> µg/L (variable)	Lead <sup>1</sup> µg/L (variable)	Chlorpyrifos 0.015 µg/L	Algae toxicity Based on growth	
12-Jul-05	500			0.018		
16-Aug-05				0.046		
28-Feb-06	500			0.016	toxic	
15-Mar-06				0.029		
16-May-06		4.8 (2.6)	0.68 (0.46)			
13-Jun-06	770	17 (3.3)	1.6 (0.69)			
11-Jul-06		6.7 (4.1)				
8-Aug-06		6.3 (3.1)				
12-Sep-06		9.3 (3.3)				

\* 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](http://www.esjcoalition.org)

<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

# Bear Creek at Kibby Road

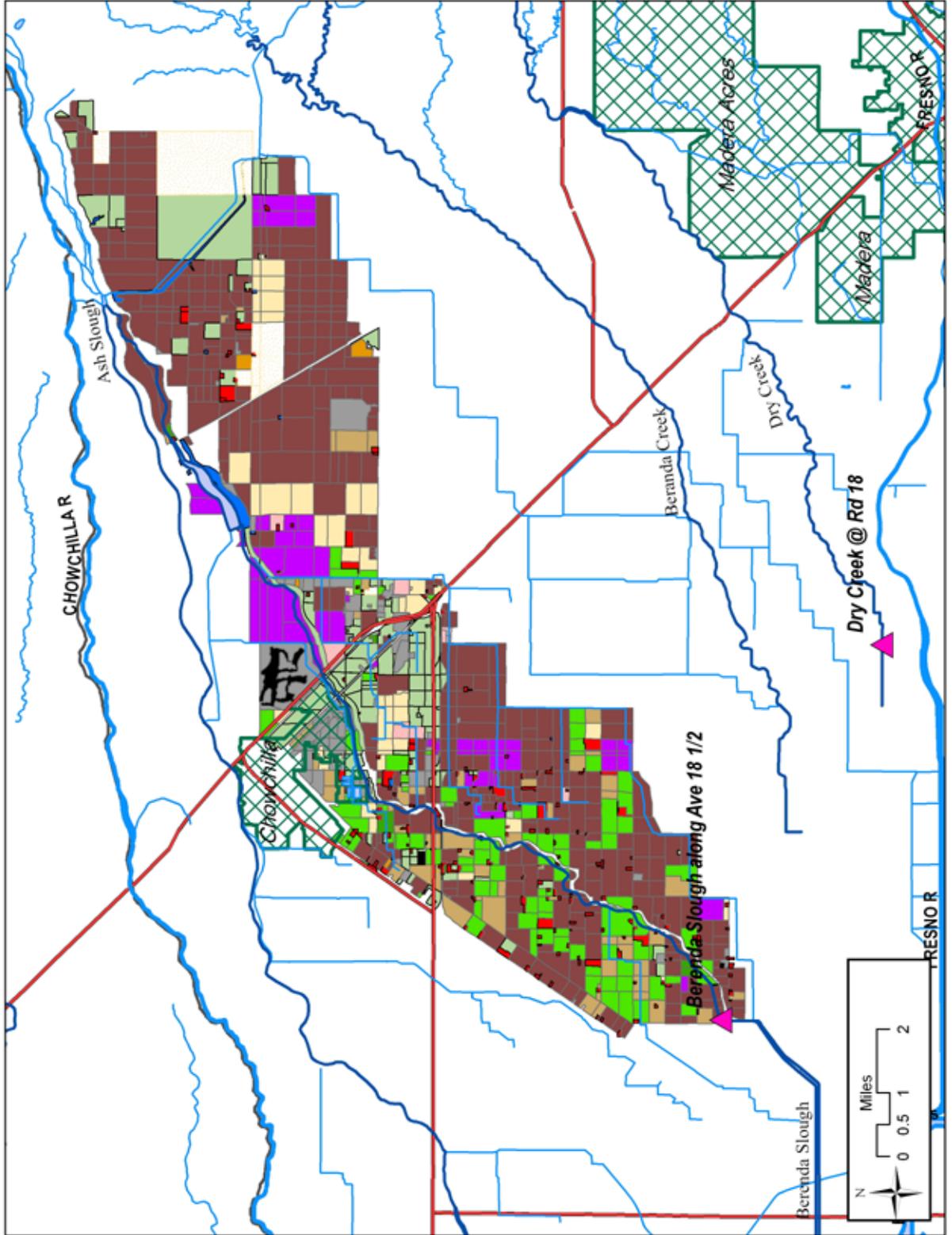


Bear Creek at Kibby Road										
Date Sampled	Oxygen, Dissolved	pH	E. coli	Arsenic	Copper <sup>1</sup>	Chlorpyrifos	DDT	Water flea toxicity	Algae toxicity	Sediment toxicity
	7 mg/L	6.5 – 8.5 units	235 MPN/100 mL	10 µg/L	µg/L (variable)	0.015 µg/L	0.00059 µg/L	Based on survival	Based on growth	Based on survival
21-Mar-05	4.4		1600							
10-May-05			280					toxic		
15-Mar-06			1600							
17-May-06						0.52		toxic		
13-Jun-06	6.99	8.69								
12-Feb-07			2400		12 (9.3)		0.0091			
1-Mar-07			1300							
24-Jul-07						0.049		toxic		
21-Aug-07		8.69								
24-Jan-08			2400		8.6 (7.7)					
25-Feb-08			>2400		7.2 (6.4)					
4-Mar-08		8.72							toxic	
29-Apr-08									toxic	
7-May-08										
24-Jun-08				17						
26-Aug-08					7.1 (2.4)					
28-Aug-08										toxic
2-Oct-08										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](http://www.esjcoalition.org)

<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

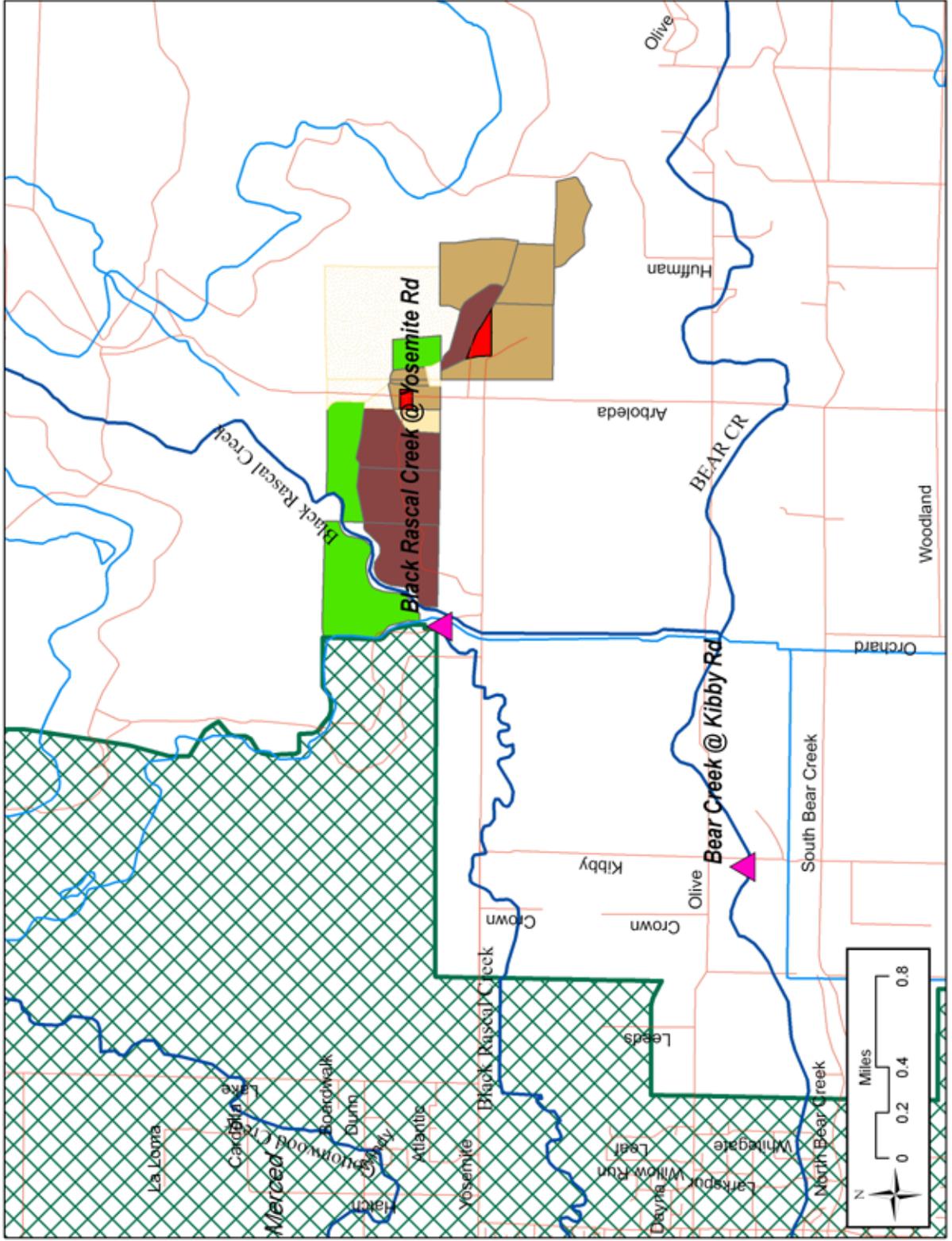
# Berenda Slough along Avenue 18 1/2



<b>Berenda Slough along Avenue 18 1/2 (Road 19)</b>									
<b>Site Name</b>	<b>Date Sampled</b>	<b>Oxygen, Dissolved</b>	<b>E. coli MPN/100 mL</b>	<b>Chlorpyrifos</b>	<b>Diuron</b>	<b>Water flea toxicity Based on survival</b>	<b>Algae toxicity Based on growth</b>		
		<b>7 mg/L</b>	<b>235</b>	<b>0.015 µg/L</b>	<b>2 µg/L</b>				
Along Ave 18 1/2	13-Jun-2006	5.49	460						
Along Ave 18 1/2	11-Jul-2006	6.54		0.043					
Along Ave 18 1/2	12-Sep-2006			0.14		toxic			
Along Ave 18 1/2	29-May-2007	1.75			3.4		toxic		
Along Ave 18 1/2	05-Jun-2007	3.07							
Along Ave 18 1/2	26-Jun-2007	5.2	390						
Along Ave 18 1/2	24-Jul-2007	6.37		0.028			toxic		
Along Ave 18 1/2	31-Jul-2007	4.72					toxic		
Along Ave 18 1/2	21-Aug-2007	6.13							
@ Rd 19	29-Jul-2008	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](http://www.esjcoalition.org)  
*Italics* – Additional Management Plan monitoring site

# Black Rascal Creek at Yosemite Road



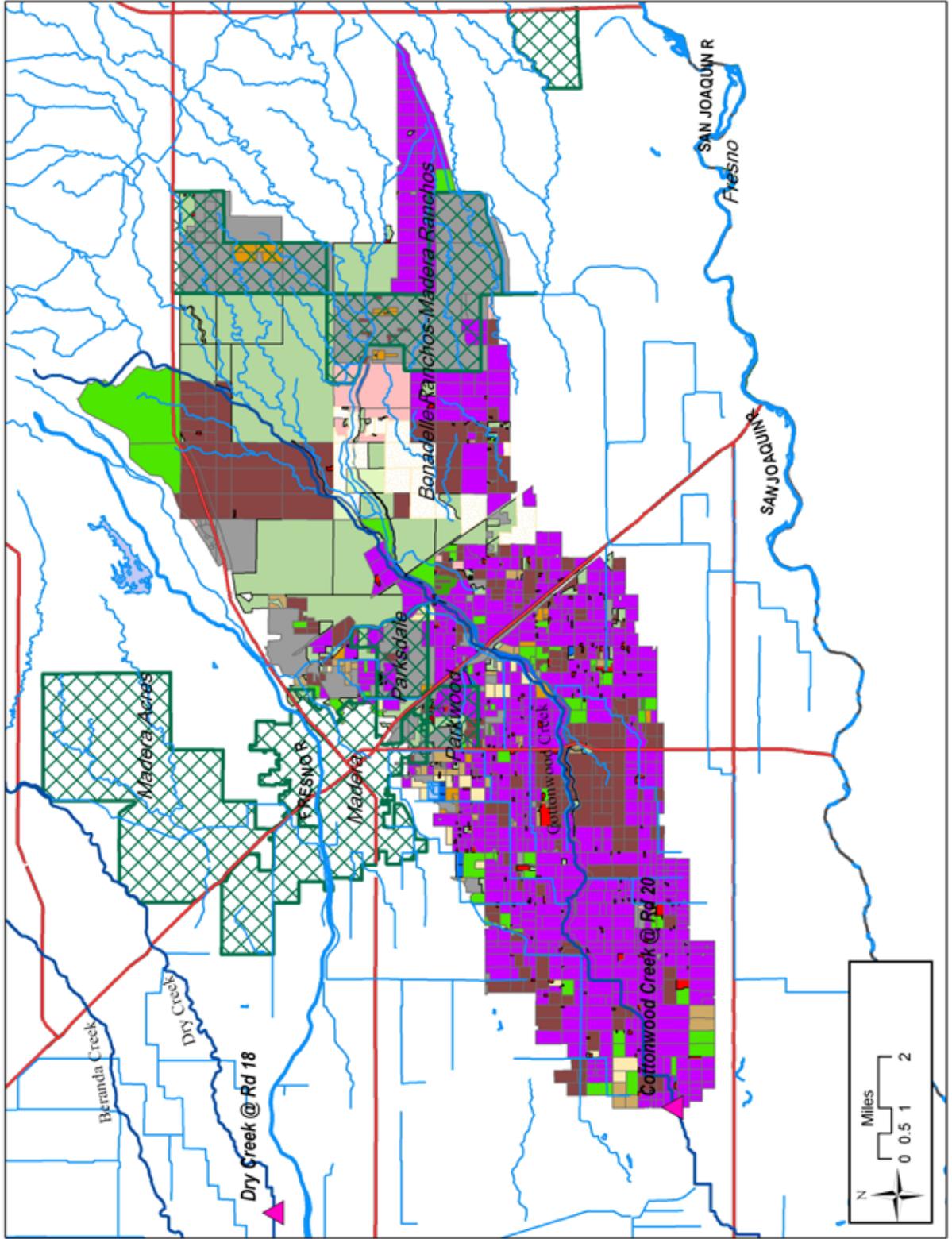
Black Rascal Creek at Yosemite Road										
Date Sampled	Oxygen, Dissolved	pH	<i>E. coli</i>	Copper <sup>1</sup>	Lead <sup>1</sup>	Chlorpyrifos	Water flea toxicity	Algae toxicity	Sediment toxicity	
	7 mg/L	6.5 – 8.5 units	235 MPN/100 mL	µg/L (variable)	µg/L (variable)	0.015 µg/L	Based on survival	Based on growth	Based on survival	
18-May-06	5.41		2400			0.033				
14-Jun-06			490							
12-Jul-06	5.53									
9-Aug-06	5.65									
12-Sep-06	5.56									
12-Feb-07			2400							
1-Mar-07			2400							
29-May-07	3.93		770				toxic			
26-Jun-07	6.95									
24-Jul-07			580			3.7	toxic			
31-Jul-07							toxic			
21-Aug-07	6.42					0.12	toxic			
23-Aug-07	5.69									
28-Aug-07	6.18						toxic			
18-Sep-07						0.031				
24-Jan-08			>2400							
25-Feb-08			>2400					toxic		
29-Apr-08		8.75	770	8 (7.7)	2.4 (2.39)					
27-May-08			920							
24-Jun-08			490							
8-Jul-08	2.3									
29-Jul-08	4.49									
5-Aug-08	5.58									
26-Aug-08	2.58									
28-Aug-08	2.26								toxic	
9-Sep-08	4.18									
30-Sep-08		5.02			1.3 (0.75)					
2-Oct-08	5.05									

\* 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](http://www.esjcoalition.org)

<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

# Cottonwood Creek at Road 20

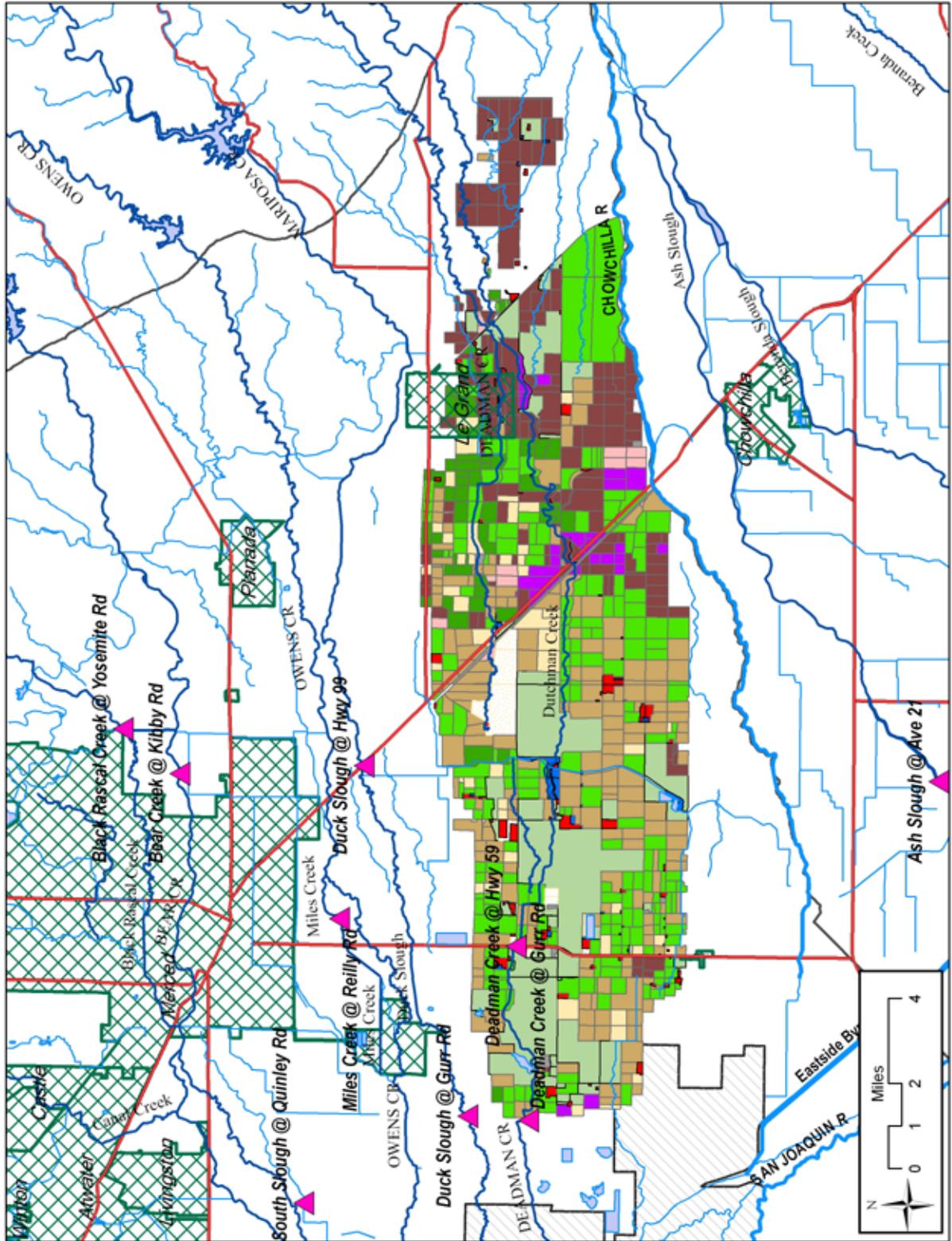


**Cottonwood Creek at Road 20**

Date Sampled	Oxygen, Dissolved	pH	E. coli	Copper <sup>1</sup>	Lead <sup>1</sup>	Chlorpyrifos	Cyanazine	Diazinon	Diuron	Simazine	Fathead minnow toxicity	Algae toxicity	Sediment toxicity
16-Feb-05	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
21-Mar-05	5.6		1600										
10-May-05			540										
14-Jun-05	5.7												
12-Jul-05	5.17												
16-Aug-05			300										
20-Sep-05	6.5												
28-Feb-06			300										
15-Mar-06			1600										
16-May-06	5.71			4.4 (3.5)									
13-Jun-06	6.9			8 (3.1)	0.73 (0.63)								
11-Jul-06	6.51												
8-Aug-06	6.95												
12-Sep-06	6.11			5.5 (4.4)									
29-May-07	6.55			6.7 (5.5)									
19-Jun-07				6.7 (4.4)									
26-Jun-07				4.3 (4.1)									
24-Jul-07		9.04		5.4 (4.6)									
21-Aug-07	6.81			5.2 (4.6)									
23-Aug-07	3.95												
25-Jan-08			1200	24 (3.0)	5.4 (0.57)	0.019			68		toxic		
25-Feb-08				21 (6.5)	1.9 (1.87)	0.04		0.2	65	5.1			
4-Mar-08													toxic
29-Apr-08			580	8 (6.9)								toxic	
7-May-08												toxic	
27-May-08			250				1.1						
24-Jun-08			1300	39 (5.5)									
29-Jul-08			1000										
26-Aug-08	6.83		390	4.4 (3.7)									

\* 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](http://www.esjcoalition.org)  
<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

# Deadman Creek at Gurr Road



**Deadman Creek @ Gurr Road**

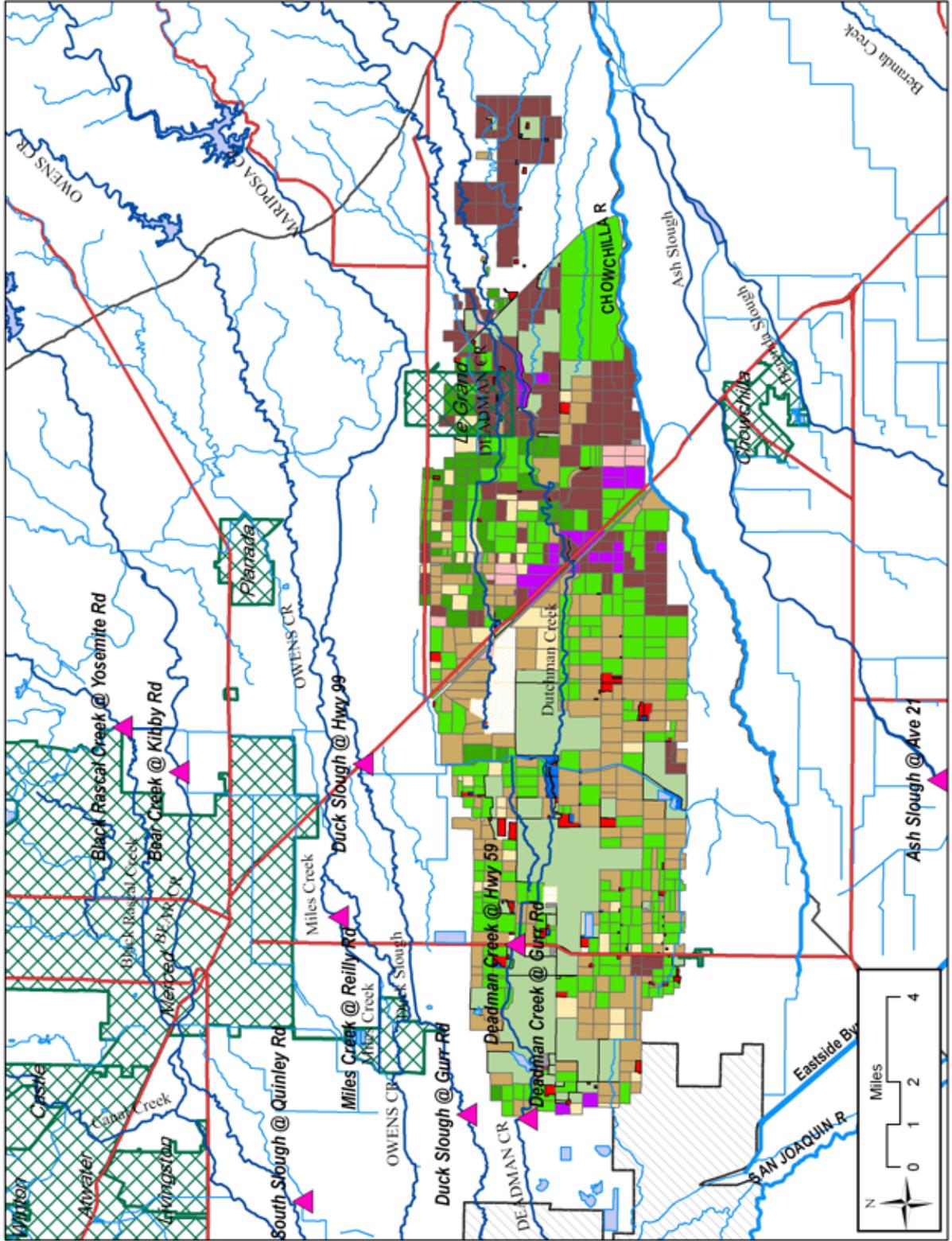
Date Sampled	Oxygen, Dissolved 7 mg/L	pH 6.5-8.5 units	Specific Conductivity 700 µmhos/cm	E. coli MPN/100mL	Total Dissolved Solids 450 mg/L	Arsenic 10 µg/L	Copper <sup>1</sup> µg/L (variable)	Chlorpyrifos 0.015 µg/L	DDT 0.00059 µg/L	Dieldrin 0.00014 µg/L	Malathion <sup>2</sup> 0 µg/L	Fathead minnow toxicity Based on survival	Algae toxicity Based on growth
31-Jul-04	6.85			1600									
31-Aug-04				1600									
29-Sep-04	6.7			500									
17-May-06				1200									
13-Jun-06	5.01			310								toxic	
11-Jul-06	6.5			490									
8-Aug-06	6.96			390							0.19		
12-Sep-06	6.08			2400				0.027					
11-Feb-07				2400		14	16 (15.4)						
28-Feb-07				1000		14							
24-Apr-07							9.2 (7.7)						
29-May-07	5.11			1400			8.8 (7.5)					toxic	
26-Jun-07				460									
24-Jul-07	5.38												toxic
18-Sep-07	5.88			820									
25-Jan-08				870		15	19 (11.7)		0.0073				
25-Feb-08		8.51		550		13							toxic
29-Apr-08				>2400		18				0.03			
27-May-08			801		520								
24-Jun-08	4.85												
29-Jul-08	6.87												
26-Aug-08	5.21			330									
28-Aug-08	5.9												
30-Sep-08	5.46			330									

\* 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](http://www.esjcoalition.org)

<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

<sup>2</sup> 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

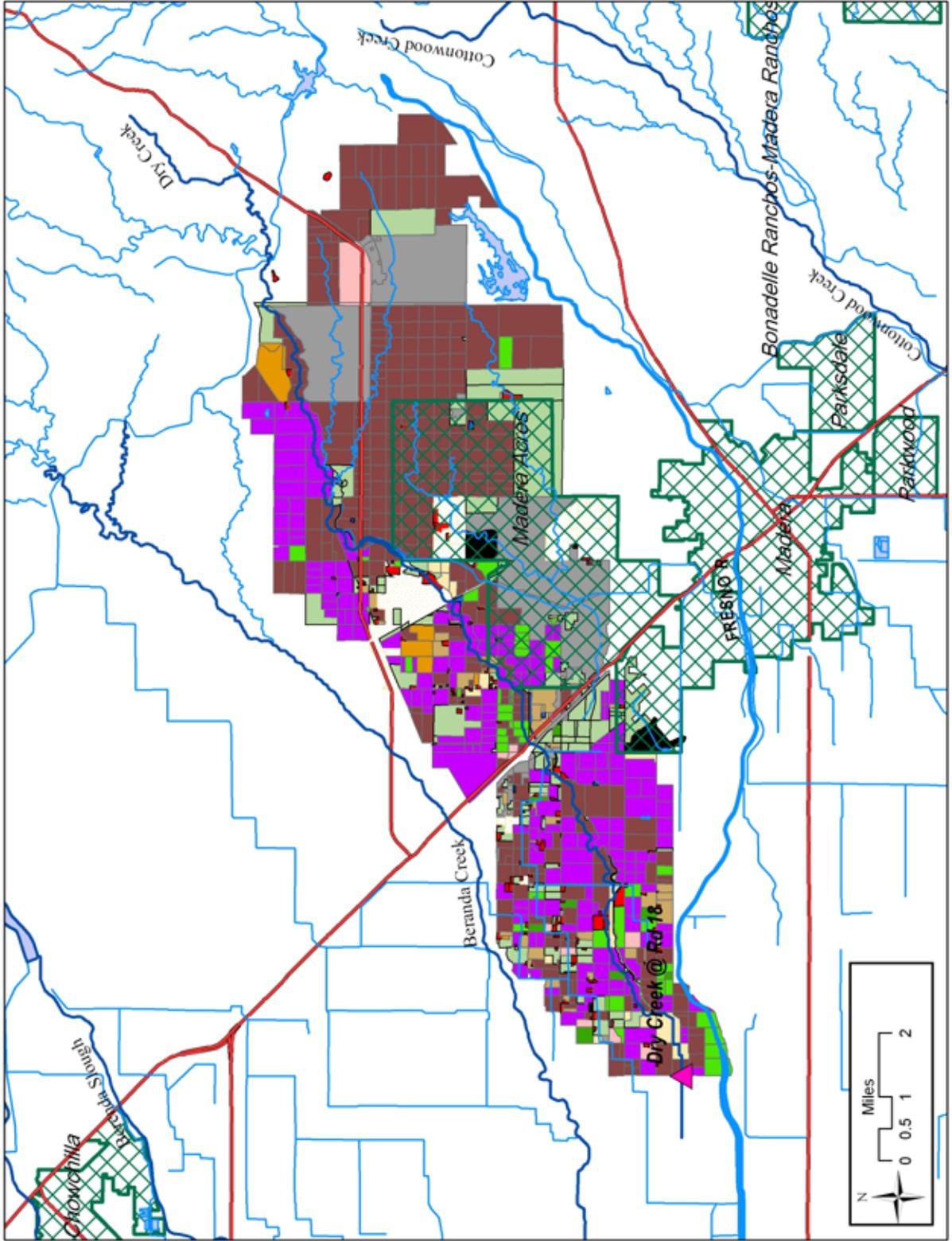


**Deadman Creek @ Highway 59**

Date Sampled	Oxygen, Dissolved	E. coli MPN/100mL	Arsenic	Chlorpyrifos	DDD µg/L	DDT µg/L	Diuron	Simazine	Algae toxicity	Sediment toxicity
	7 mg/L									
13-Jun-06	5.65				0.0053	0.05				
8-Aug-06	6.55									
12-Sep-06	6.53			0.059						
11-Feb-07		400								
28-Feb-07		490								
24-Apr-07		310								
29-May-07	6.13	490								
26-Jun-07	6.78	610								
24-Jul-07	4.31									
21-Aug-07	4.47			0.038						
23-Aug-07	2.65									
18-Sep-07	5.43	330								
25-Jan-08		>2400					6.2	25	toxic	
25-Feb-08		1200								
29-Apr-08		610	16						toxic	
7-May-08									toxic	
27-May-08		610	12							
24-Jun-08	3.78	310	17							
29-Jul-08	3.08	490								
5-Aug-08	4.51			0.14						
26-Aug-08	1.78		11							
28-Aug-08	1.05									toxic
9-Sep-08	3.37			0.069						
30-Sep-08	4.45		13							
2-Oct-08	4.22									

\* 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](http://www.esjcoalition.org)

**Dry Creek at Road 18 (Road 22 and 28 1/2)**



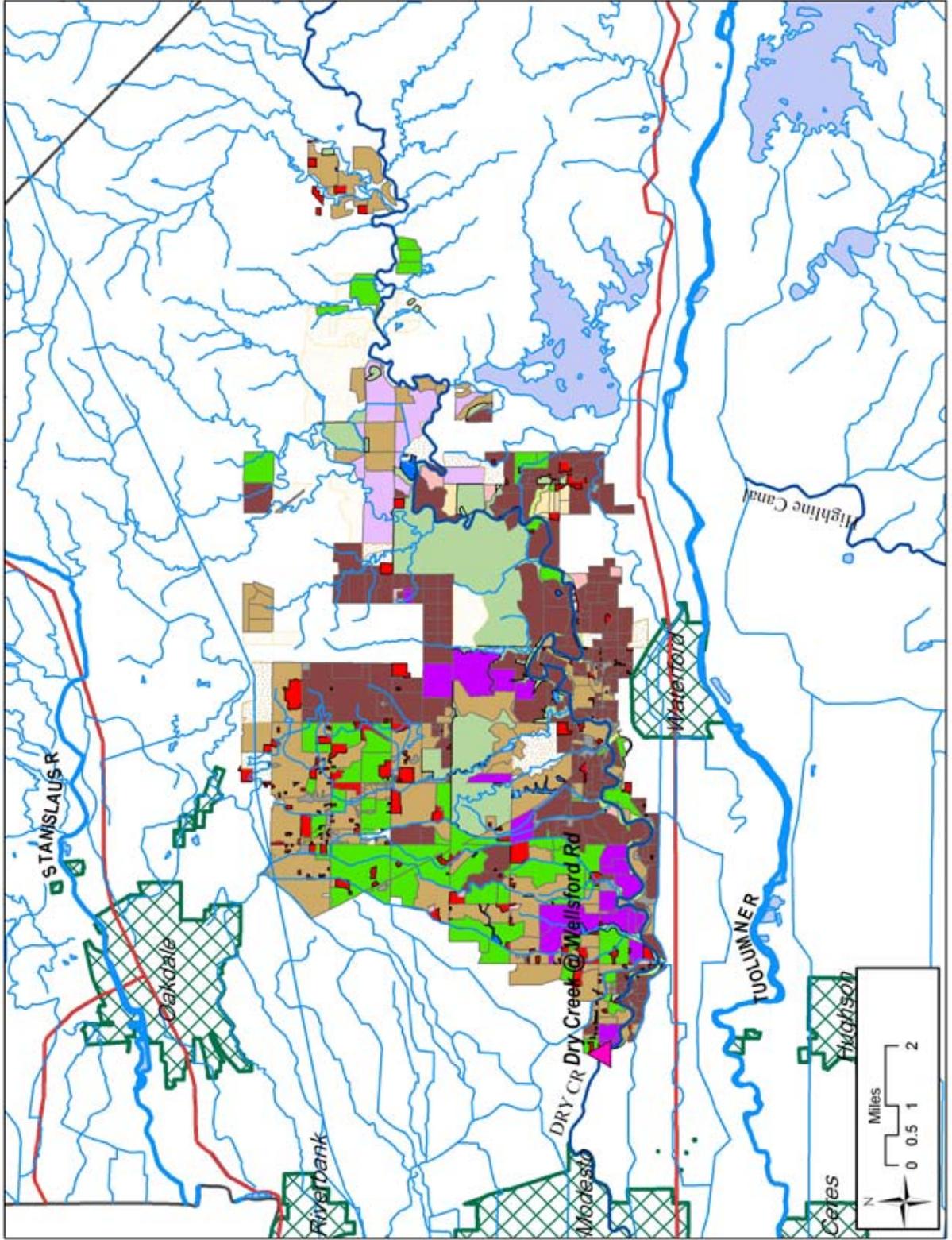
Dry Creek @ Road 18 (Rd 22 and 28 1/2)													
Site Name	Date Sampled	Oxygen, Dissolved	pH	E. coli	Copper <sup>1</sup>	Lead <sup>1</sup>	Zinc <sup>1</sup>	Chlorpyrifos	Diazinon	Diuron	Water flea Toxicity	Algae toxicity	Sediment toxicity
Rd 18	16-Aug-05	7 mg/L	6.5 – 8.5 units	235 MPN/100mL	µg/L (variable)	µg/L (variable)	µg/L (variable)	0.015 µg/L	0.1 µg/L	2 µg/L	Based on survival	Based on growth	Based on survival
Rd 18	20-Sep-05		6.48	500									
Rd 18	03-May-06												
Rd 18	16-May-06			1600	4.3 (1.9)	0.36 (0.31)							toxic
Rd 18	13-Jun-06				6.3 (1.5)	0.27 (0.21)					toxic		
Rd 18	11-Jul-06				4.1 (2.4)			0.077					
Rd 18	8-Aug-06				4.6 (2.2)								
Rd 18	12-Sep-06	5.61			6.1 (1.1)	0.31 (0.13)	18 (14.1)						
Rd 18	11-Feb-07				14 (3.9)				0.13				
Rd 18	24-Apr-07			1400	17 (15.4)			0.017					
Rd 18	29-May-07				4.7 (2.4)							toxic	
Rd 18	19-Jun-07				4.9 (1.5)								
Rd 18	26-Jun-07				3.6 (1.9)								
Rd 18	24-Jul-07				5.6 (2.2)								
Rd 18	31-Jul-07				4.5 (1.5)								
Rd 18	21-Aug-07				5.5 (1.9)	0.34 (0.31)							
Rd 18	28-Aug-07		8.53		4.3 (1.9)								
Rd 18	25-Jan-08			>2400	20 (5.9)				0.13	21		toxic	
Rd 18	25-Feb-08				33 (5.5)			0.034	0.24	2.1		toxic	
Rd 18	4-Mar-08											toxic	
Rd 18	29-Apr-08				6.8 (3.0)								
Rd 22	29-Apr-08		8.8		5.2 (3.0)								
Rd 18	27-May-08				5 (3.5)								
Rd 22	27-May-08				5.7 (4.1)								
Rd 18	24-Jun-08				4 (2.6)								
Rd 22	24-Jun-08				6.5 (2.6)								
Rd 18	29-Jul-08				5.9 (1.5)								
Rd 22	29-Jul-08				7 (2.4)								
Rd 28 1/2	29-Jul-08				5.3 (1.7)								
Rd 18	26-Aug-08	5.82			5.1 (1.3)	0.36 (0.17)							
Rd 22	26-Aug-08				6.5 (1.5)								
Rd 18	28-Aug-08	5.62											toxic
Rd 22	30-Sep-08	3.97			36 (8.2)								

\* 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](http://www.esjcoalition.org)

<sup>1</sup>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 at Wellsford Road (Waterford Rd)												
Site Name	Date Sampled	Oxygen, Dissolved	pH	<i>E. coli</i>	Copper <sup>1</sup>	Lead <sup>1</sup>	Chlorpyrifos	Diuron	Thiobencarb <sup>2</sup>	Water flea 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	2 µg/L	0 µg/L	Based on survival	Based on growth	Based on survival
Wellsford Rd	15-Feb-05									toxic		
Wellsford Rd	22-Mar-05		8.96	900								
Wellsford Rd	11-May-05		6.26									
Wellsford Rd	15-Jun-05	5.9		240								
Wellsford Rd	13-Jul-05	5.7										
Wellsford Rd	17-Aug-05		9.18	900			0.024					
Wellsford Rd	21-Sep-05	6.98		500								
Wellsford Rd	1-Mar-06			300								
Wellsford Rd	16-Mar-06			1600								
Wellsford Rd	18-May-06			280								
Wellsford Rd	15-Jun-06	6.08										
Wellsford Rd	13-Jul-06	6.69					0.026					
Wellsford Rd	10-Aug-06						0.024					
Wellsford Rd	14-Sep-06			310					0.1	toxic		
Wellsford Rd	11-Feb-07	6.17		290				37		toxic		
Wellsford Rd	22-Feb-07									toxic		
Wellsford Rd	28-Feb-07			2400	8.4 (7.2)			4		toxic		
Wellsford Rd	7-Mar-07									toxic		
Wellsford Rd	17-Apr-07				5.1 (5.0)							
Wellsford Rd	19-Jun-07	5.77										
Wellsford Rd	17-Jul-07	6.64					0.021					
Wellsford Rd	31-Jul-07	6.91										
Wellsford Rd	14-Aug-07	6.58		440								
Wellsford Rd	11-Sep-07	6.5		420			0.043					
Wellsford Rd	24-Jan-08			>2400								
Wellsford Rd	26-Feb-08			>2400	11 (6.0)	1.8 (1.7)				toxic		
Wellsford Rd	4-Mar-08											toxic
Wellsford Rd	22-Apr-08			>2400								
Wellsford Rd	20-May-08	5.67		330								
Wellsford Rd	17-Jun-08	6.31		>2400								
Wellsford Rd	22-Jul-08	6.67		>2400			0.03					
Waterford Rd	22-Jul-08	6.08					0.02					
Wellsford Rd	19-Aug-08	6.85		580								
Waterford Rd	19-Aug-08	5.93					0.023					
Wellsford Rd	28-Aug-08	6.64										toxic
Wellsford Rd	23-Sep-08			290								
Wellsford Rd	2-Oct-08	5.83										

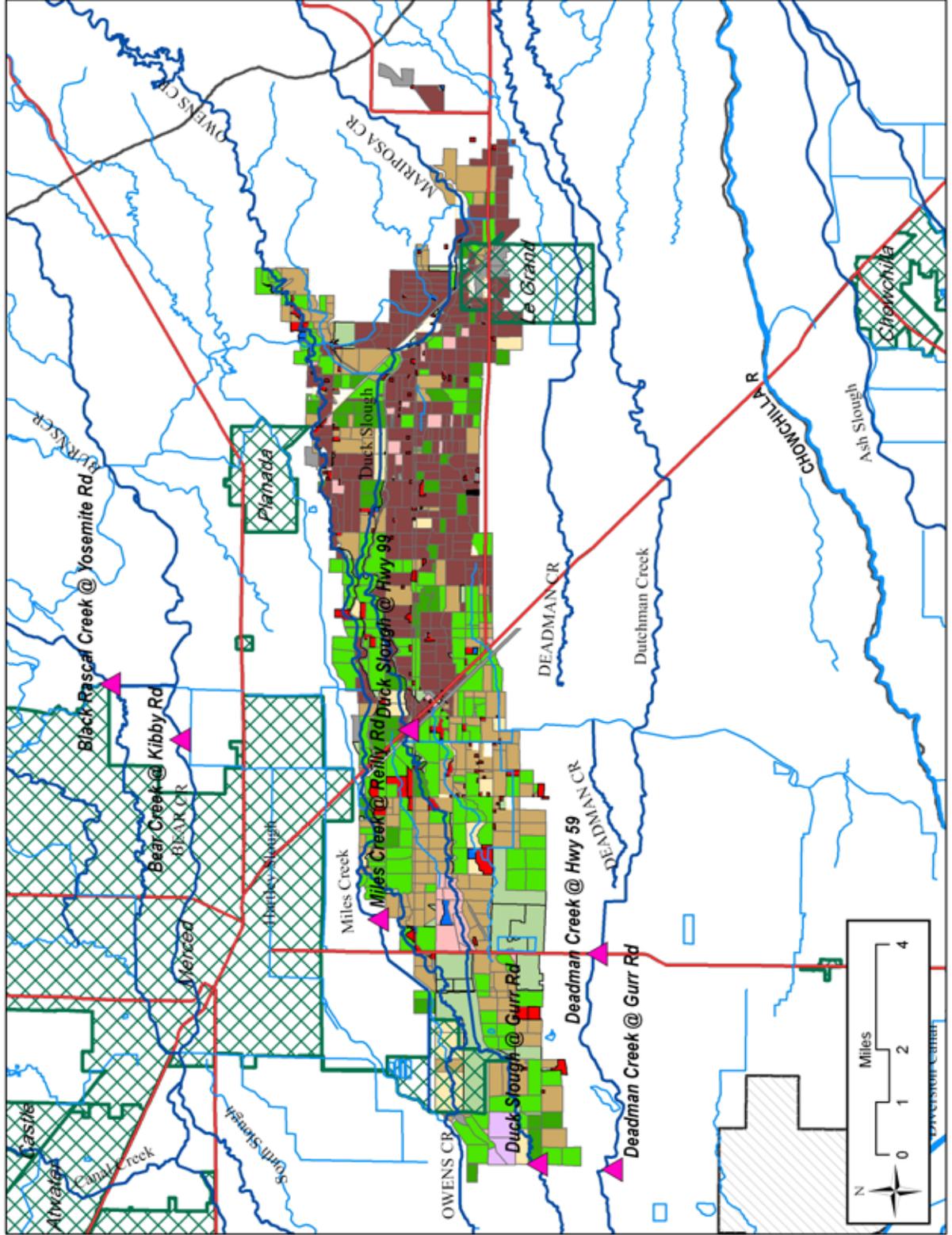
\* Water Quality Trigger Limits (WQTLs) are indicated below the column headers. WQTLs for all constituents sampled can be found on the ESJWQC website; [www.esjcoalition.org](http://www.esjcoalition.org)

<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

<sup>2</sup> 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 and Highway 99)



### Duck Slough at Gurr Road (Highway 59)

Site Name	Date Sampled	Oxygen, Dissolved	pH	Specific Conductivity	E. coli	Total Dissolved Solids	Copper <sup>1</sup>	Lead <sup>1</sup>	Carbofuran <sup>2</sup>	Chlorpyrifos	Thiobencarb <sup>2</sup>	Water flea toxicity	Algae toxicity	Sediment toxicity
		7 mg/L	6.5 - 8.5 units	700 µmhos/cm	235 MPN/100 mL	450 mg/L	µg/L (variable)	µg/L (variable)	0 µg/L	0.015 µg/L	0 µg/L	Based on survival	Based on growth	Based on survival
Gurr Rd	31-Jul-04				350					0.045				
Gurr Rd	31-Aug-04													toxic
Gurr Rd	29-Sep-04			701		540							toxic	
Gurr Rd	16-Feb-05				1600									
Gurr Rd	21-Mar-05				1600									
Gurr Rd	10-May-05				1600									
Gurr Rd	14-Jun-05				300									
Gurr Rd	12-Jul-05				300									toxic
Gurr Rd	16-Aug-05				240									
Gurr Rd	20-Sep-05													toxic
Gurr Rd	28-Feb-06											toxic		
Gurr Rd	10-Mar-06											toxic		
Gurr Rd	15-Mar-06				300							toxic		
Gurr Rd	17-May-06		8.6		2000									
Gurr Rd	14-Jun-06				690		120 (10.9)				5.8			
Gurr Rd	12-Jul-06	6.18					14 (9.3)				0.29			
Gurr Rd	13-Sep-06	5.53												
Gurr Rd	12-Feb-07				2400		47 (12.4)	13 (4.88)						
Gurr Rd	28-Feb-07				2000		11 (8.8)							
Gurr Rd	7-Mar-07		9.17											
Gurr Rd	29-May-07				820									
Gurr Rd	19-Jun-07						5.4 (3)							
Gurr Rd	26-Jun-07	5.85					4.6 (3.7)	1 (0.81)					toxic	
Gurr Rd	24-Jul-07													
Gurr Rd	18-Sep-07				370									
Gurr Rd	25-Jan-08				>2400		13 (9.0)							
Gurr Rd	25-Feb-08				>2400		17 (9.3)	3.7 (3.18)						
Gurr Rd	29-Apr-08								0.052					
<i>Hwy 59</i>	<i>24-Jun-08</i>			<i>841</i>										
<i>Hwy 59</i>	<i>29-Jul-08</i>	<i>4.22</i>												
Gurr Rd	28-Aug-08	4.83												toxic
<i>Hwy 59</i>	<i>30-Sep-08</i>	<i>3.33</i>					<i>3.7 (1.3)</i>							
Gurr Rd	2-Oct-08													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](http://www.esjcoalition.org)

<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

<sup>2</sup> 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

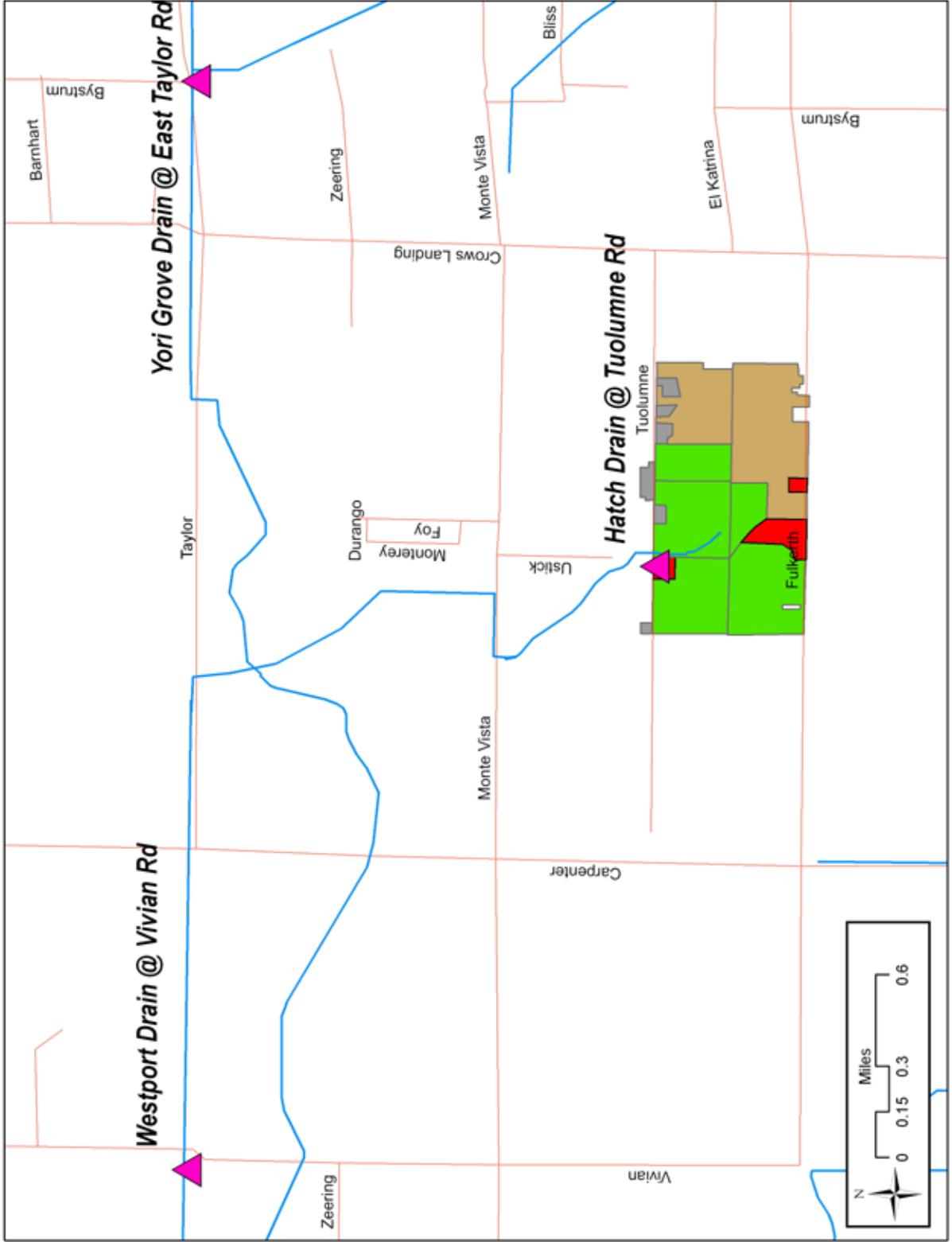
**Duck Slough at Highway 99**

Date Sampled	Oxygen, Dissolved	pH	Specific Conductivity	<i>E. coli</i>	Copper <sup>1</sup>	Lead <sup>1</sup>	Chlorpyrifos	Water flea toxicity	Algae toxicity	Sediment toxicity
21-Mar-05	7 mg/L	6.5 – 8.5 units	700 µmhos/cm	235 MPN/100 mL	µg/L (variable)	µg/L (variable)	0.015 µg/L	Based on survival	Based on growth	Based on survival
10-May-05				1600						
12-Jul-05				1600			0.026		toxic	
15-Mar-06				900						
17-May-06		8.57		280		5.2 (3.02)	0.27	toxic		
14-Jun-06				260						
8-Aug-06					3.4 (2.4)	2.3 (0.41)				
13-Sep-06	6.72			340	19 (5)	24 (1.25)				
12-Feb-07				2400	31 (10.1)	15 (3.59)				
28-Feb-07				2400						
24-Apr-07					4.1 (3.7)	1.5 (0.81)				
26-Jun-07					3 (2.4)	0.68 (0.41)				
24-Jul-07					3.5 (3)	0.64 (0.57)				
31-Jul-07		8.8					0.042			
21-Aug-07					5.5 (3.3)	1.1 (0.69)				
28-Aug-07					3.1 (2.4)					
18-Sep-07				610	6.9 (2.8)	1.8 (0.52)				
25-Jan-08				>2400						
25-Feb-08				>2400	9.9 (8.0)					
4-Mar-08		8.65								
29-Apr-08				280					toxic	
7-May-08									toxic	
29-Jul-08					2.7 (2.6)	0.69 (0.5)				
26-Aug-08						0.72 (0.69)				
28-Aug-08										toxic
30-Sep-08							0.034			toxic
02-Oct-08										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](http://www.esjcoalition.org)  
<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.



# Hatch Drain at Toulumne Road

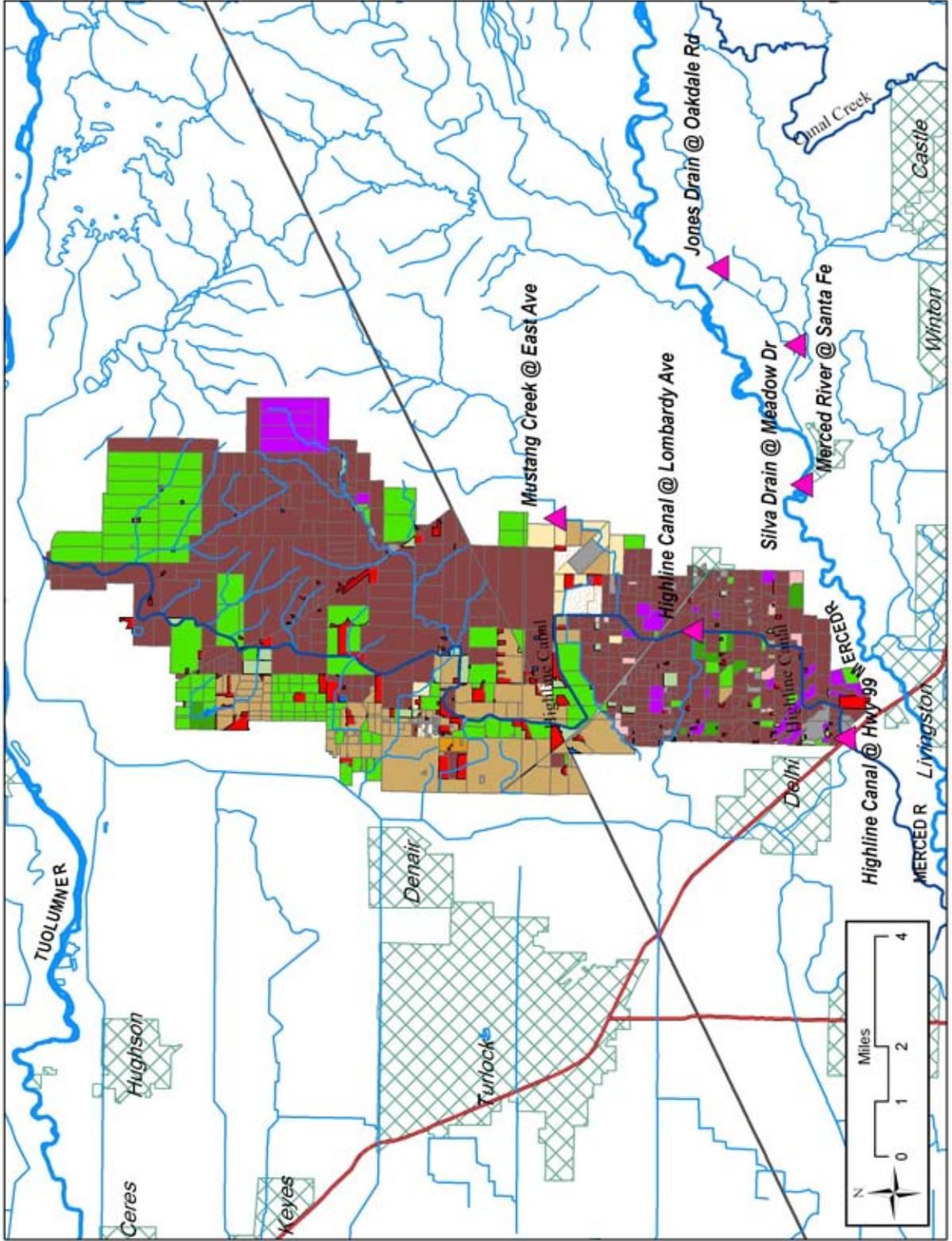


### Hatch Drain at Tuolumne Road

Date Sampled	Oxygen, Dissolved 7 mg/L	Specific Conductivity 700 µmhos/cm	Total Dissolved Solids 450 mg/L	<i>E. coli</i> 235 MPN /100 mL	Ammonia as N 1.5 mg/L	Nitrate as N 10 mg/L	Nitrite as N 1.0 mg/L	Arsenic 10 µg/L	DDT 0.00059 µg/L	Dimethoate 1.0 µg/L	Methoxychlor 0.03 µg/L	Algae toxicity Based on growth	Sediment toxicity Based on survival
15-May-07	6.46	1105	700	2400		13	2.2	12					
19-Jun-07	5.54	1014	800	770		23		29					
17-Jul-07	3.05	1111	720	260		44		18					
14-Aug-07	4.22			2400	4.7	18				2.1			
16-Aug-07	5.85	1280											toxic
11-Sep-07	3.53	1817	1300	1600		24		18			0.035		toxic
24-Jan-08	4.67	1199	820	410		24		15					toxic
26-Feb-08	1.9	1298	900	920		24		16					toxic
4-Mar-08	2.12	1271											toxic
28-Mar-08	5.22	1373											toxic
22-Apr-08	2.14	1274	880	1300		20		17	0.023				toxic
29-Apr-08	0.82	1323											toxic
20-May-08	1.67	1325	960	2400		18		18					toxic
27-May-08	0.73	1197											
17-Jun-08	0.99	1292	930	390		18		17					
22-Jul-08	0.67	1326	900	650		27		19					toxic
29-Jul-08	0.9	1301											toxic
19-Aug-08	1.4	1330	900	1400		15		17					toxic
26-Aug-08	1.1	1493											toxic
28-Aug-08	1.31	1391											toxic
23-Sep-08	1.69	1295	920			17		15					
2-Oct-08	2.14	1455											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](http://www.esjcoalition.org)

# Highline Canal at Highway 99 and at Lombardy Avenue



### Highline Canal @ Highway 99

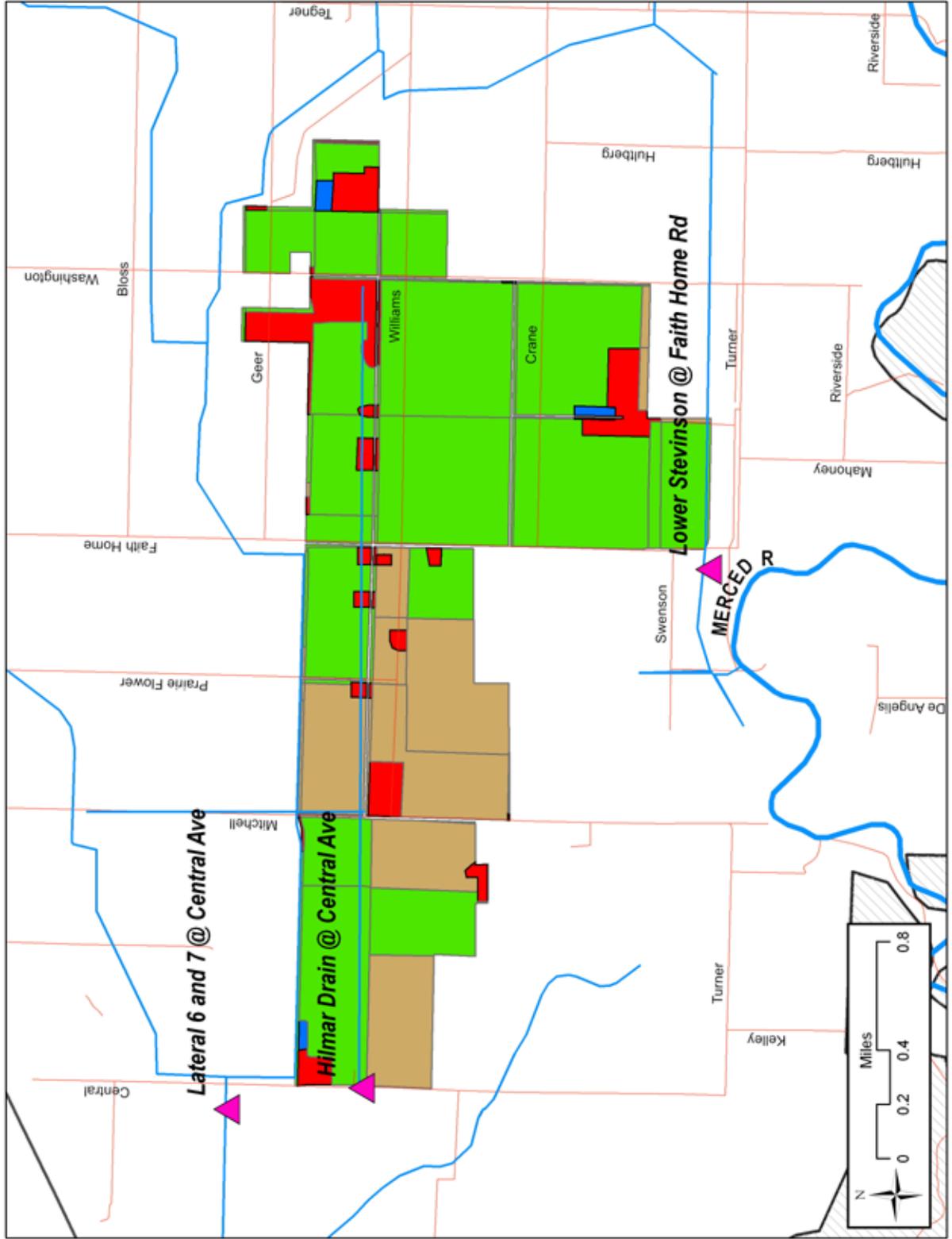
Date Sampled	Oxygen, Dissolved	pH	Specific Conductivity	Total Dissolved Solids	E. coli	Ammonia as N	Copper <sup>1</sup>	Lead <sup>1</sup>	Chlorpyrifos	Diuron	Water flea toxicity	Algae toxicity	Sediment toxicity
10-May-05	7 mg/L	6.5-8.5 units	700 µmhos/cm	450 mg/L	235 MPN /100 mL	1.5 mg/L	µg/L (variable)	µg/L (variable)	0.015 µg/L	2 µg/L	Based on survival	Based on growth	Based on survival
19-May-05											toxic		
20-Sep-05											toxic		
1-Mar-06	5.6								0.02			toxic	
16-Mar-06					300						toxic		
2-May-06		8.73											
17-May-06								0.42 (0.36)					
9-Aug-06								0.39 (0.31)					toxic
5-Sep-06													toxic
13-Sep-06											toxic		
11-Feb-07							3 (2.2)	0.52 (0.36)		25			
17-Apr-07							11 (10.1)	5.1 (3.59)					
15-May-07		8.56			250								
19-Jun-07					320		2.4 (1.9)	0.5 (0.31)					
17-Jul-07					440		3.2 (2.2)	1 (0.36)	0.02				
14-Aug-07		8.62					1.9 (1.7)	0.44 (0.26)					
25-Sep-07		8.73											
24-Jan-08				500	>2400	3.3	37 (14.7)		0.019	3.2			
26-Feb-08			747	520	>2400	8.3	81 (16.1)					toxic	
4-Mar-08		9.32											toxic
22-Apr-08													
7-May-08		8.69											
20-May-08					240								
3-Jun-08		8.54											
22-Jul-08									0.021				
19-Aug-08		9.24											
28-Aug-08													toxic
9-Sep-08		8.73											
2-Oct-08													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](http://www.esjcoalition.org)  
<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.





# Hilmar Drain at Central Avenue

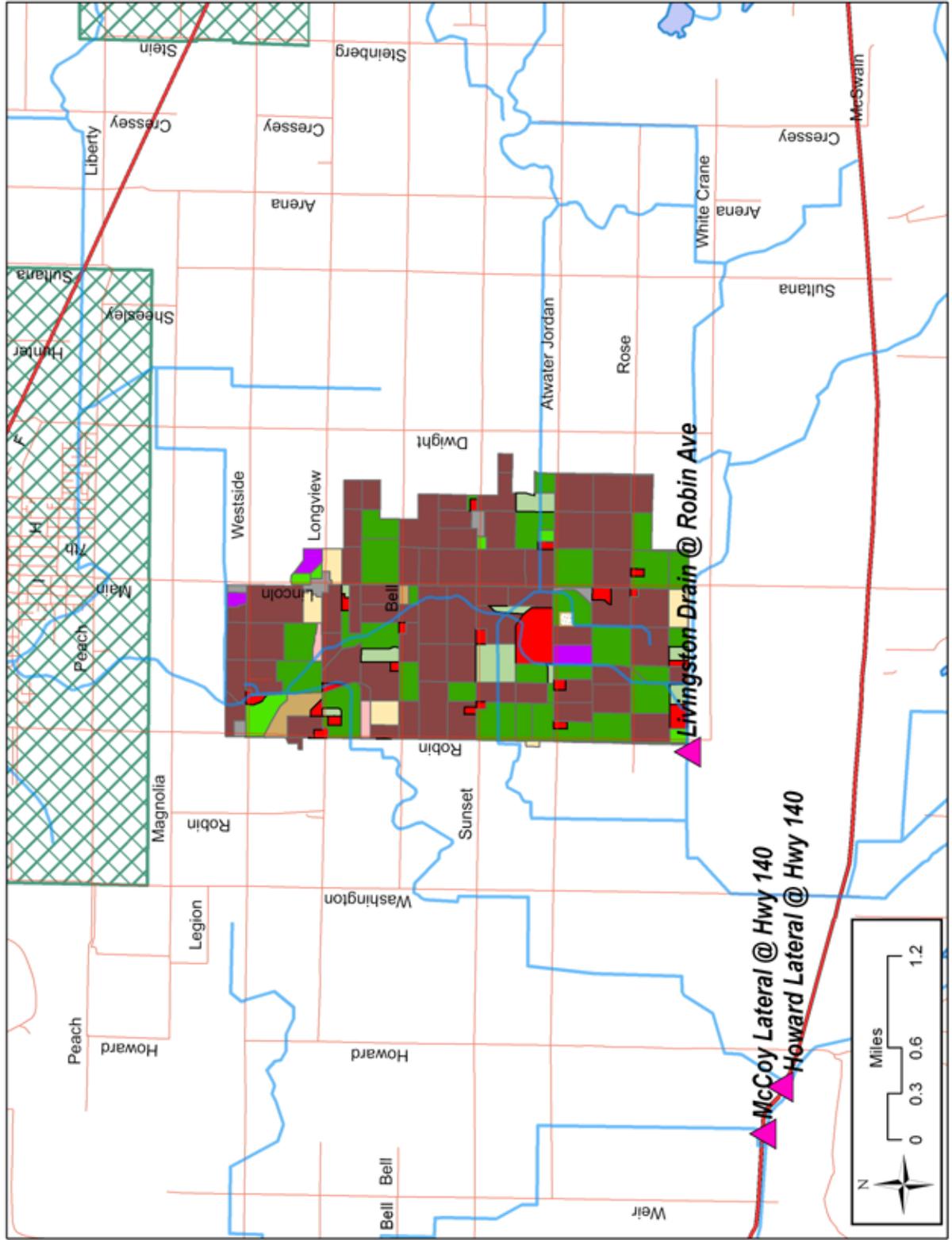


Hilmar Drain @ Central Avenue (Tuolumne Rd, Mitchell Rd, Reclamation Drain @ Williams Ave)									
Site Name	Date Sampled	Oxygen, Dissolved	pH	Specific Conductivity	Total Dissolved Solids	E. coli	Ammonia as N	Nitrate as N	
		7 mg/L							6.5-8.5 units
Central Ave	15-Feb-05			1102	740	240			
Central Ave	22-Mar-05			1157	760	900			
Central Ave	11-May-05			1354	740	1600			
Central Ave	19-May-05			1214					
Central Ave	15-Jun-05			855	720	500			
Central Ave	13-Jul-05	6.45		826	600	1600			
Central Ave	16-Aug-05			788	500	1600			
Central Ave	21-Sep-05				690	430			
Central Ave	1-Mar-06		9.55	1058	670				
Central Ave	16-Mar-06			1215	710				
Central Ave	24-Mar-06			1400					
Central Ave	2-May-06		8.58	794					
Central Ave	18-May-06	6.28				2400			
Central Ave	15-Jun-06	6.8						12	
Central Ave	13-Jul-06			1096	610	2400	3.8	11	
Central Ave	10-Aug-06					1000		13	
Central Ave	14-Sep-06			773	510			20	
Central Ave	11-Feb-07					2400	13		
Central Ave	1-Mar-07			1396	790				
Central Ave	7-Mar-07		8.79	1633					
Central Ave	17-Apr-07			1106	700	1100			
Central Ave	15-May-07			1030	640	440		22	
Central Ave	19-Jun-07			869	600	1700		21	
Central Ave	17-Jul-07			717	460	340		15	
Central Ave	21-Aug-07			793	520			18	
Central Ave	11-Sep-07			703	460	2400		18	
Central Ave	24-Jan-08			1528	970				
Tuolumne Rd	30-Jan-08	5.18		1343					
Central Ave	26-Feb-08			1476	910				
Central Ave	4-Mar-08			1429					
Central Ave	28-Mar-08	6.3		1111					
Central Ave	22-Apr-08			1482	960	390			
Central Ave	29-Apr-08	4.48		809					
Central Ave	20-May-08			963	680	440		20	
Central Ave	17-Jun-08			1060	650	1000			
Central Ave	22-Jul-08			1074	710	270		21	
Mitchell Rd	22-Jul-08	6.93		995				28	
Reclamation Drain @ Williams Ave	22-Jul-08			1558					
Mitchell Rd	29-Jul-08	1.81		770					





# Livingston Drain at Robin Avenue

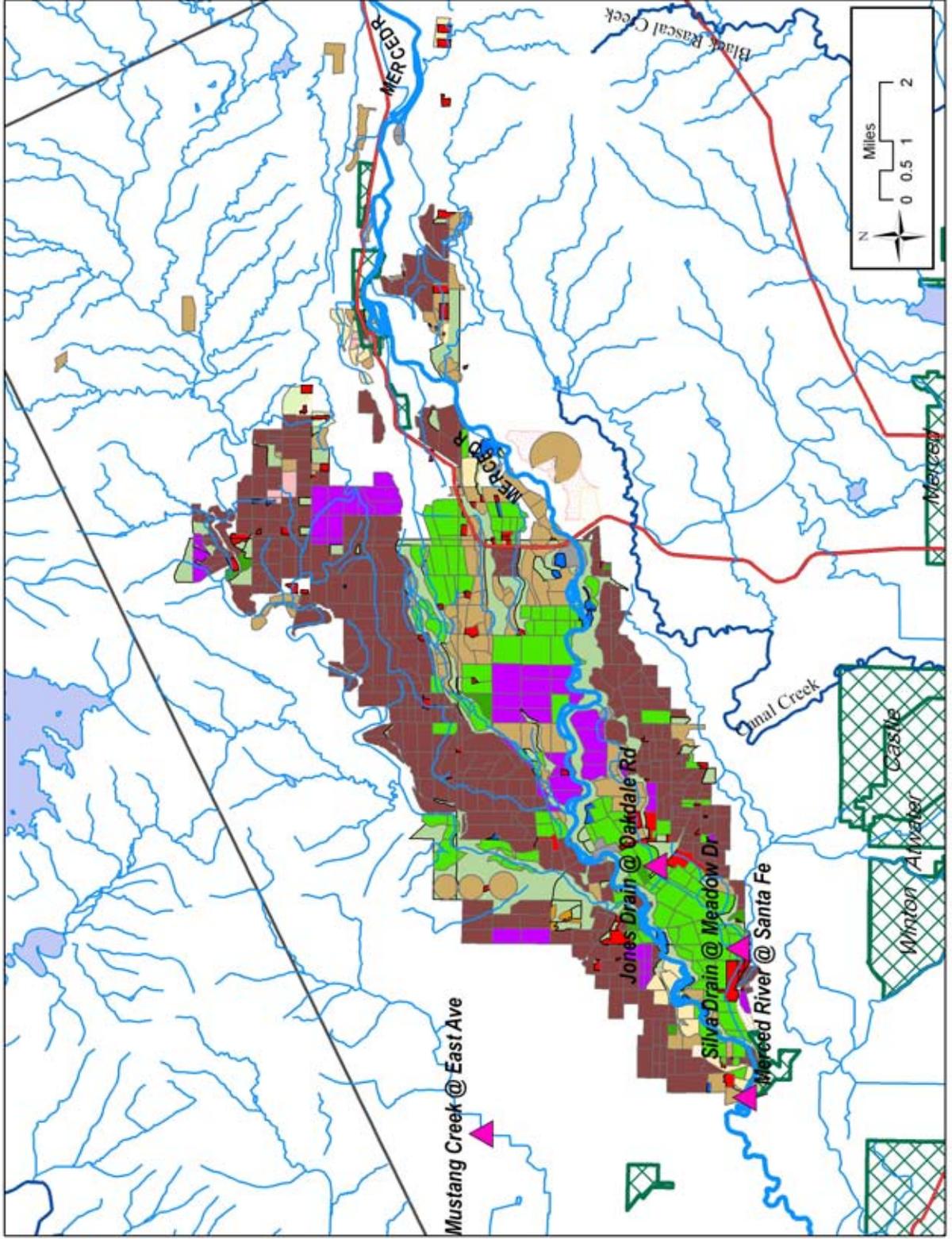


Livingston Drain at Robin Avenue									
Date Sampled	Oxygen, Dissolved 7 mg/L	pH 6.5 – 8.5 units	<i>E. coli</i> 235 MPN/100 mL	Nitrate as N 10 mg/L	Copper <sup>1</sup> µg/L (variable)	Lead <sup>1</sup> µg/L (variable)	Chlorpyrifos 0.015 µg/L	Algae toxicity Based on growth	
15-May-2007		8.95			18 (13.2)				
19-Jun-2007					16 (4.4)				
17-Jul-2007		8.82			7.8 (5.3)				
14-Aug-2007							0.016		
11-Sep-2007		8.57			14 (6.4)				
24-Jan-2008			1700		6.7 (3.1)	2.4 (0.63)	0.02		
26-Feb-2008	5.68				15 (4.1)	1.1 (0.93)		toxic	
22-Apr-2008								toxic	
29-Apr-2008								toxic	
20-May-2008		8.79						toxic	
27-May-2008		8.68							
03-Jun-2008		8.61							
17-Jun-2008		8.97		11	45 (13)		0.23		
08-Jul-2008		8.97			110 (5.7)				
22-Jul-2008			440		17 (16.9)				
28-Aug-2008		8.67							
09-Sep-2008		8.72							
23-Sep-2008		9.02							

\* 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](http://www.esjcoalition.org)

<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

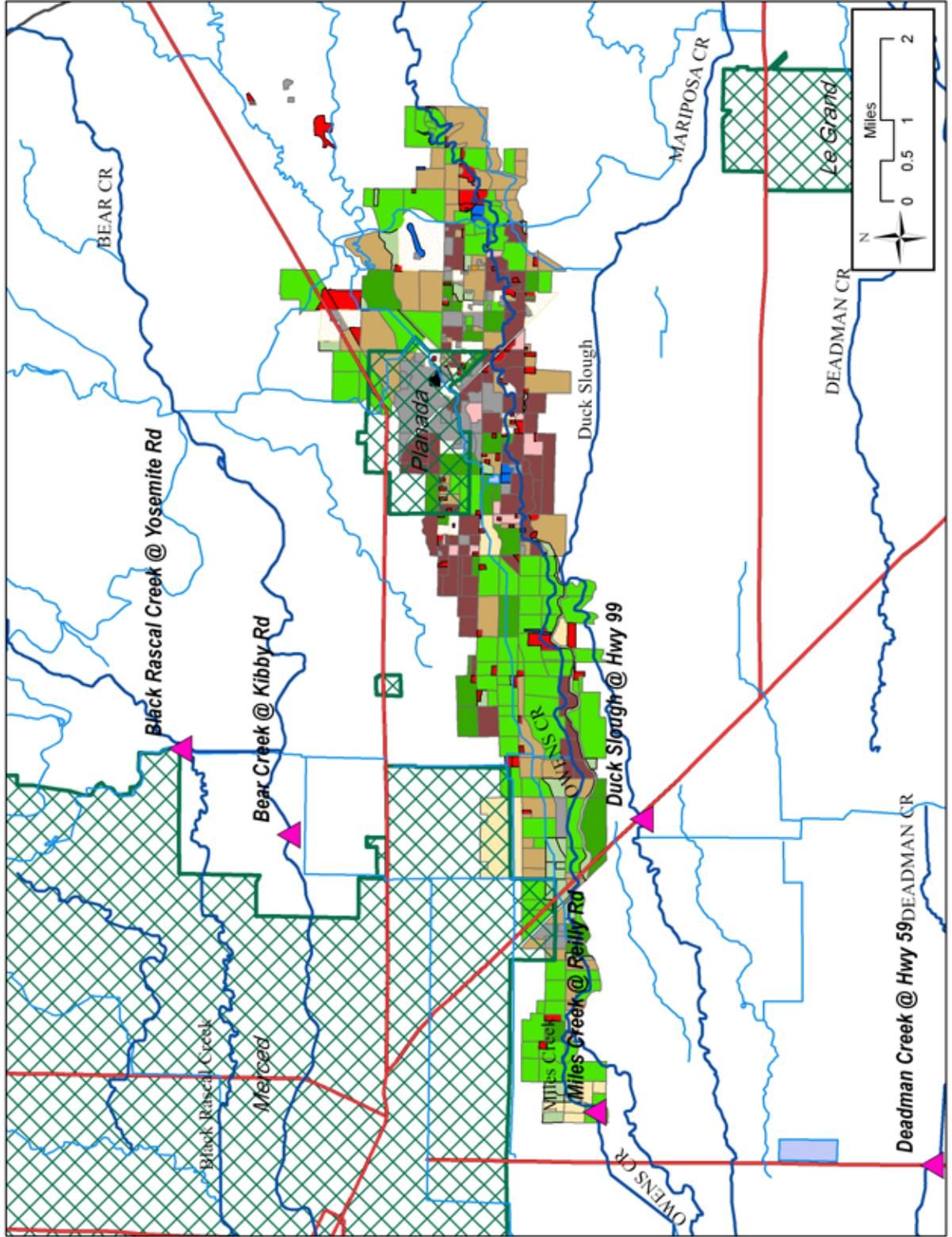
# Merced River at Santa Fe



Merced River at Santa Fe									
Date Sampled	Oxygen, Dissolved 7 mg/L	pH 6.5 – 8.5 units	E. coli MPN /100 mL	Copper <sup>1</sup> µg/L (variable)	Lead <sup>1</sup> µg/L (variable)	Chlorpyrifos 0.015 µg/L	Water flea toxicity Based on survival	Algae toxicity Based on growth	
31-Jul-2004							toxic		
31-Aug-2004							toxic		
21-Mar-2005								toxic	
17-Aug-2005		6.38							
01-Mar-2006			1600						
16-Mar-2006							toxic		
14-Jun-2006	6.4								
12-Feb-2007					0.82 (0.63)				
17-Jul-2007						0.018			
24-Jan-2008				22 (4.4)	5.6 (1.05)	0.59	toxic		
30-Jan-2008							toxic		
22-Apr-2008	6.06								

\* 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](http://www.esjcoalition.org)  
<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

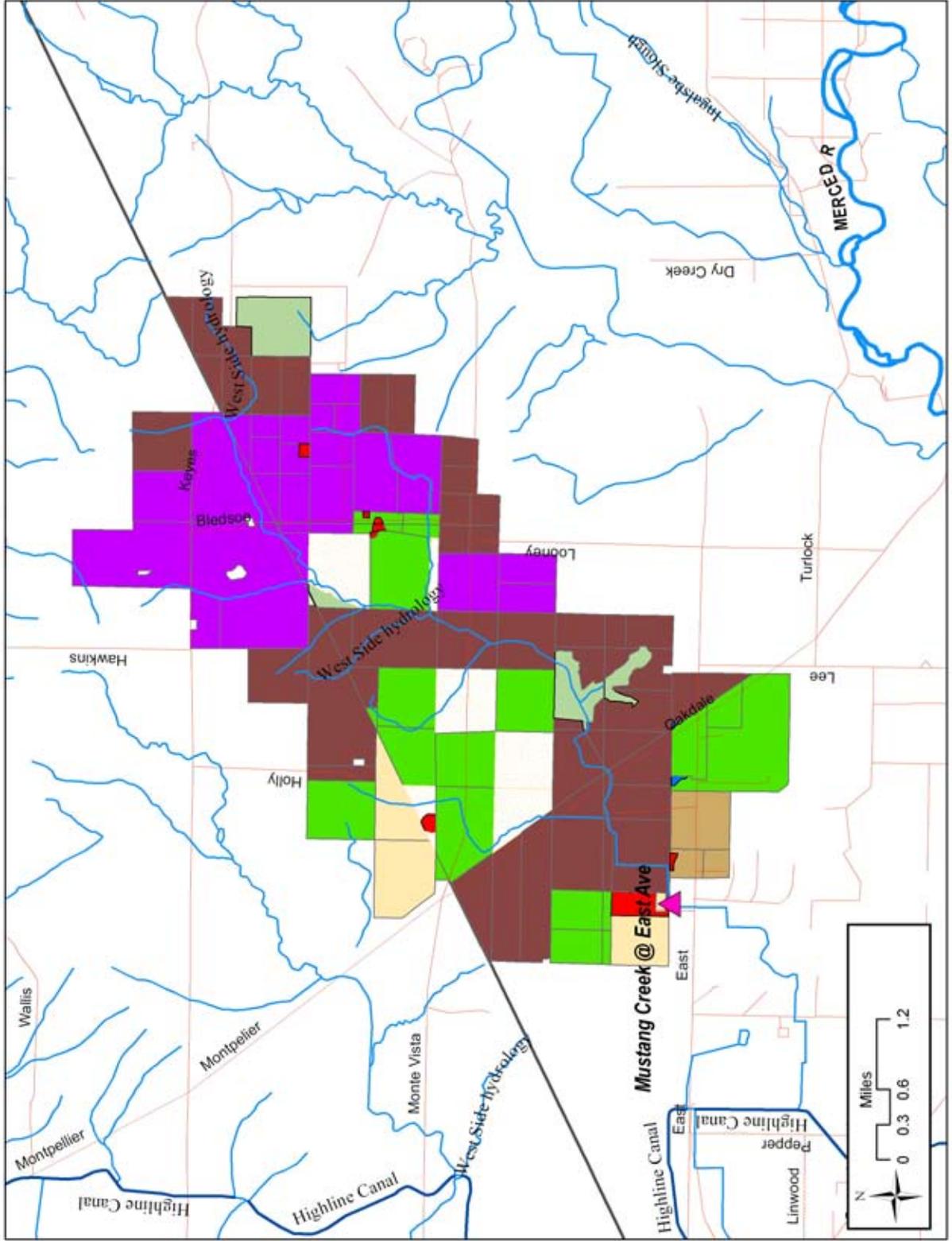
# Miles Creek at Reilly Road



Miles Creek at Reilly Road										
Date Sampled	Oxygen, Dissolved 7 mg/L	E. coli 235 MPN /100 mL	Copper <sup>1</sup> µg/L (variable)	Lead <sup>1</sup> 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
29-May-07		290	4.3 (3.5)							
26-Jun-07		310	5.8 (4.3)	1 (0.99)			5.4		toxic	
24-Jul-07		340								
21-Aug-07			5.2 (4.4)							
23-Aug-07										toxic
18-Sep-07					0.03			toxic		
25-Jan-08		>2400	15 (6.2)	3.2 (1.73)		2.3		toxic		
30-Jan-08										
25-Feb-08		2000	34 (8.0)	7.7 (2.55)						
29-Apr-08									toxic	
7-May-08									toxic	
27-May-08		>2400								
24-Jun-08	4.76									
29-Jul-08	5.34	250	7.5 (4.6)	1.7 (1.1)	0.021					
5-Aug-08	6.93									
26-Aug-08	5.86		7.5 (6.7)	2 (1.95)	0.042					
28-Aug-08	5.33									toxic
30-Sep-08	6.34									
2-Oct-08										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](http://www.esjcoalition.org)  
<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

# Mustang Creek at East Avenue

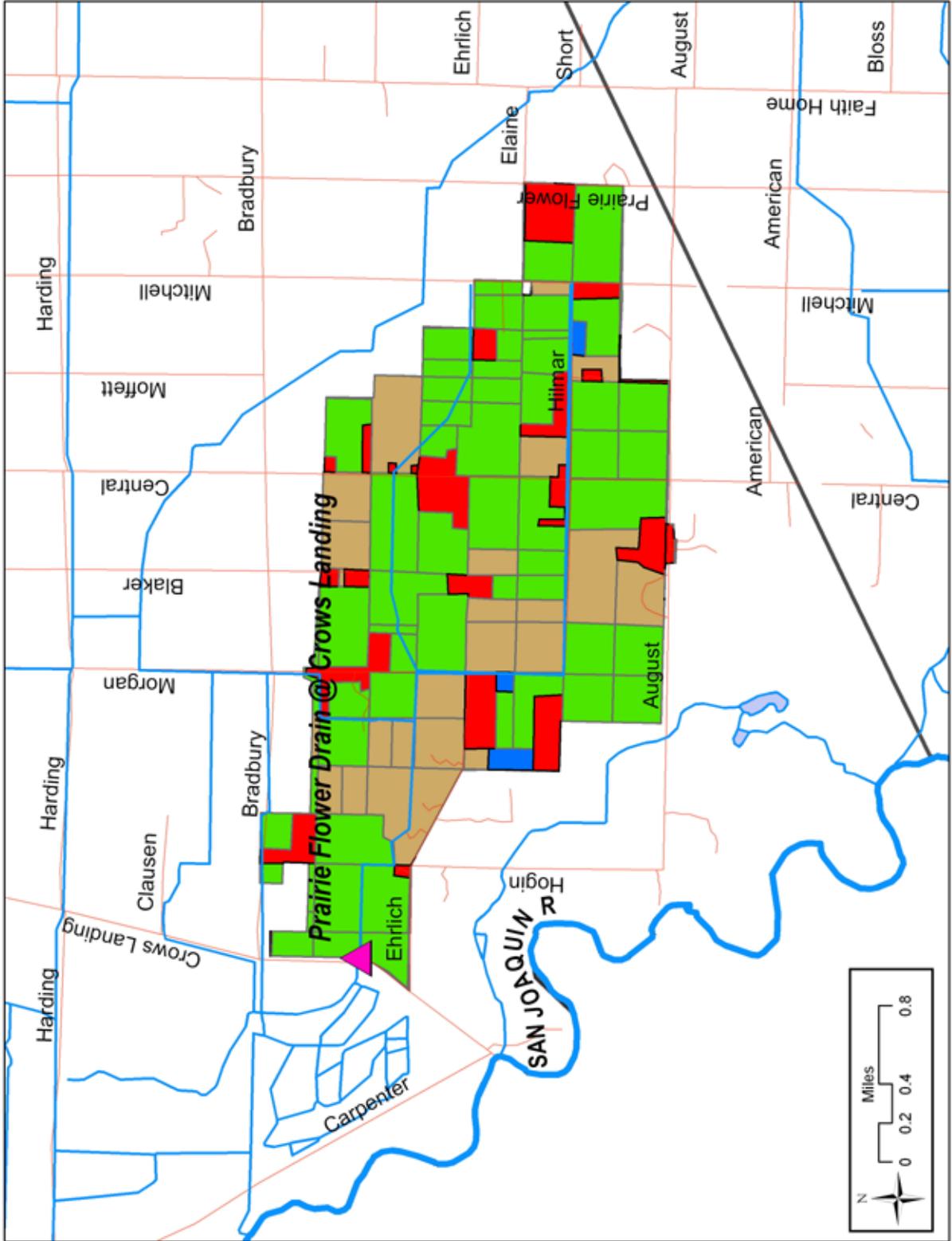


**Mustang Creek at East Avenue**

Date Sampled	Oxygen, Dissolved	Specific Conductivity	Total Dissolved Solids	E. coli	Chlorpyrifos	DDE	Simazine	Water flea toxicity	Algae toxicity	Sediment toxicity
	7 mg/L	700 µmhos/cm	450 mg/L	235 MPN/100 mL	0.015 µg/L	0.00059 µg/L	4.0 µg/L	Based on survival	Based on growth	Based on survival
18-May-2006	5.82			2400						
15-Jun-2006	5			2400						
10-Aug-2006	2.61			980						
28-Feb-2007		760	460			0.0064				
15-May-2007	1.16			1600						
19-Jun-2007	4.3			410		0.0073				
24-Jan-2008				460	0.067		4.2	toxic		
30-Jan-2008								toxic		
26-Feb-2008	4.06								toxic	
04-Mar-2008	2.44				0.028		17			toxic
28-Mar-2008	4.1	1467								

\*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](http://www.esjcoalition.org)

# Prairie Flower Drain at Crows Landing Road (Morgan Road)



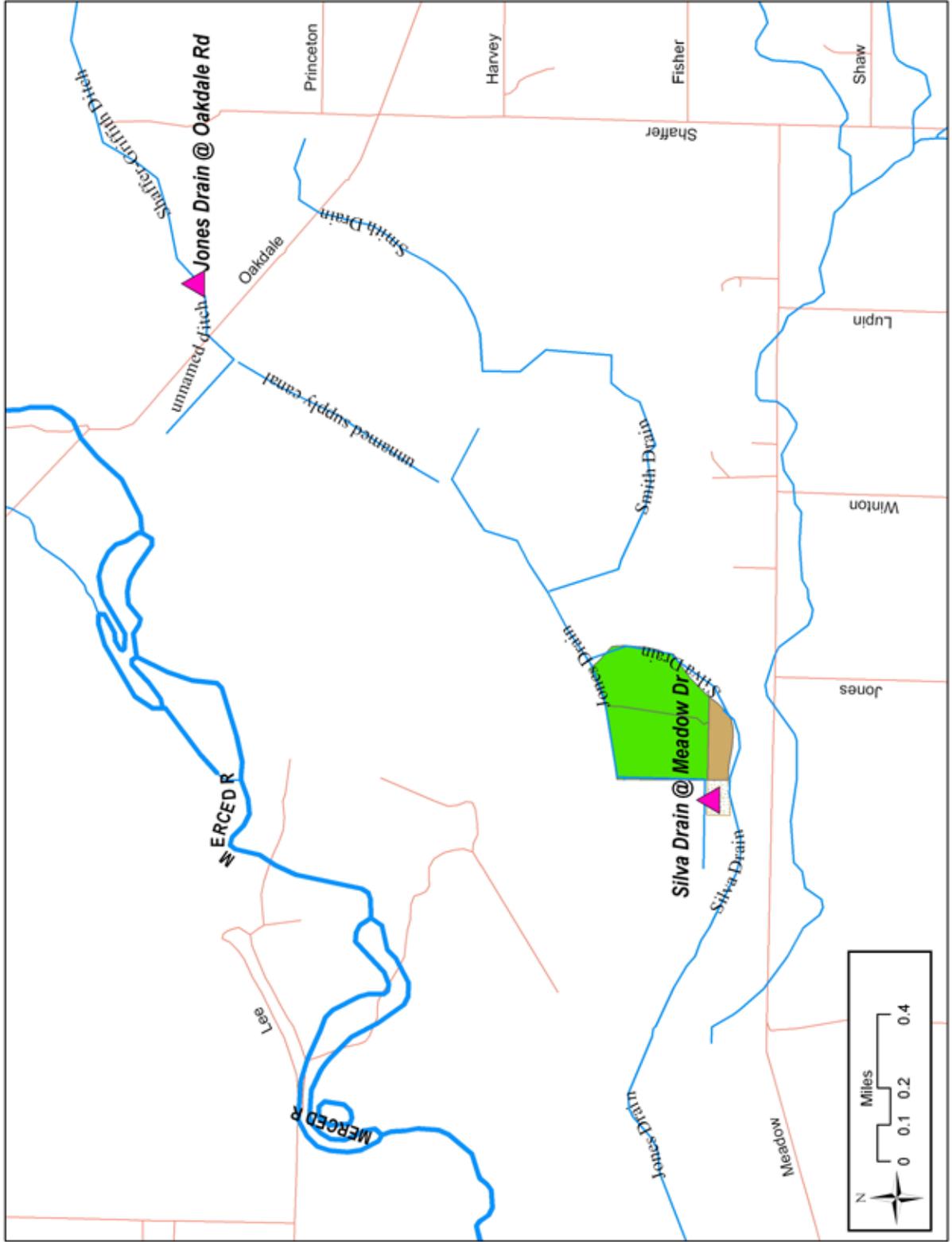
**Prairie Flower Drain @ Crows Landing Road (Morgan Rd)**

Site Name	Date Sampled	Oxygen, Dissolved 7 mg/L	pH 6.5 – 8.5 units	Specific Conductivity 700 µmhos/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	Nitrite as N 1.0 mg/L
Crows Landing Rd	15-Feb-2005			2561	1600				
Crows Landing Rd	22-Mar-2005	6.5		2568	1600	1600			
Crows Landing Rd	11-May-2005			3168	1600	500			
Crows Landing Rd	15-Jun-2005			1705	1300	300			
Crows Landing Rd	13-Jul-2005	3.2		1723	1100	1600			
Crows Landing Rd	17-Aug-2005			1779	990	1600			
Crows Landing Rd	21-Sep-2005	5.22		791	460	500			
Crows Landing Rd	01-Mar-2006			2419	1600	900			
Crows Landing Rd	16-Mar-2006		8.77	2728	1600	300			
Crows Landing Rd	24-Mar-2006			2782					
Crows Landing Rd	02-May-2006			2724					
Crows Landing Rd	18-May-2006			2958	1700	550			
Crows Landing Rd	15-Jun-2006			2660	1700	1300		21	
Crows Landing Rd	13-Jul-2006	5.45	8.85	1560	720	790	18		
Crows Landing Rd	20-Jul-2006	6.41		1950					
Crows Landing Rd	10-Aug-2006			2302	1800	820		17	1.1
Crows Landing Rd	14-Sep-2006	6.01		1276	760	2400		11	
Crows Landing Rd	11-Feb-2007		6.12	2659	1600	2400		24	
Crows Landing Rd	01-Mar-2007		8.57	2592	1500			42	
Crows Landing Rd	07-Mar-2007			4798					
Crows Landing Rd	17-Apr-2007			2127	1700			25	
Crows Landing Rd	15-May-2007	5.59		2473	1500	920		32	
Crows Landing Rd	23-May-2007			2390					
Crows Landing Rd	19-Jun-2007		8.54	2304	1500			41	
Crows Landing Rd	17-Jul-2007	4.3		1067	730			13	
Crows Landing Rd	14-Aug-2007			1126	700	260		16	
Crows Landing Rd	16-Aug-2007			2562					
Crows Landing Rd	28-Aug-2007	3.64		1015					
Crows Landing Rd	11-Sep-2007	7.86		1097	540	2400			
Crows Landing Rd	18-Sep-2007			2262					
Crows Landing Rd	25-Sep-2007			2489					
Crows Landing Rd	24-Jan-2008			2371	1500	1100		23	
Crows Landing Rd	30-Jan-2008			2944					
Crows Landing Rd	26-Feb-2008			2722	1600			28	
Crows Landing Rd	04-Mar-2008			2639					
Crows Landing Rd	22-Apr-2008			2548	1700	370		23	
<i>Morgan Rd</i>	22-Apr-2008	3.29		2574				35	
Crows Landing Rd	29-Apr-2008	5.44		1739					
Crows Landing Rd	20-May-2008			2526	1600	610		26	
<i>Morgan Rd</i>	20-May-2008	1.17		2026				22	
Crows Landing Rd	27-May-2008			2273					
Crows Landing Rd	17-Jun-2008			2049	1200	1300	2.1	19	
<i>Morgan Rd</i>	17-Jun-2008			2893				30	
Crows Landing Rd	22-Jul-2008	2.51		1012	620	250		11	





# Silva Drain at Meadow Drive

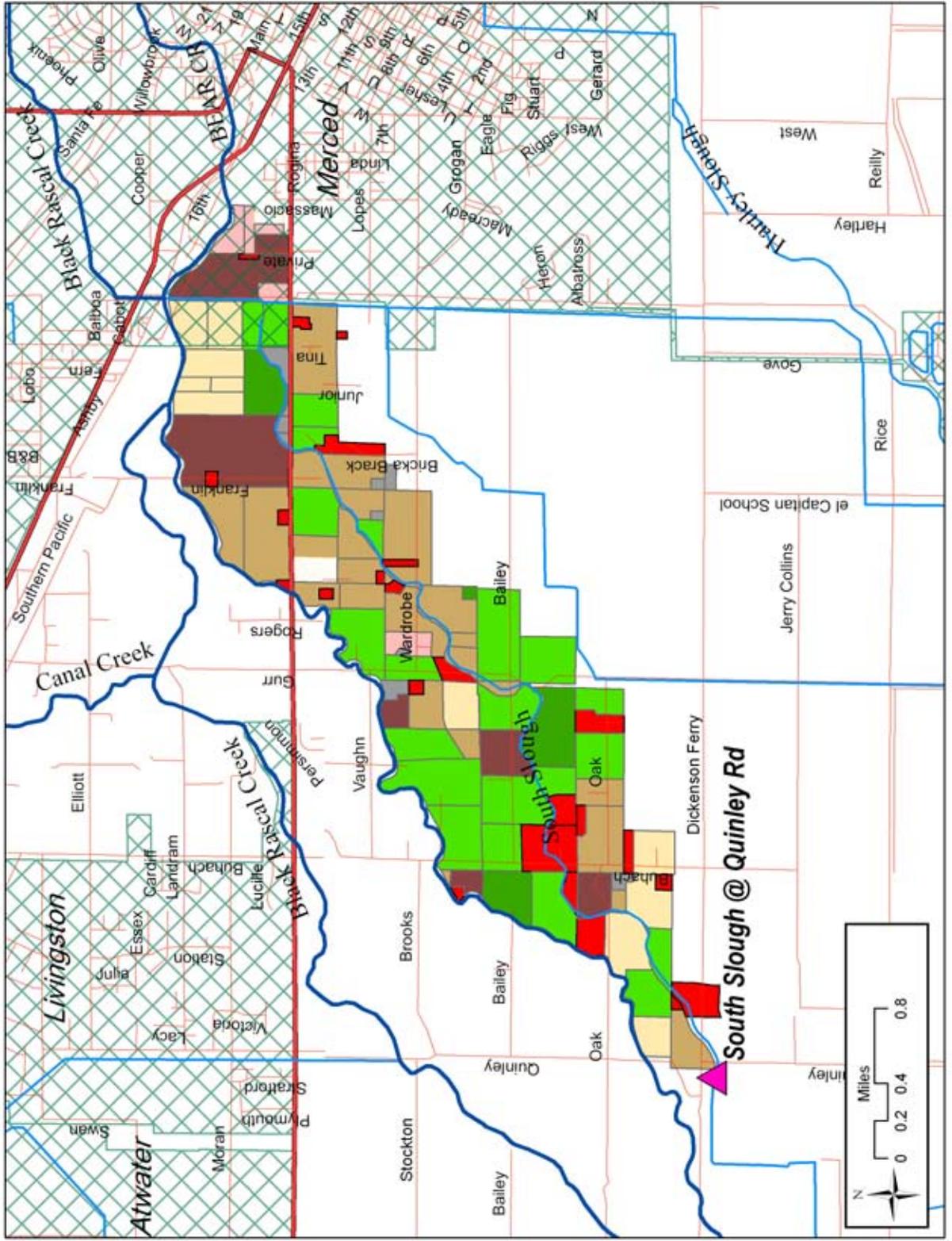


Silva Drain at Meadow Drive										
Date Sampled	Oxygen, Dissolved	pH	E. coli	Ammonia as N	Copper <sup>1</sup>	Lead <sup>1</sup>	Chlorpyrifos	Water flea toxicity	Fathead minnow toxicity	Sediment toxicity
18-May-06	7 mg/L	6.5-8.5 units	235 MPN/100 mL	1.5 mg/L	µg/L (variable)	µg/L (variable)	0.015 µg/L	Based on survival	Based on survival	Based on survival
13-Jul-06	5.75		1300							
9-Aug-06			690				0.14	toxic		toxic
5-Sep-06			460							toxic
13-Sep-06	5.99		320							
17-Apr-07			420							
15-May-07			1400							
19-Jun-07	4.2		1000							
17-Jul-07	4.71		520				0.031			
31-Jul-07	6.1									
14-Aug-07			410							
16-Aug-07	6.43									
28-Aug-07							0.055			
11-Sep-07	6.12									
22-Apr-08	5.02			4.1						
20-May-08	0.7									
17-Jun-08			>2400	13	68 (27)				toxic	
8-Jul-08	1.38									
22-Jul-08	2.1		410				0.43	toxic		
29-Jul-08	5.96							toxic		
5-Aug-08	3.37						0.021			
19-Aug-08	3.73		1400		20 (6.9)	3 (2.02)	0.023			
28-Aug-08	3.32									toxic
23-Sep-08	6.19		310	3	15 (4.4)					
2-Oct-08	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](http://www.esjcoalition.org)

<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

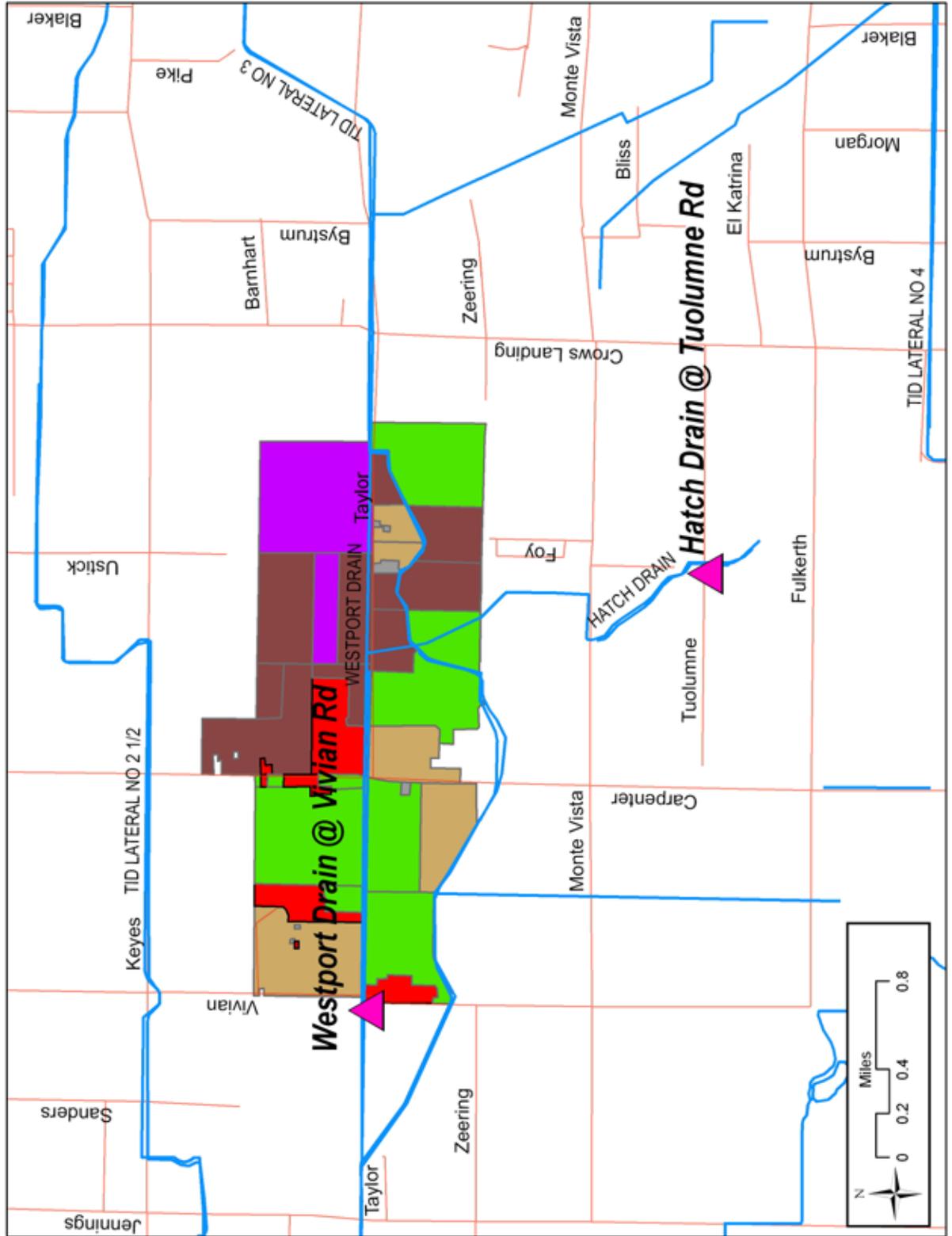
# South Slough at Quinley Avenue



South Slough at Quinley Avenue									
Date Sampled	Oxygen, Dissolved	pH	<i>E. coli</i>	Copper <sup>1</sup>	Lead <sup>1</sup>	Chlorpyrifos	Dieldrin	Algae toxicity	
	7 mg/L	6.5 – 8.5 units	235 MPN /100 mL	µg/L (variable)	µg/L (variable)	0.015 µg/L	0.00014 µg/L	Based on growth	
11-Jul-2006			1200						
09-Aug-2006			580						
29-May-2007	2.51								
24-Jul-2007	6.39								
21-Aug-2007		9.29					0.011		
23-Aug-2007	5.3	8.87							
29-Apr-2008	5.8		520					toxic	
24-Jun-2008				4 (3.7)	0.85 (0.81)				
29-Jul-2008						0.029			

\* 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](http://www.esjcoalition.org)  
<sup>1</sup>WQTL is based on hardness measured in each water sample and is indicated in parenthesis.

# Westport Drain at Vivian Road



Westport Drain at Vivian Road									
Date Sampled	Oxygen, Dissolved	Specific Conductivity	Total Dissolved Solids	<i>E. coli</i>	Nitrate as N	Chlorpyrifos	Algae toxicity	Sediment toxicity	
	7 mg/L	700 µmhos/cm	450 mg/L	235 MPN /100 mL	10 mg/L	0.015 µg/L	Based on growth	Based on survival	
15-May-07		1054	660		24		toxic		
23-May-07		1081							
19-Jun-07		991	660		27				
17-Jul-07		1025	680	330	68	0.018			
14-Aug-07		1129	760		32				
16-Aug-07		1147							
11-Sep-07		1106	740	330	30				
24-Jan-08		1086	740	290	28				
26-Feb-08	5.7	1104	730		26		toxic		
4-Mar-08		1096					toxic		
22-Apr-08	4.44	1079	750	1000	23		toxic		
29-Apr-08	4.76	1106							
20-May-08	6.95	1084	720		23				
17-Jun-08	5.43	1107	750	260	25				
22-Jul-08	5.02	1079	760	1000	25	0.016			
19-Aug-08	3.59	1088	760	290	25				
28-Aug-08		1100						toxic	
23-Sep-08		1097	750		27				
2-Oct-08		1093							

\* 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](http://www.esjcoalition.org)

