East San Joaquin
WATER QUALITY COALITION

SUMMARY ANNUAL REPORT
2007
Including Data from 2004-2006

East San Joaquin Water Quality Coalition

SACRAMENTO
AMADOR
CALAVERAS
TUOLUMNE
SAN JOAQUIN
STANISLAUS
MARIPOSA
MERCED
SANTA CLARA
MADERA
FRESNO

49
120
108
99
5
41
33
180

Modesto
Ceres
Turlock
Atwater
Merced
Los Banos
Madera

San Joaquin River

VINEYARD
IDLE
RICE
BARREN
PASTURE
FIELD CROPS
GRAIN AND HAY CROP
NATIVE VEGETATION
WATER SURFACE
RESIDENTIAL
CITRUS AND SUBTROPICAL
DECIDUOUS FRUITS AND NUTS
RIPARIAN VEGETATION
INCIDENTAL TO AGRICULTURE
TRUCK & BERRY CROPS
CALAVERAS AG*

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

Miles
0 2.5 5 10 15 20

DUCKS UNLIMITED

Data Source:
DWR Land Use

SUMMARY ANNUAL REPORT

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East San Joaquin Water Quality Coalition
Summary Annual Report 2007

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2007 Year in Review

2007 marks year four 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). In those four years, the Coalition has found farm inputs at levels exceeding state standards in nearly all the waterways tested. Most significant is the repeated exceedances of State standards for *E. coli,* chlorpyrifos insecticide and sediment toxicity. Currently the Coalition collects samples from 22 monitoring sites in Merced, Madera, and Stanislaus counties.

In an effort to better understand the sources of *E. coli* exceedances in Coalition waterways, the Coalition funded a study that suggested human DNA to be the most common source of contamination. The Water Board is currently reviewing the study report. Other Central Valley Coalitions performed the same study with similar results. Plans are for all the Coalitions to meet collectively with the Water Board in early 2008 to plan an effective approach to better define *E. coli* sources and develop solutions.

The Central Valley Water Board passed a requirement in August 2006 that a Coalition must develop a Management Plan for a waterway when water sampling indicates two or more exceedances of State water standards for any constituent. Eighteen waterways were included in draft Management Plans submitted to the Water Board in the Spring of 2007. These Plans, plus plans for four additional sites, are expected to be finalized in the Spring of 2008 (see summary of exceedances page 6).

These mandatory Management Plans hold significant responsibilities for the Coalition and its members. Initially, members are required to fill out Management Practice Surveys that will help develop information to better understand potential sources of the problem. Ultimately, landowners will be required to adopt management practices to mitigate the problem should their farm drainage be contributing to a problem.

Requirements of the ILRP dictate that new waterways be sampled throughout the Coaliton region in 2007. Subsequently, the Coalition added four sites and because of Management Plan sampling requirements, we must continue sampling in sites where those plans are in place.

This additional water sampling has put a severe strain on our budget. There is also a new Monitoring and Reporting Plan being considered by the Water Board in January 2008 that increases sampling frequency to monthly versus irrigation and storm season only. The potential impact of that change plus the addition of four more Management Plans is being assessed by the Board. Our hope is to keep membership dues at $1.50 per acre for 2008 (plus $50 per landowner). However, an increase in dues may be possible should anticipated membership revenues not cover our projected costs for 2008. See page 5 for a review of our 2007-2008 budget.

See page 7 for a current list of sampling site locations. Maps starting on page 8 show shaded lands 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. Maps with no corresponding data page are sites where no water quality standards were exceeded or pesticides were detected.

The Coalition Board of Directors thanks you for your participation in this program.

Coalition Overview

Membership
As of February 1, 2007, the Coalition membership stood at 2486 landowner/operators and 612,490 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
- Kevin Olsen, 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
- Dennis Gudgel, Stanislaus County Agricultural Commissioner
- David Robinson, Merced County Agricultural Commissioner
- Bob Rolan, Madera County Agricultural Commissioner

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 2007, 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 w*ith* 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
Krista Callinan – Environmental Scientist
Jon Katz – Environmental Scientist
Frank Wulff – Environmental Scientist

Analytical Laboratories

- AQUA-Science, Davis, CA. (water toxicity)
- APPL Inc., Fresno, CA (pesticide analysis)
- North Coast Laboratories Ltd., Arcata, CA (glyphosate and paraquat 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 during irrigation season (May though October)
- Twice during winter rainy season (January, February or March)

Questions, Comments, Changes in Membership

Members are welcome to contact the coaliton 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.

STATEMENT OF FINANCIAL ACTIVITIES
EAST SAN JOAQUIN WATER QUALITY COALITION (ESJWQC)
January - December 2007 VS 2007 Budget

	ACTUAL* 2007	BUDGET 2007	
	$ K, (Thousands)	$ K, (Thousands)	**DESCRIPTION**
INCOME			
Dues & Interest (TOTAL INCOME)	1,088	1,122.4	Membership dues and interest on bank accounts.
EXPENSES			
Organizational	145	118.5	Executive director, legal, accounting, management of membership records & related communications, and miscellaneous business costs.
Program	1,084	1,494.1	Program manager, site monitoring/ special studies, quality control/ assurance, data management, communications with Coalition members regarding monitoring results, and reports to RWQCB.
Travel and Meeting	22	7.5	Expenses for executive director and program manager, contractors and employees of the Coalition.
TOTAL EXPENSES	1,327	1,620.1	
UNEXPENDED FUNDS			
Net Income	(244)	(497.7)	Difference between TOTAL INCOME (including retained income form previous year) and TOTAL EXPENSES.
Retained	956	877.2	Funds carried in from previous year.
Total	712	379.5	Total funds in (or projected to be in) bank accounts at end of fiscal year.

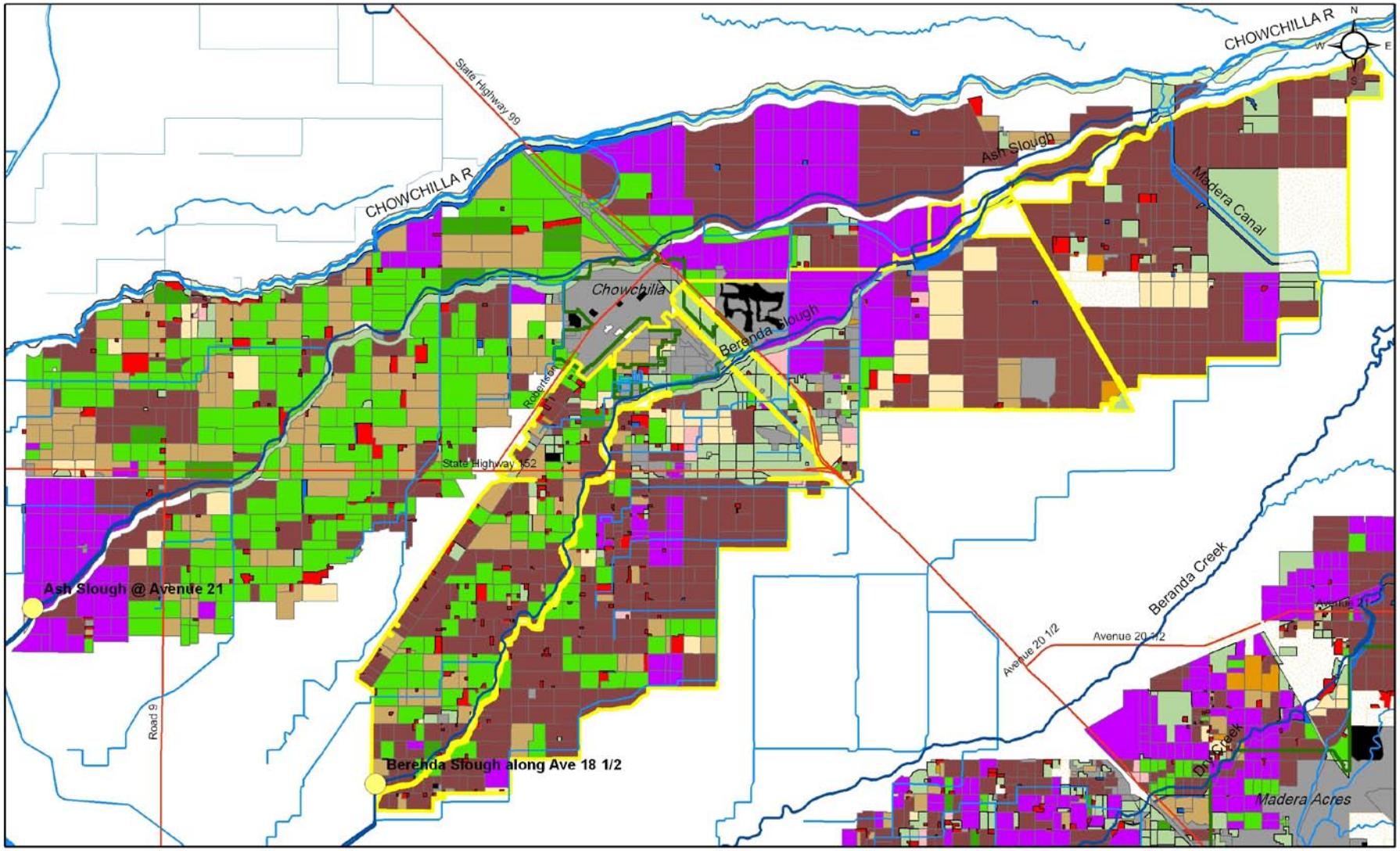
* Expenses for the month of December are estimated.

Summary of Exceedances

Sample Site	Oxygen, Dissolved	pH	EC	Color	E. coli	Nitrate as N	Nitrite as N	Total Dissolved Solids	Arsenic	Copper	Lead	Zinc	Aldicarb	Chlorpyrifos	DDD(p,p')	DDE(p,p')	DDT(p,p')	Diazinon	Dieldrin	Dimethoate	Diuron	Malathion	Methoxychlor	Permethrin, total	Ceriodaphnia dubia	Pimephales promelas	Selenastrum capricornutum	Hyalella azteca
Ash Slough @ Ave 21				9	3					5	2			4													1	
Aug Rd Drn upstream of Crows Landing Br			3	3	3			3						1														
Bear Creek @ Kibby Rd	2	2		14	5					1				2			1								3			
Berenda Slough along Ave 18 1/2	8			9	2									3						1					1		3	
Black Rascal Creek @ Yosemite Rd	9			13	6									4											5			
Cottonwood Creek @ Rd 20	12	1		18	5					8	1																	
Deadman Creek (Dutchman) @ Gurr Rd	9			16	13				2	3				1							1					1	1	
Deadman Creek @ Hwy 59	9			12	6									2	1		1											
Dry Creek @ Rd 18	1	2		11	3					14	4	1		2				1							1		1	1
Dry Creek @ Wellsford Rd	11	3		22	12					2				5						2					2		4	
Duck Slough @ Gurr Rd	3	2	1	25	14			1		5	2														3		2	3
Duck Slough @ Hwy 99	1	2		21	9					9	9			3											1		1	
Hatch Drain @ Tuolumne Rd	7		6	5	5		1	4	4											1			1					2
Highline Canal @ Hwy 99	1	4		11	4					5	7			2							1				4		1	3
Highline Canal @ Lombardy Rd		2		12	2					2	7	1		3							1				4		3	4
Hilmar Drain @ Central Ave	3	3	22	22	16			18		2				1	1						2				1		2	1
Jones Drain @ Oakdale Rd	11	1		22	18					13	6			4			1								1		1	
Livingston Drain @ Robin Ave		3		2						4				1														
Merced River @ Santa Fe	1	1		16	1						1			1											3		1	
Miles Creek @ Reilly Rd				5	3					3	1		1	1													1	1
Mustang Creek @ East Ave	5		1	7	5			1								2												
Prairie Flower Drain @ Crows Landing Rd	11	4	32	22	16		1	22	1					3											1	2	1	3
Silva Drain @ Meadow Dr	7			13	9									3											1			2
South Slough @ Quinley Rd	3	2		6	2																							
Westport Drain @ Vivian Rd			7	4	2	1		5						1													1	

Coalition Sponsored Water Monitoring Sites

Ash Slough at Avenue 21



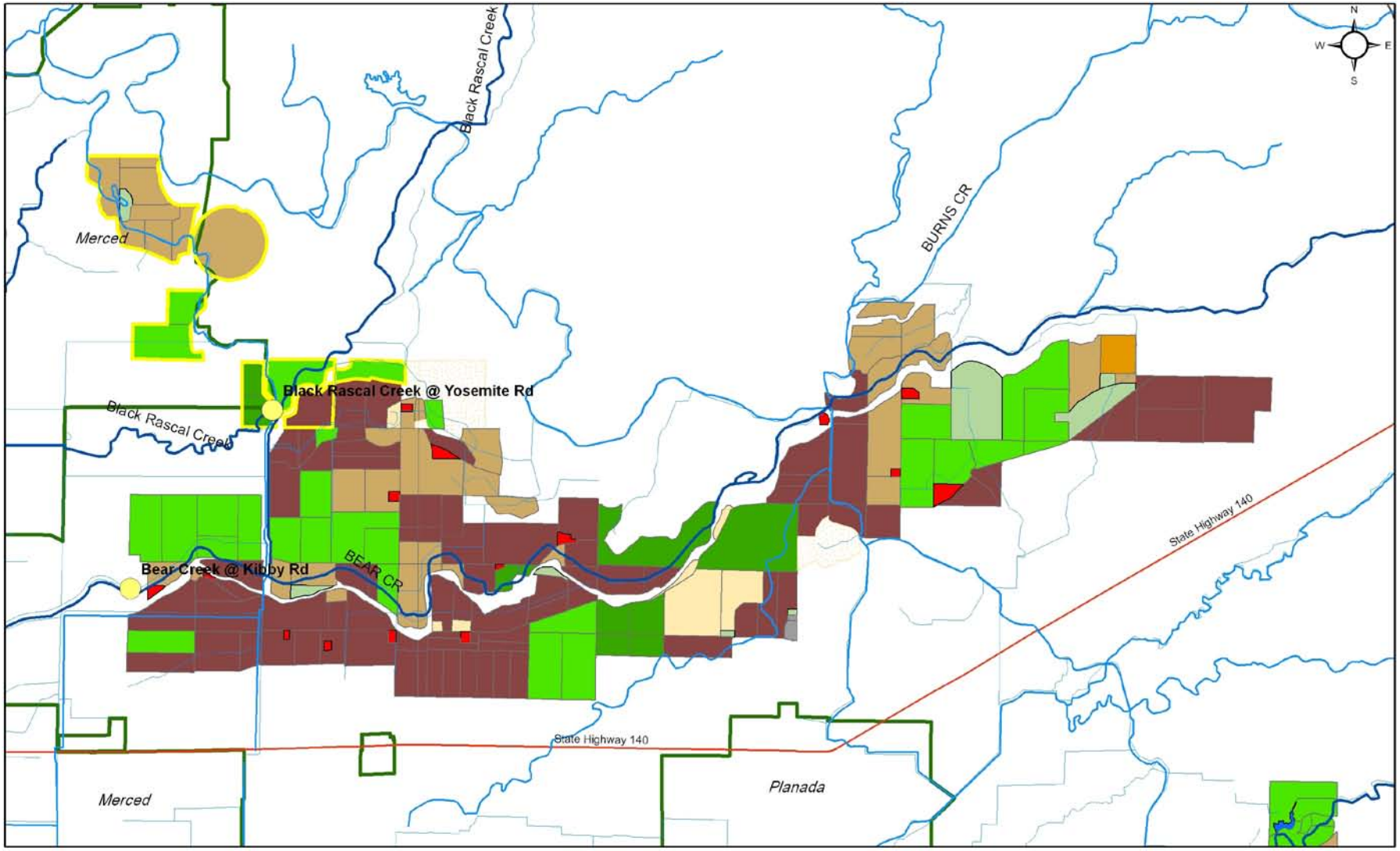
Ash Slough at Avenue 21						
Date Sampled	Chlorpyrifos (Lorsban)	*E. coli*	Selenium	Algae toxicity	Copper[1]	Lead[2]
	0.015 µg/L	235 MPN/ 100mL	5 µg/L	Based on growth	µg/L Based on hardness	µg/L Based on hardness
12-Jul-05	0.018	500				
16-Aug-05	0.046					
28-Feb-06	0.016	500		toxic		
15-Mar-06	0.029					
16-May-06					9.4 (5.2)	1.34 (1.32)
13-Jun-06		770			17.0 (3.3)	1.6 (0.7)
11-Jul-06					6.7 (4.1)	
8-Aug-06					6.3 (3.1)	
12-Sep-06			5.0		9.3 (3.3)	

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

[1]Limit is based on hardness measured in each water sample and is indicated in parenthesis.

[2]If hardness is less than 71 mg/L then the limit is based on hardness measured in each sample.

Bear Creek at Kibby Road



Bear Creek at Kibby Road								
Date Sampled	**Color**	**Oxygen, Dissolved**	**pH**	**Chlorpyrifos (Lorsban)**	**DDT**	***E. coli***	**Water flea toxicity**	**Copper[1]**
	15 color units	**7 mg/L**	**6.5 - 8.5 pH units**	**0.015 µg/L**	**0.00059 ug/L**	**235 MPN/ 100mL**	**Based on survival**	**Based on hardness**
21-Mar-05		4.40				1600		
10-May-05						280	toxic	
15-Mar-06						1600		
17-May-06				0.520			toxic	
13-Jun-06		6.99	8.69					
12-Sep-06								
12-Feb-07	180				0.0091	>2400		12 (9.3)
1-Mar-07	100					1300		
24-Jul-07				0.049			toxic	
21-Aug-07			8.69					
18-Sep-07	17							

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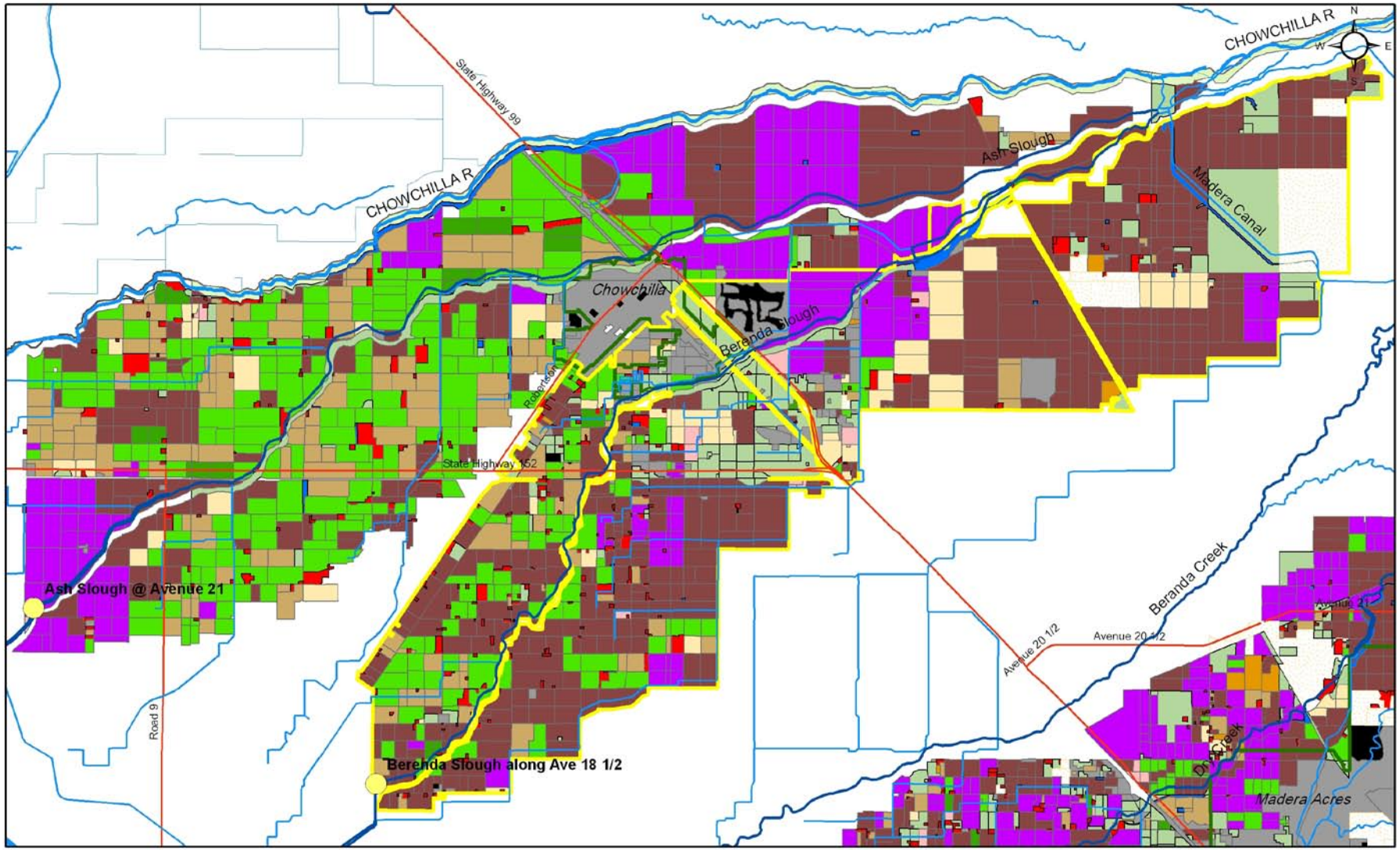
[1]Limit is based on hardness measured in each water sample and is indicated in parenthesis.

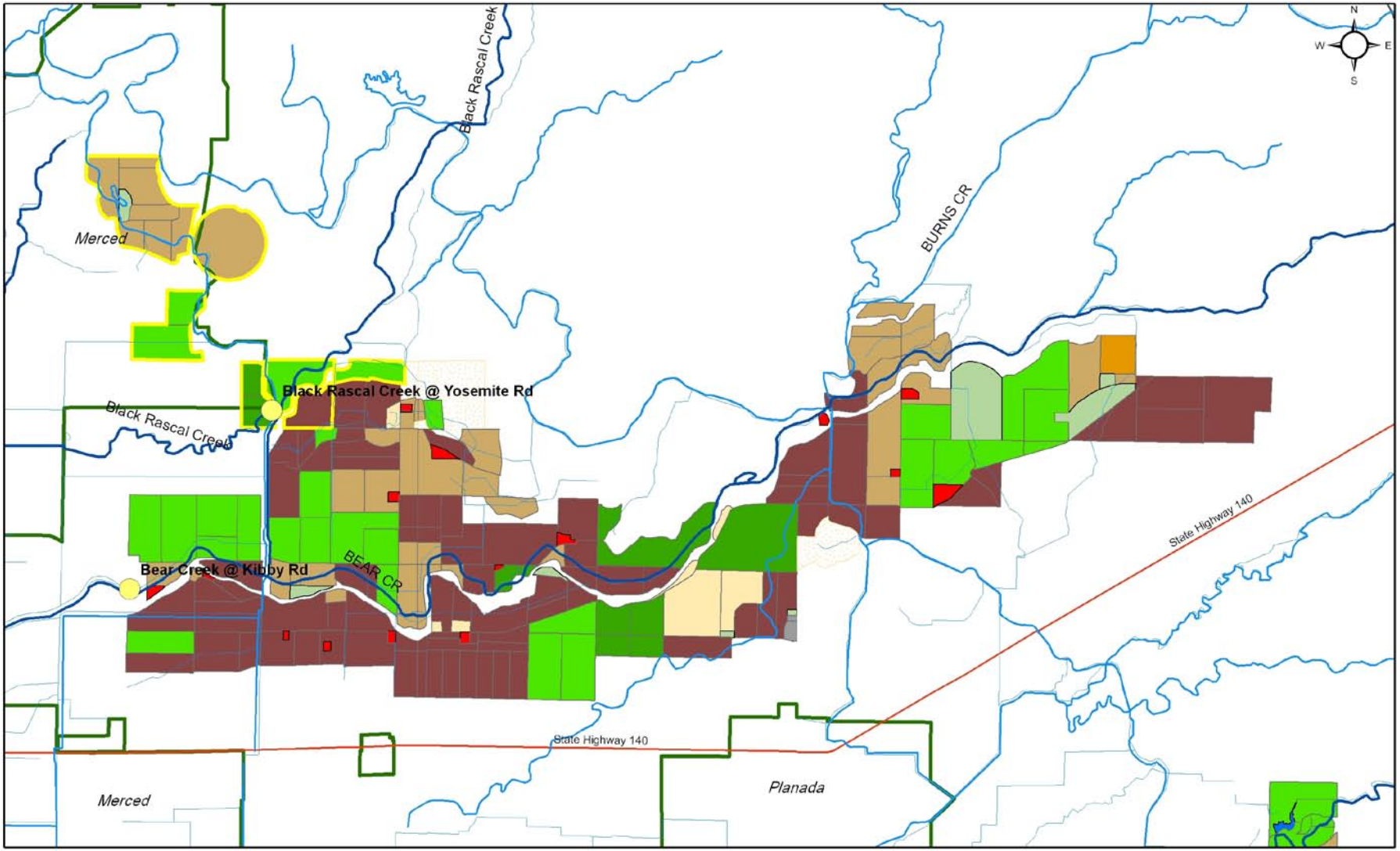
Berenda Slough along Avenue 18 1/2



Berenda Slough along Avenue 18 1/2							
Date Sampled	**Color**	**Oxygen, Dissolved**	**Chlorpyrifos (Lorsban)**	**Diuron**	***E. coli***	**Water flea toxicity**	**Algae toxicity**
	15 color units	**7 mg/L**	**0.015 µg/L**	**2 µg/L**	**235 MPN/ 100mL**	**Based on survival**	**Based on growth**
13-Jun-06		5.49			460		
11-Jul-06		6.54	0.043				
8-Aug-06							
12-Sep-06			0.140			toxic	
29-May-07	56	1.75		3.4			toxic
5-Jun-07		3.07					
26-Jun-07	38	5.20			390		
24-Jul-07	28	6.37	0.028				toxic
31-Jul-07		4.72					toxic
21-Aug-07	18	6.13					

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

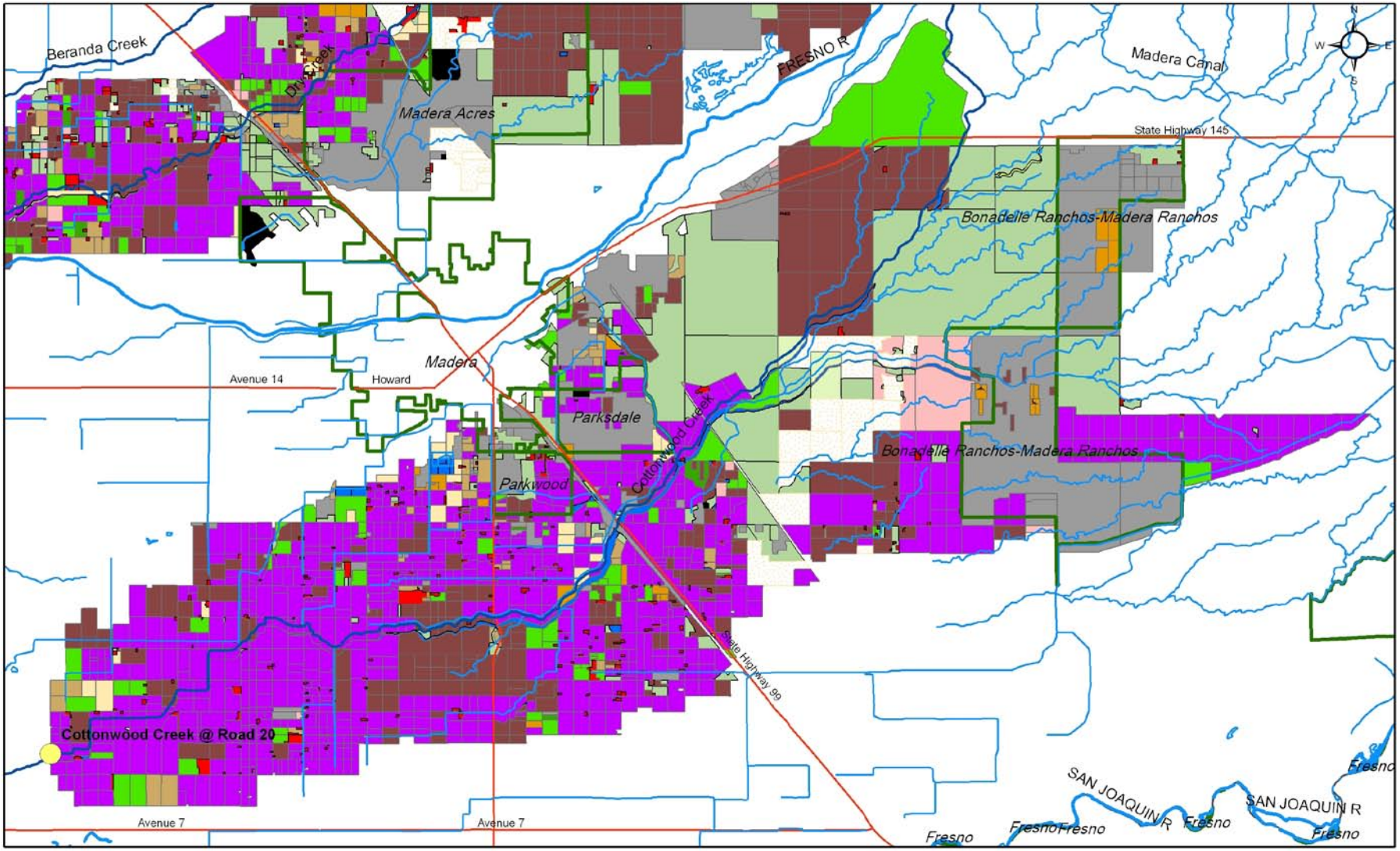
Black Rascal Creek at Yosemite Road



Black Rascal Creek at Yosemite Road					
Date Sampled	**Color**	**Oxygen, Dissolved**	**Chlorpyrifos (Lorsban)**	***E. coli***	**Water flea toxicity**
	15 color units	**7 mg/L**	**0.015 µg/L**	**235 MPN/ 100mL**	**Based on survival**
18-May-06		5.41	0.033	2400	
14-Jun-06				490	
12-Jul-06		5.53			
9-Aug-06		5.65			
12-Sep-06		5.56			
12-Feb-07	110				
01-Mar_07	180				
17-Apr-07	22				
29-May-07	65	3.93		770	toxic
26-Jun-07	120	6.95			
24-Jul-07	56		3.70	580	toxic
31-Jul-07					toxic
21-Aug-07	65	6.42	0.12		toxic
23-Aug-07		5.69			
28-Aug-07		6.18			toxic
18-Sep-07	140		0.031		

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Cottonwood Creek at Road 20



Cottonwood Creek at Road 20							
Date Sampled	Color	Oxygen, Dissolved	pH	*E. coli*	Sediment toxicity	Copper[1]	Lead[2]
	15 color units	7 mg/L	6.5 – 8.5 pH units	235 MPN/ 100mL	Based on survival	µg/L Based on hardness	µg/L Based on hardness
16-Feb-05				1600			
21-Mar-05		5.60		1600			
10-May-05				540	toxic		
14-Jun-05		5.70					
12-Jul-05		5.17					
16-Aug-05				300			
20-Sep-05		6.50					
28-Feb-06				300			
15-Mar-06				1600			
16-May-06		5.71				4.4 (3.5)	
13-Jun-06		6.90				8.0 (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)	
24-Apr-07	17						
29-May-07	24	6.55				6.7 (5.5)	
19-Jun-07						6.7 (4.4)	
26-Jun-07	17					4.3 (4.1)	
24-Jul-07	24		9.04			5.4 (4.6)	
21-Aug-07		6.81					
23-Aug-07		3.95					

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

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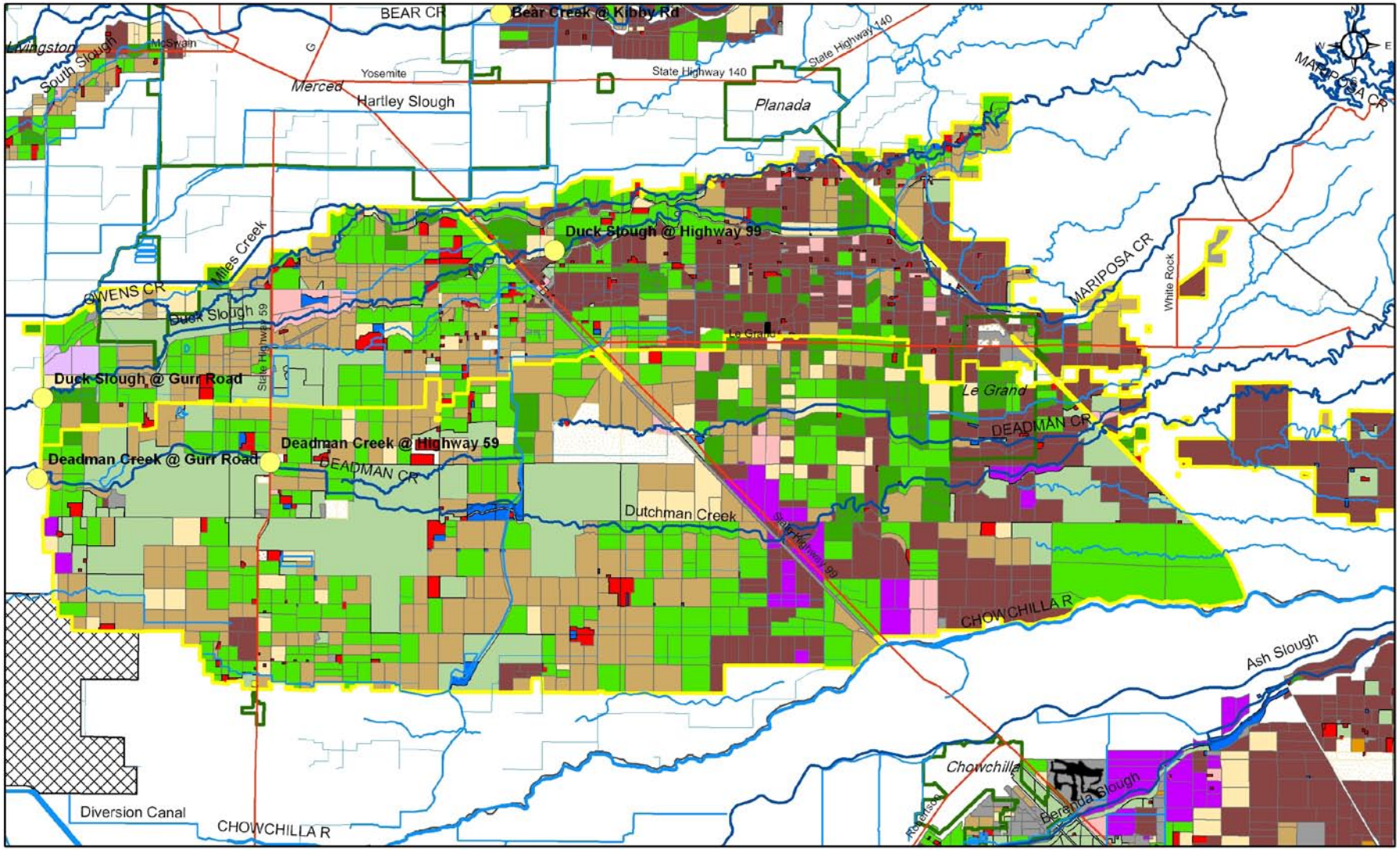
[2]If hardness is less than 71 mg/L then the limit is based on hardness measured in each sample.

Deadman Creek and Duck Slough



Deadman Creek

Site Name	Date Sampled	Color	Oxygen, Dissolved	Bifenthrin	Chlorpyrifos (Lorsban)	DDD	DDT	Malathion	*E. coli*	Fathead minnow toxicity	Algae toxicity	Arsenic	Copper[1]
		15 color units	7 mg/L	0.0004 µg/L	0.015 µg/L	0.00083 µg/L	0.00059 µg/L	Prohibited discharge	235 MPN/ 100mL	Based on survival	Based on growth	10 µg/L	Based on hardness
Highway 59	17-May-06												
Highway 59	13-Jun-06		5.65			0.0053	0.05						
Highway 59	11-Jul-06												
Highway 59	8-Aug-06		6.55	0.011									
Highway 59	12-Sep-06		6.53		0.059								
Highway 59	11-Feb-07	110							400				
Highway 59	28-Feb-07	120							490				
Highway 59	24-Apr-07	35							310				
Highway 59	29-May-07	40	6.13						490				
Highway 59	26-Jun-07	30	6.78						610				
Highway 59	24-Jul-07	34	4.31										
Highway 59	21-Aug-07	24	4.47		0.038								
Highway 59	23-Aug-07		2.65										
Highway 59	18-Sep-07								330				
Gurr Rd	31-Jul-04		6.85						1600				
Gurr Rd	31-Aug-04								1600				
Gurr Rd	29-Sep-04		6.70						500				
Gurr Rd	17-May-06								1200				
Gurr Rd	13-Jun-06		5.01						310	toxic			
Gurr Rd	11-Jul-06		6.50						490				
Gurr Rd	8-Aug-06		6.96					0.19	390				
Gurr Rd	12-Sep-06		6.08		0.027				2400				
Gurr Rd	11-Feb-07	200										14	16 (15.4)
Gurr Rd	28-Feb-07	60										14	
Gurr Rd	24-Apr-07	40											9.2 (7.7)
Gurr Rd	29-May-07	40	5.11						1400	toxic			8.8 (7.5)
Gurr Rd	19-Jun-07												
Gurr Rd	26-Jun-07	50							460				
Gurr Rd	24-Jul-07	70	5.38								toxic		
Gurr Rd	21-Aug-07	25											
Gurr Rd	18-Sep-07	30	5.88						820				

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

[1]Limit is based on hardness measured in each water sample and is indicated in parenthesis.

Duck Slough										
Site Name	**Date Sampled**	**Color**	**Oxygen, Dissolved**	**pH**	**Specific Conductance**	**Bifenthrin**	**Chlorpyrifos (Lorsban)**	**Cyhalothrin, lambda**	**Esfenvalerate/ Fenvalerate**	**Thiobencarb**
		15 color units	**7 mg/L**	**6.5 - 8.5 pH units**	**700 µmhos/cm**	**0.0004 µg/L**	**0.015 µg/L**	**0.00041 µg/L**	**0.007 µg/L**	**Prohibited discharge**
Gurr Road	31-Jul-04						0.045			
Gurr Road	29-Sep-04				701				0.05	
Gurr Road	17-May-06			8.6						
Gurr Road	14-Jun-06					0.025		0.011		5.8
Gurr Road	12-Jul-06		6.18			0.0088				0.29
Gurr Road	13-Sep-06		5.53							
Gurr Road	12-Feb-07	550								
Gurr Road	28-Feb-07	170								
Gurr Road	07-Mar-07			9.17						
Gurr Road	24-Apr-07	35								
Gurr Road	29-May-07	35								
Gurr Road	19-Jun-07		5.85							
Gurr Road	26-Jun-07	30								
Gurr Road	24-Jul-07	30								
Gurr Road	21-Aug-07	30								
Gurr Road	18-Sep-07	40								
Highway 99	12-Jul-05						0.026			
Highway 99	17-May-06			8.57			0.27			
Highway 99	13-Sep-06		6.72							
Highway 99	12-Feb-07	450								
Highway 99	28-Feb-07	120								
Highway 99	24-Apr-07	30								
Highway 99	26-Jun-07	25								
Highway 99	24-Jul-07	25								
Highway 99	31-Jul-07		8.8				0.042			
Highway 99	21-Aug-07	24								
Highway 99	18-Sep-07	22								

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

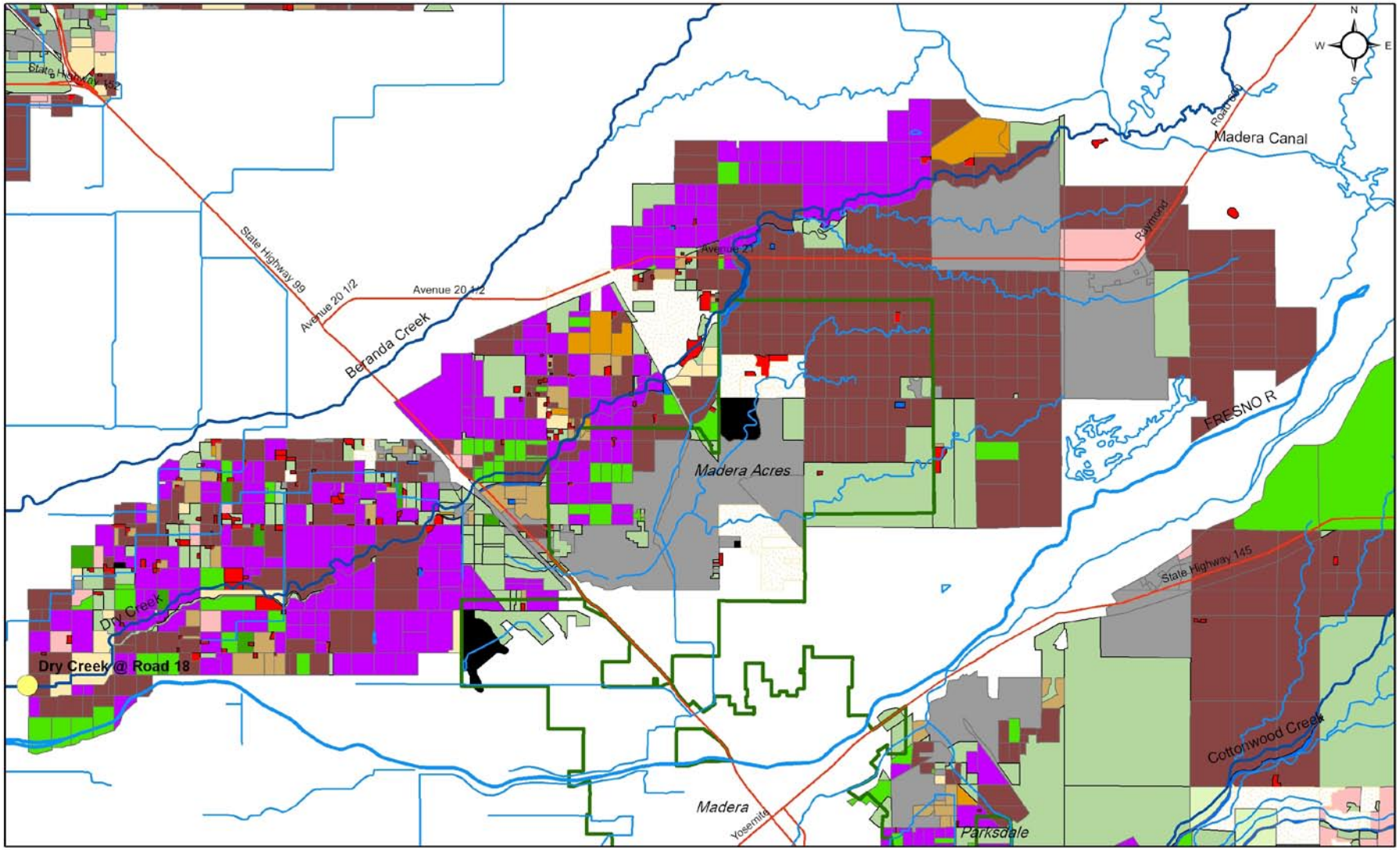
Duck Slough								
Site Name	**Date Sampled**	***E. coli***	**Total Dissolved Solids**	**Water flea toxicity**	**Algae toxicity**	**Sediment toxicity**	**Copper[1]**	**Lead[2]**
		235 MPN/ 100mL	**450 mg/L**	**Based on survival**	**Based on growth**	**Based on survival**	**µg/L Based on hardness**	**µg/L Based on hardness**
Gurr Road	31-Aug-04					toxic		
Gurr Road	29-Sep-04		540		toxic			
Gurr Road	10-May-05					toxic		
Gurr Road	12-Jul-05					toxic		
Gurr Road	20-Sep-05					toxic		
Gurr Road	28-Feb-06			toxic				
Gurr Road	10-Mar-06			toxic				
Gurr Road	15-Mar-06			toxic				
Gurr Road	14-Jun-06						120 (10.9)	
Gurr Road	12-Jul-06						14.0 (9.3)	
Gurr Road	12-Feb-07	>2400					93 (23.9)	27 (12.9)
Gurr Road	28-Feb-07	2000					11 (8.8)	
Gurr Road	29-May-07	820						
Gurr Road	26-Jun-07						4.6 (3.7)	1 (0.81)
Gurr Road	24-Jul-07				toxic			
Gurr Road	18-Sep-07	370						
Highway 99	12-Jul-05				toxic			
Highway 99	17-May-06			toxic				5.2 (3.0)
Highway 99	8-Aug-06						3.4 (2.4)	2.3 (0.4)
Highway 99	13-Sep-06						19.0 (5.0)	24.0 (1.3)
Highway 99	12-Feb-07	>2400					31 (10)	15 (3.6)
Highway 99	28-Feb-07	>2400						
Highway 99	24-Apr-07						4.1 (3.7)	1.5 (0.8)
Highway 99	26-Jun-07						3.0 (2.4)	0.68 (0.41)
Highway 99	24-Jul-07						3.5 (3.0)	0.64 (0.57)
Highway 99	21-Aug-07						5.5 (3.3)	1.1 (0.7)
Highway 99	28-Aug-07						3.1 (2.4)	
Highway 99	18-Sep-07	610					6.9 (2.8)	1.8 (0.5)

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

[1]Limit is based on hardness measured in each water sample and is indicated in parenthesis.

[2]If hardness is less than 71 mg/L then the limit is based on hardness measured in each sample.

Dry Creek at Road 18



Dry Creek at Road 18												
Date Sampled	**Color**	**Oxygen, Dissolved**	**pH**	**Chlorpyrifos (Lorsban)**	**Diuron**	***E. coli***	**Water flea toxicity**	**Algae toxicity**	**Sediment toxicity**	**Copper[1]**	**Lead[2]**	***Zinc[1]***
	15 color units	**7 mg/L**	**6.5 - 8.5 pH units**	**0.015 µg/L**	**2 ug/L**	**235 MPN/ 100mL**	**Based on survival**	**Based on growth**	**Based on survival**	**µg/L Based on hardness**	**µg/L Based on hardness**	***µg/L Based on hardness***
16-Aug-05			6.48									
20-Sep-05						500						
3-May-06									toxic			
16-May-06						1600				4.3 (1.9)	0.36 (0.31)	
13-Jun-06							toxic			6.3 (1.5)	0.27 (0.21)	
11-Jul-06				0.077						4.1 (2.4)		
8-Aug-06										4.6 (2.2)		
12-Sep-06		5.61								6.1 (1.1)	0.31 (0.13)	*18 (14)*
11-Feb-07	35									14 (3.9)		
24-Apr-07	76			0.017		1400				17 (15)		
29-May-07	17							toxic		4.7 (2.4)		
19-Jun-07										4.9 (1.5)		
26-Jun-07										3.6 (1.9)		
24-Jul-07										5.6 (2.2)		
31-Jul-07										4.5 (1.5)		
21-Aug-07	16									5.5 (2.0)	0.34 (0.31)	
28-Aug-07			*8.53*							*4.3 (2.0)*		

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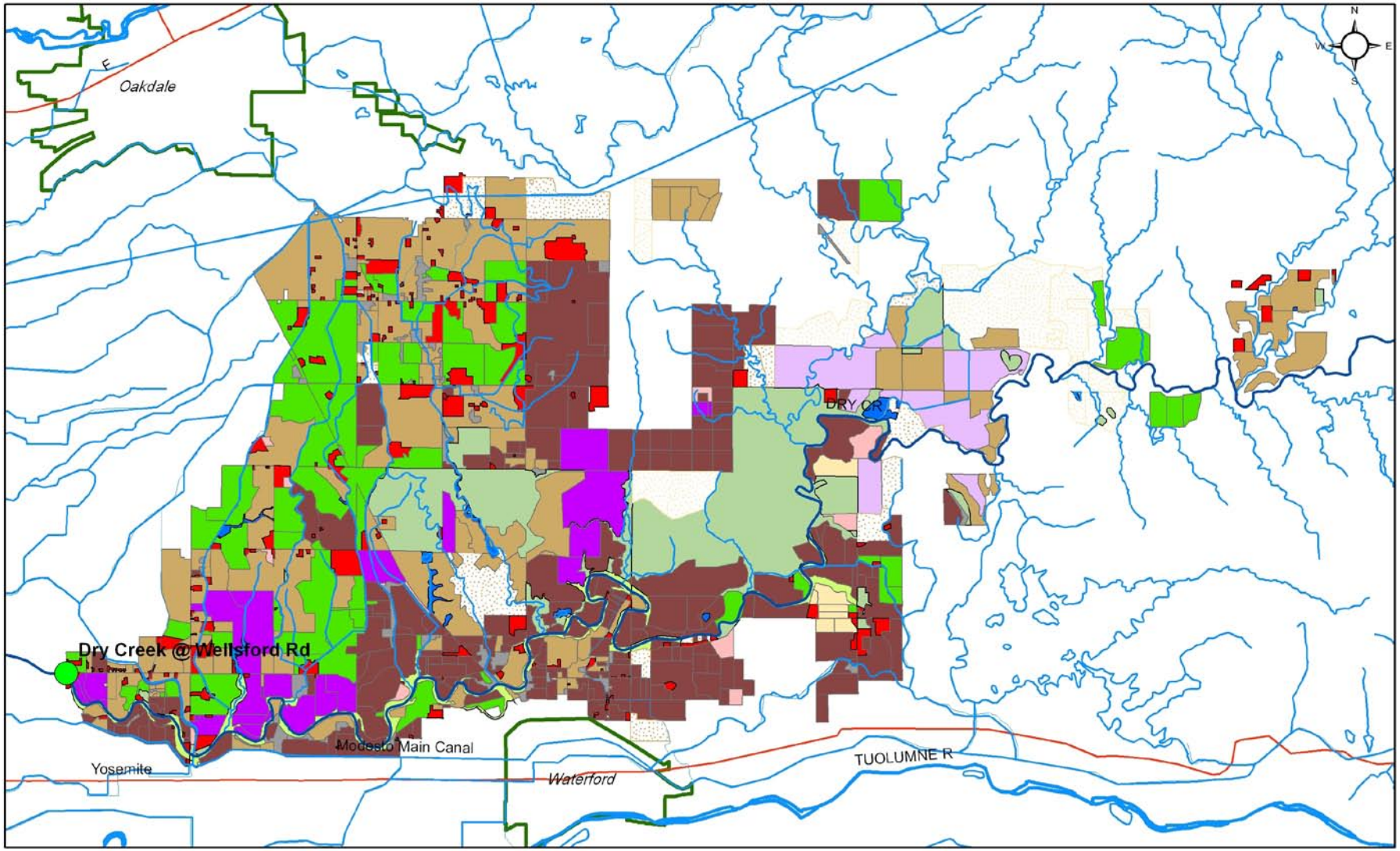
[1]Limit is based on hardness measured in each water sample and is indicated in parenthesis.

Dry Creek at Wellsford Road



Dry Creek at Wellsford Road											
Date Sampled	Color	Oxygen, Dissolved	pH	Chlorpyrifos (Lorsban)	Diuron	Thiobencarb	*E. coli*	Water flea toxicity	Algae toxicity	Sediment toxicity	Copper[1]
	15 color units	7 mg/L	6.5 - 8.5 pH units	0.015 µg/L	2 µg/L	Prohibited discharge	235 MPN/ 100mL	Based on survival	Based on growth	Based on survival	µg/L Based on hardness
15-Feb-05								toxic			
22-Mar-05			8.96				900				
11-May-05			6.26							toxic	
15-Jun-05		5.90					240				
13-Jul-05		5.70									
17-Aug-05			9.18	0.024			900				
21-Sep-05		6.98					500				
1-Mar-06							300				
16-Mar-06							1600				
18-May-06							280				
15-Jun-06		6.08									
13-Jul-06		6.69		0.026							
10-Aug-06				0.024							
14-Sep-06						0.1	310	toxic			
11-Feb-07	50				37		290		toxic		
22-Feb-07									toxic		
28-Feb-07	250				4		>2400		toxic		8.4 (7.2)
07-Mar-07									toxic		
17-Apr-07	90										5.1 (5.0)
15-May-07	60										
19-Jun-07	120	5.77									
17-Jul-07	75	6.64		0.021							
31-Jul-07		6.91									
14-Aug-07	85	6.58					440				
11-Sep-07	74			0.043			420				

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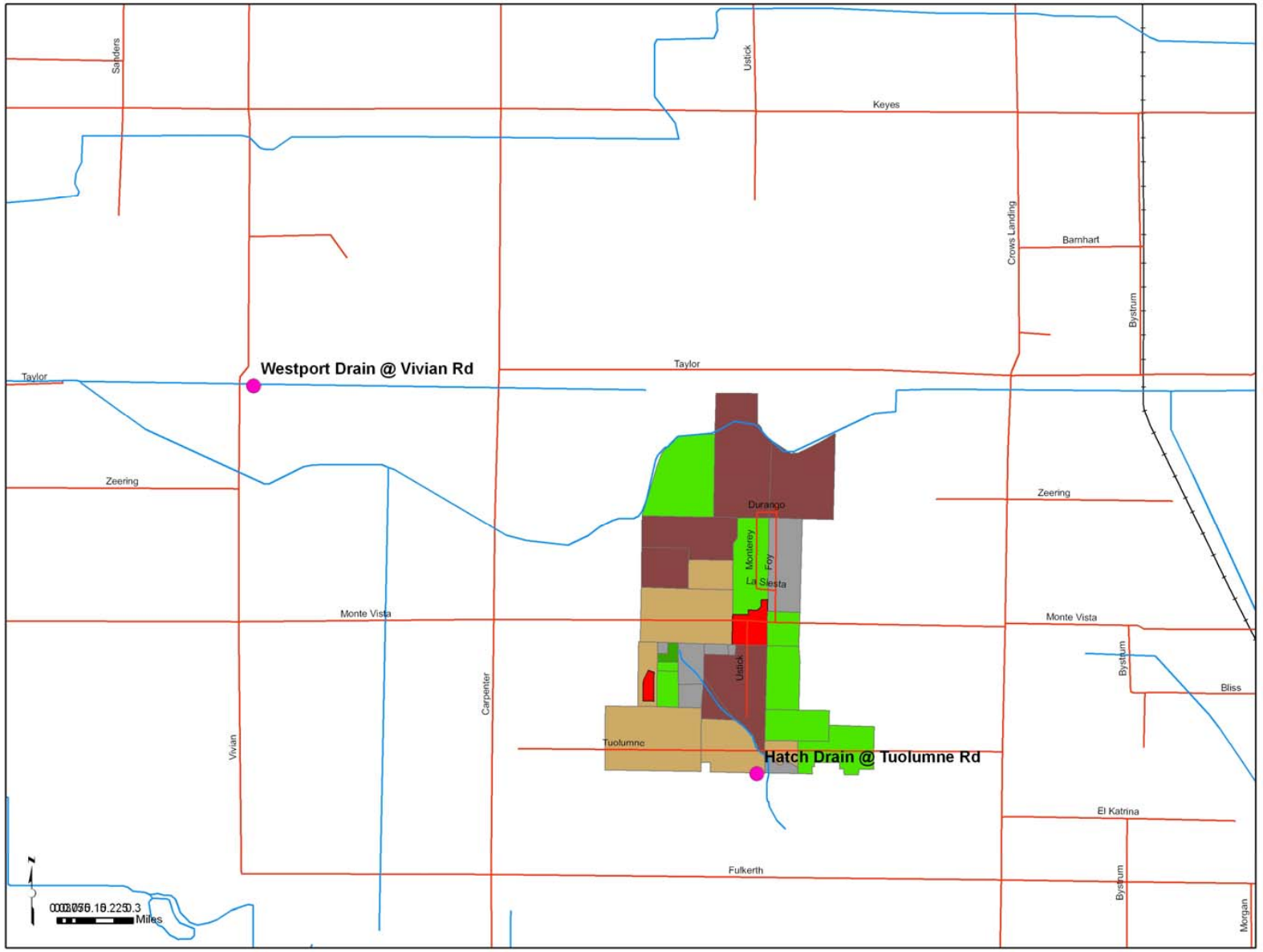
[1]Limit is based on hardness measured in each water sample and is indicated in parenthesis.

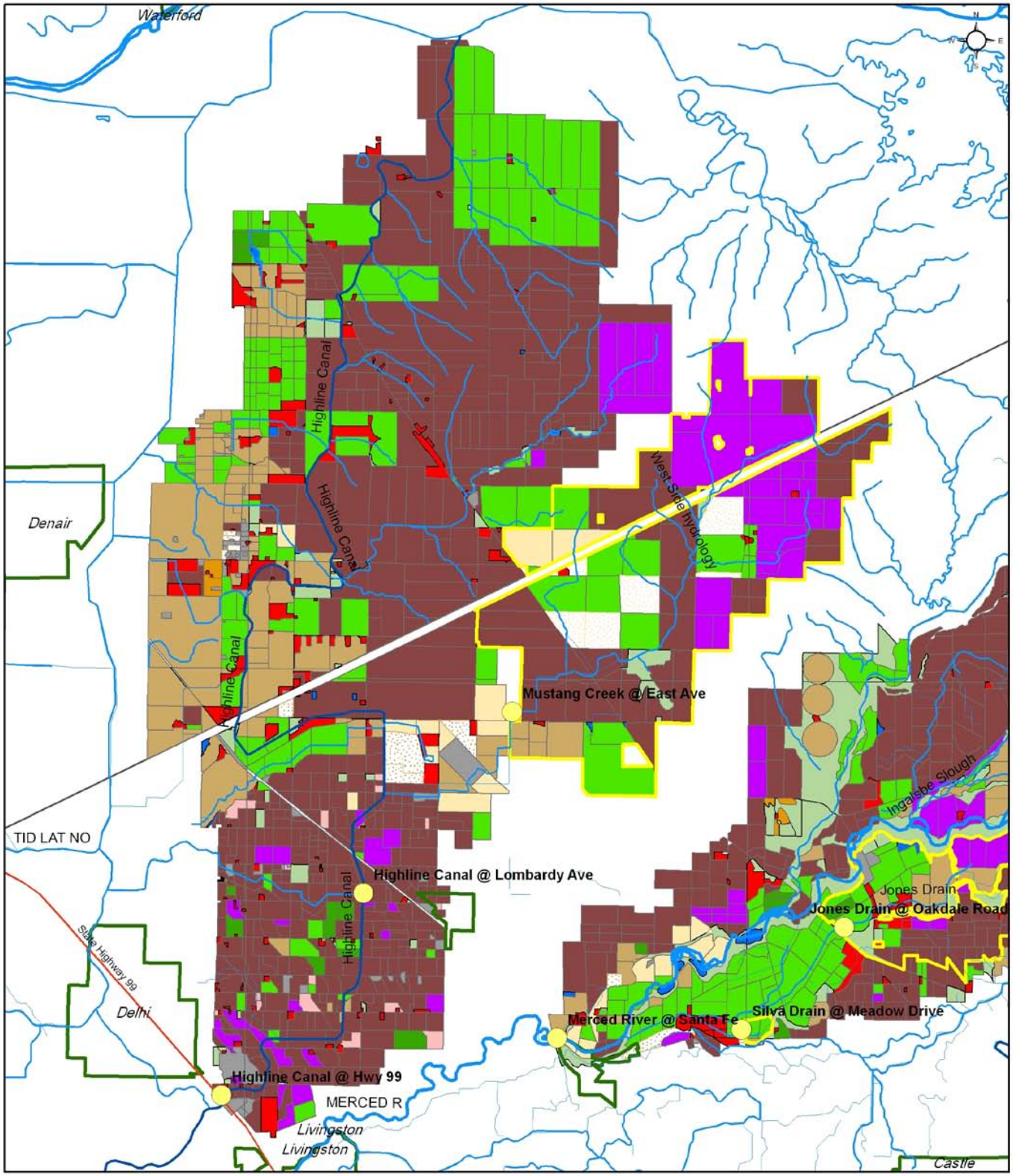
Hatch Drain at Toulumne Road



Hatch Drain at Tuolumne Road										
Date Sampled	**Color**	**Oxygen, Dissolved**	**Specific Conductance**	**Dimethoate**	**Methoxychlor**	***E. coli***	**Total Dissolved Solids**	**Nitrite as N**	**Sediment toxicity**	**Arsenic**
	15 color units	**7 mg/L**	**700 µmhos/cm**	**1.0 µg/L**	**0.03 µg/L**	**235 MPN/ 100mL**	**450 µg/L**	**1.0 mg/L**	**Based on survival**	**10 µg/L**
15-May-07	70	6.46	1105			>2400	700	2.2		12
19-Jun-07	40	5.54	1014			770	800			29
17-Jul-07	76	3.05	1111			260	720			18
14-Aug-07	64	4.22		2.1		>2400				
16-Aug-07		5.85	1280						toxic	
11-Sep-07		3.53	1817		0.035	1600	1300		toxic	18

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Highline Canal



Highline Canal													
Site Name	**Date Sampled**	**Color**	**Oxygen, Dissolved**	**pH**	**Chlorpyrifos (Lorsban)**	**Diuron**	***E. coli***	**Water flea toxicity**	**Algae toxicity**	**Sediment toxicity**	**Copper[1]**	**Lead[2]**	**Zinc[1]**
		15 color units	**7 mg/L**	**6.5 - 8.5 pH units**	**0.015 µg/L**	**2 ug/L**	**235 MPN/100mL**	**Based on survival**	**Based on growth**	**Based on survival**	**µg/L Based on hardness**	**µg/L Based on hardness**	**µg/L Based on hardness**
Highway 99	10-May-05							toxic					
Highway 99	19-May-05							toxic					
Highway 99	13-Jul-05									toxic			
Highway 99	17-Aug-05												
Highway 99	20-Sep-05									toxic			
Highway 99	1-Mar-06		5.6		0.021				toxic				
Highway 99	16-Mar-06						300	toxic					
Highway 99	2-May-06			8.73									
Highway 99	17-May-06											0.42 (0.36)	
Highway 99	9-Aug-06									toxic		0.39 (0.31)	
Highway 99	13-Sep-06							toxic					
Highway 99	11-Feb-07	20				25					3.0 (2.2)	0.52 (0.36)	
Highway 99	17-Apr-07	16									11 (10.1)	5.1 (3.6)	
Highway 99	15-May-07			8.56			250						
Highway 99	19-Jun-07						320				2.4 (2.0)	0.5 (0.31)	
Highway 99	17-Jul-07	25			0.017		440				3.2 (2.2)	1 (0.36)	
Highway 99	14-Aug-07			8.62							1.9 (1.7)	0.44 (0.26)	
Highway 99	25-Sep-07			8.73									
Lombardy Road	21-Mar-05			8.56									
Lombardy Road	10-May-05						240			toxic			
Lombardy Road	13-Jul-05									toxic			
Lombardy Road	17-Aug-05			6.46					toxic				
Lombardy Road	1-Mar-06				0.027								
Lombardy Road	16-Mar-06				0.018		900		toxic				
Lombardy Road	2-May-06									toxic			
Lombardy Road	17-May-06											0.49 (0.46)	
Lombardy Road	14-Jun-06							toxic				0.55 (0.52)	
Lombardy Road	9-Aug-06											0.34 (0.31)	
Lombardy Road	13-Sep-06							toxic				0.29 (0.21)	23 (20)
Lombardy Road	11-Feb-07	25									2.5 (2.2)	0.45 (0.36)	
Lombardy Road	28-Feb-07	25				3.2		toxic	toxic				
Lombardy Road	07-Mar-07							toxic					
Lombardy Road	15-May-07										2.2 (2.0)	0.49 (0.31)	
Lombardy Road	19-Jun-07											0.49 (0.31)	
Lombardy Road	17-Jul-07				0.017								
Lombardy Road	16-Aug-07									toxic			
Lombardy Road	11-Sep-07									toxic			

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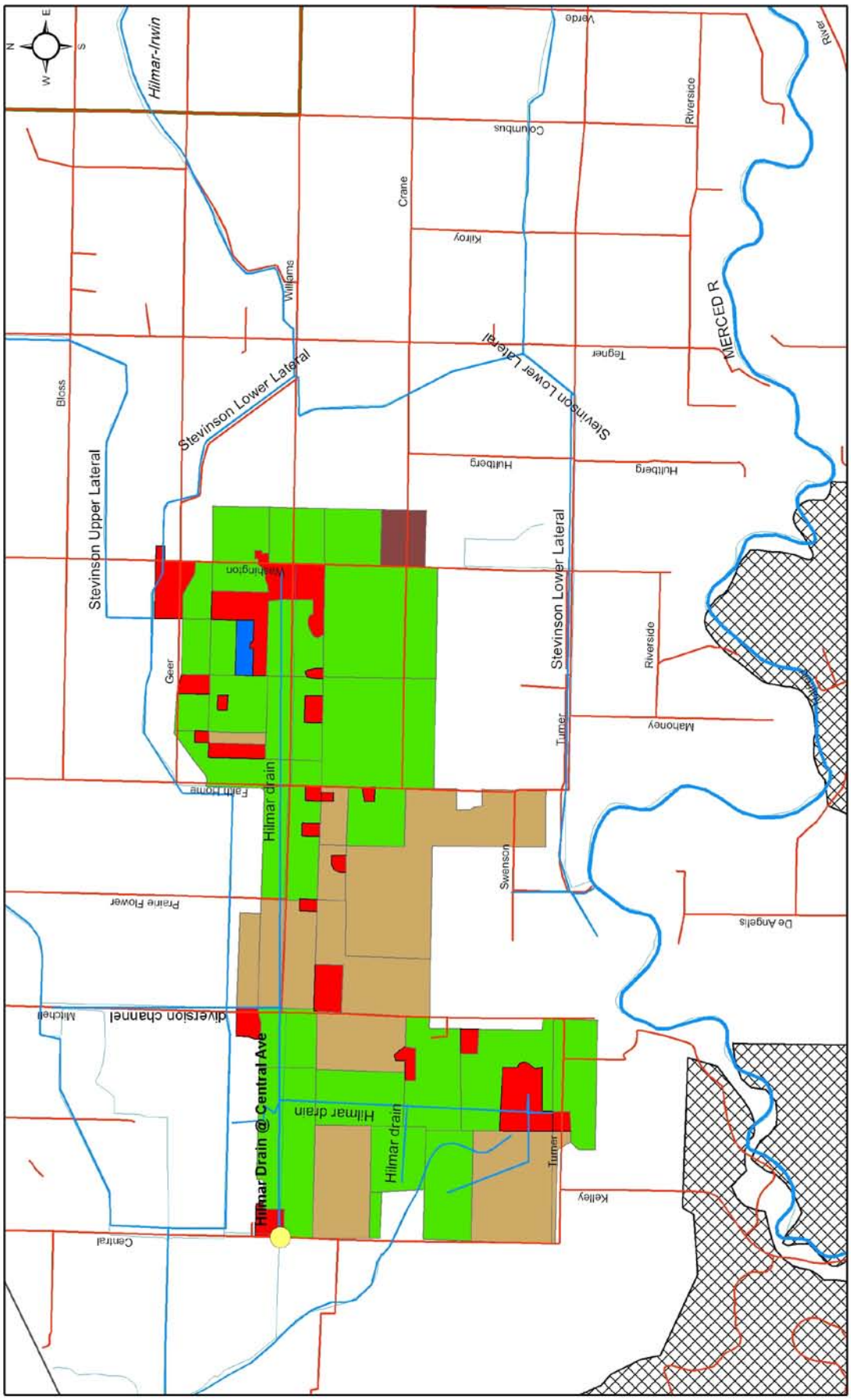
[2]If hardness is less than 71 mg/L then the limit is based on hardness measured in each sample.

Hilmar Drain at Central Avenue



Hilmar Drain at Central Avenue													
Date Sampled	Color	Oxygen, Dissolved	pH	Specific Conductance	Chlorpyrifos (Lorsban)	DDD	Diuron	*E. coli*	Total Dissolved Solids	Water flea toxicity	Algae toxicity	Sediment toxicity	Copper[1]
	15 color units	7 mg/L	6.5 - 8.5 pH units	700 µmhos/cm	0.015 µg/L	0.00083 µg/L	2 µg/L	235 MPN/ 100mL	500 µg/L	Based on survival	Based on growth	Based on survival	µg/L Based on hardness
15-Feb-05				1102				240	740				
22-Mar-05				1157				900	760				
11-May-05				1354				1600	740	toxic		toxic	
19-May-05				1214									
15-Jun-05				855				500	720				
13-Jul-05		6.45		826				1600	600				
16-Aug-05				788				1600	500				
21-Sep-05								430	690			toxic	
1-Mar-06			9.55	1058					670				
16-Mar-06				1215					710				
24-Mar-06				1400									
2-May-06			8.58	794									
18-May-06		6.28						>2400					
15-Jun-06		6.80											
13-Jul-06				1096	0.016			>2400	610		toxic		31 (19)
10-Aug-06						0.003		1000					
14-Sep-06				773					510				
11-Feb-07	250							>2400					84 (10)
01-Mar-07	35			1396					790				
07-Mar-07			8.79	1633									
17-Apr-07	100			1106			3.3	1100	700		toxic		
15-May-07	17			1030				440	640				
19-Jun-07	60			869			6.6	1700	600				
17-Jul-07	75			717				340	460				
21-Aug-07	54			793					520				
11-Sep-07	56			703				>2400	460				

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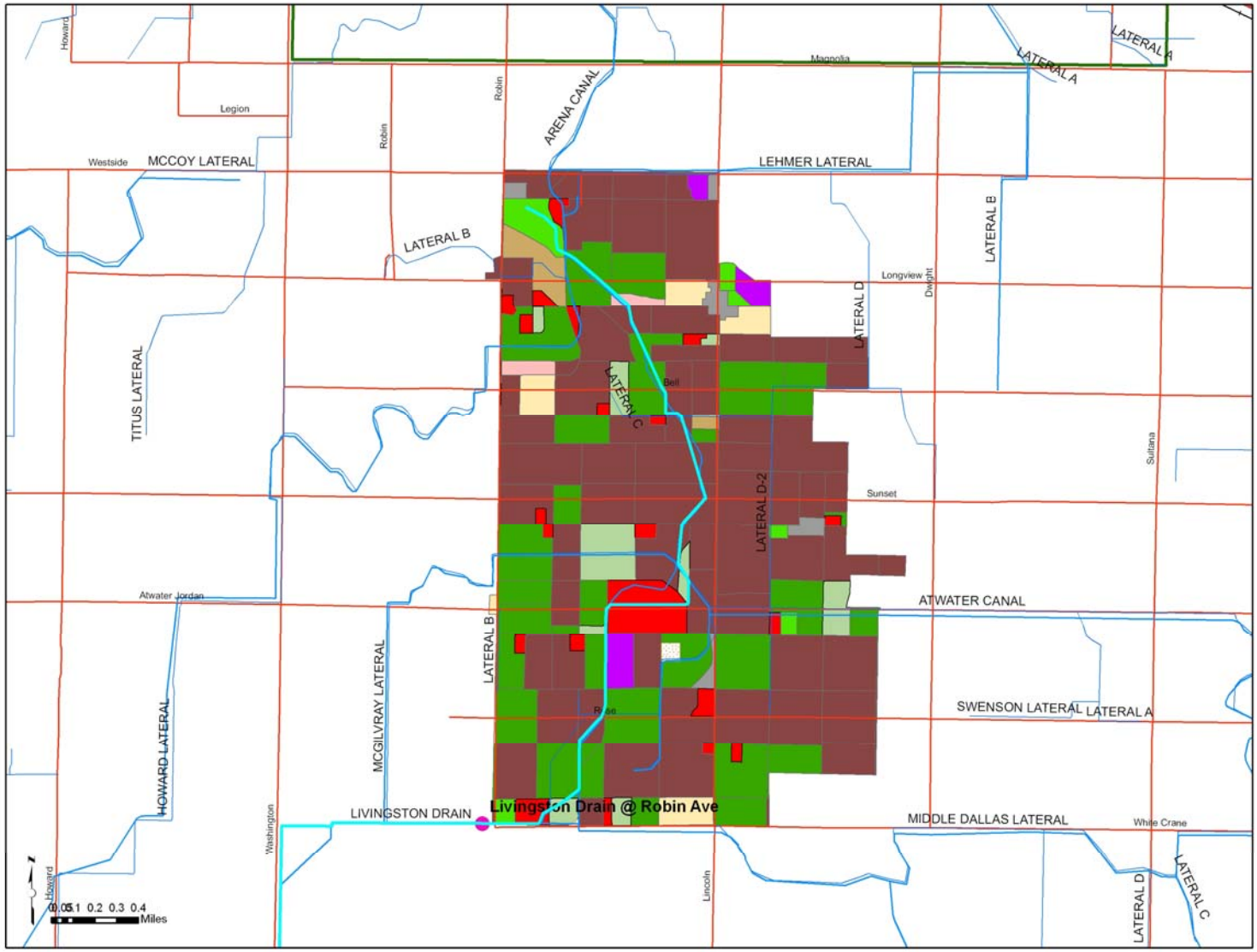
Livingston Drain at Robin Avenue



Livingston Drain at Robin Avenue				
Date Sampled	Color	pH	Chlorpyrifos	Copper[1]
	15 color units	6.5 - 8.5 pH units	0.015 µg/L	µg/L Based on hardness
15-May-07	16	8.95		18.0 (13)
19-Jun-07	16			16.0 (4.5)
17-Jul-07		8.82		7.8 (5.3)
14-Aug-07			0.016	
11-Sep-07		8.57		14.0 (6.4)

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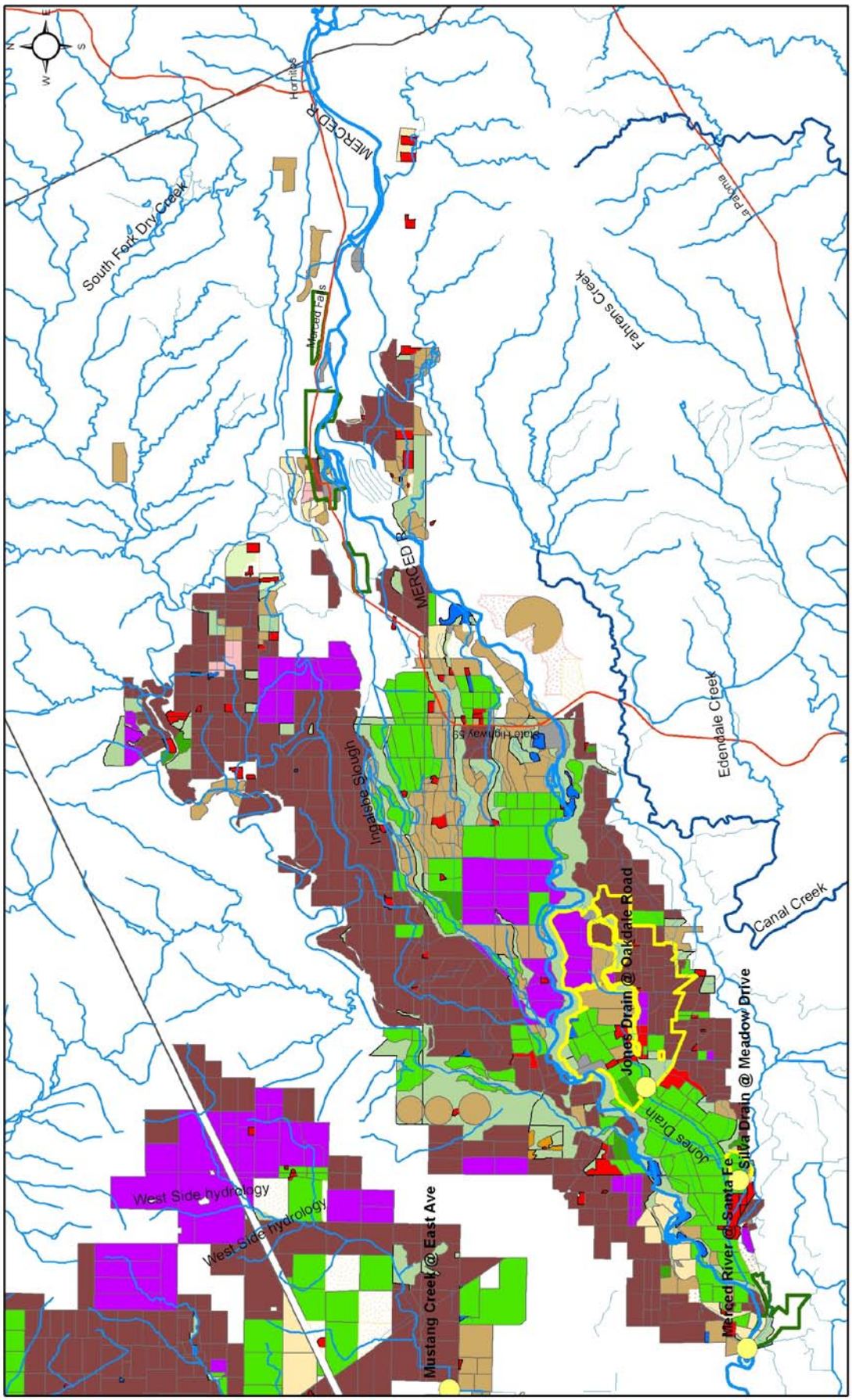
[1]Limit is based on hardness measured in each water sample and is indicated in parenthesis.

Merced River at Santa Fe



Merced River at Santa Fe								
Date Sampled	Color	Oxygen, Dissolved	pH	*E. coli*	Chlorpyrifos	Water flea toxicity	Algae toxicity	Lead[1]
	15 color units	7 mg/L	6.5 - 8.5 pH units	235 MPN/ 100mL	0.015 µg/L	Based on survival	Based on growth	µg/L Based on hardness
31-Jul-04						toxic		
31-Aug-04						toxic		
21-Mar-05							toxic	
17-Aug-05			6.38					
1-Mar-06				1600				
16-Mar-06						toxic		
14-Jun-06		6.4						
12-Feb-07	45							0.82 (0.63)
28-Feb-07	60							
17-Jul-07					0.018			

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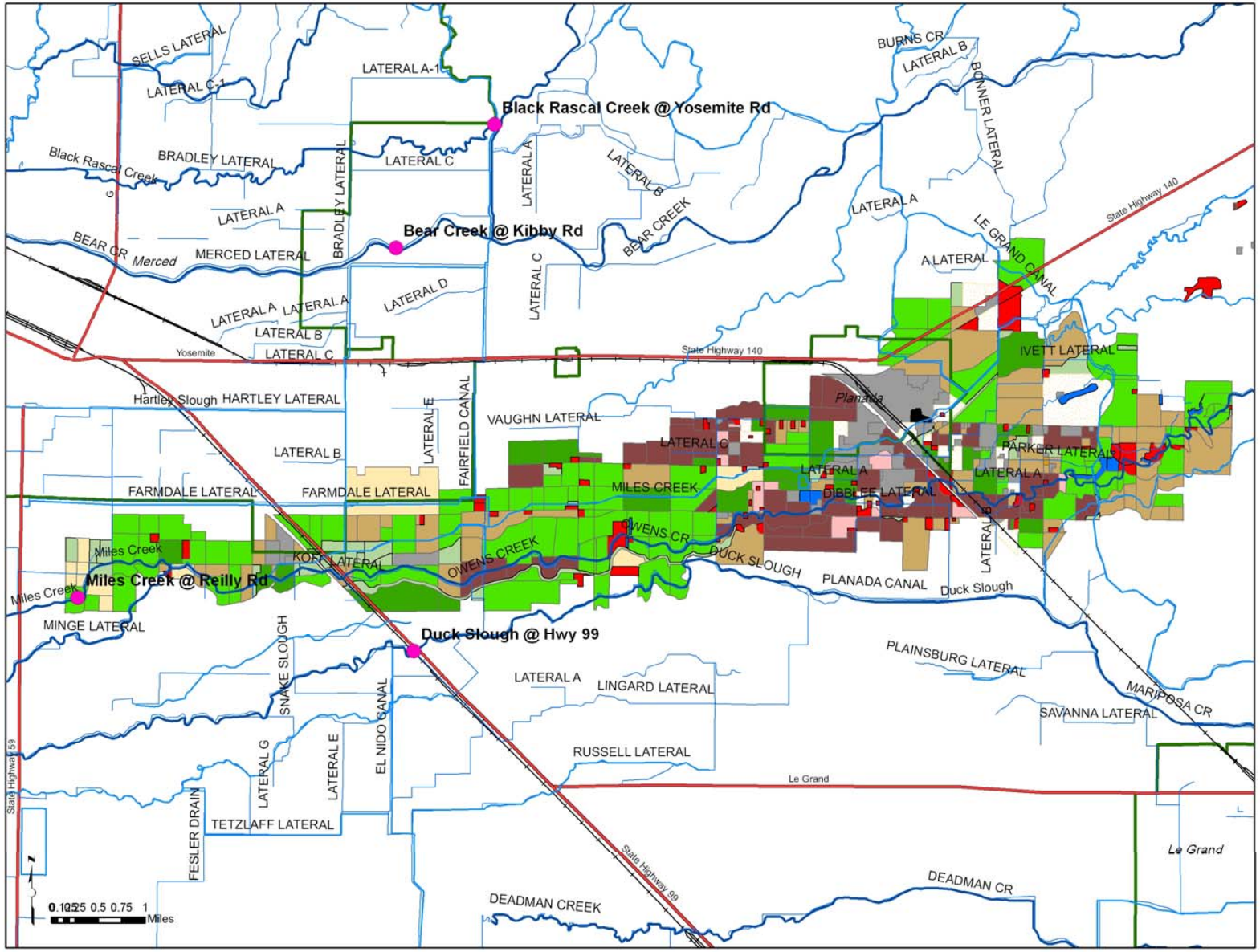
Miles Creek at Reilly Road



Miles Creek at Reilly Road									
Date Sampled	Color	*E. coli*	Aldicarb	Chlorpyrifos (Lorsban)	Water flea toxicity	Algae toxicity	Sediment toxicity	Copper[1]	Lead[2]
	15 color units	235 MPN/ 100mL	3.0 µg/L	0.015 µg/L	Based on survival	Based on growth	Based on survival	µg/L Based on hardness	µg/L Based on hardness
29-May-07	30	290						4.3 (3.5)	
26-Jun-07	35	310	5.4			toxic		5.8 (4.3)	1 (0.99)
24-Jul-07	35	340							
21-Aug-07	35							5.2 (4.5)	
23-Aug-07							toxic		
18-Sep-07	25			0.03	toxic				

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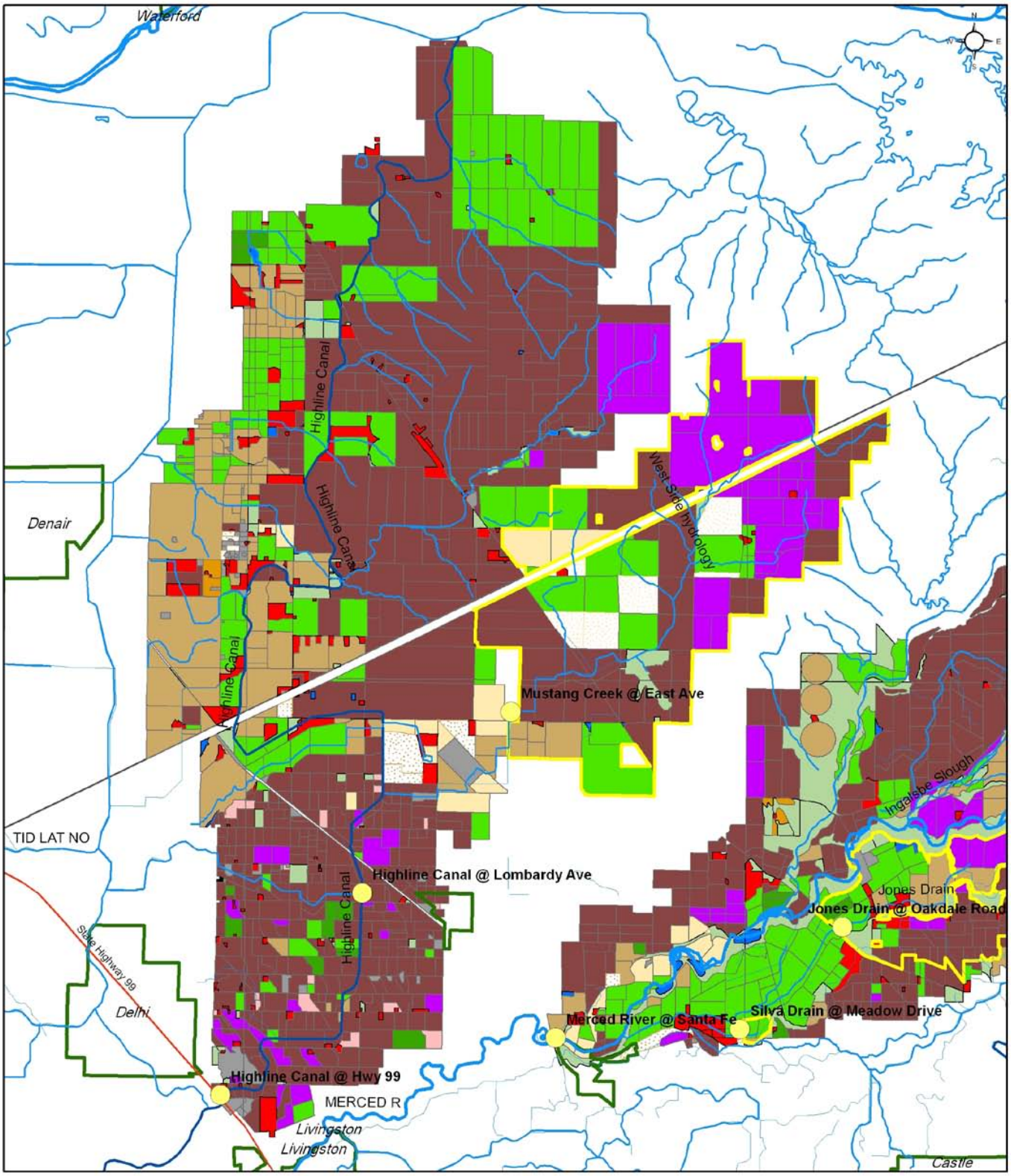
[2]If hardness is less than 71 mg/L then the limit is based on hardness measured in each sample.

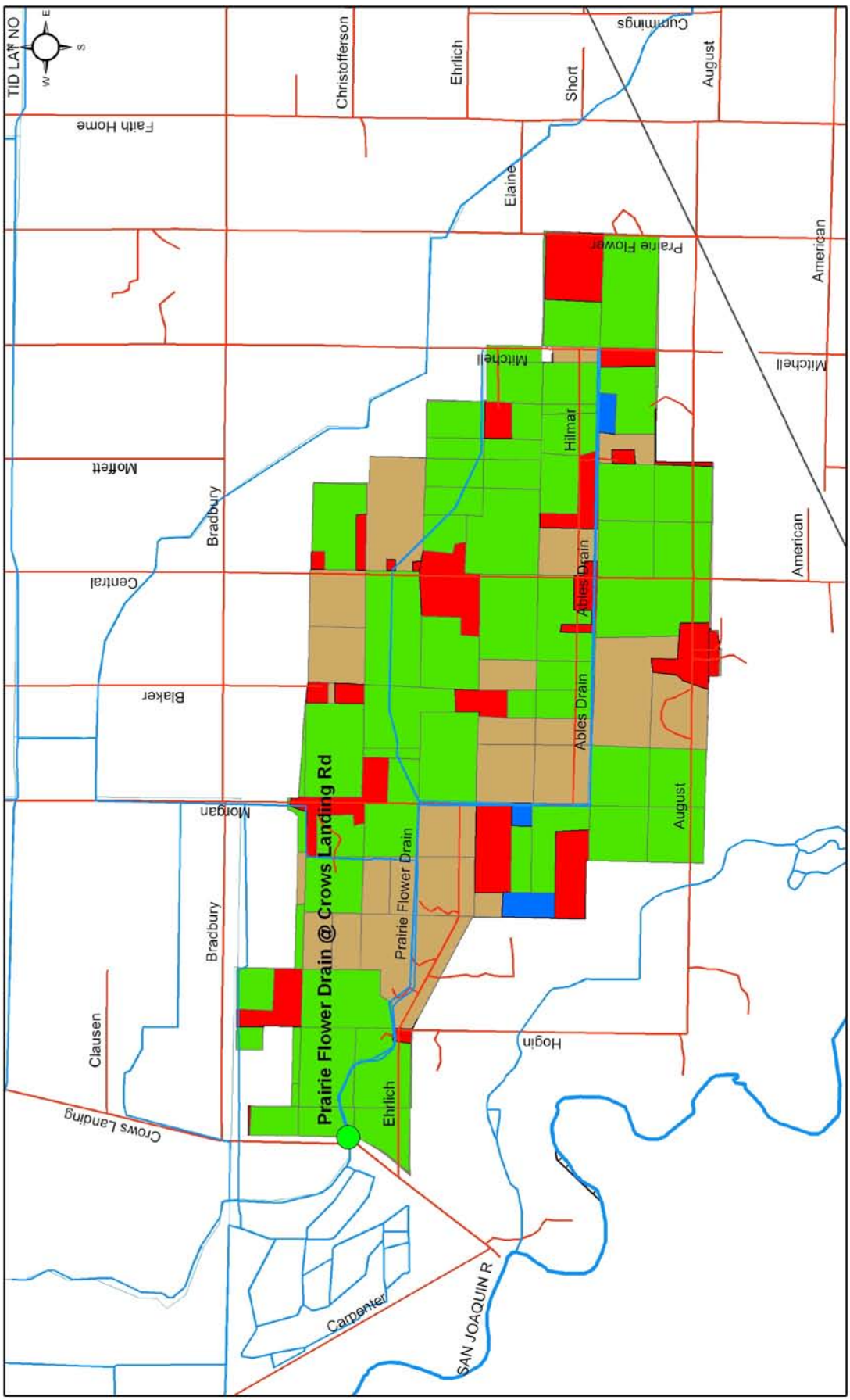
Mustang Creek at East Avenue



Mustang Creek at East Avenue							
Date Sampled	**Color**	**Oxygen, Dissolved**	**Specific Conductance**	**Chlorpyrifos (Lorsban)**	**DDE**	***E. coli***	**Total Dissolved Solids**
	15 color units	**7 mg/L**	**700 µmhos/ cm**	**0.015 µg/L**	**0.00059 µg/L**	**235 MPN/ 100mL**	**450 µg/L**
18-May-06		5.82				2400	
15-Jun-06		5.00				2400	
10-Aug-06		2.61		0.015		980	
12-Feb07	140						
28-Feb-07	70		760		0.0064		460
15-May-07	120	1.16				1600	
19-Jun-07	190	4.30			0.0073	410	

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Prairie Flower Drain at Crows Landing Road

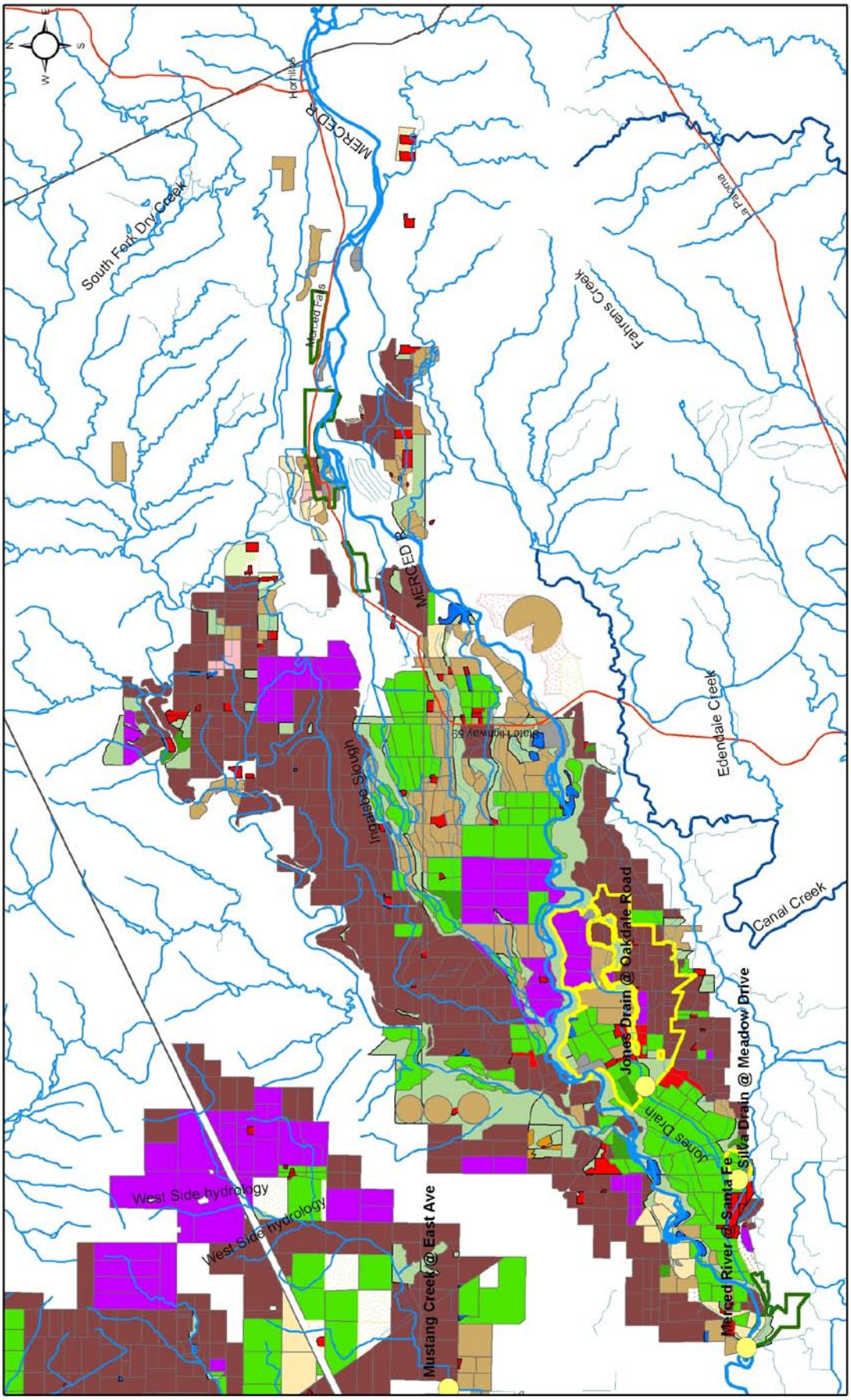


Prairie Flower Drain at Crows Landing Road

Date Sampled	Color	Oxygen, Dissolved	pH	Specific Conductance	Arsenic	Bifenthrin	Chlorpyrifos (Lorsban)	*E. coli*	Nitrite as Nitrogen	Total Dissolved Solids	Water flea toxicity	Fathead minnow toxicity	Algae toxicity	Sediment toxicity
	15 color units	7 mg/L	6.5 - 8.5 pH units	700 µmhos/cm	10.0 µg/L	0.0004 µg/L	0.015 µg/L	235 MPN/ 100mL	1.0 mg/L	450 mg/L	Based on survival	Based on survival	Based on growth	Based on survival
15-Feb-05				2561						1600				
22-Mar-05		6.50		2568				1600		1600				
11-May-05				3168				500		1600				
15-Jun-05				1705				300		1300				
13-Jul-05		3.20		1723				1600		1100				toxic
17-Aug-05				1779			0.029	1600		990				
21-Sep-05		5.22		791			0.018	500						toxic
1-Mar-06				2419				900		1600				
16-Mar-06			8.77	2728				300		1600	toxic			
24-Mar-06				2782										
2-May-06				2724										toxic
18-May-06				2958				550		1700				
15-Jun-06				2660				1300		1700				
13-Jul-06		5.45	8.85	1560				790		720		toxic		
20-Jul-06		6.41		1950								toxic		
10-Aug-06				2302		0.037		820	1.1	1800				
14-Sep-06		6.01		1276				>2400		760				
11-Feb-07	20		6.12	2659				>2400		1600				
01-Mar-07	56		8.57	2592				920		1500				
07-Mar-07				4798										
17-Apr-07	54			2127						1700				
15-May-07	56	5.59		2473				920		1500			toxic	
23-May-07				2390										
19-Jun-07	80		8.54	2304	12.0					1500				
17-Jul-07	90	4.30		1067						730				
14-Aug-07	44			1126				260		700				
16-Aug-07				2562										toxic
28-Aug-07		3.64		1015			0.094							
11-Sep-07	160	3.93		1097				>2400		540	toxic			
18-Sep-07				2262										
25-Sep-07				2489										

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Silva Drain at Meadow Drive



Silva Drain at Meadow Drive						
Date Sampled	**Color**	**Oxygen, Dissolved**	**Chlorpyrifos (Lorsban)**	***E. coli***	**Water flea toxicity**	**Sediment toxicity**
	15 color units	**7 mg/L**	**0.015 µg/L**	**235 MPN/ 100mL**	**Based on survival**	**Based on survival**
18-May-06				1300		
13-Jul-06		5.75	0.015	690		
9-Aug-06			0.140	460	toxic	toxic
13-Sep-06		5.99		320		
12-Feb-07	65					
28-Feb-07	70					
17-Apr-07	40			420		
15-May-07	65			1400		
19-Jun-07	75	4.20		1000		
17-Jul-07	55	4.71	0.031	520		
31-Jul-07		6.10				
14-Aug-07	85			410		
16-Aug-07		6.43				
28-Aug-07			0.055			
11-Sep-07	140	6.12				

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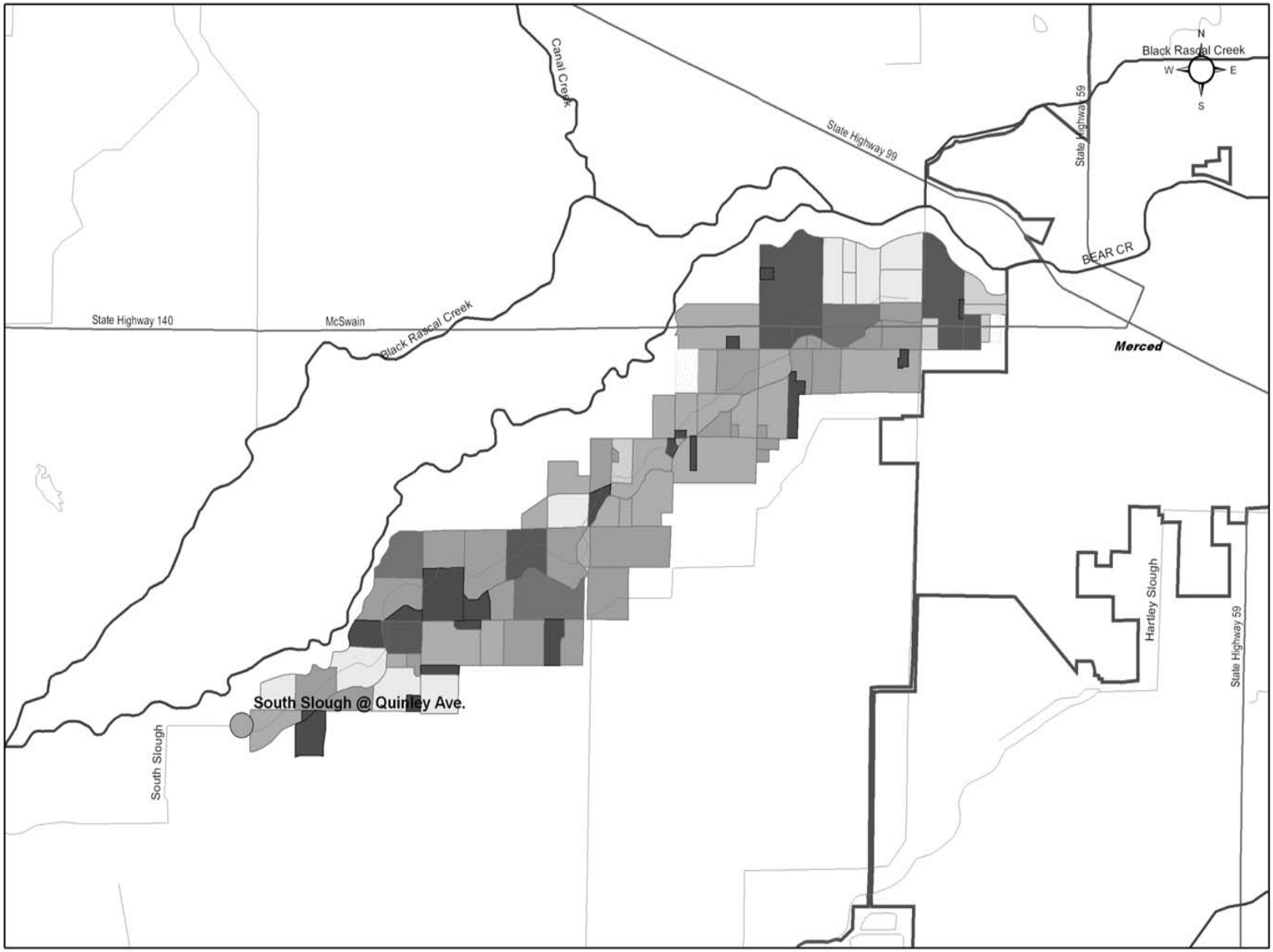
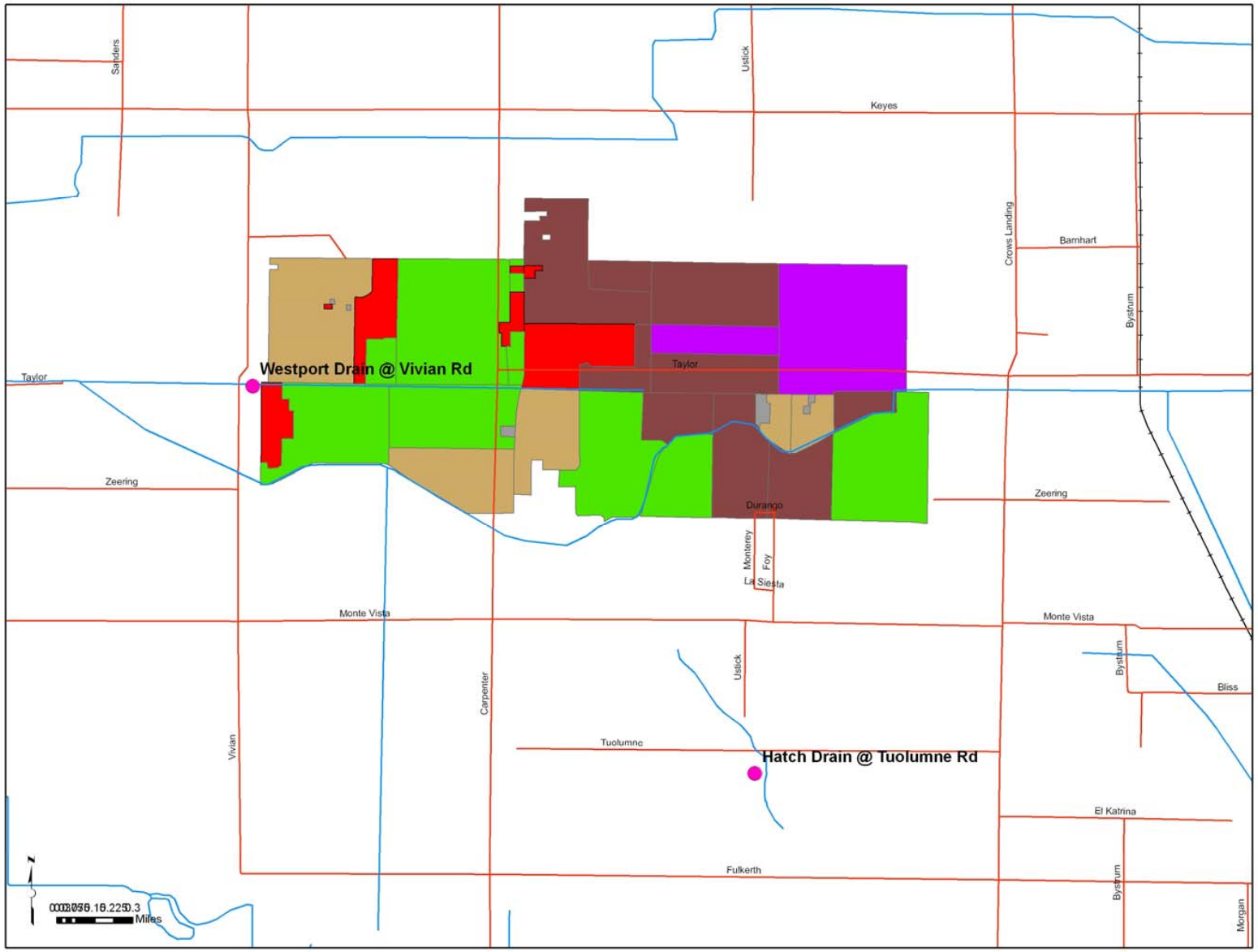
South Slough at Quinley Avenue



South Slough at Quinley Avenue				
Date Sampled	**Color**	**Oxygen, Dissolved**	**pH**	***E. coli***
	15 color units	**7 mg/L**	**6.5 – 8.5 pH units**	**235 MPN/ 100mL**
11-Jul-06				1200
9-Aug-06				580
29-May-07	60	2.51		
26-Jun-07	30			
24-Jul-07	35	6.39		
21-Aug-07	25		9.29	
23-Aug-07		5.30	8.87	

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org

Westport Drain at Vivian Road



Westport Drain at Vivian Road							
Date Sampled	**Color**	**Specific Conductance**	***E. coli***	**Nitrate as N**	**Total Dissolved Solids**	**Chlorpyrifos**	**Algal toxicity**
	15 color units	**700 µmhos/ cm**	**235 MPN/ 100mL**	**10 mg/L**	**450 mg/L**	**0.015 µg/L**	**Based on growth**
15-May-07		1054			660		toxic
23-May-07		1081					
19-Jun-07	25	991			660		
17-Jul-07	17	1025	330	68	680	0.018	
14-Aug-07	30	1129			760		
16-Aug-07		1147					
11-Sep-07	17	1106	330		740		

*Exceedance triggers or objectives are indicated below the column headers. Triggers and objectives for all constituents sampled can be found on the ESJWQC website; www.esjcoalition.org