East San Joaquin Water Quality Coalition

Semi-Annual Monitoring Report

June 30, 2008



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Table of Contents

LIST OF TABLES III

LIST OF FIGURES V

TABLE OF APPENDICES V

LIST OF ACRONYMS VI

LIST OF UNITS VIII

LIST OF TERMS IX

EXECUTIVE SUMMARY 1

INTRODUCTION 4

DESCRIPTION OF WATERSHED 5

- LAND USE 7
- CLIMATE 17
- SOILS 17
- HYDROLOGY 17
- VALUABLE AQUATIC RESOURCES 18
- ESJWQC SUBWATERSHEDS AND WATER BODIES 21
- WATERSHED DRAINAGE MAPS 24

MONITORING OBJECTIVES 29

- HISTORY OF COALITION MONITORING 29
- STORM SEASON MONITORING 2008 30
- PESTICIDES AND TOXICITY 33
- NUTRIENTS AND PHYSICAL PARAMETERS 33
- FIELD PARAMETERS 34
- E. COLI 34
- METALS 35

SAMPLING SITE DESCRIPTIONS 37

- SITE SUBWATERSHED DESCRIPTIONS 38
- MONITORING AND ANALYSIS 41

LOCATION MAPS OF SAMPLE SITES AND LAND USE 44

MONITORING RESULTS 52

- SAMPLE DETAILS 52

SAMPLING AND ANALYTICAL METHODS USED 58

COPY OF CHAIN OF CUSTODY FORMS 63

LAB AND FIELD QC RESULTS 64

PRECISION AND ACCURACY 65

- CHEMISTRY 66
- TOXICITY 70

Administrative Record
Page 12215

PESTICIDE USE INFORMATION 92
DATA INTERPRETATION 93
INTERPRETATION OF RESULTS 109
Toxicity 109
Pesticides 119
Metals 123
Nutrients (Ammonia, Nitrate) 128
Physical Parameters (Color and Dissolved Solids) 129
E. coli 130
Field Parameters (pH, DO, EC) 130
SUMMARY OF MANAGEMENT PRACTICES 132
ACTIONS TAKEN TO ADDRESS WATER QUALITY IMPACTS 136
Outreach and Education 136
Pest Control Advisors, Agricultural Commissioners, and Registrants 138
ACTIVITIES, EVENTS AND DELIVERABLES 143
EXCEEDANCE, COMMUNICATION, AND EVALUATION REPORTS 146
Exceedance and Communication Reports 146
Evaluation Reports 146
CONCLUSIONS AND RECOMMENDATIONS 148
Conclusions 148
Recommendations 151

Administrative Record
Page 12216

List of Tables

Table 1. Acreage of irrigated land in ESJWQC counties. 6
Table 2. Crops grown and monthly pesticide use in the ESJWQC region. 8
Table 3. Primary water bodies that drain directly into the major rivers of the ESJWQC region and the beneficial use for each of the major river reaches. 20
Table 4. Site subwatersheds within the ESJWQC area listed by size designation (small, intermediate, and large). 22
Table 5. ESJWQC irrigation 2008 sampling locations. 37
Table 6. ESJWQC storm 2008 sampling constituents for field parameters, metals, nutrients, total organic carbon (TOC), physical parameters, *E.coli*, water column toxicity (WCT) and sediment toxicity. 42
Table 7. ESJWQC storm 2008 sampling constituents for pesticides. 43
Table 8. Land use acreage of site subwatersheds monitored during the 2008 storm season. 45
Table 9. Land use acreage of site subwatersheds selected for monitoring during the 2008 storm season. 46
Table 10. Sample details for all 2008 storm season sorted by station name, sample date and monitoring event. 53
Table 11. Sampling procedures, containers, sample volumes, preservation and storage techniques, and holding times. 59
Table 12. Field parameters and instruments used to collect measurements. 60
Table 13. Analytical methods, target reporting limits (RL) and units. 61
Table 14. ESJWQC summary of field blank quality control sample evaluations. 72
Table 15. ESJWQC summary of field duplicate quality control sample evaluations. 74
Table 16. ESJWQC summary of method blank quality control sample evaluations. 76
Table 17. ESJWQC summary of lab control spike quality control sample evaluations. 78
Table 18. ESJWQC summary of lab control spike duplicate quality control sample evaluations. 80
Table 19. ESJWQC summary of matrix spike quality control sample evaluations. 82
Table 20. ESJWQC summary of matrix spike duplicate quality control sample evaluations. 84
Table 21. ESJWQC summary of lab duplicate quality control sample evaluations. 86
Table 22. ESJWQC summary of surrogate recovery quality control sample evaluations. 88
Table 23. ESJWQC summary of holding time evaluations for environmental, field blank, field duplicate and matrix spike samples collected during the storm season of 2008; sorted by method and analyte. 89
Table 24. ESJWQC summary of toxicity retest evaluations due to failed toxicity criteria for samples collected during the storm season of 2008; sorted by method and species. 91
Table 25. ESJWQC summary of toxicity field duplicate sample evaluations collected during the storm season of 2008; sorted by method and species. 91
Table 26. Pesticide use data collected for reported exceedences. 92
Table 27. Exceedance discrepancies that occurred during the 2008 storm season. 95

Administrative Record
Page 12217

Table 28. Water Quality Triggers Limits (WQTLs) for constituents and parameters measured during Coalition monitoring. 97
Table 29. Exceedances of field parameters; sorted by station name and sample date. 102
Table 30. Water column pesticides exceedances; sorted by station name and sample date. 103
Table 31. Water column inorganics, physical parameters, metals, nutrients and bacteria exceedances in water column; sorted by station name and sample date. 104
Table 32. Water column and sediment toxicity exceedances and results of TIE studies. 106
Table 33. Table of best management practices (BMPs), target constituents, mechanism and possible improvements to water quality. 133
Table 34. Calendar of events and deliverables for the ESJWQC relevant to the 2008 storm season. 143
Table 35. Table of ESJWQC actions and deliverables dealing with grower notification of exceedances and management practices relevant to the 2008 storm monitoring season. 145
Table 36. Schedule of Management Plans that have been submitted for each site subwatershed. 147

Administrative Record
Page 12218

List of Figures

Figure 1. Agriculture lands in the ESJWQC region. 15
Figure 2. Legend for agriculture lands in the ESJWQC region. 16
Figure 3. Site subwatershed size designation for all subwatersheds in the Coalition region 25
Figure 4. Site subwatershed size designation for Stanislaus County. 26
Figure 5. Site subwatershed size designation for Merced County. 27
Figure 6. Site subwatershed size designation for Madera County. 28
Figure 7. Local weather conditions during the first two months of 2008. 32
Figure 8. Coalition map showing all site subwatersheds identified for sampling in 2008 storm season. 47
Figure 9. Land use for sampling sites in Stanislaus County. 48
Figure 10. Land use for sampling sites in Merced County. 49
Figure 11. Land use for sampling sites in Madera County. 50
Figure 12. Legend for land use data. 51
Figure 13. News clipping submitted by ESJWQC on January 31, 2008 for the Merced River storm water quality exceedances. 139
Figure 14. Example letter sent to growers with direct drainage into select creeks. 142

Table of Appendices

Appendix I – Monitoring Results
Appendix II – Chain of Custodies
Appendix III – Lab and Field QC Results
Appendix IV – Pesticide Use Reports
Appendix V – Exceedance and Communication Reports
Appendix VI – Toxicity Identification Evaluation Report

List of Acronyms

BMP	Best Management Practice
BOD	Biological Oxygen Demand
BU	Beneficial Use
CDPR	California Department of Pesticide Regulation
CEDEN	California Environmental Data Exchange Network
COC	Chain of Custody
CURES	Coalition for Urban and Rural Environmental Stewardship
CVRWQCB	Central Valley Regional Water Quality Control Board
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DF	Dilution factor
DFG	California (Department of Fish and Game)
DHS	(California) Department of Health Services
DI	Deionized
DO	Dissolved Oxygen
DQO	Data Quality Objective
DWR	(California) Department of Water Resources
E	Environmental sample
EC	Specific Conductance
EC_{50}	Effective Concentration of 50% of the measured endpoint
EPA	Environmental Protection Agency
ESJWQC	East San Joaquin County Water Quality Coalition
FB	Field Blank
FD	Field Duplicate
HDPE	High density polyethylene
ILRP	Irrigated Land and Regulatory Program
IPM	Integrated Pesticide Management
IRIS	Integrated Risk Information System
K_{oc}	Organic Carbon Partitioning Coefficient
LABQA	Laboratory Quality Assurance
LC_{50}	Lethal Concentration at 50% mortality
LCS	Laboratory Control Spike
MCL	Maximum Contaminant Level
MLJ-LLC	Michael L. Johnson, LLC
MPN	Most Probable Number
MRP	Monitoring and Reporting Program Order No. R5-2005-00833
MS	Matrix Spike
MUN	Municipal and Domestic Supply (beneficial use)
NA	Not Applicable

Administrative Record
Page 12220

ND	Not Detected
NiCd	Nickel-cadmium
NM	Normal Monitoring
NONAG	The sample was provided by a project other than the Coalition to the laboratory and was included in the QC report from the laboratory to meet their QC requirements.
OP	Organophosphate
PCA	Pesticide Control Advisor
pH	Power of Hydrogen
PR	Percent Recovery
PTFE	Polytetraflouroethylene (Teflon™)
PUR	Pesticide Use Report
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RfD	Reference Dose
RL	Reporting Limit
RPD	Relative Percent Difference
RS	Resample
SAMR	Semi-Annual Monitoring Report
SG	Statistically significantly different from control; Greater than 80% threshold
SL	Statistically significantly different from control; Less than 80% threshold
SOP	Standard operating procedure
SPE	Solid Phase Extraction
SWAMP	Surface Water Ambient Monitoring Program
TDS	Total Dissolved Solids
TIE	Toxicity Identification Evaluation
TKN	Total Kjeldahl Nitrogen
TOC	Total Organic Carbon
TRS	Township, Range, Section
UC	University of California
USEPA	United States Environmental Protection Agency
VOA	Volatile Organic Analyte
WER	Watershed Evaluation Report
WQG	Water Quality Guidelines
WQTL	Water Quality Trigger Limit

Administrative Record
Page 12221

List of Units

cfs	cubic feet per second
L	Liter
lbs	pounds
mg	milligram
NTU	Nephelometric Turbidity Units
sec	second
TUa	Toxic Unit (acute)
µg	microgram

Administrative Record
Page 12222

List of Terms

Agricultural Commissioner – County Agriculture Commissioner

ArcGIS – Geographic Information Systems mapping software

Central Valley or Valley – California Central Valley

Coalition – East San Joaquin Water Quality Coalition

Coalition/ESJWQC region – The region within the Central Valley that is monitored by the East San Joaquin Water Quality Coalition.

drainage –water that moves horizontally across the surface or vertically into the subsurface from land

landowners – one or more persons responsible for the management of the irrigated land

Regional Board – Central Valley Regional Water Quality Control Board

site subwatershed – Starting from the sampling site, all water bodies that drain, directly or indirectly, into the water body before the point where sampling occurs.

subwatershed – The topographic perimeter of the catchment area of a stream tributary. (EPA terms of environment: (http://www.epa.gov/OCEPAterms/sterms.html)

Waiver – Central Valley Regional Water Quality Control Board Coalition Group Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands, Order No. R5-2006-0077, amending Order No. R5-2006-0053.

water body –standing or flowing water of any size that may or may not move into a larger body of water, including lakes, reservoirs, ponds, rivers, streams, tributaries, creeks, sloughs, canals, laterals and drainage ditches.

watershed – The land area that drains into a stream; the watershed for a major river may encompass a number of smaller watersheds that ultimately combine at a common point. (EPA terms of environment: http://www.epa.gov/OCEPAterms/wterms.html)

Administrative Record
Page 12223

Executive Summary

The East San Joaquin Water Quality Coalition (ESJWQC) region includes the counties of Stanislaus, Merced, Madera, Tuolumne, and Mariposa and the portion of Calaveras County that drains into the Stanislaus River. Apart from the San Joaquin River which forms the south and east boundary of the Coalition, there are five major rivers in the watershed: the Fresno River, Chowchilla River, Merced River, Tuolumne River and Stanislaus River. In addition, the Eastside Bypass is considered a major water body. These east side tributaries of the San Joaquin River drain the Sierra Nevada range from east to west. Irrigated agriculture is the predominant land use in the Coalition area although the growing urban areas in the Central Valley are also a significant land use. Other non-irrigated land uses include dairies with some acreage in feedlots.

Water quality monitoring was conducted from two storm events in January and February 2008. Sediment was sampled during March 2008. Several sites were dry during both monitoring trips. The primary objective was to characterize discharge from agriculture during the storm season. Field data were recorded during each sampling event unless otherwise noted and ambient water samples were analyzed for pesticides, *E. coli*, metals, bacteria, inorganic and organic parameters, as well as toxicity to three test species: *Ceriodaphnia dubia, Pimephales promelas, and Selenastrum capricornutum*. During sediment sampling events field parameters were measured and toxicity samples were collected to test for *Hyalella azteca* toxicity. All water and sediment sample analyses are based on requirements specified in Table 1 of the ILRP Monitoring and Reporting Program (MRP). For samples that experienced toxicity, follow-up sampling occurred within 48 hours from the time that the laboratory reported the toxicity.

Samples collected during the 2008 storm season experienced 25 exceedances of pesticides including chlorpyrifos (9), diazinon (2), diuron (7), simazine (6), and methidathion (1). Water column toxicity was experienced in 21 samples. All sites showing toxicity were resampled to determine the persistence of the toxicity. Of the 21 samples that experienced toxicity, five were toxic to *Ceriodaphnia*, three to *Pimephales* and 13 to *Selenastrum*. Seven sediment samples were found to be toxic to *Hyalella*.

As in the previous irrigation season, exceedances of Specific Conductance (EC) and Total Dissolved Solids (TDS), both measures of salts in the water, often co-occurred during the storm monitoring events when both parameters were measured. In total, there were six exceedances of TDS and seven exceedances of EC. There were 6 exceedances of Dissolved Oxygen (DO), four exceedances of pH, and 19 exceedances of the color water quality objective. There were 17 exceedances of the *E. coli* water quality objective. Four metals, cadmium (9), copper (12), lead (11), and nickel (3) were found at concentrations above water quality objectives in water samples. Among the four metals, only copper is currently used by agriculture within the Coalition region. The

increase in cadmium exceedances is due to a reduction of the concentration of the WQTL. Cadmium is a common detection in the region but the source of the cadmium is unknown. Peat soils (http://www.speclab.com/elements/cadmium.htm), industrial emissions (i.e. burning of fossil fuels) and agriculture (i.e. phosphate base fertilizers) potentially contribute cadmium to aquatic systems. Sources are distinguishable using stable isotopes but the cost of the analyses is substantial and the Coalition does not anticipate using this technique to identify the source(s).

One TIE was supposed to be performed from the second storm event for samples collected at Dry Creek @ Rd 18 but was not conducted due to an oversight at the lab. There was no resample at Dry Creek @ Rd 18 for the first storm event due to a miscommunication from the laboratory. A Communication Report for field exceedances from the sediment sampling event was not provided to the Regional Board. Eight nitrate samples were analyzed out of hold time due to an instrument malfunction at the laboratory. One sample was analyzed for color out of hold time due to laboratory error.

In an effort to understand the source(s) of discharges to Coalition water bodies, the Coalition entered into an agreement with the Stanislaus County Agricultural Commissioner to walk the creeks and identify points where discharges enter from pipes, culverts, and ditches. Dry Creek @ Wellsford Road, Prairie Flower Drain @ Crows Landing Road, Highline Canal @ Hwy 99, and Duck Slough @ Gurr Road were all walked in November and December of 2007. All discharge points were located using a GPS unit, photographed, and plotted using GIS. All discharge points were identified by parcel and owner and all received a communication from the Coalition informing them that the discharge may be illegal and requesting their attendance at a meeting on June 18, 2008. Although outside of the time period for this report, the June meeting is summarized because the next monitoring report will not be delivered to the Regional Board until March 2009. Coalition representatives presented results of the storm season monitoring and provided management practices that could eliminate exceedances. Further creek walks are planned for Coalition site subwatersheds in Merced and Madera counties.

Over the 2008 storm season, the Coalition was able to meet its monitoring program objectives by determining the concentration and load of waste in discharges to surface waters, evaluating compliance with existing narrative and numeric water quality triggers to determine if implementation of additional management practices is necessary to improve and/or protect water quality and assessing the impact of storm water discharges from irrigated agriculture to surface water. The Coalition is currently developing a strategy for determining the degree of implementation of management practices to reduce discharge of specific wastes that impact water quality in receiving waters of the Coalition region, and developing strategies to reduce discharges of wastes that impact water quality.

The Coalition is creating a strategy to document and evaluate current management practices within the Coalition area and will initially focus on priority subwatersheds: Dry

Creek @ Wellsford Rd, Highline Canal @ Highway 99, Prairie Flower Drain @ Crows Landing Road, and Duck Slough @ Gurr Road. It is the goal of the Coalition to link past water quality exceedances within these subwatersheds with crop types and inform growers of management practices that can be implemented for the specific crops thought responsible for the exceedance. Although the Coalition conducted BMP surveys in 2007, the Coalition plans to supplement that information with more detailed information obtained from individual grower contacts starting with priority subwatersheds.

In response to repeated exceedances in watersheds in the Coalition region, the Coalition entered into a contract with the Stanislaus County Agricultural Commissioner to conduct a series of "creek walks." These walks involved walking upstream from the Coalition sample point, locating all pipes or conveyances that could deliver discharge, recording the location with a GPS instrument, and photographing the pipes for documentation. Pipes were located that could convey discharge from irrigated agriculture as well as nonagricultural discharges including local residential dwellings. Plotted in a GIS, the discharge points were matched to individual parcels and the owners were identified and contacted. A meeting was held on June 18 in Modesto to discuss the exceedances in the watersheds and provide additional information on management practices. Regional Board staff were present to discuss enforcement activities. Several growers had already plugged their pipes from the field end, and other growers, e.g., Gallo Farms, were in the process of removing pipes. These activities should result in improvements in water quality in both the irrigation season as well as the storm season.

Outreach and education activities continue to be a central component of the Coalition monitoring program. The Coalition provides information and notification of exceedances in person during grower meetings, through the Coalition website, and by mail. The Coalition website (www.esjcoalition.org) includes a general description of the Coalition's mission, member information, recommended best management practices, a schedule of Coalition meetings and presentations, Coalition news and newsletters, maps of sample sites and subwatersheds, and links to other sources of relevant information. A meeting was held specifically for the exceedance of chlorpyrifos in the Merced River @ Santa Fe on February 29, 2008. Discussions with the grower will result in a change of management practices, most probably, a change in product or no dormant spray on the almonds. Meetings to review storm season exceedances and present management practices that can be effective during storm season will be offered just prior to the 2009 storm season. At that point, growers will be focused on applications during the winter and will be in a position to apply the management practices presented by Coalition representatives. As it moves into the next storm season, the Coalition recommends examining PUR reports from previous years to identify parcels that have been associated with repeated exceedances of pesticides, associating exceedances of pesticides with crops known to use the products to further refine the search for sources, if applicable, following the Management Plan monitoring plan by adding upstream sites to identify potential sources, and focusing outreach on small groups of growers identified as potential sources.

Introduction

This document is being submitted by the East San Joaquin Water Quality Coalition to the Central Valley Regional Water Quality Control Board (CVRWQCB or Regional Board) as required by the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands Resolution No. R5-2003-0105 (Order), Monitoring and Reporting Program Order No. R5-2005-0833, amended by Monitoring and Reporting Program Order No. R5-2006-0053 and Monitoring and Reporting Program Order No. R5-2006-0077 (hereafter referred to as the Irrigated Lands Regulatory Program or ILRP). The document herein reports on the Coalition monitoring program and covers activities associated with the 2008 storm season monitoring, reporting, outreach and education.

Data that are too substantial to include in the body of this report are located in separate appendices. Where appropriate, Semi-Annual Monitoring Report (SAMR) sections refer readers to the appendices relevant to that section.

Description of Watershed

The East San Joaquin Water Quality Coalition (ESJWQC) area includes Stanislaus, Merced, Madera, Tuolumne, and Mariposa Counties and the portion of Calaveras County that drains into the Stanislaus River (Table 1). The region that drains into the Coalition area is bordered by the crest of the Sierra Nevada on the east and the San Joaquin River on the west, the Stanislaus River on the north to the San Joaquin River on the south. The southern portion of the Coalition area has been expanded to now include the area that was formerly within the Root Creek Coalition area. Additionally, there are landholdings in the vicinity of the Lone Willow Slough watershed (west of the Eastside Bypass) that have joined the Westside Coalition.

The only surface water export from the Coalition area is northward via the San Joaquin River. This river drains watersheds on the east and west side of the California Central Valley (Valley), though only east side watersheds are relevant with respect to the Coalition area. San Joaquin River water is eventually either exported to the San Francisco Bay through the Delta, or conveyed southward via the State Water Project and the Delta Mendota Canal. The Coalition area also includes within its boundaries portions of all six irrigation districts: Oakdale Irrigation District, Merced Irrigation District, Turlock Irrigation District, Modesto Irrigation District, Chowchilla Irrigation District and Madera Irrigation District. Water bodies may have both irrigation district and Coalition involvement only when they convey both irrigation supply and agriculture return water. Irrigation districts are covered by individual waivers.

Apart from the San Joaquin River, there are five major rivers in the watershed: the Fresno River, Chowchilla River, Merced River, Tuolumne River and Stanislaus River. In addition, the Eastside Bypass is considered a major water body. These east side tributaries of the San Joaquin River drain the Sierra Nevada range from east to west. Typically, only the Stanislaus, Merced, and Tuolumne Rivers maintain flows during the summer months. Flow in the Chowchilla and Fresno Rivers are intermittent to nonexistent as the irrigation season progresses into the fall and remain dry unless major storm events produce sufficient precipitation in the immediate vicinity of the rivers. Intermediate sized water bodies in the Coalition area (e.g. Dry Creek, Duck Slough, and Highline Canal) originate either in the Sierra Nevada foothills or the Valley itself and are tributaries to the major rivers. The remaining water bodies are small in size (e.g. Silva Drain, Mustang Creek) and are primarily agricultural canals and ditches that convey water to one of the larger rivers or intermediate-sized creeks/sloughs.

Although exact acreage is difficult to estimate due to rapidly changing land use, the Coalition area contains 1,186,889 acres that are considered irrigated agriculture (Table 1). For Stanislaus, Merced, Mariposa, Tuolumne, and Madera Counties, the Coalition used the Department of Water Resources (DWR) land use estimates for irrigated

agriculture to determine total acreage. DWR does not provide land use data for Calaveras County. Instead, the Coalition used data from the County Agricultural Commissioner's office.

Table 1. Acreage of irrigated land in ESJWQC counties.

Acreage shown for Stanislaus, Merced, Madera, Tuolumne, Calaveras and Mariposa Counties. Data from 2001 California Department of Water Resources (http://www.landwateruse.water.ca.gov/annualdata/landuse/2001/landuselevels.cfm)

County	Irrigated Land Area (acres)
Calaveras	976
Madera	295,000
Mariposa	297
Merced	510,500
Stanislaus	378,700
Tuolumne	1,416
Total	***1,186,889***

Note that the estimates of irrigated acres may differ from previous estimates. The Coalition anticipates that as urban development increases over the next several years, the estimates will continue to change.

Land Use

Irrigated agriculture is the predominant land use in the Coalition area although growth of the urban areas in the San Joaquin Valley has been a significant factor impacting water quality. Non-irrigated land uses include urban and dairy with some acreage in feedlots and impoundments.

A variety of crops are grown and are often found in regions specific to microclimate, soil type, and local farming history. A more detailed discussion of crop type occurs in this report within the Sampling Sites Description section. Over 50 types of commercial crops are produced within the Coalition area (Table 2). The most common crops by acres are almonds, tomatoes, hay, sweet potatoes, cotton, silage, beans, wheat, peaches, melons, and grapes. In general agriculture varies geographically as one travels from the north to south and from east to west. In the eastern foothills, deciduous orchards and grapes are the dominant crops, though there are also considerable amounts of irrigated pastures and dairy farms. Crop type is more diverse in the northern Coalition area and includes row crops (e.g. tomatoes, sweet potatoes, melons, and leafy green vegetables), alfalfa hay, and orchards. In the relatively drier southern area dominate crops include cotton, vineyards, and orchards (almonds and pistachios).

A map of land use in the Coalition region is provided in Figure 1, and the legend for the map is provided in Figure 2. Information was obtained from the California Department of Pesticide Regulation database which is current through 2004 (http://calpip.cdpr.ca.gov/cfdocs/calpip/prod/main.cfm). The map shown in Figure 1 is provided as a jpeg file; however, due to the size of the Coalition area, the map does not support a reasonable level of detail in this document. ArcGIS coverage has previously been provided, and can be referred to for more detail on coverage.

Table 2. Crops grown and monthly pesticide use in the ESJWQC region.

Crop information was developed from Pesticide Use Reports from the 2004 CDPR PUR database. An X in the month column specifying that there were pesticide use permits filed in those months indicating that applications of chemicals to those crops occurred.

COUNTY NAME	CROP	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
CALAVERAS													
	APPLE			x			x						
	BLUEBERRY		x		x						x	x	
	CHERRY			x	x		x		x			x	
	GRAPES, WINE	x	x	x	x	x	x	x	x			x	x
	NECTARINE		x										
	N-OUTDR CONTAINER/FLD GRWN PLANTS		x	x	x	x	x	x		x			
	OATS, GENERAL	x	x	x									
	OLIVE (ALL OR UNSPEC)	x		x			x	x	x	x			x
	PASTURES (ALL OR UNSPEC)		x	x	x	x							
	PEACH		x										
	PISTACHIO (PISTACHE NUT)			x	x	x		x	x				
	VEGETABLES (ALL OR UNSPEC)			x									
	WALNUT (ENGLISH WALNUT, PERSIAN WALNUT)		x	x	x	x	x	x	x	x			
MADERA													
	ALFALFA (FORAGE - FODDER) (ALFALFA HAY)	x	x	x	x	x	x	x	x	x	x	x	x
	ALMOND	x	x	x	x	x	x	x	x	x	x	x	x
	APPLE		x	x	x	x	x	x	x				
	APRICOT	x	x	x	x	x							x
	BARLEY (FORAGE - FODDER)	x	x	x									
	BARLEY, GENERAL	x	x	x									
	BEANS (ALL OR UNSPEC)						x	x	x				
	BEANS, DRIED-TYPE	x					x	x	x				
	BLUEBERRY											x	
	BOYSENBERRY (BOYSENS)												x
	CARROTS, GENERAL		x	x		x	x	x					
	CHERRY	x	x	x	x	x	x	x			x	x	x
	CHRISTMAS TREE PLANTATIONS					x							
	CITRUS FRUITS (ALL OR UNSPEC)		x			x		x		x		x	
	CORN (FORAGE - FODDER)			x	x	x	x	x	x	x		x	
	CORN, HUMAN CONSUMPTION		x	x		x	x	x					
	COTTON, GENERAL	x	x	x	x	x	x	x	x	x	x	x	x
	FIG	x	x	x	x	x	x	x	x	x		x	x
	GARLIC	x		x	x	x							
	GRAPES	x	x	x	x	x	x	x	x	x	x	x	x
	GRAPES, WINE	x	x	x	x	x	x	x	x	x	x	x	x
	KIWI FRUIT	x	x	x		x		x	x	x			

COUNTY NAME	CROP	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
	MELONS			x									
	NECTARINE	x	x	x	x	x	x	x	x	x	x	x	x
	N-GRNHS GRWN CUT FLWRS OR GREENS	x	x	x	x	x	x	x	x	x	x	x	x
	N-GRNHS GRWN PLANTS IN CONTAINERS						x				x		
	N-OUTDR CONTAINER/FLD GRWN PLANTS	x	x	x		x	x	x	x	x	x	x	x
	N-OUTDR GRWN TRNSPLNT/PRPGTV MTRL		x	x	x	x	x	x	x	x			
	OATS (FORAGE - FODDER)	x	x	x									x
	OATS, GENERAL	x	x	x									x
	OLIVE (ALL OR UNSPEC)	x	x	x		x	x	x	x	x	x	x	x
	ONION (DRY, SPANISH, WHITE, YELLOW, RED, ETC.)			x	x						x	x	
	ORANGE (ALL OR UNSPEC)	x	x	x	x	x	x	x	x	x	x	x	x
	PASTURES (ALL OR UNSPEC)		x	x								x	x
	PEACH	x	x	x	x	x	x	x	x	x	x	x	x
	PEAR	x		x				x				x	
	PECAN			x		x		x				x	
	PERSIMMON			x		x		x	x	x			
	PISTACHIO (PISTACHE NUT)	x	x	x	x	x	x	x	x	x	x	x	x
	PLUM (INCLUDES WILD PLUMS FOR HUMAN CONSUMPTION)	x	x	x	x	x	x	x	x	x	x	x	x
	POMEGRANATE (MISCELLANEOUS FRUIT)				x	x		x	x	x			x
	PRUNE	x	x	x	x	x	x	x		x	x		x
	SOIL APPLICATION, PREPLANT-OUTDOOR (SEEDBEDS, ETC.)	x	x	x	x	x	x		x	x	x	x	x
	STONE FRUITS (ALL OR UNSPEC)		x							x			
	STRAWBERRY (ALL OR UNSPEC)	x			x							x	
	SUGARBEET, GENERAL	x		x	x	x	x	x	x	x			x
	TANGELO		x	x	x	x	x	x	x	x	x	x	x
	TANGERINE (MANDARIN, SATSUMA, MURCOTT, ETC.)			x	x	x		x		x	x	x	
	TOMATO			x				x	x	x	x		
	TOMATOES, FOR PROCESSING/CANNING	x		x	x	x	x	x	x		x	x	
	UNCULTIVATED AGRICULTURAL AREAS (ALL OR UNSPECIFIED)	x	x	x	x	x	x	x	x		x	x	x
	WALNUT (ENGLISH WALNUT, PERSIAN WALNUT)	x	x	x	x	x	x	x	x	x		x	
	WATERMELONS					x							
	WHEAT (FORAGE - FODDER)	x	x	x			x	x	x	x			x
	WHEAT, GENERAL	x	x	x	x							x	x
MARIPOSA													
	APPLE			x	x	x							
	GRAPES, WINE		x	x	x	x	x	x	x				
	N-OUTDR CONTAINER/FLD GRWN PLANTS	x	x	x	x	x	x	x	x	x	x	x	x
MERCED													

COUNTY NAME	CROP	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
	ALFALFA (FORAGE - FODDER) (ALFALFA HAY)	x	x	x	x	x	x	x	x	x	x	x	x
	ALMOND	x	x	x	x	x	x	x	x	x	x	x	x
	APPLE	x						x					x
	APRICOT	x	x	x	x	x	x	x	x		x		
	ASPARAGUS (SPEARS, FERNS, ETC.)				x			x	x		x		
	BARLEY (FORAGE - FODDER)												x
	BARLEY, GENERAL	x	x	x									x
	BEANS, DRIED-TYPE		x		x	x	x	x	x	x	x		
	BEANS, SUCCULENT (OTHER THAN LIMA)				x	x	x	x	x	x	x		
	BLUEBERRY		x	x	x		x	x			x	x	
	BOYSENBERRY (BOYSENS)				x		x						
	BROCCOLI										x	x	
	CANTALOUPE			x		x	x	x	x	x		x	x
	CAULIFLOWER							x	x	x			
	CHERRY	x	x	x	x	x		x				x	x
	CHICORY (ALL OR UNSPEC)				x				x	x	x		
	CHINESE CABBAGE (NAPPA, WON BOK, CELERY CABBAGE)				x						x		
	CHINESE GREENS, CHINESE LEAFY VEGETABLES					x							
	CHRISTMAS TREE PLANTATIONS	x	x					x					
	CITRUS FRUITS (ALL OR UNSPEC)	x				x							x
	COLE CROPS (ALL OR UNSPEC)												x
	CORN (FORAGE - FODDER)	x	x	x	x	x	x	x	x	x	x	x	x
	CORN, HUMAN CONSUMPTION	x	x	x	x	x	x	x	x	x			x
	COTTON, GENERAL	x	x	x	x	x	x	x	x	x	x	x	x
	CUCUMBER (PICKLING, CHINESE, ETC.)	x			x				x	x			
	FIG		x	x	x	x	x	x	x	x		x	x
	FORAGE - FODDER GRASSES (ALL OR UNSPEC) (HAY)	x	x	x									
	GRAPES		x	x	x	x	x	x					
	GRAPES, WINE	x	x	x	x	x	x	x	x	x	x	x	x
	LEAFY VEGETABLES (ALL OR UNSPEC)								x	x	x	x	
	LETTUCE, HEAD (ALL OR UNSPEC)				x								
	MELONS							x	x				
	MUSTARD, GENERAL									x			
	NECTARINE	x	x	x	x	x	x	x				x	
	N-GRNHS GRWN PLANTS IN CONTAINERS	x	x	x	x	x	x	x	x	x	x		
	N-OUTDR CONTAINER/FLD GRWN PLANTS	x	x	x	x	x	x	x	x	x	x	x	x
	N-OUTDR GRWN TRNSPLNT/PRPGTV MTRL	x	x	x	x	x	x	x	x		x	x	x
	OATS (FORAGE - FODDER)	x	x	x	x	x			x	x		x	x
	OATS, GENERAL	x	x	x								x	
	OLIVE (ALL OR UNSPEC)											x	

Administrative Record
Page 12233

COUNTY NAME	CROP	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
	ONION (DRY, SPANISH, WHITE, YELLOW, RED, ETC.)		x	x	x	x						x	x
	ORNAMENTAL TURF (ALL OR UNSPEC)	x	x	x	x		x	x	x	x		x	
	PASTURES (ALL OR UNSPEC)	x	x	x	x	x	x	x	x		x		
	PEACH	x	x	x	x	x	x	x	x	x	x	x	x
	PEAR	x			x		x	x					
	PEAS, GENERAL	x	x	x									
	PECAN					x	x	x		x			
	PEPPERS (CHILI TYPE) (FLAVORING AND SPICE CROP)			x	x	x		x	x	x	x	x	
	PEPPERS (FRUITING VEGETABLE), (BELL, CHILI, ETC.)	x		x	x	x	x	x	x	x	x		
	PISTACHIO (PISTACHE NUT)	x	x	x	x	x	x	x	x	x	x	x	x
	PLUM (INCLUDES WILD PLUMS FOR HUMAN CONSUMPTION)	x	x	x	x	x		x	x	x		x	x
	PRUNE	x	x	x		x	x	x	x	x			x
	PUMPKIN						x	x	x	x			
	RADISH					x		x					
	RICE (ALL OR UNSPEC)					x	x	x	x				
	RYE (ALL OR UNSPEC)		x										
	SAFFLOWER, GENERAL	x											
	SOIL APPLICATION, PREPLANT-OUTDOOR (SEEDBEDS, ETC.)	x	x	x								x	x
	SORGHUM (FORAGE - FODDER) (SORGO, ETC.)						x		x	x			
	SQUASH (ALL OR UNSPEC)							x	x				
	SQUASH (WINTER) (HUBBARD SQUASH, CALABAZA, ETC.)							x	x	x			
	STONE FRUITS (ALL OR UNSPEC)			x									
	STRAWBERRY (ALL OR UNSPEC)	x	x	x	x		x	x	x				x
	SUDANGRASS (FORAGE - FODDER) (SORGHUM SUDANESE)					x	x	x	x	x			
	SUGARBEET, GENERAL	x	x	x	x	x	x	x	x	x	x		
	SWEET POTATO	x	x	x	x	x	x	x	x	x		x	x
	TOMATILLO						x	x					
	TOMATO	x	x	x	x	x	x	x	x	x	x	x	x
	TOMATOES, FOR PROCESSING/CANNING	x	x	x	x	x	x	x	x	x	x	x	x
	UNCULTIVATED AGRICULTURAL AREAS (ALL OR UNSPEC)	x	x	x	x					x	x	x	x
	WALNUT (ENGLISH WALNUT, PERSIAN WALNUT)	x	x	x	x	x	x	x	x	x	x	x	x
	WATERMELONS			x	x	x	x	x	x		x	x	
	WHEAT (FORAGE - FODDER)	x	x	x							x	x	x
	WHEAT, GENERAL	x	x	x	x		x			x		x	x
STANISLAUS													
	ALFALFA (FORAGE - FODDER) (ALFALFA HAY)	x	x	x	x	x	x	x	x	x	x	x	x
	ALMOND	x	x	x	x	x	x	x	x	x	x	x	x
	APPLE	x	x	x	x	x	x	x	x	x	x	x	x

COUNTY NAME	CROP	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
	APRICOT	x	x	x	x	x	x	x	x	x	x	x	x
	ARRUGULA (ROQUETTE, ROCKET SALAD)							x					
	ASPARAGUS (SPEARS, FERNS, ETC.)						x		x				
	BARLEY (FORAGE - FODDER)		x										
	BARLEY, GENERAL										x		x
	BASIL (BUSH, GARDEN, SWEET)		x	x	x	x	x	x	x	x	x	x	
	BEANS, DRIED-TYPE	x	x	x	x	x	x	x	x	x	x	x	
	BEANS, SUCCULENT (OTHER THAN LIMA)			x	x	x	x	x	x	x			
	BEETS, GENERAL	x	x	x	x	x	x	x	x	x	x	x	x
	BOK CHOY (WONG BOK)	x	x	x	x	x	x	x	x	x	x	x	x
	BOYSENBERRY (BOYSENS)	x		x		x		x				x	
	BROCCOLI	x		x	x	x	x	x	x	x	x	x	x
	CABBAGE	x	x	x	x	x	x	x	x	x	x	x	x
	CANTALOUPE			x		x	x	x	x	x			
	CAULIFLOWER			x		x		x	x	x	x		
	CELERIAC (CELERY ROOT)	x	x					x	x	x		x	
	CELERY, GENERAL		x	x	x	x	x	x	x	x	x	x	x
	CHERRY	x	x	x	x	x	x	x	x	x	x	x	x
	CHESTNUT		x		x	x	x	x	x		x		x
	CHICORY (ALL OR UNSPEC)	x							x	x	x	x	
	CHINESE GREENS, CHINESE LEAFY VEGETABLES										x	x	
	CHINESE RADISH/DAIKON (LOBOK, JAPANESE RADISH)	x	x	x	x	x	x	x	x	x	x	x	x
	CILANTRO (CHINESE PARSLEY, CORIANDER LEAVES)	x	x	x	x	x	x	x	x	x	x	x	x
	CITRUS FRUITS (ALL OR UNSPEC)		x	x	x	x	x	x	x		x	x	
	COLLARDS	x	x	x	x	x	x	x	x	x	x	x	x
	CORN (FORAGE - FODDER)		x	x	x	x	x	x	x	x	x		x
	CORN, HUMAN CONSUMPTION						x	x				x	
	COUNTY AG. COMM. SALES											x	
	CUCUMBER (PICKLING, CHINESE, ETC.)			x	x	x	x	x	x				
	DANDELION (CHINESE DANDELION, GOW GAY)	x	x	x	x	x	x	x	x	x	x	x	x
	DILL	x	x	x	x	x	x	x	x	x			x
	ENDIVE (ESCAROLE)	x								x		x	
	FENNEL (ALL OR UNSPEC)		x	x	x	x	x	x	x	x			
	FIG										x		
	FLAVORING AND SPICE CROPS (ALL OR UNSPEC)				x		x		x		x		
	FORAGE - FODDER GRASSES (ALL OR UNSPEC) (HAY)	x		x									
	GRAPES	x		x	x	x	x	x	x		x	x	x
	GRAPES, WINE	x	x	x	x	x	x	x	x	x	x	x	x
	KALE	x	x	x	x	x	x	x	x	x	x	x	x
	KIWI FRUIT		x	x		x			x	x			

COUNTY NAME	CROP	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
	KOHLRABI	x	x	x	x	x	x	x	x	x	x	x	x
	LEEK			x	x	x	x	x	x	x	x	x	
	LETTUCE, LEAF (ALL OR UNSPEC)	x	x	x	x	x	x	x	x	x	x	x	x
	MELONS						x	x	x			x	
	MINT (ALL OR UNSPEC)	x		x	x	x	x	x	x	x	x	x	
	MUSTARD, GENERAL	x	x	x	x	x	x	x	x	x	x	x	x
	NECTARINE	x	x	x	x	x	x	x		x	x	x	x
	N-GRNHS GRWN PLANTS IN CONTAINERS	x	x	x	x	x	x	x	x	x	x	x	x
	N-GRNHS GRWN TRNSPLNT/PRPGTV MTRL	x	x	x	x	x	x	x	x	x			
	N-OUTDR CONTAINER/FLD GRWN PLANTS	x	x	x	x	x	x	x	x	x	x	x	x
	N-OUTDR GRWN CUT FLWRS OR GREENS												x
	N-OUTDR GRWN TRNSPLNT/PRPGTV MTRL	x	x	x	x	x	x	x	x	x	x	x	x
	OATS (FORAGE - FODDER)	x	x	x	x		x	x			x	x	x
	OATS, GENERAL		x	x									
	OLIVE (ALL OR UNSPEC)					x	x	x	x	x			
	ORNAMENTAL TURF (ALL OR UNSPEC)	x	x	x	x	x	x	x	x	x			
	PARSLEY (LEAFY VEGETABLE)	x	x	x	x	x	x	x	x	x	x	x	x
	PASTURES (ALL OR UNSPEC)	x	x	x	x	x	x	x	x	x	x		x
	PEACH	x	x	x	x	x	x	x	x	x	x	x	x
	PEAR		x					x			x	x	x
	PEAS, GENERAL	x	x	x									
	PECAN			x	x	x		x					x
	PEPPERS (FRUITING VEGETABLE), (BELL, CHILI, ETC.)	x		x	x	x							
	PERSIMMON		x	x		x		x			x		
	PISTACHIO (PISTACHE NUT)	x	x		x	x	x	x	x				x
	PLUM (INCLUDES WILD PLUMS FOR HUMAN CONSUMPTION)	x	x	x	x	x	x	x	x		x	x	x
	POMEGRANATE (MISCELLANEOUS FRUIT)							x			x		
	PRUNE	x	x									x	x
	PUMPKIN						x	x	x	x			
	QUINCE											x	
	RICE (ALL OR UNSPEC)			x	x	x	x	x					
	RYE (ALL OR UNSPEC)		x										
	RYEGRASS, PERENNIAL (FORAGE - FODDER)		x										
	SOIL APPLICATION, PREPLANT-OUTDOOR (SEEDBEDS, ETC.)		x										
	SORGHUM (FORAGE - FODDER) (SORGO, ETC.)								x				
	SPINACH	x	x	x	x	x	x	x	x	x	x	x	x
	STRAWBERRY (ALL OR UNSPEC)		x	x	x			x	x	x			x
	SUDANGRASS (FORAGE - FODDER) (SORGHUM SUDANESE)							x	x				

COUNTY NAME	CROP	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
	SUGARBEET, GENERAL			x	x	x	x		x	x			
	SWEET POTATO	x		x	x	x							x
	SWISS CHARD (SPINACH BEET)	x	x	x	x	x	x	x	x	x	x	x	x
	TOMATO				x	x	x	x	x	x	x	x	
	TOMATOES, FOR PROCESSING/CANNING	x	x	x	x	x	x	x	x	x	x		x
	TURNIP, GENERAL	x	x	x	x	x	x	x	x	x	x	x	x
	WALNUT (ENGLISH WALNUT, PERSIAN WALNUT)	x	x	x	x	x	x	x	x	x	x	x	x
	WATERMELONS				x	x	x	x	x	x			
	WHEAT (FORAGE - FODDER)	x	x	x	x							x	x
	WHEAT, GENERAL	x	x	x	x								
TUOLUMNE													
	APPLE		x	x	x	x	x	x					
	BLACKBERRY				x								
	BOYSENBERRY (BOYSENS)		x	x	x								
	CHERRY		x	x	x								
	GRAPES						x						
	GRAPES, WINE					x							
	NECTARINE				x								
	N-OUTDR CONTAINER/FLD GRWN PLANTS	x	x	x	x	x	x						
	N-OUTDR GRWN CUT FLWRS OR GREENS			x			x						
	PASTURES (ALL OR UNSPEC)			x	x	x	x	x					
	PEACH		x	x		x	x						

Administrative Record
Page 12237

Figure 1. Agriculture lands in the ESJWQC region.

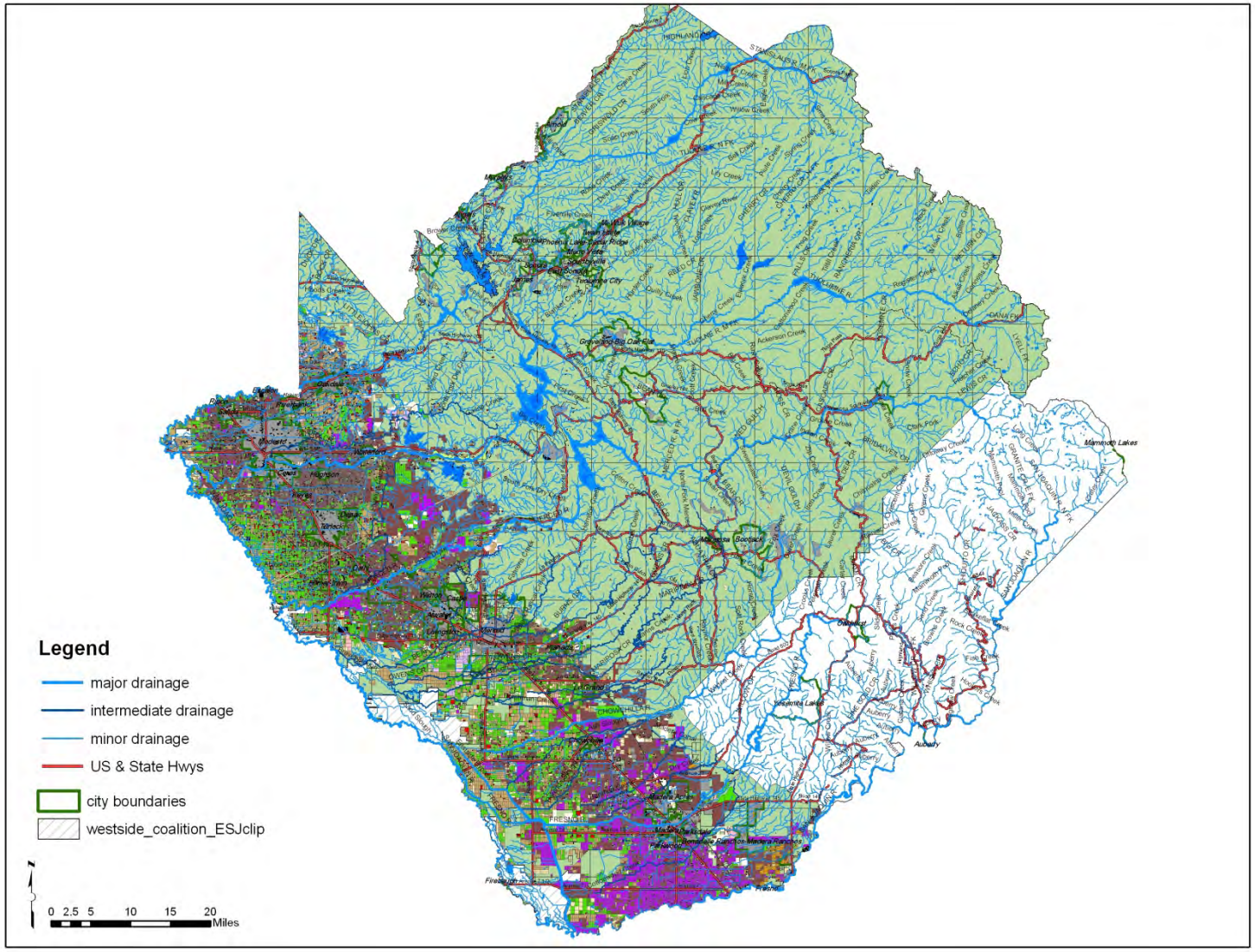


Figure 2. Legend for agriculture lands in the ESJWQC region.



Climate

Summer temperatures are usually hot in the San Joaquin Valley, ranging from the mid 80's to mid 90's (^{o}F) for average daily high temperatures and the mid to upper 50's for average summer daily low temperatures. In the summer the northern area is subject to pulses of cool coastal air that can provide relief from summertime highs and allow for the farming of crops requiring cooler temperatures. The upland areas are slightly cooler at night but generally remain hot throughout the summer. In the winter, temperatures are usually moderate with average daily high temperatures in the mid to upper 50's and average daily low temperatures in the low 40's. Freezing is common; this generally prevents farming of perennial crops susceptible to frost. Annual precipitation on the San Joaquin Valley floor in the Coalition area is variable, averaging 13-15 inches per year (City of Merced). Rainfall occurs predominantly during the winter and is heterogeneously distributed throughout this period (typical for a Mediterranean climate). Winter seasons are characterized by several small storms with one or two major events (increased rain due to several larger storms) providing the bulk of the precipitation. December, January and February are historically the months with greatest precipitation. There appears to be no discernible pattern as to when during the winter these large storms occur.

Soils

Soils maps reveal a complicated mosaic of soil types in the Coalition area. Generally, the Coalition area has sandy, well-drained soils. Soil type interacts with other factors such as slope, soil saturation, rainfall/irrigation water amount, and drainage patterns to control runoff. Soils maps and ArcGIS soils coverages have been delivered to the Central Valley Regional Water Quality Control Board (CVRWQCB) previously and will not be provided as part of this document.

Hydrology

As indicated above, there are several main rivers that cross the Coalition area from east to west. These rivers have complex hydrologic systems due to both seasonal influence of precipitation, and management systems for water use (reservoirs, basin transfers, hydropower, municipal and irrigation supply, and anadromous fisheries). In general, flows are greatest during the winter and spring due to winter precipitation and subsequent spring snowmelt. Summertime flows are now greater than flows were historically due to reservoir releases during this period. The numerous small creeks that have their headwaters in the foothills and western portion of the Sierra Nevada mountain range are primarily ephemeral with no flow from early summer through the first rains of the winter. Later discussion of hydrology will be specific to each subwatershed.

There is an increased propensity for runoff with increased slope, soil water saturation, and volume of water, conditions that arise primarily due to large amounts of rainfall and are more likely in the relatively greater sloped valley margins. During the winter, runoff is drained through the myriad of creeks, rivers, and drains for flood management and may be subject to efforts of larger geographic flood control programs. Runoff can also occur during the irrigation season if water entering the field is greater than the amount that can infiltrate the soil. Recent sampling efforts indicate that many of the drainages in the southern portion of the Coalition region do not always carry runoff even during substantial rainfall events. Immediately after a storm in March of 2005, Ash Slough did not maintain sufficient flows to be sampled even when adjacent orchards were flooded. Also, the watersheds throughout the Coalition region tend to be "flashy" in that water from runoff events moves through the systems very quickly leaving very little flow shortly after the storm ends. For example, there was no flow remaining when crews visited the site for persistence sampling in the Lone Willow Slough watershed approximately a week after a winter 2005 storm event.

A complex system for water transfer, use, and re-use is utilized for irrigation purposes. Without precise methods of applying water for irrigation purposes some water may return to the source after being used on the field. In some cases, the volume of water applied to a field for irrigation may represent not only what is needed by the vegetative crop, but also a greater quantity used either to push the water over the field, or as a method of reducing the negative effects of evapotranspiration and consequent accumulation of salts. The system is designed to allow downstream irrigators to reuse water that was previously used upstream.

Valuable Aquatic Resources

Aquatic resources for water bodies within the Coalition area have been defined in part as those assigned a beneficial use (BU) by the CVRWQCB. Using the tributary rule, BUs were applied to upstream tributaries based on the currently assigned BU (Table 3) in downstream water bodies. Important aquatic resources exist in the Coalition area, including cold water and warm water stream aquatic habitat, wetlands and fisheries resources.

Wetlands are an important aquatic resource within the Coalition area. These habitats are associated with riparian areas along many of the water bodies in the region (particularly in the Sandy Mush Country area of southern Merced County) and savannah step region of the lower Sierra Foothills. Because vernal pools are isolated mini-watersheds they are found heterogeneously distributed across the Coalition in upland areas. They receive winter rains and require an aquatard to maintain their characteristic pools into the spring. These wetlands maintain a unique flora and fauna and are protected by the Clean Water Act. Generally, vernal pools and irrigated agriculture are not found together, although there are exceptions.

Several fisheries are considered important in the Coalition area. Steelhead trout (*Oncorhynchus mykiss*) were common in the region prior to the construction of dams on

all of the major tributaries of the San Joaquin River. Once the dams were built, historic spawning grounds were eliminated and with them, most of the wild salmonids in the San Joaquin Valley. Currently, no permanent steelhead stocks exist in the drainages of the San Joaquin Valley despite occasional reports of fish in the Tuolumne and Merced Rivers. The California Department of Fish and Game considers the Tuolumne River to have suitable habitat to support a steelhead run if one could become established.

Chinook salmon (*Oncorhynchus tshawytscha*) are present in the San Joaquin system and are found in all major tributaries in the region. All of the major tributaries are considered to be impaired for salmonid spawning and/or migration habitat as is the main stem of the San Joaquin River (Table II-1 of the Sacramento/San Joaquin River Basin Plan).

Table 3. Primary water bodies that drain directly into the major rivers of the ESJWQC region and the beneficial use for each of the major river reaches.

A list of beneficial uses is listed below the table. Water bodies that were sampled during the 2008 storm season are bolded. For water bodies that may exist in multiple counties, the county is specified in parenthesis.

Water Body	Immediate Downstream Water Body	Beneficial Use of Immediate Downstream Water Body *
Root Creek @ Rd 35 **	San Joaquin River[1]	1-4, 7-15
Cottonwood Creek (Madera County)**	None[6]	-
Ash Slough**	San Joaquin River[2]	1-4, 7-9, 11-15
Cottonwood Creek (Stanislaus County)		
Bear Creek**		
Dry Creek (Madera County)**		
Duck Slough		
Mattos Drain		
Black Rascal Creek		
Berenda Slough		
Miles Creek		
Mariposa Creek		
Deane Drain		
Owens Creek		
Dutchman Creek		
Berenda Creek**		
Deadman Creek		
Livingston Drain		
Mustang Creek	San Joaquin River[3]	1-4, 7-9, 11-13, 15
August Rd. Drain[7]		
Highline Canal		
Hilmar Drain		
Cavill Drain		
Prairie Flower Drain		
Hatch Drain		
Western States Drain		
Westport Drain		
Dry Creek (Stanislaus County)	Tuolumne River[4]	1-3, 7-10, 12-15
Jones Drain	Merced River[5]	1, 3-15
Highline Canal		
Merced River		
Silva Drain		
South Slough		

[1] Friant Dam to Mendota Pool reach
[2] Sack Dam to Merced River reach (all waterbodies that drain to this reach enter via the East Side Bypass with the exception of Livingston Drain)
[3] Merced River to Delta reach
[4] New Don Pedro Reservoir to San Joaquin River reach
[5] McSwain Reservoir to San Joaquin River reach
[6] There is no natural course by which Cottonwood Creek flows to the San Joaquin River. Its course is diverted in any number of ways, generally through canals or to open areas for percolation, depending upon the current situation

[7] August Rd. Drain @ Crows Landing subwatershed has been removed from the sampling plan due to safety concerns for the sampling crews

** Surface water flow in these water bodies terminates in subterranean flow except for periods of increased runoff during large winter storms

* Beneficial Use code list:

1 - Municipal and Domestic Supply
2 - Agriculture Supply (irrigation)
3 - Agriculture Supply (stock watering)
4 - Industrial Process Supply
5 - Industrial Service Supply
6 - Hydropower Generation
7 - Water Contact Recreation
8 - Non-contact Water Recreation
9 - Warm Freshwater Habitat
10 - Cold Freshwater Habitat
11 - Migration of Aquatic Organisms (warm)
12 - Migration of Aquatic Organisms (cold)
13 - Spawning, Reproduction, and/or Early Development (warm)
14 - Spawning, Reproduction, and/or Early Development (cold)
15 - Wildlife Habitat

ESJWQC Subwatersheds and Water Bodies

There are approximately 215 water bodies in the Coalition area (Table 5a-5c, East San Joaquin Water Quality Coalition Watershed Evaluation Report, Third Revised Report) that are classified into four categories (large, intermediate, small, or lake/reservoir) based on water flow and water body size. The seven large water bodies within the Coalition region are the Chowchilla River, Eastside Bypass, Fresno River, Merced River, San Joaquin River, Tuolumne River and Stanislaus River. With the exception of the Merced River, none of the large rivers are sampled. The Merced River is sampled but relatively high in the watershed to allow the integration of the sampling results from smaller water bodies that drain into the river upstream. Though the amount of irrigated agriculture within these watersheds is similar or even less than some of the watersheds classified as medium sized, water flow in these relatively larger watersheds is primarily a function of source water originating upstream of irrigated agriculture. These rivers have relatively greater base water flow due to snowmelt and reservoir releases. There are 16 intermediate sized water bodies in the Coalition Region. These are primarily natural creeks and sloughs that drain a large portion of the Coalition area. The 164 smaller water bodies in the Coalition area are small-sized natural creeks, agriculture canals, and/or drains. Current, past or potential monitoring sites are provided in Table 4Table 4 below. The site subwatershed size (listed as irrigated acres) may have changed due to updated information on the boundary of each subwatershed.

Table 4 contains what have been designated as site subwatersheds. The “site subwatershed” is the watershed formed from the location of the sample site, not the location where the subwatershed has its confluence with a downstream water body. Consequently, site subwatersheds may be smaller than the subwatershed in which they are found. For example, Black Rascal Creek @ Yosemite Road is a small site subwatershed although Black Rascal Creek is classified as an intermediate sized water body. (See glossary of terms for full definition.) Some watersheds do not connect to

downstream water bodies except under exceptional conditions such as major flood events.

Table 4. Site subwatersheds within the ESJWQC area listed by size designation (small, intermediate, and large).

Site Subwatershed	Size Designation	Size (Irrigated Acres)
Ash Slough @ Avenue 21	Intermediate	27,704
Bear Creek @ Kibby Rd	Intermediate	6,715
Berenda Creek @ Road 19	Intermediate	25,006
Berenda Slough along Road 18 ½ [2]	Intermediate	19,834
Cottonwood Creek @ Road 20	Intermediate	40,699
Deadman Creek @ Gurr Road	Intermediate	52,091
Deadman Creek @ Highway 59	Intermediate	38,231
Dry Creek @ Road 18	Intermediate	23,299
Dry Creek @ Wellsford Road	Intermediate	23,339
Duck Slough @ Gurr Road	Intermediate	28,712
Duck Slough @ Hwy 99 [3]	Intermediate	15,622
Dutchman Creek @ Highway 99	Intermediate	8,734
Highline Canal @ Hwy 99	Intermediate	35,003
Highline Canal @ Lombardy Ave	Intermediate	29,941
Mustang Creek @ East Ave	Intermediate	12,400
Merced River @ Santa Fe	Large	27,796
August Rd Drain @ Crows Landing Road[1]	Small	1,467
Black Rascal Creek @ Yosemite Rd [4]	Small	744
Cavill Drain @ McGee Road	Small	13,751
Cottonwood Creek @ Six Mile road	Small	442
Deane Drain @ Gurr Road	Small	4,701
Hatch Drain @ Tuolumne Ave	Small	553
Hilmar Drain @ Central Ave	Small	2,106
Jones Drain @ Oakdale Road	Small	2,817
Livingston Drain @ Robin Ave	Small	3,656
Mariposa Creek @ Simonson Way	Small	496
Mattos Drain @ Range Road	Small	1,130
Miles Creek @ Reilly Rd	Small	664
Owens Creek @ Kibby Road	Small	4,828
Prairie Flower Drain @ Crows Landing Road	Small	4,080
Root Creek @ Rd 35	Small	8,378
Silva Drain @ Meadow Drive	Small	69
South Slough @ Quinley Ave	Small	1,137
Western States Drain @ Central Ave	Small	6,109
Westport Drain @ Vivian Road	Small	1,474

[1] August Rd. Drain @ Crows Landing subwatershed has been removed from the sampling plan due to safety concerns for the sampling crews.
[2] Site subwatershed was previously named Berenda Slough @ Dairyland Road

[3] Site subwatershed was previously named Duck Slough @ Pioneer Rd
[4] Site subwatershed was previously named Black Rascal Creek @ Kibby Road

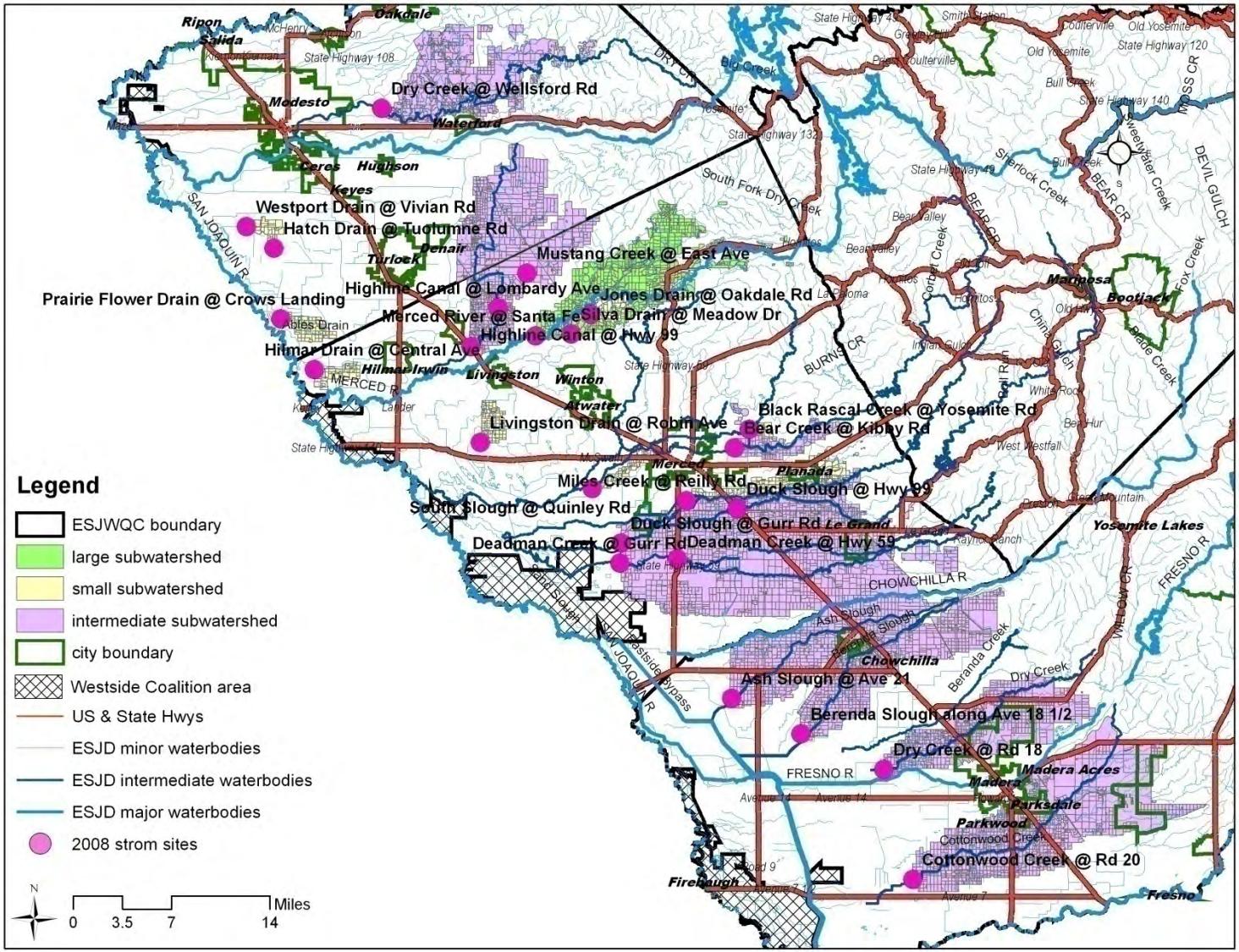
Administrative Record
Page 12246

Watershed Drainage Maps

An overall map detailing the Coalition drainage designation for all site subwatersheds is provided in Figure 3. Maps showing drainage designation for each of the subwatersheds in the Merced, Madera and Stanislaus counties are provided in Figure 4-Figure 6.

Administrative Record
Page 12247

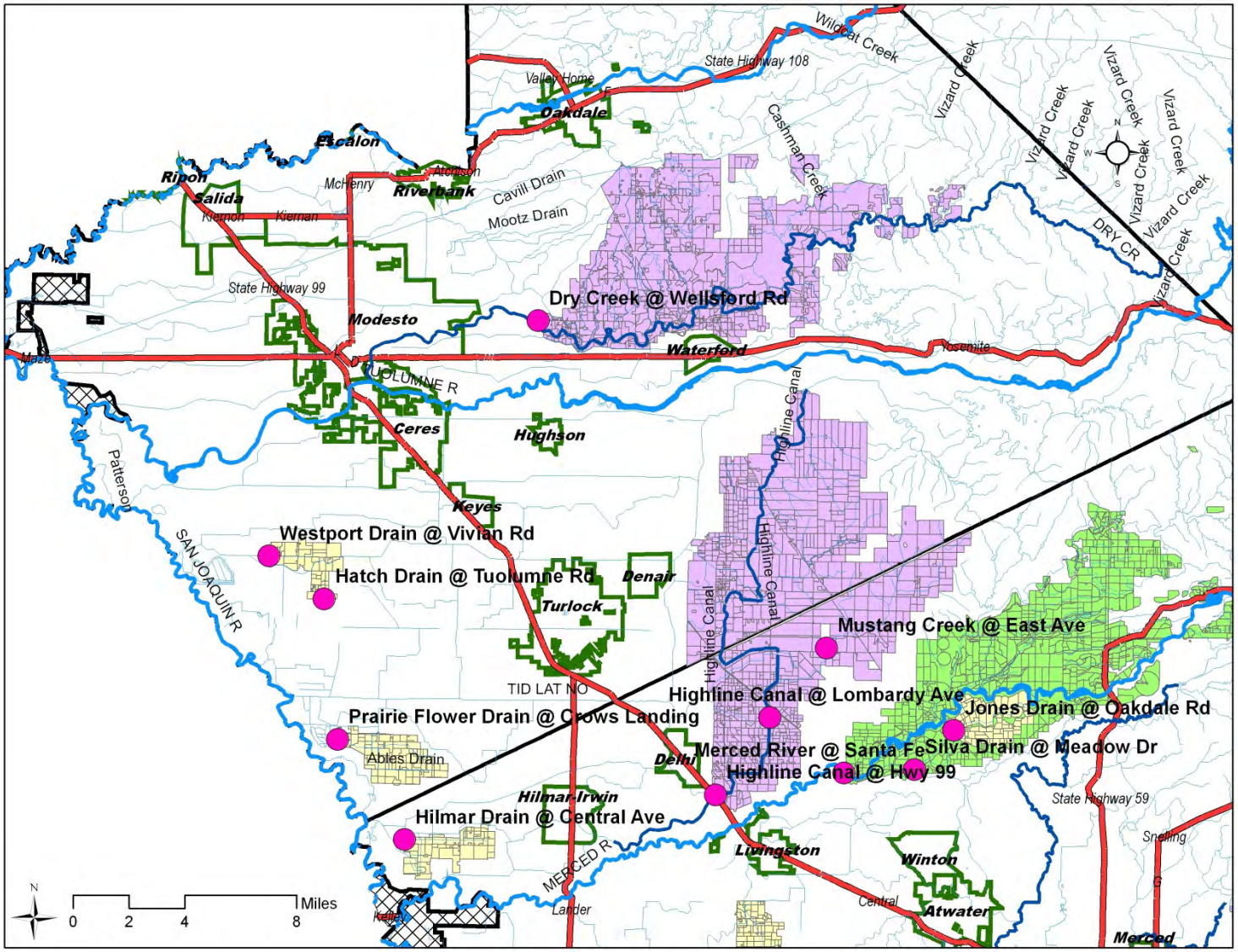
Figure 3. Site subwatershed size designation for all subwatersheds in the Coalition region



Administrative Record
Page 12248

Figure 4. Site subwatershed size designation for Stanislaus County.

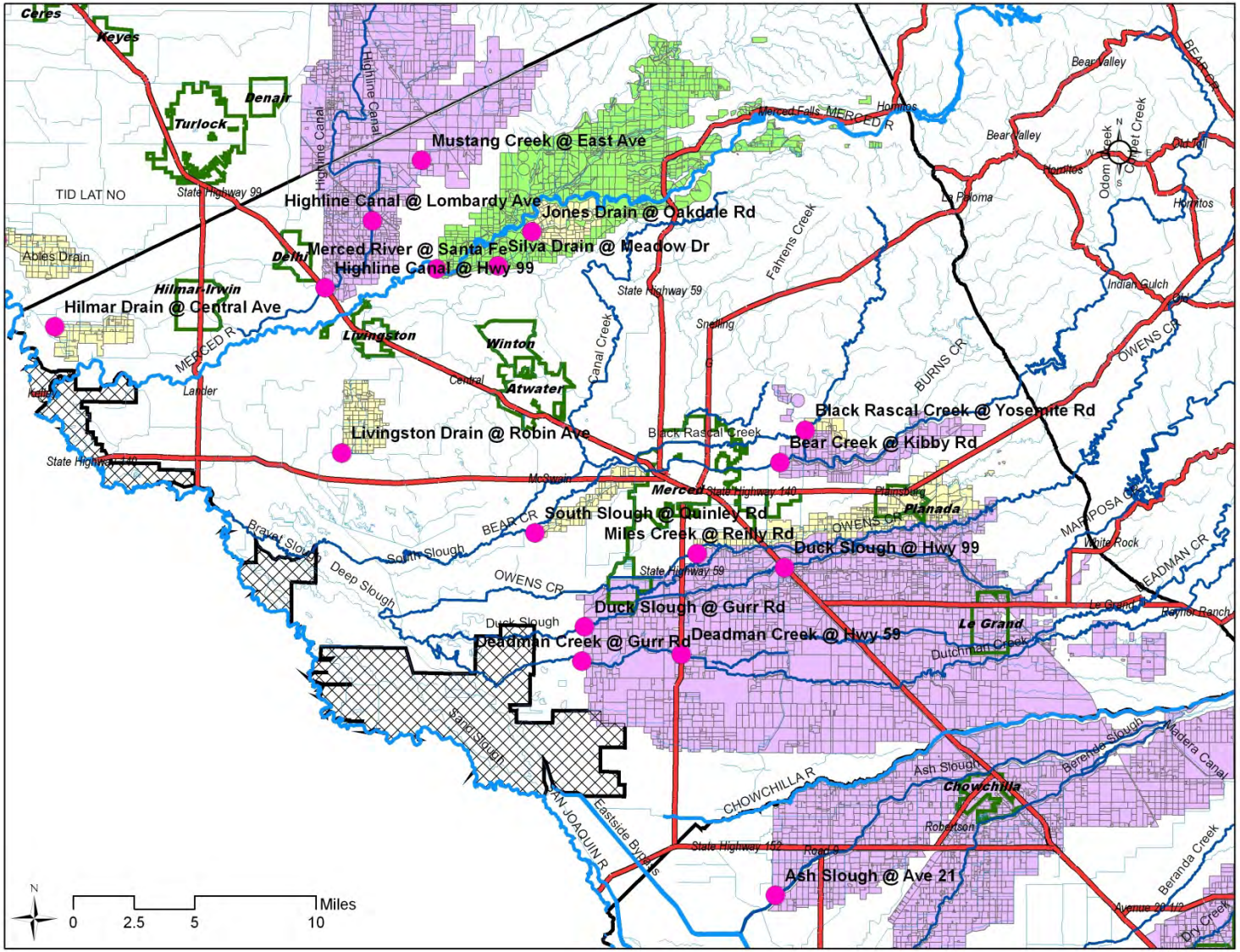
A size designation legend is included in Figure 3.



Administrative Record
Page 12249

Figure 5. Site subwatershed size designation for Merced County.

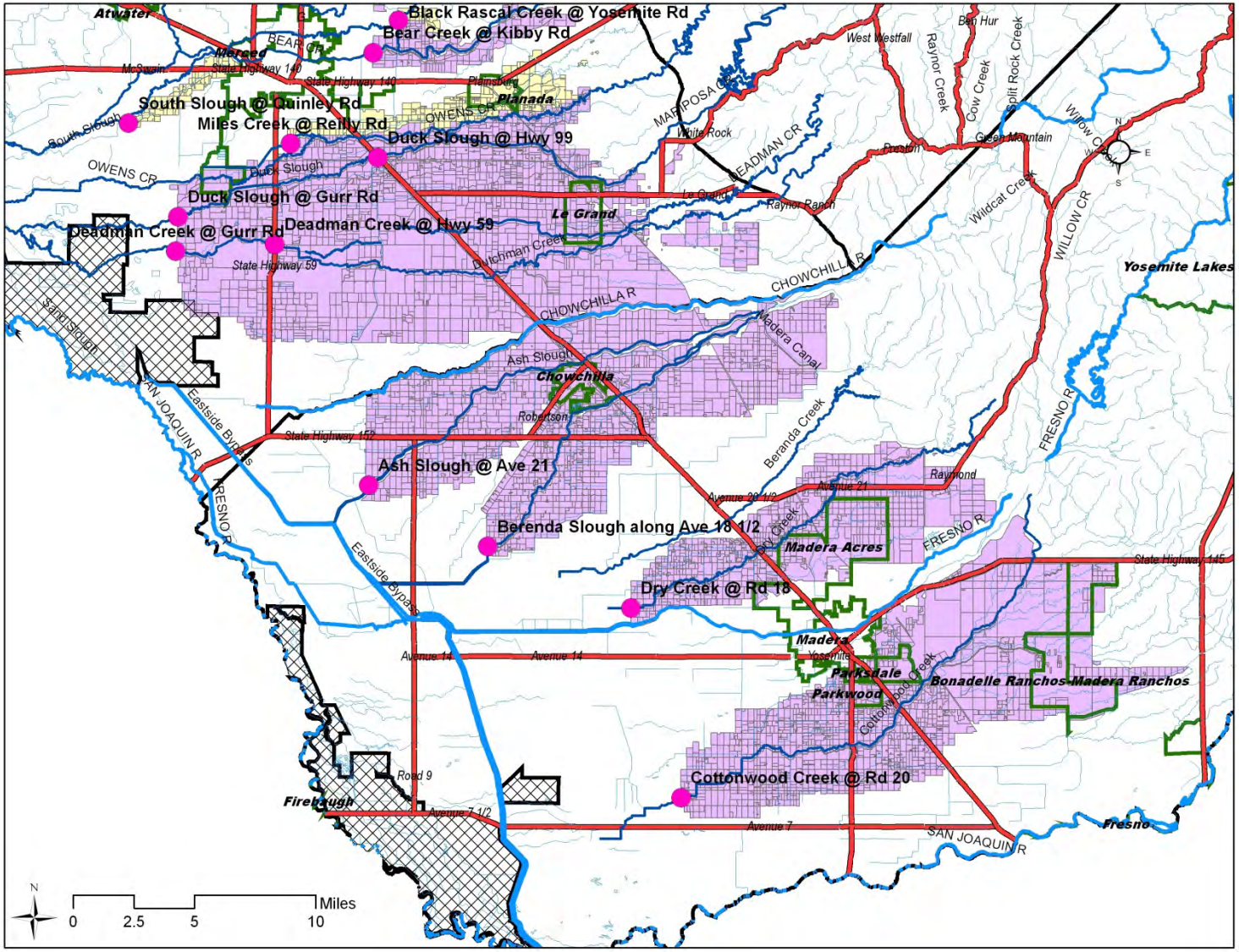
A size designation legend is included in Figure 3.



Administrative Record
Page 12250

Figure 6. Site subwatershed size designation for Madera County.

A size designation legend is included in Figure 3.



Monitoring Objectives

History of Coalition Monitoring

Coalition ambient water and sediment quality monitoring has been conducted in the ESJWQC region since the inception of the Irrigated Lands Program in 2003. Each year both the number of sites monitored and the constituents analyzed have grown. In 2004 samples were collected from four sites and were sent to laboratories to test for nine total constituents/analytes as well as toxicity testing. By 2007, 24 monitoring sites were sampled and over 50 total analytes tested in addition to toxicity. Table 5 illustrates the sites monitored during each the storm and irrigation seasons across years of sampling.

Table 5. Sample sites and years monitored.

A blank cell indicates that no sampling occurred at that site during the specified season. "Dry" indicates that the site was dry during one or more events during the specified monitoring season.

Station Name	2004	2005		2006		2007		2008
	Irrigation	Storm	Irrigation	Storm	Irrigation	Storm	Irrigation	Storm
Ash Slough @ Ave 21			x	x	x	Dry	Dry	Dry
August Road Drain upstream of Crows Landing Bridge (Hogin Rd)	x							
Bear Creek @ Kibby Rd		x	x	x	x	x	x	x
Berenda Slough along Ave 18 1/2					x	Dry	x	x
Black Rascal Creek @ Yosemite Rd					x	x	x	x
Cottonwood Creek @ Rd 20		x	x	x	x	Dry	x	x
Deadman Creak @ Hwy 59					x	x	x	x
Deadman Creek (Dutchman) @ Gurr Rd	x				x	x	x	x
Dry Creek @ Rd 18			x	Dry	x	x	x	x
Dry Creek @ Wellsford Rd		x	x	x	x	x	x	x
Duck Slough @ Gurr Rd	x	x	x	x	x	x	x	x
Duck Slough @ Hwy 99		x	x	x	x	x	x	x
Highline Canal @ Hwy 99			x	x	x	x	x	x
Highline Canal @ Lombardy Ave		x	x	x	x	x	x	x
Hilmar Drain @ Central Ave		x	x	x	x	x	x	x
Jones Drain @ Oakdale Rd		x	x	x	x	x	x	
Lone Willow Slough @ Madera Ave		x	x					

Administrative Record
Page 12252

Station Name	2004	2005		2006		2007		2008
	Irrigation	Storm	Irrigation	Storm	Irrigation	Storm	Irrigation	Storm
Merced River @ Santa Fe	x	x	x	x	x	x	x	x
Mustang Creek @ East Ave					x	x	x	x
Prairie Flower Drain @ Crows Landing Rd		x	x	x	x	x	x	x
Silva Drain @ Meadow Dr					x	x	x	x
South Slough @ Quinley Rd					x	Dry	x	x
Hatch Drain @ Tuolumne Rd							x	x
Livingston Drain @ Robin Ave							x	x
Miles Creek @ Reilly Rd							x	x
Westport Drain @ Vivian Rd							x	x

Storm Season Monitoring 2008

Coalition monitoring is conducted in both the winter storm runoff season and the summer irrigation season. This report covers only monitoring conducted between the months of November and March, 2008, during the storm season. The winter storm season sampling is designed to characterize the discharge from irrigated agriculture as a result of storm runoff. Sampling during the storm season is triggered by a storm event of 0.25 inches of rain or greater, after the dormant season sprays occur. In general, dormant sprays do not occur until December and therefore the first storm event with enough rainfall to trigger sampling usually occurs in January. Below is a description of each of the two storm events that occurred for the 2008 monitoring season.

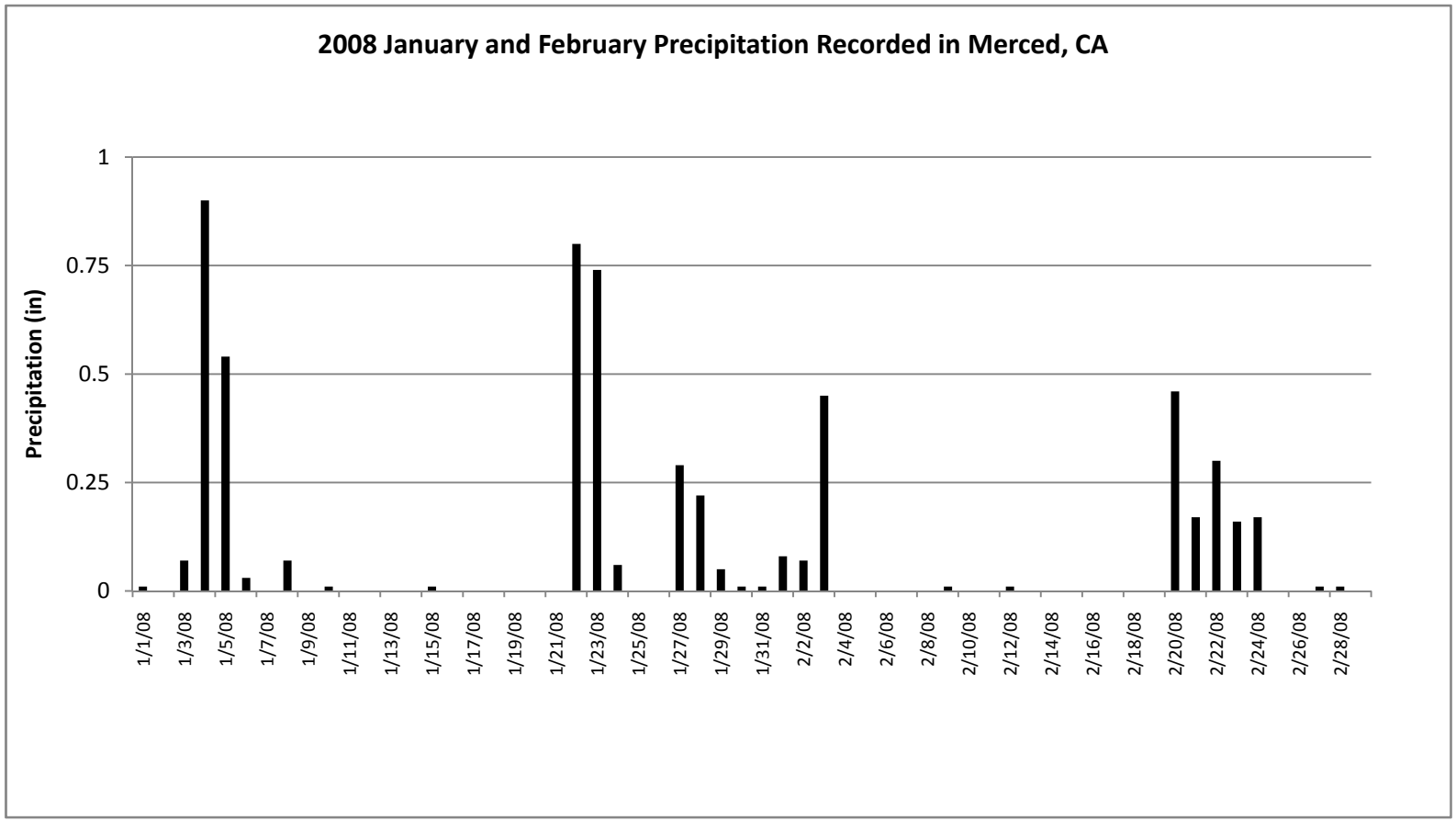
The first storm sampling event for the ESJWQC began on January 24, 2008 and continued to January 25, 2008. This storm was separated from the previous substantial precipitation on January 4th and 5th by twelve days of zero recorded rainfall, which allowed ample time for farmers to apply dormant season pesticides and herbicides. Rainfall during the precipitation event varied over the geographic sample area but surpassed the 0.5" in 24 hours on January 22 and 23. During these 48 hours 1.54" of rain fell in Merced, which produced measurable runoff across the region. This storm event was the second substantial rain of 2008 during a wet January; the statewide average of 6.02" of rainfall made January 2008 the 24th wettest January in the 113 years of the California Climate Tracker. It should be noted that this storm appeared suddenly and was not forecasted until approximately three days prior to the first rain on January 22. The precipitation predictions also increased within those three days from showers to rain. During this second storm the sub-tropical moisture landed on coastal central California, crossed the southern San Joaquin Valley and spun north along the foothills of

the Sierra Nevada. It then returned to the San Joaquin Valley as it continued pushing north. Rain continued to fall across the region for the nine days after sampling, with an additional 1.18" recorded in Merced.

The second storm sampling event for the ESJWQC began on February 25, 2008 and continued to February 26. This storm was separated from the previous major precipitation event (and the previous sampling event) by 14 days without any measureable precipitation. Again, the dry period allowed ample time for further dormant season pesticide and herbicide application. This storm produced less rain than the first and began with 0.46" of rain on February 20, 2007. Over the next five days 1.26" of rain fell in Merced. As with the first event, rainfall varied across the region but remained sufficient to generate runoff throughout most of the region. The moisture for this second event followed the jet stream in from the northern Pacific and entered central California just south of the San Francisco Bay, then distributed rain to the north and the south.

Figure 7. Local weather conditions during the first two months of 2008.

The first storm sampling event on January 24-25; the second event was on February 25-26. All data recorded in Merced, CA and reported on weatherunderground.com.



Administrative Record
Page 12255

The objectives of the ESJWQC monitoring program are to:

- Determine the concentration and load of waste in discharges to surface waters
- Evaluate compliance with existing narrative and numeric water quality objectives to determine if implementation of additional management practices is necessary to improve and/or protect water quality
- Assess the impact of waste discharges from irrigated agriculture to surface water
- Determine the degree of implementation of management practices to reduce discharge of specific wastes that impact water quality in watersheds within the coalition region
- Determine the effectiveness of management practices and strategies to reduce discharges of wastes that impact water quality

In order to achieve the objectives listed above, the ESJWQC monitored water quality at 23 sites in the Coalition region during the 2008 storm runoff season. The Coalition sampled for numerous water quality variables and constituents including 39 pesticides, *E. coli*, physical parameters (total dissolved solids, color and turbidity), eight metals, total organic carbon, nutrients, field parameters (dissolved oxygen, pH, electrical conductivity), water toxicity to three test species including *Ceriodaphnia dubia*, *Pimephales promelas* and *Selenastrum capricornutum* and sediment toxicity to *Hyalella azteca*. Monitoring constituents are established by the MRP (Order No. R5-2005-0833) and are discussed in more detail below.

Because the amount of runoff was low across the Coalition region, especially the southern portions of the region, water was unable to be collected at 4 sites (documented in the section on Precision and Accuracy). Consequently, no data from those sites are available. All dry sites were documented by photographs which are available on request.

Pesticides and Toxicity

Pesticides can end up in the water column or sediment as a result of applications that occur during the winter including dormant and pre-emergent sprays. Runoff from fields can move sediment and chemicals to surface waters. The concentrations can be compared to numeric and narrative water quality triggers to determine if exceedances have been experienced. Toxicity testing is complementary to chemical analyses and can provide an independent and more direct assessment of the level of impairment in the water body. The objective of the Coalition is to use the results of toxicity testing along with water chemistry analysis to assess the impact of discharges from irrigated agriculture.

Nutrients and Physical Parameters

Excessive nutrients can cause eutrophication of surface waters resulting in elevated total organic carbon, color content, and turbidity. All of these factors can independently cause impairment of surface waters. The Coalition's objective is to determine if exceedances are occurring and to determine if potential sources can be identified through analysis of monitoring data. However, sources of nutrients, organic carbon, color, and low dissolved oxygen are difficult to identify. If current monitoring data are not sufficient, the Coalition may conduct further investigations to identify sources. Such investigations may include special studies where they are determined to be cost effective. By understanding the sources of constituents responsible for the exceedances, the Coalition can properly recommend management practices to address exceedances of nutrients and physical parameters.

Field Parameters

Much like physical parameters, exceedances of water quality objectives for pH, dissolved oxygen (DO), and electrical conductivity (EC) are difficult to track to sources. All of these parameters are non-conserved meaning that they can increase or decrease in concentration as water moves downstream. These parameters are the result of processes occurring in the water column and sediment and can vary diurnally. As with nutrients and physical parameters, the Coalition's objective is to determine if exceedances are occurring and to investigate potential sources through analysis of monitoring data and special studies where they are cost effective. By understanding the sources of constituents that may affect field parameters, the Coalition can properly recommend management practices to address the exceedances.

E. coli

E. coli inhabits the intestinal tracts of animals and is voided in fecal material. *E. coli* may persist in the presence of oxygen in the environment for periods of time after being voided. The bacteria are also known to reproduce and magnify in the environment. However, conditions under which this occurs are not well understood and require additional research. Any species of vertebrate that voids feces can contribute *E. coli* to surface waters, including humans, companion animals such as dogs and cats, cows, chickens, waterfowl (ducks and geese), raccoons, otters, ground squirrels, feral pigs, and in some locations deer. Consequently, there may be a large amount of bacteria in any environmental sample that is collected.

As a result of *E. coli* detections in samples collected for Coalition monitoring, a special study was conducted in 2006 to identify the contributing sources of *E. coli* in Coalition water bodies. Results from this study indicated that the most prominent source of bacteria being discharged into water bodies is human, with smaller contributions coming from bovine and chicken. A full report of the *E. coli* special study was submitted to the CVRWQCB on September 9, 2007.

E. coli from humans can enter aquatic systems from leaky septic systems, leaky sanitary sewer lines, improperly treated discharge from waste water treatment plants, application of biosolids to agricultural land, and direct inputs from individuals who defecate in or near water bodies. Input from cows can occur from dairies, grazing in irrigated pastures, and various manure sources. *E. coli* from chickens can enter from poultry operations or manure sources. Irrigated agriculture is responsible for management if *E. coli* contamination is the result of runoff from irrigated pasture or manure applications for fertilizer.

Metals

The Coalition samples for four basic classes of metals: 1) those that are naturally present because of underlying geologic materials but generally not applied by agriculture (boron, selenium), 2) those that are naturally present because of underlying geologic materials but are applied by agriculture (copper, zinc, nickel), 3) those that may be legacy pesticides but also have numerous nonagricultural sources (lead, arsenic), and 4) those that are found solely as a result of nonagricultural anthropogenic sources (cadmium). These categories are not all mutually exclusive and in fact, all metals belong to the first category. For example, nickel is a plant micronutrient that may be incorporated into fertilizer mixes, although normally there is a sufficient quantity of nickel in soils to supply the needs of crops. As a result, although it may be applied by agriculture, exceedances would be expected to primarily be a result of natural weathering of soils.

Natural weathering of geologic materials can release to surface waters metals and metalloid elements such as selenium, arsenic, and boron. Selenium salts are naturally elevated in the southwest portion of the San Joaquin Valley and are transported to surface waters during storm runoff. These salts are so problematic that there is a prohibition of discharge of irrigation return flows in some locations in the Valley. Arsenic appears to be naturally elevated in several locations in the San Joaquin Valley. Zinc and nickel are also found in soils and can be found in surface waters at levels that reflect background concentrations. Both of these metals can be applied during agricultural operations as well, and the difference between applications and natural weathering must be understood to properly manage the amounts reaching surface waters. Understanding background levels of these elements will be an important task for the Coalition when trying to understand the impacts of agricultural inputs to surface waters.

While all other metals can be released as a result of the weathering of geologic materials, elevated levels of most metals are a result of anthropogenic inputs. Lead was used as a pesticide during the last century but was used in declining amounts over the last several decades before being prohibited in the 1990s. Lead was also used in gasoline until the early 1980s when it was replaced by other fuel oxygenates. Lead-based paint was routinely used until the latter parts of the last century but is still present in many old buildings and structures. Lead is also a component of batteries, and

is the material in solder in numerous electronic devices including televisions, computers, and cell phones. These sources can be distinguished through sophisticated analytical tests that are beyond the capabilities of the Coalition. Copper is routinely used by agriculture on a number of crops and could be found in surface waters as a result of applications. Additional sources include road surfaces where wearing of brake pads can result in substantial loading to surface waters.

Because fertilizer applications and the micronutrient constituents included in fertilizer mixes are not reported, there is no way the Coalition can distinguish between natural and anthropogenic sources with normal monitoring data. Several of these metals can be identified to source using sophisticated analytical equipment and techniques, but these tests are beyond the capabilities of the Coalition. Consequently, the Coalition will use monitoring data to determine if exceedances are occurring, and will attempt to establish background concentrations of some metals in surface waters to determine if concentrations are a result of natural or anthropogenic inputs to the water. In addition, if it is concluded that it is necessary to determine if the metals are bioavailable, additional analyses may be used to determine the amount of soluble metals as compared to particulate bound metals.

Sampling Site Descriptions

The site names, codes and locations of the 23 sites monitored during the 2008 storm season are provided in Table 5. A narrative description of each site subwatershed with respect to hydrology and agricultural production follows below.

Table 5. ESJWQC irrigation 2008 sampling locations.

Site Name	Station Code	Latitude	Longitude
Ash Slough @ Ave 21	545XASAAT	37.0545	-120.4158
Bear Creek @ Kibby Rd†	535XBCAKR	37.3128	-120.4138
Berenda Slough along Ave 18 1/2	545XBSAAE	37.0182	-120.3265
Black Rascal Creek @ Yosemite Rd	535BRCAYR	37.33208	-120.3947
Cottonwood Creek @ Rd 20†	545XCCART	36.8686	-120.1818
Deadman Creek @ Gurr Rd	535XDCAGR	37.1936	-120.5612
Deadman Creek @ Hwy 59	535DMCAHF	37.1981	-120.4869
Dry Creek @ Rd 18	545XDCARE	36.9818	-120.2195
Dry Creek @ Wellsford Rd†	535XDCAWR	37.6602	-120.8743
Duck Slough @ Gurr Rd†	535XDSAGR	37.2142	-120.5596
Duck Slough @ Hwy 99†	535XDSAHN	37.2501	-120.4100
Hatch Drain @ Tuolumne Rd	535XHDATR	37.5149	-121.0122
Highline Canal @ Hwy 99†	535XHCHNN	37.4153	-120.7557
Highline Canal @ Lombardy Ave†	535XHCALR	37.4556	-120.7207
Hilmar Drain @ Central Ave†	535XHDACA	37.3906	-120.9582
Livingston Drain @ Robin Ave	535XLDARA	37.3169	-120.7423
Merced River @ Santa Fe†	535XMRSFD	37.4271	-120.6721
Miles Creek @ Reilly Rd	535XMCARR	37.2582	-120.4755
Mustang Creek @ East Ave	535XMCAEA	37.4918	-120.6839
Prairie Flower Drain @ Crows Landing Rd†	535XPFDCL	37.4422	-121.0024
Silva Drain @ Meadow Dr	535XSDAMD	37.4291	-120.6261
South Slough @ Quinley Rd	535XSSAQR	37.2699	-120.5971
Westport Drain @ Vivian Rd	535XWDAVR	37.5368	-121.0486

† indicates sites that have been monitored for at least two years

Administrative Record
Page 12260

Site Subwatershed Descriptions

Descriptions of the 23 site subwatersheds are provided below alphabetically.

Ash Slough @ Avenue 21 (27,704 irrigated acres) – Agriculture upstream includes vineyards, field crops, and deciduous nuts. Ash Slough flows just north of Chowchilla but there appears to be a buffer of agricultural land between Ash Slough and Chowchilla. Dairies are located upstream.

Bear Creek @ Kibby Road (6,715 irrigated acres) – This site subwatershed drains an eastern portion of the Coalition region in Merced County. Bear Creek originates in the foothills of the Sierras with Burn's Creek as one of the major tributaries. Bear Creek drains to the east just north of the towns of Planada, through Merced and eventually to the San Joaquin River. The primary irrigated agriculture in the site subwatershed includes deciduous nuts, field crops, truck crops, and irrigated pasture.

Berenda Slough along Road 18 ½ (25,006 irrigated acres) – Berenda Slough flows through the northern portion of Madera County and empties into the Eastside Bypass. The primary agriculture is orchards and vineyards with small amounts of pasture and field crops.

Black Rascal Creek @ Yosemite Road (744 irrigated acres) – The headwaters of Black Rascal Creek originate in the Sierra foothills. It is located just to the north of the Bear Creek site subwatershed and to the east of the city of Merced. Citrus and field crops make up the majority of the agriculture in the site subwatershed.

Cottonwood Creek @ Road 20 (40,699 irrigated acres) – This site subwatershed is at the very southern edge of the Coalition region in Madera County and drains into the Eastside Bypass. The immediate upstream agriculture is vineyards and there are deciduous nuts farther to the east. There are only a few dairies in the Cottonwood Creek site subwatershed.

Deadman Creek @ Gurr Rd (52,091 irrigated acres) - This site subwatershed is a downstream site from Deadman Creek @ Hwy 59. The primary agriculture in the site subwatershed is orchards and row crops with some irrigated pasture upstream.

Deadman Creek @ Highway 59 (38,231 irrigated acres) – Deadman Creek flows out of the Sierra foothills and confluences with Dutchman's Creek in the vicinity of Highway 59. The primary agriculture in the site subwatershed is orchards and row crops with some irrigated pasture upstream.

Dry Creek @ Road 18 (23,299 irrigated acres) – Dry Creek originates in the Sierra foothills and flows to the north of the city of Madera eventually draining into the San Joaquin River through various channels and irrigation ditches. Deciduous crops are the primary irrigated agriculture in

the upper portion of the site subwatershed whereas vineyards predominate in the lower portions. There are field crops scattered throughout the site subwatershed.

Dry Creek @ Wellsford Road (23,339 irrigated acres) – This site subwatershed is in the northern part of the Coalition region and drains a combination of field crops, deciduous nuts, and vineyards. Dry Creek originates to the east of Modesto and drains into the Tuolumne River. This site subwatershed samples Dry Creek at the furthest downstream location that collects agricultural drainage prior to flowing through the urban areas of Modesto. Dairies are located upstream of this site and the town of Waterford may contribute an urban signal.

Duck Slough @ Gurr Road (28,712 irrigated acres) – This site subwatershed is a monitoring location downstream from Duck Slough @ Hwy 99. Located to the south and west of Merced, this site drains field crops immediately upstream and deciduous nuts further upstream as well as some irrigated pasture. The city of Merced delivers treated water to Duck Slough a few miles upstream of the Gurr Road site. Duck Slough flows west eventually becoming Deadman Creek in the western portion of the Coalition region. The slough eventually flows into the San Joaquin River via Deadman Creek and Deep Slough.

Duck Slough @ Hwy 99 (15,622 irrigated acres) – This site subwatershed is located upstream of the Duck Slough @ Gurr Road site and was selected to determine relative contribution of water quality impairments in the upstream portion of the Duck Slough subwatershed. Duck Slough originates in the Sierra foothills and flows west eventually joining with Deadman Creek in the western portion of the coalition region. The monitoring site is located just east of Highway 99 south of Planada and Merced. Irrigated agriculture in this site subwatershed is primarily deciduous nuts, with truck crops and irrigated pasture the next most common land uses.

Hatch Drain @ Tuolumne Rd (553 irrigated acres) – This small site subwatershed is located in the western portion of the Coalition region in Stanislaus County. The two major crops are citrus and field crops.

Highline Canal @ Highway 99 (35,003 irrigated acres) – The Highline Canal is a conveyance of the Turlock Irrigation District and carries both clean irrigation water and irrigation return flow during the summer, and storm water runoff during the winter. This site was selected as a downstream companion site to the Highline Canal @ Lombardy Road site. This site subwatershed is monitored to determine the relative contribution of the upstream and downstream site subwatersheds to water quality impairments. The sampling site is located just south of Delhi as the canal crosses the highway. The irrigated agriculture is primarily deciduous nuts, and these are located at the lower end of the site subwatershed. A small number of vineyards are also present.

Highline Canal @ Lombardy Road (29,941 irrigated acres) – The Highline Canal is a conveyance of the Turlock Irrigation District and carries both clean irrigation water and irrigation return flow

Administrative Record
Page 12262

during the summer, and storm water runoff during the winter. The main upstream tributary of the Highline Canal is Mustang Creek. The Highline Canal flows west and eventually drains into the Merced River. Dairies are present upstream and Mustang Creek, a major tributary during the dormant season, passes immediately to the southeast of the Turlock Airport. The main agricultural crop upstream is deciduous nuts.

Hilmar Drain @ Central Ave (2,106 irrigated acres) – This site subwatershed is located toward the western edge of the Coalition region near the San Joaquin River. This is a small site subwatershed containing primarily field crops and a large number of dairies with irrigated pasture. Hilmar Drain originates at Williams Ave and Washington Road and eventually drains into the San Joaquin River.

Livingston Drain @ Robin Ave (3,656 irrigated acres) – Livingston Drain is located in the west central portion of the Coalition region in Merced County. It is located west of Atwater and Livingston. The agriculture is almost entirely citrus.

Merced River @ Santa Fe Drive (27,796 irrigated acres) – This water body is designated as a major water body and is 303d listed. It was selected as an integrator site for several of the drains and tributaries in the vicinity. The Merced River originates in the high Sierra encountering several dams and impoundments as it flows west. The Merced River eventually drains into the San Joaquin River near Hatfield State Park. Upstream agriculture includes some field crops in the immediate vicinity of the river and deciduous nuts, primarily almonds.

Miles Creek @ Reilly Rd. (9,664 irrigated acres) – Miles Creek is located just north of Duck Slough and drains into Owen's Creek. The primary agriculture includes field crops, deciduous nut & fruit, pasture and truck, nursery and berry. Within the subwatershed are also urban drainages, dairies and hay and pasture lands.

Mustang Creek @ East Ave (12,400 irrigated acres) – Mustang Creek originates in the foothills of the Sierra Nevada and flows into the upper portion of the Highline Canal. Mustang Creek is ephemeral with flow found primarily during winter runoff events. Summer flows are intermittent. Citrus and deciduous nut crops are the main agriculture with smaller amounts of field crops and grains and hay.

Prairie Flower Drain @ Crows Landing Road (4,080 irrigated acres) – Relative to other drains in the western portion of the Coalition region, Prairie Flower Drain is longer and appears to drain mostly irrigated agriculture. Dairies and feedlots are ubiquitous in this part of the Coalition region and this drain may receive runoff from several dairies immediately upstream. Upstream agriculture is field crops.

Silva Drain @ Meadow Drive (69 irrigated acres) – This is a very small site subwatershed that joins with Jones Drain just upstream of the confluence of Jones Drain with the Merced River. The

primary agriculture is citrus orchards with small amounts of field crops and irrigated pasture. Large dairies are found in the site subwatershed.

South Slough @ Quinley Road (1,137 irrigated acres) – South Slough begins just west of Merced and eventually flows into Bear Creek. Pasture, deciduous nuts, and citrus are the primary crops in the site watershed.

Westport Drain @ Vivian Road (1,474 irrigated acres) – This site subwatershed is located adjacent to the Hatch Drain subwatershed in the western portion of the Coalition region. The primary agriculture in this site subwatershed is citrus and field crops.

Monitoring and Analysis

Tables 6 and Table 7 specify the constituents monitored at each site subwatershed. The Coalition monitoring program consists of a mix of Phase I and Phase II monitoring elements at various sites. As a result, the sites added to the Coalition monitoring program in May 2006 (e.g. Berenda Slough, Black Rascal Creek, Deadman Creek @ Hwy 59, Mustang Creek, Silva Drain and South Slough) do not require sampling for metals or nutrients as outlined in Table 1 of the CVRWQCB's MRP document. Four sites were also added during the 2007 irrigation season, however all constituents were monitored at those sites. Although pesticides other than those identified by 303d listings are not required to be monitored, the Coalition is monitoring all Phase II pesticides during Phase I and Phase II.

Additionally, because two years of sampling resulted in no exceedances of *E. coli* or sediment toxicity at the Merced River @ Santa Fe sample site, both of these tests were withdrawn from the suite of analytes monitored at that site in 2006. It was brought to the attention of the Coalition after this storm season that the Coalition was not approved by the Executive Officer of the Regional Board to drop this constituent and therefore the Coalition resumed monitoring for *E. coli* during the irrigation season of 2008.

On November 19, 2007 the Coalition submitted a proposal to the Regional Board to drop constituents at sites that had been monitored for two or more full years which did not have a single exceedance of a water quality trigger limit. On December 14, 2007 the Coalition was notified by the Executive Officer that the Coalition would no longer need to monitor at the listed locations for the following constituents:

- Bear Creek @ Kibby Rd: pyrethroids and *Selenastrum capricornutum* toxicity,
- Cottonwood Creek @ Rd 20: pyrethroids and *Selenastrum capricornutum* toxicity,
- Dry Creek @ Wellfsford Rd: pyrethroids,
- Duck Slough @ Hwy 105: pyrethroids,
- Merced River @ Santa Fe: pyrethroids,
- Prairie Flower Drain @ Crows Landing Rd: pyrethroids.

Table 6. ESJWQC storm 2008 sampling constituents for field parameters, metals, nutrients, total organic carbon (TOC), physical parameters, *E.coli*, water column toxicity (WCT) and sediment toxicity.

Site Name	Field Parameters	Metals	Nutrients	TOC	Physical Parameters	*E. coli*	WCT	Sediment Toxicity
Ash Slough @ Ave 21	x	x	x	x	x	x	x	x
Berenda Slough along Ave 18 1/2	x			x	x	x	x	x
Bear Creek @ Kibby Rd*	x	x	x	x	x	x	x	x
Black Rascal Creek @ Yosemite Rd	x			x	x	x	x	x
Cottonwood Creek @ Rd 20	x	x	x	x	x	x	x	x
Deadman Creek @ Gurr Rd†	x	x	x	x	x	x	x	x
Deadman Creek @ Hwy 59	x			x	x	x	x	x
Dry Creek @ Rd 18	x	x	x	x	x	x	x	x
Dry Creek @ Wellsford Rd	x	x	x	x	x	x	x	x
Duck Slough @ Gurr Rd†	x	x	x	x	x	x	x	x
Duck Slough @ Hwy 99	x	x	x	x	x	x	x	x
Hatch Drain @ Tuolumne Rd	x	x	x	x	x	x	x	x
Highline Canal @ Hwy 99	x	x	x	x	x	x	x	x
Highline Canal @ Lombardy Ave	x	x	x	x	x	x	x	x
Hilmar Drain @ Central Ave	x	x	x	x	x	x	x	x
Livingston Drain @ Robin Ave	x	x	x	x	x	x	x	x
Merced River @ Santa Fe†	x	x	x	x	x		x	
Miles Creek @ Reilly Rd	x	x	x	x	x	x	x	x
Mustang Creek @ East Ave	x			x	x	x	x	x
Prairie Flower Drain @ Crows Landing Rd	x	x	x	x	x	x	x	x
Silva Drain @ Meadow Dr	x			x	x	x	x	x
South Slough @ Quinley Rd	x			x	x	x	x	x
Westport Drain @ Vivian Rd	x	x	x	x	x	x	x	x

† indicates sites that have been monitored for at least two years

*not analyzed for *Selenastrum* toxicity

Administrative Record
Page 12265

Table 7. ESJWQC storm 2008 sampling constituents for pesticides.

Site Name	Organo-phosphates	Pyrethroids	Carbamates	Herbicides	Organo-chlorines	Glyphosate	Paraquat
Ash Slough @ Ave 21	x	x	x	x	x	x	x
Berenda Slough along Ave 18 1/2	x	x	x	x	x	x	x
Bear Creek @ Kibby Rd	x		x	x	x	x	x
Black Rascal Creek @ Yosemite Rd	x	x	x	x	x	x	x
Cottonwood Creek @ Rd 20	x		x	x	x	x	x
Deadman Creek @ Gurr Rd	x	x	x	x	x	x	x
Deadman Creek @ Hwy 59	x	x	x	x	x	x	x
Dry Creek @ Rd 18	x	x	x	x	x	x	x
Dry Creek @ Wellsford Rd	x		x	x	x	x	x
Duck Slough @ Gurr Rd†	x	x	x	x	x	x	x
Duck Slough @ Hwy 99	x		x	x	x	x	x
Hatch Drain @ Tuolumne Rd	x	x	x	x	x	x	x
Highline Canal @ Hwy 99	x	x	x	x	x	x	x
Highline Canal @ Lombardy Ave	x	x	x	x	x	x	x
Hilmar Drain @ Central Ave	x	x	x	x	x	x	x
Livingston Drain @ Robin Av	x	x	x	x	x	x	x
Merced River @ Santa Fe†	x		x	x	x	x	x
Miles Creek @ Reilly Rd	x	x	x	x	x	x	x
Mustang Creek @ East Ave	x	x	x	x	x	x	x
Prairie Flower Drain @ Crows Landing Rd	x		x	x	x	x	x
Silva Drain @ Meadow Dr	x	x	x	x	x	x	x
South Slough @ Quinley Rd	x	x	x	x	x	x	x
Westport Drain @ Vivian Rd	x	x	x	x	x	x	x

† indicates sites that have been monitored for at least two years

Administrative Record
Page 12266

Location Maps of Sample Sites and Land Use

All site subwatersheds in Table 8 and Table 9 drain agricultural land in the Coalition region. The tables provided include the land use acreage for each major crop or land use type and indicate whether the land area is irrigated or non-irrigated. Land use maps are provided in Figure 8 – Figure 11, (a legend for land use is provided in Figure 12), and included parcel specific land use data in each of the site subwatersheds as well as the hydrology within the site subwatershed that drains those parcels. Not included are roadside ditches that may drain fields to the nearest surface water body. Ditches are constructed to move water draining from roads adjacent to the fields and are not generally constructed to move water draining from agricultural fields. The site subwatershed sizes (listed as total and irrigated acres) may have changed due to updated information on the boundary of each subwatershed. Land use information was obtained from data provided by California Department of Water Resources (http://www.landwateruse.water.ca.gov/annualdata/landuse/2001/landuselevels.cfm).

Table 8. Land use acreage of site subwatersheds monitored during the 2008 storm season.

The land uses are designated as irrigated/non-irrigated (I/NI). Sites are listed alphabetically from Ash Slough to Hatch Drain.

Land Use	I/NI	Ash Slough @ Ave 21	Bear Creek @ Kibby Rd	Beranda Slough along Ave 18 1/2	Black Rascal Creek @ Yosemite Rd	Cottonwood Creek @ Rd 20	Deadman Creek @ Gurr Rd	Deadman Creek @ Hwy 59	Dry Creek @ Wellsford Rd	Dry Creek @ Rd 18	Duck Slough @ Gurr Rd	Duck Slough @ Hwy 99	Highline Canal @ Hwy 99	Highline Canal @ Lombardy Ave.	Highline Canal (Stanislaus)	Hilmar Drain @ Central Ave.	Hatch Drain @ Tuolumne Rd
Citrus	I		48.1	96.7		570.6	7.3	7.3	7.6	421.7					76.7		
Deciduous nut and fruit	I	6,888.9	2,934.7	15,573.5	53.9	10,325.6	11,333.2	10,246.3	8,064.3	12,103.0	8,766.3	8,290.2	7,988.6	4,012.0	12,563.6	31.7	210.6
Field crop	I	9,101.3	1,581.2	3,048.0	241.1	3,724.4	16,221.1	11,457.9	4,515.7	1,105.3	7,974.9	2,768.3	929.8	684.9	5,976.4	1,365.2	169.6
Field crop	NI					314.2											
Grain and hay	I	726.5	223.0	1,803.7		664.1	3,120.9	2,366.3	216.0	1,657.3	1,271.0	415.8	550.7	550.7	75.6		
Grain and hay	NI		242.4	1,413.1		2,009.0	1,164.7	1,152.7	2,179.0		321.6	258.6					
Idle	I	33.0		261.0		1,172.5	671.7	665.6	238.5	495.4	831.6	314.7	221.4	80.4			
Idle	NI																
Wild vegetation	NI	998.8	237.7	3,791.6	12.5	11,329.5	12,060.0	7,318.2	39,705.9	3,916.7	3,153.7	422.5	184.6	142.0	365.2		
Water surface	NI	274.2		267.0		615.1	392.5	295.6	204.1	104.3	172.0	94.4	18.9	18.9	163.8	11.7	
Pasture	I	4,935.9	1,414.2	1,695.0	389.9	846.8	14,833.4	8,740.0	7,346.4	637.5	7,378.4	2,444.6	791.4	734.6	4,034.6	708.6	169.7
Pasture	NI						21.5		1,310.3		75.7	66.0	335.7	335.7	16.4		
Rice	I						913.9		1,187.9		318.1						
Feedlot, dairy, farmstead	NI	712.1	66.8	720.1		561.5		626.1	1,414.3	446.1	1,056.4	438.7	353.8	189.9	993.7	223.0	16.5
Truck, nursery, berry	I	635.0	514.2	115.7	59.3	85.3	3,393.0	3,328.8		169.4	2,171.8	1,388.4	261.1		110.0		2.7
Urban	NI	1,310.8	10.1	1,621.6		10,061.8	389.6	312.3	486.2	4,614.4	675.7	474.3	456.7	192.1	146.1		55.0
Golfcourse, cemetery, landscape	NI	32.8		23,334.9		25.0					17.0		4.1	1.2			
Vineyard	I	5,383.2		2412.1		23,309.9	1,596.5	1,418.2	1,762.3	6,709.7			599.2	217.0	824.0		
Total acres		**31,032.4**	**7,272.4**	**56,154.1**	**756.8**	**65,615.3**	**66,119.4**	**47,935.4**	**68,638.3**	**32,380.6**	**34,184.0**	**17,376.5**	**12,695.9**	**7,159.4**	**25,346.2**	**2,340.2**	**624.1**
Irrigated acres		**27,703.8**	**6,715.4**	**25,005.7**	**744.3**	**40,699.2**	**52,091.1**	**38,230.5**	**23,338.6**	**23,299.2**	**28,711.8**	**15,622.1**	**11,342.2**	**6,279.5**	**23,660.9**	**2,105.5**	**552.6**

Administrative Record
Page 12268

Table 9. Land use acreage of site subwatersheds selected for monitoring during the 2008 storm season.

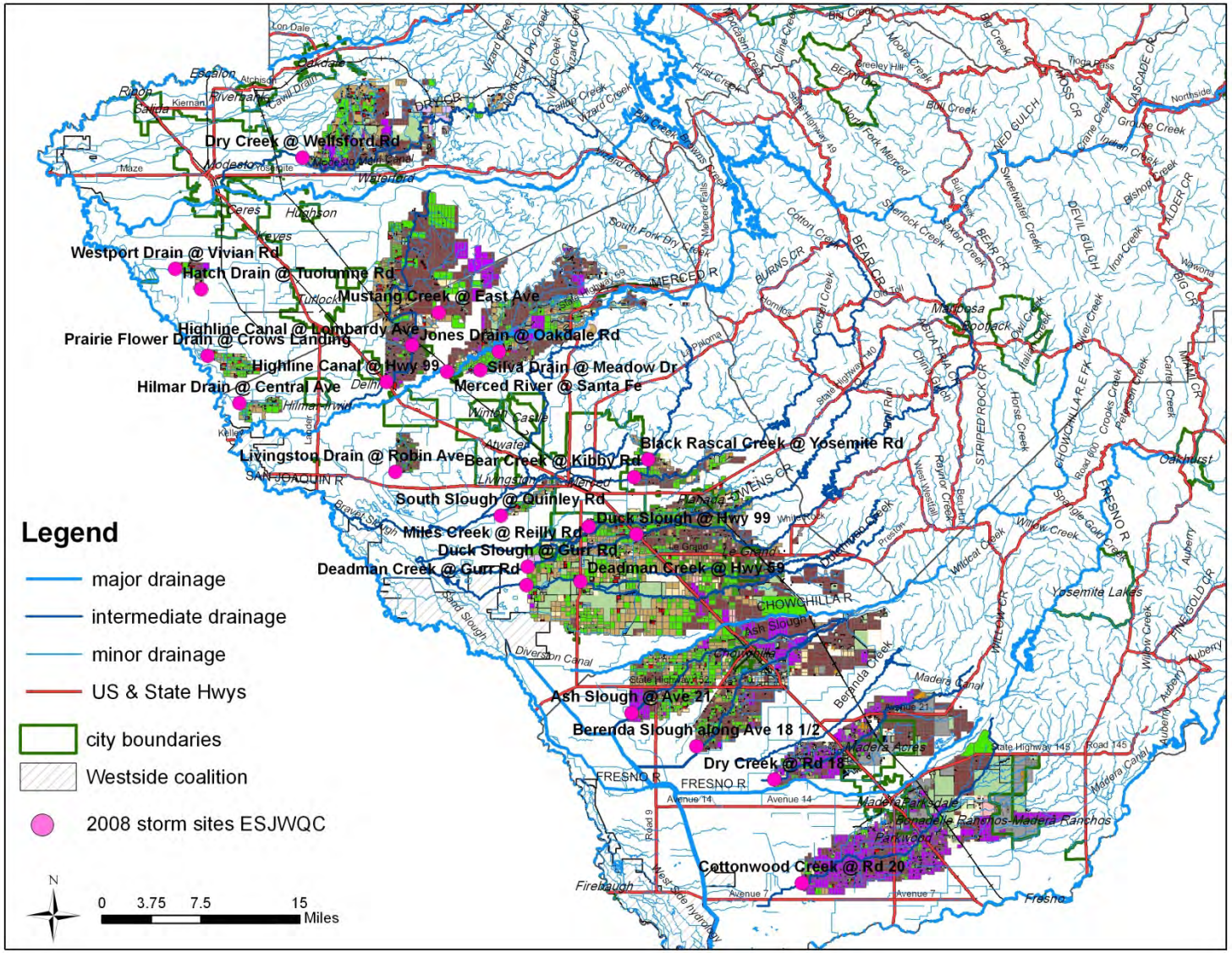
The land uses are designated as irrigated/non-irrigated (I/NI). Sites are listed alphabetically from Highline Canal to Westport Drain.

Land Use	I/NI	Highline Canal @ Hwy 99	Highline Canal @ Lombardy Ave.	Highline Canal - Stanislaus County portion	Hilmar Drain @ Central Ave.	Livingston Drain @ Robin Ave	Merced River @ Santa Fe	Miles Creek @ Reilly Rd	Mustang Creek @ East Ave.	Mustang Creek - Stanislaus County portion	Prairie Flower Drain @ Crows Landing Rd.	Silva Drain @ Meadow Dr	South Slough @ Quinley Ave.	Westport Drain @ Vivian Rd
Citrus	I			76.7			45.4	3.3					299.2	
Deciduous nut and fruit	I	7,988.6	4,012.0	12,563.6	31.7	2,366.7	14,109.4	1,767.0	3,304.2	695.9			593.2	432.0
Field crop	I	929.8	684.9	5,976.4	1,365.2	58.3	5,421.8	3,927.4	1,595.4	194.9	2,673.6	60.7		575.3
Field crop	NI						140.1						330.7	
Grain and hay	I	550.7	550.7	75.6		176.1	700.3	547.5	701.3	343.9				
Grain and hay	NI						226.3	535.9					62.0	
Idle	I	221.4	80.4			17.9	141.1	144.8						
Idle	NI						276.2							
Wild vegetation	NI	184.6	142.0	365.2		130.9	5,005.6	568.1	193.4					
Water surface	NI	18.9	18.9	163.8	11.7	2.3	256.2	81.7	5.0		30.4		645.3	
Pasture	I	791.4	734.6	4,034.6	708.6	57.5	4,483.5	2,200.7	320.0		1,406.3	7.9		264.1
Pasture	NI	335.7	335.7	16.4		19.8	100.9							
Rice	I												201.5	
Feedlot, dairy, farmstead	NI	353.8	189.9	993.7	223.0	145.7	1,098.9	474.9	31.1		442.6		145.7	126.3
Truck, nursery, berry	I	261.1		110.0		921.9	278.4	1,072.8					42.7	
Urban	NI	456.7	192.1	146.1		37.1	338.6	860.3						
Golfcourse, cemetery, landscape	NI	4.1	1.2				3.9	15.0						7.0
Vineyard	I	599.2	217.0	824.0		57.8	2,616.0		1,327.7	3,916.5				202.4
Total acres		**12,695.9**	**7,159.4**	**25,346.2**	**2,340.2**	**3,991.8**	**35,242.5**	**12,199.6**	**7,478.1**	**5,151.1**	**4,552.8**	**68.7**	**2,320.2**	**1,607.1**
Irrigated acres		**11,342.2**	**6,279.5**	**23,660.9**	**2,105.5**	**3,656.1**	**27,795.8**	**9,663.5**	**7,248.6**	**5,151.1**	**4,079.9**	**68.7**	**1,136.6**	**1,473.8**

Administrative Record
Page 12269

Figure 8. Coalition map showing all site subwatersheds identified for sampling in 2008 storm season.

Land use designations are provided in Figure 12.



Administrative Record
Page 12270

Figure 9. Land use for sampling sites in Stanislaus County.

Land use designations are provided in Figure 12.

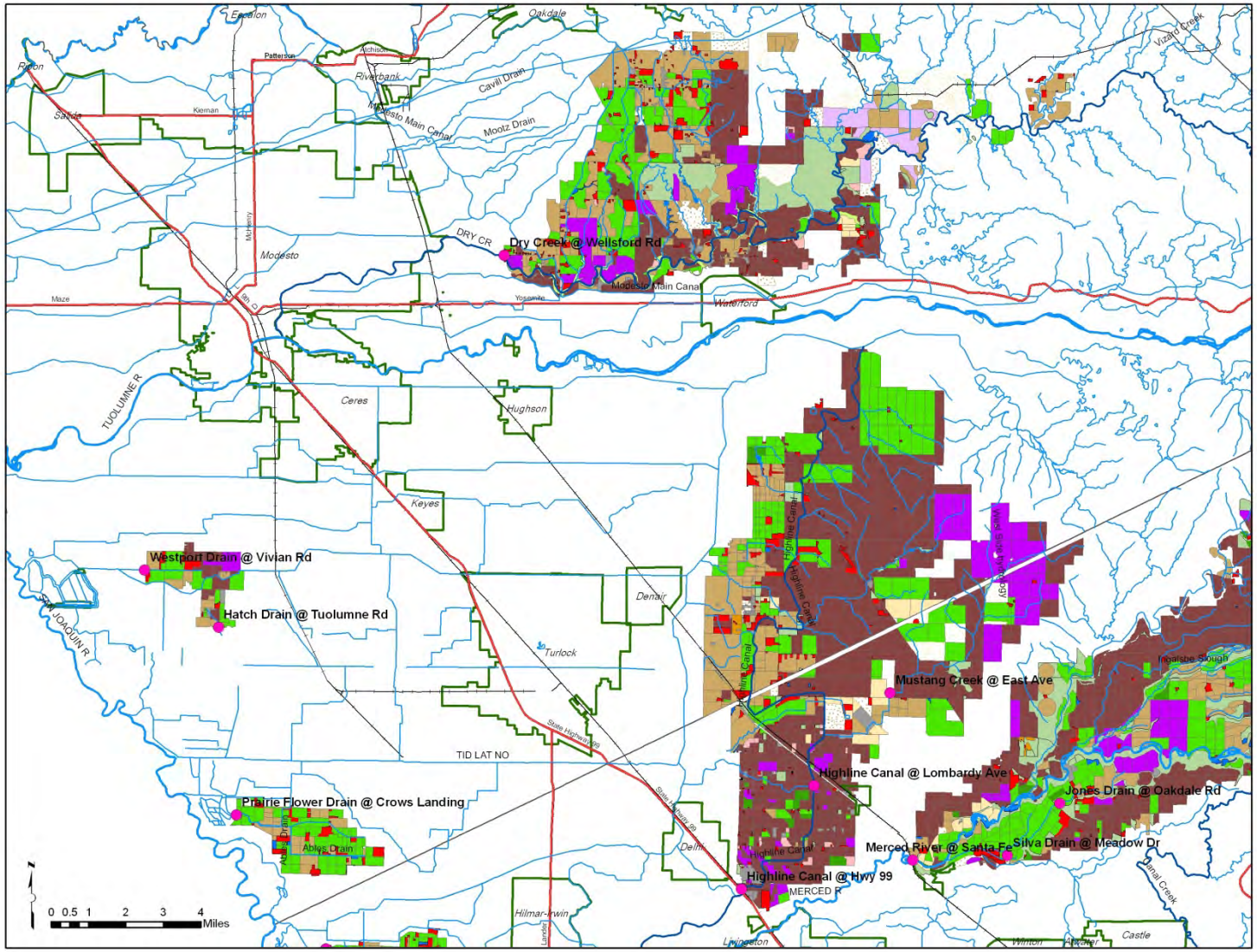
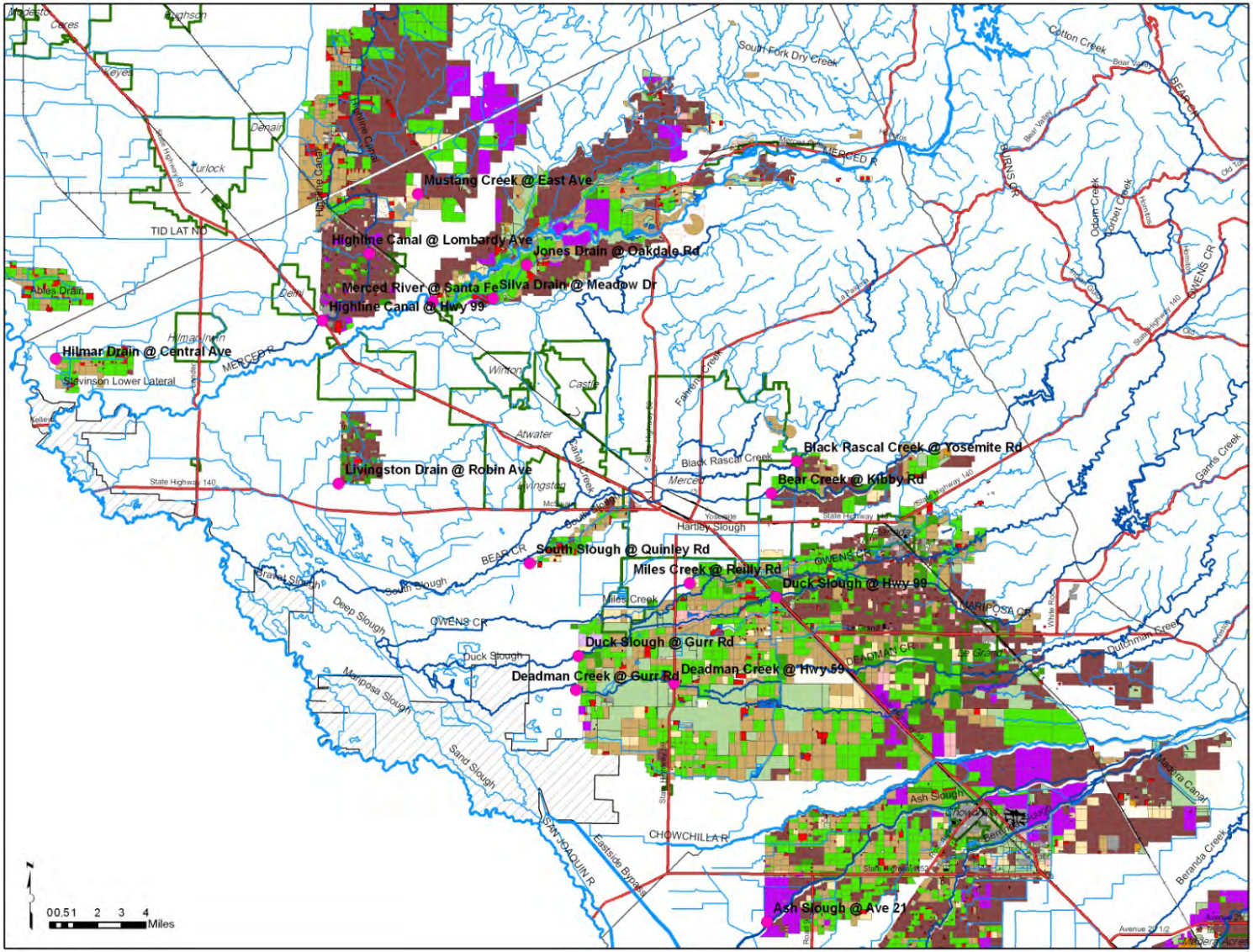


Figure 10. Land use for sampling sites in Merced County.

Land use designations are provided in Figure 12.



Administrative Record
Page 12272

Figure 11. Land use for sampling sites in Madera County.

Land use designations are provided in Figure 12.

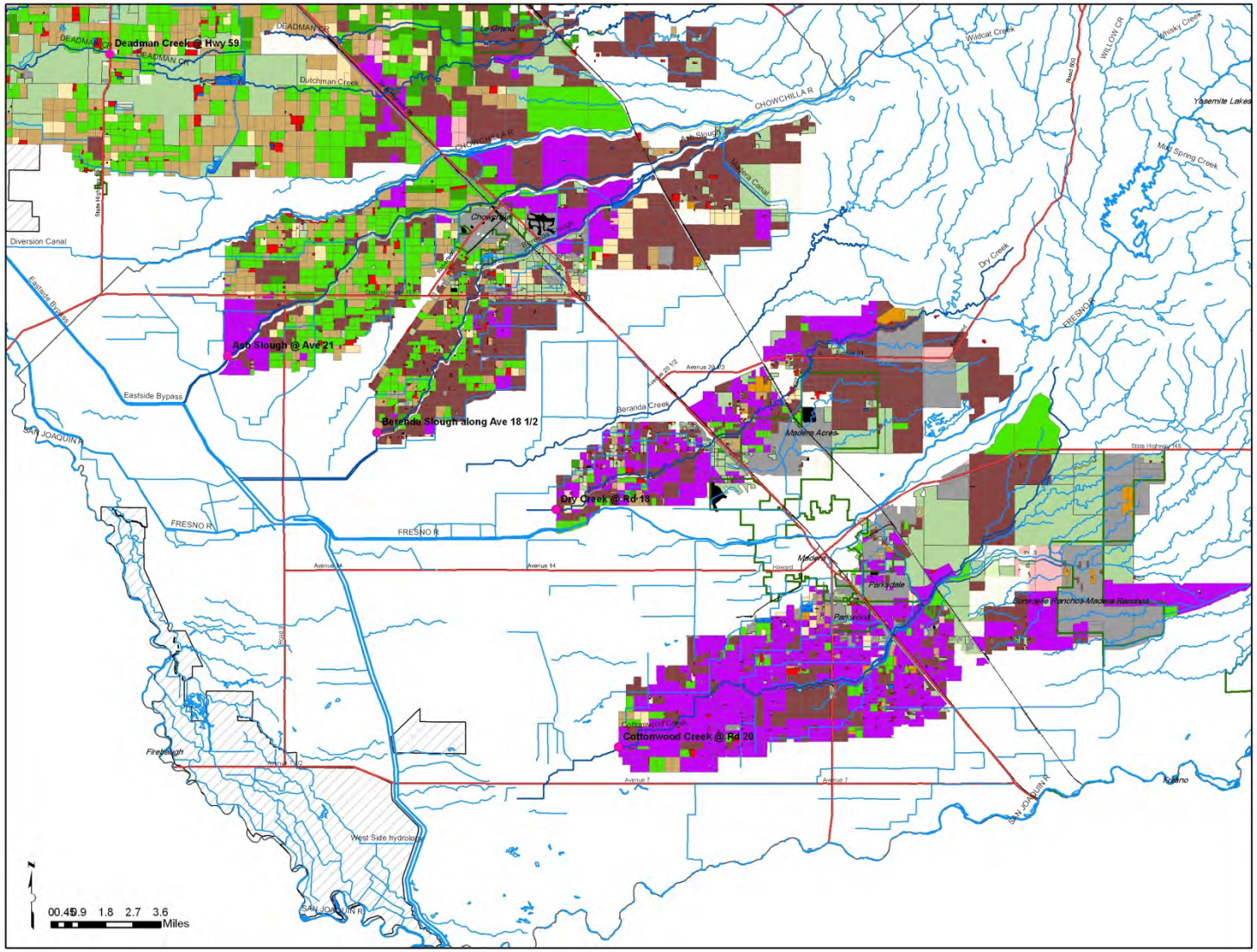
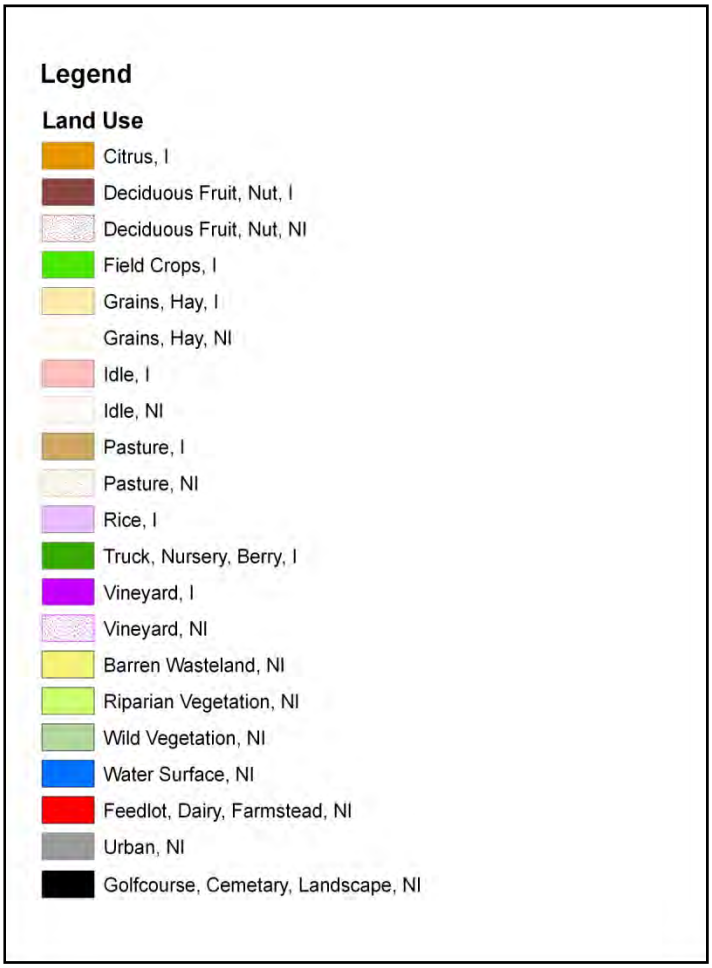


Figure 12. Legend for land use data.



Monitoring Results

Sample Details

Full monitoring results from the 2008 storm season are included in Appendix I. The results include field parameters, organics, inorganics including metals and *E. coli*, toxicity and calculated loads for any detectable analyte with corresponding site flow. Loads have been calculated for all detections (Table I-6) according to the following formula:

Instantaneous Load (µg/sec) = Discharge (cfs) X 28.317L x Concentration (milligram/L x 1,000 or µg/L).

The load values calculated and presented for pesticides or other constitutents in this report represent instantaneous loads only. These values should not be used to extrapolate loading over any period of time (e.g. weekly, monthly, seasonal or annual). The primary purpose for reporting instantaneous loads is to provide the Regional Water Board with a context for the concentrations of various constituents at the time that samples were collected.

Monitoring results include results from samples taken for normal monitoring and sediment toxicity monitoring including resampling due to toxicity. Each sampling location, sampling date, sampling time and type of monitoring is listed in Table 10.

Administrative Record
Page 12275

Table 10. Sample details for all 2008 storm season sorted by station name, sample date and monitoring event.

NM = Normal Monitoring (water column) including resampling due to toxicity. Sediment = Sediment sampling including resampling due to toxicity.

Station Name	Station Code	Monitoring Event	Season	Sample Date	Sample Time	Failure Reason	Sample Comments
Ash Slough @ Ave 21	545XASAAT	NM	Storm1	01/25/08	12:10	Dry	
Ash Slough @ Ave 21	545XASAAT	NM	Storm2	02/25/08	12:30	Dry	
Ash Slough @ Ave 21	545XASAAT	Sediment	Storm2	03/04/08	10:52	Dry	
Bear Creek @ Kibby Rd	535XBCAKR	NM	Storm1	01/24/08	16:00	none	
Bear Creek @ Kibby Rd	535XBCAKR	NM	Storm2	02/25/08	13:50	none	
Bear Creek @ Kibby Rd	535XBCAKR	Sediment	Storm2	03/04/08	15:30	none	
Berenda Slough along Ave 18 1/2	545XBSAAE	NM	Storm1	01/25/08	11:48	Dry	
Berenda Slough along Ave 18 1/2	545XBSAAE	NM	Storm2	02/25/08	12:10	Dry	
Berenda Slough along Ave 18 1/2	545XBSAAE	Sediment	Storm2	03/04/08	10:40	Dry	
Black Rascal Creek @ Yosemite Rd	535BRCAYR	NM	Storm1	01/24/08	17:00	none	
Black Rascal Creek @ Yosemite Rd	535BRCAYR	NM	Storm2	02/25/08	14:10	none	
Black Rascal Creek @ Yosemite Rd	535BRCAYR	NM	Storm2	03/04/08	12:20	none	Resampling event due to *Selenastrum* toxicity on 02/25/2008.
Black Rascal Creek @ Yosemite Rd	535BRCAYR	Sediment	Storm2	03/04/08	12:20	none	
Cottonwood Creek @ Rd 20	545XCCART	NM	Storm1	01/25/08	9:50	none	
Cottonwood Creek @ Rd 20	545XCCART	NM	Storm1	01/30/08	9:30	none	Resampling event due to *Pimephales* toxicity on 01/25/2008.
Cottonwood Creek @ Rd 20	545XCCART	NM	Storm2	02/25/08	9:40	none	
Cottonwood Creek @ Rd 20	545XCCART	Sediment	Storm2	03/04/08	9:20	none	
Cottonwood Creek @ Rd 20	545XCCART	Sediment	Storm2	03/28/08	9:06	Dry	Resampling event due to *Hyalella* toxicity on 03/04/08.
Deadman Creek (Dutchman) @ Gurr Rd	535XDCAGR	NM	Storm1	01/25/08	10:50	none	
Deadman Creek (Dutchman) @ Gurr Rd	535XDCAGR	NM	Storm2	02/25/08	9:50	none	

Administrative Record
Page 12276

Station Name	Station Code	Monitoring Event	Season	Sample Date	Sample Time	Failure Reason	Sample Comments
Deadman Creek (Dutchman) @ Gurr Rd	535XDCAGR	NM	Storm2	03/04/08	11:30	none	Resampling event due to *Selenastrum* toxicity on 02/25/2008.
Deadman Creek (Dutchman) @ Gurr Rd	535XDCAGR	Sediment	Storm2	03/04/08	11:30	none	
Deadman Creek @ Hwy 59	535DMCAHF	NM	Storm1	01/25/08	12:00	none	
Deadman Creek @ Hwy 59	535DMCAHF	NM	Storm1	01/30/08	13:50	none	Resampling event due to *Selenastrum* toxicity on 01/25/2008.
Deadman Creek @ Hwy 59	535DMCAHF	NM	Storm2	02/25/08	10:50	none	
Deadman Creek @ Hwy 59	535DMCAHF	Sediment	Storm2	03/04/08	14:20	none	
Dry Creek @ Rd 18	545XDCARE	NM	Storm1	01/25/08	11:10	none	Experienced *S. capricornutum* toxicity; site not resampled on 01/30/08 due to a laboratory communication error.
Dry Creek @ Rd 18	545XDCARE	NM	Storm2	02/25/08	11:10	none	
Dry Creek @ Rd 18	545XDCARE	NM	Storm2	03/04/08	10:00	none	Resampling event due to *Selenastrum* toxicity on 02/25/2008.
Dry Creek @ Rd 18	545XDCARE	Sediment	Storm2	03/04/08	10:00	none	
Dry Creek @ Wellsford Rd	535XDCAWR	NM	Storm1	01/24/08	9:10	none	
Dry Creek @ Wellsford Rd	535XDCAWR	NM	Storm1	01/30/08	13:40	none	Site inadvertenly resampled due to a laboratory communication error.
Dry Creek @ Wellsford Rd	535XDCAWR	NM	Storm2	02/26/08	8:30	none	
Dry Creek @ Wellsford Rd	535XDCAWR	NM	Storm2	03/04/08	8:20	none	Resampling event due to *Selenastrum* toxicity on 02/26/2008.
Dry Creek @ Wellsford Rd	535XDCAWR	Sediment	Storm2	03/04/08	8:20	none	
Dry Creek @ Wellsford Rd	535XDCAWR	Sediment	Storm2	03/28/08	14:40	none	Resampling event due to *Hyalella* toxicity on 03/04/08.
Duck Slough @ Gurr Rd	535XDSAGR	NM	Storm1	01/25/08	9:40	none	

Administrative Record
Page 12277

Station Name	Station Code	Monitoring Event	Season	Sample Date	Sample Time	Failure Reason	Sample Comments
Duck Slough @ Gurr Rd	535XDSAGR	NM	Storm2	02/25/08	9:10	none	
Duck Slough @ Gurr Rd	535XDSAGR	Sediment	Storm2	03/04/08	13:50	none	
Duck Slough @ Hwy 99	535XDSAHN	NM	Storm1	01/25/08	13:10	none	
Duck Slough @ Hwy 99	535XDSAHN	NM	Storm2	02/25/08	12:40	none	
Duck Slough @ Hwy 99	535XDSAHN	Sediment	Storm2	03/04/08	15:30	none	
Hatch Drain @ Tuolumne Rd	535XHDATR	NM	Storm1	01/24/08	10:00	none	
Hatch Drain @ Tuolumne Rd	535XHDATR	NM	Storm1	01/30/08	12:10	none	Resampling event due to *Selenastrum* toxicity on 01/25/2008.
Hatch Drain @ Tuolumne Rd	535XHDATR	NM	Storm2	02/26/08	9:20	none	
Hatch Drain @ Tuolumne Rd	535XHDATR	NM	Storm2	03/04/08	10:30	none	Resampling event due to *Selenastrum* toxicity on 02/26/2008.
Hatch Drain @ Tuolumne Rd	535XHDATR	Sediment	Storm2	03/04/08	10:30	none	
Hatch Drain @ Tuolumne Rd	535XHDATR	Sediment	Storm2	03/28/08	13:40	none	Resampling event due to *Hyalella* toxicity on 03/04/08.
Highline Canal @ Hwy 99	535XHCHNN	NM	Storm1	01/24/08	14:40	none	
Highline Canal @ Hwy 99	535XHCHNN	NM	Storm2	02/26/08	13:00	none	
Highline Canal @ Hwy 99	535XHCHNN	NM	Storm2	03/04/08	12:40	none	Resampling event due to *Selenastrum* toxicity on 02/26/2008.
Highline Canal @ Hwy 99	535XHCHNN	Sediment	Storm2	03/04/08	12:40	none	
Highline Canal @ Hwy 99	535XHCHNN	Sediment	Storm2	03/28/08	10:30	none	Resampling event due to *Hyalella* toxicity on 03/04/08.
Highline Canal @ Lombardy Ave	535XHCALR	NM	Storm1	01/24/08	12:50	none	
Highline Canal @ Lombardy Ave	535XHCALR	NM	Storm1	01/30/08	12:20	none	Resampling event due to *Ceriodaphnia* toxicity on 01/24/2008.
Highline Canal @ Lombardy Ave	535XHCALR	NM	Storm2	02/26/08	12:00	none	
Highline Canal @ Lombardy Ave	535XHCALR	NM	Storm2	03/04/08	13:20	none	Resampling event due to *Pimephales* toxicity on 02/26/2008.
Highline Canal @ Lombardy Ave	535XHCALR	Sediment	Storm2	03/04/08	13:20	none	

Administrative Record
Page 12278

Station Name	Station Code	Monitoring Event	Season	Sample Date	Sample Time	Failure Reason	Sample Comments
Highline Canal @ Lombardy Ave	535XHCALR	Sediment	Storm2	03/28/08	11:30	none	Resampling event due to *Hyalella* toxicity on 03/04/08.
Hilmar Drain @ Central Ave	535XHDACA	NM	Storm1	01/24/08	14:10	none	
Hilmar Drain @ Central Ave	535XHDACA	NM	Storm2	02/26/08	11:20	none	
Hilmar Drain @ Central Ave	535XHDACA	Sediment	Storm2	03/04/08	16:40	none	
Hilmar Drain @ Central Ave	535XHDACA	Sediment	Storm2	03/28/08	13:10	none	Resampling event due to *Hyalella* toxicity on 03/04/08.
Livingston Drain @ Robin Ave	535XLDARA	NM	Storm1	01/24/08	15:40	none	
Livingston Drain @ Robin Ave	535XLDARA	NM	Storm2	02/26/08	12:50	none	
Livingston Drain @ Robin Ave	535XLDARA	NM	Storm2	03/04/08	13:10	Dry	Resampling event due to *Selenastrum* toxicity on 02/26/2008.
Livingston Drain @ Robin Ave	535XLDARA	Sediment	Storm2	03/04/08	13:10	Dry	
Merced River @ Santa Fe	535XMRSFD	NM	Storm1	01/24/08	11:40	none	
Merced River @ Santa Fe	535XMRSFD	NM	Storm1	01/30/08	11:40	none	Resampling event due to *Ceriodaphnia* toxicity on 01/24/2008.
Merced River @ Santa Fe	535XMRSFD	NM	Storm2	02/26/08	11:00	none	
Miles Creek @ Reilly Rd	535XMCARR	NM	Storm1	01/25/08	13:40	none	
Miles Creek @ Reilly Rd	535XMCARR	NM	Storm1	01/30/08	10:40	none	Resampling event due to *Ceriodaphnia* toxicity on 01/25/2008.
Miles Creek @ Reilly Rd	535XMCARR	NM	Storm2	02/25/08	11:50	none	
Miles Creek @ Reilly Rd	535XMCARR	Sediment	Storm2	03/04/08	15:00	none	
Mustang Creek @ East Ave	535XMCAEA	NM	Storm1	01/24/08	10:40	none	
Mustang Creek @ East Ave	535XMCAEA	NM	Storm1	01/30/08	12:40	none	Resampling event due to *Ceriodaphnia* toxicity on 01/24/2008.
Mustang Creek @ East Ave	535XMCAEA	NM	Storm2	02/26/08	9:50	none	
Mustang Creek @ East Ave	535XMCAEA	NM	Storm2	03/04/08	14:00	none	Resampling event due to *Selenastrum* toxicity on 02/26/2008.
Mustang Creek @ East Ave	535XMCAEA	Sediment	Storm2	03/04/08	14:00	none	

Administrative Record
Page 12279

Station Name	Station Code	Monitoring Event	Season	Sample Date	Sample Time	Failure Reason	Sample Comments
Mustang Creek @ East Ave	535XMCAEA	Sediment	Storm2	03/28/08	12:20	none	Resampling event due to *Hyalella* toxicity on 03/04/08.
Prairie Flower Drain @ Crows Landing Rd	535XPFDCL	NM	Storm1	01/24/08	12:20	none	
Prairie Flower Drain @ Crows Landing Rd	535XPFDCL	NM	Storm1	01/30/08	12:40	none	Resampling event due to *Selenastrum* toxicity on 01/25/2008.
Prairie Flower Drain @ Crows Landing Rd	535XPFDCL	NM	Storm2	02/26/08	10:10	none	
Prairie Flower Drain @ Crows Landing Rd	535XPFDCL	NM	Storm2	03/04/08	11:30	none	Resampling event due to *Selenastrum* toxicity on 02/26/2008.
Prairie Flower Drain @ Crows Landing Rd	535XPFDCL	Sediment	Storm2	03/04/08	11:30	none	
Silva Drain @ Meadow Dr	535XSDAMD	NM	Storm1	01/24/08	11:12	Dry	
Silva Drain @ Meadow Dr	535XSDAMD	NM	Storm2	02/26/08	10:30	Dry	
Silva Drain @ Meadow Dr	535XSDAMD	Sediment	Storm2	03/04/08	14:40	Dry	
South Slough @ Quinley Rd	535XSSAQR	NM	Storm1	01/25/08	8:50	Dry	
South Slough @ Quinley Rd	535XSSAQR	NM	Storm2	02/25/08	8:40	Dry	
South Slough @ Quinley Rd	535XSSAQR	Sediment	Storm2	03/04/08	13:33	Dry	
Westport Drain @ Vivian Rd	535XWDAVR	NM	Storm1	01/24/08	8:40	none	
Westport Drain @ Vivian Rd	535XWDAVR	NM	Storm2	02/26/08	8:30	none	
Westport Drain @ Vivian Rd	535XWDAVR	NM	Storm2	03/04/08	9:50	none	Resampling event due to *Selenastrum* toxicity on 02/26/2008.
Westport Drain @ Vivian Rd	535XWDAVR	Sediment	Storm2	03/04/08	9:50	none	

Administrative Record
Page 12280

Sampling and Analytical Methods Used

Sample collection criteria and field instruments are provided in Table 11 and Table 12. Analytical methods and reporting limits are provided in Table 13. All field sampling methods were performed as outlined in the standard operating procedures (SOPs) provided in the Quality Assurance Project Plan (QAPP). All analytical methods were performed as described in the QAPP.

Administrative Record
Page 12281

Table 11. Sampling procedures, containers, sample volumes, preservation and storage techniques, and holding times.

Parameter	Sample Container	Sample Volume[1]	Immediate Processing and Storage	Holding Time[2]
Physical Parameters[3]				
Color	Glass or polyethylene	500 mL	Store at 4°C	48 hours
Turbidity	Glass or polyethylene	150 mL	Store at 4°C	48 hours
Total Dissolved Solids	Polyethylene	500 mL	Store at 4°C	7 days
Drinking Water				
E. coli (pathogens)	Polyethylene (sterile)	100 mL	Store at 4°C	24 hours[4]
Total Organic Carbon	Amber Glass VOA, PTFE-lined cap	125 mL	Preserve w/HCL; Store at 4°C	28 days
Toxicity				
Aquatic bioassays	Amber glass	5 gallons	Store at 4°C	36 hours
Sediment bioassays	Glass	1 liter (x2)	Store at 4°C	14 days
Pesticides				
Carbamates	Amber Glass	1 liter	Store at 4°C; Extract within 7 days	40 days
Organochlorines	Amber Glass	1 liter		
Organophosphates	Amber Glass	1 liter		
Pyrethroids	Amber Glass	1 liter		
Herbicides (general)	Amber Glass	1 liter		
Herbicides (paraquat)	Polyethylene	1 liter		
Herbicides (glyphosate)	Amber Glass VOA	40 ml (x2)	Store at 4°C, freeze within 2 weeks	6 months
Nutrients				
TKN, Ammonia, and Total Phosphorus	Polyethylene	500 mL	Preserve to ≤ pH 2 with H_2SO_4; Store at 4°C	28 days
Nitrate as NO3, Nitrite as N, and Soluble Ortho-Phosphate	Polyethylene	1000 mL	Store at 4°C	48 hours
Metals/Trace Elements				
Trace elements[5]	Polyethylene	500 mL	Filter as necessary; Preserve to ≤ pH 2 with HNO_3	40 days

1. Additional volumes may be required for QC analyses; NA = Not Applicable
2. Holding time after initial preservation or extraction.
3. Volume of water necessary to analyze the physical parameters is typically combined in multiple 1L polyethylene bottles, which provides sufficient volume for re-analyses and lab spike duplicates. This is only possible when the same laboratory provides the analyses for all of the physical parameters.
4. Samples for bacteria analyses should be set up as soon as possible.
5. To include arsenic, boron, cadmium, copper, lead, nickel, selenium, and zinc.

Table 12. Field parameters and instruments used to collect measurements.

Parameter	Instrument
Dissolved oxygen	YSI Model 556
Temperature	YSI Model 556
pH	YSI Model 556
Specific Conductance	YSI Model 556
Discharge	Marsh-McBirney Flow Meter

Administrative Record
Page 12283

Table 13. Analytical methods, target reporting limits (RL) and units.

Analyte	Method	RL	Units
Physical Parameters			
Color	EPA 100.2	5.0	color units
Turbidity	EPA 180.1	1.0	NTU
Dissolved Solids, Total	EPA 160.1	10	mg/L
Drinking Water Parameters			
Escherischia coli (*E. coli*)	SM 9223	2	MPN/100 mL
Total Organic Carbon	EPA 415.1	0.5	mg/L
Nutrients			
Total Kjeldahl Nitrogen	EPA 351.3	0.5	mg/L
Nitrate as N	EPA 300.0	0.05	mg/L
Nitrite as N	EPA 354.1	0.05	mg/L
Ammonia	EPA 350.2	0.10	mg/L
Hardness	EPA 130.2	10	mg/L
Total Phosphorus	EPA 365.2	0.01	mg/L
Soluble Orthophosphate	EPA 365.2	0.01	mg/L
Metals			
Arsenic	EPA 200.8	1	µg/L
Boron	EPA 200.8	10	µg/L
Cadmium	EPA 200.8	0.1	µg/L
Copper	EPA 200.8	0.5	µg/L
Lead	EPA 200.8	0.5	µg/L
Nickel	EPA 200.8	1	µg/L
Selenium	EPA 200.8	1	µg/L
Zinc	EPA 200.8	1	µg/L
Carbamate Pesticides			
Aldicarb	EPA 8321	0.5	µg/L
Carbaryl	EPA 8321	0.5	µg/L
Carbofuran	EPA 8321	0.5	µg/L
Methiocarb	EPA 8321	0.5	µg/L
Methomyl	EPA 8321	0.5	µg/L
Oxnamyl	EPA 8321	0.5	µg/L
Organochlorine Pesticides			
DDD	EPA 8081A	0.02	µg/L
DDE	EPA 8081A	0.01	µg/L
DDt	EPA 8081A	0.01	µg/L
Dicofol	EPA 8081A	0.1	µg/L
Dieldrin	EPA 8081A	0.01	µg/L
Endrin	EPA 8081A	0.01	µg/L
Methoxychlor	EPA 8081A	0.05	µg/L
Organophosphorus Pesticides			

Administrative Record
Page 12284

Analyte	Method	RL	Units
Azinphos-methyl	EPA 8141A	0.1	µg/L
Chlorpyrifos	EPA 8141A	0.02	µg/L
Diazinon	EPA 8141A	0.02	µg/L
Dimethoate	EPA 8141A	0.1	µg/L
Disulfoton	EPA 8141A	0.1	µg/L
Malathion	EPA 8141A	0.1	µg/L
Methamidophos	EPA 8141A	0.2	µg/L
Methidathion	EPA 8141A	0.1	µg/L
Parathion-methyl	EPA 8141A	0.1	µg/L
Phorate	EPA 8141A	0.2	µg/L
Phosmet	EPA 8141A	0.2	µg/L
Pyrethroid Pesticides			
Biphenthrin	EPA 8081A	0.05	µg/L
Cyfluthrin	EPA 8081A	0.05	µg/L
Cypermethrin	EPA 8081A	0.05	µg/L
Esfenvalerate	EPA 8081A	0.05	µg/L
Lambda-Cyhalothrin	EPA 8081A	0.05	µg/L
Permethrin	EPA 8081A	0.05	µg/L
Herbicides			
Atrazine	EPA 619	0.5	µg/L
Cyanazine	EPA 619	0.5	µg/L
Diuron	EPA 8321	0.5	µg/L
Glyphosate	EPA 547	5	µg/L
Linuron	EPA 8321	0.5	µg/L
Molinate	EPA 8141A	0.5	µg/L
Paraquat dichloride	EPA 549.1	0.5	µg/L
Simazine	EPA 619	0.5	µg/L
Thiobencarb	EPA 8141A	0.5	µg/L

Copy of Chain of Custody Forms

Original Chain of Custody (COC) forms have been scanned, converted to pdf and are provided in Appendix II. COCs were faxed by the contract laboratories to Michael L. Johnson, LLC after the receipt of samples by the laboratory. As such, they are complete and accurate records of sample handling and processing and reflect the timing of sample collection and delivery to the laboratories. Sample collection and delivery was performed according to the QAPP. If there were any discrepancies between the COC and sample delivery, the issues were resolved and documented either directly on the COC or on an anomaly form filled out by the laboratory. Documentation of COC anomalies can be found in Table II-1 of Appendix II.

Administrative Record
Page 12286

Lab and Field QC Results

Laboratory and field quality control (QC) results are included in Appendix III. Field duplicate and field blank results are included for organics, inorganics (including metals, physical parameters, nutrients and *E. coli*), and field duplicates for toxicity. Laboratory QC results include matrix spikes (MS) performed on both Coalition samples and samples from other projects, laboratory control spikes (LCS), laboratory blanks and laboratory duplicates. All control criteria are listed with the result and samples not meeting control criteria are flagged.

Administrative Record
Page 12287

Precision and Accuracy

Normal surface water monitoring occurred twice during the storm season of 2008 for 23 sites, with the following exceptions due to lack of water:

- Ash Slough @ Ave 21 (01/25/08, 02/25/08)
- Berenda Slough along Ave 18 ½ (01/25/08, 02/25/08)
- Silva Drain @ Meadow Dr (01/24/08, 02/26/08)
- South Slough @ Quinley Rd (01/25/08, 02/25/08)

Resampling to test for water column toxicity persistence occurred at the following sites with the exception of Dry Creek @ Rd 18 (sample toxic on 01/25/08) which was not resampled due to a laboratory communication error. Dry Creek @ Wellsford Rd was resampled instead and did not exhibit toxicity in the original sample on 01/24/08 or resample on 01/30/08):

- Black Rascal Creek @ Yosemite Rd (03/04/08)
- Cottonwood Creek @ Rd 20 (01/30/08)
- Deadman Creek @ Gurr Rd (03/04/08)
- Deadman Creek @ Hwy 59 (01/30/08)
- Dry Creek @ Rd 18 (03/04/08)
- Dry Creek @ Wellsford Rd (01/30/08, 03/04/08)
- Hatch Drain @ Tuolumne Rd (01/30/08, 03/04/08)
- Highline Canal @ Hwy 99 (03/04/08)
- Highline Canal @ Lombardy Ave (01/30/08, 03/04/08)
- Livingston Drain @ Robin Ave (03/04/08)
- Merced River @ Santa Fe (01/30/08)
- Miles Creek @ Reilly Rd (01/30/08)
- Mustang Creek @ East Ave (01/30/08, 03/04/08)
- Prairie Flower Drain @ Crows Landing Rd (01/30/08, 03/04/08)
- Westport Drain @ Vivian Rd (03/04/08)

During water column toxicity resampling one site was dry and therefore not sampled:

- Livingston Drain @ Robin Ave (03/04/08)

Sediment sampling occurred once during the storm season during the month of March. The following sites were not sampled due to a lack of water:

- Ash Slough @ Ave 21 (03/04/08)
- Berenda Slough along Ave 18 ½ (03/04/08)
- Livingston Drain @ Robin Ave (03/04/08)
- Silva Drain @ Meadow Dr (03/04/08)
- South Slough @ Quinley Rd (03/04/08)

Resampling to test for sediment toxicity persistence occurred at the following sites:

Administrative Record
Page 12288

- Dry Creek @ Wellsford Rd (03/28/08)
- Highline Canal @ Hwy 99 (03/28/08)
- Highline Canal @ Lombardy Ave (03/28/08)
- Hilmar Drain @ Central Ave (03/28/08)
- Mustang Creek @ East Ave (03/28/08)

During sediment the following site was dry and therefore not sampled:

- Cottonwood Creek @ Rd 20 (03/28/08)

Chemistry

Due to the addition of new sites during the irrigation season of 2006, not all sites are sampled for all constituents since they are part of Phase I monitoring. In addition some constituents at specific sites have been dropped due to no exceedances in two or more years (see Table 6). Therefore, for normal monitoring, not including laboratory or field QCs, 38 organic (pesticides including carbamates, organochlorines, organophoshates and herbicides), 26 organic (pyrethroid pesticides), 36 *E. coli*, 38 physical parameter, and 32 nutrient and metal samples were collected and analyzed. There was 100% completeness for environmental samples collected for chemistry analyses.

For each storm monitoring event, one field duplicate and field blank were collected for each constituent to meet the field QC requirement of 5%. Field blanks and duplicates comprised 8-12% of organic samples, 8% of *E. coli* samples, 8% of physical parameter samples, 9% of nutrient samples and 6-9% of metal samples. Field duplicate are examined for field precision based on the relative percent difference (RPD) between the duplicate and the environmental sample (RPD < 25). When water is sampled at high flows, there is a higher chance that the field duplicate does meet data quality objectives due to the heterogeneity of the water column. Field duplicates are collected by hand by holding both bottles under water at the same time. However, the samples may represent different locations along the cross section of the water body.

For some constituents the environmental sample may exceed the amount that the detector can detect and therefore requires a dilution. The result reported is the amount found in the diluted sample multiplied by the dilution factor to represent the amount of the analyte present in the original sample. The dilution factor is recorded and the reporting limit (RL) is generally increased by multiplying the RL for that analyte by the dilution factor. There are times that the RL is increased higher than this value based on method requirements. Therefore, for each dilution that occurs, there is a corresponding increase in the limit of quantification.

For pesticides such as paraquat, co-elution, also referred to as matrix interference, may cause the RL to be raised and the sample is flagged. In such cases the dilution factor (DF) is recorded in the laboratory comments for each sample.

All results are reported in the Monitoring Results section of this report (Appendix I). Each result is flagged if it does not meet data quality objectives (acceptability criteria) using SWAMP codes and can also be found in the SWAMP comparable database managed by the Coalition and posted on the UC Davis Center for Environmental Data Exchange Network (CEDEN) ftp site (ftp://aeal-FTP.ucdavis.edu). A review of the number of samples analyzed and the percentage per analyte that meets acceptability criteria are listed in the tables following this section. A brief overview is listed below to assess overall precision and accuracy per analyte (all pesticides are grouped and discussed together).

- Color: One hundred percent of field blanks were less than the RL. Sixty-seven percent of field duplicates had RPDs less than 25. Laboratory control spikes and lab blanks were run with each color batch and all met laboratory QC criteria. Lab duplicates were recorded by the laboratory to access precision and 100% had RPDs less than 25.

- Hardness: One hundred percent of all field blanks and field duplicates met acceptance criteria. All laboratory QCs met quality criteria. Lab control spikes, matrix spikes, matrix spike duplicates, and lab blanks were run with every batch and all met precision and accuracy requirements.

- Total Dissolved Solids (TDS): One hundred percent of field blanks and field duplicates met acceptance criteria. Lab blanks and laboratory duplicates were run with every batch and met acceptance criteria for 100% of samples. Matrix spikes cannot be performed for TDS.

- Turbidity: One hundred percent of field blanks and 67% of field duplicates met acceptance criteria. Lab blanks were run with every batch and 100% were less than the RL. Laboratory control spikes and laboratory duplicates were analyzed with each batch and 100% of the samples met acceptance criteria. Matrix spikes cannot be performed for turbidity.

- Nitrate as N: One hundred percent of field duplicates and field blanks met acceptance criteria. Lab blanks were run with every batch and were less than the RL for all samples. Lab control spikes were within acceptability criteria for all batches. Matrix spikes were performed in each batch with 75% meeting acceptability requirements and matrix spike duplicates met 100% of acceptability requirement for precision.

- Ammonia as N: One hundred percent of field blanks met acceptance criteria. Thirty-three percent of field duplicates had an RPD less than 25. The field duplicate collected on January 25, 2008 had an RPD of 29.7 and the other field duplicate collected on February 26, 2008 had an RPD of 68. The February field duplicate had a result of 0.2 µg/L whereas the environmental sample had a result of 0.099 µg/L which was below the RL and considered detected but not

quantifiable (DNQ). The Coalition treats results that are below the RL as real values however it is important to note that these results are not above a limit that the laboratory can accurately detect and therefore should be considered estimates. Lab blanks and laboratory control spikes were run with every batch and 100% were less than the RL. Ninety percent of matrix spikes and 100% of matrix spike duplicates were within acceptability criteria.

- Nitrogen, Total Kjeldahl (TKN): One hundred percent of field blanks and 67% of field duplicates met acceptance criteria. Lab blanks were run with every batch and were less than the RL. Lab control spikes were within acceptability criteria for all batches. Matrix spikes were performed in each batch with 92% meeting acceptability requirements. Matrix spike duplicates met 100% of acceptability requirement for precision.

- Nitrite as N: One hundred percent of field duplicates and field blanks met acceptance criteria. Lab blanks were run with every batch and were less than the RL. Lab control spikes, matrix spikes and matrix spike duplicates were within acceptability criteria for all batches meeting requirements of accuracy and precision.

- Orthophosphate as P: One hundred percent of field duplicates and field blanks met acceptance criteria. Lab blanks were run with every batch and were less than the RL. Lab control spikes were within acceptability criteria for all batches. Matrix spikes were performed in each batch with 75% meeting acceptability criteria and 100% of matrix spike duplicates meeting the requirements of accuracy and precision.

- Phosphate as P: One hundred percent of field blanks and 67% of field duplicates met acceptance criteria. Lab blanks were run with every batch and were less than the RL. Lab control spikes, matrix spikes and matrix spike duplicates were within acceptability criteria for all batches meeting requirements of accuracy and precision.

- Total Organic Carbon (TOC): Sixty-seven percent of field blanks and field duplicates collected met acceptance criteria. The detection in the field blank sample that exceeded the acceptance criteria (<RL or <1/5 the environmental sample) was 1.4 µg/L (environmental sample = 6.5 µg/L). Contamination in the field may be due to contamination of the field blank water, the field blank storage container, the field blank bottle, or contamination from the sampler. The water analyzed in the field blank was de-ionized (DI) water collected from UC Davis and stored in a high-density polyethylene (HDPE) carboy which is used only to store DI water. The field blank bottle came directly from the laboratory and is certified pre-clean. The bottle was not opened until right before filling it with DI water. Clean gloves were used when filling the bottle with DI water from the carboy and neither the lid nor the opening of the bottle was touched. The cap

was immediately returned to the bottle and screwed on tightly after filling with DI water. All sampling SOPs (which include the above steps to prevent contamination) were followed. Other sources of contamination may have occurred during transport from the field to the laboratory (all bottles were closed tightly and only touched when being put in the cooler by the sampler and taken from the cooler by the laboratory with gloved hands) and/or during the laboratory extraction process. The associated lab blank had no total organic carbon detections. It is difficult to know for sure the source of contamination and both the samplers and the laboratory have been informed of the issue. Lab control spikes laboratory duplicates were within acceptability criteria for all batches. Matrix spikes were performed in each batch with 67% meeting acceptability requirements and matrix spike duplicates met 100% of acceptability requirement for precision.

- Total Metals: One hundred percent of field blanks met field precision criteria. All field duplicates, except for cadmium and selenium, met acceptance criteria. Sixty-seven percent of cadmium and selenium field duplicates had RPDs less than 25. Field duplicate RPDs outside of criteria were 33.3 and 38 for cadmium and selenium, respectively. Due to past detections in field blanks, travel blanks were sent from the lab and traveled with the sampling crew from beginning to end. All travel blanks met acceptability criteria of being less than the RL. Laboratory blanks were run for each metals batch and 100% of samples met acceptability criteria. Laboratory control spikes were within acceptable recovery limits for 100% of samples run. All matrix spike and matrix spike duplicate samples met the requirements of accuracy and precision (RPD < 25).

- *E. coli:* Sterility checks, or laboratory blanks, negative control and positive control samples were run for each batch. One hundred percent of lab blanks performed by the laboratory were less than the RL. One hundred percent of field blanks collected had *E. coli* numbers less than the RL of 1. R_{log}s were performed on *E. coli* laboratory duplicates by Caltest Laboratories. The mean R_{log} for the laboratory was calculated to be 0.40. This value multiplied by 3.27 resulted in a precision criterion of 1.30. All laboratory duplicates had R_{log}s below the criteria acceptance level. RPDs were also calculated for E. coli laboratory duplicates and 100% were less than 25. Due to the nature of the analysis method and *E. coli* distribution within the water column, it is not possible to use RPDs to assess precision, however field duplicate RPDs have been recorded to monitor the variation in duplicates over time analyzed by the lab.

- Pesticides: One hundred percent of field blanks collected met acceptability criteria. One hundred percent of field duplicates collected met acceptability criteria of RPDs <25 except for simazine (a single sample was above criteria with an RPD of 27). The field crews were notified of the high RPD; all field SOPs were followed including collecting the environmental and field duplicate samples at the same time. Storm events tend to cause turbid waters due to increased

sediment mobilization. A water body that is not well mixed across the width of the channel can result in unequal concentrations of a pesticide.

For the storm season, pesticides were analyzed in eight different groups: pyrethroids (EPA 8081A), organochlorines (EPA 8081A), organophosphates (EPA 8141A), carbamates (EPA 8321A), methamidophos (EPA 8141A), paraquat (EPA 549.2), glyphosate (EPA 547), and triazines (EPA 619). Lab blanks were performed for each batch and met acceptability criteria for all analysis. Matrix spikes and lab control spikes were performed for each batch to assess precision and accuracy as well as possible matrix interference. Either a matrix spike duplicate and/or a lab control spike duplicate were performed per batch to assess precision. Surrogates were run for each analysis except for paraquat and glyphosate. Surrogate recoveries were within specific acceptance criteria for 94% of all samples analyzed. Laboratory control spikes and laboratory control spike duplicates were within acceptability criteria for 100% of all analytes except for paraquat (86% of laboratory control spikes met acceptability requirements). One hundred percent of matrix spikes were within acceptability criteria except for cyanazine (75% were within recovery criteria) and paraquat (none of the matrix spikes were within critiera). Paraquat analysis is difficult to perform due to matrix interferences; paraquat tends to bind to suspended solids in the sample and therefore recoveries of matrix spike samples are consistently low. The Coalition switched laboratories prior to the storm season in hopes that the new laboratory would have improved matrix spike recoveries. The Coalition will discuss with the laboratory measures to improve matrix spike recoveries. Laboratory precision, as assessed by the RPD of laboratory duplicates, met acceptability criteria in 100% of matrix spike duplicates for all samples. All batches with laboratory QCs outside of acceptability criteria have been flagged in addition to the specific sample acceptability criteria. If a surrogate was outside of acceptability criteria, the surrogate was flagged as well as the associated sample within that batch. Batches are approved by evaluating all measures of precision and accuracy such that although a single QC sample may be outside of acceptability criteria, the entire batch may be accepted due to other QCs within that batch meeting acceptability criteria.

Hold times for all chemistry analysis were met except for one color sample and eight nitrate samples. The color sample was performed a few hours past the 48 hour hold time due to a laboratory error. The nitrate samples were run overnight and due to an instrument malfunction the remaining eight samples were run past the 48 hour hold time.

Toxicity

For aquatic toxicity tests, the acceptability of test results is determined primarily by performance-based criteria for test organisms, culture and test conditions, and the results of control bioassays. Control bioassays include monthly reference toxicant

testing and negative and solvent controls (for TIEs). Test acceptability requirements are documented in the method documents for each bioassay method and are included in the QAPP. In addition to the QA requirements for the toxicity testing methods, a minimum of 5% of the samples collected are required to be collected as field duplicates. Field duplicates were collected every sampling event such that the overall rate of field duplicates would be at least 5% of all samples including management plan samples and resamples due to toxicity during normal monitoring. The overall percentage of field duplicates are as follows: *Ceriodaphnia* 7% *Pimephales* 7%, *Selenastrum* 6% and *Hyalella* 4%.

- Water Column Toxicity: Field duplicates were collected during each storm event and were tested for *Ceriodaphnia, Selenastrum, and Pimephales*. For these three species RPDs for all field duplicates were within acceptability criteria (RPD < 25) except for *Selenastrum*, which had 67% of field duplicate samples meeting the acceptability criteria. All tests met holding time requirements (<36 hrs), water quality requirements and control requirements (as listed in the EPA method guidelines).

- Sediment Toxicity: Sediment was collected on March 4, 2008 and resampled on March 28, 2008. Three of the four ice chests containing samples from the March 4 sampling event arrived at Nautilus on March 7. Due to courier error, the remaining ice chest arrived on March 10. All samples were received in good condition and within temperature range requirements. Once received the samples were moved into a 4°C refrigerator.

  One field duplicate was collected and was within acceptability criteria. One hundred percent of the sediment samples had laboratory controls within acceptability criteria. All sediment samples met holding time criteria.

Table 14. ESJWQC summary of field blank quality control sample evaluations.

Samples were collected during the storm season of 2008 and are sorted by method and analyte.

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8321A CARB	Aldicarb	<RL or < (env sample/5)	3	3	100.00
EPA 8321A CARB	Carbaryl	<RL or < (env sample/5)	3	3	100.00
EPA 8321A CARB	Carbofuran	<RL or < (env sample/5)	3	3	100.00
EPA 8321A CARB	Methiocarb	<RL or < (env sample/5)	3	3	100.00
EPA 8321A CARB	Methomyl	<RL or < (env sample/5)	3	3	100.00
EPA 8321A CARB	Oxamyl	<RL or < (env sample/5)	3	3	100.00
EPA 8321A CARB	Diuron	<RL or < (env sample/5)	3	3	100.00
EPA 8321A CARB	Linuron	<RL or < (env sample/5)	3	3	100.00
EPA 619	Atrazine	<RL or < (env sample/5)	3	3	100.00
EPA 619	Cyanazine	<RL or < (env sample/5)	3	3	100.00
EPA 619	Simazine	<RL or < (env sample/5)	3	3	100.00
EPA 547M	Glyphosate	<RL or < (env sample/5)	3	3	100.00
EPA 549.2M	Paraquat dichloride	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	DDD(p,p')	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	DDE(p,p')	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	DDT(p,p')	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	Dicofol	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	Dieldrin	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	Endrin	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	Methoxychlor	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	Bifenthrin	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	Cyfluthrin, total	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	Cypermethrin, total	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	Esfenvalerate/Fenvalerate, total	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	Cyhalothrin, lambda, total	<RL or < (env sample/5)	3	3	100.00
EPA 8081A	Permethrin, total	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Azinphos methyl	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Chlorpyrifos	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Diazinon	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Dimethoate	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Disulfoton	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Malathion	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Methidathion	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Parathion, Methyl	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Phorate	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Phosmet	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Molinate	<RL or < (env sample/5)	3	3	100.00

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8141A OP	Thiobencarb	<RL or < (env sample/5)	3	3	100.00
EPA 8141A OP	Methamidophos	<RL or < (env sample/5)	3	3	100.00
EPA 110.2	Color	<RL or < (env sample/5)	3	3	100.00
EPA 130.2	Hardness as CaCO3	<RL or < (env sample/5)	2	2	100.00
EPA 160.1	Total Dissolved Solids	<RL or < (env sample/5)	3	3	100.00
EPA 180.1	Turbidity	<RL or < (env sample/5)	3	3	100.00
EPA 300.0	Nitrate as N	<RL or < (env sample/5)	3	3	100.00
EPA 350.2	Ammonia as N	<RL or < (env sample/5)	3	3	100.00
EPA 351.3	Nitrogen, Total Kjeldahl	<RL or < (env sample/5)	3	3	100.00
EPA 354.1	Nitrite as N	<RL or < (env sample/5)	3	3	100.00
EPA 365.2	OrthoPhosphate as P	<RL or < (env sample/5)	3	3	100.00
EPA 365.2	Phosphate as P	<RL or < (env sample/5)	3	3	100.00
EPA 415.1	Total Organic Carbon	<RL or < (env sample/5)	3	2	66.67
SM 9223	E. coli	<RL or < (env sample/5)	3	3	100.00
EPA 200.8	Arsenic	<RL or < (env sample/5)	2	2	100.00
EPA 200.8	Boron	<RL or < (env sample/5)	2	2	100.00
EPA 200.8	Cadmium	<RL or < (env sample/5)	2	2	100.00
EPA 200.8	Copper	<RL or < (env sample/5)	2	2	100.00
EPA 200.8	Lead	<RL or < (env sample/5)	2	2	100.00
EPA 200.8	Nickel	<RL or < (env sample/5)	2	2	100.00
EPA 200.8	Selenium	<RL or < (env sample/5)	2	2	100.00
EPA 200.8	Zinc	<RL or < (env sample/5)	2	2	100.00
		TOTAL	168	167	99.40

Administrative Record
Page 12296

Table 15. ESJWQC summary of field duplicate quality control sample evaluations.

Samples were collected during the storm season of 2008 and are sorted by method and analyte.

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8321A CARB	Aldicarb	RPD ≤ 25	3	3	100.00
EPA 8321A CARB	Carbaryl	RPD ≤ 25	3	3	100.00
EPA 8321A CARB	Carbofuran	RPD ≤ 25	3	3	100.00
EPA 8321A CARB	Methiocarb	RPD ≤ 25	3	3	100.00
EPA 8321A CARB	Methomyl	RPD ≤ 25	3	3	100.00
EPA 8321A CARB	Oxamyl	RPD ≤ 25	3	3	100.00
EPA 8321A CARB	Diuron	RPD ≤ 25	3	3	100.00
EPA 8321A CARB	Linuron	RPD ≤ 25	3	3	100.00
EPA 619	Atrazine	RPD ≤ 25	3	3	100.00
EPA 619	Cyanazine	RPD ≤ 25	3	3	100.00
EPA 619	Simazine	RPD ≤ 25	3	2	66.67
EPA 547M	Glyphosate	RPD ≤ 25	3	3	100.00
EPA 549.2M	Paraquat dichloride	RPD ≤ 25	3	3	100.00
EPA 8081A	DDD(p,p')	RPD ≤ 25	3	3	100.00
EPA 8081A	DDE(p,p')	RPD ≤ 25	3	3	100.00
EPA 8081A	DDT(p,p')	RPD ≤ 25	3	3	100.00
EPA 8081A	Dicofol	RPD ≤ 25	3	3	100.00
EPA 8081A	Dieldrin	RPD ≤ 25	3	3	100.00
EPA 8081A	Endrin	RPD ≤ 25	3	3	100.00
EPA 8081A	Methoxychlor	RPD ≤ 25	3	3	100.00
EPA 8081A	Bifenthrin	RPD ≤ 25	3	3	100.00
EPA 8081A	Cyfluthrin, total	RPD ≤ 25	3	3	100.00
EPA 8081A	Cypermethrin, total	RPD ≤ 25	3	3	100.00
EPA 8081A	Esfenvalerate/Fenvalerate, total	RPD ≤ 25	3	3	100.00
EPA 8081A	Cyhalothrin, lambda, total	RPD ≤ 25	3	3	100.00
EPA 8081A	Permethrin, total	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Azinphos methyl	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Chlorpyrifos	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Diazinon	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Dimethoate	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Disulfoton	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Malathion	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Methidathion	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Parathion, Methyl	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Phorate	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Phosmet	RPD ≤ 25	3	3	100.00

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8141A OP	Molinate	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Thiobencarb	RPD ≤ 25	3	3	100.00
EPA 8141A OP	Methamidophos	RPD ≤ 25	3	3	100.00
EPA 110.2	Color	RPD ≤ 25	3	2	66.67
EPA 130.2	Hardness as CaCO3	RPD ≤ 25	3	3	100.00
EPA 160.1	Total Dissolved Solids	RPD ≤ 25	3	3	100.00
EPA 180.1	Turbidity	RPD ≤ 25	3	2	66.67
EPA 300.0	Nitrate as N	RPD ≤ 25	3	3	100.00
EPA 350.2	Ammonia as N	RPD ≤ 25	3	1	33.33
EPA 351.3	Nitrogen, Total Kjeldahl	RPD ≤ 25	3	2	66.67
EPA 354.1	Nitrite as N	RPD ≤ 25	3	3	100.00
EPA 365.2	OrthoPhosphate as P	RPD ≤ 25	3	3	100.00
EPA 365.2	Phosphate as P	RPD ≤ 25	3	2	66.67
EPA 415.1	Total Organic Carbon	RPD ≤ 25	3	2	66.67
SM 9223	E. coli	RPD ≤ 25	3	3	100.00
EPA 200.8	Arsenic	RPD ≤ 25	3	3	100.00
EPA 200.8	Boron	RPD ≤ 25	3	3	100.00
EPA 200.8	Cadmium	RPD ≤ 25	3	2	66.67
EPA 200.8	Copper	RPD ≤ 25	3	3	100.00
EPA 200.8	Lead	RPD ≤ 25	3	3	100.00
EPA 200.8	Nickel	RPD ≤ 25	3	3	100.00
EPA 200.8	Selenium	RPD ≤ 25	3	2	66.67
EPA 200.8	Zinc	RPD ≤ 25	3	3	100.00
		TOTAL	177	167	94.35

Administrative Record
Page 12298

Table 16. ESJWQC summary of method blank quality control sample evaluations.

Samples were analyzed in batches with samples collected during the storm season of 2008 and are sorted by method and analyte.

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8321A CARB	Aldicarb	<RL	4	4	100.00
EPA 8321A CARB	Carbaryl	<RL	4	4	100.00
EPA 8321A CARB	Carbofuran	<RL	4	4	100.00
EPA 8321A CARB	Methiocarb	<RL	4	4	100.00
EPA 8321A CARB	Methomyl	<RL	4	4	100.00
EPA 8321A CARB	Oxamyl	<RL	4	4	100.00
EPA 8321A CARB	Diuron	<RL	4	4	100.00
EPA 8321A CARB	Linuron	<RL	4	4	100.00
EPA 619	Atrazine	<RL	4	4	100.00
EPA 619	Cyanazine	<RL	4	4	100.00
EPA 619	Simazine	<RL	4	4	100.00
EPA 547M	Glyphosate	<RL	4	4	100.00
EPA 549.2M	Paraquat dichloride	<RL	5	5	100.00
EPA 8081A	DDD(p,p')	<RL	4	4	100.00
EPA 8081A	DDE(p,p')	<RL	4	4	100.00
EPA 8081A	DDT(p,p')	<RL	4	4	100.00
EPA 8081A	Dicofol	<RL	4	4	100.00
EPA 8081A	Dieldrin	<RL	4	4	100.00
EPA 8081A	Endrin	<RL	4	4	100.00
EPA 8081A	Methoxychlor	<RL	4	4	100.00
EPA 8081A	Bifenthrin	<RL	4	4	100.00
EPA 8081A	Cyfluthrin, total	<RL	4	4	100.00
EPA 8081A	Cypermethrin, total	<RL	4	4	100.00
EPA 8081A	Esfenvalerate/Fenvalerate, total	<RL	4	4	100.00
EPA 8081A	Cyhalothrin, lambda, total	<RL	4	4	100.00
EPA 8081A	Permethrin, total	<RL	4	4	100.00
EPA 8141A OP	Azinphos methyl	<RL	4	4	100.00
EPA 8141A OP	Chlorpyrifos	<RL	4	4	100.00
EPA 8141A OP	Diazinon	<RL	4	4	100.00
EPA 8141A OP	Dimethoate	<RL	4	4	100.00
EPA 8141A OP	Disulfoton	<RL	4	4	100.00
EPA 8141A OP	Malathion	<RL	4	4	100.00
EPA 8141A OP	Methidathion	<RL	4	4	100.00
EPA 8141A OP	Parathion, Methyl	<RL	4	4	100.00
EPA 8141A OP	Phorate	<RL	4	4	100.00
EPA 8141A OP	Phosmet	<RL	4	4	100.00
EPA 8141A OP	Molinate	<RL	4	4	100.00
EPA 8141A OP	Thiobencarb	<RL	4	4	100.00
EPA 8141A OP	Methamidophos	<RL	4	4	100.00
EPA 110.2	Color	<RL	4	4	100.00

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 130.2	Hardness as CaCO3	<RL	6	6	100.00
EPA 160.1	Total Dissolved Solids	<RL	5	5	100.00
EPA 180.1	Turbidity	<RL	4	4	100.00
EPA 300.0	Nitrate as N	<RL	4	4	100.00
EPA 350.2	Ammonia as N	<RL	5	5	100.00
EPA 351.3	Nitrogen, Total Kjeldahl	<RL	6	6	100.00
EPA 354.1	Nitrite as N	<RL	5	5	100.00
EPA 365.2	OrthoPhosphate as P	<RL	4	4	100.00
EPA 365.2	Phosphate as P	<RL	4	4	100.00
EPA 415.1	Total Organic Carbon	<RL	5	5	100.00
SM 9223	E. coli	<RL	4	4	100.00
EPA 200.8	Arsenic	<RL	6	6	100.00
EPA 200.8	Boron	<RL	6	6	100.00
EPA 200.8	Cadmium	<RL	6	6	100.00
EPA 200.8	Copper	<RL	6	6	100.00
EPA 200.8	Lead	<RL	6	6	100.00
EPA 200.8	Nickel	<RL	6	6	100.00
EPA 200.8	Selenium	<RL	7	7	100.00
EPA 200.8	Zinc	<RL	6	6	100.00
		TOTAL	262	262	100.00

Administrative Record
Page 12300

Table 17. ESJWQC summary of lab control spike quality control sample evaluations.

Laboratory control spikes and laboratory control spike duplicates were analyzed in batches with samples collected during the storm season of 2008 and are sorted by method and analyte.

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8321A CARB	Aldicarb	PR 31-133	4	4	100.00
EPA 8321A CARB	Carbaryl	PR 44-133	4	4	100.00
EPA 8321A CARB	Carbofuran	PR 36-165	4	4	100.00
EPA 8321A CARB	Methiocarb	PR 35-142	4	4	100.00
EPA 8321A CARB	Methomyl	PR23-152	4	4	100.00
EPA 8321A CARB	Oxamyl	PR 10-117	4	4	100.00
EPA 8321A CARB	Diuron	PR 52-136	4	4	100.00
EPA 8321A CARB	Linuron	PR 49-144	4	4	100.00
EPA 619	Atrazine	PR 39-156	4	4	100.00
EPA 619	Cyanazine	PR 22-172	4	4	100.00
EPA 619	Simazine	PR 21-179	4	4	100.00
EPA 547M	Glyphosate	PR 72-131	8	8	100.00
EPA 549.2M	Paraquat dichloride	PR 50-126	7	6	85.71
EPA 8081A	DDD(p,p')	PR 38-135	4	4	100.00
EPA 8081A	DDE(p,p')	PR 21-134	4	4	100.00
EPA 8081A	DDT(p,p')	PR 18-145	4	4	100.00
EPA 8081A	Dicofol	PR 40-135	4	4	100.00
EPA 8081A	Dieldrin	PR 48-121	4	4	100.00
EPA 8081A	Endrin	PR 24-143	4	4	100.00
EPA 8081A	Methoxychlor	PR 30-163	4	4	100.00
EPA 8081A	Bifenthrin	PR 52-117	4	4	100.00
EPA 8081A	Cyfluthrin	PR 53-125	4	4	100.00
EPA 8081A	Cypermethrin	PR 55-107	4	4	100.00
EPA 8081A	Esfenvalerate/Fenvalerate, total	PR 52-117	4	4	100.00
EPA 8081A	Cyhalothrin, lambda, total	PR 62-104	4	4	100.00
EPA 8081A	Permethrin, total	PR 24-166	4	4	100.00
EPA 8141A OP	Azinphos methyl	PR 36-189	4	4	100.00
EPA 8141A OP	Chlorpyrifos	PR 61-125	4	4	100.00
EPA 8141A OP	Diazinon	PR 57-130	4	4	100.00
EPA 8141A OP	Dimethoate	PR 68-202	4	4	100.00
EPA 8141A OP	Disulfoton	PR 47-117	4	4	100.00
EPA 8141A OP	Malathion	PR 47-125	4	4	100.00
EPA 8141A OP	Methidathion	PR 50-150	4	4	100.00
EPA 8141A OP	Parathion, Methyl	PR 55-164	4	4	100.00
EPA 8141A OP	Phorate	PR 44-117	4	4	100.00
EPA 8141A OP	Phosmet	PR 50-150	4	4	100.00
EPA 8141A OP	Molinate	PR 50-150	4	4	100.00
EPA 8141A OP	Thiobencarb	PR 50-150	4	4	100.00
EPA 8141A OP	Methamidophos	PR 40-135	4	4	100.00
EPA 110.2	Color	PR 80-120	4	4	100.00

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 130.2	Hardness as CaCO3	PR 80-120	6	6	100.00
EPA 160.1	Total Dissolved Solids	PR 80-120	5	5	100.00
EPA 180.1	Turbidity	PR 90-110	4	4	100.00
EPA 300.0	Nitrate as N	PR 90-110	4	4	100.00
EPA 350.2	Ammonia as N	PR 90-110	5	5	100.00
EPA 351.3	Nitrogen, Total Kjeldahl	PR 90-110	6	6	100.00
EPA 354.1	Nitrite as N	PR 80-120	5	5	100.00
EPA 365.2	OrthoPhosphate as P	PR 90-110	4	4	100.00
EPA 365.2	Phosphate as P	PR 90-110	4	4	100.00
EPA 415.1	Total Organic Carbon	PR 80-120	5	5	100.00
SM 9223	E. coli	PR 80-120			NA
EPA 200.8	Arsenic	PR 85-115	6	6	100.00
EPA 200.8	Boron	PR 85-115	6	6	100.00
EPA 200.8	Cadmium	PR 85-115	6	6	100.00
EPA 200.8	Copper	PR 85-115	6	6	100.00
EPA 200.8	Lead	PR 85-115	6	6	100.00
EPA 200.8	Nickel	PR 85-115	6	6	100.00
EPA 200.8	Selenium	PR 85-115	7	7	100.00
EPA 200.8	Zinc	PR 85-115	6	6	100.00
		TOTAL	264	263	99.62

Administrative Record
Page 12302

Table 18. ESJWQC summary of lab control spike duplicate quality control sample evaluations.

Laboratory control spikes and laboratory control spike duplicates were analyzed in batches with samples collected during the storm season of 2008 and are sorted by method and analyte.

Method	Analyte	Data Quality Objective	Number of Pairs	Pairs Within Control Limits	Percent Samples Acceptable
EPA 8321A CARB	Aldicarb	RPD ≤ 25			NA
EPA 8321A CARB	Carbaryl	RPD ≤ 25			NA
EPA 8321A CARB	Carbofuran	RPD ≤ 25			NA
EPA 8321A CARB	Methiocarb	RPD ≤ 25			NA
EPA 8321A CARB	Methomyl	RPD ≤ 25			NA
EPA 8321A CARB	Oxamyl	RPD ≤ 25			NA
EPA 8321A CARB	Diuron	RPD ≤ 25			NA
EPA 8321A CARB	Linuron	RPD ≤ 25			NA
					NA
EPA 619	Atrazine	RPD ≤ 25			NA
EPA 619	Cyanazine	RPD ≤ 25			NA
EPA 619	Simazine	RPD ≤ 25			NA
EPA 547M	Glyphosate	RPD ≤ 25	4	4	100.00
EPA 549.2M	Paraquat dichloride	RPD ≤ 25	2	2	100.00
EPA 8081A	DDD(p,p')	RPD ≤ 25			NA
EPA 8081A	DDE(p,p')	RPD ≤ 25			NA
EPA 8081A	DDT(p,p')	RPD ≤ 25			NA
EPA 8081A	Dicofol	RPD ≤ 25			NA
EPA 8081A	Dieldrin	RPD ≤ 25			NA
EPA 8081A	Endrin	RPD ≤ 25			NA
EPA 8081A	Methoxychlor	RPD ≤ 25			NA
EPA 8081A	Bifenthrin	RPD ≤ 25			NA
EPA 8081A	Cyfluthrin	RPD ≤ 25			NA
EPA 8081A	Cypermethrin	RPD ≤ 25			NA
EPA 8081A	Esfenvalerate/Fenvalerate, total	RPD ≤ 25			NA
EPA 8081A	Cyhalothrin, lambda, total	RPD ≤ 25			NA
EPA 8081A	Permethrin, total	RPD ≤ 25			NA
EPA 8141A OP	Azinphos methyl	RPD ≤ 25			NA
EPA 8141A OP	Chlorpyrifos	RPD ≤ 25			NA
EPA 8141A OP	Diazinon	RPD ≤ 25			NA
EPA 8141A OP	Dimethoate	RPD ≤ 25			NA
EPA 8141A OP	Disulfoton	RPD ≤ 25			NA
EPA 8141A OP	Malathion	RPD ≤ 25			NA
EPA 8141A OP	Methidathion	RPD ≤ 25			NA
EPA 8141A OP	Parathion, Methyl	RPD ≤ 25			NA
EPA 8141A OP	Phorate	RPD ≤ 25			NA

Method	Analyte	Data Quality Objective	Number of Pairs	Pairs Within Control Limits	Percent Samples Acceptable
EPA 8141A OP	Phosmet	RPD ≤ 25			NA
EPA 8141A OP	Molinate	RPD ≤ 25			NA
EPA 8141A OP	Thiobencarb	RPD ≤ 25			NA
EPA 8141A OP	Methamidophos	RPD ≤ 25			NA
EPA 110.2	Color	RPD ≤ 25			NA
EPA 130.2	Hardness as CaCO3	RPD ≤ 25			NA
EPA 160.1	Total Dissolved Solids	RPD ≤ 25			NA
EPA 180.1	Turbidity	RPD ≤ 25			NA
EPA 300.0	Nitrate as N	RPD ≤ 25			NA
EPA 350.2	Ammonia as N	RPD ≤ 25			NA
EPA 351.3	Nitrogen, Total Kjeldahl	RPD ≤ 25			NA
EPA 354.1	Nitrite as N	RPD ≤ 25			NA
EPA 365.2	OrthoPhosphate as P	RPD ≤ 25			NA
EPA 365.2	Phosphate as P	RPD ≤ 25			NA
EPA 415.1	Total Organic Carbon	RPD ≤ 25			NA
SM 9223	E. coli	RPD ≤ 25			NA
EPA 200.8	Arsenic	RPD ≤ 25			NA
EPA 200.8	Boron	RPD ≤ 25			NA
EPA 200.8	Cadmium	RPD ≤ 25			NA
EPA 200.8	Copper	RPD ≤ 25			NA
EPA 200.8	Lead	RPD ≤ 25			NA
EPA 200.8	Nickel	RPD ≤ 25			NA
EPA 200.8	Selenium	RPD ≤ 25			NA
EPA 200.8	Zinc	RPD ≤ 25			NA
		TOTAL	6	6	100.00

Administrative Record
Page 12304

Table 19. ESJWQC summary of matrix spike quality control sample evaluations.

Matrix spikes and matrix spike duplicates were collected during the storm season of 2008. Included in the following table are NONAG matrix spikes included for batch quality assurance purposes. Evaluations are sorted by method and analyte.

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8321A CARB	Aldicarb	PR 31-133	8	8	100.00
EPA 8321A CARB	Carbaryl	PR 44-133	8	7	87.50
EPA 8321A CARB	Carbofuran	PR 36-165	8	8	100.00
EPA 8321A CARB	Methiocarb	PR 35-142	8	8	100.00
EPA 8321A CARB	Methomyl	PR 23-152	8	8	100.00
EPA 8321A CARB	Oxamyl	PR 10-117	8	8	100.00
EPA 8321A CARB	Diuron	PR52-136	8	8	100.00
EPA 8321A CARB	Linuron	PR 49-144	8	8	100.00
EPA 619	Atrazine	PR 39-156	8	8	100.00
EPA 619	Cyanazine	PR 22-172	8	6	75.00
EPA 619	Simazine	PR 21-179	8	8	100.00
EPA 547M	Glyphosate	PR 72-131	8	8	100.00
EPA 549.2M	Paraquat dichloride	PR 50-126	8	0	0.00
EPA 8081A	DDD(p,p')	PR 38-135	8	8	100.00
EPA 8081A	DDE(p,p')	PR 21-134	8	8	100.00
EPA 8081A	DDT(p,p')	PR 18-145	8	8	100.00
EPA 8081A	Dicofol	PR 40-135	8	8	100.00
EPA 8081A	Dieldrin	PR 48-121	8	8	100.00
EPA 8081A	Endrin	PR 24-143	8	8	100.00
EPA 8081A	Methoxychlor	PR 30-163	8	8	100.00
EPA 8081A	Bifenthrin	PR 52-117	8	8	100.00
EPA 8081A	Cyfluthrin	PR 53-125	8	8	100.00
EPA 8081A	Cypermethrin	PR 55-107	8	8	100.00
EPA 8081A	Esfenvalerate/Fenvalerate, total	PR 52-117	8	8	100.00
EPA 8081A	Cyhalothrin, lambda, total	PR 62-104	8	4	50.00
EPA 8081A	Permethrin, total	PR 24-166	8	8	100.00
EPA 8141A OP	Azinphos methyl	PR 36-189	8	6	75.00
EPA 8141A OP	Chlorpyrifos	PR 61-125	8	8	100.00
EPA 8141A OP	Diazinon	PR 57-130	8	8	100.00
EPA 8141A OP	Dimethoate	PR 68-202	8	8	100.00
EPA 8141A OP	Disulfoton	PR 47-117	8	8	100.00
EPA 8141A OP	Malathion	PR 47-125	8	8	100.00
EPA 8141A OP	Methidathion	PR 50-150	8	8	100.00
EPA 8141A OP	Parathion, Methyl	PR 55-164	8	8	100.00
EPA 8141A OP	Phorate	PR 44-117	8	8	100.00
EPA 8141A OP	Phosmet	PR 50-150	8	6	75.00

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8141A OP	Molinate	PR 50-150	8	8	100.00
EPA 8141A OP	Thiobencarb	PR 50-150	8	8	100.00
EPA 8141A OP	Methamidophos	PR 40-135	8	8	100.00
EPA 110.2	Color	PR 80-120			NA
EPA 130.2	Hardness as CaCO3	PR 80-120	12	12	100.00
EPA 160.1	Total Dissolved Solids	PR 80-120			NA
EPA 180.1	Turbidity	PR 90-110			NA
EPA 300.0	Nitrate as N	PR 90-110	8	6	75.00
EPA 350.2	Ammonia as N	PR 90-110	10	9	90.00
EPA 351.3	Nitrogen, Total Kjeldahl	PR 90-110	12	11	91.67
EPA 354.1	Nitrite as N	PR 80-120	10	10	100.00
EPA 365.2	OrthoPhosphate as P	PR 90-110	8	6	75.00
EPA 365.2	Phosphate as P	PR 90-110	8	8	100.00
EPA 415.1	Total Organic Carbon	PR 80-120	12	8	66.67
SM 9223	E. coli	PR 80-120			NA
EPA 200.8	Arsenic	PR 85-115	12	12	100.00
EPA 200.8	Boron	PR 85-115	12	8	66.67
EPA 200.8	Cadmium	PR 85-115	12	12	100.00
EPA 200.8	Copper	PR 85-115	12	12	100.00
EPA 200.8	Lead	PR 85-115	12	12	100.00
EPA 200.8	Nickel	PR 85-115	12	11	91.67
EPA 200.8	Selenium	PR 85-115	14	14	100.00
EPA 200.8	Zinc	PR 85-115	12	11	91.67
		TOTAL	490	455	92.86

Table 20. ESJWQC summary of matrix spike duplicate quality control sample evaluations.

Matrix spikes and matrix spike duplicates were collected during the storm season of 2008. Included in the following table are NONAG matrix spikes included for batch quality assurance purposes. Evaluations are sorted by method and analyte.

Method	Analyte	Data Quality Objective	Number of Pairs	Pairs Within Control Limits	Percent Samples Acceptable
EPA 8321A CARB	Aldicarb	RPD ≤ 25	4	4	100.00
EPA 8321A CARB	Carbaryl	RPD ≤ 25	4	4	100.00
EPA 8321A CARB	Carbofuran	RPD ≤ 25	4	4	100.00
EPA 8321A CARB	Methiocarb	RPD ≤ 25	4	4	100.00
EPA 8321A CARB	Methomyl	RPD ≤ 25	4	4	100.00
EPA 8321A CARB	Oxamyl	RPD ≤ 25	4	4	100.00
EPA 8321A CARB	Diuron	RPD ≤ 25	4	4	100.00
EPA 8321A CARB	Linuron	RPD ≤ 25	4	4	100.00
EPA 619	Atrazine	RPD ≤ 25	4	4	100.00
EPA 619	Cyanazine	RPD ≤ 25	4	4	100.00
EPA 619	Simazine	RPD ≤ 25	4	4	100.00
EPA 547M	Glyphosate	RPD ≤ 25	4	4	100.00
EPA 549.2M	Paraquat dichloride	RPD ≤ 25	4	4	100.00
EPA 8081A	DDD(p,p')	RPD ≤ 25	4	4	100.00
EPA 8081A	DDE(p,p')	RPD ≤ 25	4	4	100.00
EPA 8081A	DDT(p,p')	RPD ≤ 25	4	4	100.00
EPA 8081A	Dicofol	RPD ≤ 25	4	4	100.00
EPA 8081A	Dieldrin	RPD ≤ 25	4	4	100.00
EPA 8081A	Endrin	RPD ≤ 25	4	4	100.00
EPA 8081A	Methoxychlor	RPD ≤ 25	4	4	100.00
EPA 8081A	Bifenthrin	RPD ≤ 25	4	4	100.00
EPA 8081A	Cyfluthrin	RPD ≤ 25	4	4	100.00
EPA 8081A	Cypermethrin	RPD ≤ 25	4	4	100.00
EPA 8081A	Esfenvalerate/Fenvalerate, total	RPD ≤ 25	4	4	100.00
EPA 8081A	Cyhalothrin, lambda, total	RPD ≤ 25	4	4	100.00
EPA 8081A	Permethrin, total	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Azinphos methyl	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Chlorpyrifos	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Diazinon	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Dimethoate	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Disulfoton	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Malathion	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Methidathion	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Parathion, Methyl	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Phorate	RPD ≤ 25	4	4	100.00

Administrative Record
Page 12307

Method	Analyte	Data Quality Objective	Number of Pairs	Pairs Within Control Limits	Percent Samples Acceptable
EPA 8141A OP	Phosmet	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Molinate	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Thiobencarb	RPD ≤ 25	4	4	100.00
EPA 8141A OP	Methamidophos	RPD ≤ 25	4	4	100.00
EPA 110.2	Color	RPD ≤ 25			NA
EPA 130.2	Hardness as CaCO3	RPD ≤ 25	6	6	100.00
EPA 160.1	Total Dissolved Solids	RPD ≤ 25			NA
EPA 180.1	Turbidity	RPD ≤ 25			NA
EPA 300.0	Nitrate as N	RPD ≤ 25	4	4	100.00
EPA 350.2	Ammonia as N	RPD ≤ 25	5	5	100.00
EPA 351.3	Nitrogen, Total Kjeldahl	RPD ≤ 25	6	6	100.00
EPA 354.1	Nitrite as N	RPD ≤ 25	5	5	100.00
EPA 365.2	OrthoPhosphate as P	RPD ≤ 25	4	4	100.00
EPA 365.2	Phosphate as P	RPD ≤ 25	4	4	100.00
EPA 415.1	Total Organic Carbon	RPD ≤ 25	6	6	100.00
SM 9223	E. coli	RPD ≤ 25			NA
EPA 200.8	Arsenic	RPD ≤ 25	6	6	100.00
EPA 200.8	Boron	RPD ≤ 25	6	6	100.00
EPA 200.8	Cadmium	RPD ≤ 25	6	6	100.00
EPA 200.8	Copper	RPD ≤ 25	6	6	100.00
EPA 200.8	Lead	RPD ≤ 25	6	6	100.00
EPA 200.8	Nickel	RPD ≤ 25	6	6	100.00
EPA 200.8	Selenium	RPD ≤ 25	7	7	100.00
EPA 200.8	Zinc	RPD ≤ 25	6	6	100.00
		TOTAL	245	245	100.00

Administrative Record
Page 12308

Table 21. ESJWQC summary of lab duplicate quality control sample evaluations.

Samples were analyzed in batches with samples collected during the storm season of 2008, and also include NONAG matrix spikes included for batch quality assurance purposes, and are sorted by method and analyte.

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8260B	Acrolein	RPD ≤ 25			NA
EPA 8321A CARB	Aldicarb	RPD ≤ 25			NA
EPA 8321A CARB	Carbaryl	RPD ≤ 25			NA
EPA 8321A CARB	Carbofuran	RPD ≤ 25			NA
EPA 8321A CARB	Methiocarb	RPD ≤ 25			NA
EPA 8321A CARB	Methomyl	RPD ≤ 25			NA
EPA 8321A CARB	Oxamyl	RPD ≤ 25			NA
EPA 8321A CARB	Diuron	RPD ≤ 25			NA
EPA 8321A CARB	Linuron	RPD ≤ 25			NA
EPA 619	Atrazine	RPD ≤ 25			NA
EPA 619	Cyanazine	RPD ≤ 25			NA
EPA 619	Simazine	RPD ≤ 25			NA
EPA 547M	Glyphosate	RPD ≤ 25			NA
EPA 549.2M	Paraquat dichloride	RPD ≤ 25			NA
EPA 8081A	DDD(p,p')	RPD ≤ 25			NA
EPA 8081A	DDE(p,p')	RPD ≤ 25			NA
EPA 8081A	DDT(p,p')	RPD ≤ 25			NA
EPA 8081A	Dicofol	RPD ≤ 25			NA
EPA 8081A	Dieldrin	RPD ≤ 25			NA
EPA 8081A	Endrin	RPD ≤ 25			NA
EPA 8081A	Methoxychlor	RPD ≤ 25			NA
EPA 8081A	Bifenthrin	RPD ≤ 25			NA
EPA 8081A	Cyfluthrin, total	RPD ≤ 25			NA
EPA 8081A	Cypermethrin, total	RPD ≤ 25			NA
EPA 8081A	Esfenvalerate/Fenvalerate, total	RPD ≤ 25			NA
EPA 8081A	Cyhalothrin, lambda, total	RPD ≤ 25			NA
EPA 8081A	Permethrin, total	RPD ≤ 25			NA
EPA 8141A OP	Azinphos methyl	RPD ≤ 25			NA
EPA 8141A OP	Chlorpyrifos	RPD ≤ 25			NA
EPA 8141A OP	Diazinon	RPD ≤ 25			NA
EPA 8141A OP	Dimethoate	RPD ≤ 25			NA
EPA 8141A OP	Disulfoton	RPD ≤ 25			NA
EPA 8141A OP	Malathion	RPD ≤ 25			NA
EPA 8141A OP	Methidathion	RPD ≤ 25			NA
EPA 8141A OP	Parathion, Methyl	RPD ≤ 25			NA

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8141A OP	Phorate	RPD ≤ 25			NA
EPA 8141A OP	Phosmet	RPD ≤ 25			NA
EPA 8141A OP	Molinate	RPD ≤ 25			NA
EPA 8141A OP	Thiobencarb	RPD ≤ 25			NA
EPA 8141A OP	Methamidophos	RPD ≤ 25			NA
EPA 110.2	Color	RPD ≤ 25	4	4	100.00
EPA 130.2	Hardness as CaCO3	RPD ≤ 25			NA
EPA 160.1	Total Dissolved Solids	RPD ≤ 25	5	5	100.00
EPA 180.1	Turbidity	RPD ≤ 25	4	4	100.00
EPA 300.0	Nitrate as N	RPD ≤ 25			NA
EPA 350.2	Ammonia as N	RPD ≤ 25			NA
EPA 351.3	Nitrogen, Total Kjeldahl	RPD ≤ 25			NA
EPA 354.1	Nitrite as N	RPD ≤ 25			NA
EPA 365.2	OrthoPhosphate as P	RPD ≤ 25			NA
EPA 365.2	Phosphate as P	RPD ≤ 25			NA
EPA 415.1	Total Organic Carbon	RPD ≤ 25			NA
SM 9223	E. coli	RPD ≤ 25	3	3	100.00
EPA 200.8	Arsenic	RPD ≤ 25			NA
EPA 200.8	Boron	RPD ≤ 25			NA
EPA 200.8	Cadmium	RPD ≤ 25			NA
EPA 200.8	Copper	RPD ≤ 25			NA
EPA 200.8	Lead	RPD ≤ 25			NA
EPA 200.8	Nickel	RPD ≤ 25			NA
EPA 200.8	Selenium	RPD ≤ 25			NA
EPA 200.8	Zinc	RPD ≤ 25			NA
		TOTAL	16	16	100.00

Administrative Record
Page 12310

Table 22. ESJWQC summary of surrogate recovery quality control sample evaluations.

Surrogates were run with water samples collected and LABQAs analyzed during the storm season of 2008 for all organics except paraquat and glyphosate. Included are NONAG samples. Evaluations are sorted by method and analyte.

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8321A CARB	Isoxaben(Surrogate)	RPD ≤ 25; PR 36-140	60	60	100.00
EPA 8321A CARB	Tributylphosphate(Surrogate)	RPD ≤ 25; PR 36-140	60	54	90.00
EPA 8321A CARB	Triphenyl phosphate(Surrogate)	RPD ≤ 25; PR 56-129			NA
EPA 619	Tributylphosphate(Surrogate)	RPD ≤ 25; PR 62-145	60	57	95.00
EPA 619	Triphenyl phosphate(Surrogate)	RPD ≤ 25; PR 54-144	60	54	90.00
EPA 8081A	Decachlorobiphenyl(Surrogate)	RPD ≤ 25; PR 16-146	60	60	100.00
EPA 8081A	Tetrachloro-m-xylene(Surrogate)	RPD ≤ 25; PR 15-98	60	60	100.00
EPA 8141A OP	Tributylphosphate(Surrogate)	RPD ≤ 25; PR 60-150	120	113	94.17
EPA 8141A OP	Triphenyl phosphate(Surrogate)	RPD ≤ 25; PR 56-129	120	108	90.00
		TOTAL	600	566	94.33

Table 23. ESJWQC summary of holding time evaluations for environmental, field blank, field duplicate and matrix spike samples collected during the storm season of 2008; sorted by method and analyte.

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8321A CARB	Aldicarb	7 days	48	48	100.00
EPA 8321A CARB	Carbaryl	7 days	48	48	100.00
EPA 8321A CARB	Carbofuran	7 days	48	48	100.00
EPA 8321A CARB	Methiocarb	7 days	48	48	100.00
EPA 8321A CARB	Methomyl	7 days	48	48	100.00
EPA 8321A CARB	Oxamyl	7 days	48	48	100.00
EPA 8321A CARB	Diuron	7 days	48	48	100.00
EPA 8321A CARB	Linuron	7 days	48	48	100.00
EPA 619	Atrazine	7 days	48	48	100.00
EPA 619	Cyanazine	7 days	48	48	100.00
EPA 619	Simazine	7 days	48	48	100.00
EPA 547M	Glyphosate	14 days	48	48	100.00
EPA 549.2M	Paraquat dichloride	7 days	48	48	100.00
EPA 8081A	DDD(p,p')	7 days	48	48	100.00
EPA 8081A	DDE(p,p')	7 days	48	48	100.00
EPA 8081A	DDT(p,p')	7 days	48	48	100.00
EPA 8081A	Dicofol	7 days	48	48	100.00
EPA 8081A	Dieldrin	7 days	48	48	100.00
EPA 8081A	Endrin	7 days	48	48	100.00
EPA 8081A	Methoxychlor	7 days	48	48	100.00
EPA 8081A	Bifenthrin	7 days	36	36	100.00
EPA 8081A	Cyfluthrin	7 days	36	36	100.00
EPA 8081A	Cypermethrin	7 days	36	36	100.00
EPA 8081A	Esfenvalerate/Fenvalerate, total	7 days	36	36	100.00
EPA 8081A	Cyhalothrin, lambda, total	7 days	36	36	100.00
EPA 8081A	Permethrin, total	7 days	36	36	100.00
EPA 8141A OP	Azinphos methyl	7 days	48	48	100.00
EPA 8141A OP	Chlorpyrifos	7 days	48	48	100.00
EPA 8141A OP	Diazinon	7 days	48	48	100.00
EPA 8141A OP	Dimethoate	7 days	48	48	100.00
EPA 8141A OP	Disulfoton	7 days	48	48	100.00
EPA 8141A OP	Malathion	7 days	48	48	100.00
EPA 8141A OP	Methidathion	7 days	48	48	100.00
EPA 8141A OP	Parathion, Methyl	7 days	48	48	100.00
EPA 8141A OP	Phorate	7 days	48	48	100.00
EPA 8141A OP	Phosmet	7 days	48	48	100.00
EPA 8141A OP	Molinate	7 days	48	48	100.00

Method	Analyte	Data Quality Objective	Number of Samples	Samples Within Control Limits	Percent Samples Acceptable
EPA 8141A OP	Thiobencarb	7 days	48	48	100.00
EPA 8141A OP	Methamidophos	7 days	48	48	100.00
EPA 110.2	Color	48 hours	44	43	97.73
EPA 130.2	Hardness as CaCO3	6 months	41	41	100.00
EPA 160.1	Total Dissolved Solids	48 hours	44	44	100.00
EPA 180.1	Turbidity	48 hours	44	44	100.00
EPA 300.0	Nitrate as N	48 hours	42	34	80.95
EPA 350.2	Ammonia as N	Field acidify, 28 days	42	42	100.00
EPA 351.3	Nitrogen, Total Kjeldahl	Field acidify, 28 days	42	42	100.00
EPA 354.1	Nitrite as N	48 hours	42	42	100.00
EPA 365.2	OrthoPhosphate as P	48 hours	42	42	100.00
EPA 365.2	Phosphate as P	Field acidify, 28 days	42	42	100.00
EPA 415.1	Total Organic Carbon	28 days	48	48	100.00
SM 9223	E. coli	24 hours	42	42	100.00
EPA 200.8	Arsenic	Field acidify, 40 days	41	41	100.00
EPA 200.8	Boron	Field acidify, 40 days	41	41	100.00
EPA 200.8	Cadmium	Field acidify, 40 days	41	41	100.00
EPA 200.8	Copper	Field acidify, 40 days	41	41	100.00
EPA 200.8	Lead	Field acidify, 40 days	41	41	100.00
EPA 200.8	Nickel	Field acidify, 40 days	41	41	100.00
EPA 200.8	Selenium	Field acidify, 40 days	41	41	100.00
EPA 200.8	Zinc	Field acidify, 40 days	41	41	100.00
		TOTAL	2643	2634	99.66

Administrative Record
Page 12313

Table 24. ESJWQC summary of toxicity retest evaluations due to failed toxicity criteria for samples collected during the storm season of 2008; sorted by method and species.

Method	Toxicity Species	Total Samples	Total Samples Retested	Percent Samples Within Acceptable Criteria
EPA 821/R-02-012	*Ceriodaphnia dubia*	45	0	100.00
EPA 821/R-02-012	*Pimephales promelas*	43	0	100.00
EPA 821/R-02-013	*Selenastrum capricornutum*	50	0	100.00
EPA 600/R-99-064	*Hyalella azteca*	24	0	100.00

Table 25. ESJWQC summary of toxicity field duplicate sample evaluations collected during the storm season of 2008; sorted by method and species.

Method	Toxicity Species	Total Field Duplicate Samples	Data Quality Objective (DQO)	Total Field Duplicate Samples Within DQO	Percent Samples Within Acceptable Criteria
EPA 821/R-02-012	*Ceriodaphnia dubia*	3	RPD ≤ 25	3	100.00
EPA 821/R-02-012	*Pimephales promelas*	3	RPD ≤ 25	3	100.00
EPA 821/R-02-013	*Selenastrum capricornutum*	3	RPD ≤ 25	2	66.67
EPA 600/R-99-064	*Hyalella azteca*	1	RPD ≤ 25	1	100.00

Pesticide Use Information

All exceedances for the 2008 storm sampling are provided in the next section of this report, Data Interpretation. Pesticide use reports (PUR) for October 2007 – March 2008 were requested from all the counties within the Coalition region and applications relevant to exceedances are included in Appendix IV. It should be noted that PUR data are considered preliminary and may include errors and/or omissions.

For each sampling period in which chemicals, metals or toxicity were detected, all reported pesticide use for one to six months prior to sampling (depending on the exceedance (Table 26) was collected for the specific site subwatershed based on Township-Range-Section (TRS). All pesticide products that contained the detected chemicals and metals are listed by their active ingredients and application method and are provided in maps in Appendix IV. Pesticide use is reported as amount of product used. Some products may have more than one active ingredient and in this case the product appears more than once with the name of the chemical ingredient. Data are not available for individual fields or parcels except where they coincide with complete sections. Where consecutive exceedances require pesticide use reports, only additional pesticide use from the date of the previous exceedance are provided for the later exceedance.

Dieldrin, endrin, DDT and DDE exceedances are not queried since there are no registered products that contain these chemicals. Nitrate/nitrite exceedances are not listed since the use of these products are not reported.

Table 26. Pesticide use data collected for reported exceedences.

Exceedance Type	Pesticides Use Data Collected
Pesticides in water column	1 month, except pyrethroids 6 months
Metals in water column	3 months
Sediment Toxicity – *Hyalella azteca*	3 months with 6 months for pyrethroids
Water column toxicity – *Selenastrum capricornutum, Pimephales promelas* and *Ceriodaphnia dubia*	1 month with 6 months for pyrethroids

Administrative Record
Page 12315

Data Interpretation

A summary of exceedances that occurred during monitoring over the 2008 storm season is presented in Table 29 - Table 32. Water quality trigger limits (WQTLs) used to determine exceedances are provided in Table 28.

Discrepancies exist between exceedances reported in this document and those submitted as exceedance reports to the CVRWQCB during the 2008 storm monitoring season. These discrepancies include detections that were either not reported in official exceedance reports or that were reported incorrectly and are described below as well as listed in Table 27.

Exceedances of cadmium included in this report were not reported during the 2008 storm season due to a change in the WQTL for cadmium, applied on March 13, 2008. As a result, seven exceedances of cadmium (including one field duplicate) were detected after monitoring results for the storm monitoring event had been reported. These exceedances occurred across six of the Coalition monitoring sites, as shown in Table 27, below.

In addition, discrepancies occurred between the initial percentages reported for *Selenastrum capricornutum* toxicity and those included in this report. *Selenastrum* toxicity test results are reported from the laboratory in both absorbance units and cells/mL (calculated based on absorbance). Initially a percent relative to the control was calculated based on the reported absorbance; however the percent relative to the control values entered into the Coalition database were calculated based on cell counts. As a result, the percentages reported in the initial exceedance reports may vary slightly from the final exceedances shown below.

One discrepancy occurred in the reported percent survival of *Ceriodaphnia dubia* compared to the control for the samples collected from Miles Creek @ Reilly Rd on January 30, 2008. This result was misreported to the Coalition in the preliminary summary of exceedances from the laboratory. The correct result has been updated from 15% to 19% survival.

As required by the MRP, all samples that were toxic were resampled, except for one, within 48 hours of receiving laboratory results. Due to an email with the incorrect site name, Dry Creek @ Rd 18 was not resampled due for *Selenastrum* toxicity experienced in the sample collected on January 25, 2008. The error was not caught until it was too late to resample. All samples that experienced toxicity greater than 50% of the control underwent toxicity identification evaluations (TIEs) and the results of these are included Appendix VI and summarized in Table 32. There were two toxic samples for which a TIE

was not conducted; one was due to elevated levels of ammonia and the other due to a laboratory oversight.

Administrative Record
Page 12317

Table 27. Exceedance discrepancies that occurred during the 2008 storm season.

Results are sorted by analyte and station name.

Station Name	Sample Date	Analyte	Reported unit	Exceedance Report	Current Report
Bear Creek @ Kibby Rd	01/24/08	Cadmium	µg/L	Not Reported	0.08
Highline Canal @ Hwy 99	01/24/08	Cadmium	µg/L	Not Reported	0.2
Highline Canal @ Lombardy Ave	01/24/08	Cadmium	µg/L	Not Reported	0.06
Merced River @ Santa Fe	01/24/08	Cadmium	µg/L	Not Reported	0.1
Deadman Creek (Dutchman) @ Gurr Rd	01/25/08	Cadmium	µg/L	Not Reported	0.05
Duck Slough @ Gurr Rd FD	01/25/08	Cadmium	µg/L	Not Reported	0.05
Duck Slough @ Gurr Rd	01/25/08	Cadmium	µg/L	Not Reported	0.07
Miles Creek @ Reilly Rd	1/30/08	*C. dubia*	% survival relative to control	15	19
Hatch Drain @ Tuolumne Rd	1/24/08	*S. capricornutum*	% growth relative to control (cell count)	75	74
Prairie Flower Drain @ Crows Landing Rd	1/24/08	*S. capricornutum*	% growth relative to control (cell count)	72	71
Deadman Creek @ Hwy 59	1/25/08	*S. capricornutum*	% growth relative to control (cell count)	45	44
Deadman Creek @ Hwy 59 FD	1/25/08	*S. capricornutum*	% growth relative to control (cell count)	59	58
Dry Creek @ Rd 18	1/25/08	*S. capricornutum*	% growth relative to control (cell count)	33	36
Black Rascal Creek @ Yosemite Rd	2/25/08	*S. capricornutum*	% growth relative to control (cell count)	41	38
Deadman Creek @ Gurr Rd	2/25/08	*S. capricornutum*	% growth relative to control (cell count)	50	47
Dry Creek @ Rd 18	2/25/08	*S. capricornutum*	% growth relative to control (cell count)	78	77
Dry Creek @ Wellsford Rd	2/26/08	*S. capricornutum*	% growth relative to control (cell count)	34	33
Hatch Drain @ Tuolumne Rd	2/26/08	*S. capricornutum*	% growth relative to control (cell count)	8	6
Highline Canal @ Hwy 99	2/26/08	*S. capricornutum*	% growth relative to control (cell count)	73	72

Station Name	Sample Date	Analyte	Reported unit	Exceedance Report	Current Report
Livingston Drain @ Robin Ave	2/26/08	*S. capricornutum*	% growth relative to control (cell count)	62	61
Livingston Drain @ Robin Ave (FD)	2/26/08	*S. capricornutum*	% growth relative to control (cell count)	66	65
Mustang Creek @ East Ave	2/26/08	*S. capricornutum*	% growth relative to control (cell count)	26	25
Prairie Flower Drain @ Crows Landing Rd	2/26/08	*S. capricornutum*	% growth relative to control (cell count)	41	39
Westport Drain @ Vivian Rd	2/26/08	*S. capricornutum*	% growth relative to control (cell count)	14	12
Dry Creek @ Rd 18	3/4/08	*S. capricornutum*	% growth relative to control (cell count)	34	35

Administrative Record
Page 12319

Table 28. Water Quality Triggers Limits (WQTLs) for constituents and parameters measured during Coalition monitoring.

Constituent	Water Quality Trigger Limit (WQTL)	Standard Type	Beneficial Use (BU) with most protective limit	Reference for the Trigger Limit
Physical Parameters				
pH	6.5 - 8.5 units	Numeric		Sacramento/San Joaquin Rivers Basin Plan (page III.6.00)
Electrical Conductivity (maximum)	700 umhos/cm	Narrative	Agricultural Supply	Water Quality for Agriculture (Ayers & Westcot)
Dissolved Oxygen (minimum)	7 mg/L	Numeric	Cold Freshwater Habitat, Spawning	Sacramento/San Joaquin Rivers Basin Plan. Water Quality Control Plan for the Tulare Lake Basin.
	5 mg/L		Warm water habitat	Basin Plan Objective, page III-5.00: for waters designated WARM (aquatic life). Tulare Lake Basin Plan
Total Dissolved Solids	450 mg/L	Narrative	Agricultural Supply	Water Quality for Agriculture (Ayers & Westcot)
Turbidity	variable	Numeric	Municipal and Domestic Supply	Basin Plan Objective - increase varies based on natural turbidity
E. coli	235 MPN/100 ml			EPA ambient water quality criteria, single-sample maximum
TOC	NA			
Pesticides - Carbamates				
Aldicarb	3 ug/L	Narrative	Municipal and Domestic Supply	Basin Plan Chemical Constituents Objective, USEPA Primary MCL (MUN, human health)
Carbaryl	2.53 ug/L	Narrative	Cold Freshwater Habitat, Spawning	Basin Plan Toxicity Objective: Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average (California Department of Fish and Game) (aquatic life). Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average (California Department of Fish and Game)
Carbofuran	ND	Numeric		Sacramento/San Joaquin Basin Plan - Basin Plan Prohibition, page IV-25.00 (MUN, human health)
Methiocarb	0.5 ug/L	Narrative	Cold Freshwater Habitat, Spawning	Handbook of Acute Toxicity of Chemicals to Fish and Aquatic Invertebrates/Resour.Publ.137, Fish Wildl.Serv., U.S.D.I., Washington, D.C :98 p. (OECDG Data File) -(Detect at .5 ug/L - no limit set)
Methomyl	0.52 ug/L	Narrative	Cold Freshwater Habitat, Spawning	Basin Plan Toxicity Objective, Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average (California Department of Fish and Game) (aquatic life)
Oxamyl	50 ug/L	Numeric	Municipal and Domestic Supply	Basin Plan, page III-3.00, under "Chemical constituents." Drinking Water Standards - Maximum Contaminant Levels (MCLs). California Dept of Health Services. Primary MCL
Pesticides - Organochlorines				
DDD(p,p')	0.00083 ug/L	Numeric	Municipal and Domestic Supply	Basin Plan (page III-6.00, pesticides, third bullet). CTR, Human Health Protection, 30-Day Average - Sources of Drinking Water (water & fish consumption)
DDE(p,p')	0.00059 ug/L			
DDT(p,p')	0.00059 ug/L			
Dicofol	NA			

Constituent	Water Quality Trigger Limit (WQTL)	Standard Type	Beneficial Use (BU) with most protective limit	Reference for the Trigger Limit
Dieldrin	0.00014 ug/L	Numeric	Municipal and Domestic Supply	CTR, Human Health Protection, 30-Day Average - Sources of Drinking Water (water & fish consumption)
Endrin	0.036 ug/L	Numeric	Cold Freshwater Habitat, Spawning	CTR, Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average
Methoxychlor	0.03 ug/L	Narrative	Cold Freshwater Habitat, Spawning	Basin Plan Toxicity Objective, USEPA National Ambient Water Quality Criteria - Freshwater Aquatic Life Protection - instantaneous maximum (aquatic life)
Pesticides - Organophosphates				
Azinphos methyl	0.01 ug/L	Narrative	Cold Freshwater Habitat, Spawning	National Ambient Water Quality Criteria - Freshwater Aquatic Life Protection (Instantaneous)
Chlorpyrifos	0.015 ug/L	Numeric	Cold Freshwater Habitat, Spawning	Sacramento/San Joaquin Rivers Basin Plan, page III-6.01; San Joaquin River & Delta, pending Sacramento & Feather Rivers (aquatic life); more stringent 4-day average selected over less stringent 1-hour average (Central Valley Regional Water Quality Control Board; recent ammendment for Diazinon and Chlorpyrifos in the Lower San Joaquin River).
Diazinon	0.1 ug/L	Numeric	Cold Freshwater Habitat, Spawning	Sacramento San Joaquin Basin Plan, San Joaquin River & Delta numeric standard pending Sacramento & Feather Rivers numeric standard
Dimethoate	1.0 ug/L	Narrative	Cold Freshwater Habitat, Spawning	Basin Plan Toxicity Objective, Notification Level – DHS (MUN, human health). California Notification Levels. (Department of Health Services)
Disulfoton	0.05 ug/L	Narrative	Cold Freshwater Habitat, Spawning	Basin Plan Toxicity Objective, USEPA National Ambient Water Quality Criteria - Freshwater Aquatic Life Protection - instantaneous
Malathion	ND	Numeric		Sacramento/San Joaquin Basin Plan - Basin Plan Discharge Prohibition, page IV-25.00
Methamidophos	0.35 ug/L	Narrative	Municipal and Domestic Supply	Basin Plan Toxicity Objective, Drinking Water Health Advisories or Suggested No-Adverse-Response Levels for non-cancer health effects. USEPA IRIS Reference Dose (RfD) as a drinking water level.
Methidathion	0.7	Narrative	Municipal and Domestic Supply	Basin Plan Toxicity Objective, USEPA IRIS Reference Dose (MUN, human health)
Parathion, Methyl	ND	Numeric		Sacramento/San Joaquin Basin Plan - Basin Plan Prohibition, page IV-25.00
Phorate	0.7 ug/L	Narrative	Municipal and Domestic Supply	Basin Plan Toxicity Objective, Drinking Water Health Advisories or Suggested No-Adverse-Response Levels for non-cancer health effects. USEPA IRIS Reference Dose (RfD) as a drinking water level.
Phosmet	140 ug/L	Narrative	Municipal and Domestic Supply	Basin Plan Toxicity Objective, Drinking Water Health Advisories or Suggested No-Adverse-Response Levels for non-cancer health effects. USEPA IRIS Reference Dose (RfD) as a drinking water level.
Pesticides - Pyrethroids				

Constituent	Water Quality Trigger Limit (WQTL)	Standard Type	Beneficial Use (BU) with most protective limit	Reference for the Trigger Limit
Biphenthrin	110 ug/L	Narrative		Basin Plan Toxicity Objective, USEPA IRIS Reference Dose (human health)
Cypermethrin, total	0.002 ug/L	Narrative	Cold Freshwater Habitat, Spawning	Basin Plan Toxicity Objective, Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average (California Department of Fish and Game)(aquatic life)
Cyhalothrin, lambda, total	35 ug/L	Narrative		Basin Plan Toxicity Objective, USEPA IRIS Reference Dose (MUN, human health)
Permethrin, total	0.03 ug/L	Narrative	Cold Freshwater Habitat, Spawning	Basin Plan Toxicity Objective, Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average (California Department of Fish and Game) (aquatic life). USEPA National Ambient Water Quality Criteria, CA DFG, 2000
Cyfluthrin, total	NA			
Esfenvalerate/ Fenvalerate, total	NA			
Pesticides - Herbicides				
Atrazine	1.0 ug/L	Narrative	Municipal and Domestic Supply	Basin Plan, page III-3.00, under "Chemical constituents." California Primary MCL
Cyanazine	1.0 ug/L	Narrative	Municipal and Domestic Supply	Basin Plan Toxicity Objective, USEPA Health Advisory (human health)
Diuron	2 ug/L	Narrative	Municipal and Domestic Supply	One-in-a-Million Incremental Cancer Risk Estimates for Drinking Water. USEPA Health Advisory. Likely to be carcinogenic to humans (U.S. Environmental Protection Agency, 2005 Guidelines for Carcinogen Risk Assessment). Value modified using more recent information in USEPA Office of Pesticide Programs Registration Eligibility Decisions Documents. From Reference 36. (August 2007 Update Edition of the WQG)
Glyphosate	700 ug/L	Numeric	Municipal and Domestic Supply	Basin Plan Chemical Constituents Objective, page III-3.00, California Primary MCL (MUN, human health)
Linuron	1.4 ug/L	Narrative	Municipal and Domestic Supply	USEPA IRIS Reference Dose as a drinking water level*
Molinate	ND	Numeric		Sacramento/San Joaquin Basin Plan - Basin Plan Discharge Prohibition, page IV-25.00
Paraquat dichloride	3.2 ug/L	Narrative	Municipal and Domestic Supply	USEPA IRIS Reference Dose as a drinking water level*
Simazine	4.0 ug/L	Numeric	Municipal and Domestic Supply	Basin Plan Chemical Constituents Objective, California Primary MCL (MUN, human health)
Thiobencarb	ND	Numeric		Sacramento/San Joaquin Basin Plan - Basin Plan Discharge Prohibition, page IV-25.00
Metals (c)				

Constituent	Water Quality Trigger Limit (WQTL)	Standard Type	Beneficial Use (BU) with most protective limit	Reference for the Trigger Limit
Arsenic	10 ug/L	Narrative	Municipal and Domestic Supply	Basin Plan Chemical Constituents Objective, USEPA Primary MCL (MUN, human health)
Boron	700 ug/L	Narrative	Agricultural Supply	Water Quality for Agriculture (Ayers & Westcot)
Cadmium	For aquatic life; variable (see cadmium worksheet). For MUN, trigger limit is 0.04 regardless of hardness value	Numeric	Cold Freshwater Habitat, Spawning/ Municipal and Domestic Supply	Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average - Varies with water hardness/ California Public Health Goal for Drinking Water
Copper	For aquatic life; variable (see copper worksheet). For MUN, trigger limit is 170 regardless of hardness value	Numeric	Cold Freshwater Habitat, Spawning/ Municipal and Domestic Supply	Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average - Varies with water hardness/ California Public Health Goal for Drinking Water
Lead	For aquatic life; variable (see Lead worksheet). For MUN, trigger limit is 2.0 regardless of hardness value	Numeric	Cold Freshwater Habitat, Spawning/ Municipal and Domestic Supply	CTR Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average - varies with water hardness/ CA Public Health Goal for Drinking Water
Nickel	For aquatic life variable (see Nickel worksheet). For MUN nickel trigger limit is 12 ug/L regardless of hardness value	Numeric	Cold Freshwater Habitat, Spawning / Municipal and Domestic Supply	Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average - varies with water hardness/ CA Public Health Goal for Drinking Water
Selenium	50 ug/L	Numeric	Municipal and Domestic Supply	California Primary MCL
Selenium	5 ug/L (4-day average)	Numeric	Cold Freshwater Habitat, Spawning	Table III-1: Trace Element Water Quality Objective. Applicable Water Bodies - San Joaquin River, mouth of the Merced River to Vernalis. Also CTR
Zinc	For aquatic life variable (see Zinc worksheet). For MUN nickel trigger limit is 5000 ug/L regardless of hardness value	Numeric	Cold Freshwater Habitat, Spawning, Municipal and Domestic Supply	Freshwater Aquatic Life Protection - Continuous Concentration, 4-Day Average - varies with water hardness/ CA Public Health Goal for Drinking Water
Nutrients				
Nitrate as NO3 Nitrate as N	45,000 ug/L as NO3 10,000 ug/L as N	Numeric	Municipal and Domestic Supply	California Primary MCL

Administrative Record
Page 12323

Constituent	Water Quality Trigger Limit (WQTL)	Standard Type	Beneficial Use (BU) with most protective limit	Reference for the Trigger Limit
Nitrite as Nitrogen	1,000 ug/L as N	Numeric	Municipal and Domestic Supply	California Primary MCL
Ammonia	For aquatic life variable (see ammonia worksheet). For MUN ammonia trigger limit is 1.5 mg/L regardless of pH and Temperature values	Numeric	Cold Freshwater Habitat, Spawning/ Municipal and Domestic Supply	USEPA Freshwater Aquatic Life Criteria, Continuous Concentration/ Taste and Odor Threshold
Hardness	NA			
Phosphorus, total	NA			
Orthophosphate, soluble	NA			
TKN	NA			

NA = Not Available. Until completion of evaluation studies and MRP Plan submittals with site specific information on beneficial uses.
ND = Non Detect.

Table 29. Exceedances of field parameters; sorted by station name and sample date.

Station Name	Sample Date	Sample Time	Oxygen, Dissolved, mg/L	pH, none	Specific Conductivity, µS/cm
Bear Creek @ Kibby Rd	03/04/08	15:30		8.72	
Deadman Creek (Dutchman) @ Gurr Rd	02/25/08	9:50		8.51	
Duck Slough @ Hwy 99	03/04/08	15:30		8.65	
Hatch Drain @ Tuolumne Rd	01/24/08	10:00	4.67		1199
Hatch Drain @ Tuolumne Rd	01/30/08	12:10	5.28		1343
Hatch Drain @ Tuolumne Rd	02/26/08	9:20	1.9		1298
Hatch Drain @ Tuolumne Rd	03/04/08	10:30	2.12		1271
Hatch Drain @ Tuolumne Rd	03/28/08	13:40	5.18		1373
Highline Canal @ Hwy 99	02/26/08	13:00			747
Highline Canal @ Hwy 99	03/04/08	12:40		9.32	
Highline Canal @ Lombardy Ave	03/04/08	13:20	0.34		1402
Hilmar Drain @ Central Ave	01/24/08	14:10			1528
Hilmar Drain @ Central Ave	02/26/08	11:20			1476
Hilmar Drain @ Central Ave	03/04/08	16:40			1429
Hilmar Drain @ Central Ave	03/28/08	13:10	6.3		1111
Livingston Drain @ Robin Ave	02/26/08	12:50	5.68		
Mustang Creek @ East Ave	02/26/08	9:50	4.06		
Mustang Creek @ East Ave	03/04/08	14:00	2.44		
Mustang Creek @ East Ave	03/28/08	12:20	4.1		1467
Prairie Flower Drain @ Crows Landing Rd	01/24/08	12:20			2371
Prairie Flower Drain @ Crows Landing Rd	01/30/08	12:40			2944
Prairie Flower Drain @ Crows Landing Rd	02/26/08	10:10			2722
Prairie Flower Drain @ Crows Landing Rd	03/04/08	11:30			2639
Westport Drain @ Vivian Rd	01/24/08	8:40			1086
Westport Drain @ Vivian Rd	02/26/08	8:30	5.7		1104
Westport Drain @ Vivian Rd	03/04/08	9:50			1096

Table 30. Water column pesticides exceedances; sorted by station name and sample date.

Station Name	Sample Type Code	Sample Date	Sample Time	Chlorpyrifos, µg/L	DDT (p,p'), µg/L	Diazinon, µg/L	Diuron, µg/L	Methidathion, µg/L	Simazine, µg/L
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	0.019			68		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	0.036		0.24	65		5.1
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50		0.0073				
Deadman Creek @ Hwy 59	FD	01/25/08	12:00				6.3		19
Deadman Creek @ Hwy 59	E	01/25/08	12:00				6.2		25
Dry Creek @ Rd 18	E	01/25/08	11:10				21		
Dry Creek @ Rd 18	E	02/25/08	11:10	0.034		0.24	2.1		
Highline Canal @ Hwy 99	E	01/24/08	14:40	0.019			3.2		
Highline Canal @ Lombardy Ave	E	01/24/08	12:50	0.028					
Highline Canal @ Lombardy Ave	E	02/26/08	12:00						12
Livingston Drain @ Robin Ave	E	01/24/08	15:40	0.02					
Merced River @ Santa Fe	E	01/24/08	11:40	0.59					
Miles Creek @ Reilly Rd	E	01/25/08	13:40					2.3	
Mustang Creek @ East Ave	E	01/24/08	10:40	0.067					4.2
Mustang Creek @ East Ave	E	02/26/08	9:50	0.028					17

E = Environmental sample; FD = Field Duplicate

Administrative Record
Page 12326

Table 31. Water column inorganics, physical parameters, metals, nutrients and bacteria exceedances in water column; sorted by station name and sample date.

The hardness value is included in parenthesis for those metals exceedances that are based on hardness.

Station Name	Sample Type Code	Sample Date	Sample Time	Ammonia as N	Arsenic, µg/L	Cadmium, µg/L	Color, color units	Copper, µg/L	Dissolved Solids, mg/L	*E. coli*, MPN/100 mL	Lead, µg/L	Nickel, µg/L	Nitrate as N, mg/L
Bear Creek @ Kibby Rd	E	01/24/08	16:00			0.08	150	8.6 (80)		>2400			
Bear Creek @ Kibby Rd	E	02/25/08	13:50				150	7.2 (64)		>2400			
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00				85			>2400			
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10				170			>2400			
Cottonwood Creek @ Rd 20	E	01/25/08	9:50				100	24 (26)		1200	5.4		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40				120	21 (66)			1.9 (66)		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50		15	0.05	150	19 (130)		870	3.2	18	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50		13		58			550			
Deadman Creek @ Hwy 59	E	01/25/08	12:00				350			>2400			
Deadman Creek @ Hwy 59	E	02/25/08	10:50				540			1200			
Dry Creek @ Rd 18	E	01/25/08	11:10				76	20 (58)		>2400			
Dry Creek @ Rd 18	E	02/25/08	11:10				85	33 (54)					
Dry Creek @ Wellsford Rd	E	01/24/08	9:10				200			>2400	2.4		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30			0.05	250	11 (60)		>2400	1.8 (60)		
Duck Slough @ Gurr Rd	FD	01/25/08	9:40			0.05	180	13 (80)		>2400	2.7		
Duck Slough @ Gurr Rd	E	01/25/08	9:40			0.07	200	13 (96)		>2400	2.9	13	
Duck Slough @ Gurr Rd	E	02/25/08	9:10			0.1	250	17 (100)		>2400	3.7	17	
Duck Slough @ Hwy 99	E	01/25/08	13:10				120			>2400			
Duck Slough @ Hwy 99	E	02/25/08	12:40			0.05	140	9.9 (84)		>2400	2.1		
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00		16		40		820	340			22
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00		15		40		820	410			24
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20		16		37		900	920			24
Highline Canal @ Hwy 99	E	01/24/08	14:40	3.3		0.2	250	37 (170)	500	>2400	3.4		
Highline Canal @ Hwy 99	E	02/26/08	13:00	8.3		0.096	300	81 (190)	520	>2400			

Administrative Record
Page 12327

Station Name	Sample Type Code	Sample Date	Sample Time	Ammonia as N	Arsenic, µg/L	Cadmium, µg/L	Color, color units	Copper, µg/L	Dissolved Solids, mg/L	*E. coli*, MPN/100 mL	Lead, µg/L	Nickel, µg/L	Nitrate as N, mg/L
Highline Canal @ Lombardy Ave	E	01/24/08	12:50			0.06	220	28 (150)		2000	3.2		
Highline Canal @ Lombardy Ave	E	02/26/08	12:00	1.7		0.09	330	32 (110)			2.7		
Hilmar Drain @ Central Ave	E	01/24/08	14:10				44		970				
Hilmar Drain @ Central Ave	E	02/26/08	11:20				35		910				
Livingston Drain @ Robin Ave	E	01/24/08	15:40				35	6.7 (28)		1700	2.4		
Livingston Drain @ Robin Ave	FD	02/26/08	12:50				75	18 (38)			0.93 (38)		
Livingston Drain @ Robin Ave	E	02/26/08	12:50				40	15 (38)			1.1 (38)		
Merced River @ Santa Fe	E	01/24/08	11:40			0.1	300	22 (42)			5.6		
Merced River @ Santa Fe	E	02/26/08	11:00				130						
Miles Creek @ Reilly Rd	E	01/25/08	13:40				150	15 (62)		>2400	3.2		
Miles Creek @ Reilly Rd	E	02/25/08	11:50			0.2	620	34 (84)		2000	7.7	26	
Mustang Creek @ East Ave	E	01/24/08	10:40				200			460			
Mustang Creek @ East Ave	E	02/26/08	9:50				250						
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20				85		1500	1100			23
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10				56		1600				28
Westport Drain @ Vivian Rd	E	01/24/08	8:40				22		740	290			28
Westport Drain @ Vivian Rd	E	02/26/08	8:30						730				26

E = Environmental sample; FD = Field Duplicate

Administrative Record
Page 12328

Table 32. Water column and sediment toxicity exceedances and results of TIE studies.

Station Name	Sample Type Code	Sample Date	Sample Time	Species	Toxicity End Point	Mean	Percent Control	Toxicity Significance	Summary Comments
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	*Selenastrum capricornutum*	Total Cell Count	201668	38	SL	TIE was initiated on 3/11/08 and sample lost all toxicity. Resampled on 03/4/08; toxicity was not persistent.
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	*Pimephales promelas*	Survival (%)	45	45	SL	TIE was initiated on 1/30/08 and concluded that non-polar organics was the probable cause of toxicity. Resampled on 01/30/08; toxicity was not persistent.
Cottonwood Creek @ Rd 20	E	03/04/08	9:20	*Hyalella azteca*	Survival (%)	93	96	SG	Resample not taken on 3/28/08 - site dry.
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	*Selenastrum capricornutum*	Total Cell Count	279824	47	SL	TIE was initiated on 3/11/08 and sample lost all toxicity. Resampled on 03/4/08; toxicity was not persistent.
Deadman Creek @ Hwy 59	FD	01/25/08	12:00	*Selenastrum capricornutum*	Total Cell Count	719452	58	SL	RPD 26.7 TIE was initiated on 2/2/08 and concluded that non-polar organics was the probable cause of toxicity. Resampled on 01/30/08; toxicity was not persistent.
Deadman Creek @ Hwy 59	E	01/25/08	12:00	*Selenastrum capricornutum*	Total Cell Count	550114	44	SL	TIE was initiated on 2/2/08 and concluded that non-polar organics was the probable cause of toxicity. Resampled on 01/30/08; toxicity was not persistent.
Dry Creek @ Rd 18	E	01/25/08	11:10	*Selenastrum capricornutum*	Total Cell Count	439393	36	SL	TIE was initiated on 2/2/08 and since all toxicity was lost, no conclusions could be made. Site was not resampled due to laboratory communication error.
Dry Creek @ Rd 18	E	02/25/08	11:10	*Selenastrum capricornutum*	Total Cell Count	452419	77	SL	Resampled on 03/4/08.
Dry Creek @ Rd 18	RS	03/04/08	10:00	*Selenastrum capricornutum*	Total Cell Count	188642	35	SL	Resample due to *S. capricornutum* toxicity on 02/25/08; toxicity was persistent.
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	*Selenastrum capricornutum*	Total Cell Count	494753	33	SL	TIE initiated on 3/11/08 and concluded that non-polar organics was the probable cause of toxicity. Resampled on 03/04/08; toxicity was not persistent.
Dry Creek @ Wellsford Rd	E	03/04/08	8:20	*Hyalella azteca*	Survival (%)	80	88	SG	Resampled on 03/28/08; toxicity was not persistent.
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	*Selenastrum capricornutum*	Total Cell Count	833429	74	SL	Resampled on 1/30/08; toxicity was not persistent.
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	*Selenastrum capricornutum*	Total Cell Count	90947	6	SL	TIE initiated on 3/11/08 and concluded that non-polar organics was the probable cause of toxicity. Resampled on 03/04/08.
Hatch Drain @ Tuolumne Rd	E	03/04/08	10:30	*Hyalella azteca*	Survival (%)	0	0	SL	Resampled on 03/28/08.

Station Name	Sample Type Code	Sample Date	Sample Time	Species	Toxicity End Point	Mean	Percent Control	Toxicity Significance	Summary Comments
Hatch Drain @ Tuolumne Rd	FD	03/04/08	10:30	*Hyalella azteca*	Survival (%)	0	0	SL	RPD 0 Resampled on 03/28/08.
Hatch Drain @ Tuolumne Rd	RS	03/04/08	10:30	*Selenastrum capricornutum*	Total Cell Count	357980	73	SL	Resample due to *S. capricornutum* toxicity on 02/26/08; toxicity was persistent.
Hatch Drain @ Tuolumne Rd	RS	03/28/08	13:40	*Hyalella azteca*	Survival (%)	2	2	SL	Resample due to *H. azteca* toxicity on 03/04/08, toxicity was persistent.
Highline Canal @ Hwy 99	E	02/26/08	13:00	*Selenastrum capricornutum*	Total Cell Count	817147	72	SL	Resampled on 03/04/08; toxicity was not persistent.
Highline Canal @ Hwy 99	E	03/04/08	12:40	*Hyalella azteca*	Survival (%)	82	90	SG	Resampled on 03/28/08; toxicity was not persistent.
Highline Canal @ Lombardy Ave	E	01/24/08	12:50	*Ceriodaphnia dubia*	Survival (%)	40	40	SL	TIE was initiated on 1/30/08 and concluded that pyrethroid insecticides was the probable cause of toxicity. Resampled on 1/30/08.
Highline Canal @ Lombardy Ave	RS	01/30/08	12:20	*Ceriodaphnia dubia*	Survival (%)	30	30	SL	Resample due to *C. dubia* toxicity on 01/24/08; toxicity was persistent.
Highline Canal @ Lombardy Ave	E	02/26/08	12:00	*Pimephales promelas*	Survival (%)	90	90	SG	Resampled on 03/04/08.
Highline Canal @ Lombardy Ave	RS	03/04/08	13:20	*Pimephales promelas*	Survival (%)	0	0	SL	Resample due to *P. promelas* toxicity on 02/26/08; toxicity was persistent.
Highline Canal @ Lombardy Ave	E	03/04/08	13:20	*Hyalella azteca*	Survival (%)	83	91	SG	Resampled on 03/28/08; toxicity was not persistent.
Hilmar Drain @ Central Ave	E	03/04/08	16:40	*Hyalella azteca*	Survival (%)	83	91	SG	Resampled on 03/28/08; toxicity was not persistent.
Livingston Drain @ Robin Ave	E	02/26/08	12:50	*Selenastrum capricornutum*	Total Cell Count	690143	61	SL	Resample not taken; site dry.
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	*Selenastrum capricornutum*	Total Cell Count	732478	65	SL	RPD 5.9 Resample not taken; site dry.
Merced River @ Santa Fe	E	01/24/08	11:40	*Ceriodaphnia dubia*	Survival (%)	0	0	SL	TIE was initiated on 1/27/08 and concluded that OP insecticides was the probable cause of toxicity. Resampled on 1/30/08.
Merced River @ Santa Fe	RS	01/30/08	11:40	*Ceriodaphnia dubia*	Survival (%)	0	0	SL	Resample due to *C. dubia* toxicity on 01/24/08; toxicity was persistent.
Miles Creek @ Reilly Rd	E	01/25/08	13:40	*Ceriodaphnia dubia*	Survival (%)	0	0	SL	TIE was initiated on 1/30/08 and concluded that pyrethroid insecticides was the probable cause of toxicity. Resampled on 01/30/08.
Miles Creek @ Reilly Rd	RS	01/30/08	10:40	*Ceriodaphnia dubia*	Survival (%)	19	19	SL	Resample due to *C. dubia* toxicity on 01/25/08; toxicity was persistent.
Mustang Creek @ East Ave	E	01/24/08	10:40	*Ceriodaphnia dubia*	Survival (%)	0	0	SL	TIE was initiated on 1/27/08 and concluded that pyrethroid insecticides was the probable cause of toxicity. Resampled on 1/30/08.

Station Name	Sample Type Code	Sample Date	Sample Time	Species	Toxicity End Point	Mean	Percent Control	Toxicity Significance	Summary Comments
Mustang Creek @ East Ave	RS	01/30/08	12:40	*Ceriodaphnia dubia*	Survival (%)	0	0	SL	Resample due to *C. dubia* toxicity on 01/24/08; toxicity was persistent.
Mustang Creek @ East Ave	E	02/26/08	9:50	*Selenastrum capricornutum*	Total Cell Count	374263	25	SL	TIE initiated on 3/11/08 and sample lost all toxicity. Resampled on 03/04/08; toxicity was not persistent.
Mustang Creek @ East Ave	E	03/04/08	14:00	*Hyalella azteca*	Survival (%)	71	78	SL	Resampled on 03/28/08; toxicity was not persistent.
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	*Selenastrum capricornutum*	Total Cell Count	797608	71	SL	Resampled on 1/30/08; toxicity was not persistent.
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	*Selenastrum capricornutum*	Total Cell Count	442649	39	SL	TIE initiated on 3/11/08 and sample lost all toxicity. Resampled on 03/04/08; toxicity was not persistent.
Westport Drain @ Vivian Rd	E	02/26/08	8:30	*Selenastrum capricornutum*	Total Cell Count	188642	12	SL	TIE initiated on 3/11/08 and sample lost all toxicity. Resampled on 03/04/08.
Westport Drain @ Vivian Rd	RS	03/04/08	9:50	*Selenastrum capricornutum*	Total Cell Count	361237	66	SL	Resample due to *S. capricornutum* toxicity on 02/26/08; toxicity was persistent.

E = Environmental sample; FD = Field Duplicate; RS = Resample

Interpretation of Results

Monitoring of ambient surface waters is conducted by the Coalition for the purpose of characterizing agricultural discharges in the Coalition area. Over the long term, monitoring data provides insight into general trends in water quality at each of the sample sites.

A series of actions taken by the Coalition to determine the potential sources of exceedances experienced during each monitoring event include:

- analysis of associated toxicity data (for organic chemistry exceedances) or the evaluation of chemistry data (for toxicity exceedances) to determine possible sources of toxicity,
- analysis of relevant Toxicity Identification Evaluation (TIE) results to determine possible causes of toxicity in sample water (for samples with greater than 50% reduction of growth or survival as compared to the control),
- review of PUR data to identify relevant applications of pesticides that occurred within the site subwatershed area prior to the sampling event,
- analysis of associated monitoring data to determine potential processes by which some physical and field exceedances (such as DO, pH, and TDS) may have occurred,
- special studies, where appropriate and cost-effective, and
- additional sampling as outlined in site subwatershed management plans.

These actions were implemented on a case by case basis over the course of the 2008 storm season. All PUR data for exceedances that occurred during the 2008 storm season can be found in Appendix IV.

Toxicity

Water Column Toxicity

Toxicity in the water column can occur as a result of natural or anthropogenic causes, including the discharge, release or re-suspension of metals, pesticides, ammonia or other toxicants in a water body. The three species (*Ceriodaphnia dubia, Selenastrum capricornutum,* and *Pimephales promelas*) used in water column toxicity analyses can often be associated with detections of one or more constituents in the same sample water. Water column toxicity was experienced in 30 samples collected during the 2008 storm monitoring season. Of these samples, two were field duplicate samples and eight were a result of follow-up resampling for *Ceriodaphnia dubia, Pimephales promelas or Selenastrum capricornutum* toxicity. Of the 20 samples that experienced toxicity (not including the field duplicates or toxicity resamples), four were toxic to *Ceriodaphnia*, two to *Pimephales* and 14 to *Selenastrum*.

Every time that a sample was toxic to one or more of the above test species, the site was resampled except for one instance where there was an email error from the laboratory and the wrong site was listed as toxic (see the previous section, Data Interpretation, for details). If complete mortality occurred in a sample, a dilution series was run and acute toxic units (TUa) were calculated. TIEs were conducted on samples with less than 50% growth or survival in the treatment relative to the control. If the original sample triggered a TIE and the resample also triggered a TIE, a TIE was not performed on the resample since the second sampling is to test for toxicity persistence and it is assumed that the toxicity in the resample is due to the same causes as the original sample. However, if the original sample did not trigger a TIE and the resample did, a TIE was conducted on the resample.

There are some situations where TIEs are not performed including cases where DO or ammonia may be causing toxicity and cannot be eliminated to determine if pesticides or metals are also potential causes of toxicity. Due to a laboratory oversight one sample (Dry Creek @ Rd 18 resampled for *Selenastrum* toxicity on March 4, 2008) did not have a TIE performed. A report describing the findings of the TIEs is included in Appendix VI. In addition, PUR data are reviewed to establish a link between applications and toxicity experienced at a site. Queries are performed for applications of pesticides occurring within a relevant time period prior to the date of sampling. The time period is determined by the physical properties of the applied chemical; namely the half-life and the K_{oc}. For water toxicity, the relevant time period for herbicides and insecticides is one month prior to sampling and for applications of metals the time period is three months. Summaries and maps of PUR data for all toxicity and exceedances experienced during the 2008 storm season are provided in Appendix IV.

Toxicity to Ceriodaphnia dubia

Highline Canal @ Lombardy Rd

Samples collected from Highline Canal @ Lombardy Rd during the January 24, 2008 monitoring event tested toxic to *Ceriodaphnia* (40% survival compared to the control). A TIE was performed to identify the causes of toxicity. Results indicated that the water column toxicity was due to a pyrethroid insecticide, however there were no pyrethroid pesticides detected in the chemistry analyses. Chlorpyrifos (0.028 µg/L) and copper (28 µg/L), based on LC_{50} and EC_{50} information, account for all of the toxicity experienced. The resample collected on January 30, 2008 was again toxic to *Ceriodaphnia* (30% survival as compared to the control). There were no applications of chlorpyrifos in the site subwatershed within one month prior to sampling; however, applications of copper, predominantly in the form of copper hydroxide and copper sulfate, occurred on 3,277 acres of orchards in the months of December and January. There were also widespread applications of pyrethroid pesticides including bifenthrin, esfenvalerate, lambda-cyhalothrin and permethrin. It is possible that one or more of these pesticides contributed to the toxicity in samples collected from the Highline Canal. None of these pyrethroids were detected in the sample collected for chemical analysis.

Merced River @ Santa Fe

Samples collected from the Merced River @ Santa Fe site during the January 24, 2008 monitoring event were toxic to *Ceriodaphnia dubia* leading to complete mortality. A dilution series was performed and a TIE was conducted to identify the causes of toxicity. The dilution series indicated that 11.1 TUa were present in the sample and the TIE indicated that toxicity was due to an organophosphate pesticide. Chlorpyrifos (0.59 µg/L) was detected in the sample water and accounts for the majority of the toxic units (7.4 out of 11.4 TUa). Diazinon was detected (0.01 µg/L) and accounted for less than 0.1 TUa. In addition to the organophosphate pesticides, copper was detected in the water at 22 µg/L. A query was run on relevant PUR data for applications of chlorpyrifos, copper or other pesticides toxic to *Ceriodaphnia*. One chlorpyrifos application occurred two weeks prior to sampling within a TRS located near the outer boundary of the site subwatershed (refer to Appendix IV for a map showing all applications). The pesticide, Lorsban-4E, was applied on 550 acres of almond orchards. There were also numerous applications of copper-based pesticides within three months prior to sampling. A total of 20,702 Ibs of copper-based pesticides, including copper hydroxide, copper oxide and copper sulfate, were applied to 2,676 acres of orchards. It is likely that one or more of these pesticides contributed to the toxicity and exceedances detected at the Merced River monitoring site. This site was resampled on January 30, 2008 and resulted in complete mortality to *Ceriodaphnia*. No additional applications were reported between the original sample and the resample.

Miles Creek @ Reilly Rd

Complete mortality to *Ceriodaphnia* was experienced in samples collected from the Miles Creek @ Reilly Rd on January 25, 2008. A dilution series and TIE were performed. Although the baseline test did not indicate that toxicity was still present, an addition of piperonyl butoxide (PBO) elevated the level of toxicity in the sample water indicating that pyrethroids were present in the sample water at low concentrations. There were no detections of pyrethroid pesticides in the water. Exceedances of methidathion (2.3 µg/L) and copper (15 µg/L) were experienced in the samples, however, results from the TIE indicate that these constituents were not responsible for the toxicity. It is possible that the pyrethroid pesticides that initially caused toxicity may have become adsorbed to the surface of the laboratory container. Initially the concentration of pyrethroids was sufficient to cause toxicity but the propensity to bind to container walls resulted in a lack of toxicity by the time the TIE was initiated (3 days later) and the chemistry analysis conducted (up to 7 days later). Approximately 1,615 acres of field crops and orchards were treated with pyrethroid pesticides in the site subwatershed within three months of sampling, including bifenthrin, permethrin, beta-cyfluthrin, lambda-cyhalothrin and esfenvalerate. It is likely that one or more of these pesticides contributed to the toxicity in the sample water from this site. Resampling was conducted on January 30, 2008 and resulted in 15% survival in comparison to the control. The only application reported between the January 25 and January 30 was for paraquat dichloride (150 pints on 100 acres).

Mustang Creek @ East Ave

Ceriodaphnia dubia experienced complete mortality in samples collected from Mustang Creek @ East Ave site on January 24. A dilution series and TIE were performed. The TIE indicated that there were 1.7 TUa in the sample water most likely due to a pyrethroid pesticide. There were no detections of pyrethroid pesticides in the sample water. Toxicity resamples were collected one week after the original sample date and there was 100% mortality of *Ceriodaphnia* (0% survival as compared to the control). Since a TIE was conducted on the original sample, a TIE was not performed on the resample. The sample collected on January 24 had detections of chlorpyrifos (0.067 µg/L), diazinon (0.065 µg/L) and simazine (4.2 µg/L). There were no applications of chlorpyrifos, diazinon or simazine within one month prior to sampling, however four applications of two pyrethroids, esfenvalerate and gamma-cyhalothrin, occurred in January on 775 acres of almond orchard. Neither esfenvalerate nor lambda-cyhalothrin was detected in the water samples collected from the Mustang Creek sample site (water samples were not tested for gamma-cyhalothrin). As with the sample from the site described above, it is possible that pyrethroid pesticides that initially caused toxicity in the water column may have adsorbed to the surface of the laboratory container, thus eliminating detection at the chemistry laboratory. The pyrethroids reported in the PUR data may be responsible for the initial toxicity even though they were not detected in the chemistry analysis. The organophosphates (chlorpyrifos and diazinon) may have also had an effect on the initial toxicity.

Toxicity to Pimephales promelas

Cottonwood Creek @ Rd 20

Samples collected from the Cottonwood Creek @ Rd 20 site experienced toxicity to *Pimephales* (45% survival as compared to the control) and also experienced exceedances in copper (24 µg/L), lead (5.4 µg/L), chlorpyrifos (0.019 µg/L) and diuron (68 µg/L). Due to the fact that toxicity to other, more sensitive test species did not occur, it is unlikely that the toxicity in the sample water was a result of the pesticides/metal detected. None of the constituents in the sample water are known to be acutely toxic to *Pimephales* at the detected concentrations. Toxicity was not detected in the TIE baseline however the SPE add-back recovered (amplified) the toxicity, indicating that a non-polar organic toxicant was present in the sample water at sublethal concentrations. PUR data were reviewed for applications of constituents within the relevant time frame prior to sampling; there were no reported applications of pesticides known to be toxic to *Pimephales* within three months of the sample collection date. Ammonia is the most common cause of toxicity to *Pimephales* however the ammonia measured in this sample (0.32 mg/L) was not at a level that would cause mortality. As a result, the cause of toxicity to *Pimephales* in this sample is unknown. Cottonwood Creek was resampled on January 30, 2008 and the toxicity to *Pimephales* was not persistent.

Highline Canal @ Lombardy

Samples collected from the Highline Canal @ Lombardy Rd site on February 26, 2008 experienced toxicity to *Pimephales* (90% survival as compared to the control). The

amount of survival in the sample (90%) is above criteria used for control tests and therefore this toxicity is not considered ecologically significant. Ammonia was detected in the sample water (1.7 mg/L) and may have contributed to the 10% mortality. Though other constituents were detected in the sample, none of these are known to be acutely toxic to *Pimephales* at the detected concentrations. Resampling occurred at this site one week after the original samples were collected (March 4, 2008) and resulted in complete mortality to the test species. There were no chemistry analyses coinciding with the resampling event, but tests at the toxicity laboratory showed levels of ammonia at 56 mg/L. The high concentration of ammonia is the most likely cause of the *Pimephales* toxicity. If a TIE is not conducted on the original sample, the laboratory is supposed to conduct a TIE on the resample if the resample is less than 50% survival as compared to the control. A TIE was not conducted on this sample since it would be impossible to know if the toxicity was due to ammonia or another constituent.

Toxicity to Selenastrum capricornutum

Black Rascal Creek @ Yosemite Rd

Samples collected from the Black Rascal Creek @ Yosemite Rd site on February 25, 2008 experienced toxicity to *Selenastrum* (38% growth as compared to the control). There were no exceedances of constituents relevant to this toxicity detected in the sample water. Toxicity was lost prior to or during the TIE and therefore the evaluation was inconclusive. Cyanazine was present at 0.14 µg/L, which is a concentration not known to be toxic to *Selenastrum*. No metals analysis was conducted for this site since it is in Phase I sampling. PUR data for this site indicate that there were no applications of products known to be toxic to *Selenastrum* in January and February 2008. The last application of any relevant pesticides occurred on December 18, 2007, however the half-life and retention in the soil of herbicides make it unlikely that they would be detected in February 2008. As a result, the cause of toxicity at this site is unknown. Resampling was conducted on March 4, 2008 and toxicity was not persistent.

Deadman Creek @ Gurr Rd

Samples collected from the Deadman Creek @ Gurr Rd site on February 25, 2008 experienced toxicity to *Selenastrum* (47% growth compared to the control). The growth is determined using absorbance values and then converted to cell/mL as per ILRP requirements. The percent growth compared to control was originally calculated as 50% based on absorbance values and therefore a TIE was not triggered. The amount reported in Table 32 and in this discussion is based on the conversion to cells/mL. Samples collected from the same site also experienced an exceedance of arsenic (13 µg/L). The level of arsenic detected in the sample water was not at a concentration known to be toxic to algae. Other metals detected in the water column at levels below WQTLs include boron (31 µg/L), copper (3.4 µg/L), lead (0.4 µg/L), nickel (3.3 µg/L), and zinc (6 µg/L). Diuron was also detected in the water (0.49 µg/L). PUR data indicate numerous applications of herbicides and copper that occurred in February, 2008 including copper hydroxide, dimethylamine salt, carfentrazone-ethyl, glyphosate,

oxyfluorfen, paraquat dichloride, pendimethalin and simazine. Resampling occurred on March 4, 2008; toxicity was not persistent.

Deadman Creek @ Hwy 59

Both the grab sample and the duplicate sample collected from Deadman Creek @ Hwy 59 on January 25, 2008 experienced toxicity to *Selenastrum* (44% and 58% growth compared to the control). The environmental and field duplicate samples also contained diuron (6.2 µg/L and 6.3 µg/L, respectively) and simazine (25 µg/L and 19 µg/L, respectively). Diuron and simazine are herbicides known to be toxic to phytoplankton and therefore are likely sources of the toxicity experienced in these samples. TIE results indicate that the source of toxicity is a non-polar organic. There were applications of both diuron and simazine within the site subwatershed during the month of January. Diuron applications occurred on 509 acres of alfalfa and grapes and simazine applications occurred on 866 acres of almonds and grapes. It is likely that the exceedances of diuron and simazine, as well as the toxicity, were a result of these applications. Resampling was conducted on January 30, 2008 and toxicity was not persistent.

Dry Creek @ Rd 18

Samples collected from the Dry Creek @ Rd 18 on January 25 and February 25, 2008 experienced toxicity to *Selenastrum* (36% and 77% growth compared to the control, respectively). A TIE was conducted on the January 25 sample and toxicity was lost resulting in an inconclusive evaluation. Diuron was detected in the water (2.1 µg/L) which is close to the reported EC_{50} of 2.4 µg/L. Copper was also detected in the water at 20 µg/L (an exceedance of the hardness-based WQTL). Probable causes of toxicity include both diuron and copper. PUR data indicate that diuron was not applied in the site subwatershed within one month prior to sampling, however applications of copper hydroxide, copper oxide and copper sulfate were reported. Approximately 900 Ibs of copper-based pesticides were used within the site subwatershed during the month of January. Resampling occurred for the January event at the wrong location due to a lab miscommunication and therefore it is unknown if the toxicity was persistent. The storm sample collected on February 25 contained copper (33 µg/L) and diuron (2.1 µg/L) similar to samples collected one month earlier. Diazinon (0.24 µg/L) and chlorpyrifos (0.034 µg/L) were also detected, however these constituents are less likely to have an effect on *Selenastrum* since these chemicals act as acetylcholinesterase inhibitors. Due to 77% growth as compared to the control no TIE was conducted on the February sample. Relevant PUR data for applications that occurred within the site subwatershed include 2,000 Ibs of copper hydroxide and copper sulfate applied on 743 acres of almonds and flower crops during the month of February. One application of diuron occurred on February 14 totaling 17 Ibs of product applied on 8.5 acres of grapes. Resampling occurred on March 4, 2008 resulting in persistent toxicity (35% growth as compared to the control). A TIE was not conducted on this sample due to an oversight by the laboratory.

Dry Creek @ Wellsford Rd

Samples collected from the Dry Creek @ Wellsford Rd site experienced toxicity to *Selenastrum* during the second storm sampling event in February (33% growth compared to the control). Copper (11 µg/L), cadmium (0.05 µg/L) and lead (1.8 µg/L) were found in the sample. A TIE was performed to identify the cause of toxicity. Results indicate that the source of toxicity was likely a non-polar organic pesticide (herbicide) and/or cationic metal. There were no exceedance-level detections of any pesticides at this site however detections of both diuron (0.24 µg/L) and simazine (0.48 µg/L) did occur. PUR data include applications of numerous herbicides and fungicides within the site subwatershed during the month of February. Copper was applied as copper hydroxide and copper oxide on 894 acres. Some of the more common herbicides applied include diethanolamine salt, carfentrazone-ethyl, copper hydroxide, glyphosate, dimethylamine salt, oryzalin, oxyfluorfen, paraquat dichloride, pendimethalin, and simazine. Resampling occurred on March 4, 2008 and toxicity was not persistent.

Hatch Drain @ Tuolumne

Samples collected from Hatch Drain @ Tuolumne Rd experienced toxicity to *Selenastrum* during the first and second storm monitoring events on January 24 and February 26 (74% and 6% growth as compared to the control, respectively). The field duplicate collected on January 24 was also toxic to *Selenastrum* (73% growth as compared to the control). The January resample (collected on January 30, 2008) was not toxic although the February resample (collected on March 4, 2008) was toxic (73% growth as compared to the control). A TIE performed on the environmental sample collected on February 26 concluded that both non-polar organics and cationic metals were responsible for toxicity. There were no pesticides detected in the March samples. Samples collected during the January and February sampling events experienced arsenic exceedances (15 and 16 µg/L, respectively). Copper was detected in January at a concentration of 4.7 µg/L in the environmental sample and 4.4 µg/L in the field duplicate. In the February sample, copper was detected at a concentration of 4.5 µg/L. Copper toxicity is dependent on hardness and none of the detections experienced at Hatch Drain in January or March were above WQTLs. PUR data for applications that occurred within the Hatch Drain site subwatershed were reviewed for pesticides that may have been responsible for the toxicity. Numerous herbicides were applied within one month prior to each of the sampling events, including dimethylamine salt, carfentrazone-ethyl, glyphosate, pendimethalin, rimsulfuron and copper hydroxide.

Highline Canal @ Hwy 99

Toxicity to *Selenastrum* occurred in samples collected on February 26, 2008 at Highline Canal @ Hwy 99 (72% growth compared to the control). Exceedances of ammonia (8.3 µg/L), cadmium (0.096 µg/L) and copper (81 µg/L) were present in the water. The amount of copper detected is two times the EC_{50} (43 µg/L) and is the most likely cause of decreased growth. Relevant PUR data indicate that 7839 Ibs of copper-based pesticides were applied on 753 acres of peach and almond orchards. It is likely that one or more of these applications may have caused the exceedance of copper and toxicity at the Highline Canal sample site. Resampling occurred on March 4, 2008 and the toxicity was not persistent.

Livingston Drain @ Robin Ave

Both the grab and field duplicate samples collected from Livingston Drain @ Robin Ave experienced toxicity to *Selenastrum* during the second storm event on February 26, 2008 (61% and 65% growth as compared to the control, respectively). The environmental and field duplicate water contained hardness-based exceedances of copper (15 and 18 µg/L, respectively) and lead (1.1 and 0.93 µg/L, respectively). The only pesticide detected in the water was diazinon (0.068 µg/L in the environmental sample and 0.079 µg/L in the field duplicate). The detected concentrations of diazinon would not be toxic to *Selenastrum* (EC_{50} = 6,400 µg/L). PUR data for applications of herbicides and fungicides include copper hydroxide, copper oxide and copper sulfate. During this time 2,457 lbs of copper product was applied on 384 acres of almond and peach orchards. It is likely that one or more of these applications may have caused the exceedance of copper and toxicity at the Livingston Drain sample site. Resampling was attempted on March 4, 2008, however the site was dry.

Mustang Creek @ East Ave

Samples collected from Mustang Creek @ East Ave experienced toxicity to *Selenastrum* (25% growth as compared to the control) during the second storm event on February 26. 2008. An exceedance of simazine (17 µg/L) was detected in the water and may have contributed to the toxicity (EC_{50} = 100 µg/L). No tests were performed for metals since the site is in Phase I monitoring. A TIE was performed to identify the cause(s) of toxicity, however sample toxicity was lost and no conclusions could be made. Five applications of simazine were made on 610 acres of almonds. 4,897 lbs of copper hydroxide and copper oxide were applied on 925 acres in January and February. One or more of these applications may have caused the exceedance of simazine and toxicity at the Mustang Creek sample site. Resampling occurred March 4, 2008; toxicity was not persistent.

Prairie Flower Drain @ Crows Landing Rd

Samples collected from Prairie Flower Drain @ Crows Landing Rd experienced toxicity to *Selenastrum* during the first and second storm events on January 24 and February 26, 2008 (71% and 39% growth as compared to the control, respectively). A TIE was performed to identify potential cause(s) of toxicity. Toxicity was lost resulting in an inconclusive evaluation. Detections of pesticides and metals below water quality limits include boron (360 µg/L), copper (9.2 µg/L), nickel (6.0 µg/L), selenium (1.1 µg/L), zinc (20 µg/L), and diuron (0.31 µg/L) in the January sample and boron (440 µg/L), copper (9.1 µg/L), nickel (6.5 µg/L), selenium (1.4 µg/L), zinc (4 µg/L), diuron (0.3 µg/L) and simazine (2.5 µg/L). Although none of these detections are at high enough concentration to cause toxicity the combination of these may have contributed to the reduced growth in the January and February samples. Resampling occurred on January 30 and March 4; toxicity was not persistent in either resample. PUR data indicate applications of carfentrazone-ethyl, diglycolamine salt of 3,6-dichloro-o-anisic acid, diuron, hexazinone, dimethylamine salt and paraquat dichloride. The exact source of toxicity is uncertain; however runoff of one or more of these applications may have contributed to the toxicity at the Prairie Flower Drain sample site.

Westport Drain @ Vivian Rd
Samples collected from Westport Drain @ Vivian Rd experienced toxicity to *Selenastrum* during the second storm monitoring event on February 26, 2008 and again in the resample collected one week later. A TIE was performed to identify the source of toxicity, however toxicity was lost. There were no exceedance-level detections of pesticides or metals that could cause *Selenastrum* toxicity. However, it may be that a constituent not tested by the Coalition was the cause of toxicity. PUR data indicate that applications of herbicides were made including dimethylamine salt, copper hydroxide, copper oxide, glyphosate, oxyfluorfen, paraquat and pendimethalin. One or more of these applications could be responsible for the toxicity experienced at the Westport Drain sample site.

Sediment Toxicity

Storm sediment samples were collected for the analysis of toxicity to *Hyalella azteca* on March 4, 2008. A resample was collected on March 28, 2008. Sediment samples did not undergo chemistry analyses or TIEs. The Coalition relied on PUR data to determine possible sources of sediment toxicity. Applications of pesticides with a high soil organic carbon partitioning coefficient (K_{oc}) are summarized and mapped for each of the sites that experience toxicity (Appendix IV). The relevant time frame during which applications could have an effect on the sediment at the time of sampling is six months prior to the sample collection date for pyrethroid pesticides and three months prior to sampling for all other pesticides. A discussion of each of the sediment toxicity exceedances and possible sources of toxicity are provided below.

Cottonwood Creek @ Rd 20
Samples collected at Cottonwood Creek @ Rd 20 were toxic to *Hyalella* during the storm sediment sampling event. A resample was collected three weeks after the original sampling and sediment toxicity was not persistent. Ambient water samples collected one week prior to sediment sampling revealed exceedance-level detections of copper (21 µg/L), lead (1.9 µg/L), chlorpyrifos (0.036 µg/L), diazinon (0.24 µg/L), diuron (65 µg/L) and simazine (5.1 µg/L). Chlorpyrifos is capable of binding to sediment and may have contributed to the *Hyalella* toxicity, though at the level detected it is unlikely to be the only source of toxicity. Copper could also contribute to the toxicity but the current analysis is for total metals and includes both sediment bound and dissolved compounds. Consequently it is unclear how much of the copper would have been deposited in the sediment. There were no applications of chlorpyrifos however applications of esfenvalerate occurred within one month prior to the sample collection date. Other products used within this time period include glyphosate and oxyflourfen.

Dry Creek @ Wellsford Rd
Samples collected from Dry Creek @ Wellsford Rd experienced toxicity to *Hyalella* during the storm sediment sampling event. A resample for toxicity was collected three

weeks after the original sampling and sediment toxicity was not persistent. Ambient water samples collected one week prior to sediment sampling revealed exceedance-level detections of cadmium (0.05 µg/L), copper (11 µg/L) and lead (1.8 µg/L). At the levels detected it is unlikely that any of these constituents caused sediment toxicity at the Dry Creek site, although it is possible that one or more of the metals could have contributed to the toxicity. Applications of pendimethalin occurred between the months of January and March. Other products used within this time period include glyphosate, oxyflourfen, and cyprodinil. It is likely that one or more of these applications were the cause of toxicity at this site.

Hatch Drain @ Tuolumne Rd

Samples collected from Hatch Drain @ Tuolumne Rd caused complete mortality to *Hyalella*. A resample was collected three weeks after the original sampling and sediment toxicity was persistent in the drain (2% survival relative to the control in the resample). Ambient water samples collected one week prior to sediment sampling had an exceedance-level detection of arsenic (16 µg/L), however arsenic is not known to cause toxicity at the concentration detected. It is likely that the constituents responsible for the sediment toxicity are bound to the sediment and not found in the water column. PUR data from the Hatch Drain site subwatershed indicate that seven applications occurred between February and March including glyphosate, oxyfluorfen, cyprodinil, chlorpyrifos and lambda-cyhalothrin on 61 acres of almonds and alfalfa. Though pesticide use was minimal in the site subwatershed, it is likely that one or more of these applications were the cause of toxicity at this site.

Highline Canal @ Hwy 99

Samples collected from Highline Canal @ Hwy 99 experienced toxicity to *Hyalella* during the sediment sampling event. A resample was collected three weeks after the original sampling and sediment toxicity was not persistent. Ambient water samples collected one week prior to sediment sampling revealed exceedance level detections of cadmium (0.096 µg/L) and copper (81 µg/L). At the level detected, cadmium is unlikely to cause sediment toxicity at the site although it is possible that one or more of the metals could have contributed to the toxicity. The level of copper in the sample water could contribute to the toxicity but the current analysis is for total metals and includes both sediment-bound and dissolved compounds. Consequently it is unclear how much of the copper would be deposited in the sediment. PUR data from the Highline Canal @ Hwy 99 site subwatershed show numerous pyrethroid pesticide applications (predominantly esfenvalerate) occurring between the months of December and January. Numerous applications of other pesticides, including fungicides, herbicides and insecticides, occurred up to the date of sampling and are summarized in Appendix IV. The exact cause of the toxicity is not certain, however it is likely that one or more of these applications were the cause of toxicity at this site.

Highline Canal @ Lombardy Rd

Samples collected from Highline Canal @ Lombardy Rd experienced toxicity to *Hyalella*. A resample was collected three weeks after the original sampling and sediment toxicity

was not persistent. Ambient water samples collected one week prior to sediment sampling had exceedance level detections of cadmium (0.09 µg/L), copper (32 µg/L), lead (2.7 µg/L) and simazine (12 µg/L). The concentration of metals in the sample water could contribute to sediment toxicity but includes both sediment-bound and dissolved compounds. Consequently it is unclear if the metals would be deposited in the sediment. PUR data from the Highline Canal @ Lombardy Rd site subwatershed indicate that numerous pyrethroid pesticide applications (predominantly esfenvalerate) occurred between the months of December and January. Similar to the downstream site along Highline Canal (Highline Canal @ Hwy 99), numerous applications of other pesticides, including fungicides, herbicides and insecticides, occurred in the site subwatershed prior to the date of sampling. The exact source of the toxicity is not certain, however it is likely that one or more of these applications were the cause of toxicity at this site.

Hilmar Drain @ Central Ave

Samples collected from Hilmar Drain @ Central Ave were toxic to *Hyalella*. A resample was collected three weeks after the original sampling and sediment toxicity was not persistent in the drain. Ambient water samples collected one week prior to sediment sampling did not have exceedance-level detections of any constituents known to be toxic to *Hyalella*. PUR data from the Hilmar Drain site subwatershed indicate six pesticide applications occurring between the months of January and March including pendimethalin, oxyfluorfen, paraquat dichloride and bromoxynil octanoate. The exact cause of the toxicity is not certain, however it is likely that one or more of these applications were the cause of toxicity at this site.

Mustang Creek @ East Ave

Samples collected from Mustang Creek @ East Ave were toxic to *Hyalella* during the storm sediment sampling event. A resample was collected three weeks after the original sampling and sediment toxicity was not persistent. Ambient water samples collected one week prior to sediment sampling had exceedance-level detections of chlorpyrifos (0.028 µg/L) and simazine (17 µg/L). Of these constituents, only chlorpyrifos is likely to bind to sediment and cause toxicity, however it is not likely that the toxicity would have been caused only by chlorpyrifos at the level detected. Furthermore, there were no applications of chlorpyrifos reported in the site subwatershed within 3 months prior to sampling. Current PUR data from the Mustang Creek site subwatershed show pesticide applications occurring between the months of January and March, 2008 and include glyphosate, pyraclostrobin and esfenvalerate. It is likely that one or more of these pesticides were the cause of toxicity at this site.

Pesticides

A total of 2084 individual analyses for pesticides were conducted during the 2008 storm monitoring season and a total of 26 exceedances occurred. Two of the 26 exceedances

were field duplicate results and one of the exceedances was of DDT. Field duplicate exceedances are not considered separately unless an exceedance occurs in the duplicate sample and not in its accompanying grab sample. In addition, DDT is a legacy pesticide not currently used by agriculture. Given these considerations, 23 of the 26 detected exceedances are considered relevant for the purpose of monitoring agricultural discharge during the 2008 storm season. These 23 exceedances occurred at 10 of the 23 Coalition monitoring sites during the storm sampling events that occurred on January 24-25 and February 25-26, 2008.

Herbicides accounted for 11 of the 23 pesticide exceedances, with six exceedances of diuron and five exceedances of simazine (plus field duplicate exceedances for each of these) detected across six of the sample sites. Organophosphate pesticides accounted for the other 12 of the 23 pesticide exceedances with nine exceedances of chlorpyrifos, two exceedances of diazinon and one exceedance of methidathion at eight of the sampling sites.

Pesticide applications are identifiable to township, range and section (TRS) through the use of PURs. Monitoring results obtained from sampling over the 2008 storm season were analyzed against PURs, which were received from the Merced County, Madera County and Stanislaus County Agricultural Commissioner's office as soon as they became available. Exceedances were compared to applications that occurred within the site subwatershed. Specific crops may also correlate with particular exceedances and were also identifiable through PURs. All PUR data are included in Appendix IV.

Cottonwood Creek @ Rd 20

Exceedances of chlorpyrifos and diuron were experienced at Cottonwood Creek @ Rd 20 during the first (0.019 µg/L and 68 µg/L, respectively) and second storm monitoring events of 2008 (0.036 µg/L and 65 µg/L, respectively). The last reported application of chlorpyrifos occurred in October of 2007, during which less than 30 gallons of product were used on 45 acres of orange orchards and grapes. Diuron applications occured in December 2007 and February 2008. No applications were reported for diuron in January 2008. In December, approximately 500 Ibs of diuron were used on 150 acres of orange, walnut and tangelo orchards. In February, over 1000 Ibs were applied on 500 acres of alfalfa, grapes, tangelos and oranges.

Exceedances in diazinon and simazine were experienced at Cottonwood Creek @ Rd 20 for the first time during the second storm monitoring event (0.24 µg/L and 5.1 µg/L, respectively). Diazinon is used on orchards during the dormant season and simazine can be used on a variety of crops including orchards and grapes. PUR data from the site subwatershed show applications of both diazinon and simazine within one month of sampling. One hundred and two Ibs of diazinon were applied on 315 acres of various fruit and nut orchards. Simazine applications were more widespread and occurred over 1,711 acres of grape vineyards during the month of February. It is likely that runoff of one or more of these products were the source of the exceedances.

Deadman Creek @ Gurr Rd

The exceedance of DDT that occurred at Deadman Creek @ Gurr Rd on February 25 is a result of applications in the past. DDT is a pesticide that is no longer registered or applied but persists because of its exceptionally high K_{oc} and long half life. It is estimated that the K_{oc} for DDT is between 100,000 and 1,000,000 depending on the source, and the half-life in aquatic systems is probably over 150 years (http://www.speclab.com/compound/c50293.htm). Remnants of this pesticide may be bound to sediment in the creek and mobilized periodically by unknown mechanisms. This is the first time and only time that DDT has been detected at this site since it was first monitored in May 2006.

Deadman Creek @ Hwy 59

Exceedances of diuron and simazine were detected in sample water collected from the Deadman Creek @ Hwy 59 site on January 25th in both the environmental and the field duplicate samples. Toxicity to *Selenastrum* was also experienced in the sample water and may be attributed to the detected herbicides. The TIE indicated that a non-polar organic toxicant, such as an herbicide (or more than one herbicide), was the likely cause of toxicity. According to the PURs, there were applications of both diuron and simazine in the site subwatershed during the month of January. Diuron applications occurred on 509 acres of alfalfa and grapes and simazine applications occurred on 866 acres of almonds and grapes. It is likely that the exceedances in diuron and simazine experienced in the creek were a result of these applications.

Dry Creek @ Rd 18

Exceedances of diuron were detected in samples collected during the first and second storm events from Dry Creek @ Rd 18 (21 µg/L and 2.1 µg/L, respectively). PUR data indicate that there were no applications of diuron in January; the last application of diuron was in November 2007. Two applications of diuron occurred on February 14, totaling 17 lbs of product applied on 8.5 acres of grapes. During the second storm event, chlorpyrifos (0.034 µg/L) and diazinon (0.24 µg/L) were detected above WQTLs in addition to diuron. On January 18 and 19, a total of 17.5 lbs of chlorpyrifos was applied on 35 acres of almond orchards. Three applications of diazinon occurred during the month of February amounting to 97.5 lbs of product applied on 780 acres of fig orchards. Two applications of diuron occurred on February 14, totaling 17 lbs of product applied on 8.5 acres of grapes.

Highline Canal @ Hwy 99

Exceedances of chlorpyrifos (0.019 µg/L) and diuron (3.2 µg/L) were detected in samples collected from the Highline Canal @ Hwy 99 sample site during the first storm monitoring event. There was no toxicity experienced in these samples. PUR data for the site subwatershed indicate that there were no applications of chlorpyrifos or diuron in the three months prior to sampling. It is unlikely that applications occurring prior to three months would persist sufficiently long to cause these detections. As a result, the source(s) of these exceedances are unknown.

Highline Canal @ Lombardy Ave
Exceedances of chlorpyrifos (0.028 µg/L) during the first storm event and simazine (12 µg/L) were detected at the Highline Canal @ Lombardy Rd. PUR data indicate no reported use of chlorpyrifos in the site subwatershed from August of 2007 to January 25, 2008. Applications of simazine occurred within the site subwatershed during late January and through February, with a total of 1183 acres of almond and walnut orchards treated.

Livingston Drain @ Robin Ave
One exceedance of chlorpyrifos (0.02 µg/L) was detected at the Livingston Drain @ Robin Ave during the first 2008 storm monitoring event. There was no associated toxicity in these samples. PUR data indicate that there was no reported use of chlorpyrifos in the site subwatershed between August of 2007 and January 25, 2008.

Merced River @ Santa Fe
One exceedance of chlorpyrifos (0.59 µg/L) was detected in the Merced River @ Santa Fe sample during the first 2008 storm event. Toxicity was also experienced in samples collected from this site. The concentration of chlorpyrifos accounts for the majority of the toxic units experienced in the *Ceriodaphnia* TIE analysis. PUR data for the site subwatershed show one application of chlorpyrifos occurred on January 10, two weeks prior to sampling. A total of 2,200 pints of product were applied on 550 acres of almond orchards. It is likely that the exceedance and toxicity detected at this site was a result of this pesticide application. Follow-up actions occurred as a result of these exceedances and are discussed in the following section, "Activities, Events and Deliverables."

Miles Creek @ Reilly Rd
An exceedance of methidathion was detected in samples collected from the Miles Creek @ Reilly Rd sample site on January 25, 2008 (2.3 µg/L). Toxicity to *Ceriodaphnia* was also experienced in samples collected from this site. Methidathion is an organophosphate pesticide known to be toxic to invertebrates. The level of methidathion in the sample water may have contributed to the water flea toxicity. The TIE conducted in the laboratory showed enhanced toxicity with treatment of PBO, indicative of a pyrethroid insecticide as the source contaminant. It may be the case that a pyrethroid pesticide that is not analyzed by the Coalition was apparent in the sample water at a more toxic concentration than the methidathion, thus resulting in enhanced toxicity with the PBO treatment. PUR data for the Miles Creek @ Reilly Rd site subwatershed show no applications of methidathion anytime over the past year.

Mustang Creek @ East Ave
Chlorpyrifos and simazine were detected in samples collected from the Mustang Creek @ East Ave sample site during both the first and second storm monitoring events. According to the PUR data for this site, there were no reported applications of chlorpyrifos in the Mustang Creek site subwatershed during the month of January, 2008. The last application shown in the PUR data was on October 23, 2007. PUR data indicate that 785 acres of almond orchard were treated with simazine in January, prior to the

first sampling event, and an additional 620 acres treated prior to the second storm sampling event. It is likely that one or more of these applications were the source of the exceedances at this site.

Metals

Metals can be divided into two groups: those metals which are currently registered for use by agriculture, and those that are not registered or currently applied. During the 2008 storm season, exceedances of arsenic, cadmium, copper, lead and nickel were experienced. Among the five metals, only copper is known to be currently used by agriculture within the Coalition region. Each time an exceedance of copper occurred, PUR data for parcels of land upstream of the sample site were reviewed for applications of products containing the particular metal within three months of the sample date. If applications had occurred then it was assumed that these applications could contribute to the exceedance experienced at the sample site. There are numerous sources that have the potential to release metals into the environment, and it is important that the Coalition investigate all possible sources to fully understand how exceedances can be addressed.

A total of 56 exceedances of metals were experienced during the 2008 storm season (not including field duplicate exceedances). Four of the exceedances were detections of arsenic, 12 of cadmium, 16 of lead, four of nickel and 20 of copper. These exceedances and their relevance to pesticide applications that occurred in the upstream subwatershed are described in more detail below.

Cadmium

Twelve exceedances of cadmium occurred at nine monitoring sites during the two storm monitoring events of 2008. Few exceedances of cadmium occurred in the past, however due to a change in the water quality trigger limit in March of 2008 exceedances of cadmium have increased.

Cadmium is often found in the parent material processed to generate phosphate fertilizers. Cadmium may result from the erosion of peat soils and bedrock, atmospheric deposition, discharge from industrial operations or leakage from landfills and contaminated sites. The element can be found in NiCd batteries used for wireless devices such as telephones and power tools. Cadmium has high tendency to adsorb to sediments and persists indefinitely in the environment. Identifying the potential source(s) of cadmium is possible by identifying the stable isotopes of cadmium in the sample. Different sources typically have different ratios of isotopes which allow a source designation. However, the cost of the analysis is substantial and the Coalition is unable to conduct the analysis at this time.

Copper

Copper was detected at concentrations above the WQTL 20 times at 13 sites during the storm monitoring events. Copper is commonly applied throughout the Coalition region and is considered an organic herbicide, fungicide, and algaecide. Copper products include copper, copper hydroxide, copper sulfate and copper sulfate pentahydrate. Copper can enter water bodies through the weathering of rocks and soils that naturally contain metals. Copper is known to contribute to the toxicity of *Selenastrum*. Since copper does not degrade, it is possible that applications can cause exceedances more than one month after application. When exceedances of copper occur, PUR data are reviewed for applications within three months of the date of sampling. Exceedances that occurred during the storm season are analyzed by site subwatershed below. Refer to Appendix IV for detailed PUR data and maps showing copper applications relevant to the exceedance.

Arsenic

Arsenic was detected above the water quality trigger limit during both storm monitoring events at two sites, Deadman Creek @ Gurr Rd and Hatch Drain @ Tuolumne Ave. Arsenic is found in sodium cacodylate which is applied by agriculture for broadleaf weed control and as a cotton defoliant. The registrations on many products with this active ingredient have been cancelled. However, there are four products currently registered for use on citrus, for weed control around ditches, for use on ornamental plants, for nonagricultural weed control, and for weed control around buildings, driveways, sidewalks, rights-of-way, and fencerows. Several products are available for use by homeowners and nonagricultural users (e.g. county road maintenance) (http://www.pesticideinfo.org/List_Products.jsp?Rec_Id=PC34358&Chem_Name=Sodium%20cacodylate&PC_Code=012502) and the product may have been purchased for use by local homeowners for use on their property. California Department of Pesticide Regulation records indicate minimal use of sodium cacodylate across the Coalition region between 1996 and 2006, and in the Deadman Creek @ Gurr Rd and Hatch Drain @ Tuolumne Ave, where the exceedance occurred, there is no record of any sodium cacodylate application.

At this point the source of arsenic is unclear although native soils can contain elevated concentrations of arsenic. The Coalition is presently investigating methods for establishing background levels of arsenic in surface waters. The Coalition will work with the Regional Board to determine if it is feasible to obtain the necessary data to establish background levels.

Lead

Lead exceedances were experienced in 16 samples collected at 10 sites. Lead is a legacy of any of a number of potential sources including deposition from leaded gasoline, disposal of lead-based products such as paints, electronic components, and batteries, and old applications of lead arsenate pesticides. Currently, there are no pesticides applied that contain lead, although lead arsenate was used in the past. Lead arsenate

was used generally only until the 1960s and has been banned on all food crops since 1991. Currently, the most probable source is contaminated soils that originated from old pesticide applications, disposal of products containing lead, or the deposition of automobile exhaust along roadways. Contaminated soils may have caused contaminated sediment and that sediment may be moved into the water body during storm events. Lead is predominantly particulate bound and not bioavailable in that form. Major roads and highways within a subwatershed may contribute to the leaching of lead into receiving waterways. In addition, disposal of lead paint or leaching lead from lead arsenate deposition could contribute to lead detections.

Nickel

Four exceedances of nickel occurred at three sites during the 2008 storm monitoring events. Nickel is a naturally occurring metal that is found in soils as a normal constituent. It is also applied by agriculture as a foliar nutrient on crops such as cotton and pecans to improve nitrogen utilization when nitrogen is applied as urea. Nickel is also a constituent in fertilizers originating with wastes from industry and sewage treatment plants. It can also be released into the environment from the disposal of nickel-cadmium batteries, and in fact all nickel exceedances detected during the storm monitoring events were accompanied by cadmium exceedances (though this may simply be a coincidence). Metallic nickel is insoluble in water but complexes with several other compounds in oxidation states from -1 to +4; the most common oxidation state is +2. Ni^{2+} can be found in the dissolved state and its bioavailability is determined by the amount of organic carbon in the water body. Nickel is a potential contaminant in sediments where its bioavailability is determined by the amount of organic carbon and acid volatile sulfides. The amount of nickel applied in the Coalition region is unknown but because urea is not a commonly used form of nitrogen fertilizer its use is assumed to be low.

Site Subwatershed Analysis

Bear Creek @ Kibby Rd

Exceedances of copper occurred at the Bear Creek @ Kibby Rd site during the first and second storm season events (8.6 µg/L and 7.2 µg/L, respectively). Copper is commonly applied throughout the Coalition region and is considered an organic herbicide, fungicide, and algaecide. PUR data for the upstream subwatershed show no reported use of copper within six month prior to either sampling event. Cadmium exceeded the WQTL in samples collected during the second storm event (0.08 µg/L). Cadmium in the creek may come from a number of sources, as described above. It is not certain what the most likely sources of cadmium and copper are in the Bear Creek site subwatershed and these exceedances will be addressed in the Coalition Management Plan.

Cottonwood Creek @ Rd 20

Exceedances of copper and lead occurred in samples collected at the Cottonwood Creek @ Rd 20 site during the first and second 2008 storm monitoring events. Lead in the

creek may come from number of sources, as described above. However, it is not certain what the most likely source of lead is in the Cottonwood Creek. PUR data for the upstream site subwatershed indicate that applications of copper hydroxide, copper oxide and copper sulfate occurred throughout the months of January and February 2008. Between January 10 and January 25 over 3,000 acres of orchards (predominantly almonds) were treated with copper-based pesticides. After that time, but prior to the second sampling event on February 25, 408 acres (mostly fruit orchards) were treated with copper. It is probable that one or more of these applications was the source of copper detected in the creek during the storm sampling events.

Deadman Creek @ Gurr Rd

Exceedances of arsenic, cadmium, copper, lead and nickel occurred at the Deadman Creek @ Gurr Rd sample site during the first 2008 storm monitoring event. Arsenic was also detected above the WQTL in samples collected during the second storm event. With the exception of copper, previous exceedances of metals at this site have predominantly occurred during storm season events indicating that the source of the exceedances are probably unrelated to fertilizer or pesticide applications that occur during the irrigation season. Sources of arsenic, cadmium, lead and nickel are explained above. PUR data indicate that there were no applications of copper just prior to sampling in the month of January; however copper hydroxide was applied on 312 acres of ornamental plant farms and peach orchards in November and December, 2007. During that time, a total of 2,323 Ibs of product were applied. It is probable that one or more of these applications was the source of copper detected in the creek during the first storm monitoring event.

Dry Creek @ Rd 18

Exceedances of copper occurred in samples collected from the Dry Creek @ Rd 18 site during the 2008 first and second storm events (20 µg/L and 33 µg/L, respectively). Applications of copper hydroxide, copper oxide and copper sulfate occurred for dormant season pest control throughout the month of January and February 2008. In January, approximately 1,700 acres of orchard (predominantly almonds) were treated with copper-based pesticides. Between the first and second sampling events, a total of 743 acres of almonds and ornamentals were treated with copper. It is probable that one or more of these applications was the source of copper detected in the creek during the storm sampling events.

Dry Creek @ Wellsford Rd

During the first monitoring event, one exceedance of lead occurred in samples collected from Dry Creek @ Wellsford. Exceedances of cadmium, copper and lead occurred in samples collected from the second event on February 26, 2008. Applications of copper hydroxide and copper oxide occurred between the months of December 2007 and February 2008. During this time, 1,187 acres (predominantly almonds) were treated with copper-based pesticides.

Duck Slough @ Gurr Rd and Duck Slough @ Hwy 99

Samples collected from Duck Slough @ Hwy 99 had exceedances of cadmium, copper, lead and nickel in both storm events. Downstream of Highway 99, the Duck Slough @ Gurr Rd was sampled and contained exceedance levels of cadmium, copper and lead during the second storm event. A gravel extraction facility is located in close proximity to the water body (www.maps.google.com). It is difficult to determine the type of operations that occur at this facility and whether discharge is released into the slough, however it's possible that trace minerals are being released from the extraction and/or rinsing processes at the site. Applications of copper occurred within the site subwatershed between December 2007 and January 2008. A total of 1,202 Ibs of product were applied on 179 acres. The copper exceedance experienced during storm monitoring in Duck Slough may have been a result of one or more of these applications.

Hatch Drain @ Tuolumne Rd

Exceedances of arsenic were experienced in samples collected from the Hatch Drain @ Tuolumne Rd site on January 24 (environmental sample = 15 µg/L, field duplicate = 16 µg/L) and February 26 (16 µg/L). The source of arsenic is unclear at this point, although native soils can contain elevated concentrations of arsenic in the Coalition region. Arsenic has been detected at exceedance levels in the Hatch Drain during almost every sampling event since monitoring at that site began. Consistent exceedances at this site are an indication that the native soils within the site subwatershed may contain elevated levels of arsenic or that there is a contaminated site somewhere within the watershed that is the source. The Coalition is presently investigating methods for establishing background levels of arsenic in surface waters within the Coalition region.

Highline Canal @ Hwy 99 and Highline Canal @ Lombardy Rd

In the Highline Canal subwatershed, detections of cadmium, copper and lead at levels above the WQTLs occurred in both 2008 storm monitoring events for both sampling locations except for lead which was detected below the WQTL on February 26 at the Highline Canal @ Hwy 99 site. Detections across storms are an indication that the presence of metals in the canal is persistent. Field observations indicate that the slough contained murky, brown water at the time that samples were collected at both locations. There are two sources of water to the Highline Canal system during the winter storm season; urban runoff and runoff from agricultural operations. Unfortunately, storm water from the urban areas is not characterized and it is unclear how much of the contribution originates in the urban areas. Copper, cadmium, and lead are all common constituents of runoff from urban areas. Applications of copper occurred predominantly during the month of January on peach and almond orchards. 25,900 Ibs of product were applied in January on 3,790 acres. It is likely that one or more of these applications contributed to the detections found at monitoring sites along the Highline Canal.

Livingston Drain @ Robin Ave

Exceedances of copper and lead occurred at the Livingston Drain sample site during the first and second 2008 storm monitoring events. Copper exceedances have been detected in several samples collected at this site since monitoring was initiated during

the irrigation season of 2007. Between the months of December 2007 and January 2008, 2,167 Ibs of copper were applied on 338 acres of almond and peach orchards. Three additional applications occurred between the first and the second storm monitoring event, and include 370 Ibs of product applied on 56 acres of almond orchard. One or more of these applications may be responsible for detections found in the Livingston Drain.

Merced River @ Santa Fe

Exceedances of cadmium, copper and lead occurred at the Merced River @ Santa Fe sample site during the first storm event. Exceedances of metals have only occurred during the storm season from the Merced River site. Copper hydroxide, copper sulfate and copper oxide applications occurred between November 2007 and January 2008 with 20,702 Ibs of product applied on 2,676 acres of almond and stone fruit orchards. It may be that one or more of these applications contributed to the detections found in samples collected from the Merced River.

Miles Creek @ Reilly Rd

Exceedances of cadmium, copper, lead and nickel occurred at the Livingston Drain sample site during the first and second 2008 storm monitoring events. Elevated flows during storm events mobilize sediment resulting in exceedances of sediment bound constituents, such as metals. Six applications of copper were made during the month of January. 1580 Ibs of product were applied on 191 acres of peach and almond orchards. It is possible that one or more of these applications contributed to the detections found in samples collected from Miles Creek.

Nutrients (Ammonia, Nitrate)

Ammonia

Ammonia can enter a water body through two sources, direct discharge from agricultural fertilizers or animal waste, or from discharges from waste water treatment plants. Ammonia in fertilizer is typically converted to nitrite and then nitrate in soils over a short period of time and discharge of ammonia from fertilizer would have to be immediate to detect ammonia in the receiving water body. Exceedances of ammonia occurred at both Highline Canal monitoring sites and during both storm monitoring events, indicating that the source of the ammonia in the canal may be persistent. There is no waste water treatment plan discharge to Highline Canal and therefore the source of ammonia is unknown at this time.

Nitrate

High levels of nitrate and nitrite in the Coalition region are not uncommon. Potential sources of nitrates in surface waters include runoff of fertilizers or organic matter from irrigated pasture, leaking septic systems, waste-treatment facility effluent, and inputs from dairies. These sources can move to surface waters through above ground runoff or shallow subsurface flows.

Exceedances of nitrate occurred consistently at three sites, Hatch Drain @ Tuolumne Rd, Prairie Flower Drain @ Crows Landing Rd and Westport Drain @ Vivian Ave, during both 2008 storm monitoring events. Elevated detections of nitrate at these three sites are not uncommon. There are no wastewater treatment plants upstream of these sites however there are a number of animal waste sources including dairies. Dairies and feedlots are common in this part of the Coalition region and historically waste lagoons were not lined allowing movement of soluble nitrates into shallow ground water. The three drains intercept shallow ground water, especially during the winter. Consequently, legacy nitrate discharges to shallow ground water may be contributing to the current nitrate exceedances.

Physical Parameters (Color and Dissolved Solids)

Color is a derived parameter in that it is not delivered to surface waters from any single source, with the possible exception of color derived from suspended sediments. Color is a result of other constituents (e.g. organic carbon) or processes (e.g. photosynthesis, turbulent flow and resuspension of particulate matter). Consequently, management of color is not possible unless the process(es) that contribute to color are understood. Color exceedances at different water bodies may be a result of different factors. As the Coalition conducts the special studies to determine the cause(s) of exceedances of constituents such as DO and pH, information may become available that will allow us to address color exceedances.

TDS describes all solids (usually mineral salts) that are dissolved in water and are frequently associated with exceedances of EC. Potential sources of EC and TDS are minerals leached from soils by upstream surface water and ground water, or drain water from irrigated agriculture. There are two general sources of EC (or TDS) in agricultural landscapes; fertilizers and native soils. A commercial fertilizer can be made up of dozens of different chemicals, each of which ionize and contribute to the EC of the solution. Different fertilizer can use different chemicals to make up the total formula indicating that there will not be a universal signal for fertilizer-generated EC or TDS.

Elevated levels of EC and TDS were detected consistently across five sites, Hatch Drain, Hilmar Drain, Prairie Flower Drain, Westport Drain and Highline Canal. These five sites are located close to the San Joaquin River where depth to ground water is shallow and local field drains remove high salinity ground water to lower the water table and allow plant growth. In addition, with the exception of the Highline Canal, these drains are not concrete lined and can be recharged directly from shallow ground water. In fact, many of the unlined drains in the vicinity were dug to directly drain shallow ground water. Data developed by the Modesto Irrigation District suggests that the exceedances of TDS/EC are a function of ground water in the region and have been for almost a century. Geologically, the ground water from both the east and west side of the Valley moves toward the San Joaquin River trough, the low point in the Valley that is naturally high in salts. The movement of water down gradient toward the San Joaquin River creates a shallow ground water table, as evidenced by the numerous wetlands that are in the

vicinity of the river. This shallow ground water appears to be the cause of the salinity problems in the ESJWQC region close to the river.

The CVRWQCB recognizes that EC/TDS is a region-wide problem and must be solved at that level. The Coalition will work with the CVRWQCB to address the problem over the next several years.

E. coli

E. coli is an indicator of fecal contamination in surface waters. There were 29 exceedances (27 environmental samples, 2 field duplicates) across 17 sites of the *E. coli* water quality trigger during the 2008 storm season in a total of 39 samples (36 environmental samples, 3 field duplicates) tested. Potential sources of *E. coli* include deposition or runoff from irrigated pasture, dairies, leaky sewer lines, leaky septic systems, application of manure, biosolids and liquid dairy waste, and a large array of wildlife. Results of a special study conducted in 2006 indicated that the source of the bacteria in the water samples was a combination of human and bovine fecal matter (as well as a small amount from poultry), depending on the location. The Coalition anticipates participating in a region-wide study to further investigate the fate and transport of *E. coli*. The study is still being developed in collaboration with Regional Board staff.

Field Parameters (pH, DO, EC)

There were 12 exceedances of the DO water quality objective across six of the Coalition monitoring sites. Exceedances of DO are common and have been present throughout the Coalition region since monitoring was implemented. Four exceedances of pH occurred during the storm season, all of which were measured above the upper water quality objective. One exceedance was experienced each at Bear Creek @ Kibby Rd, Deadman Creek @ Gurr Rd, Duck Slough @ Hwy 99 and Highline Canal @ Hwy 99.

DO and pH are expected to vary diurnally and can exceed the standards as a result of natural processes in the water column such as changing water temperature, photosynthesis and respiration. These processes can be exacerbated by the addition of nutrients which stimulate productivity and eventually release the organic matter into the water column and sediment where it is broken down by microbial activity (biological oxygen demand or BOD). The Coalition conducted a special study focusing on BOD which attempted to determine if BOD was the cause of the low DO. Results from this study showed that BOD and TOC were moderately positively correlated and TOC was used as a surrogate for BOD in a multiple regression analysis. Water temperature, BOD, and nitrate in the water column were all significant predictors of dissolved oxygen. As water temperature and BOD increased, dissolved oxygen decreased. As nitrate increased, dissolved oxygen increased although the explanation for this latter relationship is not clear. It is clear that both water temperature and BOD are significant

factors causing the decrease in DO although other, as yet unknown factors are also important.

There were 19 exceedances of the specific conductance (EC) water quality trigger during the two storm monitoring events. These exceedances occurred consistently across four monitoring sites including Hatch Drain @ Tuolumne Rd, Hilmar Drain @ Central Ave, Prairie Flower Drain @ Crows Landing Rd and Westport Drain @ Vivian Rd. The persistence of elevated EC at these sample sites indicates that EC is a water quality impairment that is a result of the natural conditions in the region. Exceedances were also experienced one time each at Highline Canal @ Hwy 99, Highline Canal @ Lombardy Ave and Mustang Creek @ East Ave. Information regarding the source(s) of EC in the Coalition region, as it is related to TDS, was discussed previously in this section.

Summary of Management Practices

One of the primary goals of the Coalition is to gather information on best management practices (BMPs) that are demonstrated to benefit water quality and to provide information and support to growers to facilitate the implementation of these management practices. Over the last several years, the Coalition has collaborated with groups such as the Natural Resources Conservation Service (NRCS), University of California Agricultural Cooperative Extension (UC Extension), the Coalition for Urban and Rural Environmental Stewardship (CURES), pesticide registrants and pest control advisors (PCAs) to gather information on the most up-to-date management practices to reduce the potential for pesticide runoff. Information is provided to growers regularly throughout the year by means of Coalition outreach meetings, mailings, personal communication with growers, and the Coalition website. Each management practice is viewed as one tool in a collective tool box and the management practices (tools) that are most beneficial to a particular farming operation will depend on factors such as the size of the farm, the drainage system, soil type, crop type and the crop pests that must be controlled.

A working list of best management practices is provided in Table 33 below. BMPs are described based on the goal (e.g. water conservation, waste discharge reduction) and the mechanism of the practice. The ESJWQC Management Plan will include specific information on management practices that have been provided to the Coalition members and growers. Management practices are continually developing and changing and therefore the information will be updated in the ESJWQC Management Plan as new data becomes available.

Table 33. Table of best management practices (BMPs), target constituents, mechanism and possible improvements to water quality.

BMP	BMP Endpoint	BMP Target(s)	BMP Mechanism	Effected water/sediment quality monitoring parameter(s)
Sediment basin	Reduce discharge	PI, PS, K, S, NP	Removal of sediment, pesticides bound to sediments; allow time for biodegradation of pesticides	Color, turbidity, EC, TDS, metals, short half-life pesticides, high Koc pesticides, total phosphorous
Landguard™	Reduce discharge	PI, PS (organophosphate specific)	Improve hydrolysis of organophosphate pesticides	Organophosphate pesticides
Vegetated buffers	Reduce discharge	PI, PS, K, S, NP, NN	Remove sediment, nutrients, pesticides bound to sediments, or any contaminants with low solubility	Color, turbidity, EC, TDS, metals, pesticides, nutrients
Cover crop, dormant season vegetation	Reduce discharge	K, S, NP	Remove sediment, pesticides bound to sediments, or any contaminants with low solubility; protect soils and soil nutrients for growing season	Color, turbidity, EC, TDS, metals, pesticides, nutrients
Sprayer calibration	Reduce discharge	D	Reduce potential for spray drift	All pesticides
Polyacrylamide (PAM)	Reduce discharge	PI, K, S, NP	Removes sediment from the water column, removing pesticides bound to sediments	Color, turbidity, metals, pyrethroid pesticides, total phosphorous
Dormant season field retainers	Reduce discharge	PS, S	Reduce/eliminate storm runoff	Color, turbidity, EC, TDS, copper, pyrethroid pesticides, organophosphate pesticides
Microspray and drip irrigation	Reduce water use & discharge	D,W	Increase water use efficiency, eliminate potential for spray drift	All pesticides, copper

Administrative Record
Page 12356

BMP	BMP Endpoint	BMP Target(s)	BMP Mechanism	Effected water/sediment quality monitoring parameter(s)
Tail water return	Reduce water use & discharge	PI , PS, K, S, W, NP, NN	Re-use of irrigation water, eliminate discharge completely	Color, turbidity, EC, TDS, metals, all pesticides, all nutrients

BMP Targets Code:

D: Chemical (pesticide) drift
PS: Dormant spray pesticide storm runoff
S: Sediment runoff
NP: Nutrients: phosphorous
PI: Pesticide runoff from irrigation
K: High K_{oc} pesticide runoff
W: Water use efficiency
NN: Nutrients: nitrate, nitrite or Kjeldhal nitrogen

Administrative Record
Page 12357

Management Practices Implementation

When exceedances of water quality standards occur at a sample site more than once, the Coalition is required to develop a Management Plan to address those exceedances. The ESJWQC Management Plan contains goals and actions that are designed to address problems specific to a subwatershed upstream of a sampling site and the crops grown there. Performing grower outreach and implementation of BMPs are important components of the plan. The Management Plan provides a prioritization scheme and sequence by which management actions occur. Based on this plan, growers are encouraged to adopt management practices in their operations through general outreach at county and/or subwatershed meetings and in higher priority subwatersheds on an individual grower and/or grower group basis. In some cases, Coalition representatives visit individual farms to investigate potential sources of exceedances and to personally speak with growers or applicators about potential practices. After outreach or contact occurs, all the growers met with to date have expressed willingness to cooperate with the Coalition and change practices to avoid contributing to problems in the future.

The Coalition is in the process of documenting implementation of management practices in the Coalition region. This is being done by asking growers to complete a management practices survey if they operate in watersheds under Management Plans. Conversations with growers indicate that they are changing practices but often do not report the changes to the Coalition. Changing chemicals, application methods (e.g. timing of application, calibrating nozzles), or implementing structural BMPs are occurring in the Coalition region but are difficult to track. Once data from the management practice surveys are compiled, the Coalition will report those results to the Regional Water Board. .

Actions Taken to Address Water Quality Impacts

Monitoring of ambient surface waters is conducted by the Coalition for the purpose of characterizing discharges from agriculture in the Coalition area. Over the long term, monitoring data provide insight on the general trends in water quality at each of the sample sites. Results from each event within a monitoring season can help to identify constituents detected at sample sites, and which agricultural lands, crops and/or particular pesticides need to be addressed to reduce or eliminate input from agriculture. A series of actions taken to determine the potential sources of exceedances experienced during each monitoring event include 1) the use of PURs to identify relevant applications that occurred upstream of the sample site and within a specified time period prior to the sampling event, 2) an analysis of monitoring data to determine the potential mechanism associated with exceedances of physical and field parameters such as DO, pH, and TDS, and 3) special studies where appropriate and cost effective to determine the sources of constituents such as *E. coli* or the potential causes of exceedances such as low DO.

As follow-up to exceedances, each Coalition members receive results of the monitoring by mailing the Coalition annual report of the previous season. Results are also disseminated at grower outreach meetings and, in some cases, by personal communication when evidence such as PUR indicates the likely contributor to a detection or exceedance. The Coalition also provides growers with information on best management practices to reduce runoff of irrigation water and sediments into receiving water bodies. Additional relevant management practices are presented at meetings, such as alternative pesticides, structural changes to manage drain water or pesticide application practices for minimizing spray drift.

Reporting was also conducted to inform the CVRWQCB and stakeholders of Coalition monitoring results and progress. The monitoring and reporting activities are summarized in Table 34 in the next section. Further detail describing all of the actions explained above is provided in this section.

Outreach and Education

Based on the results of the monitoring, the Coalition held workshops, meetings and presentations to provide useful information to all growers in the Coalition region. Outreach and education activities are an important component of the Coalition monitoring program. The Coalition continues to make a strong effort to provide information to growers at regular meetings, as well as at meetings conducted by the County Agricultural Commissioner, and by personal contact. Coalition presentations over the 2008 storm season provided members with general information, site

subwatershed specific monitoring results, and management practices that have proven to be effective to reduce the discharge of pesticides to water bodies.

In December of 2007 meetings were held in the Coalition regions to present monitoring results from the 2007 storm and irrigation season, and discuss management practices to reduce the potential for runoff of pesticides and sediment. Outreach occurred again to follow up on storm runoff exceedances during the months of February 2008 and June 2008 in advance of the major pesticide application season in July. Due to a large amount of chlorpyrifos detected in the Merced River and associated toxicity, the ESJWQC issued a press release notifying the public of the situation and the corrective actions that the Coalition was pursuing (Figure 13). A meeting with growers regarding the exceedances and toxicity experienced in the Merced River occurred on February 29, 2008. Attendees included Coalition members within that site subwatershed, Coalition representatives, Ag Commissioners and Regional Board staff including a representative from the ILRP Compliance Unit. A discussion of Coalition member responsibilities and program enforcement was presented and 13267 letters were distributed for reference to growers that attended. In November and December of 2007, the staff from the Stanislaus County Ag Commissioner's office walked the shore line of four creeks that the Coalition currently monitors: Dry Creek (Stanislaus County), Hatch Drain, Westport Drain and Prairie Flower Drain. While walking the creeks the Ag Commissioner's staff photo documented and marked the locations using GPS where there was the possibility for direct discharge into the stream. This information was matched with member parcel information and letters were sent inviting land owners to a meeting to discuss the impacts of direct discharge (example in Figure 14). On June 18, the Coalition held a meeting at the Stanislaus Farm Bureau to discuss the four creeks and relevant exceedances of WQTLs that had occurred during Coalition monitoring. Requirements to stay in compliance of the ILRP were also discussed with growers.

With each meeting conducted, growers become familiar with the Coalition representatives. The meetings are often followed by individual discussions of monitoring results and management practices that may help prevent problems. Follow-up discussions such as these have led to management practice implementation by growers, especially in site subwatersheds where exceedances have occurred more than once for a particular pesticide.

The Coalition also hosts a Coalition website: http://www.esjcoalition.org/home.asp. This website has served as a clearing house for Coalition activities and outreach on management practices. Information provided on the website has functioned as a useful supplement to regular grower contacts and meetings.

Pest Control Advisors, Agricultural Commissioners, and Registrants

For the Coalition to be most effective in providing recommendations on management practices that will reduce or eliminate discharge, collaboration with County Agricultural Commissioners, PCAs and pesticide registrants is important. During the 2008 storm season the Coalition worked with each of these entities as needed to follow-up on exceedances. Ag Commissioners from the various counties are active participants as non-voting members of the ESJWQC Board of Directors. The Stanislaus Ag Commissioner has been active in the last year with the initiation of creek walks within the Stanislaus County with Merced and Madera County Ag Commissioners planning to perform similar reconnaissance of waterways sampled by the Coalition in their counties later in 2008.

Figure 13. News clipping submitted by ESJWQC on January 31, 2008 for the Merced River storm water quality exceedances.



East San Joaquin Water Quality Coalition

Water Sampling Finds Toxicity in Merced River Following Rainstorm

January 31, 2008 -- Water sampling of the Merced River at Santa Fe Ave. on January 24 showed toxicity to the test organism *Ceriodaphnia dubia*. Further analysis of the sample showed the toxicity was caused by a non polar organic chemical which often indicates a pesticide. The "water flea," as *C. dubia* is known, is a laboratory test organism that is sensitive to very low pesticide levels in water.

The water sample was taken the day following a storm where ¾ inch of rain fell upstream of the sampling site. The Coalition is required to sample two "storm events" each winter following the start of orchard dormant sprays. Farm land upstream of the sample site consists of vineyards, almond, peach and walnut orchards as well as alfalfa and other field crops. Almonds and peaches are often sprayed in January with a dormant spray that can include an organophosphate insecticide. In part due to the Coalition's encouragement in recent years and pest pressure, orchard growers in the region have been using fewer dormant insecticide sprays, instead applying only copper, zinc or spray oil in the winter treatments.

Under the Irrigated Lands Regulatory Program (ILRP), the East San Joaquin Water Quality Coalition, which performed the sampling, must report the toxicity to the Central Valley Regional Water Quality Control Board. A report was sent to the Regional Water Board on Wednesday, January 30, 2008.

Coalition members who farm orchards upstream of the sampling site will be formally notified of the toxicity event later this winter after the pesticide has been positively identified. Water quality laboratories typically release results of pesticide analysis tests 4-5 weeks after a water sample is taken. Results from toxicity tests are provided to the Coalition 96 hours after a sample is delivered.

When coalition members are contacted this spring, they will also be provided information on management practices that can be used to prevent pesticide runoff when dormant sprays are applied next year. Several management practices, including making dormant spray applications in December before the rainy season begins, will be encouraged for use in the watershed.

Should the toxicity be positively identified as a pesticide, the exceedance will trigger a Management Plan requirement for the Merced River under the ILRP. Management Plans typically require additional water monitoring of the waterway, increasing costs for coalition members. The plans also raise enforcement scrutiny by the Regional Water Board. The Water Board says it will be contacting non-coalition members in the area through 13267 enforcement orders, which hold the potential for fines if not completed. A Merced County grower was fined $3000 by the Water Board in December for ignoring a 13267 order.

The Coalition also plans to hold grower workshops in the watershed later this Spring to discuss farm management practice options with landowners.

Coalition Background

The ESJWQC is a non-profit organization formed in 2003 to represent landowners under the Irrigated Lands Regulatory Program mandated by the Central Valley Regional Water Quality Control Board. The Coalition's Board of Directors is committed to: implementing an economical and scientifically valid water monitoring program for area waterways (as required by the ILRP); communicating to landowners where water monitoring indicates problems and work to solve those problems; and to maintain ILRP coverage for coalition members. As of February 2007, more than 2600 farmers with more than 640,000 irrigated acres in Stanislaus, Merced, Madera, Mariposa and Tuolumne Counties (east of the San Joaquin River) are ESJWQC members. With an estimated 1.1 million acres of irrigated cropland in the Coalition region, more than 40% of irrigated acreage is not enrolled in the Coalition and may be out of compliance with the California Water Code.

Coalition website: www.esjcoalition.org

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For additional information contact:

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Figure 14. Example letter sent to growers with direct drainage into select creeks.

East San Joaquin Water Quality Coalition
1201 L Street
Modesto, CA 95354
www.esjcoalition.org

May 9, 2008

re: Property draining upstream of the following locations:

- Dry Creek @ Wellsford Road
- Hatch Drain @ Tuolumne Road
- Westport Drain @ Vivian Road
- Prairie Flower Drain @ South Morgan Rd

Name
Address
City

Dear Mr. Jones;
Over the past four years, the ESJWQC has performed water quality monitoring in the waterways listed above. Results from numerous sampling events indicate these waterways do not meet standards set by the Central Valley Regional Water Quality Control Board for several parameters (pesticides, E. coli, metals).

Despite numerous mailings to landowners along these waterways, we continue to find exceedances of water quality standards. Since the ESJWQC and its members are committed to solving water quality problems, the coalition contracted with the County Agricultural Commissioner's office to "walk the creeks" and identify and record locations where pipes, conduits or drainage enters these waterways. ***You have been identified as a property owner where such a potential discharge point is located -- see enclosed map for discharge site locations.***

Landowners within the Central Valley who have irrigation water and/or stormwater leaving their irrigated lands **must** obtain regulatory coverage. These discharges of irrigation or storm water may potentially contribute "waste" (as defined in the California Water Code) to surface waters (rivers, creeks, sloughs, lakes). Pesticide residues, nutrients and sediment are examples of waste that are typically discharged. The Water Board allows landowners and/or operators of irrigated lands to obtain regulatory coverage required by the California Water Code by:

- Joining a Water Board-approved Coalition Group that forms on behalf of individual growers; or
- Obtaining individual coverage under the Individual Discharger Conditional Waiver.

Some of you receiving this letter are already members of ESJWQC, while others are not. In order to more fully explain your responsibilities as a discharger, the Coalition has scheduled a workshop at the location below. Please plan to attend (or send someone representing you).

Wednesday, June 18, 2008, 10 am – 12 pm
Stanislaus County Farm Bureau office
1201 L Street, Modesto, CA

If you have questions, please contact us at the numbers below.
Regards,

Parry Klassen
Executive Director
559-646-2224

Wayne Zipser
Co-Chairman
209-522-7278

Activities, Events and Deliverables

Table 34 and 35 provide Coalition activities, events and deliverables that have occurred during the 2008 storm monitoring season. Entries include the date in each month in which the activity was performed. Exceedance and Communication Reports are listed as are the general class of constituent(s) (i.e. field parameters, pesticides, *E. coli*/metals/physical parameters, water column toxicity, and sediment toxicity) covered by the reports.

Table 34. Calendar of events and deliverables for the ESJWQC relevant to the 2008 storm season.

Storm monitoring events are numbered in chronological order starting with Storm1 which occurred on January 24 and 25, 2008.

Date	Action Item
1/24/2008	Storm1 Normal Monitoring Event
1/25/2008	Storm1 Normal Monitoring Event
1/25/2008	Field Exceedance Report - Storm1 Normal Monitoring
1/26/2008	Field Exceedance Report - Storm1 Normal Monitoring
1/30/2008	Storm1 Resampling Event
1/30/2008	Toxicity Exceedance Report - Storm1 Normal Monitoring
1/30/2008	Field Exceedance Report - Storm1 Resampling
2/5/2008	Toxicity Exceedance Report - Storm1 Resampling
2/25/2008	Storm2 Normal Monitoring Event
2/26/2008	Storm2 Normal Monitoring Event
2/26/2008	Field Exceedance Report - Storm2 Normal Monitoring
2/27/2008	Field Exceedance Report - Storm2 Normal Monitoring
3/4/2008	Storm2 Resampling Event
3/4/2008	Storm Sediment Event
3/4/2008	Toxicity Exceedance Report - Storm2 Normal Monitoring
3/5/2008	Field Exceedance Report - Storm2 Resampling and Sediment Sampling
3/7/2008	Pesticides Exceedance Report - Storm1 Normal Monitoring
3/10/2008	E. coli/Metals/Physical Parameters Exceedance Report - Storm1 Normal Monitoring
3/13/2008	Toxicity Exceedance Report - Storm2 Resampling
3/27/2008	Toxicity Exceedance Report - Storm Sediment
3/28/2008	Storm Sediment Resampling Event
3/31/2008	Field Exceedance Report - Storm Sediment Resampling
4/3/2008	Toxicity Communication Report - Storm1 Normal Monitoring
4/10/2008	Pesticides Exceedance Report - Storm2 Normal Monitoring
4/14/2008	E. coli/Metals/Physical Parameters Exceedance Report - Storm2 Normal Monitoring
4/17/2008	Toxicity Exceedance Report - Storm Sediment Resampling

Date	Action Item
4/30/2008	Field Communication Report - Storm2 Normal Monitoring
5/7/2008	Toxicity Communication Report - Storm2 Normal Monitoring and Resampling
5/9/2008	Pesticides Communication Report - Storm1 Normal Monitoring
5/13/2008	E. coli/Metals/Physical Parameters Communication Report - Storm1 Normal Monitoring
6/2/2008	Sediment Toxcity Communication Report - Storm Normal Monitoring
6/13/2008	Pesticides Communication Report - Storm2 Normal Monitoring
6/16/2008	E. coli/Metals/Physical Parameters Communication Report - Storm2 Normal Monitoring

Table 35. Table of ESJWQC actions and deliverables dealing with grower notification of exceedances and management practices relevant to the 2008 storm monitoring season.

County	Site(s)	Date	Category	Description	Who
Merced	Merced River @ Santa Fe	4-Feb-08	Media	Notification of toxicity in Merced River published in Merced Sun Star newspaper[1].	Parry Klassen
Madera	Merced River @ Santa Fe	4-Feb-08	Media	Notification of toxicity in Merced River published in Madera Tribune newspaper[1].	Parry Klassen
Fresno	Merced River @ Santa Fe	4-Feb-08	Media	Notification of toxicity in Merced River published in Fresno Bee newspaper[1].	Parry Klassen
Merced	Merced River @ Santa Fe	29-Feb-08	BMP Outreach and Education	Meeting with growers regarding toxicity experienced in Merced River - discussion on Coalition member responsibilities and program enforcement, 13267 letters distributed.	Parry Klassen, MLJ-LLC, CVRWQCB
Stanislaus	Dry Creek (Stanislaus), Hatch Drain, Westport Drain, Prairie Flower Drain	09-May-08	Grower Notification	Notification to all direct dischargers in the upstream subwatershed to discuss compliance with ILRP and invite growers to upcoming meeting[2].	Parry Klassen
Stanislaus	Dry Creek (Stanislaus), Hatch Drain, Westport Drain, Prairie Flower Drain	18-Jun-08	BMP Outreach and Education	Grower meeting at Farm Bureau inviting all direct dischargers in the upstream subwatershed to discuss compliance with ILRP.	Parry Klassen, Mike Johnson

[1] A copy of the article is provided in Figure 13.
[2] A copy of the notification letter to growers is provided in Figure 14.

Administrative Record
Page 12368

Exceedance, Communication, and Evaluation Reports

Exceedance and Communication Reports

Exceedance reports were submitted for all exceedances experienced during the 2008 storm season monitoring events except for cadmium exceedances experienced in samples collected on January 24 and 25 for six locations plus one field duplicate (see Data Interpretation section for details). Communication Reports have also been submitted for all exceedances that occurred for the first time at a site except for a Communication Report that was due on May 8, 2008 as a result of field exceedances that occurred during sediment sampling on March 4, 2008 and reported in an Exceedance Report on March 5, 2008. A copy of these reports is provided in Appendix V.

Evaluation Reports

Evaluation Reports were not required for exceedances experienced during the 2008 storm season events. Management Plans have superceded Evaluation Reports and been submitted for each site subwatershed where two or more exceedances of a specific constituent were experienced during Coalition monitoring. Table 36 summarizes the schedule of Management Plans submitted for each site-subwatershed. Management Plans will be reviewed and edited on a yearly basis to incorporate results from the previous years sampling and special studies. An updated Management Plan that will address the entire Coalition region is scheduled to be submitted by September 2008.

Table 36. Schedule of Management Plans that have been submitted for each site subwatershed.

Sample Site	Management Plan Due Date
Highline Canal @ Hwy 99 Highline Canal @ Lombardy Ave	11/17/2006 Revised 4/2/2007
Dry Creek @ Wellsford Road	4/2/2007
Duck Slough @ Gurr Rd Duck Slough @ Hwy 99	11/17/2006 Revised 4/2/2007
Ash Slough @ Ave 21	11/17/2006 Revised 4/13/2007
Berenda Slough along Rd 18 1/2	4/13/2007
Jones Drain @ Oakdale Rd	4/13/2007
Silva Drain @ Meadow Drive	4/13/2007
Cottonwood Creek @ Road 20	4/27/2007
Bear Creek @ Kibby Rd	4/27/2007
Merced River @ Santa Fe	11/17/2006 Revised 4/27/2007
Dry Creek @ Rd 18	4/27/2007
Aug Rd Drn upstrm Crows Landing	5/11/2007
Black Rascal Crk @ Yosemite Rd	5/11/2007
Deadman Creek @ Gurr Rd	5/11/2007
Deadman Creek @ Hwy 59	
Mustang Creek @ East Ave	5/11/2007
South Slough @ Quinley Road	5/11/2007
Hilmar Drain @ Central Ave	5/11/2007
Prairie Flower Drain @ Crows Landing	5/11/2007

Administrative Record
Page 12370

Conclusions and Recommendations

Conclusions

Over the 2008 storm season, the Coalition was able to meet its monitoring program objectives:

- Determine the concentration and load of waste in discharges to surface waters.
  - The completeness of the analytical data was sufficient to determine concentration and load for all samples collected.
  - Quality control issues were present for a small number of samples, but the batches were evaluated using all LABQA results and were determined to be acceptable.
- Evaluate compliance with existing narrative and numeric water quality triggers to determine if implementation of additional management practices is necessary to improve and/or protect water quality.
  - The data for all constituents for which criteria exist were compared to the appropriate water quality trigger.
  - If samples existed in which the constituent exceeded the objective, it was determined that outreach would be performed and growers were encouraged to implement additional management practices.
  - A series of meetings with growers was held in which additional management practices were presented and growers were encouraged to implement the practices to protect water quality.
- Assess the impact of storm water discharges from irrigated agriculture to surface water.
  - Comparisons of monitoring data with water quality triggers allowed an evaluation of whether the water body was impacted by irrigated agriculture.
  - The level of impairment is difficult to determine solely from the data collected as ecosystem function is assumed to be impaired, but the mechanism of impairment is difficult to assess.
- Determine the degree of implementation of management practices to reduce discharge of specific wastes that impact water quality in receiving waters of the Coalition region.
  - The Coalition compiled responses from its BMP survey and is incorporating the results into the Management Plan to be submitted later in the summer.
- Determine the effectiveness of management practices and strategies to reduce discharges of wastes that impact water quality.
  - While the Coalition still does not have adequate data to evaluate the effectiveness of management practices implemented in the Coalition region, positive steps are being taken to obtain the necessary data. These steps include:

- Obtain Coalition region-specific information on management practice effectiveness.
- Create Coalition region-specific management practice handbooks for Coalition members.
- Obtain information from growers in regards to implemented management practices and when they were implemented.
- Create a database to track implemented management practices.
- Link implemented management practices to changes in water quality as outlined in the Management Plan.

- The Coalition initiated development of a member/parcel/crop relational database whose goal is to enable tracking of members by parcel, TRS, and crop on a real-time basis.
  - Classifying growers by location or crop will facilitate more immediate notification of exceedances and tracking of potential sources.
  - Knowledge of current crops grown by members allows the Coalition to provide growers with crop specific management practices.

To meet the Coalition's monitoring and reporting objectives, it is necessary for the monitoring data collected during the storm 2008 season to meet completeness objectives as outlined in the MRP.

- Two planned sample events were captured.
- Chemical testing met the Regional Board's Reporting Limit requirements.
- Discharge measurements were collected from all sites at which it was possible to collect measurements.

The monitoring program provided the following technical conclusions:

- The most common exceedances were dissolved oxygen, *E. coli*, TDS/EC, cadmium, chlorpyrifos, diazinon, diuron, and toxicity.
  - Exceedances of diazinon will trigger a management plan for the Dry Creek @ Road 18 watershed.
  - Exceedances of chlorpyrifos will trigger a management plans for the Cottonwood Creek @ Road 20 and the Mustang Creek @ East Ave watersheds.
  - Other exceedances triggering management plans are diuron at Cottonwood Creek @ Road 20, Deadman Creek @ Highway 59, Dry Creek @ Road 18, Highline Canal @ Hwy 99, simazine at Deadman Creek @ Highway 59 and Mustang Creek @ East Ave, *Selenastrum* toxicity at Deadman Creek @ Highway 59, Deadman Creek @ Gurr Road, Dry Creek @ Road 18, Hatch Drain @ Tuolumne Road, Highline Canal @ Hwy 99, and Prairie Flower Drain @ Crows Landing Road, and *Ceriodaphnia* toxicity at Mustang Creek @ East Ave and Miles Creek @ Reilly Road, *Pimephales* toxicity at Highline Canal @ Lombardy Road, and *Hyalella* toxicity at Hilmar Drain @ Central Ave.

- The cause of the *Pimephales* toxicity at Highline Canal @ Lombardy Road is unknown but has tentatively been attributed to animal waste. The Coalition will attempt to determine the cause and source of the exceedance before building a management plan for the toxicity.

- The increase in cadmium exceedances is due to a reduction of the concentration of the WQTL.
  - Cadmium is a common detection in the region but the source of the cadmium is unknown.
  - Peat soils (http://www.speclab.com/elements/cadmium.htm), industrial emissions (i.e. burning of fossil fuels) and agriculture (i.e. phosphate base fertilizers) potentially contribute cadmium to aquatic systems.
    - Sources are distinguishable using stable isotopes but the cost of the analyses is substantial and the Coalition does not anticipate using this technique to identify the source(s).
- There have been an increased number of herbicide exceedances relative to previous years, particularly simazine and diuron.
  - A partial explanation is the large, non forecasted storm in January.
  - Herbicides have continued to be found at concentrations above the WQTL into the 2008 irrigation season suggesting that storm runoff is not the sole explanation for winter exceedances.
  - An increased number of *Selenastrum* toxicities support the conclusion that herbicides are impacting water quality.
- Sites with a majority of the exceedances to date continued during the storm 2008 season to experience exceedances for the same constituents.
- In most of the site subwatersheds, sufficient data have been collected over the last several years to allow a more detailed analysis of pesticide use.
  - Multiple exceedances of pesticides at the same location over several years can be analyzed for commonalities in use patterns with exceedances.
  - Preliminary analysis for selected watersheds indicates that concentrations of chemicals in samples are correlated with the total pounds of active ingredient applied in the watershed.
    - These results suggest that the exceedances are the result of cumulative applications and not runoff from a subset of parcels.
  - Complete analyses will be presented in the Management Plan.

The winter of 2008 was very dry compared to 2007 which was in turn, drier than 2006. The circumstances surrounding the first storm in 2008 were unusual. The storm occurred over a three-day holiday weekend and was not predicted until just prior to the beginning of rainfall. The fast moving storm system virtually materialized over Northern and Central California within a 48 hour period bringing substantial amounts of rainfall to the ESJWQC region. Many growers were finishing dormant sprays or applications of herbicides for weed control and were caught unaware by the storm. As a result, many applications were made immediately prior to the unpredicted storm event leading to conditions that maximized runoff.

Recommendations

The Coalition evaluates monitoring results and identifies opportunities for outreach. Outreach during the storm 2008 season included two grower meetings, three media releases and member notification of exceedances. Meetings have been held at regional, group and individual levels to inform growers of current water quality problems and management practices that can be used to reduce/eliminate water quality impairments due to agriculture. Although these meetings would not have affected runoff during the winter storm season, contacts with individual growers appear to be a promising avenue for reducing runoff. The Coalition makes the following recommendations for its Monitoring and Reporting Program.

- Examine PUR reports from previous years to identify parcels that have been associated with repeated exceedances of pesticides.
- Associate exceedances of pesticides with crops known to use the products to further refine the search for sources.
- If applicable, follow the Management Plan monitoring plan by adding upstream sites to identify potential sources.
- Focus outreach on small groups of growers identified as potential sources.

The Coalition is in the process of developing a Management Plan that will identify agriculture sources, implemented management practices, and performance goals in response to water quality impairments. The Management Plan will be updated on a yearly basis to include monitoring results from the previous year and evaluate improvements in water quality due to outreach efforts and implemented management practices. The updates will also evaluate any new water quality impairments. The results from this SAMR will be included in the April 2008 Management Plan update and will review the recommendations provided above.

There are five main Coalition monitoring program plan objectives which are listed above in the conclusions. The Coalition Management Plan will supplement this monitoring report to meet the last three objectives:

- Assess the impact of waste discharges from irrigated agriculture to surface water.
  - For each site subwatershed within the Management Plan, all water quality data over all years of monitoring is reviewed to assess trends in and magnitude of exceedances.
- Determine the degree of implementation of management practices to reduce discharge of specific wastes that impact water quality in watersheds within the coalition region.
  - BMP surveys were conducted in 2007 and will be evaluated on a site subwatershed basis in the Management Plans.

- The Coalition is developing a document to record management practices used by growers which will be filled out by a Coalition representative when contacting growers.
- Information of management practices implemented by growers will be housed within the Coalition member database.

- Determine the effectiveness of management practices and strategies to reduce discharges of wastes that impact water quality.
  - The Coalition will first focus on high priority subwatersheds as described in the Management Plan to determine what management practices have been implemented.
  - The Coalition intends to link management practice information with water quality data obtained from monitoring as described in the MRP and Management Plan monitoring. The Management Plan will outline measures by which to evaluate improvements in water quality based on known management practices implemented within the area.

The Coalition is creating a strategy to document and evaluate current management practices within the Coalition area and will first focus on priority subwatersheds as outlined in the Management Plan. These include Dry Creek @ Wellsford Rd, Highline Canal @ Highway 99, Prairie Flower Drain @ Crows Landing Road, and Duck Slough @ Gurr Road. It is the goal of the Coalition to link past water quality exceedances within these subwatersheds with crop types and inform growers of management practices that can be implemented specific to the crops in question. Although the Coalition conducted BMP surveys in 2007, the Coalition plans to supplement that information with more detailed information obtained from individual grower contacts starting with priority subwatersheds.

In response to repeated exceedances in watersheds in the Coalition region, The Coalition entered into a contract with the Stanislaus County Agricultural Commissioner to conduct a series of "creek walks." These walks involved walking upstream from the Coalition sample point, locating all pipes or conveyances that could deliver discharge, recording the location with a GPS instrument, and photographing the pipes for documentation. Pipes were located that could convey discharge from irrigated agriculture as well as nonagricultural discharges including pipes from local residential dwellings. Plotted in GIS, the discharge points were matched to individual parcels and the owners were identified and contacted. A meeting was held on June 18 in Modesto to discuss the exceedances in the watersheds and provide additional information on management practices. Regional Board staff personnel were present to discuss enforcement activities. Several growers had already plugged their pipes from the field end, and other growers, e.g., Gallo Farms, were in the process of removing pipes. County Ag Commissioners from Madera and Merced counties are in the process of developing contracts to perform similar creek walks. It is anticipated that creek walks in these counties will commence in the fall of 2008. These activities should result in improvements in water quality in both the irrigation season as well as the storm season.

Appendix I

Monitoring Results

Administrative Record
Page 12376

Table of Contents

Table I - 1. Field parameter results..... 1
Table I - 2. ESJWQC environmental sample results for organic analysis..... 8
Table I - 3. ESJWQC environmental sample results for inorganic analysis including physical parameters, nutrients, metals and bacteria. 108
Table I - 4. ESJWQC water toxicity testing results. 155
Table I - 5. ESJWQC sediment toxicity testing results. 169
Table I - 6. Calculated Loads. 171

Table I - 1. Field parameter results.

Results include calculated discharge and measured dissolved oxygen (DO), pH, specific conductivity (EC) and temperature and are sorted by station name and sample date.

Station Name	Sample Date	Sample Time	Discharge cfs	Oxygen, Dissolved mg/L	pH none	Specific Conductivity, µS/cm	Temperature °C	Field Result Comments
Ash Slough @ Ave 21	01/25/08	12:10	NA	NA	NA	NA	NA	Dry Site
Ash Slough @ Ave 21	02/25/08	12:30	NA	NA	NA	NA	NA	Dry Site
Ash Slough @ Ave 21	03/04/08	10:52	NA	NA	NA	NA	NA	Dry Site
Bear Creek @ Kibby Rd	01/24/08	16:00	NA	11.04	7.46	108	6.51	Unable to deploy velocity instrument for discharge calculation, too deep and fast to wade
Bear Creek @ Kibby Rd	02/25/08	13:50	NA	9.26	7.5	114	11.5	Unable to deploy velocity instrument for discharge calculation, too deep to wade
Bear Creek @ Kibby Rd	03/04/08	15:30	NA	13.24	8.72	228	16.6	Sediment toxicity sampling only, discharge not measured
Berenda Slough Along Ave 18 1/2	01/25/08	11:48	NA	NA	NA	NA	NA	Dry Site
Berenda Slough Along Ave 18 1/2	02/25/08	12:10	NA	NA	NA	NA	NA	Dry Site
Berenda Slough Along Ave 18 1/2	03/04/08	10:40	NA	NA	NA	NA	NA	Dry Site
Black Rascal Creek @ Yosemite Rd	01/24/08	17:00	NA	10.96	7.47	69	6.84	Unable to deploy velocity instrument for discharge calculation, too deep to wade
Black Rascal Creek @ Yosemite Rd	02/25/08	14:10	61.02	8.58	7.43	67	13.5	
Black Rascal Creek @ Yosemite Rd	03/04/08	12:20	NA	9.07	7.5	87	17	Sediment toxicity sampling and toxicity resampling only, discharge not measured. Field measurements taken for sediment toxicity sampling only.
Cottonwood Creek @ Rd 20	01/25/08	9:50	3.05	11.12	6.5	64	7.38	

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Station Name	Sample Date	Sample Time	Discharge cfs	Oxygen, Dissolved mg/L	pH none	Specific Conductivity, µS/cm	Temperature °C	Field Result Comments
Cottonwood Creek @ Rd 20	01/30/08	9:30	NA	NA	NA	NA	NA	Toxicity resampling only, no field measurements taken because of no 1/25/08 exceedances
Cottonwood Creek @ Rd 20	02/25/08	9:40	0.22	10.45	7.34	133	11.7	
Cottonwood Creek @ Rd 20	03/04/08	9:20	NA	16.81	8.35	209	12.6	Sediment toxicity sampling only, discharge not measured
Cottonwood Creek @ Rd 20	03/28/08	9:06	NA	NA	NA	NA	NA	Dry Site
Deadman Creek (Dutchman) @ Gurr Rd	01/25/08	10:50	28.58	10.42	7.85	480	7.97	
Deadman Creek (Dutchman) @ Gurr Rd	02/25/08	9:50	2.52	12.47	8.51	508	11.2	
Deadman Creek (Dutchman) @ Gurr Rd	03/04/08	11:30	NA	10.62	7.99	385	13.9	Sediment toxicity sampling and toxicity resampling only, discharge not measured.
Deadman Creek @ Hwy 59	01/25/08	12:00	NA	7.71	7.73	177	7.11	Unable to deploy velocity instrument for discharge calculation, too deep to wade
Deadman Creek @ Hwy 59	01/30/08	13:50	NA	NA	NA	NA	NA	Toxicity resampling only, no field measurements taken because of no 1/25/08 exceedances
Deadman Creek @ Hwy 59	02/25/08	10:50	51.71	7.87	7.76	458	12.1	
Deadman Creek @ Hwy 59	03/04/08	14:20	NA	13.03	8.37	454	17	Sediment toxicity sampling only, discharge not measured
Dry Creek @ Rd 18	01/25/08	11:10	2.56	11.71	7.1	185	7.56	
Dry Creek @ Rd 18	02/25/08	11:10	1.44	12.35	8.06	127	13.5	
Dry Creek @ Rd 18	03/04/08	10:00	NA	9.62	7.7	249	15.5	Sediment toxicity sampling and toxicity resampling only, discharge not measured. Field measurements taken for sediment toxicity sampling only.

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Station Name	Sample Date	Sample Time	Discharge cfs	Oxygen, Dissolved mg/L	pH none	Specific Conductivity, µS/cm	Temperature °C	Field Result Comments
Dry Creek @ Wellsford Rd	01/24/08	9:10	NA	9.7	6.99	124	7.53	Unable to deploy velocity instrument for discharge calculation, too deep and fast to wade
Dry Creek @ Wellsford Rd	01/30/08	13:40	NA	NA	NA	NA	NA	Toxicity resampling only, no field measurements taken because of no 1/24/08 exceedances
Dry Creek @ Wellsford Rd	02/26/08	8:30	NA	9.13	6.67	99	10.4	Unable to deploy velocity instrument for discharge calculation, too deep and fast to wade
Dry Creek @ Wellsford Rd	03/04/08	8:20	NA	9.78	7.41	165	11.3	Sediment toxicity sampling and toxicity resampling only, discharge not measured. Field measurements taken for sediment toxicity sampling only.
Dry Creek @ Wellsford Rd	03/28/08	14:40	NA	NA	NA	NA	NA	Sediment toxicity resampling only, no field measurements taken because of no exceedances on 03/04/08
Duck Slough @ Gurr Rd	01/25/08	9:40	NA	12.03	7.36	175	6.55	Unable to deploy velocity instrument for discharge calculation, too deep to wade
Duck Slough @ Gurr Rd	02/25/08	9:10	NA	10.15	7.49	194	10.9	Unable to deploy velocity instrument for discharge calculation, too deep and fast to wade
Duck Slough @ Gurr Rd	03/04/08	13:50	NA	12.67	8.43	167	18.7	Sediment toxicity sampling only, discharge not measured
Duck Slough @ Hwy 99	01/25/08	13:10	NA	7.51	7.45	205	6.89	Unable to deploy velocity instrument for discharge calculation, too deep to wade

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Station Name	Sample Date	Sample Time	Discharge cfs	Oxygen, Dissolved mg/L	pH none	Specific Conductivity, µS/cm	Temperature °C	Field Result Comments
Duck Slough @ Hwy 99	02/25/08	12:40	NA	10.06	7.37	141	10.7	Unable to deploy velocity instrument for discharge calculation, too deep and fast to wade
Duck Slough @ Hwy 99	03/04/08	15:30	NA	14.01	8.65	208	14.4	Sediment toxicity sampling only, discharge not measured
Hatch Drain @ Tuolumne Rd	01/24/08	10:00	0.171	4.67	7.38	1199	8.93	Discharge was calculated using the culvert calculator
Hatch Drain @ Tuolumne Rd	01/30/08	12:10	NA	5.18	7.35	1343	10.2	Toxicity resampling only, discharge not measured
Hatch Drain @ Tuolumne Rd	02/26/08	9:20	NA	1.9	7.38	1298	9.1	Discharge too low to be measured; DO mg/L calculated using saturation chart (original value DO%)
Hatch Drain @ Tuolumne Rd	03/04/08	10:30	NA	2.12	7.35	1271	9.82	Sediment toxicity sampling and toxicity resampling only, discharge not measured.
Hatch Drain @ Tuolumne Rd	03/28/08	13:40	NA	5.22	7.37	1373	15.2	Sediment toxicity resampling only, discharge not measured
Highline Canal @ Hwy 99	01/24/08	14:40	55.88	11.55	7.54	631	7.42	
Highline Canal @ Hwy 99	02/26/08	13:00	6.91	12.65	8.03	747	16.1	
Highline Canal @ Hwy 99	03/04/08	12:40	NA	13.49	9.32	365	13.5	Sediment toxicity sampling and toxicity resampling only, discharge not measured.
Highline Canal @ Hwy 99	03/28/08	10:30	NA	8.9	7.74	43	13.9	Sediment toxicity resampling only, discharge not measured
Highline Canal @ Lombardy Rd	01/24/08	12:50	54.02	9.66	7.18	3.11	7.06	
Highline Canal @ Lombardy Rd	01/30/08	12:20	NA	NA	NA	NA	NA	Toxicity resampling only, no field measurements taken because of no 1/24/08 exceedances
Highline Canal @ Lombardy Rd	02/26/08	12:00	4.79	10.01	7.62	353	15	

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Station Name	Sample Date	Sample Time	Discharge cfs	Oxygen, Dissolved mg/L	pH none	Specific Conductivity, µS/cm	Temperature °C	Field Result Comments
Highline Canal @ Lombardy Rd	03/04/08	13:20	NA	0.34	7.88	1402	18	Sediment toxicity sampling and toxicity resampling only, discharge not measured. Field measurements taken for sediment toxicity sampling only.
Highline Canal @ Lombardy Rd	03/28/08	11:30	NA	10.79	8	43	14	Sediment toxicity resampling only, discharge not measured
Hilmar Drain @ Central Ave	01/24/08	14:10	0.38	11.73	8.09	1528	7.55	
Hilmar Drain @ Central Ave	02/26/08	11:20	0.13	11.9	8.19	1476	11.1	DO mg/L calculated using the saturation chart (original measurement %DO)
Hilmar Drain @ Central Ave	03/04/08	16:40	NA	21.08	8.44	1429	13.8	Sediment toxicity sampling only, discharge not measured
Hilmar Drain @ Central Ave	03/28/08	13:10	NA	6.3	7.56	1111	16.3	Sediment toxicity resampling only, discharge not measured
Livingston Drain @ Robin Ave	01/24/08	15:40	7.13	7.46	7.62	68	8.2	Discharge calculated using the culvert calculator
Livingston Drain @ Robin Ave	02/26/08	12:50	0.19	5.68	7.97	103	14.3	
Livingston Drain @ Robin Ave	03/04/08	13:10	NA	NA	NA	NA	NA	Dry Site
Merced River @ Santa Fe	01/24/08	11:40	2318	10.56	7.47	92	7.73	Discharge from Cressy gauge added on 03/20/08
Merced River @ Santa Fe	01/30/08	11:40	NA	NA	NA	NA	NA	Toxicity resampling only, no field measurements taken because of no 1/24/08 exceedances
Merced River @ Santa Fe	02/26/08	11:00	557	9.93	6.88	75	11.6	Discharge from Cressy gauge added on 03/20/08
Miles Creek @ Reilly Rd	01/25/08	13:40	57.87	11.36	6.97	114	7.02	
Miles Creek @ Reilly Rd	01/30/08	10:40	NA	NA	NA	NA	NA	Toxicity resampling only, no field measurements taken because of no 1/25/08 exceedances

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Station Name	Sample Date	Sample Time	Discharge cfs	Oxygen, Dissolved mg/L	pH none	Specific Conductivity, µS/cm	Temperature °C	Field Result Comments
Miles Creek @ Reilly Rd	02/25/08	11:50	NA	8.92	7.26	140	12	Unable to deploy velocity instrument for discharge calculation, too deep and fast to wade
Miles Creek @ Reilly Rd	03/04/08	15:00	NA	9.75	7.88	377	16.8	Sediment toxicity sampling only, discharge not measured
Mustang Creek @ East Ave	01/24/08	10:40	NA	7.6	7.11	207	6.49	Unable to deploy velocity instrument for discharge calculation, too deep to wade
Mustang Creek @ East Ave	01/30/08	12:40	NA	NA	NA	NA	NA	Toxicity resampling only, no field measurements taken because of no 1/24/08 exceedances
Mustang Creek @ East Ave	02/26/08	9:50	2.08	4.06	6.91	243	11	
Mustang Creek @ East Ave	03/04/08	14:00	NA	2.44	7.08	472	15	Sediment toxicity sampling and toxicity resampling only, discharge not measured. Field measurements taken for sediment toxicity sampling only.
Mustang Creek @ East Ave	03/28/08	12:20	NA	4.1	7.4	1467	9.95	Sediment toxicity resampling only, discharge not measured
Prairie Flower Drain @ Crows Landing Rd	01/24/08	12:20	0.45	16.17	8	2371	8.4	
Prairie Flower Drain @ Crows Landing Rd	01/30/08	12:40	NA	12.4	7.71	2944	10.6	Toxicity resampling only, discharge not measured
Prairie Flower Drain @ Crows Landing Rd	02/26/08	10:10	0.94	9.9	7.93	2722	12.7	DO mg/L calculated using saturation chart (original measurement %DO)
Prairie Flower Drain @ Crows Landing Rd	03/04/08	11:30	NA	19.88	8.15	2639	15.7	Sediment toxicity sampling and toxicity resampling only, discharge not measured.
Silva Drain @ Meadow Drive	01/24/08	11:12	NA	NA	NA	NA	NA	Dry Site
Silva Drain @ Meadow Drive	02/26/08	10:30	NA	NA	NA	NA	NA	Dry Site
Silva Drain @ Meadow Drive	03/04/08	14:40	NA	NA	NA	NA	NA	Dry Site

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Station Name	Sample Date	Sample Time	Discharge cfs	Oxygen, Dissolved mg/L	pH none	Specific Conductivity, µS/cm	Temperature °C	Field Result Comments
South Slough @ Quinley Rd	01/25/08	8:50	NA	NA	NA	NA	NA	Dry Site
South Slough @ Quinley Rd	02/25/08	8:40	NA	NA	NA	NA	NA	Dry Site
South Slough @ Quinley Rd	03/04/08	13:33	NA	NA	NA	NA	NA	Dry Site
Westport Drain @ Vivian Rd	01/24/08	8:40	0	7.91	7.57	1086	8.93	Discharge calculated using the culvert calculator
Westport Drain @ Vivian Rd	02/26/08	8:30	NA	5.7	7.42	1104	12	Discharge too low to be measured; DO mg/L calculated using saturation chart (original in DO %)
Westport Drain @ Vivian Rd	03/04/08	9:50	NA	8.4	7.57	1096	13.7	Sediment toxicity sampling and toxicity resampling only, discharge not measured.

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Table I - 2. ESJWQC environmental sample results for organic analysis.

Samples are sorted by station name, analyte, and sample date.

StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Chlorpyrifos	0.008	µg/L	DNQ	0.003	0.02		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	53.7	%		NA	NA	100	None	PR 16-146	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	69.7	%		NA	NA	100	None	PR 16-146	
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		Batch has two different analysis dates due to the samples being run overnight.
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8321A	Isoxaben (Surrogate)	90.6	%		NA	NA	100	None	PR 47-134	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8321A	Isoxaben (Surrogate)	106	%		NA	NA	100	None	PR 47-134	
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	67.3	%		NA	NA	100	None	PR 15-98	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	73.9	%		NA	NA	100	None	PR 15-98	
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		Surrogate recovery is outside of control limits		
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 619	Tributylphosphate (Surrogate)	123	%		NA	NA	100	None	PR 62-145	
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Tributylphosphate (Surrogate)	114	%		NA	NA	100	None	PR 60-150	
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Tributylphosphate (Surrogate)	123	%		NA	NA	100	None	PR 60-150	
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8321A	Tributylphosphate (Surrogate)	117	%		NA	NA	100	None	PR 36-140	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 619	Tributylphosphate (Surrogate)	91.6	%		NA	NA	100	None	PR 62-145	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Tributylphosphate (Surrogate)	91.6	%		NA	NA	100	None	PR 60-150	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Tributylphosphate (Surrogate)	105	%		NA	NA	100	None	PR 60-150	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8321A	Tributylphosphate (Surrogate)	118	%		NA	NA	100	None	PR 36-140	
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 619	Triphenyl phosphate (Surrogate)	179	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 54-144	
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Triphenyl phosphate (Surrogate)	93	%		NA	NA	100	None	PR 56-129	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	E	01/24/08	16:00	EPA 8141A	Triphenyl phosphate (Surrogate)	179	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 56-129	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 619	Triphenyl phosphate (Surrogate)	106	%		NA	NA	100	None	PR 54-144	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Triphenyl phosphate (Surrogate)	103	%		NA	NA	100	None	PR 56-129	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	EPA 8141A	Triphenyl phosphate (Surrogate)	97.6	%		NA	NA	100	None	PR 56-129	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Chlorpyrifos	0.0057	µg/L	DNQ	0.003	0.02		Primary and confirmation results varied by > than 40%		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 619	Cyanazine	0.14	µg/L	DNQ	0.09	0.5		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	44.2	%		NA	NA	100	None	PR 16-146	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Decachlorobiphenyl (Surrogate)	54	%		NA	NA	100	None	PR 16-146	

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Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 547M	Glyphosate	<4	µg/L	ND	4	10		Reporting limits elevated due to matrix interferences		Batch has two different analysis dates due to the samples being run overnight.
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8321A	Isoxaben (Surrogate)	94.5	%		NA	NA	100	None	PR 47-134	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8321A	Isoxaben (Surrogate)	103	%		NA	NA	100	None	PR 47-134	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	55.6	%		NA	NA	100	None	PR 15-98	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	59.9	%		NA	NA	100	None	PR 15-98	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		Surrogate recovery is outside of control limits		
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 619	Tributylphosphate (Surrogate)	96.8	%		NA	NA	100	None	PR 62-145	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Tributylphosphate (Surrogate)	121	%		NA	NA	100	None	PR 60-150	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Tributylphosphate (Surrogate)	96.8	%		NA	NA	100	None	PR 60-150	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8321A	Tributylphosphate (Surrogate)	112	%		NA	NA	100	None	PR 36-140	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 619	Tributylphosphate (Surrogate)	78.7	%		NA	NA	100	None	PR 62-145	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Tributylphosphate (Surrogate)	104	%		NA	NA	100	None	PR 60-150	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Tributylphosphate (Surrogate)	95	%		NA	NA	100	None	PR 60-150	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8321A	Tributylphosphate (Surrogate)	115	%		NA	NA	100	None	PR 36-140	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 619	Triphenyl phosphate (Surrogate)	130	%		NA	NA	100	None	PR 54-144	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Triphenyl phosphate (Surrogate)	130	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 56-129	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	EPA 8141A	Triphenyl phosphate (Surrogate)	103	%		NA	NA	100	None	PR 56-129	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 619	Triphenyl phosphate (Surrogate)	92.1	%		NA	NA	100	None	PR 54-144	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Triphenyl phosphate (Surrogate)	94.3	%		NA	NA	100	None	PR 56-129	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	EPA 8141A	Triphenyl phosphate (Surrogate)	92.5	%		NA	NA	100	None	PR 56-129	
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Chlorpyrifos	0.019	µg/L	DNQ	0.003	0.02		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Chlorpyrifos	0.036	µg/L		0.003	0.02		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		

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Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	42.8	%		NA	NA	100	None	PR 16-146	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8081A	Decachlorobiphenyl (Surrogate)	59.3	%		NA	NA	100	None	PR 16-146	
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Diazinon	0.06	µg/L		0.004	0.02		Surrogate recovery is outside of control limits; Primary and confirmation results varied by > than 40%		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Diazinon	0.24	µg/L		0.004	0.02		Primary and confirmation results varied by > than 40%		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		

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Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8321A	Diuron	68	µg/L		4	8		Analytes analyzed at a secondary dilution		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8321A	Diuron	65	µg/L		4	8		Analytes analyzed at a secondary dilution		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	15		Reporting limits elevated due to matrix interferences		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 547M	Glyphosate	<4	µg/L	ND	4	15		Reporting limits elevated due to matrix interferences		Batch has two different analysis dates due to the samples being run overnight.
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8321A	Isoxaben (Surrogate)	83.2	%		NA	NA	100	None	PR 47-134	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8321A	Isoxaben (Surrogate)	99	%		NA	NA	100	None	PR 47-134	
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		Surrogate recovery is outside of control limits		

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Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		Batch samples extracted overnight and therefore DigestExtract Date over two days.
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Parathion, Methyl	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Phorate	<0.07	µg/L	ND	0.07	0.1		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 619	Simazine	2	µg/L		0.08	0.5		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 619	Simazine	5.1	µg/L		0.08	0.5		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	82.1	%		NA	NA	100	None	PR 15-98	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	60.6	%		NA	NA	100	None	PR 15-98	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		Surrogate recovery is outside of control limits		
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 619	Tributylphosphate (Surrogate)	101	%		NA	NA	100	None	PR 62-145	
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Tributylphosphate (Surrogate)	110	%		NA	NA	100	None	PR 60-150	
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Tributylphosphate (Surrogate)	101	%		NA	NA	100	None	PR 60-150	
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8321A	Tributylphosphate (Surrogate)	82.5	%		NA	NA	100	None	PR 36-140	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 619	Tributylphosphate (Surrogate)	98.8	%		NA	NA	100	None	PR 62-145	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Tributylphosphate (Surrogate)	98.8	%		NA	NA	100	None	PR 60-150	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Tributylphosphate (Surrogate)	109	%		NA	NA	100	None	PR 60-150	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8321A	Tributylphosphate (Surrogate)	113	%		NA	NA	100	None	PR 36-140	
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 619	Triphenyl phosphate (Surrogate)	162	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 54-144	
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Triphenyl phosphate (Surrogate)	162	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 56-129	
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	EPA 8141A	Triphenyl phosphate (Surrogate)	89.7	%		NA	NA	100	None	PR 56-129	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 619	Triphenyl phosphate (Surrogate)	113	%		NA	NA	100	None	PR 54-144	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Triphenyl phosphate (Surrogate)	117	%		NA	NA	100	None	PR 56-129	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	EPA 8141A	Triphenyl phosphate (Surrogate)	101	%		NA	NA	100	None	PR 56-129	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Chlorpyrifos	0.0037	µg/L	DNQ	0.003	0.02		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	DDT (p,p')	0.0073	µg/L	DNQ	0.007	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	58.4	%		NA	NA	100	None	PR 16-146	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	62.2	%		NA	NA	100	None	PR 16-146	
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		

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Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8321A	Diuron	0.43	µg/L		0.2	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8321A	Diuron	0.49	µg/L		0.2	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		Batch has two different analysis dates due to the samples being run overnight.
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8321A	Isoxaben (Surrogate)	100	%		NA	NA	100	None	PR 47-134	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8321A	Isoxaben (Surrogate)	109	%		NA	NA	100	None	PR 47-134	
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		

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Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		Batch samples extracted overnight and therefore DigestExtract Date over two days.

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Parathion, Methyl	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Phorate	<0.07	µg/L	ND	0.07	0.1		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 619	Simazine	0.54	µg/L		0.08	0.5		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	76	%		NA	NA	100	None	PR 15-98	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	71.2	%		NA	NA	100	None	PR 15-98	
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		Surrogate recovery is outside of control limits		
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 619	Tributylphosphate (Surrogate)	94.1	%		NA	NA	100	None	PR 62-145	
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Tributylphosphate (Surrogate)	94.1	%		NA	NA	100	None	PR 60-150	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Tributylphosphate (Surrogate)	90.9	%		NA	NA	100	None	PR 60-150	
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8321A	Tributylphosphate (Surrogate)	105	%		NA	NA	100	None	PR 36-140	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 619	Tributylphosphate (Surrogate)	89.3	%		NA	NA	100	None	PR 62-145	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Tributylphosphate (Surrogate)	104	%		NA	NA	100	None	PR 60-150	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Tributylphosphate (Surrogate)	89.3	%		NA	NA	100	None	PR 60-150	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8321A	Tributylphosphate (Surrogate)	114	%		NA	NA	100	None	PR 36-140	
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 619	Triphenyl phosphate (Surrogate)	139	%		NA	NA	100	None	PR 54-144	
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Triphenyl phosphate (Surrogate)	139	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 56-129	
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	EPA 8141A	Triphenyl phosphate (Surrogate)	75.8	%		NA	NA	100	None	PR 56-129	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 619	Triphenyl phosphate (Surrogate)	97.1	%		NA	NA	100	None	PR 54-144	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Triphenyl phosphate (Surrogate)	106	%		NA	NA	100	None	PR 56-129	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	EPA 8141A	Triphenyl phosphate (Surrogate)	93.5	%		NA	NA	100	None	PR 56-129	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Chlorpyrifos	0.012	µg/L	DNQ	0.003	0.02		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	54.5	%		NA	NA	100	None	PR 16-146	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	50.8	%		NA	NA	100	None	PR 16-146	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Diazinon	0.021	µg/L		0.004	0.02		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		

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Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8321A	Diuron	6.2	µg/L		2	4		Analytes analyzed at a secondary dilution		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8321A	Diuron	0.51	µg/L		0.2	0.4		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	15		Reporting limits elevated due to matrix interferences		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		Batch has two different analysis dates due to the samples being run overnight.
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8321A	Isoxaben (Surrogate)	95.3	%		NA	NA	100	None	PR 47-134	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8321A	Isoxaben (Surrogate)	106	%		NA	NA	100	None	PR 47-134	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		

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Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		Batch samples extracted overnight and therefore DigestExtract Date over two days.
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		

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Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Parathion, Methyl	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Phorate	<0.07	µg/L	ND	0.07	0.1		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		Surrogate recovery is outside of control limits		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 619	Simazine	25	µg/L		1	5		A secondary dilution was performed; Field duplicate RPD above QC limit; Surrogate recovery is outside of control limits.		
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	76.1	%		NA	NA	100	None	PR 15-98	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	66	%		NA	NA	100	None	PR 15-98	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		Surrogate recovery is outside of control limits		

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Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 619	Tributylphosphate (Surrogate)	97.6	%		NA	NA	100	None	PR 62-145	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	97.6	%		NA	NA	100	None	PR 60-150	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	110	%		NA	NA	100	None	PR 60-150	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8321A	Tributylphosphate (Surrogate)	89.7	%		NA	NA	100	None	PR 36-140	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 619	Tributylphosphate (Surrogate)	77.1	%		NA	NA	100	None	PR 62-145	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Tributylphosphate (Surrogate)	97.9	%		NA	NA	100	None	PR 60-150	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Tributylphosphate (Surrogate)	139	%		NA	NA	100	None	PR 60-150	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8321A	Tributylphosphate (Surrogate)	117	%		NA	NA	100	None	PR 36-140	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 619	Triphenyl phosphate (Surrogate)	161	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 54-144	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	161	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 56-129	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	82.5	%		NA	NA	100	None	PR 56-129	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 619	Triphenyl phosphate (Surrogate)	87.2	%		NA	NA	100	None	PR 54-144	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Triphenyl phosphate (Surrogate)	84.4	%		NA	NA	100	None	PR 56-129	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	EPA 8141A	Triphenyl phosphate (Surrogate)	97.9	%		NA	NA	100	None	PR 56-129	
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Chlorpyrifos	0.01	µg/L	DNQ	0.003	0.02		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Chlorpyrifos	0.034	µg/L		0.003	0.02		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 619	Cyanazine	0.12	µg/L	DNQ	0.09	0.5		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Decachlorobiphenyl (Surrogate)	59.1	%		NA	NA	100	None	PR 16-146	
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Decachlorobiphenyl (Surrogate)	64.7	%		NA	NA	100	None	PR 16-146	
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Diazinon	0.049	µg/L		0.004	0.02		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Diazinon	0.24	µg/L		0.004	0.02		Primary and confirmation results varied by > than 40%		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8321A	Diuron	21	µg/L		4	8		Analytes analyzed at a secondary dilution		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8321A	Diuron	2.1	µg/L		0.2	0.4		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8321A	Isoxaben (Surrogate)	86.9	%		NA	NA	100	None	PR 47-134	
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8321A	Isoxaben (Surrogate)	105	%		NA	NA	100	None	PR 47-134	
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		

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Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		Batch samples extracted overnight and therefore DigestExtract Date over two days.
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		

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Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Parathion, Methyl	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Phorate	<0.07	µg/L	ND	0.07	0.1		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 619	Simazine	0.56	µg/L		0.08	0.5		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 619	Simazine	0.53	µg/L		0.08	0.5		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	78.1	%		NA	NA	100	None	PR 15-98	
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	61.4	%		NA	NA	100	None	PR 15-98	
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		Surrogate recovery is outside of control limits		
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 619	Tributylphosphate (Surrogate)	110	%		NA	NA	100	None	PR 62-145	
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Tributylphosphate (Surrogate)	123	%		NA	NA	100	None	PR 60-150	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Tributylphosphate (Surrogate)	110	%		NA	NA	100	None	PR 60-150	
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8321A	Tributylphosphate (Surrogate)	88.5	%		NA	NA	100	None	PR 36-140	
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 619	Tributylphosphate (Surrogate)	82	%		NA	NA	100	None	PR 62-145	
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Tributylphosphate (Surrogate)	109	%		NA	NA	100	None	PR 60-150	
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Tributylphosphate (Surrogate)	82	%		NA	NA	100	None	PR 60-150	
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8321A	Tributylphosphate (Surrogate)	119	%		NA	NA	100	None	PR 36-140	
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 619	Triphenyl phosphate (Surrogate)	150	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 54-144	
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Triphenyl phosphate (Surrogate)	150	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 56-129	
Dry Creek @ Rd 18	E	01/25/08	11:10	EPA 8141A	Triphenyl phosphate (Surrogate)	96.4	%		NA	NA	100	None	PR 56-129	
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 619	Triphenyl phosphate (Surrogate)	94.2	%		NA	NA	100	None	PR 54-144	
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Triphenyl phosphate (Surrogate)	115	%		NA	NA	100	None	PR 56-129	
Dry Creek @ Rd 18	E	02/25/08	11:10	EPA 8141A	Triphenyl phosphate (Surrogate)	113	%		NA	NA	100	None	PR 56-129	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		

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Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		Surrogate recovery is outside of control limits		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		Surrogate recovery is outside of control limits		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8081A	Decachlorobiphenyl (Surrogate)	45.1	%		NA	NA	100	None	PR 16-146	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8081A	Decachlorobiphenyl (Surrogate)	55.7	%		NA	NA	100	None	PR 16-146	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8321A	Diuron	1.1	µg/L		0.2	0.4		Surrogate recovery is outside of control limits		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8321A	Diuron	0.24	µg/L	DNQ	0.2	0.4		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 547M	Glyphosate	<4	µg/L	ND	4	10		Reporting limits elevated due to matrix interferences		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 547M	Glyphosate	<4	µg/L	ND	4	10		Reporting limits elevated due to matrix interferences		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8321A	Isoxaben (Surrogate)	94.1	%		NA	NA	100	None	PR 47-134	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8321A	Isoxaben (Surrogate)	97.3	%		NA	NA	100	None	PR 47-134	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		Surrogate recovery is outside of control limits		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 619	Simazine	0.99	µg/L		0.08	0.5		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 619	Simazine	0.48	µg/L	DNQ	0.08	0.5		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	60.8	%		NA	NA	100	None	PR 15-98	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	71.7	%		NA	NA	100	None	PR 15-98	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 619	Tributylphosphate (Surrogate)	88.6	%		NA	NA	100	None	PR 62-145	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Tributylphosphate (Surrogate)	125	%		NA	NA	100	None	PR 60-150	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Tributylphosphate (Surrogate)	88.6	%		NA	NA	100	None	PR 60-150	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8321A	Tributylphosphate (Surrogate)	292	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 36-140	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 619	Tributylphosphate (Surrogate)	91.5	%		NA	NA	100	None	PR 62-145	

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Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Tributylphosphate (Surrogate)	79	%		NA	NA	100	None	PR 60-150	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Tributylphosphate (Surrogate)	139	%		NA	NA	100	None	PR 60-150	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8321A	Tributylphosphate (Surrogate)	115	%		NA	NA	100	None	PR 36-140	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 619	Triphenyl phosphate (Surrogate)	121	%		NA	NA	100	None	PR 54-144	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Triphenyl phosphate (Surrogate)	105	%		NA	NA	100	None	PR 56-129	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	EPA 8141A	Triphenyl phosphate (Surrogate)	121	%		NA	NA	100	None	PR 56-129	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 619	Triphenyl phosphate (Surrogate)	109	%		NA	NA	100	None	PR 54-144	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Triphenyl phosphate (Surrogate)	77.9	%		NA	NA	100	None	PR 56-129	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	EPA 8141A	Triphenyl phosphate (Surrogate)	87.5	%		NA	NA	100	None	PR 56-129	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		

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Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Chlorpyrifos	0.0062	µg/L	DNQ	0.003	0.02		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		

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Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Decachlorobiphenyl (Surrogate)	56.1	%		NA	NA	100	None	PR 16-146	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Decachlorobiphenyl (Surrogate)	48	%		NA	NA	100	None	PR 16-146	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		Batch has two different analysis dates due to the samples being run overnight.
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8321A	Isoxaben (Surrogate)	97	%		NA	NA	100	None	PR 47-134	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8321A	Isoxaben (Surrogate)	104	%		NA	NA	100	None	PR 47-134	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		Batch samples extracted overnight and therefore DigestExtract Date over two days.
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Parathion, Methyl	<0.08	µg/L	ND	0.08	0.1		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Phorate	<0.07	µg/L	ND	0.07	0.1		Surrogate recovery is outside of control limits		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 619	Simazine	0.72	µg/L		0.08	0.5		None		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 619	Simazine	1	µg/L		0.08	0.5		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	73.2	%		NA	NA	100	None	PR 15-98	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	65.8	%		NA	NA	100	None	PR 15-98	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		Surrogate recovery is outside of control limits		
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 619	Tributylphosphate (Surrogate)	96	%		NA	NA	100	None	PR 62-145	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Tributylphosphate (Surrogate)	96	%		NA	NA	100	None	PR 60-150	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Tributylphosphate (Surrogate)	165	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 60-150	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8321A	Tributylphosphate (Surrogate)	98.9	%		NA	NA	100	None	PR 36-140	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 619	Tributylphosphate (Surrogate)	87.3	%		NA	NA	100	None	PR 62-145	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Tributylphosphate (Surrogate)	148	%		NA	NA	100	None	PR 60-150	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Tributylphosphate (Surrogate)	94.1	%		NA	NA	100	None	PR 60-150	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8321A	Tributylphosphate (Surrogate)	112	%		NA	NA	100	None	PR 36-140	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 619	Triphenyl phosphate (Surrogate)	141	%		NA	NA	100	None	PR 54-144	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Triphenyl phosphate (Surrogate)	74.3	%		NA	NA	100	None	PR 56-129	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	EPA 8141A	Triphenyl phosphate (Surrogate)	141	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 56-129	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 619	Triphenyl phosphate (Surrogate)	103	%		NA	NA	100	None	PR 54-144	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Triphenyl phosphate (Surrogate)	93.5	%		NA	NA	100	None	PR 56-129	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	EPA 8141A	Triphenyl phosphate (Surrogate)	92.3	%		NA	NA	100	None	PR 56-129	
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Chlorpyrifos	0.0035	µg/L	DNQ	0.003	0.02		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8081A	Decachlorobiphenyl (Surrogate)	57.1	%		NA	NA	100	None	PR 16-146	
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8081A	Decachlorobiphenyl (Surrogate)	53.6	%		NA	NA	100	None	PR 16-146	
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		

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Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		Batch has two different analysis dates due to the samples being run overnight.
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8321A	Isoxaben (Surrogate)	96.5	%		NA	NA	100	None	PR 47-134	
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8321A	Isoxaben (Surrogate)	102	%		NA	NA	100	None	PR 47-134	
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		Batch samples extracted overnight and therefore DigestExtract Date over two days.
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Parathion, Methyl	<0.08	µg/L	ND	0.08	0.1		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Phorate	<0.07	µg/L	ND	0.07	0.1		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 619	Simazine	0.5	µg/L		0.08	0.5		None		
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 619	Simazine	0.47	µg/L	DNQ	0.08	0.5		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	73.5	%		NA	NA	100	None	PR 15-98	
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	71.6	%		NA	NA	100	None	PR 15-98	
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 619	Tributylphosphate (Surrogate)	90.9	%		NA	NA	100	None	PR 62-145	
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Tributylphosphate (Surrogate)	90.9	%		NA	NA	100	None	PR 60-150	
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Tributylphosphate (Surrogate)	112	%		NA	NA	100	None	PR 60-150	
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8321A	Tributylphosphate (Surrogate)	89.3	%		NA	NA	100	None	PR 36-140	
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 619	Tributylphosphate (Surrogate)	96	%		NA	NA	100	None	PR 62-145	
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Tributylphosphate (Surrogate)	96	%		NA	NA	100	None	PR 60-150	
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Tributylphosphate (Surrogate)	88.2	%		NA	NA	100	None	PR 60-150	
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8321A	Tributylphosphate (Surrogate)	114	%		NA	NA	100	None	PR 36-140	
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 619	Triphenyl phosphate (Surrogate)	135	%		NA	NA	100	None	PR 54-144	
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Triphenyl phosphate (Surrogate)	127	%		NA	NA	100	None	PR 56-129	
Duck Slough @ Hwy 99	E	01/25/08	13:10	EPA 8141A	Triphenyl phosphate (Surrogate)	94.5	%		NA	NA	100	None	PR 56-129	
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 619	Triphenyl phosphate (Surrogate)	106	%		NA	NA	100	None	PR 54-144	
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Triphenyl phosphate (Surrogate)	93.2	%		NA	NA	100	None	PR 56-129	
Duck Slough @ Hwy 99	E	02/25/08	12:40	EPA 8141A	Triphenyl phosphate (Surrogate)	93.2	%		NA	NA	100	None	PR 56-129	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		

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Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		

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Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	62.4	%		NA	NA	100	None	PR 16-146	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Decachlorobiphenyl (Surrogate)	74	%		NA	NA	100	None	PR 16-146	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Diazinon	0.037	µg/L		0.004	0.02		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		

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Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	10		Reporting limits elevated due to matrix interferences		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8321A	Isoxaben (Surrogate)	104	%		NA	NA	100	None	PR 47-134	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8321A	Isoxaben (Surrogate)	80.1	%		NA	NA	100	None	PR 47-134	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		Surrogate recovery is outside of control limits		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Methoxychlor	0.016	µg/L		0.008	0.01		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Methoxychlor	0.011	µg/L		0.008	0.01		None		

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Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	51.9	%		NA	NA	100	None	PR 15-98	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	74.1	%		NA	NA	100	None	PR 15-98	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 619	Tributylphosphate (Surrogate)	96.5	%		NA	NA	100	None	PR 62-145	

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Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Tributylphosphate (Surrogate)	108	%		NA	NA	100	None	PR 60-150	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Tributylphosphate (Surrogate)	96.5	%		NA	NA	100	None	PR 60-150	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8321A	Tributylphosphate (Surrogate)	111	%		NA	NA	100	None	PR 36-140	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 619	Tributylphosphate (Surrogate)	92.2	%		NA	NA	100	None	PR 62-145	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Tributylphosphate (Surrogate)	106	%		NA	NA	100	None	PR 60-150	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Tributylphosphate (Surrogate)	145	%		NA	NA	100	None	PR 60-150	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8321A	Tributylphosphate (Surrogate)	82.1	%		NA	NA	100	None	PR 36-140	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 619	Triphenyl phosphate (Surrogate)	129	%		NA	NA	100	None	PR 54-144	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Triphenyl phosphate (Surrogate)	133	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 56-129	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	EPA 8141A	Triphenyl phosphate (Surrogate)	129	%		NA	NA	100	None	PR 56-129	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 619	Triphenyl phosphate (Surrogate)	102	%		NA	NA	100	None	PR 54-144	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Triphenyl phosphate (Surrogate)	99	%		NA	NA	100	None	PR 56-129	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	EPA 8141A	Triphenyl phosphate (Surrogate)	86.8	%		NA	NA	100	None	PR 56-129	
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		

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Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Chlorpyrifos	0.019	µg/L	DNQ	0.003	0.02		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Chlorpyrifos	0.0076	µg/L	DNQ	0.003	0.02		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Decachlorobiphenyl (Surrogate)	39	%		NA	NA	100	None	PR 16-146	
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	50.5	%		NA	NA	100	None	PR 16-146	
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Diazinon	0.04	µg/L		0.004	0.02		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8321A	Diuron	3.2	µg/L		0.2	0.4		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8321A	Diuron	0.43	µg/L		0.2	0.4		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		

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Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 547M	Glyphosate	<4	µg/L	ND	4	25		Reporting limits elevated due to matrix interferences		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	50		Reporting limits elevated due to matrix interferences		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8321A	Isoxaben (Surrogate)	94.6	%		NA	NA	100	None	PR 47-134	
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8321A	Isoxaben (Surrogate)	77.4	%		NA	NA	100	None	PR 47-134	
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		

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Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 619	Simazine	1.2	µg/L		0.08	0.5		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 619	Simazine	3.5	µg/L		0.08	0.5		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	59.6	%		NA	NA	100	None	PR 15-98	
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	57	%		NA	NA	100	None	PR 15-98	
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 619	Tributylphosphate (Surrogate)	92.4	%		NA	NA	100	None	PR 62-145	
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Tributylphosphate (Surrogate)	90.9	%		NA	NA	100	None	PR 60-150	

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Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Tributylphosphate (Surrogate)	92.4	%		NA	NA	100	None	PR 60-150	
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8321A	Tributylphosphate (Surrogate)	99.1	%		NA	NA	100	None	PR 36-140	
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 619	Tributylphosphate (Surrogate)	73.9	%		NA	NA	100	None	PR 62-145	
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Tributylphosphate (Surrogate)	77.6	%		NA	NA	100	None	PR 60-150	
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Tributylphosphate (Surrogate)	126	%		NA	NA	100	None	PR 60-150	
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8321A	Tributylphosphate (Surrogate)	101	%		NA	NA	100	None	PR 36-140	
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 619	Triphenyl phosphate (Surrogate)	119	%		NA	NA	100	None	PR 54-144	
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Triphenyl phosphate (Surrogate)	119	%		NA	NA	100	None	PR 56-129	
Highline Canal @ Hwy 99	E	01/24/08	14:40	EPA 8141A	Triphenyl phosphate (Surrogate)	77.7	%		NA	NA	100	None	PR 56-129	
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 619	Triphenyl phosphate (Surrogate)	91	%		NA	NA	100	None	PR 54-144	
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Triphenyl phosphate (Surrogate)	76.7	%		NA	NA	100	None	PR 56-129	
Highline Canal @ Hwy 99	E	02/26/08	13:00	EPA 8141A	Triphenyl phosphate (Surrogate)	82.3	%		NA	NA	100	None	PR 56-129	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		

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Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		Surrogate recovery is outside of control limits		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		Surrogate recovery is outside of control limits		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Chlorpyrifos	0.028	µg/L		0.003	0.02		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Chlorpyrifos	0.015	µg/L	DNQ	0.003	0.02		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		

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Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	35.9	%		NA	NA	100	None	PR 16-146	
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	58.4	%		NA	NA	100	None	PR 16-146	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Diazinon	0.043	µg/L		0.004	0.02		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8321A	Diuron	1	µg/L		0.2	0.4		Surrogate recovery is outside of control limits		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	20		Reporting limits elevated due to matrix interferences		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	25		Reporting limits elevated due to matrix interferences		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8321A	Isoxaben (Surrogate)	86.3	%		NA	NA	100	None	PR 47-134	
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8321A	Isoxaben (Surrogate)	88.6	%		NA	NA	100	None	PR 47-134	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		

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Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		Surrogate recovery is outside of control limits		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 619	Simazine	2.5	µg/L		0.08	0.5		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 619	Simazine	12	µg/L		0.08	0.5		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	50.5	%		NA	NA	100	None	PR 15-98	
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	68.2	%		NA	NA	100	None	PR 15-98	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 619	Tributylphosphate (Surrogate)	72.7	%		NA	NA	100	None	PR 62-145	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	72.7	%		NA	NA	100	None	PR 60-150	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	112	%		NA	NA	100	None	PR 60-150	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8321A	Tributylphosphate (Surrogate)	274	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 36-140	
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 619	Tributylphosphate (Surrogate)	83.4	%		NA	NA	100	None	PR 62-145	
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	83.4	%		NA	NA	100	None	PR 60-150	
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	74.9	%		NA	NA	100	None	PR 60-150	
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8321A	Tributylphosphate (Surrogate)	118	%		NA	NA	100	None	PR 36-140	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 619	Triphenyl phosphate (Surrogate)	94.6	%		NA	NA	100	None	PR 54-144	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	91.6	%		NA	NA	100	None	PR 56-129	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	94.6	%		NA	NA	100	None	PR 56-129	
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 619	Triphenyl phosphate (Surrogate)	98.7	%		NA	NA	100	None	PR 54-144	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	75.9	%		NA	NA	100	None	PR 56-129	
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	98.7	%		NA	NA	100	None	PR 56-129	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		

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Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Decachlorobiphenyl (Surrogate)	55	%		NA	NA	100	None	PR 16-146	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Decachlorobiphenyl (Surrogate)	73.4	%		NA	NA	100	None	PR 16-146	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		

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Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8321A	Diuron	0.52	µg/L		0.2	0.4		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 547M	Glyphosate	<4	µg/L	ND	4	10		Reporting limits elevated due to matrix interferences		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8321A	Isoxaben (Surrogate)	84.8	%		NA	NA	100	None	PR 47-134	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8321A	Isoxaben (Surrogate)	93.4	%		NA	NA	100	None	PR 47-134	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		

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Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	60.5	%		NA	NA	100	None	PR 15-98	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	73.2	%		NA	NA	100	None	PR 15-98	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 619	Tributylphosphate (Surrogate)	101	%		NA	NA	100	None	PR 62-145	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Tributylphosphate (Surrogate)	136	%		NA	NA	100	None	PR 60-150	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Tributylphosphate (Surrogate)	101	%		NA	NA	100	None	PR 60-150	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8321A	Tributylphosphate (Surrogate)	105	%		NA	NA	100	None	PR 36-140	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 619	Tributylphosphate (Surrogate)	92.2	%		NA	NA	100	None	PR 62-145	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Tributylphosphate (Surrogate)	84.1	%		NA	NA	100	None	PR 60-150	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Tributylphosphate (Surrogate)	144	%		NA	NA	100	None	PR 60-150	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8321A	Tributylphosphate (Surrogate)	104	%		NA	NA	100	None	PR 36-140	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 619	Triphenyl phosphate (Surrogate)	129	%		NA	NA	100	None	PR 54-144	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Triphenyl phosphate (Surrogate)	116	%		NA	NA	100	None	PR 56-129	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	EPA 8141A	Triphenyl phosphate (Surrogate)	129	%		NA	NA	100	None	PR 56-129	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 619	Triphenyl phosphate (Surrogate)	105	%		NA	NA	100	None	PR 54-144	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Triphenyl phosphate (Surrogate)	83.9	%		NA	NA	100	None	PR 56-129	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	EPA 8141A	Triphenyl phosphate (Surrogate)	91.5	%		NA	NA	100	None	PR 56-129	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Chlorpyrifos	0.02	µg/L		0.003	0.02		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		

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Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Decachlorobiphenyl (Surrogate)	47.8	%		NA	NA	100	None	PR 16-146	
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	53.8	%		NA	NA	100	None	PR 16-146	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Diazinon	0.078	µg/L		0.004	0.02		Primary and confirmation results varied by > than 40%		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Diazinon	0.068	µg/L		0.004	0.02		Primary and confirmation results varied by > than 40%		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		

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Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	10		Reporting limits elevated due to matrix interferences		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8321A	Isoxaben (Surrogate)	94.6	%		NA	NA	100	None	PR 47-134	
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8321A	Isoxaben (Surrogate)	99.2	%		NA	NA	100	None	PR 47-134	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		Surrogate recovery is outside of control limits		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		

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Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 619	Simazine	0.91	µg/L		0.08	0.5		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 619	Simazine	0.8	µg/L		0.08	0.5		None		

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Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	56.4	%		NA	NA	100	None	PR 15-98	
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	65.1	%		NA	NA	100	None	PR 15-98	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 619	Tributylphosphate (Surrogate)	104	%		NA	NA	100	None	PR 62-145	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Tributylphosphate (Surrogate)	172	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 60-150	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Tributylphosphate (Surrogate)	104	%		NA	NA	100	None	PR 60-150	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8321A	Tributylphosphate (Surrogate)	124	%		NA	NA	100	None	PR 36-140	
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 619	Tributylphosphate (Surrogate)	91.1	%		NA	NA	100	None	PR 62-145	
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	87	%		NA	NA	100	None	PR 60-150	
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	118	%		NA	NA	100	None	PR 60-150	
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8321A	Tributylphosphate (Surrogate)	120	%		NA	NA	100	None	PR 36-140	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 619	Triphenyl phosphate (Surrogate)	123	%		NA	NA	100	None	PR 54-144	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Triphenyl phosphate (Surrogate)	108	%		NA	NA	100	None	PR 56-129	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	EPA 8141A	Triphenyl phosphate (Surrogate)	123	%		NA	NA	100	None	PR 56-129	
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 619	Triphenyl phosphate (Surrogate)	112	%		NA	NA	100	None	PR 54-144	
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	71.8	%		NA	NA	100	None	PR 56-129	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Livingston Drain @ Robin Ave	E	02/26/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	90.1	%		NA	NA	100	None	PR 56-129	
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		Surrogate recovery is outside of control limits		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		Surrogate recovery is outside of control limits		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Chlorpyrifos	0.59	µg/L		0.003	0.02		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Chlorpyrifos	0.011	µg/L	DNQ	0.003	0.02		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8081A	Decachlorobiphenyl (Surrogate)	41.7	%		NA	NA	100	None	PR 16-146	
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	65.5	%		NA	NA	100	None	PR 16-146	
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Diazinon	0.01	µg/L	DNQ	0.004	0.02		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		

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Merced River @ Santa Fe	E	01/24/08	11:40	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8321A	Isoxaben (Surrogate)	94.8	%		NA	NA	100	None	PR 47-134	
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8321A	Isoxaben (Surrogate)	99.1	%		NA	NA	100	None	PR 47-134	
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		Surrogate recovery is outside of control limits		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		Surrogate recovery is outside of control limits		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 619	Simazine	1.5	µg/L		0.08	0.5		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 619	Simazine	0.39	µg/L	DNQ	0.08	0.5		Primary and confirmation results varied by > than 40%		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	55.8	%		NA	NA	100	None	PR 15-98	
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	77	%		NA	NA	100	None	PR 15-98	
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 619	Tributylphosphate (Surrogate)	85	%		NA	NA	100	None	PR 62-145	

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Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Tributylphosphate (Surrogate)	107	%		NA	NA	100	None	PR 60-150	
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Tributylphosphate (Surrogate)	85	%		NA	NA	100	None	PR 60-150	
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8321A	Tributylphosphate (Surrogate)	170	%		NA	NA	100	Surrogate recovery is outside of control limits	PR 36-140	
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 619	Tributylphosphate (Surrogate)	87.8	%		NA	NA	100	None	PR 62-145	
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Tributylphosphate (Surrogate)	82.3	%		NA	NA	100	None	PR 60-150	
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Tributylphosphate (Surrogate)	142	%		NA	NA	100	None	PR 60-150	
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8321A	Tributylphosphate (Surrogate)	119	%		NA	NA	100	None	PR 36-140	
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 619	Triphenyl phosphate (Surrogate)	110	%		NA	NA	100	None	PR 54-144	
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Triphenyl phosphate (Surrogate)	86.8	%		NA	NA	100	None	PR 56-129	
Merced River @ Santa Fe	E	01/24/08	11:40	EPA 8141A	Triphenyl phosphate (Surrogate)	110	%		NA	NA	100	None	PR 56-129	
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 619	Triphenyl phosphate (Surrogate)	101	%		NA	NA	100	None	PR 54-144	
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Triphenyl phosphate (Surrogate)	85.5	%		NA	NA	100	None	PR 56-129	
Merced River @ Santa Fe	E	02/26/08	11:00	EPA 8141A	Triphenyl phosphate (Surrogate)	92.1	%		NA	NA	100	None	PR 56-129	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		

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Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Chlorpyrifos	0.0053	µg/L	DNQ	0.003	0.02		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		

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Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Decachlorobiphenyl (Surrogate)	46.2	%		NA	NA	100	None	PR 16-146	
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	41.4	%		NA	NA	100	None	PR 16-146	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Diazinon	0.019	µg/L	DNQ	0.004	0.02		Primary and confirmation results varied by > than 40%		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8321A	Diuron	0.32	µg/L	DNQ	0.2	0.4		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	10		Reporting limits elevated due to matrix interferences		Batch has two different analysis dates due to the samples being run overnight.
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8321A	Isoxaben (Surrogate)	104	%		NA	NA	100	None	PR 47-134	
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8321A	Isoxaben (Surrogate)	91.3	%		NA	NA	100	None	PR 47-134	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Methidathion	2.3	µg/L		0.04	0.1		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		Batch samples extracted overnight and therefore DigestExtract Date over two days.
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Parathion, Methyl	<0.08	µg/L	ND	0.08	0.1		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Phorate	<0.07	µg/L	ND	0.07	0.1		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 619	Simazine	0.81	µg/L		0.08	0.5		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 619	Simazine	0.32	µg/L	DNQ	0.08	0.5		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	68.8	%		NA	NA	100	None	PR 15-98	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	67.5	%		NA	NA	100	None	PR 15-98	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 619	Tributylphosphate (Surrogate)	85.4	%		NA	NA	100	None	PR 62-145	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Tributylphosphate (Surrogate)	85.4	%		NA	NA	100	None	PR 60-150	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Tributylphosphate (Surrogate)	113	%		NA	NA	100	None	PR 60-150	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8321A	Tributylphosphate (Surrogate)	100	%		NA	NA	100	None	PR 36-140	
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 619	Tributylphosphate (Surrogate)	86.7	%		NA	NA	100	None	PR 62-145	
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Tributylphosphate (Surrogate)	144	%		NA	NA	100	None	PR 60-150	
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Tributylphosphate (Surrogate)	70.5	%		NA	NA	100	None	PR 60-150	
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8321A	Tributylphosphate (Surrogate)	112	%		NA	NA	100	None	PR 36-140	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 619	Triphenyl phosphate (Surrogate)	128	%		NA	NA	100	None	PR 54-144	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Triphenyl phosphate (Surrogate)	79.6	%		NA	NA	100	None	PR 56-129	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	EPA 8141A	Triphenyl phosphate (Surrogate)	128	%		NA	NA	100	None	PR 56-129	
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 619	Triphenyl phosphate (Surrogate)	101	%		NA	NA	100	None	PR 54-144	
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Triphenyl phosphate (Surrogate)	65.5	%		NA	NA	100	None	PR 56-129	
Miles Creek @ Reilly Rd	E	02/25/08	11:50	EPA 8141A	Triphenyl phosphate (Surrogate)	89.5	%		NA	NA	100	None	PR 56-129	
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Chlorpyrifos	0.067	µg/L		0.003	0.02		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Chlorpyrifos	0.028	µg/L		0.003	0.02		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		

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Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Decachlorobiphenyl (Surrogate)	38.1	%		NA	NA	100	None	PR 16-146	
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	56.3	%		NA	NA	100	None	PR 16-146	
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Diazinon	0.065	µg/L		0.004	0.02		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		

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Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 547M	Glyphosate	<4	µg/L	ND	4	20		Reporting limits elevated due to matrix interferences		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	15		Reporting limits elevated due to matrix interferences		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8321A	Isoxaben (Surrogate)	88.5	%		NA	NA	100	None	PR 47-134	
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8321A	Isoxaben (Surrogate)	88.9	%		NA	NA	100	None	PR 47-134	
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 619	Simazine	4.2	µg/L		0.08	0.5		None		
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 619	Simazine	17	µg/L		0.08	0.5		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	57.5	%		NA	NA	100	None	PR 15-98	
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	62.3	%		NA	NA	100	None	PR 15-98	
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		

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Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 619	Tributylphosphate (Surrogate)	85.1	%		NA	NA	100	None	PR 62-145	
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Tributylphosphate (Surrogate)	105	%		NA	NA	100	None	PR 60-150	
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Tributylphosphate (Surrogate)	85.1	%		NA	NA	100	None	PR 60-150	
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8321A	Tributylphosphate (Surrogate)	119	%		NA	NA	100	None	PR 36-140	
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 619	Tributylphosphate (Surrogate)	74.3	%		NA	NA	100	None	PR 62-145	
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Tributylphosphate (Surrogate)	118	%		NA	NA	100	None	PR 60-150	
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Tributylphosphate (Surrogate)	69	%		NA	NA	100	None	PR 60-150	
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8321A	Tributylphosphate (Surrogate)	111	%		NA	NA	100	None	PR 36-140	
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 619	Triphenyl phosphate (Surrogate)	116	%		NA	NA	100	None	PR 54-144	
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Triphenyl phosphate (Surrogate)	88.2	%		NA	NA	100	None	PR 56-129	
Mustang Creek @ East Ave	E	01/24/08	10:40	EPA 8141A	Triphenyl phosphate (Surrogate)	116	%		NA	NA	100	None	PR 56-129	
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 619	Triphenyl phosphate (Surrogate)	87.9	%		NA	NA	100	None	PR 54-144	
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Triphenyl phosphate (Surrogate)	78	%		NA	NA	100	None	PR 56-129	
Mustang Creek @ East Ave	E	02/26/08	9:50	EPA 8141A	Triphenyl phosphate (Surrogate)	64.7	%		NA	NA	100	None	PR 56-129	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		

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Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8081A	Decachlorobiphenyl (Surrogate)	50.3	%		NA	NA	100	None	PR 16-146	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8081A	Decachlorobiphenyl (Surrogate)	70.4	%		NA	NA	100	None	PR 16-146	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Diazinon	0.026	µg/L		0.004	0.02		Primary and confirmation results varied by > than 40%		

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Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8321A	Diuron	0.31	µg/L	DNQ	0.2	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8321A	Diuron	0.3	µg/L	DNQ	0.2	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 547M	Glyphosate	<4	µg/L	ND	4	25		Reporting limits elevated due to matrix interferences		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8321A	Isoxaben (Surrogate)	88.8	%		NA	NA	100	None	PR 47-134	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8321A	Isoxaben (Surrogate)	97.3	%		NA	NA	100	None	PR 47-134	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		

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Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		

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Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 619	Simazine	2.5	µg/L		0.08	0.5		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	56.9	%		NA	NA	100	None	PR 15-98	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	73.3	%		NA	NA	100	None	PR 15-98	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 619	Tributylphosphate (Surrogate)	119	%		NA	NA	100	None	PR 62-145	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Tributylphosphate (Surrogate)	119	%		NA	NA	100	None	PR 60-150	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Tributylphosphate (Surrogate)	132	%		NA	NA	100	None	PR 60-150	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8321A	Tributylphosphate (Surrogate)	99.1	%		NA	NA	100	None	PR 36-140	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 619	Tributylphosphate (Surrogate)	88.6	%		NA	NA	100	None	PR 62-145	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Tributylphosphate (Surrogate)	81.1	%		NA	NA	100	None	PR 60-150	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Tributylphosphate (Surrogate)	144	%		NA	NA	100	None	PR 60-150	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8321A	Tributylphosphate (Surrogate)	124	%		NA	NA	100	None	PR 36-140	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 619	Triphenyl phosphate (Surrogate)	109	%		NA	NA	100	None	PR 54-144	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Triphenyl phosphate (Surrogate)	109	%		NA	NA	100	None	PR 56-129	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	EPA 8141A	Triphenyl phosphate (Surrogate)	108	%		NA	NA	100	None	PR 56-129	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 619	Triphenyl phosphate (Surrogate)	103	%		NA	NA	100	None	PR 54-144	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Triphenyl phosphate (Surrogate)	82.8	%		NA	NA	100	None	PR 56-129	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	EPA 8141A	Triphenyl phosphate (Surrogate)	91	%		NA	NA	100	None	PR 56-129	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Decachlorobiphenyl (Surrogate)	65.7	%		NA	NA	100	None	PR 16-146	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Decachlorobiphenyl (Surrogate)	71.7	%		NA	NA	100	None	PR 16-146	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Diazinon	0.031	µg/L		0.004	0.02		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 547M	Glyphosate	<4	µg/L	ND	4	5		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8321A	Isoxaben (Surrogate)	88.8	%		NA	NA	100	None	PR 47-134	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8321A	Isoxaben (Surrogate)	95.4	%		NA	NA	100	None	PR 47-134	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	50.9	%		NA	NA	100	None	PR 15-98	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	70.2	%		NA	NA	100	None	PR 15-98	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5		None		
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 619	Tributylphosphate (Surrogate)	94	%		NA	NA	100	None	PR 62-145	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Tributylphosphate (Surrogate)	94	%		NA	NA	100	None	PR 60-150	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Tributylphosphate (Surrogate)	133	%		NA	NA	100	None	PR 60-150	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8321A	Tributylphosphate (Surrogate)	105	%		NA	NA	100	None	PR 36-140	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 619	Tributylphosphate (Surrogate)	92.2	%		NA	NA	100	None	PR 62-145	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Tributylphosphate (Surrogate)	136	%		NA	NA	100	None	PR 60-150	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Tributylphosphate (Surrogate)	89.1	%		NA	NA	100	None	PR 60-150	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8321A	Tributylphosphate (Surrogate)	115	%		NA	NA	100	None	PR 36-140	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 619	Triphenyl phosphate (Surrogate)	117	%		NA	NA	100	None	PR 54-144	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Triphenyl phosphate (Surrogate)	105	%		NA	NA	100	None	PR 56-129	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	EPA 8141A	Triphenyl phosphate (Surrogate)	117	%		NA	NA	100	None	PR 56-129	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 619	Triphenyl phosphate (Surrogate)	102	%		NA	NA	100	None	PR 54-144	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Triphenyl phosphate (Surrogate)	89.5	%		NA	NA	100	None	PR 56-129	

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StationName	Sample Type Code	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	Quality Assurance	Data Acceptability Criteria	Lab Comments
Westport Drain @ Vivian Rd	E	02/26/08	8:30	EPA 8141A	Triphenyl phosphate (Surrogate)	88.3	%		NA	NA	100	None	PR 56-129	

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Table I - 3. ESJWQC environmental sample results for inorganic analysis including physical parameters, nutrients, metals and bacteria.

Samples are sorted by station name, analyte and sample date.

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 200.8	Arsenic	1.3	µg/L		0.03	0.5			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 200.8	Boron	12	µg/L		0.2	10			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 200.8	Cadmium	0.08	µg/L	DNQ	0.02	0.1			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 110.2	Color	150	color units		75	80			Analytes analyzed at a secondary dilution		DF=25
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 200.8	Copper	8.6	µg/L		0.1	0.5			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 160.1	Dissolved Solids	110	mg/L		4	10			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	SM 9223 B	E. coli	2400	MPN/ 100 mL		1	1			None		Analysis Time= 07:33 DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 130.2	Hardness as CaCO3	80	mg/L		6	10			Analytes analyzed at a secondary dilution		DF=2
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 200.8	Lead	2	µg/L		0.01	0.25			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 200.8	Nickel	4.7	µg/L		0.01	0.5			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 300.0	Nitrate as N	2.8	mg/L		0.01	0.05			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 354.1	Nitrite as N	0.031	mg/L		0.004	0.03			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 351.3	Nitrogen, Total Kjeldahl	1.4	mg/L		0.08	0.1			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 365.2	OrthoPhosphate as P	0.086	mg/L		0.01	0.01			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 365.2	Phosphate as P	0.24	mg/L		0.01	0.01			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 200.8	Selenium	0.29	µg/L	DNQ	0.22	1			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 415.1	Total Organic Carbon	9.1	mg/L		0.3	0.5			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 180.1	Turbidity	58	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Bear Creek @ Kibby Rd	E	1.00	01/24/08	16:00	EPA 200.8	Zinc	12	µg/L		0.6	1			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 200.8	Arsenic	1.4	µg/L		0.03	0.5			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 200.8	Boron	13	µg/L		0.2	10			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 110.2	Color	150	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Bear Creek @ Kibby Rd	E	2.00	02/25/08	13:50	EPA 110.2	Color	150	color units		30	30	150	RPD 0	Analytes analyzed at a secondary dilution	RPD <25	DF=10
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 200.8	Copper	7.2	µg/L		0.1	0.5			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 160.1	Dissolved Solids	110	mg/L		4	10			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 07:53 DF=1
Bear Creek @ Kibby Rd	E	2.00	02/25/08	13:50	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1	>2400	Rlog 0	None	Rlog <1.3	Analysis Time= 07:53 DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 130.2	Hardness as CaCO3	64	mg/L		3	5			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 200.8	Lead	1.5	µg/L		0.01	0.25			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 200.8	Nickel	3.9	µg/L		0.01	0.5			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 300.0	Nitrate as N	0.4	mg/L		0.01	0.05			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 354.1	Nitrite as N	0.016	mg/L	DNQ	0.004	0.03			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 351.3	Nitrogen, Total Kjeldahl	1	mg/L		0.08	0.1			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 365.2	OrthoPhosphate as P	0.048	mg/L		0.01	0.01			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 365.2	Phosphate as P	0.14	mg/L		0.01	0.01			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 200.8	Selenium	0.31	µg/L	DNQ	0.22	1			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 415.1	Total Organic Carbon	11	mg/L		0.3	0.5			None		DF=1
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 180.1	Turbidity	44	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Bear Creek @ Kibby Rd	E	2.00	02/25/08	13:50	EPA 180.1	Turbidity	43.35	NTU		0.15	0.2	44	RPD 1.6	Analytes analyzed at a secondary dilution	RPD <25	DF=5
Bear Creek @ Kibby Rd	E	1.00	02/25/08	13:50	EPA 200.8	Zinc	10	µg/L		0.6	1			None		DF=1
Black Rascal Creek @ Yosemite Rd	E	1.00	01/24/08	17:00	EPA 110.2	Color	85	color units		15	20			Analytes analyzed at a secondary dilution		DF=5
Black Rascal Creek @ Yosemite Rd	E	1.00	01/24/08	17:00	EPA 160.1	Dissolved Solids	77	mg/L		4	10			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Black Rascal Creek @ Yosemite Rd	E	1.00	01/24/08	17:00	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time=07:33 DF=1
Black Rascal Creek @ Yosemite Rd	E	1.00	01/24/08	17:00	EPA 415.1	Total Organic Carbon	8	mg/L		0.3	0.5			None		DF=1
Black Rascal Creek @ Yosemite Rd	E	1.00	01/24/08	17:00	EPA 180.1	Turbidity	31	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Black Rascal Creek @ Yosemite Rd	E	1.00	02/25/08	14:10	EPA 110.2	Color	170	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Black Rascal Creek @ Yosemite Rd	E	1.00	02/25/08	14:10	EPA 160.1	Dissolved Solids	110	mg/L		4	10			None		DF=1
Black Rascal Creek @ Yosemite Rd	E	1.00	02/25/08	14:10	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 07:53 DF=1
Black Rascal Creek @ Yosemite Rd	E	1.00	02/25/08	14:10	EPA 415.1	Total Organic Carbon	16	mg/L		0.3	0.5			None		DF=1
Black Rascal Creek @ Yosemite Rd	E	1.00	02/25/08	14:10	EPA 180.1	Turbidity	51	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 350.2	Ammonia as N	0.32	mg/L		0.04	0.1			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 200.8	Arsenic	2.1	µg/L		0.1	0.5			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 200.8	Boron	15	µg/L		0.9	10			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 200.8	Cadmium	<0.04	µg/L	ND	0.04	0.1			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 110.2	Color	100	color units		15	20			Analytes analyzed at a secondary dilution		DF=5
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 200.8	Copper	24	µg/L		0.05	0.5			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 160.1	Dissolved Solids	54	mg/L		4	10			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	SM 9223 B	E. coli	1200	MPN/ 100 mL		1	1			None		Analysis Time= 08:56 DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 130.2	Hardness as CaCO3	26	mg/L		3	5			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 200.8	Lead	5.4	µg/L		0.05	0.25			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 200.8	Nickel	3.1	µg/L		0.09	0.5			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 300.0	Nitrate as N	0.96	mg/L		0.01	0.05			A holding time violation has occurred.		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 354.1	Nitrite as N	0.033	mg/L		0.004	0.03			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 351.3	Nitrogen, Total Kjeldahl	1.3	mg/L		0.08	0.1			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 365.2	OrthoPhosphate as P	0.14	mg/L		0.01	0.01			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 365.2	Phosphate as P	0.22	mg/L		0.01	0.01			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 200.8	Selenium	0.59	µg/L	DNQ	0.22	1			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 415.1	Total Organic Carbon	4.5	mg/L		0.3	0.5			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 180.1	Turbidity	82	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Cottonwood Creek @ Rd 20	E	1.00	01/25/08	9:50	EPA 200.8	Zinc	30	µg/L		0.7	1			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 350.2	Ammonia as N	0.13	mg/L		0.04	0.1			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 200.8	Arsenic	1.8	µg/L		0.03	0.5			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 200.8	Boron	40	µg/L		0.2	10			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 200.8	Cadmium	0.02	µg/L	DNQ	0.02	0.1			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 110.2	Color	120	color units		15	20			Analytes analyzed at a secondary dilution		DF=5
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 200.8	Copper	21	µg/L		0.1	0.5			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 160.1	Dissolved Solids	120	mg/L		4	10			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	SM 9223 B	E. coli	45	MPN/ 100 mL		1	1			None		Analysis Time= 07:53 DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 130.2	Hardness as CaCO3	66	mg/L		3	5			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 200.8	Lead	1.9	µg/L		0.01	0.25			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 200.8	Nickel	3.1	µg/L		0.01	0.5			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 300.0	Nitrate as N	1	mg/L		0.01	0.05			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 354.1	Nitrite as N	0.027	mg/L	DNQ	0.004	0.03			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 351.3	Nitrogen, Total Kjeldahl	1.9	mg/L		0.08	0.1			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 365.2	OrthoPhosphate as P	0.076	mg/L		0.01	0.01			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 365.2	Phosphate as P	0.2	mg/L		0.01	0.01			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 200.8	Selenium	0.41	µg/L	DNQ	0.22	1			None		DF=1
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 415.1	Total Organic Carbon	14	mg/L		0.3	0.5			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

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Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 180.1	Turbidity	39	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Cottonwood Creek @ Rd 20	E	1.00	02/25/08	9:40	EPA 200.8	Zinc	14	µg/L		0.6	1			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 350.2	Ammonia as N	0.34	mg/L		0.04	0.1			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 200.8	Arsenic	15	µg/L		0.1	0.5			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 200.8	Boron	34	µg/L		0.9	10			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 200.8	Cadmium	0.05	µg/L	DNQ	0.04	0.1			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 110.2	Color	150	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 200.8	Copper	19	µg/L		0.05	0.5			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 160.1	Dissolved Solids	360	mg/L		8	20			Analytes analyzed at a secondary dilution		DF=2
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	SM 9223 B	E. coli	870	MPN/ 100 mL		1	1			None		Analysis Time= 08:56 DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 130.2	Hardness as CaCO3	130	mg/L		3	5			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 200.8	Lead	3.2	µg/L		0.05	0.25			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 200.8	Nickel	18	µg/L		0.09	0.5			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 300.0	Nitrate as N	0.92	mg/L		0.01	0.05			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 354.1	Nitrite as N	0.019	mg/L	DNQ	0.004	0.03			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 351.3	Nitrogen, Total Kjeldahl	2	mg/L		0.08	0.1			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 365.2	OrthoPhosphate as P	0.15	mg/L		0.01	0.01			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 365.2	Phosphate as P	0.59	mg/L		0.01	0.01			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 200.8	Selenium	0.96	µg/L	DNQ	0.22	1			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 415.1	Total Organic Carbon	4.9	mg/L		0.3	0.5			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 180.1	Turbidity	150	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	01/25/08	10:50	EPA 200.8	Zinc	34	µg/L		0.7	1			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 350.2	Ammonia as N	0.18	mg/L		0.04	0.1			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 200.8	Arsenic	13	µg/L		0.03	0.5			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 200.8	Boron	31	µg/L		0.2	10			None		DF=1

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Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 110.2	Color	58	color units		6	6			Analytes analyzed at a secondary dilution		DF=2
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 200.8	Copper	3.4	µg/L		0.1	0.5			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 160.1	Dissolved Solids	320	mg/L		4	10			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	SM 9223 B	E. coli	550	MPN/ 100 mL		1	1			None		Analysis Time= 07:53 DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 130.2	Hardness as CaCO3	160	mg/L		3	5			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 200.8	Lead	0.4	µg/L		0.01	0.25			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 200.8	Nickel	3.3	µg/L		0.01	0.5			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 300.0	Nitrate as N	0.13	mg/L		0.01	0.05			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 354.1	Nitrite as N	<0.004	mg/L	ND	0.004	0.03			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 351.3	Nitrogen, Total Kjeldahl	1.3	mg/L		0.08	0.1			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 365.2	OrthoPhosphate as P	0.21	mg/L		0.01	0.01			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 365.2	Phosphate as P	0.43	mg/L		0.01	0.01			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 200.8	Selenium	0.5	µg/L	DNQ	0.22	1			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 415.1	Total Organic Carbon	3.5	mg/L		0.3	0.5			None		DF=1
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 180.1	Turbidity	22	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Deadman Creek (Dutchman) @ Gurr Rd	E	1.00	02/25/08	9:50	EPA 200.8	Zinc	6	µg/L		0.6	1			None		DF=1
Deadman Creek @ Hwy 59	E	1.00	01/25/08	12:00	EPA 110.2	Color	350	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Deadman Creek @ Hwy 59	E	1.00	01/25/08	12:00	EPA 160.1	Dissolved Solids	150	mg/L		8	20			Analytes analyzed at a secondary dilution		DF=2
Deadman Creek @ Hwy 59	E	1.00	01/25/08	12:00	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 08:56 DF=1
Deadman Creek @ Hwy 59	E	1.00	01/25/08	12:00	EPA 415.1	Total Organic Carbon	9.8	mg/L		0.3	0.5			None		DF=1
Deadman Creek @ Hwy 59	E	1.00	01/25/08	12:00	EPA 180.1	Turbidity	190	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Deadman Creek @ Hwy 59	E	1.00	02/25/08	10:50	EPA 110.2	Color	540	color units		60	60			Analytes analyzed at a secondary dilution		DF=20

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	E	1.00	02/25/08	10:50	EPA 160.1	Dissolved Solids	350	mg/L		8	20			Analytes analyzed at a secondary dilution		DF=2
Deadman Creek @ Hwy 59	E	1.00	02/25/08	10:50	SM 9223 B	E. coli	1200	MPN/ 100 mL		1	1			None		Analysis Time= 07:53 DF=1
Deadman Creek @ Hwy 59	E	1.00	02/25/08	10:50	EPA 415.1	Total Organic Carbon	4.3	mg/L		0.3	0.5			None		DF=1
Deadman Creek @ Hwy 59	E	1.00	02/25/08	10:50	EPA 180.1	Turbidity	110	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 350.2	Ammonia as N	0.21	mg/L		0.04	0.1			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 200.8	Arsenic	1.4	µg/L		0.1	0.5			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 200.8	Boron	30	µg/L		0.9	10			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 200.8	Cadmium	<0.04	µg/L	ND	0.04	0.1			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 110.2	Color	76	color units		6	6			Analytes analyzed at a secondary dilution		DF=2
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 200.8	Copper	20	µg/L		0.05	0.5			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 160.1	Dissolved Solids	140	mg/L		4	10			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 08:56 DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 130.2	Hardness as CaCO3	58	mg/L		3	5			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 200.8	Lead	1.1	µg/L		0.05	0.25			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 200.8	Nickel	2.8	µg/L		0.09	0.5			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 300.0	Nitrate as N	2.9	mg/L		0.02	0.1			Analytes analyzed at a secondary dilution		DF=2
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 354.1	Nitrite as N	0.24	mg/L		0.004	0.03			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 351.3	Nitrogen, Total Kjeldahl	1.6	mg/L		0.08	0.1			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 365.2	OrthoPhosphate as P	0.037	mg/L		0.01	0.01			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 365.2	Phosphate as P	0.16	mg/L		0.01	0.01			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 200.8	Selenium	0.64	µg/L	DNQ	0.22	1			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 415.1	Total Organic Carbon	8.1	mg/L		0.3	0.5			None		DF=1
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 180.1	Turbidity	39	NTU		0.06	0.1			Analytes analyzed at a secondary dilution		DF=2
Dry Creek @ Rd 18	E	1.00	01/25/08	11:10	EPA 200.8	Zinc	15	µg/L		0.7	1			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 350.2	Ammonia as N	0.077	mg/L	DNQ	0.04	0.1			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 200.8	Arsenic	1.4	µg/L		0.03	0.5			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 200.8	Boron	28	µg/L		0.2	10			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 200.8	Cadmium	0.02	µg/L	DNQ	0.02	0.1			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 110.2	Color	85	color units		15	20			Analytes analyzed at a secondary dilution		DF=5
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 200.8	Copper	33	µg/L		0.1	0.5			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 160.1	Dissolved Solids	110	mg/L		4	10			None		DF=1

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Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	SM 9223 B	E. coli	72	MPN/ 100 mL		1	1			None		Analysis Time= 07:53 DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 130.2	Hardness as CaCO3	54	mg/L		3	5			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 200.8	Lead	0.35	µg/L		0.01	0.25			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 200.8	Nickel	2.7	µg/L		0.01	0.5			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 300.0	Nitrate as N	<0.01	mg/L	ND	0.01	0.05			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 354.1	Nitrite as N	<0.004	mg/L	ND	0.004	0.03			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 351.3	Nitrogen, Total Kjeldahl	1.5	mg/L		0.08	0.1			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 365.2	OrthoPhosphate as P	0.043	mg/L		0.01	0.01			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 365.2	Phosphate as P	0.12	mg/L		0.01	0.01			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 200.8	Selenium	0.5	µg/L	DNQ	0.22	1			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 415.1	Total Organic Carbon	15	mg/L		0.3	0.5			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 180.1	Turbidity	7.6	NTU		0.03	0.05			None		DF=1
Dry Creek @ Rd 18	E	1.00	02/25/08	11:10	EPA 200.8	Zinc	5	µg/L		0.6	1			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 350.2	Ammonia as N	0.18	mg/L		0.04	0.1			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 200.8	Arsenic	1.1	µg/L		0.03	0.5			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 200.8	Boron	25	µg/L		0.2	10			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 110.2	Color	200	color units		75	80			Analytes analyzed at a secondary dilution		DF=25
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 200.8	Copper	12	µg/L		0.1	0.5			None		DF=1

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Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 160.1	Dissolved Solids	140	mg/L		4	10			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 07:33 DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 130.2	Hardness as CaCO3	150	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 200.8	Lead	2.4	µg/L		0.01	0.25			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 200.8	Nickel	4.6	µg/L		0.01	0.5			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 300.0	Nitrate as N	1.7	mg/L		0.01	0.05			A holding time violation has occurred.		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 354.1	Nitrite as N	0.06	mg/L		0.004	0.03			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 351.3	Nitrogen, Total Kjeldahl	3.2	mg/L		0.08	0.1			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 365.2	OrthoPhosphate as P	0.34	mg/L		0.01	0.01			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 365.2	Phosphate as P	0.66	mg/L		0.01	0.01			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 200.8	Selenium	0.62	µg/L	DNQ	0.22	1			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 415.1	Total Organic Carbon	12	mg/L		0.3	0.5			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 180.1	Turbidity	98	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Dry Creek @ Wellsford Rd	E	1.00	01/24/08	9:10	EPA 200.8	Zinc	18	µg/L		0.6	1			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 350.2	Ammonia as N	0.29	mg/L		0.04	0.1			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 200.8	Arsenic	0.8	µg/L		0.03	0.5			None		DF=1

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Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 200.8	Boron	21	µg/L		0.2	10			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 200.8	Cadmium	0.05	µg/L	DNQ	0.02	0.1			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 110.2	Color	250	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 200.8	Copper	11	µg/L		0.1	0.5			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 160.1	Dissolved Solids	100	mg/L		4	10			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 07:32 DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 130.2	Hardness as CaCO3	60	mg/L		3	5			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 200.8	Lead	1.8	µg/L		0.01	0.25			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 200.8	Nickel	4.1	µg/L		0.01	0.5			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 300.0	Nitrate as N	0.51	mg/L		0.01	0.05			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 354.1	Nitrite as N	0.047	mg/L		0.004	0.03			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 351.3	Nitrogen, Total Kjeldahl	1.7	mg/L		0.08	0.1			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 365.2	OrthoPhosphate as P	0.26	mg/L		0.01	0.01			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 365.2	Phosphate as P	0.44	mg/L		0.01	0.01			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 200.8	Selenium	0.46	µg/L	DNQ	0.22	1			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 415.1	Total Organic Carbon	11	mg/L		0.3	0.5			None		DF=1
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 180.1	Turbidity	94	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Dry Creek @ Wellsford Rd	E	1.00	02/26/08	8:30	EPA 200.8	Zinc	14	µg/L		0.6	1			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 350.2	Ammonia as N	0.27	mg/L		0.04	0.1			Field duplicate RPD above QC limit		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 200.8	Arsenic	2.6	µg/L		0.1	0.5			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 200.8	Boron	14	µg/L		0.9	10			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 200.8	Cadmium	0.07	µg/L	DNQ	0.04	0.1			Field duplicate RPD above QC limit		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 110.2	Color	200	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Duck Slough @ Gurr Rd	E	2.00	01/25/08	9:40	EPA 110.2	Color	200	color units		30	30	200	RPD 0	Analytes analyzed at a secondary dilution	RPD <25	DF=10
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 200.8	Copper	13	µg/L		0.05	0.5			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 160.1	Dissolved Solids	140	mg/L		8	20			Analytes analyzed at a secondary dilution		DF=2
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 08:56 DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 130.2	Hardness as CaCO3	96	mg/L		3	5			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 200.8	Lead	2.9	µg/L		0.05	0.25			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 200.8	Nickel	13	µg/L		0.09	0.5			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 300.0	Nitrate as N	1.3	mg/L		0.01	0.05			A holding time violation has occurred.		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 354.1	Nitrite as N	0.025	mg/L	DNQ	0.004	0.03			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 351.3	Nitrogen, Total Kjeldahl	1.8	mg/L		0.08	0.1			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 365.2	OrthoPhosphate as P	0.16	mg/L		0.01	0.01			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 365.2	Phosphate as P	0.38	mg/L		0.01	0.01			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 200.8	Selenium	0.81	µg/L	DNQ	0.22	1			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 415.1	Total Organic Carbon	9.4	mg/L		0.3	0.5			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 180.1	Turbidity	96	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Duck Slough @ Gurr Rd	E	2.00	01/25/08	9:40	EPA 180.1	Turbidity	95.8	NTU		0.3	0.5	96	RPD 0.3	Analytes analyzed at a secondary dilution	RPD <25	DF=10
Duck Slough @ Gurr Rd	E	1.00	01/25/08	9:40	EPA 200.8	Zinc	19	µg/L		0.7	1			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 200.8	Arsenic	2.7	µg/L		0.03	0.5			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 200.8	Boron	15	µg/L		0.2	10			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 200.8	Cadmium	0.1	µg/L		0.02	0.1			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 110.2	Color	250	color units		30	30			Analytes analyzed at a secondary dilution		DF=10

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 200.8	Copper	17	µg/L		0.1	0.5			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 160.1	Dissolved Solids	140	mg/L		4	10			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 07:53 DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 130.2	Hardness as CaCO3	100	mg/L		3	5			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 200.8	Lead	3.7	µg/L		0.01	0.25			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 200.8	Nickel	17	µg/L		0.01	0.5			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 300.0	Nitrate as N	0.18	mg/L		0.01	0.05			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 354.1	Nitrite as N	0.013	mg/L	DNQ	0.004	0.03			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 351.3	Nitrogen, Total Kjeldahl	0.48	mg/L		0.08	0.1			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 365.2	OrthoPhosphate as P	0.083	mg/L		0.01	0.01			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 365.2	Phosphate as P	0.15	mg/L		0.01	0.01			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 200.8	Selenium	0.43	µg/L	DNQ	0.22	1			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 415.1	Total Organic Carbon	8.4	mg/L		0.3	0.5			None		DF=1
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 180.1	Turbidity	110	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Duck Slough @ Gurr Rd	E	1.00	02/25/08	9:10	EPA 200.8	Zinc	25	µg/L		0.6	1			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 350.2	Ammonia as N	0.21	mg/L		0.04	0.1			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 200.8	Arsenic	2.1	µg/L		0.1	0.5			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 200.8	Boron	13	µg/L		0.9	10			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 200.8	Cadmium	<0.04	µg/L	ND	0.04	0.1			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 110.2	Color	120	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 200.8	Copper	7.1	µg/L		0.05	0.5			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 160.1	Dissolved Solids	140	mg/L		4	10			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 08:56 DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 130.2	Hardness as CaCO3	88	mg/L		3	5			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 200.8	Lead	1.2	µg/L		0.05	0.25			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 200.8	Nickel	5.9	µg/L		0.09	0.5			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 300.0	Nitrate as N	1.2	mg/L		0.01	0.05			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 354.1	Nitrite as N	0.018	mg/L	DNQ	0.004	0.03			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 351.3	Nitrogen, Total Kjeldahl	1.1	mg/L		0.08	0.1			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 365.2	OrthoPhosphate as P	0.13	mg/L		0.01	0.01			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 365.2	Phosphate as P	0.24	mg/L		0.01	0.01			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 200.8	Selenium	0.76	µg/L	DNQ	0.22	1			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 415.1	Total Organic Carbon	8.4	mg/L		0.3	0.5			None		DF=1
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 180.1	Turbidity	48	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Duck Slough @ Hwy 99	E	1.00	01/25/08	13:10	EPA 200.8	Zinc	8	µg/L		0.7	1			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 350.2	Ammonia as N	0.088	mg/L	DNQ	0.04	0.1			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 200.8	Arsenic	1.9	µg/L		0.03	0.5			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 200.8	Boron	13	µg/L		0.2	10			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 200.8	Cadmium	0.05	µg/L	DNQ	0.02	0.1			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 110.2	Color	140	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 200.8	Copper	9.9	µg/L		0.1	0.5			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 160.1	Dissolved Solids	120	mg/L		4	10			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 07:53 DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 130.2	Hardness as CaCO3	84	mg/L		3	5			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 200.8	Lead	2.1	µg/L		0.01	0.25			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 200.8	Nickel	9.6	µg/L		0.01	0.5			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 300.0	Nitrate as N	0.39	mg/L		0.01	0.05			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 354.1	Nitrite as N	0.022	mg/L	DNQ	0.004	0.03			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 351.3	Nitrogen, Total Kjeldahl	1.1	mg/L		0.08	0.1			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 365.2	OrthoPhosphate as P	0.1	mg/L		0.01	0.01			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 365.2	Phosphate as P	0.28	mg/L		0.01	0.01			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 200.8	Selenium	0.38	µg/L	DNQ	0.22	1			None		DF=1
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 415.1	Total Organic Carbon	9.2	mg/L		0.3	0.5			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 180.1	Turbidity	130	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Duck Slough @ Hwy 99	E	1.00	02/25/08	12:40	EPA 200.8	Zinc	13	µg/L		0.6	1			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 350.2	Ammonia as N	0.077	mg/L	DNQ	0.04	0.1			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 200.8	Arsenic	15	µg/L		0.03	0.5			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 200.8	Boron	200	µg/L		0.2	10			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 110.2	Color	40	color units		6	6			Analytes analyzed at a secondary dilution		DF=2
Hatch Drain @ Tuolumne Rd	E	2.00	01/24/08	10:00	EPA 110.2	Color	40	color units		6	6	40	RPD 0	Analytes analyzed at a secondary dilution	RPD <25	DF=2
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 200.8	Copper	4.7	µg/L		0.1	0.5			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 160.1	Dissolved Solids	820	mg/L		4	10			None		DF=1
Hatch Drain @ Tuolumne Rd	E	2.00	01/24/08	10:00	EPA 160.1	Dissolved Solids	816.8	mg/L		4	10	820	RPD 0.3	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	SM 9223 B	E. coli	410	MPN/ 100 mL		1	1			None		Analysis Time= 07:33 DF=1
Hatch Drain @ Tuolumne Rd	E	2.00	01/24/08	10:00	SM 9223 B	E. coli	370	MPN/ 100 mL		1	1	410	Rlog 0.045	None	Rlog <1.3	Analysis Time= 07:33 DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 130.2	Hardness as CaCO3	460	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 200.8	Lead	0.14	µg/L	DNQ	0.01	0.25			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 200.8	Nickel	3.9	µg/L		0.01	0.5			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 300.0	Nitrate as N	24	mg/L		0.01	0.05			Analyte concentration is in excess of the instrument calibration, considered estimate		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 354.1	Nitrite as N	0.32	mg/L		0.004	0.03			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 351.3	Nitrogen, Total Kjeldahl	1.2	mg/L		0.08	0.1			Field duplicate RPD above QC limit		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 365.2	OrthoPhosphate as P	0.39	mg/L		0.01	0.01			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 365.2	Phosphate as P	0.52	mg/L		0.01	0.01			Field duplicate RPD above QC limit		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 200.8	Selenium	0.79	µg/L	DNQ	0.22	1			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 415.1	Total Organic Carbon	21	mg/L		0.3	0.5			Field duplicate RPD above QC limit		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 180.1	Turbidity	5	NTU		0.03	0.05			None		DF=1
Hatch Drain @ Tuolumne Rd	E	2.00	01/24/08	10:00	EPA 180.1	Turbidity	5.19	NTU		0.03	0.05	5	RPD 3.3	None	RPD <25	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

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Hatch Drain @ Tuolumne Rd	E	1.00	01/24/08	10:00	EPA 200.8	Zinc	5	µg/L		0.6	1			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 350.2	Ammonia as N	0.15	mg/L		0.04	0.1			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 200.8	Arsenic	16	µg/L		0.03	0.5			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 200.8	Boron	170	µg/L		0.2	10			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 110.2	Color	37	color units		3	3			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 200.8	Copper	4.4	µg/L		0.1	0.5			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 160.1	Dissolved Solids	900	mg/L		4	10			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	SM 9223 B	E. coli	920	MPN/ 100 mL		1	1			None		Analysis Time= 07:32 DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 130.2	Hardness as CaCO3	520	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 200.8	Lead	0.1	µg/L	DNQ	0.01	0.25			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 200.8	Nickel	4.3	µg/L		0.01	0.5			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 300.0	Nitrate as N	24	mg/L		0.05	0.2			Analytes analyzed at a secondary dilution		DF=5
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 354.1	Nitrite as N	0.37	mg/L		0.004	0.03			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 351.3	Nitrogen, Total Kjeldahl	1.1	mg/L		0.08	0.1			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 365.2	OrthoPhosphate as P	0.3	mg/L		0.01	0.01			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 365.2	Phosphate as P	0.34	mg/L		0.01	0.01			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 200.8	Selenium	1	µg/L		0.22	1			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 415.1	Total Organic Carbon	12	mg/L		0.3	0.5			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 180.1	Turbidity	4	NTU		0.03	0.05			None		DF=1
Hatch Drain @ Tuolumne Rd	E	1.00	02/26/08	9:20	EPA 200.8	Zinc	3	µg/L		0.6	1			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 350.2	Ammonia as N	3.3	mg/L		0.04	0.1			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 200.8	Arsenic	5.2	µg/L		0.03	0.5			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 200.8	Boron	82	µg/L		0.2	10			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 200.8	Cadmium	0.2	µg/L		0.02	0.1			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 110.2	Color	250	color units		75	80			Analytes analyzed at a secondary dilution		DF=25
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 200.8	Copper	37	µg/L		0.1	0.5			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 160.1	Dissolved Solids	500	mg/L		4	10			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 07:33 DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 130.2	Hardness as CaCO3	170	mg/L		3	5			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 200.8	Lead	3.4	µg/L		0.01	0.25			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 200.8	Nickel	11	µg/L		0.01	0.5			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 300.0	Nitrate as N	6.7	mg/L		0.1	0.5			Analytes analyzed at a secondary dilution		DF=10
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 354.1	Nitrite as N	0.26	mg/L		0.004	0.03			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 351.3	Nitrogen, Total Kjeldahl	8.5	mg/L		0.08	0.1			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 365.2	OrthoPhosphate as P	3.3	mg/L		0.1	0.1			Analytes analyzed at a secondary dilution		DF=10
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 365.2	Phosphate as P	3	mg/L		0.1	0.1			Analytes analyzed at a secondary dilution		DF=10
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 200.8	Selenium	0.74	µg/L	DNQ	0.22	1			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 415.1	Total Organic Carbon	22	mg/L		0.3	0.5			None		DF=1
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 180.1	Turbidity	110	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Highline Canal @ Hwy 99	E	1.00	01/24/08	14:40	EPA 200.8	Zinc	36	µg/L		0.6	1			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 350.2	Ammonia as N	8.3	mg/L		0.04	0.1			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 200.8	Arsenic	8.6	µg/L		0.03	0.5			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 200.8	Boron	110	µg/L		0.2	10			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 200.8	Cadmium	0.096	µg/L	DNQ	0.02	0.1			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 110.2	Color	300	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 200.8	Copper	81	µg/L		0.1	0.5			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 160.1	Dissolved Solids	520	mg/L		4	10			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 07:32 DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 130.2	Hardness as CaCO3	190	mg/L		3	5			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 200.8	Lead	1.1	µg/L		0.01	0.25			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 200.8	Nickel	10	µg/L		0.01	0.5			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 300.0	Nitrate as N	5.4	mg/L		0.01	0.05			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 354.1	Nitrite as N	0.31	mg/L		0.004	0.03			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 351.3	Nitrogen, Total Kjeldahl	15	mg/L		0.08	0.1			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 365.2	OrthoPhosphate as P	3.2	mg/L		0.05	0.05			Analytes analyzed at a secondary dilution		DF=5
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 365.2	Phosphate as P	3.8	mg/L		0.05	0.05			Analytes analyzed at a secondary dilution		DF=5
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 200.8	Selenium	0.85	µg/L	DNQ	0.22	1			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 415.1	Total Organic Carbon	37	mg/L		0.3	0.5			None		DF=1
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 180.1	Turbidity	43	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Highline Canal @ Hwy 99	E	1.00	02/26/08	13:00	EPA 200.8	Zinc	31	µg/L		0.6	1			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 350.2	Ammonia as N	1.3	mg/L		0.04	0.1			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 200.8	Arsenic	3.4	µg/L		0.03	0.5			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 200.8	Boron	64	µg/L		0.2	10			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 200.8	Cadmium	0.06	µg/L	DNQ	0.02	0.1			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 110.2	Color	220	color units		75	80			Analytes analyzed at a secondary dilution		DF=25
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 200.8	Copper	28	µg/L		0.1	0.5			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 160.1	Dissolved Solids	280	mg/L		4	10			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	SM 9223 B	E. coli	2000	MPN/ 100 mL		1	1			None		Analysis Time= 07:33 DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 130.2	Hardness as CaCO3	150	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 200.8	Lead	3.2	µg/L		0.01	0.25			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 200.8	Nickel	7.5	µg/L		0.01	0.5			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 300.0	Nitrate as N	3.7	mg/L		0.05	0.2			Analytes analyzed at a secondary dilution		DF=5
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 354.1	Nitrite as N	0.12	mg/L		0.004	0.03			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 351.3	Nitrogen, Total Kjeldahl	5.2	mg/L		0.08	0.1			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 365.2	OrthoPhosphate as P	1.7	mg/L		0.05	0.05			Analytes analyzed at a secondary dilution		DF=5
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 365.2	Phosphate as P	2.2	mg/L		0.05	0.05			Analytes analyzed at a secondary dilution		DF=5

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 200.8	Selenium	0.74	µg/L	DNQ	0.22	1			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 415.1	Total Organic Carbon	13	mg/L		0.3	0.5			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 180.1	Turbidity	120	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Highline Canal @ Lombardy Rd	E	1.00	01/24/08	12:50	EPA 200.8	Zinc	32	µg/L		0.6	1			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 350.2	Ammonia as N	1.7	mg/L		0.04	0.1			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 200.8	Arsenic	4.6	µg/L		0.03	0.5			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 200.8	Boron	91	µg/L		0.2	10			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 200.8	Cadmium	0.09	µg/L	DNQ	0.02	0.1			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 110.2	Color	330	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 200.8	Copper	32	µg/L		0.1	0.5			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 160.1	Dissolved Solids	310	mg/L		4	10			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	SM 9223 B	E. coli	150	MPN/ 100 mL		1	1			None		Analysis Time= 07:32 DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 130.2	Hardness as CaCO3	110	mg/L		3	5			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 200.8	Lead	2.7	µg/L		0.01	0.25			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 200.8	Nickel	7.5	µg/L		0.01	0.5			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 300.0	Nitrate as N	2.6	mg/L		0.01	0.05			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 354.1	Nitrite as N	0.15	mg/L		0.004	0.03			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 351.3	Nitrogen, Total Kjeldahl	4.6	mg/L		0.08	0.1			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 365.2	OrthoPhosphate as P	2.1	mg/L		0.05	0.05			Analytes analyzed at a secondary dilution		DF=5
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 365.2	Phosphate as P	2.3	mg/L		0.05	0.05			Analytes analyzed at a secondary dilution		DF=5
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 200.8	Selenium	0.58	µg/L	DNQ	0.22	1			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 415.1	Total Organic Carbon	17	mg/L		0.3	0.5			None		DF=1
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 180.1	Turbidity	130	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Highline Canal @ Lombardy Rd	E	1.00	02/26/08	12:00	EPA 200.8	Zinc	29	µg/L		0.6	1			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 350.2	Ammonia as N	0.96	mg/L		0.04	0.1			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 200.8	Arsenic	3.4	µg/L		0.03	0.5			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 200.8	Boron	270	µg/L		0.4	20			Analytes analyzed at a secondary dilution		DF=2
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 110.2	Color	44	color units		6	6			Analytes analyzed at a secondary dilution		DF=2
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 200.8	Copper	9.4	µg/L		0.1	0.5			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 160.1	Dissolved Solids	970	mg/L		4	10			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	SM 9223 B	E. coli	50	MPN/ 100 mL		1	1			None		Analysis Time= 07:33 DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 130.2	Hardness as CaCO3	450	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 200.8	Lead	<0.01	µg/L	ND	0.01	0.25			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 200.8	Nickel	3.2	µg/L		0.01	0.5			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 300.0	Nitrate as N	9.3	mg/L		0.1	0.5			Analytes analyzed at a secondary dilution		DF=10
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 354.1	Nitrite as N	0.18	mg/L		0.004	0.03			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 351.3	Nitrogen, Total Kjeldahl	2.5	mg/L		0.08	0.1			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 365.2	OrthoPhosphate as P	0.24	mg/L		0.01	0.01			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 365.2	Phosphate as P	0.34	mg/L		0.01	0.01			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 200.8	Selenium	1.1	µg/L		0.22	1			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 415.1	Total Organic Carbon	10	mg/L		0.3	0.5			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 180.1	Turbidity	4.1	NTU		0.03	0.05			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	01/24/08	14:10	EPA 200.8	Zinc	3	µg/L		0.6	1			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 350.2	Ammonia as N	0.14	mg/L		0.04	0.1			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 200.8	Arsenic	3.4	µg/L		0.03	0.5			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 200.8	Boron	270	µg/L		0.4	20			Analytes analyzed at a secondary dilution		DF=2
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 110.2	Color	35	color units		3	3			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 200.8	Copper	4.4	µg/L		0.1	0.5			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 160.1	Dissolved Solids	910	mg/L		4	10			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	SM 9223 B	E. coli	38	MPN/ 100 mL		1	1			None		Analysis Time= 07:32 DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 130.2	Hardness as CaCO3	360	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 200.8	Lead	0.01	µg/L	DNQ	0.01	0.25			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 200.8	Nickel	3.4	µg/L		0.01	0.5			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 300.0	Nitrate as N	5.9	mg/L		0.05	0.2			Analytes analyzed at a secondary dilution		DF=5
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 354.1	Nitrite as N	0.12	mg/L		0.004	0.03			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 351.3	Nitrogen, Total Kjeldahl	1.2	mg/L		0.08	0.1			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 365.2	OrthoPhosphate as P	0.03	mg/L		0.01	0.01			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 365.2	Phosphate as P	0.09	mg/L		0.01	0.01			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 200.8	Selenium	0.93	µg/L	DNQ	0.22	1			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 415.1	Total Organic Carbon	12	mg/L		0.3	0.5			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 180.1	Turbidity	1.6	NTU		0.03	0.05			None		DF=1
Hilmar Drain @ Central Ave	E	1.00	02/26/08	11:20	EPA 200.8	Zinc	2	µg/L		0.6	1			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 350.2	Ammonia as N	0.3	mg/L		0.04	0.1			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 200.8	Arsenic	1.8	µg/L		0.03	0.5			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 200.8	Boron	13	µg/L		0.2	10			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 110.2	Color	35	color units		15	20			Analytes analyzed at a secondary dilution		DF=5
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 200.8	Copper	6.7	µg/L		0.1	0.5			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 160.1	Dissolved Solids	56	mg/L		4	10			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	SM 9223 B	E. coli	1700	MPN/ 100 mL		1	1			None		Analysis Time= 07:33 DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 130.2	Hardness as CaCO3	28	mg/L		3	5			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 200.8	Lead	2.4	µg/L		0.01	0.25			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 200.8	Nickel	1.6	µg/L		0.01	0.5			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 300.0	Nitrate as N	0.72	mg/L		0.01	0.05			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 354.1	Nitrite as N	0.035	mg/L		0.004	0.03			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 351.3	Nitrogen, Total Kjeldahl	0.89	mg/L		0.08	0.1			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 365.2	OrthoPhosphate as P	0.12	mg/L		0.01	0.01			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 365.2	Phosphate as P	0.22	mg/L		0.01	0.01			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 200.8	Selenium	0.54	µg/L	DNQ	0.22	1			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 415.1	Total Organic Carbon	3.7	mg/L		0.3	0.5			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 180.1	Turbidity	23	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Livingston Drain @ Robin Ave	E	1.00	01/24/08	15:40	EPA 200.8	Zinc	18	µg/L		0.6	1			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 350.2	Ammonia as N	0.099	mg/L	DNQ	0.04	0.1			Field duplicate RPD above QC limit		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 200.8	Arsenic	1.3	µg/L		0.03	0.5			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 200.8	Boron	18	µg/L		0.2	10			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

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Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 110.2	Color	40	color units		6	6			Analytes analyzed at a secondary dilution; Field Duplicate RPD above QC limit		DF=2
Livingston Drain @ Robin Ave	E	2.00	02/26/08	12:50	EPA 110.2	Color	44	color units		6	6	40	RPD 9.5	Analytes analyzed at a secondary dilution	RPD <25	DF=2
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 200.8	Copper	15	µg/L		0.1	0.5			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 160.1	Dissolved Solids	65	mg/L		4	10			None		DF=1
Livingston Drain @ Robin Ave	E	2.00	02/26/08	12:50	EPA 160.1	Dissolved Solids	64	mg/L		4	10	65	RPD 1.6	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	SM 9223 B	E. coli	3.1	MPN/ 100 mL		1	1			None		Analysis Time= 07:32 DF=1
Livingston Drain @ Robin Ave	E	2.00	02/26/08	12:50	SM 9223 B	E. coli	6.3	MPN/ 100 mL		1	1	3.1	Rlog 0.308	None	Rlog <1.3	Analysis Time= 07:32 DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 130.2	Hardness as CaCO3	38	mg/L		3	5			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 200.8	Lead	1.1	µg/L		0.01	0.25			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 200.8	Nickel	1.2	µg/L		0.01	0.5			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 300.0	Nitrate as N	0.5	mg/L		0.01	0.05			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 354.1	Nitrite as N	0.028	mg/L	DNQ	0.004	0.03			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 351.3	Nitrogen, Total Kjeldahl	0.65	mg/L		0.08	0.1			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 365.2	OrthoPhosphate as P	0.029	mg/L		0.01	0.01			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 365.2	Phosphate as P	0.12	mg/L		0.01	0.01			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 200.8	Selenium	0.6	µg/L	DNQ	0.22	1			Field duplicate RPD above QC limit		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 415.1	Total Organic Carbon	6.5	mg/L		0.3	0.5			None		DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 180.1	Turbidity	15	NTU		0.03	0.05			Field duplicate RPD above QC limit		DF=1
Livingston Drain @ Robin Ave	E	2.00	02/26/08	12:50	EPA 180.1	Turbidity	15.06	NTU		0.03	0.05	15	RPD 0.3	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	E	1.00	02/26/08	12:50	EPA 200.8	Zinc	9	µg/L		0.6	1			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 350.2	Ammonia as N	0.11	mg/L		0.04	0.1			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 200.8	Arsenic	1.7	µg/L		0.03	0.5			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 200.8	Boron	17	µg/L		0.2	10			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 200.8	Cadmium	0.1	µg/L	DNQ	0.02	0.1			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 110.2	Color	300	color units		150	200			Analytes analyzed at a secondary dilution		DF=50
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 200.8	Copper	22	µg/L		0.1	0.5			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 160.1	Dissolved Solids	130	mg/L		8	20			Analytes analyzed at a secondary dilution		DF=2
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 130.2	Hardness as CaCO3	42	mg/L		3	5			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 200.8	Lead	5.6	µg/L		0.01	0.25			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 200.8	Nickel	11	µg/L		0.01	0.5			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 300.0	Nitrate as N	2	mg/L		0.01	0.05			A holding time violation has occurred.		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 354.1	Nitrite as N	0.076	mg/L		0.004	0.03			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 351.3	Nitrogen, Total Kjeldahl	2.4	mg/L		0.08	0.1			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 365.2	OrthoPhosphate as P	0.38	mg/L		0.01	0.01			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 365.2	Phosphate as P	0.83	mg/L		0.01	0.01			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 200.8	Selenium	0.23	µg/L	DNQ	0.22	1			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 415.1	Total Organic Carbon	8.9	mg/L		0.3	0.5			None		DF=1
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 180.1	Turbidity	280	NTU		0.75	1			Analytes analyzed at a secondary dilution		DF=25
Merced River @ Santa Fe	E	1.00	01/24/08	11:40	EPA 200.8	Zinc	38	µg/L		0.6	1			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

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Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 350.2	Ammonia as N	0.088	mg/L	DNQ	0.04	0.1			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 200.8	Arsenic	1	µg/L		0.03	0.5			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 200.8	Boron	11	µg/L		0.2	10			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 200.8	Cadmium	0.03	µg/L	DNQ	0.02	0.1			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 110.2	Color	130	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 200.8	Copper	5.2	µg/L		0.1	0.5			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 160.1	Dissolved Solids	74	mg/L		4	10			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 130.2	Hardness as CaCO3	90	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 200.8	Lead	1.2	µg/L		0.01	0.25			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 200.8	Nickel	3.2	µg/L		0.01	0.5			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 300.0	Nitrate as N	0.41	mg/L		0.01	0.05			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 354.1	Nitrite as N	0.02	mg/L	DNQ	0.004	0.03			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 351.3	Nitrogen, Total Kjeldahl	0.69	mg/L		0.08	0.1			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 365.2	OrthoPhosphate as P	0.057	mg/L		0.01	0.01			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 365.2	Phosphate as P	0.17	mg/L		0.01	0.01			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 200.8	Selenium	0.65	µg/L	DNQ	0.22	1			None		DF=1
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 415.1	Total Organic Carbon	4.3	mg/L		0.3	0.5			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 180.1	Turbidity	60	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Merced River @ Santa Fe	E	1.00	02/26/08	11:00	EPA 200.8	Zinc	9	µg/L		0.6	1			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 350.2	Ammonia as N	0.43	mg/L		0.04	0.1			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 200.8	Arsenic	2.2	µg/L		0.1	0.5			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 200.8	Boron	19	µg/L		0.9	10			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 200.8	Cadmium	<0.04	µg/L	ND	0.04	0.1			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 110.2	Color	150	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 200.8	Copper	15	µg/L		0.05	0.5			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 160.1	Dissolved Solids	140	mg/L		8	20			Analytes analyzed at a secondary dilution		DF=2
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1			None		Analysis Time= 08:56 DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 130.2	Hardness as CaCO3	62	mg/L		3	5			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 200.8	Lead	3.2	µg/L		0.05	0.25			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 200.8	Nickel	12	µg/L		0.09	0.5			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 300.0	Nitrate as N	2.7	mg/L		0.02	0.1			Analytes analyzed at a secondary dilution		DF=2

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 354.1	Nitrite as N	0.062	mg/L		0.004	0.03			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 351.3	Nitrogen, Total Kjeldahl	2.7	mg/L		0.08	0.1			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 365.2	OrthoPhosphate as P	0.3	mg/L		0.01	0.01			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 365.2	Phosphate as P	0.5	mg/L		0.01	0.01			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 200.8	Selenium	0.7	µg/L	DNQ	0.22	1			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 415.1	Total Organic Carbon	12	mg/L		0.3	0.5			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 180.1	Turbidity	140	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Miles Creek @ Reilly Rd	E	1.00	01/25/08	13:40	EPA 200.8	Zinc	22	µg/L		0.7	1			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 350.2	Ammonia as N	0.57	mg/L		0.04	0.1			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 200.8	Arsenic	4	µg/L		0.03	0.5			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 200.8	Boron	27	µg/L		0.2	10			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 200.8	Cadmium	0.2	µg/L		0.02	0.1			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 110.2	Color	620	color units		75	80			Analytes analyzed at secondary dilution; A holding time violation has occurred		DF=25
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 200.8	Copper	34	µg/L		0.1	0.5			None		DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 160.1	Dissolved Solids	180	mg/L		8	20			Analytes analyzed at a secondary dilution		DF=2
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	SM 9223 B	E. coli	2000	MPN/ 100 mL		1	1			None		Analysis Time= 07:53 DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 130.2	Hardness as CaCO3	84	mg/L		3	5			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 200.8	Lead	7.7	µg/L		0.01	0.25			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 200.8	Nickel	26	µg/L		0.01	0.5			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 300.0	Nitrate as N	0.35	mg/L		0.01	0.05			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 354.1	Nitrite as N	0.062	mg/L		0.004	0.03			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 351.3	Nitrogen, Total Kjeldahl	3.7	mg/L		0.08	0.1			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 365.2	OrthoPhosphate as P	0.51	mg/L		0.01	0.01			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 365.2	Phosphate as P	1.1	mg/L		0.01	0.01			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 200.8	Selenium	0.74	µg/L	DNQ	0.22	1			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 415.1	Total Organic Carbon	14	mg/L		0.3	0.5			None		DF=1
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 180.1	Turbidity	290	NTU		1.5	2			Analytes analyzed at a secondary dilution		DF=50
Miles Creek @ Reilly Rd	E	1.00	02/25/08	11:50	EPA 200.8	Zinc	68	µg/L		0.6	1			None		DF=1
Mustang Creek @ East Ave	E	1.00	01/24/08	10:40	EPA 110.2	Color	200	color units		75	80			Analytes analyzed at a secondary dilution		DF=25
Mustang Creek @ East Ave	E	1.00	01/24/08	10:40	EPA 160.1	Dissolved Solids	190	mg/L		4	10			None		DF=1

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Mustang Creek @ East Ave	E	1.00	01/24/08	10:40	SM 9223 B	E. coli	460	MPN/ 100 mL		1	1			None		Analysis Time= 07:33 DF=1
Mustang Creek @ East Ave	E	1.00	01/24/08	10:40	EPA 415.1	Total Organic Carbon	9.7	mg/L		0.3	0.5			None		DF=1
Mustang Creek @ East Ave	E	1.00	01/24/08	10:40	EPA 180.1	Turbidity	99	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Mustang Creek @ East Ave	E	1.00	02/26/08	9:50	EPA 110.2	Color	250	color units		30	30			Analytes analyzed at a secondary dilution		DF=10
Mustang Creek @ East Ave	E	1.00	02/26/08	9:50	EPA 160.1	Dissolved Solids	280	mg/L		4	10			None		DF=1
Mustang Creek @ East Ave	E	1.00	02/26/08	9:50	SM 9223 B	E. coli	11	MPN/ 100 mL		1	1			None		Analysis Time= 07:32 DF=1
Mustang Creek @ East Ave	E	1.00	02/26/08	9:50	EPA 415.1	Total Organic Carbon	19	mg/L		0.3	0.5			None		DF=1
Mustang Creek @ East Ave	E	1.00	02/26/08	9:50	EPA 180.1	Turbidity	120	NTU		0.3	0.5			Analytes analyzed at a secondary dilution		DF=10
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 350.2	Ammonia as N	0.66	mg/L		0.04	0.1			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 200.8	Arsenic	6.8	µg/L		0.03	0.5			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 200.8	Boron	360	µg/L		0.4	20			Analytes analyzed at a secondary dilution		DF=2
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1

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Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 110.2	Color	85	color units		15	20			Analytes analyzed at a secondary dilution		DF=5
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 200.8	Copper	9.2	µg/L		0.1	0.5			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 160.1	Dissolved Solids	1500	mg/L		4	10			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	SM 9223 B	E. coli	1100	MPN/ 100 mL		1	1			None		Analysis Time= 07:33 DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 130.2	Hardness as CaCO3	520	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 200.8	Lead	0.28	µg/L		0.01	0.25			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 200.8	Nickel	6	µg/L		0.01	0.5			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 300.0	Nitrate as N	23	mg/L		0.1	0.5			Analytes analyzed at a secondary dilution		DF=10
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 354.1	Nitrite as N	0.56	mg/L		0.008	0.06			Analytes analyzed at a secondary dilution		DF=2
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 351.3	Nitrogen, Total Kjeldahl	2.8	mg/L		0.08	0.1			None		DF=1

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Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 365.2	OrthoPhosphate as P	1.6	mg/L		0.05	0.05			Analytes analyzed at a secondary dilution		DF=5
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 365.2	Phosphate as P	1.8	mg/L		0.01	0.01			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 200.8	Selenium	1.1	µg/L		0.22	1			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 415.1	Total Organic Carbon	16	mg/L		0.3	0.5			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 180.1	Turbidity	14	NTU		0.15	0.2			Analytes analyzed at a secondary dilution		DF=5
Prairie Flower Drain @ Crows Landing Rd	E	1.00	01/24/08	12:20	EPA 200.8	Zinc	20	µg/L		0.6	1			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 350.2	Ammonia as N	0.25	mg/L		0.04	0.1			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 200.8	Arsenic	7.7	µg/L		0.03	0.5			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 200.8	Boron	440	µg/L		0.8	40			Analytes analyzed at a secondary dilution		DF=4
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 110.2	Color	56	color units		6	6			Analytes analyzed at a secondary dilution		DF=2

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Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 200.8	Copper	9.1	µg/L		0.1	0.5			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 160.1	Dissolved Solids	1600	mg/L		4	10			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	SM 9223 B	E. coli	57	MPN/ 100 mL		1	1			None		Analysis Time= 07:32 DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 130.2	Hardness as CaCO3	610	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 200.8	Lead	0.02	µg/L	DNQ	0.01	0.25			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 200.8	Nickel	6.5	µg/L		0.01	0.5			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 300.0	Nitrate as N	28	mg/L		0.05	0.2			Analytes analyzed at a secondary dilution		DF=5
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 354.1	Nitrite as N	0.52	mg/L		0.008	0.06			Analytes analyzed at a secondary dilution		DF=2
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 351.3	Nitrogen, Total Kjeldahl	1.6	mg/L		0.08	0.1			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 365.2	OrthoPhosphate as P	0.97	mg/L		0.01	0.01			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 365.2	Phosphate as P	1.1	mg/L		0.01	0.01			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 200.8	Selenium	1.4	µg/L		0.22	1			None		DF=1

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Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 415.1	Total Organic Carbon	16	mg/L		0.3	0.5			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 180.1	Turbidity	0.89	NTU		0.03	0.05			None		DF=1
Prairie Flower Drain @ Crows Landing Rd	E	1.00	02/26/08	10:10	EPA 200.8	Zinc	4	µg/L		0.6	1			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 350.2	Ammonia as N	0.088	mg/L	DNQ	0.04	0.1			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 200.8	Arsenic	7.8	µg/L		0.03	0.5			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 200.8	Boron	150	µg/L		0.2	10			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 110.2	Color	22	color units		6	6			Analytes analyzed at a secondary dilution		DF=2
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 200.8	Copper	5.2	µg/L		0.1	0.5			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 160.1	Dissolved Solids	740	mg/L		4	10			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	SM 9223 B	E. coli	290	MPN/ 100 mL		1	1			None		Analysis Time= 07:33 DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 130.2	Hardness as CaCO3	420	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 200.8	Lead	0.53	µg/L		0.01	0.25			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 200.8	Nickel	3.1	µg/L		0.01	0.5			None		DF=1

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Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 300.0	Nitrate as N	28	mg/L		0.1	0.5			Analytes analyzed at a secondary dilution		DF=10
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 354.1	Nitrite as N	0.29	mg/L		0.004	0.03			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 351.3	Nitrogen, Total Kjeldahl	0.79	mg/L		0.08	0.1			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 365.2	OrthoPhosphate as P	0.34	mg/L		0.01	0.01			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 365.2	Phosphate as P	0.45	mg/L		0.01	0.01			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 200.8	Selenium	0.97	µg/L	DNQ	0.22	1			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 415.1	Total Organic Carbon	5.2	mg/L		0.3	0.5			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 180.1	Turbidity	11	NTU		0.03	0.05			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	01/24/08	8:40	EPA 200.8	Zinc	8	µg/L		0.6	1			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 350.2	Ammonia as N	0.14	mg/L		0.04	0.1			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 200.8	Arsenic	6.9	µg/L		0.03	0.5			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 200.8	Boron	140	µg/L		0.2	10			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 110.2	Color	15	color units		3	3			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 200.8	Copper	2.7	µg/L		0.1	0.5			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 160.1	Dissolved Solids	730	mg/L		4	10			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	SM 9223 B	E. coli	120	MPN/ 100 mL		1	1			None		Analysis Time= 07:32 DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 130.2	Hardness as CaCO3	420	mg/L		15	20			Analytes analyzed at a secondary dilution		DF=5
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 200.8	Lead	0.09	µg/L	DNQ	0.01	0.25			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 200.8	Nickel	2.5	µg/L		0.01	0.5			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 300.0	Nitrate as N	26	mg/L		0.05	0.2			Analytes analyzed at a secondary dilution		DF=5
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 354.1	Nitrite as N	0.35	mg/L		0.004	0.03			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 351.3	Nitrogen, Total Kjeldahl	0.52	mg/L		0.08	0.1			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 365.2	OrthoPhosphate as P	0.42	mg/L		0.01	0.01			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 365.2	Phosphate as P	0.46	mg/L		0.01	0.01			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 200.8	Selenium	0.93	µg/L	DNQ	0.22	1			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 415.1	Total Organic Carbon	6	mg/L		0.3	0.5			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 180.1	Turbidity	0.88	NTU		0.03	0.05			None		DF=1
Westport Drain @ Vivian Rd	E	1.00	02/26/08	8:30	EPA 200.8	Zinc	2	µg/L		0.6	1			None		DF=1

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Table I - 4. ESJWQC water toxicity testing results.

Results for *Ceriodaphnia dubia, Pimephales promelas* and *Selenastrum capricornutum* samples collected during the 2008 storm season. Re-samples (RS) were collected within 72 hrs of being notified that the original sample was toxic. Toxicity tests are initiated within 36 hours of sampling. Data are sorted by station name, species and sample date.

Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Bear Creek @ Kibby Rd	E	01/24/08	16:00	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	90	90	NSG	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	water	02/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Bear Creek @ Kibby Rd	E	01/24/08	16:00	water	01/25/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Bear Creek @ Kibby Rd	E	02/25/08	13:50	water	02/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1116745	2425858	217	NSG	Absorbance values converted to cells/mL.
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	95	95	NSG	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	water	02/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Black Rascal Creek @ Yosemite Rd	E	01/24/08	17:00	water	01/25/08	*Pimephales promelas*	Survival (%)	97.5	97.5	100	NSG	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	water	02/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	water	02/26/08	*Selenastrum capricornutum*	Total Cell Count	537088	201668	38	SL	TIE was initiated on 3/11/08 and sample lost all toxicity. Resampled on 03/4/08; toxicity was not persistent. Absorbance values converted to cells/mL.

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Black Rascal Creek @ Yosemite Rd	RS	03/04/08	12:20	water	03/05/08	*Selenastrum capricornutum*	Total Cell Count	546857	1097206	201	NSG	Resample due to *S. capricornutum* toxicity on 02/25/06; toxicity was not persistent. Absorbance values converted to cells/mL.
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	water	01/26/08	*Ceriodaphnia dubia*	Survival (%)	100	95	95	NSG	
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	water	02/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	water	01/26/08	*Pimephales promelas*	Survival (%)	100	45	45	SL	TIE was initiated on 1/30/08 and concluded that non-polar organics was the probable cause of toxicity. Resampled on 01/30/08; toxicity was not persistent.
Cottonwood Creek @ Rd 20	RS	01/30/08	9:30	water	01/31/08	*Pimephales promelas*	Survival (%)	98	98	100	NSG	Resample due to *P. promelas* toxicity on 01/25/08; toxicity was not persistent.
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	water	02/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	water	01/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	water	02/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	water	01/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	water	02/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	water	01/26/08	*Selenastrum capricornutum*	Total Cell Count	1233979	1250261	101	NSG	Absorbance values converted to cells/mL.
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	water	02/26/08	*Selenastrum capricornutum*	Total Cell Count	589192	279824	47	SL	TIE was initiated on 3/11/08 and sample lost all toxicity. Resampled on 03/4/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Deadman Creek (Dutchman) @ Gurr Rd	RS	03/04/08	11:30	water	03/05/08	*Selenastrum capricornutum*	Total Cell Count	546857	638039	117	NSG	Resample due to *S. capricornutum* toxicity on 02/25/06; toxicity was not persistent. Absorbance values converted to cells/mL.
Deadman Creek @ Hwy 59	E	01/25/08	12:00	water	01/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	water	02/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	water	01/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Deadman Creek @ Hwy 59	E	02/25/08	10:50	water	02/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Deadman Creek @ Hwy 59	E	01/25/08	12:00	water	01/26/08	*Selenastrum capricornutum*	Total Cell Count	1250261	550114	44	SL	TIE was initiated on 2/2/08 and concluded that non-polar organics was the probable cause of toxicity. Resampled on 01/30/08; toxicity was not persistent. Absorbance values converted to cells/mL.

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Deadman Creek @ Hwy 59	RS	01/30/08	13:50	water	01/31/08	*Selenastrum capricornutum*	Total Cell Count	537088	1185131	221	NSG	Resample due to *S. capricornutum* toxicity on 01/25/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Deadman Creek @ Hwy 59	E	02/25/08	10:50	water	02/26/08	*Selenastrum capricornutum*	Total Cell Count	589192	774812	132	NSG	Absorbance values converted to cells/mL.
Dry Creek @ Rd 18	E	01/25/08	11:10	water	01/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Dry Creek @ Rd 18	E	02/25/08	11:10	water	02/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Dry Creek @ Rd 18	E	01/25/08	11:10	water	01/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Dry Creek @ Rd 18	E	02/25/08	11:10	water	02/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Dry Creek @ Rd 18	E	01/25/08	11:10	water	01/26/08	*Selenastrum capricornutum*	Total Cell Count	1233979	439393	36	SL	TIE was initiated on 2/2/08 and since all toxicity was lost, no conclusions could be made. Site was not resampled due to laboratory communication error. Absorbance values converted to cells/mL.
Dry Creek @ Rd 18	E	02/25/08	11:10	water	02/26/08	*Selenastrum capricornutum*	Total Cell Count	589192	452419	77	SL	Resampled on 03/4/08; toxicity was persistent. Absorbance values converted to cells/mL.

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Dry Creek @ Rd 18	RS	03/04/08	10:00	water	03/05/08	*Selenastrum capricornutum*	Total Cell Count	546857	188642	35	SL	Resample due to *S. capricornutum* toxicity on 02/25/08; toxicity was persistent. Absorbance values converted to cells/mL.
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	water	01/25/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	water	02/27/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Dry Creek @ Wellsford Rd	E	01/24/08	9:10	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1120001	2396549	214	NSG	Site inadvertently resampled on 1/30/08 due to laboratory communication error. Absorbance values converted to cells/mL.
Dry Creek @ Wellsford Rd	RS	01/30/08	13:40	water	01/31/08	*Selenastrum capricornutum*	Total Cell Count	537088	1422856	265	NSG	Site inadvertently resampled due to laboratory communication error. Absorbance values converted to cells/mL.

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Dry Creek @ Wellsford Rd	E	02/26/08	8:30	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1514038	494753	33	SL	TIE initiated on 3/11/08 and concluded that non-polar organics was the probable cause of toxicity. Resampled on 03/04/08; toxicity was not persistent. Absorbance values converted to cells/mL
Dry Creek @ Wellsford Rd	RS	03/04/08	8:20	water	03/05/08	*Selenastrum capricornutum*	Total Cell Count	546857	1618246	296	NSG	Resample due to *S. capricornutum* toxicity on 02/26/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Duck Slough @ Gurr Rd	E	01/25/08	9:40	water	01/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	water	02/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	water	01/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Duck Slough @ Gurr Rd	E	02/25/08	9:10	water	02/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Duck Slough @ Gurr Rd	E	01/25/08	9:40	water	01/26/08	*Selenastrum capricornutum*	Total Cell Count	1250261	1579168	126	NSG	Absorbance values converted to cells/mL.
Duck Slough @ Gurr Rd	E	02/25/08	9:10	water	02/26/08	*Selenastrum capricornutum*	Total Cell Count	589192	569653	97	NSG	Absorbance values converted to cells/mL.
Duck Slough @ Hwy 99	E	01/25/08	13:10	water	01/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Duck Slough @ Hwy 99	E	02/25/08	12:40	water	02/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Duck Slough @ Hwy 99	E	01/25/08	13:10	water	01/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Duck Slough @ Hwy 99	E	02/25/08	12:40	water	02/26/08	*Pimephales promelas*	Survival (%)	100	97.5	98	NSG	

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Duck Slough @ Hwy 99	E	01/25/08	13:10	water	01/26/08	*Selenastrum capricornutum*	Total Cell Count	1233979	1689889	137	NSG	Absorbance values converted to cells/mL.
Duck Slough @ Hwy 99	E	02/25/08	12:40	water	02/26/08	*Selenastrum capricornutum*	Total Cell Count	537088	748760	139	NSG	Absorbance values converted to cells/mL.
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	water	01/25/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	water	02/27/08	*Pimephales promelas*	Survival (%)	100	97.5	98	NSG	
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1120001	833429	74	SL	Resampled on 1/30/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Hatch Drain @ Tuolumne Rd	RS	01/30/08	12:10	water	01/31/08	*Selenastrum capricornutum*	Total Cell Count	537088	745504	139	NSG	Resample due to *S. capricornutum* toxicity on 01/24/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Hatch Drain @ Tuolumne Rd	E	02/26/08	9:20	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1514038	90947	6	SL	TIE initiated on 3/11/08 and concluded that non-polar organics was the probable cause of toxicity. Resampled on 03/04/08; toxicity was persistent. Absorbance values converted to cells/mL.

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Hatch Drain @ Tuolumne Rd	RS	03/04/08	10:30	water	03/05/08	*Selenastrum capricornutum*	Total Cell Count	488240	357980	73	SL	Resample due to *S. capricornutum* toxicity on 02/26/08; toxicity was persistent. Absorbance values converted to cells/mL.
Highline Canal @ Hwy 99	E	01/24/08	14:40	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Highline Canal @ Hwy 99	E	02/26/08	13:00	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Highline Canal @ Hwy 99	E	01/24/08	14:40	water	01/25/08	*Pimephales promelas*	Survival (%)	97.5	97.5	100	NSG	
Highline Canal @ Hwy 99	E	02/26/08	13:00	water	02/27/08	*Pimephales promelas*	Survival (%)	100	95	95	NSG	
Highline Canal @ Hwy 99	E	01/24/08	14:40	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1116745	2083925	187	NSG	Absorbance values converted to cells/mL.
Highline Canal @ Hwy 99	E	02/26/08	13:00	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1133027	817147	72	SL	Resampled on 03/04/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Highline Canal @ Hwy 99	RS	03/04/08	12:40	water	03/05/08	*Selenastrum capricornutum*	Total Cell Count	488240	1992743	408	NSG	Resample due to *S. capricornutum* toxicity on 02/26/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	40	40	SL	TIE was initiated on 1/30/08 and concluded that pyrethroid insecticides was the probable cause of toxicity. Resampled on 1/30/08; toxicity was persistent.

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Highline Canal @ Lombardy Rd	RS	01/30/08	12:20	water	01/31/08	*Ceriodaphnia dubia*	Survival (%)	100	30	30	SL	Resample due to *C. dubia* toxicity on 01/24/08; toxicity was persistent.
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	water	01/25/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	water	02/27/08	*Pimephales promelas*	Survival (%)	100	90	90	SG	Resampled on 03/04/08; toxicity was persistent.
Highline Canal @ Lombardy Rd	RS	03/04/08	13:20	water	03/05/08	*Pimephales promelas*	Survival (%)	100	0	0	SL	Resample due to *P. promelas* toxicity on 02/26/08; toxicity was persistent.
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1120001	2715686	242	NSG	Absorbance values converted to cells/mL.
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1514038	1820149	120	NSG	Absorbance values converted to cells/mL
Hilmar Drain @ Central Ave	E	01/24/08	14:10	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	water	01/25/08	*Pimephales promelas*	Survival (%)	97.5	100	103	NSG	
Hilmar Drain @ Central Ave	E	02/26/08	11:20	water	02/27/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Hilmar Drain @ Central Ave	E	01/24/08	14:10	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1116745	1937383	173	NSG	Absorbance values converted to cells/mL.
Hilmar Drain @ Central Ave	E	02/26/08	11:20	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1133027	1253518	111	NSG	Absorbance values converted to cells/mL.
Livingston Drain @ Robin Ave	E	01/24/08	15:40	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Livingston Drain @ Robin Ave	E	02/26/08	12:50	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	water	01/25/08	*Pimephales promelas*	Survival (%)	97.5	100	103	NSG	

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Livingston Drain @ Robin Ave	E	02/26/08	12:50	water	02/27/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Livingston Drain @ Robin Ave	E	01/24/08	15:40	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1116745	1611733	144	NSG	Absorbance values converted to cells/mL.
Livingston Drain @ Robin Ave	E	02/26/08	12:50	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1133027	690143	61	SL	Resample not taken; site dry. Absorbance values converted to cells/mL.
Merced River @ Santa Fe	E	01/24/08	11:40	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	0	0	SL	TIE was initiated on 1/27/08 and concluded that OP insecticides was the probable cause of toxicity. Resampled on 1/30/08; toxicity was persistent.
Merced River @ Santa Fe	RS	01/30/08	11:40	water	01/31/08	*Ceriodaphnia dubia*	Survival (%)	100	0	0	SL	Resample due to *C. dubia* toxicity on 01/24/08; toxicity was persistent.
Merced River @ Santa Fe	E	02/26/08	11:00	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Merced River @ Santa Fe	E	01/24/08	11:40	water	01/25/08	*Pimephales promelas*	Survival (%)	97.5	100	103	NSG	
Merced River @ Santa Fe	E	02/26/08	11:00	water	02/27/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Merced River @ Santa Fe	E	01/24/08	11:40	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1116745	2038334	183	NSG	Absorbance values converted to cells/mL.
Merced River @ Santa Fe	E	02/26/08	11:00	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1133027	1325161	117	NSG	Absorbance values converted to cells/mL.

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Miles Creek @ Reilly Rd	E	01/25/08	13:40	water	01/26/08	*Ceriodaphnia dubia*	Survival (%)	100	0	0	SL	TIE was initiated on 1/30/08 and concluded that pyrethroid insecticides was the probable cause of toxicity. Resampled on 01/30/08; toxicity was persistent.
Miles Creek @ Reilly Rd	RS	01/30/08	10:40	water	01/31/08	*Ceriodaphnia dubia*	Survival (%)	100	19	19	SL	Resample due to *C. dubia* toxicity on 01/25/08; toxicity was persistent.
Miles Creek @ Reilly Rd	E	02/25/08	11:50	water	02/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	water	01/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Miles Creek @ Reilly Rd	E	02/25/08	11:50	water	02/26/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Miles Creek @ Reilly Rd	E	01/25/08	13:40	water	01/26/08	*Selenastrum capricornutum*	Total Cell Count	1250261	2178364	174	NSG	Absorbance values converted to cells/mL.
Miles Creek @ Reilly Rd	E	02/25/08	11:50	water	02/26/08	*Selenastrum capricornutum*	Total Cell Count	537088	1569398	292	NSG	Absorbance values converted to cells/mL.
Mustang Creek @ East Ave	E	01/24/08	10:40	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	0	0	SL	TIE was initiated on 1/27/08 and concluded that pyrethroid insecticides was the probable cause of toxicity. Resampled on 1/30/08; toxicity was persistent.
Mustang Creek @ East Ave	RS	01/30/08	12:40	water	01/31/08	*Ceriodaphnia dubia*	Survival (%)	100	0	0	SL	Resample due to *C. dubia* toxicity on 01/24/08; toxicity was persistent.
Mustang Creek @ East Ave	E	02/26/08	9:50	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Mustang Creek @ East Ave	E	01/24/08	10:40	water	01/25/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Mustang Creek @ East Ave	E	02/26/08	9:50	water	02/27/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Mustang Creek @ East Ave	E	01/24/08	10:40	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1120001	1641041	147	NSG	Absorbance values converted to cells/mL.
Mustang Creek @ East Ave	E	02/26/08	9:50	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1514038	374263	25	SL	TIE initiated on 3/11/08 and sample lost all toxicity. Resampled on 03/04/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Mustang Creek @ East Ave	RS	03/04/08	14:00	water	03/05/08	*Selenastrum capricornutum*	Total Cell Count	488240	1735480	355	NSG	Resample due to *S. capricornutum* toxicity on 02/26/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	95	95	NSG	
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	water	01/25/08	*Pimephales promelas*	Survival (%)	97.5	100	103	NSG	
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	water	02/27/08	*Pimephales promelas*	Survival (%)	100	97.5	98	NSG	

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1116745	797608	71	SL	Resampled on 1/30/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Prairie Flower Drain @ Crows Landing Rd	RS	01/30/08	12:40	water	01/31/08	*Selenastrum capricornutum*	Total Cell Count	537088	1341443	250	NSG	Resample due to *S. capricornutum* toxicity on 01/24/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1133027	442649	39	SL	TIE initiated on 3/11/08 and sample lost all toxicity. Resampled on 03/04/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Prairie Flower Drain @ Crows Landing Rd	RS	03/04/08	11:30	water	03/05/08	*Selenastrum capricornutum*	Total Cell Count	488240	475214	97	NSG	Resample due to *S. capricornutum* toxicity on 02/26/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Westport Drain @ Vivian Rd	E	01/24/08	8:40	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	
Westport Drain @ Vivian Rd	E	01/24/08	8:40	water	01/25/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	
Westport Drain @ Vivian Rd	E	02/26/08	8:30	water	02/27/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Westport Drain @ Vivian Rd	E	01/24/08	8:40	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1120001	1097206	98	NSG	Absorbance values converted to cells/mL.
Westport Drain @ Vivian Rd	E	02/26/08	8:30	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1514038	188642	12	SL	TIE initiated on 3/11/08 and sample lost all toxicity. Resampled on 03/04/08; toxicity was persistent. Absorbance values converted to cells/mL.
Westport Drain @ Vivian Rd	RS	03/04/08	9:50	water	03/05/08	*Selenastrum capricornutum*	Total Cell Count	546857	361237	66	SL	Resample due to *S. capricornutum* toxicity on 02/26/08; toxicity was persistent. Absorbance values converted to cells/mL.

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Table I - 5. ESJWQC sediment toxicity testing results.

Results for *Hyalella azteca* samples collected during the 2008 storm season. Re-samples (RS) were collected within 72 hrs of being notified that the original sample was toxic. Toxicity tests are initiated within 36 hours of sampling. Data are sorted by station name, species and sample date.

Station Name	Sample Type Code	Sample Date	Sample Time	Matrix Name	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Bear Creek @ Kibby Rd	E	03/04/08	15:30	sediment	03/14/08	*Hyalella azteca*	Survival (%)	97	97	100	NSG	
Black Rascal Creek @ Yosemite Rd	E	03/04/08	12:20	sediment	03/14/08	*Hyalella azteca*	Survival (%)	97	96	99	NSG	
Cottonwood Creek @ Rd 20	E	03/04/08	9:20	sediment	03/14/08	*Hyalella azteca*	Survival (%)	97	93	96	SG	Resample not taken on 3/28/08, site dry.
Deadman Creek (Dutchman) @ Gurr Rd	E	03/04/08	11:30	sediment	03/14/08	*Hyalella azteca*	Survival (%)	97	92	95	NSG	
Deadman Creek @ Hwy 59	E	03/04/08	14:20	sediment	03/14/08	*Hyalella azteca*	Survival (%)	97	96	99	NSG	
Dry Creek @ Rd 18	E	03/04/08	10:00	sediment	03/14/08	*Hyalella azteca*	Survival (%)	97	97	100	NSG	
Dry Creek @ Wellsford Rd	E	03/04/08	8:20	sediment	03/11/08	*Hyalella azteca*	Survival (%)	91	80	88	SG	Resampled on 03/28/08; toxicity was not persistent.
Dry Creek @ Wellsford Rd	RS	03/28/08	14:40	sediment	04/04/08	*Hyalella azteca*	Survival (%)	91	87	96	NSG	Resample due to *H. azteca* toxicity on 03/04/08, toxicity was not persistent.
Duck Slough @ Gurr Rd	E	03/04/08	13:50	sediment	03/14/08	*Hyalella azteca*	Survival (%)	97	97	100	NSG	
Duck Slough @ Hwy 99	E	03/04/08	15:30	sediment	03/14/08	*Hyalella azteca*	Survival (%)	97	96	99	NSG	
Hatch Drain @ Tuolumne Rd	E	03/04/08	10:30	sediment	03/11/08	*Hyalella azteca*	Survival (%)	91	0	0	SL	Resampled on 03/28/08; toxicity was persistent.
Hatch Drain @ Tuolumne Rd	RS	03/28/08	13:40	sediment	04/04/08	*Hyalella azteca*	Survival (%)	91	2	2	SL	Resample due to *H. azteca* toxicity on 03/04/08, toxicity was persistent.

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Station Name	Sample Type Code	Sample Date	Sample Time	Matrix Name	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Toxicity Test Comments
Highline Canal @ Hwy 99	E	03/04/08	12:40	sediment	03/11/08	*Hyalella azteca*	Survival (%)	91	82	90	SG	Resampled on 03/28/08; toxicity was not persistent.
Highline Canal @ Hwy 99	RS	03/28/08	10:30	sediment	04/04/08	*Hyalella azteca*	Survival (%)	91	95	104	NSG	Resample due to *H. azteca* toxicity on 03/04/08, toxicity was not persistent.
Highline Canal @ Lombardy Rd	E	03/04/08	13:20	sediment	03/11/08	*Hyalella azteca*	Survival (%)	91	83	91	SG	Resampled on 03/28/08; toxicity was not persistent.
Highline Canal @ Lombardy Rd	RS	03/28/08	11:30	sediment	04/04/08	*Hyalella azteca*	Survival (%)	91	89	98	NSG	Resample due to *H. azteca* toxicity on 03/04/08, toxicity was not persistent.
Hilmar Drain @ Central Ave	E	03/04/08	16:40	sediment	03/11/08	*Hyalella azteca*	Survival (%)	91	83	91	SG	Resampled on 03/28/08; toxicity was not persistent.
Hilmar Drain @ Central Ave	RS	03/28/08	13:10	sediment	04/04/08	*Hyalella azteca*	Survival (%)	91	84	92	NSG	Resample due to *H. azteca* toxicity on 03/04/08, toxicity was not persistent.
Miles Creek @ Reilly Rd	E	03/04/08	15:00	sediment	03/14/08	*Hyalella azteca*	Survival (%)	97	98	101	NSG	
Mustang Creek @ East Ave	E	03/04/08	14:00	sediment	03/11/08	*Hyalella azteca*	Survival (%)	91	71	78	SL	Resampled on 03/28/08; toxicity was not persistent.
Mustang Creek @ East Ave	RS	03/28/08	12:20	sediment	04/04/08	*Hyalella azteca*	Survival (%)	91	99	109	NSG	Resample due to *H. azteca* toxicity on 03/04/08, toxicity was not persistent.
Prairie Flower Drain @ Crows Landing Rd	E	03/04/08	11:30	sediment	03/11/08	*Hyalella azteca*	Survival (%)	91	86	95	NSG	
Westport Drain @ Vivian Rd	E	03/04/08	9:50	sediment	03/11/08	*Hyalella azteca*	Survival (%)	91	87	96	NSG	

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Table I - 6. Calculated Loads.

Data sorted by station name, sample date, and analyte.

Station Name	Sample Type Code	Sample Date	Sample Time	Analyte	Result	Qualifier Code	Unit	Discharge, cfs	Instantaneous Loading Rate
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	Chlorpyrifos	0.0057	DNQ	µg/L	61.02	9.85
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	Cyanazine	0.14	DNQ	µg/L	61.02	241.91
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	Dissolved Solids	110		mg/L	61.02	190069.37
Black Rascal Creek @ Yosemite Rd	E	02/25/08	14:10	Total Organic Carbon	16		mg/L	61.02	27646.45
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Ammonia as N	0.32		mg/L	3.05	27.64
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Arsenic	2.1		µg/L	3.05	181.37
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Boron	15		µg/L	3.05	1295.50
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Chlorpyrifos	0.019	DNQ	µg/L	3.05	1.64
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Copper	24		µg/L	3.05	2072.80
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Diazinon	0.06		µg/L	3.05	5.18
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Dissolved Solids	54		mg/L	3.05	4663.81
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Diuron	68		µg/L	3.05	5872.95
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Lead	5.4		µg/L	3.05	466.38
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Nickel	3.1		µg/L	3.05	267.74
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Nitrate as N	0.96		mg/L	3.05	82.91
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Nitrite as N	0.033		mg/L	3.05	2.85
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Nitrogen, Total Kjeldahl	1.3		mg/L	3.05	112.28
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	OrthoPhosphate as P	0.14		mg/L	3.05	12.09
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Phosphate as P	0.22		mg/L	3.05	19.00
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Selenium	0.59	DNQ	µg/L	3.05	50.96
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Simazine	2		µg/L	3.05	172.73
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Total Organic Carbon	4.5		mg/L	3.05	388.65
Cottonwood Creek @ Rd 20	E	01/25/08	9:50	Zinc	30		µg/L	3.05	2591.01
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Ammonia as N	0.13		mg/L	0.22	0.81
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Arsenic	1.8		µg/L	0.22	11.21
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Boron	40		µg/L	0.22	249.19
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Cadmium	0.02	DNQ	µg/L	0.22	0.12
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Chlorpyrifos	0.036		µg/L	0.22	0.22
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Copper	21		µg/L	0.22	130.82
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Diazinon	0.24		µg/L	0.22	1.50
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Dissolved Solids	120		mg/L	0.22	747.57

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Station Name	Sample Type Code	Sample Date	Sample Time	Analyte	Result	Qualifier Code	Unit	Discharge, cfs	Instantaneous Loading Rate
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Diuron	65		µg/L	0.22	404.93
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Lead	1.9		µg/L	0.22	11.84
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Nickel	3.1		µg/L	0.22	19.31
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Nitrate as N	1		mg/L	0.22	6.23
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Nitrite as N	0.027	DNQ	mg/L	0.22	0.17
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Nitrogen, Total Kjeldahl	1.9		mg/L	0.22	11.84
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	OrthoPhosphate as P	0.076		mg/L	0.22	0.47
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Phosphate as P	0.2		mg/L	0.22	1.25
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Selenium	0.41	DNQ	µg/L	0.22	2.55
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Simazine	5.1		µg/L	0.22	31.77
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Total Organic Carbon	14		mg/L	0.22	87.22
Cottonwood Creek @ Rd 20	E	02/25/08	9:40	Zinc	14		µg/L	0.22	87.22
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Ammonia as N	0.34		mg/L	28.58	275.16
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Arsenic	15		µg/L	28.58	12139.50
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Boron	34		µg/L	28.58	27516.20
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Cadmium	0.05	DNQ	µg/L	28.58	40.46
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Copper	19		µg/L	28.58	15376.70
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	DDT(p,p')	0.0073	DNQ	µg/L	28.58	5.91
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Dissolved Solids	360		mg/L	28.58	291347.95
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Diuron	0.43		µg/L	28.58	348.00
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Lead	3.2		µg/L	28.58	2589.76
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Nickel	18		µg/L	28.58	14567.40
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Nitrate as N	0.92		mg/L	28.58	744.56
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Nitrite as N	0.019	DNQ	mg/L	28.58	15.38
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Nitrogen, Total Kjeldahl	2		mg/L	28.58	1618.60
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	OrthoPhosphate as P	0.15		mg/L	28.58	121.39
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Phosphate as P	0.59		mg/L	28.58	477.49
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Selenium	0.96	DNQ	µg/L	28.58	776.93
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Simazine	0.54		µg/L	28.58	437.02
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Total Organic Carbon	4.9		mg/L	28.58	3965.57
Deadman Creek (Dutchman) @ Gurr Rd	E	01/25/08	10:50	Zinc	34		µg/L	28.58	27516.20
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Ammonia as N	0.18		mg/L	2.52	12.84
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Arsenic	13		µg/L	2.52	927.66
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Boron	31		µg/L	2.52	2212.12
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Chlorpyrifos	0.0037	DNQ	µg/L	2.52	0.26

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Station Name	Sample Type Code	Sample Date	Sample Time	Analyte	Result	Qualifier Code	Unit	Discharge, cfs	Instantaneous Loading Rate
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Copper	3.4		µg/L	2.52	242.62
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Dissolved Solids	320		mg/L	2.52	22834.83
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Diuron	0.49		µg/L	2.52	34.97
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Lead	0.4		µg/L	2.52	28.54
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Nickel	3.3		µg/L	2.52	235.48
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Nitrate as N	0.13		mg/L	2.52	9.28
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Nitrogen, Total Kjeldahl	1.3		mg/L	2.52	92.77
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	OrthoPhosphate as P	0.21		mg/L	2.52	14.99
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Phosphate as P	0.43		mg/L	2.52	30.68
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Selenium	0.5	DNQ	µg/L	2.52	35.68
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Total Organic Carbon	3.5		mg/L	2.52	249.76
Deadman Creek (Dutchman) @ Gurr Rd	E	02/25/08	9:50	Zinc	6		µg/L	2.52	428.15
Deadman Creek @ Hwy 59	E	02/25/08	10:50	Dissolved Solids	350		mg/L	51.71	512495.22
Deadman Creek @ Hwy 59	E	02/25/08	10:50	Diuron	0.51		µg/L	51.71	746.78
Deadman Creek @ Hwy 59	E	02/25/08	10:50	Total Organic Carbon	4.3		mg/L	51.71	6296.37
Dry Creek @ Rd 18	E	01/25/08	11:10	Ammonia as N	0.21		mg/L	2.56	15.22
Dry Creek @ Rd 18	E	01/25/08	11:10	Arsenic	1.4		µg/L	2.56	101.49
Dry Creek @ Rd 18	E	01/25/08	11:10	Boron	30		µg/L	2.56	2174.75
Dry Creek @ Rd 18	E	01/25/08	11:10	Chlorpyrifos	0.01	DNQ	µg/L	2.56	0.72
Dry Creek @ Rd 18	E	01/25/08	11:10	Copper	20		µg/L	2.56	1449.83
Dry Creek @ Rd 18	E	01/25/08	11:10	Diazinon	0.049		µg/L	2.56	3.55
Dry Creek @ Rd 18	E	01/25/08	11:10	Dissolved Solids	140		mg/L	2.56	10148.81
Dry Creek @ Rd 18	E	01/25/08	11:10	Diuron	21		µg/L	2.56	1522.32
Dry Creek @ Rd 18	E	01/25/08	11:10	Lead	1.1		µg/L	2.56	79.74
Dry Creek @ Rd 18	E	01/25/08	11:10	Nickel	2.8		µg/L	2.56	202.98
Dry Creek @ Rd 18	E	01/25/08	11:10	Nitrate as N	2.9		mg/L	2.56	210.23
Dry Creek @ Rd 18	E	01/25/08	11:10	Nitrite as N	0.24		mg/L	2.56	17.40
Dry Creek @ Rd 18	E	01/25/08	11:10	Nitrogen, Total Kjeldahl	1.6		mg/L	2.56	115.99
Dry Creek @ Rd 18	E	01/25/08	11:10	OrthoPhosphate as P	0.037		mg/L	2.56	2.68
Dry Creek @ Rd 18	E	01/25/08	11:10	Phosphate as P	0.16		mg/L	2.56	11.60
Dry Creek @ Rd 18	E	01/25/08	11:10	Selenium	0.64	DNQ	µg/L	2.56	46.39
Dry Creek @ Rd 18	E	01/25/08	11:10	Simazine	0.56		µg/L	2.56	40.60
Dry Creek @ Rd 18	E	01/25/08	11:10	Total Organic Carbon	8.1		mg/L	2.56	587.18
Dry Creek @ Rd 18	E	01/25/08	11:10	Zinc	15		µg/L	2.56	1087.37
Dry Creek @ Rd 18	E	02/25/08	11:10	Ammonia as N	0.077	DNQ	mg/L	1.44	3.14

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Dry Creek @ Rd 18	E	02/25/08	11:10	Arsenic	1.4		µg/L	1.44	57.09
Dry Creek @ Rd 18	E	02/25/08	11:10	Boron	28		µg/L	1.44	1141.74
Dry Creek @ Rd 18	E	02/25/08	11:10	Cadmium	0.02	DNQ	µg/L	1.44	0.82
Dry Creek @ Rd 18	E	02/25/08	11:10	Chlorpyrifos	0.034		µg/L	1.44	1.39
Dry Creek @ Rd 18	E	02/25/08	11:10	Copper	33		µg/L	1.44	1345.62
Dry Creek @ Rd 18	E	02/25/08	11:10	Cyanazine	0.12	DNQ	µg/L	1.44	4.89
Dry Creek @ Rd 18	E	02/25/08	11:10	Diazinon	0.24		µg/L	1.44	9.79
Dry Creek @ Rd 18	E	02/25/08	11:10	Dissolved Solids	110		mg/L	1.44	4485.41
Dry Creek @ Rd 18	E	02/25/08	11:10	Diuron	2.1		µg/L	1.44	85.63
Dry Creek @ Rd 18	E	02/25/08	11:10	Lead	0.35		µg/L	1.44	14.27
Dry Creek @ Rd 18	E	02/25/08	11:10	Nickel	2.7		µg/L	1.44	110.10
Dry Creek @ Rd 18	E	02/25/08	11:10	Nitrogen, Total Kjeldahl	1.5		mg/L	1.44	61.16
Dry Creek @ Rd 18	E	02/25/08	11:10	OrthoPhosphate as P	0.043		mg/L	1.44	1.75
Dry Creek @ Rd 18	E	02/25/08	11:10	Phosphate as P	0.12		mg/L	1.44	4.89
Dry Creek @ Rd 18	E	02/25/08	11:10	Selenium	0.5	DNQ	µg/L	1.44	20.39
Dry Creek @ Rd 18	E	02/25/08	11:10	Simazine	0.53		µg/L	1.44	21.61
Dry Creek @ Rd 18	E	02/25/08	11:10	Total Organic Carbon	15		mg/L	1.44	611.65
Dry Creek @ Rd 18	E	02/25/08	11:10	Zinc	5		µg/L	1.44	203.88
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Ammonia as N	0.077	DNQ	mg/L	0.171	0.37
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Arsenic	15		µg/L	0.171	72.63
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Arsenic	16		µg/L	0.171	77.48
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Boron	200		µg/L	0.171	968.44
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Boron	200		µg/L	0.171	968.44
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Copper	4.7		µg/L	0.171	22.76
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Copper	4.5		µg/L	0.171	21.79
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Dissolved Solids	820		mg/L	0.171	3970.61
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Dissolved Solids	820		mg/L	0.171	3970.61
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Lead	0.14	DNQ	µg/L	0.171	0.68
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Lead	0.12	DNQ	µg/L	0.171	0.58
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Nickel	3.9		µg/L	0.171	18.88
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Nickel	3.9		µg/L	0.171	18.88
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Nitrate as N	24		mg/L	0.171	116.21
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Nitrate as N	22		mg/L	0.171	106.53
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Nitrite as N	0.32		mg/L	0.171	1.55
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Nitrite as N	0.32		mg/L	0.171	1.55

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Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Nitrogen, Total Kjeldahl	3.3		mg/L	0.171	15.98
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Nitrogen, Total Kjeldahl	1.2		mg/L	0.171	5.81
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	OrthoPhosphate as P	0.39		mg/L	0.171	1.89
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	OrthoPhosphate as P	0.39		mg/L	0.171	1.89
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Phosphate as P	0.75		mg/L	0.171	3.63
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Phosphate as P	0.52		mg/L	0.171	2.52
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Selenium	0.99	DNQ	µg/L	0.171	4.79
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Selenium	0.79	DNQ	µg/L	0.171	3.83
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Total Organic Carbon	10		mg/L	0.171	48.42
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Total Organic Carbon	21		mg/L	0.171	101.69
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	Zinc	4		µg/L	0.171	19.37
Hatch Drain @ Tuolumne Rd	E	01/24/08	10:00	Zinc	5		µg/L	0.171	24.21
Highline Canal @ Hwy 99	E	01/24/08	14:40	Ammonia as N	3.3		mg/L	55.88	5221.77
Highline Canal @ Hwy 99	E	01/24/08	14:40	Arsenic	5.2		µg/L	55.88	8228.24
Highline Canal @ Hwy 99	E	01/24/08	14:40	Boron	82		µg/L	55.88	129753.02
Highline Canal @ Hwy 99	E	01/24/08	14:40	Cadmium	0.2		µg/L	55.88	316.47
Highline Canal @ Hwy 99	E	01/24/08	14:40	Copper	37		µg/L	55.88	58547.10
Highline Canal @ Hwy 99	E	01/24/08	14:40	Dissolved Solids	500		mg/L	55.88	791176.98
Highline Canal @ Hwy 99	E	01/24/08	14:40	Lead	3.4		µg/L	55.88	5380.00
Highline Canal @ Hwy 99	E	01/24/08	14:40	Nickel	11		µg/L	55.88	17405.89
Highline Canal @ Hwy 99	E	01/24/08	14:40	Nitrate as N	6.7		mg/L	55.88	10601.77
Highline Canal @ Hwy 99	E	01/24/08	14:40	Nitrite as N	0.26		mg/L	55.88	411.41
Highline Canal @ Hwy 99	E	01/24/08	14:40	Nitrogen, Total Kjeldahl	8.5		mg/L	55.88	13450.01
Highline Canal @ Hwy 99	E	01/24/08	14:40	OrthoPhosphate as P	3.3		mg/L	55.88	5221.77
Highline Canal @ Hwy 99	E	01/24/08	14:40	Phosphate as P	3		mg/L	55.88	4747.06
Highline Canal @ Hwy 99	E	01/24/08	14:40	Selenium	0.74	DNQ	µg/L	55.88	1170.94
Highline Canal @ Hwy 99	E	01/24/08	14:40	Total Organic Carbon	22		mg/L	55.88	34811.79
Highline Canal @ Hwy 99	E	01/24/08	14:40	Zinc	36		µg/L	55.88	56964.74
Highline Canal @ Hwy 99	E	02/26/08	13:00	Ammonia as N	8.3		mg/L	6.91	1624.06
Highline Canal @ Hwy 99	E	02/26/08	13:00	Arsenic	8.6		µg/L	6.91	1682.77
Highline Canal @ Hwy 99	E	02/26/08	13:00	Boron	110		µg/L	6.91	21523.75
Highline Canal @ Hwy 99	E	02/26/08	13:00	Cadmium	0.096	DNQ	µg/L	6.91	18.78
Highline Canal @ Hwy 99	E	02/26/08	13:00	Copper	81		µg/L	6.91	15849.31
Highline Canal @ Hwy 99	E	02/26/08	13:00	Dissolved Solids	520		mg/L	6.91	101748.64
Highline Canal @ Hwy 99	E	02/26/08	13:00	Lead	1.1		µg/L	6.91	215.24

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Highline Canal @ Hwy 99	E	02/26/08	13:00	Nickel	10		µg/L	6.91	1956.70
Highline Canal @ Hwy 99	E	02/26/08	13:00	Nitrate as N	5.4		mg/L	6.91	1056.62
Highline Canal @ Hwy 99	E	02/26/08	13:00	Nitrite as N	0.31		mg/L	6.91	60.66
Highline Canal @ Hwy 99	E	02/26/08	13:00	Nitrogen, Total Kjeldahl	15		mg/L	6.91	2935.06
Highline Canal @ Hwy 99	E	02/26/08	13:00	OrthoPhosphate as P	3.2		mg/L	6.91	626.15
Highline Canal @ Hwy 99	E	02/26/08	13:00	Phosphate as P	3.8		mg/L	6.91	743.55
Highline Canal @ Hwy 99	E	02/26/08	13:00	Selenium	0.85	DNQ	µg/L	6.91	166.32
Highline Canal @ Hwy 99	E	02/26/08	13:00	Total Organic Carbon	37		mg/L	6.91	7239.81
Highline Canal @ Hwy 99	E	02/26/08	13:00	Zinc	31		µg/L	6.91	6065.78
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Ammonia as N	1.3		mg/L	54.02	1988.59
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Arsenic	3.4		µg/L	54.02	5200.93
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Boron	64		µg/L	54.02	97899.80
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Cadmium	0.06	DNQ	µg/L	54.02	91.78
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Copper	28		µg/L	54.02	42831.16
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Dissolved Solids	280		mg/L	54.02	428311.62
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Lead	3.2		µg/L	54.02	4894.99
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Nickel	7.5		µg/L	54.02	11472.63
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Nitrate as N	3.7		mg/L	54.02	5659.83
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Nitrite as N	0.12		mg/L	54.02	183.56
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Nitrogen, Total Kjeldahl	5.2		mg/L	54.02	7954.36
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	OrthoPhosphate as P	1.7		mg/L	54.02	2600.46
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Phosphate as P	2.2		mg/L	54.02	3365.31
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Selenium	0.74	DNQ	µg/L	54.02	1131.97
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Total Organic Carbon	13		mg/L	54.02	19885.90
Highline Canal @ Lombardy Rd	E	01/24/08	12:50	Zinc	32		µg/L	54.02	48949.90
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Ammonia as N	1.7		mg/L	4.79	230.59
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Arsenic	4.6		µg/L	4.79	623.94
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Boron	91		µg/L	4.79	12343.10
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Cadmium	0.09	DNQ	µg/L	4.79	12.21
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Copper	32		µg/L	4.79	4340.43
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Dissolved Solids	310		mg/L	4.79	42047.91
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Lead	2.7		µg/L	4.79	366.22
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Nickel	7.5		µg/L	4.79	1017.29
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Nitrate as N	2.6		mg/L	4.79	352.66
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Nitrite as N	0.15		mg/L	4.79	20.35

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Station Name	Sample Type Code	Sample Date	Sample Time	Analyte	Result	Qualifier Code	Unit	Discharge, cfs	Instantaneous Loading Rate
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Nitrogen, Total Kjeldahl	4.6		mg/L	4.79	623.94
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	OrthoPhosphate as P	2.1		mg/L	4.79	284.84
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Phosphate as P	2.3		mg/L	4.79	311.97
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Selenium	0.58	DNQ	µg/L	4.79	78.67
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Total Organic Carbon	17		mg/L	4.79	2305.85
Highline Canal @ Lombardy Rd	E	02/26/08	12:00	Zinc	29		µg/L	4.79	3933.51
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Ammonia as N	0.96		mg/L	0.38	10.33
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Arsenic	3.4		µg/L	0.38	36.59
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Boron	270		µg/L	0.38	2905.32
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Copper	9.4		µg/L	0.38	101.15
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Dissolved Solids	970		mg/L	0.38	10437.65
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Nickel	3.2		µg/L	0.38	34.43
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Nitrate as N	9.3		mg/L	0.38	100.07
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Nitrite as N	0.18		mg/L	0.38	1.94
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Nitrogen, Total Kjeldahl	2.5		mg/L	0.38	26.90
Hilmar Drain @ Central Ave	E	01/24/08	14:10	OrthoPhosphate as P	0.24		mg/L	0.38	2.58
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Phosphate as P	0.34		mg/L	0.38	3.66
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Selenium	1.1		µg/L	0.38	11.84
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Total Organic Carbon	10		mg/L	0.38	107.60
Hilmar Drain @ Central Ave	E	01/24/08	14:10	Zinc	3		µg/L	0.38	32.28
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Ammonia as N	0.14		mg/L	0.13	0.52
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Arsenic	3.4		µg/L	0.13	12.52
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Boron	270		µg/L	0.13	993.93
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Copper	4.4		µg/L	0.13	16.20
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Dissolved Solids	910		mg/L	0.13	3349.90
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Lead	0.01	DNQ	µg/L	0.13	0.04
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Nickel	3.4		µg/L	0.13	12.52
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Nitrate as N	5.9		mg/L	0.13	21.72
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Nitrite as N	0.12		mg/L	0.13	0.44
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Nitrogen, Total Kjeldahl	1.2		mg/L	0.13	4.42
Hilmar Drain @ Central Ave	E	02/26/08	11:20	OrthoPhosphate as P	0.03		mg/L	0.13	0.11
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Phosphate as P	0.09		mg/L	0.13	0.33
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Selenium	0.93	DNQ	µg/L	0.13	3.42
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Total Organic Carbon	12		mg/L	0.13	44.17
Hilmar Drain @ Central Ave	E	02/26/08	11:20	Zinc	2		µg/L	0.13	7.36

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Station Name	Sample Type Code	Sample Date	Sample Time	Analyte	Result	Qualifier Code	Unit	Discharge, cfs	Instantaneous Loading Rate
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Ammonia as N	0.3		mg/L	7.13	60.57
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Arsenic	1.8		µg/L	7.13	363.42
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Boron	13		µg/L	7.13	2624.70
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Copper	6.7		µg/L	7.13	1352.73
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Dissolved Solids	56		mg/L	7.13	11306.41
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Lead	2.4		µg/L	7.13	484.56
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Nickel	1.6		µg/L	7.13	323.04
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Nitrate as N	0.72		mg/L	7.13	145.37
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Nitrite as N	0.035		mg/L	7.13	7.07
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Nitrogen, Total Kjeldahl	0.89		mg/L	7.13	179.69
Livingston Drain @ Robin Ave	E	01/24/08	15:40	OrthoPhosphate as P	0.12		mg/L	7.13	24.23
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Phosphate as P	0.22		mg/L	7.13	44.42
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Selenium	0.54	DNQ	µg/L	7.13	109.03
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Total Organic Carbon	3.7		mg/L	7.13	747.03
Livingston Drain @ Robin Ave	E	01/24/08	15:40	Zinc	18		µg/L	7.13	3634.20
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Ammonia as N	0.099	DNQ	mg/L	0.19	0.53
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Ammonia as N	0.2		mg/L	0.19	1.08
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Arsenic	1.3		µg/L	0.19	6.99
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Arsenic	1.3		µg/L	0.19	6.99
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Boron	19		µg/L	0.19	102.22
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Boron	18		µg/L	0.19	96.84
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Copper	15		µg/L	0.19	80.70
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Copper	18		µg/L	0.19	96.84
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Dissolved Solids	59		mg/L	0.19	317.43
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Dissolved Solids	65		mg/L	0.19	349.71
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Lead	0.93		µg/L	0.19	5.00
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Lead	1.1		µg/L	0.19	5.92
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Nickel	1.2		µg/L	0.19	6.46
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Nickel	1.2		µg/L	0.19	6.46
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Nitrate as N	0.5		mg/L	0.19	2.69
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Nitrate as N	0.51		mg/L	0.19	2.74
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Nitrite as N	0.029	DNQ	mg/L	0.19	0.16
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Nitrite as N	0.028	DNQ	mg/L	0.19	0.15
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Nitrogen, Total Kjeldahl	0.79		mg/L	0.19	4.25
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Nitrogen, Total Kjeldahl	0.65		mg/L	0.19	3.50

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Livingston Drain @ Robin Ave	E	02/26/08	12:50	OrthoPhosphate as P	0.029		mg/L	0.19	0.16
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	OrthoPhosphate as P	0.033		mg/L	0.19	0.18
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Phosphate as P	0.096		mg/L	0.19	0.52
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Phosphate as P	0.12		mg/L	0.19	0.65
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Selenium	0.6	DNQ	µg/L	0.19	3.23
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Selenium	0.41	DNQ	µg/L	0.19	2.21
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Total Organic Carbon	6		mg/L	0.19	32.28
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Total Organic Carbon	6.5		mg/L	0.19	34.97
Livingston Drain @ Robin Ave	E	02/26/08	12:50	Zinc	9		µg/L	0.19	48.42
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	Zinc	9		µg/L	0.19	48.42
Merced River @ Santa Fe	E	01/24/08	11:40	Ammonia as N	0.11		mg/L	2318	7220.27
Merced River @ Santa Fe	E	01/24/08	11:40	Arsenic	1.7		µg/L	2318	111585.97
Merced River @ Santa Fe	E	01/24/08	11:40	Boron	17		µg/L	2318	1115859.70
Merced River @ Santa Fe	E	01/24/08	11:40	Cadmium	0.1	DNQ	µg/L	2318	6563.88
Merced River @ Santa Fe	E	01/24/08	11:40	Copper	22		µg/L	2318	1444053.73
Merced River @ Santa Fe	E	01/24/08	11:40	Dissolved Solids	130		mg/L	2318	8533044.78
Merced River @ Santa Fe	E	01/24/08	11:40	Lead	5.6		µg/L	2318	367577.31
Merced River @ Santa Fe	E	01/24/08	11:40	Nickel	11		µg/L	2318	722026.87
Merced River @ Santa Fe	E	01/24/08	11:40	Nitrate as N	2		mg/L	2318	131277.61
Merced River @ Santa Fe	E	01/24/08	11:40	Nitrite as N	0.076		mg/L	2318	4988.55
Merced River @ Santa Fe	E	01/24/08	11:40	Nitrogen, Total Kjeldahl	2.4		mg/L	2318	157533.13
Merced River @ Santa Fe	E	01/24/08	11:40	OrthoPhosphate as P	0.38		mg/L	2318	24942.75
Merced River @ Santa Fe	E	01/24/08	11:40	Phosphate as P	0.83		mg/L	2318	54480.21
Merced River @ Santa Fe	E	01/24/08	11:40	Selenium	0.23	DNQ	µg/L	2318	15096.93
Merced River @ Santa Fe	E	01/24/08	11:40	Total Organic Carbon	8.9		mg/L	2318	584185.37
Merced River @ Santa Fe	E	01/24/08	11:40	Zinc	38		µg/L	2318	2494274.63
Merced River @ Santa Fe	E	02/26/08	11:00	Ammonia as N	0.088	DNQ	mg/L	557	1387.99
Merced River @ Santa Fe	E	02/26/08	11:00	Arsenic	1		µg/L	557	15772.57
Merced River @ Santa Fe	E	02/26/08	11:00	Boron	11		µg/L	557	173498.26
Merced River @ Santa Fe	E	02/26/08	11:00	Cadmium	0.03	DNQ	µg/L	557	473.18
Merced River @ Santa Fe	E	02/26/08	11:00	Copper	5.2		µg/L	557	82017.36
Merced River @ Santa Fe	E	02/26/08	11:00	Dissolved Solids	74		mg/L	557	1167170.11
Merced River @ Santa Fe	E	02/26/08	11:00	Lead	1.2		µg/L	557	18927.08
Merced River @ Santa Fe	E	02/26/08	11:00	Nickel	3.2		µg/L	557	50472.22
Merced River @ Santa Fe	E	02/26/08	11:00	Nitrate as N	0.41		mg/L	557	6466.75

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Merced River @ Santa Fe	E	02/26/08	11:00	Nitrite as N	0.02	DNQ	mg/L	557	315.45
Merced River @ Santa Fe	E	02/26/08	11:00	Nitrogen, Total Kjeldahl	0.69		mg/L	557	10883.07
Merced River @ Santa Fe	E	02/26/08	11:00	OrthoPhosphate as P	0.057		mg/L	557	899.04
Merced River @ Santa Fe	E	02/26/08	11:00	Phosphate as P	0.17		mg/L	557	2681.34
Merced River @ Santa Fe	E	02/26/08	11:00	Selenium	0.65	DNQ	µg/L	557	10252.17
Merced River @ Santa Fe	E	02/26/08	11:00	Total Organic Carbon	4.3		mg/L	557	67822.05
Merced River @ Santa Fe	E	02/26/08	11:00	Zinc	9		µg/L	557	141953.12
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Ammonia as N	0.43		mg/L	57.87	704.64
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Arsenic	2.2		µg/L	57.87	3605.15
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Boron	19		µg/L	57.87	31135.39
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Copper	15		µg/L	57.87	24580.57
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Diazinon	0.019	DNQ	µg/L	57.87	31.14
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Dissolved Solids	140		mg/L	57.87	229418.67
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Diuron	0.32	DNQ	µg/L	57.87	524.39
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Lead	3.2		µg/L	57.87	5243.86
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Methidathion	2.3		µg/L	57.87	3769.02
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Nickel	12		µg/L	57.87	19664.46
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Nitrate as N	2.7		mg/L	57.87	4424.50
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Nitrite as N	0.062		mg/L	57.87	101.60
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Nitrogen, Total Kjeldahl	2.7		mg/L	57.87	4424.50
Miles Creek @ Reilly Rd	E	01/25/08	13:40	OrthoPhosphate as P	0.3		mg/L	57.87	491.61
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Phosphate as P	0.5		mg/L	57.87	819.35
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Selenium	0.7	DNQ	µg/L	57.87	1147.09
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Simazine	0.81		µg/L	57.87	1327.35
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Total Organic Carbon	12		mg/L	57.87	19664.46
Miles Creek @ Reilly Rd	E	01/25/08	13:40	Zinc	22		µg/L	57.87	36051.51
Mustang Creek @ East Ave	E	02/26/08	9:50	Dissolved Solids	280		mg/L	2.08	16491.82
Mustang Creek @ East Ave	E	02/26/08	9:50	Total Organic Carbon	19		mg/L	2.08	1119.09
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Ammonia as N	0.66		mg/L	0.45	8.41
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Arsenic	6.8		µg/L	0.45	86.65
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Boron	360		µg/L	0.45	4587.35
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Copper	9.2		µg/L	0.45	117.23
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Dissolved Solids	1500		mg/L	0.45	19113.98
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Lead	0.28		µg/L	0.45	3.57
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Nickel	6		µg/L	0.45	76.46

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Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Nitrate as N	23		mg/L	0.45	293.08
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Nitrite as N	0.56		mg/L	0.45	7.14
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Nitrogen, Total Kjeldahl	2.8		mg/L	0.45	35.68
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	OrthoPhosphate as P	1.6		mg/L	0.45	20.39
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Phosphate as P	1.8		mg/L	0.45	22.94
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Selenium	1.1		µg/L	0.45	14.02
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Total Organic Carbon	16		mg/L	0.45	203.88
Prairie Flower Drain @ Crows Landing Rd	E	01/24/08	12:20	Zinc	20		µg/L	0.45	254.85
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Ammonia as N	0.25		mg/L	0.94	6.65
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Arsenic	7.7		µg/L	0.94	204.96
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Boron	440		µg/L	0.94	11711.91
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Copper	9.1		µg/L	0.94	242.22
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Dissolved Solids	1600		mg/L	0.94	42588.77
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Lead	0.02	DNQ	µg/L	0.94	0.53
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Nickel	6.5		µg/L	0.94	173.02
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Nitrate as N	28		mg/L	0.94	745.30
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Nitrite as N	0.52		mg/L	0.94	13.84
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Nitrogen, Total Kjeldahl	1.6		mg/L	0.94	42.59
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	OrthoPhosphate as P	0.97		mg/L	0.94	25.82
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Phosphate as P	1.1		mg/L	0.94	29.28
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Selenium	1.4		µg/L	0.94	37.27
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Total Organic Carbon	16		mg/L	0.94	425.89
Prairie Flower Drain @ Crows Landing Rd	E	02/26/08	10:10	Zinc	4		µg/L	0.94	106.47
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Ammonia as N	0.088	DNQ	mg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Arsenic	7.8		µg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Boron	150		µg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Copper	5.2		µg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Dissolved Solids	740		mg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Lead	0.53		µg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Nickel	3.1		µg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Nitrate as N	28		mg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Nitrite as N	0.29		mg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Nitrogen, Total Kjeldahl	0.79		mg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	OrthoPhosphate as P	0.34		mg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Phosphate as P	0.45		mg/L	0.00	0.00

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Sample Date	Sample Time	Analyte	Result	Qualifier Code	Unit	Discharge, cfs	Instantaneous Loading Rate
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Selenium	0.97	DNQ	µg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Total Organic Carbon	5.2		mg/L	0.00	0.00
Westport Drain @ Vivian Rd	E	01/24/08	8:40	Zinc	8		µg/L	0.00	0.00

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Appendix II

Chain of Custody Forms

Administrative Record
Page 12560

Table of Contents

ESJWQC COC ANOMALIES 1
ORGANIC CHEMISTRY ANALYSIS 2
WATER TOXICITY ANALYSIS 10
SEDIMENT TOXICITY ANALYSIS 16
INORGANIC CHEMISTRY ANALYSIS 20
GLYPHOSATE CHEMISTRY ANALYSIS 32

ESJWQC COC anomalies

Anomaly descriptions include date sampled, affected laboratory, affected sites, a brief description of anomaly and corrective action.

Sample Date	Laboratory	Site IDs Affected	Description	Resolution	Resolution Date
01/25/08	Caltest Labs	535DMCAHF, 535XDSAGR	Analyses for 535XDMCAHF requested on COC but no volume submitted; volume for 535XDSAGR submitted but not requested on COC; COC sample ID did not match label ID	COC corrected and faxed to lab	01/28/08
01/25/08	Caltest Labs	535XMCARR	Volume received for glyphosate analysis not requested on COC	Sample volume discarded; volume for glyphosate analysis drawn from sample for paraquat analysis and sent to NCL.	01/29/08

Administrative Record
Page 12562

Organic Chemistry Analysis

Agriculture & Priority Pollutants Laboratories, Inc (APPL)

Administrative Record
Page 12563

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

APPL CHAIN-OF-CUSTODY RECORD

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: F Wolff D. Corcoran
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Carbamate pesticides by EPA 8321 or EPA 632*	Organochlorine pesticides by EPA 8081A or EPA 608*	Pyrethoid pesticides by EPA 8081A or EPA 608*	Organophosphorus pesticides by EPA 8141A or EPA 614*	Herbicides by EPA 619, EPA 8321, EPA 547, EPA 8141A, EPA 549.1*	Paraquat dichloride by EPA 549.1	SAMPLE COMMENTS
1	535XDCAWR-GR	01/24/08	09:10	FW	5	1-L Amber Glass	Ice	X	X		X	X		
2					1	1-L Brown Poly	Ice						X	
3	535XMCAEA-GR	01/24/08	10:40	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
4					1	1-L Brown Poly	Ice						X	
5	~~535XSDAMD-GR~~			~~FW~~	5	1-L Amber Glass	Ice	X	X	X	X	X		Dry side
6					1	1-L Brown Poly	Ice						X	
7	535XHCALR-GR	01/24/08	12:50	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
8					1	1-L Brown Poly	Ice						X	
9	535XMRSFD-GR	01/24/08	11:40	FW	5	1-L Amber Glass	Ice	X	X		X	X		
10					1	1-L Brown Poly	Ice						X	
11	535XHCHNN-GR	01/24/08	14:40	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
12					1	1-L Brown Poly	Ice						X	
13	535XBCAKR	01/24/08	16:00	F.V.	1	1-L Brown Poly	Ice						X	
14					4	1-L Amber	Ice	X	X		X	X		
15														
16														
17														
18														

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com
* See project-specific guidelines for exact analyte list

Temperature at Log In: (°C)

Relinquished By		Relinquished By	
Signature	Daniel Corcoran	Signature	Doug Richards
Print Name	Daniel Corcoran	Print Name	DOUG RICHARDS
Organization	MLJ-llc	Organization	EX MILE
Date / Time	01.24.08 / 18:30	Date / Time	1-24-08 / 1940
Received By		**Received By**	
Signature	Doug Richards	Signature	
Print Name	DOUG RICHARDS	Print Name	C. Mova
Organization	EX MILE	Organization	APPI. INC.
Date / Time	1-24-08 / 1830	Date / Time	01/25/08 / 0800

Matrix codes: **SED** = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

APPL CHAIN-OF-CUSTODY RECORD

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: F. Wulff, D. Corcoran
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Carbamate pesticides by EPA 8321 or EPA 632*	Organochlorine pesticides by EPA 8081A or EPA 608*	Pyrethoid pesticides by EPA 8081A or EPA 608*	Organophosphorus pesticides by EPA 8141A or EPA 614*	Herbicides by EPA 619, EPA 8321, EPA 547, EPA 8141A, EPA 549.2*	Paraquat dichloride by EPA 549.1	SAMPLE COMMENTS
1	~~535XDGAHN-GR~~	~~01/25/08~~	~~13:10~~	FW	~~5~~	~~1-L Amber Glass~~	~~Ice~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		Accounted for on
2					1	1-L Brown Poly	Ice						X	other field sheets
3	535XDSAGR-GR	01/25/08	09:40	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
4					1	1-L Brown Poly	Ice						X	
5	~~535XSSAQR-GR~~			FW	5	1-L Amber Glass	Ice	~~X~~	~~X~~	X	X	X		Dry Site
6					1	1-L Brown Poly	Ice						X	
7	535XDCAGR-GR	01/25/08	10:50	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
8					1	1-L Brown Poly	Ice						X	
9	535XMCARR-GR	01/25/08	13:40	FW	~~4~~ 5	1-L Amber Glass	Ice	X	X	X	X	X		Bottle 1 of 5 cracked, ~~discarding for analysis~~
10					1	1-L Brown Poly	Ice						X	
11	535DMCAHF-GR	01/25/08	12:00	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
12					1	1-L Brown Poly	Ice						X	
13	535DMCAHF-FD	01/25/08	12:00	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
14					1	1-L Brown Poly	Ice						X	
15	535DMCAHF-FB	01/25/08	12:00	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
16					1	1-L Brown Poly	Ice						X	
17	535DMCAHF-MS	01/25/08	12:00	FW	3	1-Gal Amber Glass	Ice	X	X	X	X	X		MATRIX SPIKE
18					1	1-L Brown Poly	Ice						X	MATRIX SPIKE

Baffle 1 of 5 remain
JEK 01/28/08
Does not appear to leak at this time

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com
* See project-specific guidelines for exact analyses

Temperature at Log In: (°C)

Relinquished By	Relinquished By
Signature: Frank Wulff	Signature:
Print Name: Frank Wulff	Print Name: Doug Richards
Organization: MLJ-LLC	Organization: Ex MLE
Date: 1/28/08 Time: 13:45	Date: 1-28-08 Time: 1730
Received By	**Received By**
Signature:	Signature:
Print Name: Doug Richards	Print Name: C. Mower
Organization: Ex MLE	Organization: APPL. INC.
Date: 1-28-08 Time: 1345	Date: 01/29/08 Time: 0800

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

Administrative Record
Page 12565

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
4490 Drew Ave., Suite 175, Davis, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

APPL CHAIN-OF-CUSTODY RECORD

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: J. KATZ, B. JAMES
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Carbamate pesticides by EPA 8321 or EPA 632*	Organochlorine pesticides by EPA 8081A or EPA 608*	Pyrethoid pesticides by EPA 8081A or EPA 608*	Organophosphorus pesticides by EPA 8141A or EPA 614*	Herbicides by EPA 619, EPA 8321, EPA 547, EPA 8141A, EPA 549.1*	Paraquat dichloride by EPA 549.1	SAMPLE COMMENTS
1	~~535XBGAKR-GR~~			FW	~~5~~	~~1-L Amber Glass~~	~~Ice~~	~~X~~	~~X~~		~~X~~	~~X~~		Sampled on 01/24/08
2					~~1~~	~~1-L Brown Poly~~	~~Ice~~						~~X~~	
3	~~535BRCAYR-GR~~			~~FW~~	~~5~~	~~1-L Amber Glass~~	~~Ice~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		Sampled on 01/24/08
4					~~1~~	~~1-L Brown Poly~~	~~Ice~~						~~X~~	
5	545XDCARE-GR	01/25/08	11:10	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
6					1	1-L Brown Poly	Ice						X	
7	~~545XASAAT-GR~~			~~FW~~	~~5~~	~~1-L Amber Glass~~	~~Ice~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		Site dry
8					~~1~~	~~1-L Brown Poly~~	~~Ice~~						~~X~~	
9	~~545XDSARE-GR~~			~~FW~~	~~5~~	~~1-L Amber Glass~~	~~Ice~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		Site dry
10					~~1~~	~~1-L Brown Poly~~	~~Ice~~						~~X~~	
11	545XCCART-GR	01/25/08	09:50	FW	~~3~~ 4	1-L Amber Glass	Ice	X	X		X	X		CHANGED BOTTLE# JEK 01/25/08
12					1	1-L Brown Poly	Ice						X	
13	535XDSAHN-GR	01/25/08	13:10	FW	4	1-L Amb. Glass	Ice	X	X		X	X		
14					1	1-L Br. Poly	ice						X	
15	~~535XMCARR-FB~~	~~01/25/08~~	~~13:40~~	~~FW~~	~~5~~	~~1-L Amber glass~~	~~ice~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		SAMPLE OMITTED JEK 01/28/08
16														
17														
18														

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com
* See project-specific guidelines for exact analyses

Temperature at Log In: (°C)

Relinquished By		Relinquished By	
Signature	Jonathan Katz	Signature	Doug Richards
Print Name	JONATHAN KATZ	Print Name	DOUG RICHARDS
Organization	MLJ LLC	Organization	EX MILE
Date	01/28/08	Time	13:45	Date	1-28-08	Time	1830
Received By		**Received By**	
Signature	Doug Richards	Signature	
Print Name	DOUG RICHARDS	Print Name	C. Mova
Organization	EX MILE	Organization	APPL. INC.
Date	1-28-08	Time	1345	Date	01/29/08	Time	0800

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

APPL CHAIN-OF-CUSTODY RECORD

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: J. Katz A. Siadatan
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Carbamate pesticides by EPA 8321 or EPA 632*	Organochlorine pesticides by EPA 8081A or EPA 608*	Pyrethroid pesticides by EPA 8081A or EPA 608*	Organophosphorus pesticides by EPA 8141A or EPA 614*	Herbicides by EPA 619, EPA 8321, EPA 8141A*	Paraquat dichloride by EPA 549.1	SAMPLE COMMENTS
1	535XBCAKR-GR	02/25/08	13:50	FW	4	1-L Amber Glass	Ice	X	X		X	X		
2					1	1-L Brown Poly	Ice						X	
3	535BRCAYR-GR	02/25/08	14:10	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
4					1	1-L Brown Poly	Ice						X	
5	545XDCARE-GR	02/25/08	11:10	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
6					1	1-L Brown Poly	Ice						X	
7	~~545XASAAT-GR~~			~~FW~~	5	1-L Amber Glass	Ice	X	X	X	X	X		Dry site
8					1	1-L Brown Poly	Ice						X	
9	~~545XBSAAE-GR~~			~~FW~~	5	1-L Amber Glass	Ice	X	X	X	X	X		Dry site
10					1	1-L Brown Poly	Ice						X	
11	545XCCART-GR	02/25/08	09:40	FW	4	1-L Amber Glass	Ice	X	X		X	X		
12					1	1-L Brown Poly	Ice						X	
13	535BRCAYR-MS	02/25/08	14:10	FW	3	1-Gal Amber Glass	Ice	X	X	X	X	X		**MATRIX SPIKE**
14					1	1-L Brown Poly	Ice						X	**MATRIX SPIKE**
15														
16														
17														
18														

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com
* See project-specific guidelines for exact analyses

Temperature at Log In: (°C)

Relinquished By		Relinquished By	
Signature	Jonathan Katz	Signature	Doug Richards
Print Name	JONATHAN KATZ	Print Name	DOUG RICHARDS
Organization	MLJ-LLC	Organization	EF MILE
Date	02/25/08	Time	15:28	Date	2-25-08	Time	1630
Received By		**Received By**	
Signature	Doug Richards	Signature	
Print Name	DOUG RICHARDS	Print Name	C. Moun
Organization	EF MILE	Organization	Appl. Inc
Date	2-25-08	Time	1528	Date	02/26/08	Time	0800

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

APPL CHAIN-OF-CUSTODY RECORD

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: F. Wulff B. Sahes
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Carbamate pesticides by EPA 8321 or EPA 632*	Organochlorine pesticides by EPA 8081A or EPA 608*	Pyrethroid pesticides by EPA 8081A or EPA 608*	Organophosphorus pesticides by EPA 8141A or EPA 614*	Herbicides by EPA 619, EPA 8321, EPA 8141A*	Paraquat dichloride by EPA 549.1	SAMPLE COMMENTS
1	535XDSAHN-GR	02/25/08	12:40	FW	4	1-L Amber Glass	Ice	X	X		X	X		
2					1	1-L Brown Poly	Ice						X	
3	535XDSAGR-GR	02/25/08	09:10	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
4					1	1-L Brown Poly	Ice						X	
5	~~535X3SAQR-GR~~			~~FW~~	5	1-L Amber Glass	Ice	X	X	X	X	X		
6					1	1-L Brown Poly	Ice						X	Dry site
7	535XDCAGR-GR	02/25/08	09:50	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
8					1	1-L Brown Poly	Ice						X	
9	535XMCARR-GR	02/25/08	11:50	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
10					1	1-L Brown Poly	Ice						X	
11	535DMCAHF-GR	02/25/08	10:50	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
12					1	1-L Brown Poly	Ice						X	
13														
14														
15														
16														
17														
18														

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com
* See project-specific guidelines for exact analyses

Temperature at Log In: (°C)

Relinquished By		Relinquished By	
Signature	Allison Siadatan	Signature	
Print Name	Allison Siadatan	Print Name	DOUG RICHARDS
Organization	MLJ-LLC	Organization	EX MILE
Date	02/25/2008	Time	15:15
Date	2-25-08	Time	1630
Received By		**Received By**	
Signature		Signature	
Print Name	DOUG RICHARDS	Print Name	C. Moua
Organization	EX MILE	Organization	Appl. INC.
Date	2-25-08	Time	1528
Date	02/26/08	Time	0800

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

APPL CHAIN-OF-CUSTODY RECORD

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: F. Wulff A. Siadatan
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Carbamate pesticides by EPA 8321 or EPA 632*	Organochlorine pesticides by EPA 8081A or EPA 608*	Pyrethroid pesticides by EPA 8081A or EPA 608*	Organophosphorus pesticides by EPA 8141A or EPA 614*	Herbicides by EPA 619, EPA 8321, EPA 8141A*	Paraquat dichloride by EPA 549.1	SAMPLE COMMENTS
1	535XWDAVR-GR	02/26/08	08:30	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
2					1	1-L Brown Poly	Ice						X	
3	535XHDATR-GR	02/26/08	09:20	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
4					1	1-L Brown Poly	Ice						X	
5	535XLDARA-FD	02/26/08	12:50	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
6					1	1-L Brown Poly	Ice						X	
7	535XLDARA-FB	02/26/08	12:50	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
8					1	1-L Brown Poly	Ice						X	
9	535XLDARA-MS	02/26/08	12:50	FW	3	1-Gal Amber Glass	Ice	X	X	X	X	X		MATRIX SPIKE
10					1	1-L Brown Poly	Ice						X	MATRIX SPIKE
11	535XLDARA-GR	02/26/08	12:50	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
12					1	1-L Brown Poly	Ice						X	
13	535XPFDCL-GR	02/26/08	10:10	FW	4	1-L Amber Glass	Ice	X	X		X	X		
14					1	1-L Brown Poly	Ice						X	
15	535XHDACA-GR	02/26/08	11:20	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
16					1	1-L Brown Poly	Ice						X	
17														
18														

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com
* See project-specific guidelines for exact analyte list

Temperature at Log In: (°C)

Relinquished By	Relinquished By
Signature: Allison Siadat	Signature: Doug Richards
Print Name: Allison Siadatan	Print Name: DOUG RICHARDS
Organization: MLJ-LLC	Organization: EX MILK
Date: 02/26/08 Time: 15:25	Date: 2-26-08 Time: 1625
Received By	**Received By**
Signature:	Signature:
Print Name: DOUG RICHARDS	Print Name: C. Mora
Organization: EX MILK	Organization: APPI. INC.
Date: 2-26-08 Time: 1525	Date: 02/26/08 Time: 1635

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

11

Administrative Record
Page 12569

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

APPL CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	JONATHAN KATZ, BEN JAMES
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Carbamate pesticides by EPA 8321 or EPA 632*	Organochlorine pesticides by EPA 8081A or EPA 608*	Pyrethroid pesticides by EPA 8081A or EPA 608*	Organophosphorus pesticides by EPA 8141A or EPA 614*	Herbicides by EPA 619, EPA 8321, EPA 8141A*	Paraquat dichloride by EPA 549.1	SAMPLE COMMENTS
1	535XDCAWR-GR	02/26/08	8:30	FW	4	1-L Amber Glass	Ice	X	X		X	X		
2					1	1-L Brown Poly	Ice						X	
3	535XMCAEA-GR	02/26/08	9:50	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
4					1	1-L Brown Poly	Ice						X	
5	~~535XSDAMD-GR~~			~~FW~~	5	1-L Amber Glass	~~Ice~~	X	X	X	X	X		SITE DRY
6					1	1-L Brown Poly	Ice						X	
7	535XHCALR-GR	02/26/08	12:00	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
8					1	1-L Brown Poly	Ice						X	
9	535XMRSFD-GR	02/26/08	11:00	FW	4	1-L Amber Glass	Ice	X	X		X	X		
10					1	1-L Brown Poly	Ice						X	
11	535XHCHNN-GR	02/26/08	13:00	FW	5	1-L Amber Glass	Ice	X	X	X	X	X		
12					1	1-L Brown Poly	Ice						X	
13														
14														
15														
16														
17														
18														

12

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com
* See project-specific guidelines for exact analyte list

Temperature at Log In:
(°C)

Relinquished By		Relinquished By	
Signature	JONATHAN KATZ	Signature	
Print Name	JONATHAN KATZ	Print Name	DOUG RICHARDS
Organization	MLJ LLC	Organization	EP MILE
Date	02/26/08	Time	15:25	Date	2-26-08	Time	1625
Received By		**Received By**	
Signature		Signature	
Print Name	DOUG RICHARDS	Print Name	C. Mona
Organization	EP MILE	Organization	APPI. INC.
Date	2-26-08	Time	1525	Date	02/26/08	Time	1635

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

Administrative Record
Page 12570

Water Toxicity Analysis

AQUA-Science

Administrative Record
Page 12571

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

AQUAScience CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	J. KATZ, B. JANES
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Acute *Ceriodaphnia dubia*	Acute *Pimephales promelas*	Chronic *Selenastrum capricornutum*	SAMPLE COMMENTS
1	535XMCARR-GR	01/25/08	13:40	FW	5	1-Gal Amber	Ice	X	X	X	T=2.3°C DO=9.9 pH=7.47
2	535XDSAHN-GR	01/26/08	18:10	FW	5	1-Gal Amber	Ice	X	X	X	T=2.7°C DO=10.4 pH=7.81
3	~~535XBCAKR-GR~~			~~FW~~	~~5~~	~~1-Gal Amber~~	~~Ice~~	~~X~~	~~X~~		→ Sampled on 01/24/08
4	~~535BRCAYR-GR~~			~~FW~~	~~5~~	~~1-Gal Amber~~	~~Ice~~	~~X~~	~~X~~	~~X~~	→ Sampled on 01/24/08
5	545XCCART-GR	01/25/08	09:50	FW	4	1-Gal Amber	Ice	X	X		T=2.8°C DO=9.8 pH=7.32
6	545XDCARE-GR	01/25/08	11:10	FW	5	1-Gal Amber	Ice	X	X	X	T=3.9°C DO=10.4 pH=7.28
7	~~545XBSAAE-GR~~			~~FW~~	~~5~~	~~1-Gal Amber~~	~~Ice~~	~~X~~	~~X~~	~~X~~	→ Site dry
8	~~545XASAAT-GR~~			~~FW~~	~~5~~	~~1-Gal Amber~~	~~Ice~~	~~X~~	~~X~~	~~X~~	→ Site dry
9	535XDSAGR-GR	01/25/08	09:40	FW	5	1-Gal Amber	Ice	X	X	X	T=2.2°C DO=10.4 pH=7.67
10	~~535XSSAQR-GR~~			~~FW~~	~~5~~	~~1-Gal Amber~~	~~Ice~~	~~X~~	~~X~~	~~X~~	→ Site dry
11	535XDCAGR-GR	01/25/08	10:50	FW	5	1-Gal Amber	Ice	X	X	X	T=1.7°C DO=9.9 pH=8.08
12	535DMCAHF-GR	01/25/08	12:00	FW	5	1-Gal Amber	Ice	X	X	X	T=4.7°C DO=9.3 pH=7.55
13	535DMCAHF-FD	01/25/08	12:00	FW	5	1-Gal Amber	Ice	X	X	X	T=3.2°C DO=9.3 pH=7.48
14											
15											
16											
17											
18											

Comments:

Temperature at Log In: (°C)

Relinquished By		Relinquished By	
Signature	[signature]	Signature	
Print Name	JONATHAN KATZ	Print Name	
Organization	MLJ LLC	Organization	
Date 01/25/08	Time 18:15	Date	Time
Received By		**Received By**	
Signature	[signature]	Signature	
Print Name	Curtis Yip	Print Name	
Organization	Aquascience	Organization	
Date 1/26/08	Time 0835	Date	Time

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 Drew Ave., Suite 175, Davis, CA 95618
Office: (530) 756-5200 Fax: (530) 756-5225

AQUAScience CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	F. Wulff A. Siadatan J. Katz B. James
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Acute *Ceriodaphnia dubia*	Acute *Pimephales promelas*	Chronic *Selenastrum capricornutum*	SAMPLE COMMENTS
1	535XMRSFD-RS	01/30/2008	11:40	FW	~~3~~ 2	1-G Amber Glass	Ice	X			temp: ~~4.7~~ pH: ~~7.81~~ DO: 9.9
2	535XPFDCL-RS	01/30/2008	12:40	FW	~~3~~ 2	1-G Amber Glass	Ice			X	temp: ~~3.3~~ 3.4 pH: ~~7.80~~ DO: ~~9.4~~ 13.4
3	535XHCALR-RS	01/30/2008	12:20	FW	~~3~~ 2	1-G Amber Glass	Ice	X			temp: 4.5 pH: ~~7.82~~ 3 DO: ~~13.1~~ 6.0
4	535XMCAEA-RS	01/30/2008	12:40	FW	~~3~~ 2	1-G Amber Glass	Ice	X			temp: 4.5 pH: 7.43 DO: 7.1
5	535XHDATR-RS	01/30/2008	12:10	FW	~~3~~ 2	1-G Amber Glass	Ice			X	temp: 3.5 pH: 7.46 DO: 8.1
6	535XMCARR-RS	01/30/2008	10:40	FW	3	1-G Amber Glass	Ice	X			temp: 3.8 pH: 7.57 DO: 10.0
7	545XCCART-RS	01/30/2008	9:30	FW	4	1-G Amber Glass	Ice		X		temp: ~~3~~ 4.2 pH: 7.47 DO: 9.6
8	535DMCAHF-RS	01/30/2008	13:50	FW	2	1-G Amber	Ice			X	Sample ID: 535DMCAHF-RS AS
9	535XDCAWR-RS	01/30/2008	13:40	FW	2	1-G Glass	Ice			X	temp: 4.2 pH: 7.76 DO: 10.1
10											temp: 3.7
11											pH: 7.72
12											DO: 9.8
13											
14											
15											
16											
17											
18											

Comments:

Temperature at Log In: (°C)

Relinquished By		Relinquished By
Signature		Signature
Print Name	Jonathan Katz	Print Name
Organization	MLJ LLC	Organization
Date 01/30/08	Time 18:10	Date Time
Received By		**Received By**
Signature		Signature
Print Name	Cecilia Walker	Print Name
Organization	AquaScience	Organization
Date 01/31/08	Time 0910	Date Time

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

AQUAScience CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	J. Katz A. Siadatan F. Wulff B. Janes
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Acute *Ceriodaphnia dubia*	Acute *Pimephales promelas*	Chronic *Selenastrum capricornutum*	SAMPLE COMMENTS
1	535XMCARR-GR	02/25/08	11:50	FW	5	1-Gal Amber	Ice	X	X	X	pH: 7.64 DO: 9.0 temp: 4.7
2	535XDSAHN-GR	02/25/08	12:40	FW	5	1-Gal Amber	Ice	X	X	X	pH: 7.79 DO: 10.2 temp: 4.4
3	535XBCAKR-GR	02/25/08	13:50	FW	~~4~~ 4	1-Gal Amber	Ice	X	X		pH: 7.62 DO: 10.5 temp: 5.2
4	535BRCAYR-GR	02/25/08	14:10	FW	5	1-Gal Amber	Ice	X	X	X	pH: 7.60 DO: 10.3 temp: 4.8
5	545XCCART-GR	02/25/08	09:40	FW	~~4~~ 4	1-Gal Amber	Ice	X	X		pH: 7.52 DO: 10.0 temp: 5.2
6	545XDCARE-GR	02/25/08	11:10	FW	5	1-Gal Amber	Ice	X	X	X	pH: 8.00 DO: 11.7 temp: 4.3
7	~~545XBSAAE-GR~~			~~FW~~	~~5~~	~~1-Gal Amber~~	~~Ice~~	~~X~~	~~X~~	~~X~~	Dry site
8	~~545XASAAT-GR~~			~~FW~~	~~5~~	~~1-Gal Amber~~	~~Ice~~	~~X~~	~~X~~	~~X~~	Dry site
9	535XDSAGR-GR	02/25/08	09:10	FW	5	1-Gal Amber	Ice	X	X	X	pH: 7.86 DO: 10.3 temp 5.1
10	~~535XSSAQR-GR~~	~~02/25/08~~		~~FW~~	~~5~~	~~1-Gal Amber~~	~~Ice~~	~~X~~	~~X~~	~~X~~	Dry site
11	535XDCAGR-GR	02/25/08	09:50	FW	5	1-Gal Amber	Ice	X	X	X	pH: 8.69 DO: 12.7 temp 4.3
12	535DMCAHF-GR	02/25/08	10:50	FW	5	1-Gal Amber	Ice	X	X	X	pH: 8.22 DO 10.0 temp 4.9
13											
14											
15											
16											
17											
18											

Comments:

Temperature at Log In: (°C)

Relinquished By		Relinquished By	
Signature		Signature	
Print Name	Krista Callinan	Print Name	
Organization	MLJ-LLC	Organization	
Date 2/26/08	Time 9:05	Date	Time
Received By		**Received By**	
Signature		Signature	
Print Name	Cecilia Walker	Print Name	
Organization	AquaScience	Organization	
Date 02/26/08	Time 0905	Date	Time

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

AQUAScience CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	F. Wulff J. Katz B. Sanes A. Siadatan
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Acute *Ceriodaphnia dubia*	Acute *Pimephales promelas*	Chronic *Selenastrum capriconutum*	SAMPLE COMMENTS
	535XDCAWR-GR	02/26/08	08:30	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 7.89 DO: 10.7 temp: 6.6
1	535XWDAVR-GR	02/26/08	08:30	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 7.63 DO: 8.4 temp: 4.3
2	535XHDATR-GR	02/26/08	09:20	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 7.54 DO: 6.0 temp: 5.0
3	535XMCAEA-GR	02/26/08	09:50	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 7.24 DO: 6.3 temp: 5.5
4	535XLDARA-GR	02/26/08	12:50	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 7.73 DO: 10.3 temp: 4.4
5	~~535XSDAMD-GR~~			~~FW~~	~~5~~	~~1-G Amber Glass~~	~~Ice~~	~~X~~	~~X~~	~~X~~	Site Dry
6	535XPFDCL-GR	02/26/08	10:10	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 8.21 DO: 14.3 temp: 4.2
7	535XHDACA-GR	02/26/08	11:20	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 8.35 DO: 15.1 temp: 4.5
8	535XHCHNN-GR	02/26/08	13:00	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 8.19 DO: 11.3 temp: 4.9
9	535XLDARA-FD	02/26/08	12:50	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 7.73 DO: 10.2 temp: 4.3
10	535XHCALR-GR	02/26/08	12:00	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 7.94 DO: 10.4 temp: 4.9
11	535XMRSFD-GR	02/26/08	11:00	FW	5	1-G Amber Glass	Ice	X	X	X	pH: 7.75 DO: 10.1 temp: 5.0
12											
13											
14											
15											
16											
17											
18											

Comments:

Temperature at Log In: (°C)

Relinquished By		Relinquished By
Signature		Signature
Print Name	Frank Wulff	Print Name
Organization	MLJ-LLC	Organization
Date 02/27/08	Time 8:50	Date Time
Received By		**Received By**
Signature		Signature
Print Name	MIKE MILLER	Print Name
Organization	AQUA-SCIENCE	Organization
Date 2/27/08	Time 9:00	Date Time

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

AQUAScience CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	JONATHAN KATZ, ALLISON SADATAN, FRANK WULFF, BEN JONES
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Acute *Pimephales promelas*	Chronic *Selenastrum capricornutum*	SAMPLE COMMENTS
	535XDCAWR-RS	03/04/08	08:20	FW	2	1-G Amber Glass	Ice		X	Resampling due to toxicity on 02/26/08
1	535XWDAVR-RS	03/04/08	09:50	FW	2	1-G Amber Glass	Ice		X	Resampling due to toxicity on 02/26/08
2	535XHDATR-RS	03/04/08	10:30	FW	2	1-G Amber Glass	Ice		X	Resampling due to toxicity on 02/26/08
3	535XMCAEA-RS	03/04/08	14:00	FW	2	1-G Amber Glass	Ice		X	Resampling due to toxicity on 02/26/08
4	~~535XLDARA-RS~~			~~FW~~	~~3~~	~~1-G Amber Glass~~	~~Ice~~		~~X~~	~~Resampling due to toxicity on 02/26/08~~ SITE DRY
5	545XDCARE-RS	03/04/08	10:00	FW	3	1-G Amber Glass	Ice		X	Resampling due to toxicity on 02/25/08
6	535XPFDCL-RS	03/04/08	11:30	FW	2	1-G Amber Glass	Ice		X	Resampling due to toxicity on 02/26/08
7	535XDCAGR-RS	03/04/08	11:30	FW	2	1-G Amber Glass	Ice		X	Resampling due to toxicity on 02/25/08
8	535XHCHNN-RS	03/04/08	12:40	FW	3	1-G Amber Glass	Ice		X	Resampling due to toxicity on 02/26/08
9	535BRCAYR-RS	03/04/08	12:20	FW	2	1-G Amber Glass	Ice		X	Resampling due to toxicity on 02/25/08
10	535XHCALR-RS	03/04/08	13:20	FW	4	1-G Amber Glass	Ice	X		Resampling due to toxicity on 02/26/08
11										
12										
13										
14										
15										
16										
17										
18										

Comments:

Temperature at Log In: (°C)

Relinquished By		Relinquished By
Signature		Signature
Print Name	JONATHAN KATZ	Print Name
Organization	MLJ LLC	Organization
Date 03/05/08	Time 08:55	Date Time
Received By		**Received By**
Signature		Signature
Print Name	Curtis Yip	Print Name
Organization	Aquascience	Organization
Date 3/5/08	Time 09:00	Date Time

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

Sediment Toxicity Analysis

AQUA-Science

Administrative Record
Page 12577

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

AQUAScience CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	JONATHAN KATZ FRANK WULFF
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Acute *Hyalella azteca* (EPA 100.1)	SAMPLE COMMENTS
1	535XDCAWR-RS	03/28/08	14:40	SED	2	1-L Wide-mouth	Ice	X	
2	535XHDATR-RS	03/29/08	13:40	SED	2	1-L Wide-mouth	Ice	X	
3	535XMCAEA-RS	03/28/08	12:20	SED	2	1-L Wide-mouth	Ice	X	
4	535XHDACA-RS	03/28/08	13:10	SED	2	1-L Wide-mouth	Ice	X	
5	535XHCHNN-RS	03/28/08	10:30	SED	2	1-L Wide-mouth	Ice	X	
6	535XHCALR-RS	03/28/08	11:30	SED	2	1-L Wide-mouth	Ice	X	
7	~~545XCCART-RS~~			~~SED~~	~~2~~	~~1-L Wide-mouth~~	~~Ice~~	~~X~~	SITE DRY
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									

Relinquished By	Relinquished By	Relinquished By
Signature [signature]	Signature	Signature
Print Name Frank Wulff	Print Name	Print Name
Organization MLJ-LLC	Organization	Organization
Date 03/31/08 Time 13:00	Date Time	Date Time

Received By	Received By	Received By
Signature	Signature	Signature [signature]
Print Name	Print Name	Print Name Nathan Hall
Organization	Organization	Organization Nautilus
Date Time	Date Time	Date 4/1/08 Time 0840

Additional Comments:
Please fax completed COC to (530) 756-5225 or scan and email to jkatz@mlj-llc.com

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 758-0200 FAX: (530) 758-0229

AQUAScience CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	B. Jones, F. Wulff
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Acute *Hyalella azteca* (EPA 100.1)	SAMPLE COMMENTS
+•1	535XMCARR-IN	03/04/08	15:00	SED	2	1-L Wide-mouth	Ice	X	0.6°C
+•2	535XDSAHN-IN	03/04/08	15:30	SED	2	1-L Wide-mouth	Ice	X	0.6°C
+3	535XBCAKR-IN	03/04/08	15:30	SED	2	1-L Wide-mouth	Ice	X	0.6°C
+4	535BRCAYR-IN	03/04/08	12:20	SED	2	1-L Wide-mouth	Ice	X	
+5	545XCCART-IN	03/04/08	09:20	SED	2	1-L Wide-mouth	Ice	X	
+6	545XDCARE-IN	03/04/08	10:00	SED	2	1-L Wide-mouth	Ice	X	0.8°C
7	~~545XBSAAE-IN~~	~~03/04/08~~		SED	2	1-L Wide-mouth	Ice	X	Dry Site
8	~~545XASAAT-IN~~			SED	2	1-L Wide-mouth	Ice	X	Dry Site
9	~~545XDSAAT-IN~~	~~03/04/08~~	~~14:50~~	SED	2	1-L Wide-mouth	Ice	X	REWRITTEN BELOW - BJ
10	~~535XSSAQR-IN~~			SED	2	1-L Wide-mouth	Ice	X	DRY SITE
+11	535XDCAGR-IN	03/04/08	11:30	SED	2	1-L Wide-mouth	Ice	X	
+12	535DMCAHF-IN	03/04/08	14:20	SED	2	1-L Wide-mouth	Ice	X	0.6°C
13	~~545DMCAHF-FD~~	~~03/04/08~~	~~14:20~~	SED	2	1-L Wide-mouth	Ice	X	Sample not analyzed JEK 03/05/08
14									
+15	535XDSAGR-IN	03/04/08	13:50	SED	2	1-L Wide-mouth	ICE	X	0.4°C
16									
17									
18									

Relinquished By	Relinquished By	Relinquished By
Signature Fred Wulff	Signature	Signature
Print Name Frank Wulff	Print Name	Print Name
Organization MLJ-LLC	Organization	Organization
Date 03/05/08 Time 11:30	Date Time	Date Time
Received By	**Received By**	**Received By**
Signature Katie Flocken	Signature	Signature
Print Name KATIE FLOCKEN	Print Name	Print Name
Organization NAUTILUS	Organization	Organization
Date 3/7/08 Time 0925	Date Time	Date Time

Additional Comments:
Samples on 2 COCs packed in 4 coolers

Tox Batch 2

Page 1 of 2

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

AQUAScience CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	JONATHAN KATZ, ALISON SIADATAN
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Acute *Hyalella azteca* (EPA 100.1)	SAMPLE COMMENTS
+1	535XDCAWR-IN	03/04/08	08:20	SED	2	1-L Wide-mouth	Ice	X	0.8°C
+2	535XWDAVR-IN	03/04/08	09:50	SED	2	1-L Wide-mouth	Ice	X	0.8°C
+3	535XHDATR-IN	03/04/08	10:30	SED	2	1-L Wide-mouth	Ice	X	0.8°C
+4	535XMCAEA-IN	03/04/08	14:00	SED	2	1-L Wide-mouth	Ice	X	0.4°C
5	~~535XSDAMS-IN~~			~~SED~~	~~2~~	~~1-L Wide-mouth~~	~~Ice~~	~~X~~	SITE DRY
+6	535XPFDCL-IN	03/04/08	11:30	SED	2	1-L Wide-mouth	Ice	X	0.4°C
+7	535XHDACA-IN	03/04/08	16:40	SED	2	1-L Wide-mouth	Ice	X	0.6°C
+8	535XHCHNN-IN	03/04/08	12:40	SED	2	1-L Wide-mouth	Ice	X	0.4°C
+9	535XHDATR-FD	03/04/08	10:30	SED	2	1-L Wide-mouth	Ice	X	0.6°C
+10	535XHCALR-IN	03/04/08	13:20	SED	2	1-L Wide-mouth	Ice	X	0.4°C
11	~~535XMRSFD-IN~~			~~SED~~	~~2~~	~~1-L Wide-mouth~~	~~Ice~~	~~X~~	SAMPLE NOT COLLECTED
12	~~535XLDARA-IN~~			~~SED~~	~~2~~	~~1-L Wide-mouth~~	~~Ice~~	~~X~~	SITE DRY
13									
14									
15									
16									
17									
18									

Relinquished By	Relinquished By	Relinquished By
Signature: [signature]	Signature:	Signature:
Print Name: JONATHAN KATZ	Print Name:	Print Name:
Organization: MLJ LLC	Organization:	Organization:
Date: 03/05/08 Time: 11:30	Date: Time:	Date: Time:
Received By	**Received By**	**Received By**
Signature: [signature]	Signature:	Signature:
Print Name: KATIE FLOCKEN	Print Name:	Print Name:
Organization: NAUTILUS	Organization:	Organization:
Date: 3/7/08 Time: 0925	Date: Time:	Date: Time:

Additional Comments:
Samples on 2 COCs packed in 4 coolers

Tox Batch 1

page 2 of 2

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

Inorganic Chemistry Analysis

Caltest Laboratories

Administrative Record
Page 12581

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-6200 FAX: (530) 756-5225

Caltest CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	JONATHAN KATZ, BEN JANES
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

J010462

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1	-1 535XWDAVR-GR	01/24/08	08:40	FW	1	500 mL Plastic												X	X	
2					1	500 mL Plastic									X	X	X			
3					1	40 mL VOA Triplet					X									
4					1	2000 mL Plastic	X	X	X			X	X	X						
5					1	100 mL Poly				X										
6	-2 535XHDACA-GR	01/24/08	14:10	FW	1	500 mL Plastic												X	X	
7					1	500 mL Plastic									X	X	X			
8					1	40 mL VOA Triplet					X									
9					1	2000 mL Plastic	X	X	X			X	X	X						
10					1	100 mL Poly				X										
11	-3 535XPFDCL-GR	01/24/08 JEK	12:20 ~~12:05~~	FW	1	500 mL Plastic												X	X	
12					1	500 mL Plastic									X	X	X			
13					1	40 mL VOA Triplet					X									
14					1	2000 mL Plastic	X	X	X			X	X	X						
15					1	100 mL Poly				X										
16	-4 535XHDATR-GR	01/24/08	10:00	FW	2	500 mL Plastic												X	X	MATRIX SPIKE
17					2	500 mL Plastic									X	X	X			MATRIX SPIKE
18					3	40 mL VOA Triplet					X									MATRIX SPIKE
19					2	2000 mL Plastic	X	X	X			X	X	X						MATRIX SPIKE
20					1	100 mL Poly				X										
21	-5 53SXLDARA-GR	01/24/08	15:40	FW	1	500 mL Plastic												X	X	
22					1	500 mL Plastic									X	X	X			
23					1	40 mL VOA Triplet					X									
24					1	2000 mL Plastic	X	X	X			X	X	X						
25					1	100 mL Poly				X										
26																				
27	-6 535BRCAYR-GR	01/24/08	17:00	FW	1	40 mL Triple					X									
28					1	2000 mL Pl	X	X	X			X	X	X						
29					1	100 mL Poly				X										
30																				

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

TEMP. (°C): 1.0
SEALED: YES
INTACT: YES

Relinquished By		Relinquished By	
Signature	Jonathan Katz	Signature	Glen Jones
Print Name	JONATHAN KATZ	Print Name	GLEN JANES
Organization	MLJ-LLC	Organization	CALTEST
Date	01/25/08	Time	06:00
Date	1/25/08	Time	649
Received By		**Received By**	
Signature	Ben Janes	Signature	Leah Gaeta
Print Name	GLEN JANES	Print Name	Leah Gaeta
Organization	CALTEST	Organization	Caltest
Date	1/25/08	Time	06,00
Date	1/25/08	Time	0649

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

Caltest CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	F. Wolff D. Corcoran
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

I010962

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1	6 535XDCAWR-GR	01/24/08	09:10	FW	1	500 mL Plastic												X	X	
2					1	500 mL Plastic									X	X	X			
3					1	40 mL VOA Triplet					X									
4					1	2000 mL Plastic	X	X	X			X	X	X						
5					1	100 mL Poly				X										
6	7 535XHCALR-GR	01/24/08	12:50	FW	1	500 mL Plastic												X	X	
7					1	500 mL Plastic									X	X	X			
8					1	40 mL VOA Triplet					X									
9					1	2000 mL Plastic	X	X	X			X	X	X						
10					1	100 mL Poly				X										
11	8 535XHCHNN-GR	01/24/08	14:40	FW	1	500 mL Plastic												X	X	
12					1	500 mL Plastic									X	X	X			
13					1	40 mL VOA Triplet					X									
14					1	2000 mL Plastic	X	X	X			X	X	X						
15					1	100 mL Poly				X										
16																				
17	14 535XMCAEA-GR	01/24/08	10:40	FW	1	40 mL VOA Triplet					X									
18					1	2000 mL Plastic	X	X	X											
19					1	100 mL Poly				X										
20																				
21																				
22	~~535XSDAMD-GR~~			FW	1	40 mL VOA Triplet					X									Dry Ice
23					1	2000 mL Plastic	X	X	X											
24					1	100 mL Poly				X										
25					1	500 mL Plastic												X	X	
26					1	500 mL Plastic									X	X	X			
27	13 535XMRSFD-GR	01/24/08	11:40	FW	1	40 mL VOA Triplet					X									
28					1	2000 mL Plastic	X	X	X			X	X	X						
29																				
30																				

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

TEMP: (°C): 0.0
SEALED: YES
INTACT: YES

Relinquished By	Relinquished By
Signature: DANIEL C	Signature: Glen Immie
Print Name: Daniel Corcoran	Print Name: GLEN IMMIE
Organization: MLJ-LLC	Organization: CALTEST
Date: 01/25/08 Time: 06:00	Date: 1/25/08 Time: 649
Received By	**Received By**
Signature: Glen Immie	Signature: Leah Gacta
Print Name: GLEN IMMIE	Print Name: Leah Gacta
Organization: CALTEST	Organization: Caltest
Date: 1/25/08 Time: 06.00	Date: 1/25/08 Time: 0649

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

Administrative Record
Page 12583

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

Caltest CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	JONATHAN KATZ, BEN JANES
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

IO10962

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1	-9 535XHDATR-FD -16 ES II DUP	01/24/08	10:00	FW	1	500 mL Plastic												X	X	
2					1	500 mL Plastic									X	X	X			
3					1	40 mL VOA Triplet					X									
4					1	2000 mL Plastic	X	X	X			X	X	X						
5					1	100 mL Poly				X										
6	-10 535XHDATR-FB	01/24/08	10:00	FW	1	500 mL Plastic												X	X	
7					1	500 mL Plastic									X	X	X			
8					1	40 mL VOA Triplet					X									
9					1	2000 mL Plastic	X	X	X			X	X	X						
10					1	250 mL Poly				X										
11	-15 535XHDATR-TB	01/24/08	10:00	FW	1	500 mL Plastic												X	X	
12																				
13																				
14																				
15	-11 535XBCAKRGR	01/24/08	16:00	FW	1	500ml P									X	X	X	X	X	
16					1	500ml P														
17					1	40 mL VOAs					X									
18					1	2000 mL	X	X	X			X	X	X						
19					1	100 mL				X										
20	535																			
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

TEMP. (°C): 2.0
SEALED: YES
INTACT: YES

Relinquished By	
Signature	
Print Name	JONATHAN KATZ
Organization	MLJ LLC
Date	01/25/08 Time 06:00
Received By	
Signature	
Print Name	GLEN IMRIE
Organization	CALTEST
Date	1/25/08 Time 06:00

Relinquished By	
Signature	
Print Name	GLEN IMRIE
Organization	CALTEST
Date	1/25/08 Time 0649
Received By	
Signature	Leah Gaeta
Print Name	Leah Gaeta
Organization	Caltest
Date	1/25/08 Time 0649

Matrix codes: SED = sediment, FW = freshwater, WW = wastewater, STRMW = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

Caltest CHAIN-OF-CUSTODY RECORD

I010996

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	F. WULFF, D. CORCORAN
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1																				
2																				
3	-7 535DMCAHF-GR	01/25/08	12:00	FW	1	40 mL VOA Triplet					X									
4					1	2000 mL Plastic	X	X	X											
5					1	100 mL Poly				X										
6					1	500 mL Plastic												X	X	
7					1	500 mL Plastic									X	X	X			
8	-1 535XMCARR-GR	01/25/08	15:40	FW	1	40 mL VOA Triplet					X									
9					1	2000 mL Plastic	X	X	X			X	X	X						
10					1	100 mL Poly				X										
11																				
12																				
13	-8 535DMCAHF-FD	01/25/08 DC	12:00	FW	1	40 mL VOA Triplet					X									
14					1	2000 mL Plastic	X	X	X											
15					1	260 mL Poly				X										
16																				
17																				
18	-9 535DMCAHF-FB	01/25/08 DC	12:00	FW	1	40 mL VOA Triplet					X									
19					1	2000 mL Plastic	X	X	X											
20					1	100 mL Poly				X										
21					1	500 mL Plastic												X	X	
22																				
23	-12 545XDSAGR-TB	01/25/08	09:40	FW																
24																				
25																				
26																				
27																				
28																				
29																				
30																				

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

INTACT
SEALED
TEMP (°C):

Relinquished By		Relinquished By	
Signature	DANIEL	Signature	
Print Name	DANIEL CORCORAN	Print Name	
Organization	MLJ LLC	Organization	Caltest
Date	01/25/08 Time 18:11	Date	1/26/08 Time 0834
Received By		**Received By**	
Signature		Signature	
Print Name		Print Name	Benjamin C. Pilapil
Organization	Caltest	Organization	Caltest
Date	1/26/08 Time 725	Date	012608 Time 0835

Matrix codes: **SED** = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-6200 FAX: (530) 756-6225

Caltest CHAIN-OF-CUSTODY RECORD

IU10996

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	J. KATZ, B. JAMES
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1					1	500 mL Plastic									X	X	X	X	X	Sampled on 01/24/08
2					1	500 mL Plastic														
3	~~535XBCAKR-GR~~			~~FW~~	1	~~40 mL VOA Triplet~~					X									
4					1	2000 mL Plastic	X	X	X			X	X	X						
5					1	100 mL Poly				X										
6																				
7	~~535BRCAYR-GR~~			~~FW~~																Sampled on 01/24/08
8					1	40 mL VOA Triplet					X									
9					1	2000 mL Plastic	X	X	X											
10					1	100 mL Poly				X										
11					1	500 mL Plastic												X	X	Dry Site
12					1	500 mL Plastic									X	X	X			
13	~~545XASAAT-GR~~			~~FW~~	1	40 mL VOA Triplet					X									
14					1	2000 mL Plastic	X	X	X			X	X	X						
15					1	100 mL Poly				X										
16					1	500 mL Plastic												X	X	
17					1	500 mL Plastic									X	X	X			
18	5 545XDCARE-GR	01/25/08	11:10	FW	1	40 mL VOA Triplet					X									
19					1	2000 mL Plastic	X	X	X			X	X	X						
20					1	100 mL Poly				X										
21																				
22	~~545XBSAAB-GR~~			~~FW~~																Dry Site
23					1	40 mL VOA Triplet					X									
24					1	2000 mL Plastic	X	X	X											
25					1	100 mL Poly				X										
26					1	500 mL Plastic												X	X	
27					1	500 mL Plastic									X	X	X			
28	6 545XCCART-GR	01/25/08	09:50	FW	1	40 mL VOA Triplet					X									
29					1	2000 mL Plastic	X	X	X			X	X	X						
30					1	100 mL Poly				X										

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

TEMP. (°C): _____
SEALED: _____
INTACT: _____

Relinquished By		Relinquished By	
Signature		Signature	
Print Name	JONATHAN KATZ	Print Name	Ben Pitt
Organization	MLJ LLC	Organization	Caltest
Date	01/25/08 Time 18:05	Date	1/26/08 Time 0837
Received By		**Received By**	
Signature		Signature	
Print Name	Ben Pitt	Print Name	Benjamin C. Pitt
Organization	Caltest	Organization	Caltest
Date	1/26 Time 725	Date	012618 Time 0838

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

Caltest CHAIN-OF-CUSTODY RECORD

I010996

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	F. Wolff, D Corcoran
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1					1	500 mL Plastic												X	X	
2	-2 535XDSAHN-GR	01/25/08	13:10	FW	1	500 mL Plastic									X	X	X			
3					1	40 mL VOA Triplet					X									
4					1	2000 mL Plastic	X	X	X			X	X	X						
5					1	100 mL Poly				X										
6					2	500 mL Plastic												X	X	MATRIX SPIKE
7					2	500 mL Plastic									X	X	X			MATRIX SPIKE
8	-3 535XDSAGR-GR	01/25/08	09:40	FW	3	40 mL VOA Triplet					X									MATRIX SPIKE
9					2	2000 mL Plastic	X	X	X			X	X	X						MATRIX SPIKE
10					1	100 mL Poly				X										
11					1	500 mL Plastic												X	X	
12					1	500 mL Plastic									X	X	X			
13	-4 535XDCAGR-GR	01/25/08	10:50	FW	1	40 mL VOA Triplet					X									
14					1	2000 mL Plastic	X	X	X			X	X	X						
15					1	100 mL Poly				X										
16																				
17																				
18	~~535XSSAGR-GR~~			FW	1	40 mL VOA Triplet					X	/								Dry site
19					1	2000 mL Plastic	X	X	X											
20					1	100 mL Poly				X										
21					1	500 mL Plastic												X	X	
22					1	500 mL Plastic									X	X	X			
23	-10 545XDSAGR-FD	01/25/08	09:40	FW																
24					1	2000 mL Plastic						X	X	X						
25																				
26					1	500 mL Plastic												X	X	
27					1	500 mL Plastic									X	X	X			
28	-11 545XDSAGR-FB	01/25/08	09:40	FW																
29					1	2000 mL Plastic						X	X	X						
30																				

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

TEMP. [°C]: ____
SEALED: ____
INTACT: ____

Relinquished By		Relinquished By	
Signature	DANIEL CORCORAN	Signature	
Print Name	DANIEL CORCORAN	Print Name	
Organization	MLJ-LLC	Organization	Caltest
Date	01/28/08 Time 18:11	Date	1/26/08 Time 0834
Received By		**Received By**	
Signature		Signature	
Print Name		Print Name	Benjamin C. Pilegi
Organization	Caltest	Organization	Caltest
Date	1/26 Time 1725	Date	012608 Time 0838

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

Caltest CHAIN-OF-CUSTODY RECORD

SEALED: YES
INTACT: YES

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	J. Katz A. Siadatan
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East San Joaquin Water Quality Coalition

J020459

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1	535XBCAKR-GR -10 dup	02/25/08	13:50	FW	2	500 mL Plastic									X	X	X			MATRIX SPIKE
2					2	500 mL Plastic														MATRIX SPIKE
3					3	40 mL VOA Triplet					X									MATRIX SPIKE
4					2	2000 mL Plastic	X	X	X			X	X	X						(LAB DUPLICATE)
5					1	260 mL Poly				X										
6																				
7	2 535BRCAYR-GR	02/25/08	14:10	FW	1	40 mL VOA Triplet					X									
8					1	2000 mL Plastic	X	X	X											
9					1	100 mL Poly				X										
10					1	500 mL Plastic												X	X	Dry Site
11					1	500 mL Plastic									X	X	X			
12	~~545XASAAT-GR~~			~~FW~~	1	~~40 mL VOA Triplet~~					X									
13					1	2000 mL Plastic	X	X	X			X	X	X						
14					1	100 mL Poly				X										
15					1	500 mL Plastic												X	X	
16	3 545XDCARE-GR	02/25/08	11:10	FW	1	500 mL Plastic									X	X	X			
17					1	40 mL VOA Triplet					X									
18					1	2000 mL Plastic	X	X	X			X	X	X						
19					1	100 mL Poly				X										
20																				Dry site
21	~~545XBSAAE-GR~~			~~FW~~	1	~~40 mL VOA Triplet~~					X									
22					1	2000 mL Plastic	X	X	X											
23					1	100 mL Poly				X										
24					1	500 mL Plastic												X	X	
25	4 545XCCART-GR	02/25/08	09:40	FW	1	500 mL Plastic									X	X	X			
26					1	40 mL VOA Triplet					X									
27					1	2000 mL Plastic	X	X	X			X	X	X						
28					1	100 mL Poly				X										

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

Relinquished By		Relinquished By	
Signature	Frank Wulff	Signature	Glen Imrie
Print Name	Frank Wulff	Print Name	GLEN IMRIE
Organization	MLJ-LLC	Organization	CALTEST
Date	02/26/08	Time	05:45
Date	2/26/08	Time	724
Received By		**Received By**	
Signature	Glen Imrie	Signature	Rob Hinote
Print Name	GLEN IMRIE	Print Name	L. Gaeta
Organization	CALTEST	Organization	Caltest
Date	2/26/08	Time	05 45
Date	2/26/08	Time	0724

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

Administrative Record
Page 12588

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

Caltest CHAIN-OF-CUSTODY RECORD

TEMP. (°C): 2.0
SEALED: YES
INTACT: YES

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	F. Wulff B. James
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1					1	500 mL Plastic												X	X	ID20959
2					1	500 mL Plastic									X	X	X			
3	5 535XDSAHN-GR	02/25/08	12:40	FW	1	40 mL VOA Triplet					X									
4					1	2000 mL Plastic	X	X	X			X	X	X						
5					1	100 mL Poly				X										
6					1	500 mL Plastic												X	X	
7					1	500 mL Plastic									X	X	X			
8	6 535XDSAGR-GR	02/25/08	09:10	FW	1	40 mL VOA Triplet					X									
9					1	2000 mL Plastic	X	X	X			X	X	X						
10					1	100 mL Poly				X										
11					1	500 mL Plastic												X	X	
12					1	500 mL Plastic									X	X	X			
13	7 535XDCAGR-GR	02/25/08	09:50	FW	1	40 mL VOA Triplet					X									
14					1	2000 mL Plastic	X	X	X			X	X	X						
15					1	100 mL Poly				X										
16																				
17																				
18	~~535XSSAQR-GR~~			FW	1	40 mL VOA Triplet					X									Dry site
19					1	2000 mL Plastic	X	X	X											
20					1	100 mL Poly				X										
21																				
22																				
23	8 535DMCAHF-GR	02/25/08	10:50	FW	1	40 mL VOA Triplet					X									
24					1	2000 mL Plastic	X	X	X											
25					1	100 mL Poly				X										
26					1	500 mL Plastic												X	X	
27					1	500 mL Plastic									X	X	X			
28	9 535XMCARR-GR	02/25/08	11:50	FW	1	40 mL VOA Triplet					X									
29					1	2000 mL Plastic	X	X	X			X	X	X						
30					1	100 mL Poly				X										

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC: (530) 756-5225, or email to jkatz@mlj-llc.com

Relinquished By		Relinquished By	
Signature	Frank Wulff	Signature	Glen Imaie
Print Name	Frank Wulff	Print Name	GLEN IMAIE
Organization	MLJ-LLC	Organization	CALTEST
Date	02/26/08	Time	05:45
Date	2/26/08	Time	7:27
Received By		**Received By**	
Signature	Glen Imaie	Signature	Kathy Gaeta
Print Name	GLEN IMAIE	Print Name	L Gaeta
Organization	CALTEST	Organization	Caltest
Date	2/26/08	Time	0545
Date	2/26/08	Time	0724

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

Caltest CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	JONATHAN KATZ, BEN JAMES
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

I020971

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1					1	500 mL Plastic												X	X	
2	-1 535XDCAWR-GR	02/26/08	8:30	FW	1	500 mL Plastic									X	X	X			
3					1	40 mL VOA Triplet					X									
4					1	2000 mL Plastic	X	X	X			X	X	X						
5					1	100 mL Poly				X										
6					1	500 mL Plastic												X	X	
7	-2 535XHCALR-GR	02/26/08	12:00	FW	1	500 mL Plastic									X	X	X			
8					1	40 mL VOA Triplet					X									
9					1	2000 mL Plastic	X	X	X			X	X	X						
10					1	100 mL Poly				X										
11					1	500 mL Plastic												X	X	
12	-3 535XHCHNN-GR	02/26/08	13:00	FW	1	500 mL Plastic									X	X	X			
13					1	40 mL VOA Triplet					X									
14					1	2000 mL Plastic	X	X	X			X	X	X						
15					1	100 mL Poly				X										
16																				
17																				
18	-4 535XMCAEA-GR	02/26/08	9:50	FW	1	40 mL VOA Triplet					X									
19					1	2000 mL Plastic	X	X	X											
20					1	100 mL Poly				X										
21																				
22																				
23	~~535XSDAMD-GR~~			FW	1	40 mL VOA Triplet					X									SITE DRY
24					1	2000 mL Plastic	X	X	X											
25					1	100 mL Poly				X										
26					1	500 mL Plastic												X	X	
27	-5 535XMRSFD-GR	02/26/08	11:00	FW	1	500 mL Plastic									X	X	X			
28					1	40 mL VOA Triplet					X									
29					1	2000 mL Plastic	X	X	X			X	X	X						
30																				

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC: (530) 756-5225, or email to jkatz@mlj-llc.com

TEMP (°C): 0.0
SEALED: YES
INTACT: YES

Relinquished By		Relinquished By	
Signature	[signature]	Signature	[signature]
Print Name	JONATHAN KATZ	Print Name	GLEN IMRIE
Organization	MLJ LLC	Organization	CALTEST
Date	02/27/08	Time	06:00
Date	2/27/08	Time	0655
Received By		**Received By**	
Signature	[illegible]	Signature	[signature]
Print Name	[illegible]	Print Name	L. Gaeta
Organization	[illegible]	Organization	Caltest
Date	[illegible]	Time	[illegible]
Date	2/27/08	Time	0655

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

Caltest CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	F. Wulff A. Siadatan
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

JO20991

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1					1	500 mL Plastic												X	X	
2					1	500 mL Plastic									X	X	X			
3	4 535XLDARA-FD (EBD Dup)	02/26/08	12:50	FW	1	40 mL VOA Triplet					X									
4					1	2000 mL Plastic	X	X	X			X	X	X						
5					1	260 mL Poly				X										
6					1	500 mL Plastic												X	X	140 2/28
7	5 535XLDARA-FB	02/26/08	12:50	FW	1	500 mL Plastic									X	X	X			
8					1	40 mL VOA Triplet					X									
9					1	2000 mL Plastic	X	X	X			X	X	X						
10					1	100 mL Poly				X										
11					1	500 mL Plastic												X	X	140 2/28
12	~~6 535XLDARA-TB~~ 14	~~02/26/08~~	~~12:50~~	FW																
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

TEMP. (°C): 1.0
SEALED: YES
INTACT: YES

Relinquished By		Relinquished By	
Signature		Signature	
Print Name	JONATHAN KATZ	Print Name	GLEN IMRIE
Organization	MLJ LLC	Organization	CALTEST
Date	02/27/08 Time 06:00	Date	2/27/08 Time 06.55
Received By		**Received By**	
Signature		Signature	
Print Name	GLEN IMRIE	Print Name	L.Gaeta
Organization	CALTEST	Organization	Caltest
Date	2/27/08 Time 06.00	Date	2/27/08 Time 0655

Matrix codes: SED = sediment, FW = freshwater, WW = wastewater, STRMW = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

Caltest CHAIN-OF-CUSTODY RECORD

Client Name:	MLJ-LLC
Address:	1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By:	F. Wulff A. Siadatan
Phone:	(530) 756-5200
Fax:	(530) 756-5225
Project Manager:	Michael Johnson
Project Name:	East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	E. coli (SM 9221 B)	TOC (SM 5310 C)	Nitrate as N (EPA 300.0)	Nitrite as N (EPA 354.1)	Soluble Orthophosphate as P (EPA 300.1)	Total Kjeldahl Nitrogen (EPA 365.1)	Total Ammonia (EPA 350.3)	Total Phosphorus as P (EPA 365.1)	Metals: Selenium, Arsenic, Boron, Cadmium, Copper, Lead, Nickel, Zinc (EPA 200.8)	Hardness as CaCO3 (EPA 130.2 / SM2340C)	Sample Comments
1					1	500 mL Plastic												X	X	
2					1	500 mL Plastic									X	X	X			
3	6 535XWDAVR-GR	02/26/08	08:30	FW	1	40 mL VOA Triplet					X									
4					1	2000 mL Plastic	X	X	X			X	X	X						
5					1	100 mL Poly				X										
6					1	500 mL Plastic												X	X	
7					1	500 mL Plastic									X	X	X			
8	7 535XHDACA-GR	02/26/08	11:20	FW	1	40 mL VOA Triplet					X									
9					1	2000 mL Plastic	X	X	X			X	X	X						
10					1	100 mL Poly				X										
11					1	500 mL Plastic												X	X	
12					1	500 mL Plastic									X	X	X			
13	8 535XPFDCL-GR	02/26/08	10:10	FW	1	40 mL VOA Triplet					X									
14					1	2000 mL Plastic	X	X	X			X	X	X						
15					1	100 mL Poly				X										
16					2	500 mL Plastic												X	X	MATRIX SPIKE
17					2	500 mL Plastic									X	X	X			MATRIX SPIKE
18	9 535XLDARA-GR	02/26/08	12:50	FW	3	40 mL VOA Triplet					X									MATRIX SPIKE
19					2	2000 mL Plastic	X	X	X			X	X	X						MATRIX SPIKE
20					1	100 mL Poly				X										
21					1	500 mL Plastic												X	X	
22					1	500 mL Plastic									X	X	X			
23	10 535XHDATR-GR	02/26/08	09:20	FW	1	40 mL VOA Triplet					X									
24					1	2000 mL Plastic	X	X	X			X	X	X						
25					1	100 mL Poly				X										
26																				
27																				
28																				
29																				
30																				

D020991

Comments:

Temperature at Log In: (°C)

Please fax signed and completed COC to MLJ LLC: (530) 756-5225, or email to jkatz@mlj-llc.com

TEMP. (°C): 2.0
SEALED: YES
INTACT: YES

Relinquished By	Relinquished By
Signature	Signature
Print Name JONATHAN KATZ	Print Name GLEN IMRIE
Organization MLJ-LLC	Organization CALTEST
Date 02/27/08 Time 06:00	Date 2/27/08 Time 06.55
Received By	**Received By**
Signature	Signature
Print Name GLEN IMRIE	Print Name
Organization CALTEST	Organization Caltest
Date 2/27/08 Time 06.00	Date 2/27/08 Time 0655

Matrix codes: **SED** = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

Glyphosate Chemistry Analysis

North Coast Laboratories (NCL)

Administrative Record
Page 12593

0801653

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 Drew Ave., Suite 175, Davis, CA 95618
Office: (530) 756-5200 Fax: (530) 756-5225

NCL CHAIN-OF-CUSTODY RECORD

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: F. Wolff, D. Corcoran
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East Joaquin Water Quality Coalition

THIS IS AN EXACT COPY OF THE ORIGINAL

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Glyphosate- low level detection (EPA 547)	SAMPLE COMMENTS
1	535XDCAWR-GR	01/24/08	09:10	FW	2	40-mL Glass	Ice	X	
2	535XHCHNN-GR	01/24/08	14:40	FW	2	40-mL Glass	Ice	X	
3	535XHCALR-GR	01/24/08	12:50	FW	2	40-mL Glass	Ice	X	
4	535XMCAEA-GR	01/24/08	10:40	FW	2	40-mL Glass	Ice	X	
5	~~535XSDAMD-GR~~			FW	2	40-mL Glass	Ice	X	Dry site
6	535XMRSFD-GR	01/24/08	11.40	FW	2	40-mL Glass	Ice	X	
7	535XDCAKR	01/24/08	16:00	FW	2	40-mL Glass	Ice	X	
8									
9									
10									
11									
12									
13									
14									
15									

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

Temperature at Log In:
(°C) 0.3°C

Relinquished By	Relinquished By
Signature: Daniel Corcoran	Signature: Allison Siadatan
Print Name: DANIEL CORCORAN	Print Name: Allison Siadatan
Organization: MLJ-LLC	Organization: MLJ-LLC
Date: 01.24.08 Time: 22.40	Date: 01/25/08 Time: 09:40
Received By	**Received By**
Signature: Allison Siadatan	Signature:
Print Name: Allison Siadatan	Print Name: Trudie Haughy
Organization: MLJ-LLC	Organization: NCL
Date: 01/25/08 Time: 08:00	Date: 1/28/08 Time: 1047

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

cooler temp 0.3°C

109

0801632

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

NCL CHAIN-OF-CUSTODY RECORD

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: JONATHAN KATZ, BEN JANES
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Glyphosate- low level detection (EPA 547)	SAMPLE COMMENTS
1	535XPFDCL-GR	01/24/08	12:20	FW	2	40-mL Glass	Ice	X	SAMPLE TIME = 12:20 JEK
2	535XHDACA-GR	01/24/08	14:10	FW	2	40-mL Glass	Ice	X	
3	535XWDAVR-GR	01/24/08	08:40	FW	2	40-mL Glass	Ice	X	
4	535XLDARA-GR	01/24/08	15:40	FW	2	40-mL Glass	Ice	X	
5	535XHDATR-GR	01/24/08	10:00	FW	2	40-mL Glass	Ice	X	
6	535XHDATR-FD	01/24/08	10:00	FW	2	40-mL Glass	Ice	X	
7	535XHDATR-FB	01/24/08	10:00	FW	2	40-mL Glass	Ice	X	
8	535XHDATR-MS	01/24/08	10:00	FW	3	40-mL Glass	Ice	X	MATRIX SPIKE
9	535BBCAYR-GR	01/24/08	17:00	FW	2	40ml Glass	ICE	X	
10									
11									
12									
13									
14									
15									

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

Temperature at Log In: (°C) 6.3°C

Relinquished By	Relinquished By
Signature [signature]	Signature [signature]
Print Name JONATHAN KATZ	Print Name Allison Siadatan
Organization MLJ-LLC	Organization MLJ-LLC
Date 01/24/08 Time 22:40	Date 01/25/08 Time 09:40
Received By	**Received By**
Signature [signature]	Signature [signature]
Print Name Allison Siadatan	Print Name Trudie Haughy
Organization MLJ-LLC	Organization NCL
Date 01/25/08 Time 08:00	Date 1/28/08 Time 1047

Matrix codes: **SED** = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

Cooler temp 0.3°C

#0801634

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

NCL CHAIN-OF-CUSTODY RECORD

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: F. Wulff, D. Corcoran
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Glyphosate- low level detection (EPA 547)	SAMPLE COMMENTS
1	~~535XDSAHN-GR~~			FW	2	40-mL Glass	Ice	X	accidental for on other coc
2	535XDSAGR-GR	01/23/08	09:40	FW	2	40-mL Glass	Ice	X	
3	535XDCAGR-GR	01/25/08	10:50	FW	2	40-mL Glass	Ice	X	
4	~~535XDEAQR-GR~~			~~FW~~	~~2~~	~~40-mL Glass~~	~~Ice~~	~~X~~	Dry Site
5	535DMCAHF-GR	01/28/08	12:00	FW	2	40-mL Glass	Ice	X	
6	535XMCARR-GR	01/25/08	13:40	FW	2	40-mL Glass	Ice	X	Samples missing as of 12:00 on 01/28/08; bottles (new) filled w/ H_2O from Paragual Sample of same site + time JEK 01/29/08
7	535DMCAHF-FD	01/28/08	12:00	FW	2	40-mL Glass	Ice	X	
8	535DMCAHF-FB	01/28/08	12:00	FW	2	40-mL Glass	Ice	X	
9	535DMCAHF-MS	01/25/08	12:00	FW	3	40-mL Glass	Ice	X	MATRIX SPIKE
10									
11									
12									
13									
14									
15									

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

Temperature at Log In: 8.2 (°C)

Relinquished By		Relinquished By	
Signature	DANIEL	Signature	
Print Name	DANIEL CORCORAN	Print Name	
Organization	MLJ-LLC	Organization	
Date 01/28/08	Time 12:30	Date	Time
Received By		**Received By**	
Signature		Signature	
Print Name	STEVE DITO	Print Name	
Organization	NCL	Organization	
Date 1/29/08	Time 10:15	Date	Time

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

#0801635

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 Drew Ave., Suite 175, Davis, CA 95618
Office: (530) 756-5200 Fax: (530) 756-5225

NCL CHAIN-OF-CUSTODY RECORD

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: B. JANES, J. KATZ
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Glyphosate- low level detection (EPA 547)	SAMPLE COMMENTS
1	~~535XBCAKR-GR~~			FW	2	40-mL Glass	Ice	X	sampled on 01/24/08
2	~~535BRCAYR-GR~~			FW	2	40-mL Glass	Ice	X	sampled on 01/24/08
3	545XCCART-GR	01/25/08	09:50	FW	2	40-mL Glass	Ice	X	
4	545XDCARE-GR	01/25/08	11:10	FW	2	40-mL Glass	Ice	X	
5	~~545XBSAAE-GR~~			FW	2	40-mL Glass	Ice	X	⇒ site dry
6	~~545XASAAT-GR~~			FW	2	40-mL Glass	Ice	X	⇒ site dry
7	535XDSAHN-GR	01/25/08	13:10	FW	2	40 mL glass	Ice	X	
8									
9									
10									
11									
12									
13									
14									
15									

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

Temperature at Log In: 3.2 (°C)

Relinquished By		Relinquished By	
Signature		Signature	
Print Name	JONATHAN KATZ	Print Name	
Organization	MLJ LLC	Organization	
Date 01/28/08	Time 12:30	Date	Time
Received By		**Received By**	
Signature		Signature	
Print Name	STEVE DITTO	Print Name	
Organization	NCL	Organization	
Date 1/29/08	Time 10:15	Date	Time

Matrix codes: **SED** = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 759-0229

NCL CHAIN-OF-CUSTODY RECORD 0802612

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: J. Katz A. Siadatan
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Glyphosate- low level detection (EPA 547)	SAMPLE COMMENTS
1	535XBCAKR-GR	02/25/08	13:50	FW	2	40-mL Glass	Ice	X	
2	535BRCAYR-GR	02/25/08	14:10	FW	2	40-mL Glass	Ice	X	— put on hold - same as sample on line #7
3	545XCCART-GR	02/25/08	09:40	FW	2	40-mL Glass	Ice	X	
4	545XDCARE-GR	02/25/08	11:10	FW	2	40-mL Glass	Ice	X	
5	~~545XBSAKE-GR~~			~~FW~~	~~2~~	~~40-mL Glass~~	~~Ice~~	~~X~~	Dry site
6	~~545XASAAT-GR~~			~~FW~~	~~2~~	~~40-mL Glass~~	~~Ice~~	~~X~~	Dry site
7	535BRCAYR-MS	02/25/08	14:10	FW	3	40-mL Glass	Ice	X	MATRIX SPIKE
8									change ID to CAYR-GR the MS/MSD and grab sample were done from same vial. RWM 3/11/08
9									
10									
11									
12									
13									
14									
15									

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

Temperature at Log In: (°C)

Relinquished By		Relinquished By	
Signature	F. Wulff	Signature	
Print Name	Frank Wulff	Print Name	
Organization	MLJ-LLC	Organization	
Date 02/27/08	Time 10:00	Date	Time
Received By		**Received By**	
Signature		Signature	
Print Name	Ron Canady	Print Name	
Organization	NCL	Organization	
Date 2/28/08	Time 107	Date	Time

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

temp 0.2°C

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 Drew Ave., Suite 175, Davis, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

NCL CHAIN-OF-CUSTODY RECORD 0802613

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: F. WulFF B. James
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East San Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Glyphosate- low level detection (EPA 547)	SAMPLE COMMENTS
1	535XDSAHN-GR	02/25/08	12:40	FW	2	40-mL Glass	Ice	X	
2	535XDSAGR-GR	02/25/08	09:10	FW	2	40-mL Glass	Ice	X	
3	535XDCAGR-GR	02/25/08	09:50	FW	2	40-mL Glass	Ice	X	
4	~~535X9SAQR-GR~~			~~FW~~	~~2~~	~~40-mL Glass~~	~~Ice~~	~~X~~	Dry site
5	535DMCAHF-GR	02/25/08	10:50	FW	2	40-mL Glass	Ice	X	
6	535XMCARR-GR	02/25/08	11:50	FW	2	40-mL Glass	Ice	X	
7									
8									
9									
10									
11									
12									
13									
14									
15									

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

Temperature at Log In: (°C)

Relinquished By		Relinquished By	
Signature	Frank Wulff	Signature	
Print Name	Frank WulFF	Print Name	
Organization	MLJ-LLC	Organization	
Date 02/27/08	Time 10:00	Date	Time
Received By		**Received By**	
Signature	Ron Cy	Signature	
Print Name	Ron Canady	Print Name	
Organization	NCL	Organization	
Date 2/28/08	Time 1027	Date	Time

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

temp 0.2°C

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

NCL CHAIN-OF-CUSTODY RECORD 08526614

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: F. Wulff A. Siadatan
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Glyphosate- low level detection (EPA 547)	SAMPLE COMMENTS
1	535XPFDCL-GR	02/26/08	10:10	FW	2	40-mL Glass	Ice	X	
2	535XHDACA-GR	02/26/08	11:20	FW	2	40-mL Glass	Ice	X	
3	535XWDAVR-GR	02/26/08	08:30	FW	2	40-mL Glass	Ice	X	
4	535XLDARA-GR	02/26/08	12:50	FW	2	40-mL Glass	Ice	X	-Put sample on hold. data from sample on line #5.
5	535XHDATR-GR	02/26/08	09:20	FW	2	40-mL Glass	Ice	X	
6	535XLDARA-FD	02/26/08	12:50	FW	2	40-mL Glass	Ice	X	
7	535XLDARA-FB	02/26/08	12:50	FW	2	40-mL Glass	Ice	X	
8	535XLDARA-MS	02/26/08	12:50	FW	3	40-mL Glass	Ice	X	MATRIX SPIKE changed ID to -GR from -MS. Will this sample for scale. MS / MSD. Rum 3/6/08
9									
10									
11									
12									
13									
14									
15									

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

Temperature at Log In: (°C)

Relinquished By		Relinquished By	
Signature	Frank Wulff	Signature	
Print Name	Frank Wulff	Print Name	
Organization	MLJ-LLC	Organization	
Date 02/27/08	Time 10:00	Date	Time
Received By		**Received By**	
Signature		Signature	
Print Name	Ron Canady	Print Name	
Organization	NCL	Organization	
Date 2/28/08	Time 1027	Date	Time

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

temp 0.2°C

MICHAEL L JOHNSON LLC
ECOSYSTEMS CONSULTING
1490 DREW AVE., SUITE 175, DAVIS, CA 95618
OFFICE: (530) 756-5200 FAX: (530) 756-5225

NCL CHAIN-OF-CUSTODY RECORD

08262015

Client Name: MLJ-LLC
Address: 1490 Drew Ave. Suite 175, Davis, CA 95618
Sampled By: JONATHAN KATZ, BEN JONES
Phone: (530) 756-5200
Fax: (530) 756-5225
Project Manager: Michael Johnson
Project Name: East Joaquin Water Quality Coalition

	Sample Identification	Sample Date	Sample Time	Sample Matrix	Number	Type	Preservative	Glyphosate- low level detection (EPA 547)	SAMPLE COMMENTS
1	535XDCAWR-GR	02/26/08	8:30	FW	2	40-mL Glass	Ice	X	
2	535XHCHNN-GR	02/26/08	13:00	FW	2	40-mL Glass	Ice	X	
3	535XHCALR-GR	02/26/08	12:00	FW	2	40-mL Glass	Ice	X	
4	535XMCAEA-GR	02/26/08	9:50	FW	2	40-mL Glass	Ice	X	
5	~~535XSDAMD-GR~~			~~FW~~	~~2~~	~~40-mL Glass~~	~~Ice~~	~~X~~	SITE DRY
6	535XMRSFD-GR	02/26/08	11:00	FW	2	40-mL Glass	Ice	X	
7									
8									
9									
10									
11									
12									
13									
14									
15									

Comments:

Please fax signed and completed COC to MLJ LLC:
(530) 756-5225, or email to jkatz@mlj-llc.com

Temperature at Log In: (°C)

Relinquished By		Relinquished By
Signature	Frank Wolff	Signature
Print Name	Frank WOLFF	Print Name
Organization	MLJ-LLC	Organization
Date 02/27/08 Time	10:00	Date Time
Received By		**Received By**
Signature		Signature
Print Name	Ron Canady	Print Name
Organization	NCL	Organization
Date 2/28/08 Time	1027	Date Time

Matrix codes: SED = sediment, **FW** = freshwater, **WW** = wastewater, **STRMW** = stormwater

temp 0.2°C

Appendix III

Lab and Field QC Results

Administrative Record
Page 12602

Table of Contents

Table III -1. ESJWQC sample results including field blanks (FB) and field duplicates (FD) for organic analysis. 1
Table III -2. ESJWQC laboratory quality assurance (LABQA) results for organic analysis. 20
Table III -3. ESJWQC sample results including field blanks (FB), field duplicates (FD) and travel blanks (TB) for inorganic analysis including physical parameters, nutrients, metals and bacteria. 73
Table III -4. ESJWQC laboratory quality assurance (LABQA) results for inorganic analysis including physical parameters, nutrients, metals and bacteria. 84
Table III -5. ESJWQC water toxicity testing results. 110
Table III -6. ESJWQC sediment toxicity testing results. 112

Table III -1. ESJWQC sample results including field blanks (FB) and field duplicates (FD) for organic analysis.

Expected values for field duplicates are the associated environmental sample result. Samples are sorted by station name, sample type code, sample date, and analyte.

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5	<0.5		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07	<0.07		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07	<0.07		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02	<0.02		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5	<0.5		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03	<0.03		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05	<0.05		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01	<0.01		None	<RL or < (sample ÷ 5)	

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12604

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	56.5	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02	<0.02		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1	<0.1		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	5	<5		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8321A	Isoxaben (Surrogate)	85.2	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2	<0.2		None	<RL or < (sample ÷ 5)	

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12605

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07	<0.07		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5	<0.5		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Parathion, Methyl	<0.08	µg/L	ND	0.08	0.1	<.01		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Phorate	<0.07	µg/L	ND	0.07	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2	<0.2		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 619	Simazine	0.48	µg/L	DNQ	0.08	0.5	<0.5		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	Env sample=25
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	67.6	%		NA	NA	100		None	<RL or < (sample ÷ 5)	

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Administrative Record
Page 12606

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5	<0.5		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 619	Tributylphosphate (Surrogate)	224	%		NA	NA	100		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	224	%		NA	NA	100		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	105	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8321A	Tributylphosphate (Surrogate)	86.5	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 619	Triphenyl phosphate (Surrogate)	129	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	129	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FB	1.00	01/25/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	79.6	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5	<0.07	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1	<0.02	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02	<0.006	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07	<0.05	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07	<0.05	FD RPD NA	None	RPD <25	

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Administrative Record
Page 12607

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02	0.012	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5	<0.09	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03	<0.003	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02	<0.001	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05	<0.004	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01	<0.003	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01	<0.004	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01	<0.007	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	33	%		NA	NA	100		None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Diazinon	0.018	µg/L	DNQ	0.004	0.02	0.021	FD RPD 15.4	Surrogate recovery is outside of control limits; Primary and confirmation results varied by > than 40%	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1	<0.01	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01	<0.005	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1	<0.08	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	

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Administrative Record
Page 12608

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1	<0.02	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8321A	Diuron	6.3	µg/L		2	4	6.2	FD RPD 1.6	Analytes analyzed at a secondary dilution	RPD <25	DF=10
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01	<0.007	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02	<0.002	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	15	<4	FD RPD NA	Reporting limits elevated due to matrix interferences	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8321A	Isoxaben (Surrogate)	98.6	%		NA	NA	100		None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1	<0.05	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2	<0.01	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1	<0.04	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07	<0.05	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01	<0.008	FD RPD NA	None	RPD <25	

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Administrative Record
Page 12609

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5	<0.13	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4	<0.21	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Parathion, Methyl	<0.08	µg/L	ND	0.08	0.1	<0.08	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02	<0.009	FD RPD NA	None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Phorate	<0.07	µg/L	ND	0.07	0.1	<0.07	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2	<0.06	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 619	Simazine	19	µg/L		1	5	25	FD RPD 27	Dilution performed; Field duplicate RPD above QC limit; Surrogate recovery is outside of control limits.	RPD <25	DF=10
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	67.5	%		NA	NA	100		None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5	<0.06	FD RPD NA	Surrogate recovery is outside of control limits	RPD <25	

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Administrative Record
Page 12610

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 619	Tributylphosphate (Surrogate)	175	%		NA	NA	100		Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	175	%		NA	NA	100		Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	88.9	%		NA	NA	100		None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8321A	Tributylphosphate (Surrogate)	103	%		NA	NA	100		None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 619	Triphenyl phosphate (Surrogate)	142	%		NA	NA	100		None	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	142	%		NA	NA	100		Surrogate recovery is outside of control limits	RPD <25	
Deadman Creek @ Hwy 59	FD	1.00	01/25/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	68.1	%		NA	NA	100		None	RPD <25	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5	<0.5		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07	<0.07		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07	<0.07		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02	<0.02		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	

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Administrative Record
Page 12611

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5	<0.5		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03	<0.03		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05	<0.05		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	55.6	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02	<0.02		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1	<0.1		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02	<0.02		None	<RL or < (sample ÷ 5)	

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Administrative Record
Page 12612

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	5	<5		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8321A	Isoxaben (Surrogate)	85.5	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2	<0.2		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07	<0.07		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5	<0.5		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1	<0.1		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	

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Administrative Record
Page 12613

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2	<0.2		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5	<0.5		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	49.8	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5	<0.5		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 619	Tributylphosphate (Surrogate)	150	%		NA	NA	100		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Tributylphosphate (Surrogate)	138	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Tributylphosphate (Surrogate)	150	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8321A	Tributylphosphate (Surrogate)	107	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 619	Triphenyl phosphate (Surrogate)	131	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Triphenyl phosphate (Surrogate)	131	%		NA	NA	100		Surrogate recovery is outside of control limits	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 8141A	Triphenyl phosphate (Surrogate)	114	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5	<0.07	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1	<0.02	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02	<0.006	FD RPD NA	None	RPD <25	

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Administrative Record
Page 12614

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07	<0.05	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07	<0.05	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02	<0.003	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 619	Cyanazine	0.46	µg/L	DNQ	0.09	0.5	<0.09	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03	<0.003	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02	<0.001	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05	<0.004	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01	<0.003	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01	<0.004	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01	<0.007	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	60.9	%		NA	NA	100		None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Diazinon	0.035	µg/L		0.004	0.02	0.037	FD RPD 5.6	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1	<0.01	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01	<0.005	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1	<0.08	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1	<0.02	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01	<0.007	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02	<0.002	FD RPD NA	None	RPD <25	

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Administrative Record
Page 12615

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	10	<4	FD RPD NA	Reporting limits elevated due to matrix interferences	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8321A	Isoxaben (Surrogate)	98.7	%		NA	NA	100		None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1	<0.05	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2	<0.01	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1	<0.04	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07	<0.05	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Methoxychlor	0.017	µg/L		0.008	0.01	0.016	FD RPD 6.1	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5	<0.13	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4	<0.21	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1	<0.075	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02	<0.009	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1	<0.072	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2	<0.06	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 619	Simazine	0.38	µg/L	DNQ	0.08	0.5	<0.08	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	53.1	%		NA	NA	100		None	RPD <25	

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Administrative Record
Page 12616

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5	<0.06	FD RPD NA	None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 619	Tributylphosphate (Surrogate)	89.2	%		NA	NA	100		None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Tributylphosphate (Surrogate)	103	%		NA	NA	100		None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Tributylphosphate (Surrogate)	89.2	%		NA	NA	100		None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8321A	Tributylphosphate (Surrogate)	102	%		NA	NA	100		None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 619	Triphenyl phosphate (Surrogate)	115	%		NA	NA	100		None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Triphenyl phosphate (Surrogate)	122	%		NA	NA	100		None	RPD <25	
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 8141A	Triphenyl phosphate (Surrogate)	115	%		NA	NA	100		None	RPD <25	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5	<0.5		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1	<0.1		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07	<0.07		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07	<0.07		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5	<0.5		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03	<0.03		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05	<0.05		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01	<0.01		None	<RL or < (sample ÷ 5)	

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Administrative Record
Page 12617

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Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	65.7	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1	<0.1		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1	<0.1		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1	<0.1		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01	<0.01		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	5	<5		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8321A	Isoxaben (Surrogate)	112	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1	<0.1		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2	<0.2		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1	<0.1		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07	<0.07		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01	<0.01		None	<RL or < (sample ÷ 5)	

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Administrative Record
Page 12618

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5	<0.5		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4	<0.4		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1	<0.1		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02	<0.02		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1	<0.1		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2	<0.2		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5	<0.5		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	71.1	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5	<0.5		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 619	Tributylphosphate (Surrogate)	90.9	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	96.2	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	125	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8321A	Tributylphosphate (Surrogate)	130	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 619	Triphenyl phosphate (Surrogate)	106	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	90.8	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	99.5	%		NA	NA	100		None	<RL or < (sample ÷ 5)	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5	<0.07	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1	<0.02	FD RPD NA	None	RPD <25	

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Administrative Record
Page 12619

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Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02	<0.006	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07	<0.05	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07	<0.05	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02	<0.003	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5	<0.09	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03	<0.003	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02	<0.001	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05	<0.004	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01	<0.003	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01	<0.004	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01	<0.007	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	59.9	%		NA	NA	100		None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Diazinon	0.079	µg/L		0.004	0.02	0.068	FD RPD 14.9	Primary and confirmation results varied by > than 40%	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1	<0.1	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01	<0.005	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1	<0.08	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1	<0.02	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01	<0.007	FD RPD NA	None	RPD <25	

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Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02	<0.002	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 547M	Glyphosate	<4	µg/L	ND	4	5	<4	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8321A	Isoxaben (Surrogate)	91.9	%		NA	NA	100		None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1	<0.05	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2	<0.01	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1	<0.04	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07	<0.05	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01	<0.008	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5	<0.13	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4	<0.2	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4	<0.21	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1	<0.075	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02	<0.009	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1	<0.072	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2	<0.06	FD RPD NA	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 619	Simazine	0.88	µg/L		0.08	0.5	0.8	FD RPD 9.5	None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	70.6	%		NA	NA	100		None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5	<0.06	FD RPD NA	None	RPD <25	

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Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 619	Tributylphosphate (Surrogate)	99.7	%		NA	NA	100		None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	147	%		NA	NA	100		None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	101	%		NA	NA	100		None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8321A	Tributylphosphate (Surrogate)	118	%		NA	NA	100		None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 619	Triphenyl phosphate (Surrogate)	119	%		NA	NA	100		None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	103	%		NA	NA	100		None	RPD <25	
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	88.3	%		NA	NA	100		None	RPD <25	

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Administrative Record
Page 12622

Table III -2. ESJWQC laboratory quality assurance (LABQA) results for organic analysis.

Results include blanks (LabBlank), matrix spikes (MS), and laboratory control spikes (LCS) for organic analysis. LABQA was performed for samples collected during the 2008 storm season and results are sorted by sample type, station name, sample date, and analyte. For laboratory control samples, the sample date is equal to the extraction date; some LABQA samples may appear to be duplicates due to multiple batches run on the same date.

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8321A	Aldicarb	1	µg/L		0.2	0.4	1.07	PR 93.5		None	PR 31-133
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8321A	Aldicarb	0.966	µg/L		0.2	0.4	1.07	PR 90.3	RPD 3.5	None	PR 31-133 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 619	Atrazine	6.09	µg/L		0.07	0.5	5	PR 122		None	PR 39-156
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 619	Atrazine	5.84	µg/L		0.07	0.5	5	PR 117	RPD 4.2	None	PR 39-156 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Azinphos methyl	3.05	µg/L		0.02	0.1	2	PR 153		None	PR 36-189
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Azinphos methyl	3.14	µg/L		0.02	0.1	2	PR 157	RPD 2.9	None	PR 36-189 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Bifenthrin	0.301	µg/L		0.006	0.02	0.4	PR 75.3		None	PR 52-117
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Bifenthrin	0.31	µg/L		0.006	0.02	0.4	PR 77.5	RPD 2.9	None	PR 52-117 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8321A	Carbaryl	0.257	µg/L		0.05	0.07	0.267	PR 96.3		None	PR 44-133
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8321A	Carbaryl	0.256	µg/L		0.05	0.07	0.267	PR 95.9	RPD 0.39	None	PR 44-133 RPD <25

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Administrative Record
Page 12623

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8321A	Carbofuran	0.268	µg/L		0.05	0.07	0.267	PR 100		None	PR 36-165
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8321A	Carbofuran	0.235	µg/L		0.05	0.07	0.267	PR 88.0	RPD 13.1	None	PR 36-165 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Chlorpyrifos	0.977	µg/L		0.003	0.02	1.0057	PR 97.1		None	PR 61-125
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Chlorpyrifos	1.1	µg/L		0.003	0.02	1.0057	PR 109	RPD 11.8	None	PR 61-125 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 619	Cyanazine	9.79	µg/L		0.09	0.5	5	PR 193		Matrix spike recovery not within control limits	PR 22-172
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 619	Cyanazine	8.71	µg/L		0.09	0.5	5	PR 171	RPD 11.7	None	PR 22-172 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Cyfluthrin, total	0.313	µg/L		0.003	0.03	0.4	PR 78.3		None	PR 53-125
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Cyfluthrin, total	0.332	µg/L		0.003	0.03	0.4	PR 83.0	RPD 5.9	None	PR 53-125 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Cyhalothrin, lambda, total	0.305	µg/L		0.001	0.02	0.4	PR 76.3		None	PR 62-104
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Cyhalothrin, lambda, total	0.335	µg/L		0.001	0.02	0.4	PR 83.8	RPD 9.4	None	PR 62-104 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Cypermethrin, total	1.55	µg/L		0.004	0.05	2	PR 77.5		None	PR 55-107

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Administrative Record
Page 12624

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Cypermethrin, total	1.6	µg/L		0.004	0.05	2	PR 80.0	RPD 3.2	None	PR 55-107 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	DDD (p,p')	0.457	µg/L		0.003	0.01	0.6	PR 76.2		None	PR 38-135
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	DDD (p,p')	0.448	µg/L		0.003	0.01	0.6	PR 74.7	RPD 2.0	None	PR 38-135 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	DDE (p,p')	0.535	µg/L		0.004	0.01	0.6	PR 89.2		None	PR 21-134
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	DDE (p,p')	0.517	µg/L		0.004	0.01	0.6	PR 86.2	RPD 3.4	None	PR 21-134 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	DDT (p,p')	0.589	µg/L		0.007	0.01	0.6	PR 98.2		None	PR 18-145
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	DDT (p,p')	0.568	µg/L		0.007	0.01	0.6	PR 94.7	RPD 3.6	None	PR 18-145 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Decachlorobiphenyl (Surrogate)	73	%		NA	NA	100			None	PR 16-146
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Decachlorobiphenyl (Surrogate)	68.2	%		NA	NA	100			None	PR 16-146 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Diazinon	0.971	µg/L		0.004	0.02	1	PR 97.1		None	PR 57-130
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Diazinon	1.14	µg/L		0.004	0.02	1	PR 114	RPD 16.0	None	PR 57-130 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Dicofol	0.369	µg/L		0.01	0.1	0.4	PR 92.3		None	PR 40-135

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Administrative Record
Page 12625

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Dicofol	0.397	µg/L		0.01	0.1	0.4	PR 99.3	RPD 7.3	None	PR 40-135 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Dieldrin	0.572	µg/L		0.005	0.01	0.6	PR 95.3		None	PR 48-121
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Dieldrin	0.547	µg/L		0.005	0.01	0.6	PR 91.2	RPD 4.5	None	PR 48-121 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Dimethoate	1.35	µg/L		0.08	0.1	1	PR 135		None	PR 68-202
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Dimethoate	1.45	µg/L		0.08	0.1	1	PR 145	RPD 7.1	None	PR 68-202 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Disulfoton	0.994	µg/L		0.02	0.1	1	PR 99.4		None	PR 47-115
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Disulfoton	0.806	µg/L		0.02	0.1	1	PR 80.6	RPD 20.9	None	PR 47-115 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8321A	Diuron	1.07	µg/L		0.2	0.4	1.07	PR 100		None	PR 52-136
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8321A	Diuron	1.04	µg/L		0.2	0.4	1.07	PR 97.2	RPD 2.8	None	PR 52-136 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Endrin	0.568	µg/L		0.007	0.01	0.6	PR 94.7		None	PR 24-143
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Endrin	0.549	µg/L		0.007	0.01	0.6	PR 91.5	RPD 3.4	None	PR 24-143 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.304	µg/L		0.002	0.02	0.4	PR 76.0		None	PR 52-117

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Administrative Record
Page 12626

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.319	µg/L		0.002	0.02	0.4	PR 79.8	RPD 4.8	None	PR 52-117 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 547M	Glyphosate	40.74	µg/L		4	5	50	PR 81.5		None	PR 76-127
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 547M	Glyphosate	41.32	µg/L		4	5	50	PR 82.6	RPD 1.4	None	PR 76-127 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8321A	Isoxaben (Surrogate)	113	%		NA	NA	100			None	PR 47-134
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8321A	Isoxaben (Surrogate)	97.7	%		NA	NA	100			None	PR 47-134 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8321A	Linuron	1.09	µg/L		0.2	0.4	1.07	PR 102		None	PR 49-144
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8321A	Linuron	0.974	µg/L		0.2	0.4	1.07	PR 91.0	RPD 11.2	None	PR 49-144 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Malathion	1.21	µg/L		0.05	0.1	1	PR 121		None	PR 47-125
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Malathion	1.07	µg/L		0.05	0.1	1	PR 107	RPD 12.3	None	PR 47-125 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Methamidophos	0.385	µg/L		0.01	0.2	0.5	PR 77.0		None	PR 40-135
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Methamidophos	0.38	µg/L		0.01	0.2	0.5	PR 76.0	RPD 1.3	None	PR 40-135 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Methidathion	2.62	µg/L		0.04	0.1	2	PR 131		None	PR 50-150

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Administrative Record
Page 12627

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Methidathion	2.71	µg/L		0.04	0.1	2	PR 136	RPD 3.4	None	PR 50-150 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8321A	Methiocarb	1.03	µg/L		0.2	0.4	1.07	PR 96.3		None	PR 35-142
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8321A	Methiocarb	0.939	µg/L		0.2	0.4	1.07	PR 87.8	RPD 9.2	None	PR 35-142 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8321A	Methomyl	0.277	µg/L		0.05	0.07	0.267	PR 104		None	PR 23-152
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8321A	Methomyl	0.225	µg/L		0.05	0.07	0.267	PR 84.3	RPD 20.7	None	PR 23-152 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Methoxychlor	0.557	µg/L		0.008	0.01	0.6	PR 92.8		None	PR 30-163
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Methoxychlor	0.551	µg/L		0.008	0.01	0.6	PR 91.8	RPD 1.1	None	PR 30-163 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Molinate	4.93	µg/L		0.13	0.5	5	PR 98.6		None	PR 50-150
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Molinate	5.56	µg/L		0.13	0.5	5	PR 111	RPD 12.0	None	PR 50-150 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8321A	Oxamyl	1.07	µg/L		0.2	0.4	1.07	PR 100		None	PR 10-117
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8321A	Oxamyl	0.988	µg/L		0.2	0.4	1.07	PR 92.3	RPD 8.0	None	PR 10-117 RPD <25

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Administrative Record
Page 12628

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 549.2M	Paraquat dichloride	1.95	µg/L		0.21	0.4	40	PR 4.9		Matrix spike recovery not within control limits	PR 50-126
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 549.2M	Paraquat dichloride	2.35	µg/L		0.21	0.4	40	PR 5.9	RPD 18.6	Matrix spike recovery not within control limits	PR 50-126 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Parathion, Methyl	0.946	µg/L		0.075	0.1	1	PR 94.6		None	PR 55-164
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Parathion, Methyl	1.1	µg/L		0.075	0.1	1	PR 110	RPD 15.1	None	PR 55-164 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Permethrin, total	0.303	µg/L		0.009	0.02	0.4	PR 75.8		None	PR 24-166
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Permethrin, total	0.341	µg/L		0.009	0.02	0.4	PR 85.3	RPD 11.8	None	PR 24-166 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Phorate	0.918	µg/L		0.072	0.1	1	PR 91.8		None	PR 44-117
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Phorate	1.12	µg/L		0.072	0.1	1	PR 112	RPD 19.8	None	PR 44-117 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Phosmet	1.09	µg/L		0.06	0.2	1	PR 109		None	PR 50-150
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Phosmet	1.12	µg/L		0.06	0.2	1	PR 112	RPD 2.7	None	PR 50-150 RPD <25

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Administrative Record
Page 12629

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Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 619	Simazine	4.64	µg/L		0.08	0.5	5	PR 92.8		None	PR 21-179
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 619	Simazine	4.62	µg/L		0.08	0.5	5	PR 92.4	RPD 0.43	None	PR 21-179 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	75.8	%		NA	NA	100			None	PR 15-98
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	72.7	%		NA	NA	100			None	PR 15-98 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Thiobencarb	5.55	µg/L		0.06	0.5	5	PR 111		None	PR 50-150
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Thiobencarb	5.61	µg/L		0.06	0.5	5	PR 112	RPD 1.1	None	PR 50-150 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 619	Tributylphosphate (Surrogate)	101	%		NA	NA	100			None	PR 62-145
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 619	Tributylphosphate (Surrogate)	99.5	%		NA	NA	100			None	PR 62-145 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Tributylphosphate (Surrogate)	82	%		NA	NA	100			None	PR 60-150
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Tributylphosphate (Surrogate)	101	%		NA	NA	100			None	PR 60-150
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Tributylphosphate (Surrogate)	99.5	%		NA	NA	100			None	PR 60-150 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Tributylphosphate (Surrogate)	75	%		NA	NA	100			None	PR 60-150 RPD <25

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Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8321A	Tributylphosphate (Surrogate)	120	%		NA	NA	100			None	PR 36-140
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8321A	Tributylphosphate (Surrogate)	119	%		NA	NA	100			None	PR 36-140 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 619	Triphenyl phosphate (Surrogate)	118	%		NA	NA	100			None	PR 54-144
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 619	Triphenyl phosphate (Surrogate)	104	%		NA	NA	100			None	PR 54-144 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Triphenyl phosphate (Surrogate)	118	%		NA	NA	100			None	PR 56-129
Black Rascal Creek @ Yosemite Rd	MS	1.00	02/25/08	14:10	EPA 8141A	Triphenyl phosphate (Surrogate)	90.9	%		NA	NA	100			None	PR 56-129
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Triphenyl phosphate (Surrogate)	104	%		NA	NA	100			None	PR 56-129 RPD <25
Black Rascal Creek @ Yosemite Rd	MS	2.00	02/25/08	14:10	EPA 8141A	Triphenyl phosphate (Surrogate)	84.6	%		NA	NA	100			None	PR 56-129 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8321A	Aldicarb	0.808	µg/L		0.2	0.4	1.07	PR 75.5		None	PR 31-133
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8321A	Aldicarb	0.929	µg/L		0.2	0.4	1.07	PR 86.8	RPD 13.9	None	PR 31-133 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 619	Atrazine	4.88	µg/L		0.07	0.5	5	PR 97.6		Surrogate recovery is outside of control limits	PR 39-156

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Administrative Record
Page 12631

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 619	Atrazine	5.07	µg/L		0.07	0.5	5	PR 101	RPD 3.8	Surrogate recovery is outside of control limits	PR 39-156 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Azinphos methyl	2.41	µg/L		0.02	0.1	2	PR 121		None	PR 36-189
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Azinphos methyl	2.34	µg/L		0.02	0.1	2	PR 117	RPD 2.9	None	PR 36-189 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Bifenthrin	0.291	µg/L		0.006	0.02	0.4	PR 72.7		None	PR 52-117
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Bifenthrin	0.302	µg/L		0.006	0.02	0.4	PR 75.5	RPD 3.7	None	PR 52-117 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8321A	Carbaryl	0.118	µg/L		0.05	0.07	0.267	PR 44.2		None	PR 44-133
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8321A	Carbaryl	0.116	µg/L		0.05	0.07	0.267	PR 43.4	RPD 1.7	Matrix spike recovery not within control limits	PR 44-133 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8321A	Carbofuran	0.238	µg/L		0.05	0.07	0.267	PR 89.1		None	PR 36-165
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8321A	Carbofuran	0.257	µg/L		0.05	0.07	0.267	PR 96.3	RPD 7.7	None	PR 36-165 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Chlorpyrifos	1.02	µg/L		0.003	0.02	1	PR 101		None	PR 61-125
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Chlorpyrifos	0.97	µg/L		0.003	0.02	1	PR 95.8	RPD 5.0	None	PR 61-125 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 619	Cyanazine	5.43	µg/L		0.09	0.5	5	PR 109		Surrogate recovery is outside of control limits	PR 22-172

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Administrative Record
Page 12632

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 619	Cyanazine	5.57	µg/L		0.09	0.5	5	PR 111	RPD 2.5	Surrogate recovery is outside of control limits	PR 22-172 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Cyfluthrin, total	0.297	µg/L		0.003	0.03	0.4	PR 74.2		None	PR 53-125
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Cyfluthrin, total	0.302	µg/L		0.003	0.03	0.4	PR 75.5	RPD 1.7	None	PR 53-125 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Cyhalothrin, lambda, total	0.209	µg/L		0.001	0.02	0.4	PR 52.2		Matrix spike recovery not within control limits	PR 62-104
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Cyhalothrin, lambda, total	0.217	µg/L		0.001	0.02	0.4	PR 54.3	RPD 3.8	Matrix spike recovery not within control limits	PR 62-104 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Cypermethrin, total	1.55	µg/L		0.004	0.05	2	PR 77.5		None	PR 55-107
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Cypermethrin, total	1.59	µg/L		0.004	0.05	2	PR 79.5	RPD 2.5	None	PR 55-107 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	DDD (p,p')	0.608	µg/L		0.003	0.01	0.6	PR 101		None	PR 38-135
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	DDD (p,p')	0.531	µg/L		0.003	0.01	0.6	PR 88.5	RPD 13.5	None	PR 38-135 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	DDE (p,p')	0.555	µg/L		0.004	0.01	0.6	PR 92.5		None	PR 21-134
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	DDE (p,p')	0.476	µg/L		0.004	0.01	0.6	PR 79.3	RPD 15.3	None	PR 21-134 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	DDT (p,p')	0.587	µg/L		0.007	0.01	0.6	PR 97.8		None	PR 18-145
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	DDT (p,p')	0.521	µg/L		0.007	0.01	0.6	PR 86.8	RPD 11.9	None	PR 18-145 RPD <25

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Administrative Record
Page 12633

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	68.5	%		NA	NA	100			None	PR 16-146
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	61.2	%		NA	NA	100			None	PR 16-146 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Diazinon	0.998	µg/L		0.004	0.02	1.021	PR 97.7		None	PR 57-130
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Diazinon	0.948	µg/L		0.004	0.02	1.021	PR 92.7	RPD 5.1	None	PR 57-130 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Dicofol	0.383	µg/L		0.01	0.1	0.4	PR 95.8		None	PR 40-135
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Dicofol	0.447	µg/L		0.01	0.1	0.4	PR 112	RPD 15.4	None	PR 40-135 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Dieldrin	0.574	µg/L		0.005	0.01	0.6	PR 95.7		None	PR 48-121
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Dieldrin	0.505	µg/L		0.005	0.01	0.6	PR 84.2	RPD 12.8	None	PR 48-121 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Dimethoate	1.07	µg/L		0.08	0.1	1	PR 107		None	PR 68-202
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Dimethoate	1.12	µg/L		0.08	0.1	1	PR 112	RPD 4.6	None	PR 68-202 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Disulfoton	0.99	µg/L		0.02	0.1	1	PR 99.0		None	PR 47-115
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Disulfoton	1.02	µg/L		0.02	0.1	1	PR 102	RPD 3.0	None	PR 47-115 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8321A	Diuron	7.39	µg/L		0.2	0.4	7.37	PR 102		None	PR 52-136
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8321A	Diuron	7.33	µg/L		0.2	0.4	7.37	PR 96.3	RPD 0.82	None	PR 52-136 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Endrin	0.703	µg/L		0.007	0.01	0.6	PR 117		None	PR 24-143
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Endrin	0.591	µg/L		0.007	0.01	0.6	PR 98.5	RPD 17.3	None	PR 24-143 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.293	µg/L		0.002	0.02	0.4	PR 73.2		None	PR 52-117
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.302	µg/L		0.002	0.02	0.4	PR 75.5	RPD 3.0	None	PR 52-117 RPD <25

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Administrative Record
Page 12634

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 547M	Glyphosate	58.32	µg/L		4	5	50	PR 102		None	PR 76-127
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 547M	Glyphosate	58.78	µg/L		4	5	50	PR 103	RPD 0.78	None	PR 76-127 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8321A	Isoxaben (Surrogate)	113	%		NA	NA	100			None	PR 47-134
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8321A	Isoxaben (Surrogate)	102	%		NA	NA	100			None	PR 47-134 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8321A	Linuron	1.14	µg/L		0.2	0.4	1.07	PR 107		None	PR 49-144
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8321A	Linuron	1.41	µg/L		0.2	0.4	1.07	PR 132	RPD 21.2	None	PR 49-144 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Malathion	1.17	µg/L		0.05	0.1	1	PR 117		None	PR 47-125
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Malathion	1.18	µg/L		0.05	0.1	1	PR 118	RPD 0.85	None	PR 47-125 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Methamidophos	0.368	µg/L		0.01	0.2	0.5	PR 73.6		None	PR 40-135
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Methamidophos	0.373	µg/L		0.01	0.2	0.5	PR 74.6	RPD 1.3	None	PR 40-135 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Methidathion	2.71	µg/L		0.04	0.1	2	PR 136		None	PR 50-150
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Methidathion	2.4	µg/L		0.04	0.1	2	PR 120	RPD 12.1	None	PR 50-150 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8321A	Methiocarb	1.05	µg/L		0.2	0.4	1.07	PR 98.1		None	PR 35-142
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8321A	Methiocarb	1.03	µg/L		0.2	0.4	1.07	PR 96.3	RPD 1.9	None	PR 35-142 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8321A	Methomyl	0.224	µg/L		0.05	0.07	0.267	PR 83.9		None	PR 23-152
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8321A	Methomyl	0.206	µg/L		0.05	0.07	0.267	PR 77.2	RPD 8.4	None	PR 23-152 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Methoxychlor	0.628	µg/L		0.008	0.01	0.6	PR 105		None	PR 30-163
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Methoxychlor	0.55	µg/L		0.008	0.01	0.6	PR 91.7	RPD 13.2	None	PR 30-163 RPD <25

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Administrative Record
Page 12635

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Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Molinate	3.54	µg/L		0.13	0.5	5	PR 70.8		None	PR 50-150
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Molinate	3.67	µg/L		0.13	0.5	5	PR 73.4	RPD 3.6	None	PR 50-150 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8321A	Oxamyl	0.583	µg/L		0.2	0.4	1.07	PR 54.5		None	PR 10-117
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8321A	Oxamyl	0.63	µg/L		0.2	0.4	1.07	PR 58.9	RPD 7.7	None	PR 10-117 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 549.2M	Paraquat dichloride	0	µg/L		0.21	0.4	2	PR 0.0		Matrix spike recovery not within control limits	PR 50-126
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 549.2M	Paraquat dichloride	0	µg/L		0.21	0.4	2	PR 0.0	RPD 0.00	Matrix spike recovery not within control limits	PR 50-126 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Parathion, Methyl	0.861	µg/L		0.08	0.1	1	PR 86.1		None	PR 55-164
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Parathion, Methyl	0.856	µg/L		0.08	0.1	1	PR 85.6	RPD 0.58	None	PR 55-164 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Permethrin, total	0.318	µg/L		0.009	0.02	0.4	PR 79.5		None	PR 24-166
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Permethrin, total	0.301	µg/L		0.009	0.02	0.4	PR 75.3	RPD 5.5	None	PR 24-166 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Phorate	1.1	µg/L		0.07	0.1	1	PR 110		None	PR 44-117
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Phorate	1.03	µg/L		0.07	0.1	1	PR 103	RPD 6.6	None	PR 44-117 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Phosmet	0.885	µg/L		0.06	0.2	1	PR 88.5		None	PR 50-150
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Phosmet	0.861	µg/L		0.06	0.2	1	PR 86.1	RPD 2.7	None	PR 50-150 RPD <25

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Administrative Record
Page 12636

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Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 619	Simazine	30.5	µg/L		0.1	5	30	PR 110		Surrogate recovery is outside of control limits	PR 21-179
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 619	Simazine	31.9	µg/L		0.1	5	30	PR 138	RPD 4.5	Surrogate recovery is outside of control limits	PR 21-179 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	72.3	%		NA	NA	100			None	PR 15-98
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	64.5	%		NA	NA	100			None	PR 15-98 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Thiobencarb	4	µg/L		0.06	0.5	5	PR 80.0		None	PR 50-150
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Thiobencarb	3.78	µg/L		0.06	0.5	5	PR 75.6	RPD 5.7	None	PR 50-150 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 619	Tributylphosphate (Surrogate)	95.5	%		NA	NA	100			None	PR 62-145
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 619	Tributylphosphate (Surrogate)	103	%		NA	NA	100			None	PR 62-145 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	91	%		NA	NA	100			None	PR 60-150
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	108	%		NA	NA	100			None	PR 60-150
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	94.9	%		NA	NA	100			None	PR 60-150 RPD <25
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Tributylphosphate (Surrogate)	103	%		NA	NA	100			None	PR 60-150 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8321A	Tributylphosphate (Surrogate)	111	%		NA	NA	100			None	PR 36-140
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8321A	Tributylphosphate (Surrogate)	100	%		NA	NA	100			None	PR 36-140 RPD <25

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Administrative Record
Page 12637

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Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 619	Triphenyl phosphate (Surrogate)	150	%		NA	NA	100			Surrogate recovery is outside of control limits	PR 54-144
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 619	Triphenyl phosphate (Surrogate)	150	%		NA	NA	100			Surrogate recovery is outside of control limits	PR 54-144 RPD <25
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	78	%		NA	NA	100			None	PR 56-129
Deadman Creek @ Hwy 59	MS	1.00	01/25/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	82.2	%		NA	NA	100			None	PR 56-129
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	83.6	%		NA	NA	100			None	PR 56-129 RPD <25
Deadman Creek @ Hwy 59	MS	2.00	01/25/08	12:00	EPA 8141A	Triphenyl phosphate (Surrogate)	74.5	%		NA	NA	100			None	PR 56-129 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8321A	Aldicarb	0.958	µg/L		0.2	0.4	1.07	PR 89.5		None	PR 31-133
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8321A	Aldicarb	1	µg/L		0.2	0.4	1.07	PR 93.5	RPD 4.3	Surrogate recovery is outside of control limits	PR 31-133 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 619	Atrazine	4.79	µg/L		0.07	0.5	5	PR 95.8		None	PR 39-156
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 619	Atrazine	5.12	µg/L		0.07	0.5	5	PR 102	RPD 6.7	None	PR 39-156 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Azinphos methyl	4.18	µg/L		0.02	0.1	2	PR 209		Matrix spike recovery not within control limits	PR 36-189

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Administrative Record
Page 12638

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Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Azinphos methyl	4.8	µg/L		0.02	0.1	2	PR 240	RPD 13.8	Matrix spike recovery not within control limits	PR 36-189 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Bifenthrin	0.306	µg/L		0.006	0.02	0.4	PR 76.5		None	PR 52-117
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Bifenthrin	0.292	µg/L		0.006	0.02	0.4	PR 73.0	RPD 4.7	None	PR 52-117 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8321A	Carbaryl	0.269	µg/L		0.05	0.07	0.267	PR 101		None	PR 44-133
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8321A	Carbaryl	0.237	µg/L		0.05	0.07	0.267	PR 88.8	RPD 12.6	Surrogate recovery is outside of control limits	PR 44-133 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8321A	Carbofuran	0.255	µg/L		0.05	0.07	0.267	PR 95.5		None	PR 36-165
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8321A	Carbofuran	0.267	µg/L		0.05	0.07	0.267	PR 100	RPD 4.6	Surrogate recovery is outside of control limits	PR 36-165 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Chlorpyrifos	1.11	µg/L		0.003	0.02	1	PR 111		None	PR 61-125
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Chlorpyrifos	1.18	µg/L		0.003	0.02	1	PR 118	RPD 6.1	None	PR 61-125 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 619	Cyanazine	4.5	µg/L		0.09	0.5	5	PR 90.0		None	PR 22-172
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 619	Cyanazine	4.8	µg/L		0.09	0.5	5	PR 96.0	RPD 6.5	None	PR 22-172 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Cyfluthrin, total	0.317	µg/L		0.003	0.03	0.4	PR 79.3		None	PR 53-125
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Cyfluthrin, total	0.31	µg/L		0.003	0.03	0.4	PR 77.5	RPD 2.2	None	PR 53-125 RPD <25

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Administrative Record
Page 12639

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Cyhalothrin, lambda, total	0.218	µg/L		0.001	0.02	0.4	PR 54.5		Matrix spike recovery not within control limits	PR 62-104
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Cyhalothrin, lambda, total	0.217	µg/L		0.001	0.02	0.4	PR 54.3	RPD 0.46	Matrix spike recovery not within control limits	PR 62-104 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Cypermethrin, total	1.58	µg/L		0.004	0.05	2	PR 79.0		None	PR 55-107
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Cypermethrin, total	1.52	µg/L		0.004	0.05	2	PR 76.0	RPD 3.9	None	PR 55-107 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	DDD (p,p')	0.557	µg/L		0.003	0.01	0.6	PR 92.8		None	PR 38-135
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	DDD (p,p')	0.593	µg/L		0.003	0.01	0.6	PR 98.8	RPD 6.3	None	PR 38-135 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	DDE (p,p')	0.527	µg/L		0.004	0.01	0.6	PR 87.8		None	PR 21-134
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	DDE (p,p')	0.56	µg/L		0.004	0.01	0.6	PR 93.3	RPD 6.1	None	PR 21-134 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	DDT (p,p')	0.535	µg/L		0.007	0.01	0.6	PR 89.2		None	PR 18-145
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	DDT (p,p')	0.573	µg/L		0.007	0.01	0.6	PR 95.5	RPD 6.9	None	PR 18-145 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	72.7	%		NA	NA	100			None	PR 16-146
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	72.8	%		NA	NA	100			None	PR 16-146 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Diazinon	1	µg/L		0.004	0.02	1.037	PR 96.3		None	PR 57-130
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Diazinon	1.06	µg/L		0.004	0.02	1.037	PR 102	RPD 5.8	None	PR 57-130 RPD <25

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Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Dicofol	0.31	µg/L		0.01	0.1	0.4	PR 77.5		None	PR 40-135
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Dicofol	0.312	µg/L		0.01	0.1	0.4	PR 78.0	RPD 0.64	None	PR 40-135 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Dieldrin	0.533	µg/L		0.005	0.01	0.6	PR 88.8		None	PR 48-121
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Dieldrin	0.563	µg/L		0.005	0.01	0.6	PR 93.8	RPD 5.5	None	PR 48-121 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Dimethoate	1.43	µg/L		0.08	0.1	1	PR 143		None	PR 68-202
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Dimethoate	1.58	µg/L		0.08	0.1	1	PR 158	RPD 10.0	None	PR 68-202 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Disulfoton	1.01	µg/L		0.02	0.1	1	PR 101		None	PR 47-115
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Disulfoton	0.892	µg/L		0.02	0.1	1	PR 89.2	RPD 12.4	None	PR 47-115 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8321A	Diuron	1.07	µg/L		0.2	0.4	1.07	PR 100		None	PR 52-136
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8321A	Diuron	0.946	µg/L		0.2	0.4	1.07	PR 88.4	RPD 12.3	Surrogate recovery is outside of control limits	PR 52-136 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Endrin	0.582	µg/L		0.007	0.01	0.6	PR 97.0		None	PR 24-143
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Endrin	0.617	µg/L		0.007	0.01	0.6	PR 103	RPD 5.8	None	PR 24-143 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.301	µg/L		0.002	0.02	0.4	PR 75.3		None	PR 52-117
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.293	µg/L		0.002	0.02	0.4	PR 73.2	RPD 2.7	None	PR 52-117 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 547M	Glyphosate	54.17	µg/L		4	5	50	PR 108		None	PR 76-127
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 547M	Glyphosate	57.7	µg/L		4	5	50	PR 115	RPD 6.3	None	PR 76-127 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8321A	Isoxaben (Surrogate)	100	%		NA	NA	100			None	PR 47-134

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Administrative Record
Page 12641

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Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8321A	Isoxaben (Surrogate)	88	%		NA	NA	100			None	PR 47-134 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8321A	Linuron	1.11	µg/L		0.2	0.4	1.07	PR 104		None	PR 49-144
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8321A	Linuron	1.1	µg/L		0.2	0.4	1.07	PR 103	RPD 0.90	Surrogate recovery is outside of control limits	PR 49-144 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Malathion	1.25	µg/L		0.05	0.1	1	PR 125		None	PR 47-125
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Malathion	1.05	µg/L		0.05	0.1	1	PR 105	RPD 17.4	None	PR 47-125 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Methamidophos	0.437	µg/L		0.01	0.2	0.5	PR 87.4		Surrogate recovery is outside of control limits	PR 40-135
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Methamidophos	0.443	µg/L		0.01	0.2	0.5	PR 88.6	RPD 1.4	Surrogate recovery is outside of control limits	PR 40-135 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Methidathion	2.02	µg/L		0.04	0.1	2	PR 101		None	PR 50-150
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Methidathion	2.07	µg/L		0.04	0.1	2	PR 103	RPD 2.4	None	PR 50-150 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8321A	Methiocarb	1.13	µg/L		0.2	0.4	1.07	PR 106		None	PR 35-142
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8321A	Methiocarb	1.06	µg/L		0.2	0.4	1.07	PR 99.1	RPD 6.4	Surrogate recovery is outside of control limits	PR 35-142 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8321A	Methomyl	0.2	µg/L		0.05	0.07	0.267	PR 74.9		None	PR 23-152

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Administrative Record
Page 12642

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8321A	Methomyl	0.204	µg/L		0.05	0.07	0.267	PR 76.4	RPD 2.0	Surrogate recovery is outside of control limits	PR 23-152 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Methoxychlor	0.552	µg/L		0.008	0.01	0.616	PR 89.3		None	PR 30-163
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Methoxychlor	0.584	µg/L		0.008	0.01	0.616	PR 94.7	RPD 5.6	None	PR 30-163 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Molinate	4.01	µg/L		0.13	0.5	5	PR 80.2		None	PR 50-150
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Molinate	4.34	µg/L		0.13	0.5	5	PR 86.8	RPD 7.9	None	PR 50-150 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8321A	Oxamyl	0.735	µg/L		0.2	0.4	1.07	PR 68.7		None	PR 10-117
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8321A	Oxamyl	0.699	µg/L		0.2	0.4	1.07	PR 65.3	RPD 5.0	Surrogate recovery is outside of control limits	PR 10-117 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 549.2M	Paraquat dichloride	2.2	µg/L		0.21	0.4	50	PR 4.4		Matrix spike recovery not within control limits	PR 50-126
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 549.2M	Paraquat dichloride	1.88	µg/L		0.21	0.4	50	PR 3.8	RPD 15.7	Matrix spike recovery not within control limits	PR 50-126 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Parathion, Methyl	1.08	µg/L		0.075	0.1	1	PR 108		None	PR 55-164
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Parathion, Methyl	1.23	µg/L		0.075	0.1	1	PR 123	RPD 13.0	None	PR 55-164 RPD <25

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Administrative Record
Page 12643

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Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Permethrin, total	0.331	µg/L		0.009	0.02	0.4	PR 82.8		None	PR 24-166
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Permethrin, total	0.315	µg/L		0.009	0.02	0.4	PR 78.8	RPD 5.0	None	PR 24-166 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Phorate	0.84	µg/L		0.072	0.1	1	PR 84.0		None	PR 44-117
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Phorate	1.02	µg/L		0.072	0.1	1	PR 102	RPD 19.4	None	PR 44-117 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Phosmet	1.56	µg/L		0.06	0.2	1	PR 156		Matrix spike recovery not within control limits	PR 50-150
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Phosmet	1.59	µg/L		0.06	0.2	1	PR 159	RPD 1.9	Matrix spike recovery not within control limits	PR 50-150 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 619	Simazine	5.98	µg/L		0.08	0.5	5	PR 120		None	PR 21-179
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 619	Simazine	6.05	µg/L		0.08	0.5	5	PR 121	RPD 1.2	None	PR 21-179 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	53.3	%		NA	NA	100			None	PR 15-98
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	53.3	%		NA	NA	100			None	PR 15-98 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Thiobencarb	5.64	µg/L		0.06	0.5	5	PR 113		None	PR 50-150
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Thiobencarb	5.69	µg/L		0.06	0.5	5	PR 114	RPD 0.88	None	PR 50-150 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 619	Tributylphosphate (Surrogate)	94	%		NA	NA	100			None	PR 62-145
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 619	Tributylphosphate (Surrogate)	94.5	%		NA	NA	100			None	PR 62-145 RPD <25

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Administrative Record
Page 12644

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Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Tributylphosphate (Surrogate)	94	%		NA	NA	100			None	PR 60-150
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Tributylphosphate (Surrogate)	189	%		NA	NA	100			Surrogate recovery is outside of control limits	PR 60-150
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Tributylphosphate (Surrogate)	191	%		NA	NA	100			Surrogate recovery is outside of control limits	PR 60-150 RPD <25
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Tributylphosphate (Surrogate)	94.5	%		NA	NA	100			None	PR 60-150 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8321A	Tributylphosphate (Surrogate)	111	%		NA	NA	100			None	PR 36-140
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8321A	Tributylphosphate (Surrogate)	219	%		NA	NA	100			Surrogate recovery is outside of control limits	PR 36-140 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 619	Triphenyl phosphate (Surrogate)	126	%		NA	NA	100			None	PR 54-144
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 619	Triphenyl phosphate (Surrogate)	123	%		NA	NA	100			None	PR 54-144 RPD <25
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Triphenyl phosphate (Surrogate)	126	%		NA	NA	100			None	PR 56-129
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 8141A	Triphenyl phosphate (Surrogate)	110	%		NA	NA	100			None	PR 56-129
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Triphenyl phosphate (Surrogate)	123	%		NA	NA	100			None	PR 56-129 RPD <25
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 8141A	Triphenyl phosphate (Surrogate)	109	%		NA	NA	100			None	PR 56-129 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8321A	Aldicarb	0.865	µg/L		0.2	0.4	1.07	PR 80.8		None	PR 31-133
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8321A	Aldicarb	0.757	µg/L		0.2	0.4	1.07	PR 70.7	RPD 13.3	None	PR 31-133 RPD <25

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Administrative Record
Page 12645

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 619	Atrazine	5.11	µg/L		0.07	0.5	5	PR 102		None	PR 39-156
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 619	Atrazine	5.21	µg/L		0.07	0.5	5	PR 104	RPD 1.9	None	PR 39-156 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Azinphos methyl	2.93	µg/L		0.02	0.1	2	PR 147		None	PR 36-189
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Azinphos methyl	3.07	µg/L		0.02	0.1	2	PR 154	RPD 4.7	None	PR 36-189 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Bifenthrin	0.301	µg/L		0.006	0.02	0.4	PR 75.3		None	PR 52-117
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Bifenthrin	0.322	µg/L		0.006	0.02	0.4	PR 80.5	RPD 6.7	None	PR 52-117 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8321A	Carbaryl	0.236	µg/L		0.05	0.07	0.267	PR 88.4		None	PR 44-133
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8321A	Carbaryl	0.257	µg/L		0.05	0.07	0.267	PR 96.3	RPD 8.5	None	PR 44-133 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8321A	Carbofuran	0.227	µg/L		0.05	0.07	0.267	PR 85.0		None	PR 36-165
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8321A	Carbofuran	0.205	µg/L		0.05	0.07	0.267	PR 76.8	RPD 10.2	None	PR 36-165 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Chlorpyrifos	1.02	µg/L		0.003	0.02	1	PR 99.3		None	PR 61-125
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Chlorpyrifos	0.98	µg/L		0.003	0.02	1	PR 95.3	RPD 4.0	None	PR 61-125 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 619	Cyanazine	7.4	µg/L		0.09	0.5	5	PR 148		None	PR 22-172
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 619	Cyanazine	8.65	µg/L		0.09	0.5	5	PR 173	RPD 15.6	Matrix spike recovery not within control limits	PR 22-172 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Cyfluthrin, total	0.298	µg/L		0.003	0.03	0.4	PR 74.5		None	PR 53-125
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Cyfluthrin, total	0.235	µg/L		0.003	0.03	0.4	PR 58.7	RPD 23.6	None	PR 53-125 RPD <25

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Administrative Record
Page 12646

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Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Cyhalothrin, lambda, total	0.3	µg/L		0.001	0.02	0.4	PR 75.0		None	PR 62-104
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Cyhalothrin, lambda, total	0.312	µg/L		0.001	0.02	0.4	PR 78.0	RPD 3.9	None	PR 62-104 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Cypermethrin, total	1.53	µg/L		0.004	0.05	2	PR 76.5		None	PR 55-107
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Cypermethrin, total	1.53	µg/L		0.004	0.05	2	PR 76.5	RPD 0.0	None	PR 55-107 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	DDD (p,p')	0.396	µg/L		0.003	0.01	0.6	PR 66.0		None	PR 38-135
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	DDD (p,p')	0.356	µg/L		0.003	0.01	0.6	PR 59.3	RPD 10.6	None	PR 38-135 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	DDE (p,p')	0.465	µg/L		0.004	0.01	0.6	PR 77.5		None	PR 21-134
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	DDE (p,p')	0.476	µg/L		0.004	0.01	0.6	PR 79.3	RPD 2.3	None	PR 21-134 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	DDT (p,p')	0.513	µg/L		0.007	0.01	0.6	PR 85.5		None	PR 18-145
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	DDT (p,p')	0.525	µg/L		0.007	0.01	0.6	PR 87.5	RPD 2.3	None	PR 18-145 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	63	%		NA	NA	100			None	PR 16-146
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Decachlorobiphenyl (Surrogate)	63	%		NA	NA	100			None	PR 16-146 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Diazinon	0.996	µg/L		0.004	0.02	1.068	PR 92.8		None	PR 57-130
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Diazinon	0.978	µg/L		0.004	0.02	1.068	PR 91.0	RPD 1.8	None	PR 57-130 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Dicofol	0.34	µg/L		0.01	0.1	0.4	PR 85.0		None	PR 40-135
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Dicofol	0.36	µg/L		0.01	0.1	0.4	PR 90.0	RPD 5.7	None	PR 40-135 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Dieldrin	0.506	µg/L		0.005	0.01	0.6	PR 84.3		None	PR 48-121
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Dieldrin	0.522	µg/L		0.005	0.01	0.6	PR 87.0	RPD 3.1	None	PR 48-121 RPD <25

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Administrative Record
Page 12647

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Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Dimethoate	1.33	µg/L		0.08	0.1	1	PR 133		None	PR 68-202
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Dimethoate	1.36	µg/L		0.08	0.1	1	PR 136	RPD 2.2	None	PR 68-202 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Disulfoton	0.915	µg/L		0.02	0.1	1	PR 91.5		None	PR 47-115
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Disulfoton	0.802	µg/L		0.02	0.1	1	PR 80.2	RPD 13.2	None	PR 47-115 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8321A	Diuron	1.09	µg/L		0.2	0.4	1.07	PR 102		None	PR 52-136
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8321A	Diuron	0.956	µg/L		0.2	0.4	1.07	PR 89.3	RPD 13.1	None	PR 52-136 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Endrin	0.507	µg/L		0.007	0.01	0.6	PR 84.5		None	PR 24-143
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Endrin	0.527	µg/L		0.007	0.01	0.6	PR 87.8	RPD 3.9	None	PR 24-143 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.305	µg/L		0.002	0.02	0.4	PR 76.3		None	PR 52-117
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.311	µg/L		0.002	0.02	0.4	PR 77.8	RPD 1.9	None	PR 52-117 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 547M	Glyphosate	40.51	µg/L		4	5	50	PR 81		None	PR 76-127
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 547M	Glyphosate	41.27	µg/L		4	5	50	PR 82.5	RPD 1.9	None	PR 76-127 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8321A	Isoxaben (Surrogate)	108	%		NA	NA	100			None	PR 47-134
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8321A	Isoxaben (Surrogate)	91.7	%		NA	NA	100			None	PR 47-134 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8321A	Linuron	0.93	µg/L		0.2	0.4	1.07	PR 86.9		None	PR 49-144
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8321A	Linuron	0.777	µg/L		0.2	0.4	1.07	PR 72.6	RPD 17.9	None	PR 49-144 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Malathion	1.09	µg/L		0.05	0.1	1	PR 109		None	PR 47-125
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Malathion	1.03	µg/L		0.05	0.1	1	PR 103	RPD 5.7	None	PR 47-125 RPD <25

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Administrative Record
Page 12648

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Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Methamidophos	0.391	µg/L		0.01	0.2	0.5	PR 78.2		None	PR 40-135
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Methamidophos	0.391	µg/L		0.01	0.2	0.5	PR 78.2	RPD 0.0	None	PR 40-135 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Methidathion	2.42	µg/L		0.04	0.1	2	PR 121		None	PR 50-150
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Methidathion	2.45	µg/L		0.04	0.1	2	PR 123	RPD 1.2	None	PR 50-150 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8321A	Methiocarb	0.937	µg/L		0.2	0.4	1.07	PR 87.6		None	PR 35-142
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8321A	Methiocarb	0.84	µg/L		0.2	0.4	1.07	PR 78.5	RPD 10.9	None	PR 35-142 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8321A	Methomyl	0.216	µg/L		0.05	0.07	0.267	PR 80.9		None	PR 23-152
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8321A	Methomyl	0.187	µg/L		0.05	0.07	0.267	PR 70.0	RPD 14.4	None	PR 23-152 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Methoxychlor	0.511	µg/L		0.008	0.01	0.6	PR 85.2		None	PR 30-163
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Methoxychlor	0.518	µg/L		0.008	0.01	0.6	PR 86.3	RPD 1.4	None	PR 30-163 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Molinate	4.17	µg/L		0.13	0.5	5	PR 83.4		None	PR 50-150
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Molinate	4.49	µg/L		0.13	0.5	5	PR 89.8	RPD 7.4	None	PR 50-150 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8321A	Oxamyl	1.01	µg/L		0.2	0.4	1.07	PR 94.4		None	PR 10-117
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8321A	Oxamyl	1	µg/L		0.2	0.4	1.07	PR 93.5	RPD 1.00	None	PR 10-117 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 549.2M	Paraquat dichloride	2.51	µg/L		0.21	0.4	40	PR 6.3		Matrix spike recovery not within control limits	PR 50-126

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Administrative Record
Page 12649

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Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 549.2M	Paraquat dichloride	2.28	µg/L		0.21	0.4	40	PR 5.7	RPD 9.6	Matrix spike recovery not within control limits	PR 50-126 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Parathion, Methyl	1.02	µg/L		0.075	0.1	1	PR 102		None	PR 55-164
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Parathion, Methyl	0.951	µg/L		0.075	0.1	1	PR 95.1	RPD 7.0	None	PR 55-164 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Permethrin, total	0.28	µg/L		0.009	0.02	0.4	PR 70.0		None	PR 24-166
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Permethrin, total	0.345	µg/L		0.009	0.02	0.4	PR 86.2	RPD 20.8	None	PR 24-166 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Phorate	0.997	µg/L		0.072	0.1	1	PR 99.7		None	PR 44-117
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Phorate	0.897	µg/L		0.072	0.1	1	PR 89.7	RPD 10.6	None	PR 44-117 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Phosmet	1.08	µg/L		0.06	0.2	1	PR 108		None	PR 50-150
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Phosmet	1.02	µg/L		0.06	0.2	1	PR 102	RPD 5.7	None	PR 50-150 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 619	Simazine	5.02	µg/L		0.08	0.5	5.8	PR 84.4		None	PR 21-179
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 619	Simazine	5.1	µg/L		0.08	0.5	5.8	PR 86.0	RPD 1.6	None	PR 21-179 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	65.8	%		NA	NA	100			None	PR 15-98
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	70.2	%		NA	NA	100			None	PR 15-98 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Thiobencarb	4.72	µg/L		0.06	0.5	5	PR 94.4		None	PR 50-150
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Thiobencarb	4.74	µg/L		0.06	0.5	5	PR 94.8	RPD 0.42	None	PR 50-150 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 619	Tributylphosphate (Surrogate)	89	%		NA	NA	100			None	PR 62-145

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Administrative Record
Page 12650

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Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 619	Tributylphosphate (Surrogate)	93	%		NA	NA	100			None	PR 62-145 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	89	%		NA	NA	100			None	PR 60-150
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	93	%		NA	NA	100			None	PR 60-150
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	93	%		NA	NA	100			None	PR 60-150 RPD <25
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Tributylphosphate (Surrogate)	77.5	%		NA	NA	100			None	PR 60-150 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8321A	Tributylphosphate (Surrogate)	121	%		NA	NA	100			None	PR 36-140
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8321A	Tributylphosphate (Surrogate)	119	%		NA	NA	100			None	PR 36-140 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 619	Triphenyl phosphate (Surrogate)	108	%		NA	NA	100			None	PR 54-144
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 619	Triphenyl phosphate (Surrogate)	110	%		NA	NA	100			None	PR 54-144 RPD <25
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	108	%		NA	NA	100			None	PR 56-129
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	93.5	%		NA	NA	100			None	PR 56-129
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	80.4	%		NA	NA	100			None	PR 56-129 RPD <25
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 8141A	Triphenyl phosphate (Surrogate)	110	%		NA	NA	100			None	PR 56-129 RPD <25
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4				Surrogate recovery is outside of control limits	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 8321A	Aldicarb	<0.2	µg/L	ND	0.2	0.4				None	<RL

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12651

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 619	Atrazine	<0.07	µg/L	ND	0.07	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Azinphos methyl	<0.02	µg/L	ND	0.02	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Bifenthrin	<0.006	µg/L	ND	0.006	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07				Surrogate recovery is outside of control limits	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07				None	<RL
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 8321A	Carbaryl	<0.05	µg/L	ND	0.05	0.07				None	<RL

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12652

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07				Surrogate recovery is outside of control limits	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07				None	<RL
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 8321A	Carbofuran	<0.05	µg/L	ND	0.05	0.07				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Chlorpyrifos	<0.003	µg/L	ND	0.003	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 619	Cyanazine	<0.09	µg/L	ND	0.09	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Cyfluthrin, total	<0.003	µg/L	ND	0.003	0.03				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02				None	<RL

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Administrative Record
Page 12653

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Cyhalothrin, lambda, total	<0.001	µg/L	ND	0.001	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Cypermethrin, total	<0.004	µg/L	ND	0.004	0.05				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	DDD (p,p')	<0.003	µg/L	ND	0.003	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	DDE (p,p')	<0.004	µg/L	ND	0.004	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01				None	<RL

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12654

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	DDT (p,p')	<0.007	µg/L	ND	0.007	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	73.9	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	78.1	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	70	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	44.2	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Diazinon	<0.004	µg/L	ND	0.004	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Dicofol	<0.01	µg/L	ND	0.01	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Dieldrin	<0.005	µg/L	ND	0.005	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1				None	<RL

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12655

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Dimethoate	<0.08	µg/L	ND	0.08	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Disulfoton	<0.02	µg/L	ND	0.02	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4				Surrogate recovery is outside of control limits	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 8321A	Diuron	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Endrin	<0.007	µg/L	ND	0.007	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02				None	<RL

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Administrative Record
Page 12656

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	<0.002	µg/L	ND	0.002	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/30/08	0:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/14/08	0:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 547M	Glyphosate	<4	µg/L	ND	4	5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 8321A	Isoxaben (Surrogate)	92.8	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8321A	Isoxaben (Surrogate)	81.5	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8321A	Isoxaben (Surrogate)	107	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 8321A	Isoxaben (Surrogate)	100	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4				Surrogate recovery is outside of control limits	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 8321A	Linuron	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1				None	<RL

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12657

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Malathion	<0.05	µg/L	ND	0.05	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/30/08	0:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Methamidophos	<0.01	µg/L	ND	0.01	0.2				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Methidathion	<0.04	µg/L	ND	0.04	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4				Surrogate recovery is outside of control limits	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 8321A	Methiocarb	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07				Surrogate recovery is outside of control limits	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07				None	<RL

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Administrative Record
Page 12658

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07				None	<RL
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 8321A	Methomyl	<0.05	µg/L	ND	0.05	0.07				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Methoxychlor	<0.008	µg/L	ND	0.008	0.01				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Molinate	<0.13	µg/L	ND	0.13	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4				Surrogate recovery is outside of control limits	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 8321A	Oxamyl	<0.2	µg/L	ND	0.2	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/30/08	0:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4				None	<RL

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Administrative Record
Page 12659

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	02/27/08	0:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 549.2M	Paraquat dichloride	<0.21	µg/L	ND	0.21	0.4				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Parathion, Methyl	<0.075	µg/L	ND	0.075	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Permethrin, total	<0.009	µg/L	ND	0.009	0.02				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Phorate	<0.072	µg/L	ND	0.072	0.1				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Phosmet	<0.06	µg/L	ND	0.06	0.2				None	<RL

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Administrative Record
Page 12660

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 619	Simazine	<0.08	µg/L	ND	0.08	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	68.5	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	73.8	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	61.7	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	56.2	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Thiobencarb	<0.06	µg/L	ND	0.06	0.5				None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 619	Tributylphosphate (Surrogate)	100	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 619	Tributylphosphate (Surrogate)	91.8	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 619	Tributylphosphate (Surrogate)	84.8	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 619	Tributylphosphate (Surrogate)	72.4	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	100	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/30/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	134	%		NA	NA	100			None	<RL

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Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	91.8	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	140	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	104	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	135	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	79.8	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	128	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 8321A	Tributylphosphate (Surrogate)	235	%		NA	NA	100			Surrogate recovery is outside of control limits	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8321A	Tributylphosphate (Surrogate)	91.7	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8321A	Tributylphosphate (Surrogate)	108	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 8321A	Tributylphosphate (Surrogate)	119	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 619	Triphenyl phosphate (Surrogate)	128	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 619	Triphenyl phosphate (Surrogate)	119	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 619	Triphenyl phosphate (Surrogate)	77.9	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 619	Triphenyl phosphate (Surrogate)	89.5	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	128	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/30/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	111	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	95.4	%		NA	NA	100			None	<RL

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Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	119	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/28/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	99.5	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	76.9	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	78.6	%		NA	NA	100			None	<RL
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	86	%		NA	NA	100			None	<RL
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 8321A	Aldicarb	1.01	µg/L		0.2	0.4	1.07	PR 94.4		Surrogate recovery is outside of control limits	PR 31-133
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8321A	Aldicarb	0.973	µg/L		0.2	0.4	1.07	PR 90.9		None	PR 31-133
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8321A	Aldicarb	1.07	µg/L		0.2	0.4	1.07	PR 100		None	PR 31-133
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 8321A	Aldicarb	0.933	µg/L		0.2	0.4	1.07	PR 87.2		None	PR 31-133
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 619	Atrazine	2.09	µg/L		0.07	0.5	2.5	PR 83.6		None	PR 39-156
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 619	Atrazine	2.09	µg/L		0.07	0.5	2.5	PR 83.6		None	PR 39-156
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 619	Atrazine	2.76	µg/L		0.07	0.5	2.5	PR 110		None	PR 39-156
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 619	Atrazine	2.49	µg/L		0.07	0.5	2.5	PR 99.6		None	PR 39-156
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Azinphos methyl	1.64	µg/L		0.02	0.1	1	PR 164		None	PR 36-189
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Azinphos methyl	1.02	µg/L		0.02	0.1	1	PR 102		None	PR 36-189
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Azinphos methyl	1.46	µg/L		0.02	0.1	1	PR 146		None	PR 36-189
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Azinphos methyl	1.42	µg/L		0.02	0.1	1	PR 142		None	PR 36-189

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Administrative Record
Page 12663

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Bifenthrin	0.176	µg/L		0.006	0.02	0.2	PR 88.0		None	PR 52-117
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Bifenthrin	0.195	µg/L		0.006	0.02	0.2	PR 97.5		None	PR 52-117
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Bifenthrin	0.197	µg/L		0.006	0.02	0.2	PR 98.5		None	PR 52-117
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Bifenthrin	0.181	µg/L		0.006	0.02	0.2	PR 90.5		None	PR 52-117
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 8321A	Carbaryl	0.157	µg/L		0.05	0.07	0.267	PR 58.8		Surrogate recovery is outside of control limits	PR 44-133
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8321A	Carbaryl	0.239	µg/L		0.05	0.07	0.267	PR 89.5		None	PR 44-133
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8321A	Carbaryl	0.26	µg/L		0.05	0.07	0.267	PR 97.4		None	PR 44-133
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 8321A	Carbaryl	0.211	µg/L		0.05	0.07	0.267	PR 79.0		None	PR 44-133
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 8321A	Carbofuran	0.238	µg/L		0.05	0.07	0.267	PR 89.1		Surrogate recovery is outside of control limits	PR 36-165
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8321A	Carbofuran	0.231	µg/L		0.05	0.07	0.267	PR 86.5		None	PR 36-165
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8321A	Carbofuran	0.267	µg/L		0.05	0.07	0.267	PR 100		None	PR 36-165
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 8321A	Carbofuran	0.255	µg/L		0.05	0.07	0.267	PR 95.5		None	PR 36-165
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Chlorpyrifos	0.449	µg/L		0.003	0.02	0.5	PR 89.8		None	PR 61-125
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Chlorpyrifos	0.461	µg/L		0.003	0.02	0.5	PR 92.2		None	PR 61-125
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Chlorpyrifos	0.428	µg/L		0.003	0.02	0.5	PR 85.6		None	PR 61-125

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12664

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Chlorpyrifos	0.463	µg/L		0.003	0.02	0.5	PR 92.6		None	PR 61-125
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 619	Cyanazine	1.97	µg/L		0.09	0.5	2.5	PR 78.8		None	PR 22-172
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 619	Cyanazine	2.55	µg/L		0.09	0.5	2.5	PR 102		None	PR 22-172
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 619	Cyanazine	3.91	µg/L		0.09	0.5	2.5	PR 156		None	PR 22-172
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 619	Cyanazine	3.82	µg/L		0.09	0.5	2.5	PR 153		None	PR 22-172
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Cyfluthrin, total	0.187	µg/L		0.003	0.03	0.2	PR 93.5		None	PR 53-125
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Cyfluthrin, total	0.191	µg/L		0.003	0.03	0.2	PR 95.5		None	PR 53-125
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Cyfluthrin, total	0.183	µg/L		0.003	0.03	0.2	PR 91.5		None	PR 53-125
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Cyfluthrin, total	0.169	µg/L		0.003	0.03	0.2	PR 84.5		None	PR 53-125
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Cyhalothrin, lambda, total	0.125	µg/L		0.001	0.02	0.2	PR 62.5		None	PR 62-104
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Cyhalothrin, lambda, total	0.138	µg/L		0.001	0.02	0.2	PR 69.0		None	PR 62-104
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Cyhalothrin, lambda, total	0.189	µg/L		0.001	0.02	0.2	PR 94.5		None	PR 62-104
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Cyhalothrin, lambda, total	0.179	µg/L		0.001	0.02	0.2	PR 89.5		None	PR 62-104
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Cypermethrin, total	0.93	µg/L		0.004	0.05	1	PR 93.0		None	PR 55-107
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Cypermethrin, total	0.997	µg/L		0.004	0.05	1	PR 99.7		None	PR 55-107
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Cypermethrin, total	0.924	µg/L		0.004	0.05	1	PR 92.4		None	PR 55-107
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Cypermethrin, total	0.854	µg/L		0.004	0.05	1	PR 85.4		None	PR 55-107
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	DDD (p,p')	0.279	µg/L		0.003	0.01	0.3	PR 93.0		None	PR 38-135

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12665

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	DDD (p,p')	0.315	µg/L		0.003	0.01	0.3	PR 105		None	PR 38-135
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	DDD (p,p')	0.218	µg/L		0.003	0.01	0.3	PR 72.7		None	PR 38-135
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	DDD (p,p')	0.186	µg/L		0.003	0.01	0.3	PR 62.0		None	PR 38-135
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	DDE (p,p')	0.269	µg/L		0.004	0.01	0.3	PR 89.7		None	PR 21-134
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	DDE (p,p')	0.28	µg/L		0.004	0.01	0.3	PR 93.3		None	PR 21-134
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	DDE (p,p')	0.261	µg/L		0.004	0.01	0.3	PR 87.0		None	PR 21-134
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	DDE (p,p')	0.23	µg/L		0.004	0.01	0.3	PR 76.7		None	PR 21-134
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	DDT (p,p')	0.272	µg/L		0.007	0.01	0.3	PR 90.7		None	PR 18-145
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	DDT (p,p')	0.299	µg/L		0.007	0.01	0.3	PR 99.7		None	PR 18-145
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	DDT (p,p')	0.293	µg/L		0.007	0.01	0.3	PR 97.7		None	PR 18-145
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	DDT (p,p')	0.263	µg/L		0.007	0.01	0.3	PR 87.7		None	PR 18-145
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	69.3	%		NA	NA	100			None	PR 16-146
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	77.3	%		NA	NA	100			None	PR 16-146
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	79.7	%		NA	NA	100			None	PR 16-146
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Decachlorobiphenyl (Surrogate)	42.7	%		NA	NA	100			None	PR 16-146
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Diazinon	0.404	µg/L		0.004	0.02	0.5	PR 80.8		None	PR 57-130
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Diazinon	0.471	µg/L		0.004	0.02	0.5	PR 94.2		None	PR 57-130
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Diazinon	0.407	µg/L		0.004	0.02	0.5	PR 81.4		None	PR 57-130

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Administrative Record
Page 12666

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Diazinon	0.444	µg/L		0.004	0.02	0.5	PR 88.8		None	PR 57-130
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Dicofol	0.172	µg/L		0.01	0.1	0.2	PR 86.0		None	PR 40-135
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Dicofol	0.176	µg/L		0.01	0.1	0.2	PR 88.0		None	PR 40-135
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Dicofol	0.217	µg/L		0.01	0.1	0.2	PR 109		None	PR 40-135
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Dicofol	0.199	µg/L		0.01	0.1	0.2	PR 99.5		None	PR 40-135
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Dieldrin	0.276	µg/L		0.005	0.01	0.3	PR 92.0		None	PR 48-121
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Dieldrin	0.294	µg/L		0.005	0.01	0.3	PR 98.0		None	PR 48-121
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Dieldrin	0.253	µg/L		0.005	0.01	0.3	PR 84.3		None	PR 48-121
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Dieldrin	0.266	µg/L		0.005	0.01	0.3	PR 88.7		None	PR 48-121
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Dimethoate	0.57	µg/L		0.08	0.1	0.5	PR 114		None	PR 68-202
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Dimethoate	0.533	µg/L		0.08	0.1	0.5	PR 107		None	PR 68-202
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Dimethoate	0.573	µg/L		0.08	0.1	0.5	PR 115		None	PR 68-202
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Dimethoate	0.588	µg/L		0.08	0.1	0.5	PR 118		None	PR 68-202
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Disulfoton	0.534	µg/L		0.02	0.1	0.5	PR 107		None	PR 47-115
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Disulfoton	0.476	µg/L		0.02	0.1	0.5	PR 95.2		None	PR 47-115
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Disulfoton	0.385	µg/L		0.02	0.1	0.5	PR 77.0		None	PR 47-115
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Disulfoton	0.395	µg/L		0.02	0.1	0.5	PR 79.0		None	PR 47-115

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Administrative Record
Page 12667

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 8321A	Diuron	1.03	µg/L		0.2	0.4	1.07	PR 96.3		Surrogate recovery is outside of control limits	PR 52-136
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8321A	Diuron	1.16	µg/L		0.2	0.4	1.07	PR 108		None	PR 52-136
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8321A	Diuron	1.05	µg/L		0.2	0.4	1.07	PR 98.1		None	PR 52-136
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 8321A	Diuron	1.01	µg/L		0.2	0.4	1.07	PR 94.4		None	PR 52-136
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Endrin	0.29	µg/L		0.007	0.01	0.3	PR 96.7		None	PR 24-143
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Endrin	0.344	µg/L		0.007	0.01	0.3	PR 115		None	PR 24-143
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Endrin	0.276	µg/L		0.007	0.01	0.3	PR 92.0		None	PR 24-143
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Endrin	0.269	µg/L		0.007	0.01	0.3	PR 89.7		None	PR 24-143
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.173	µg/L		0.002	0.02	0.2	PR 86.5		None	PR 52-117
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.181	µg/L		0.002	0.02	0.2	PR 90.5		None	PR 52-117
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.182	µg/L		0.002	0.02	0.2	PR 91.0		None	PR 52-117
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Esfenvalerate/ Fenvalerate, total	0.166	µg/L		0.002	0.02	0.2	PR 83.0		None	PR 52-117
Laboratory QA Samples	LCS	1.00	01/30/08	0:00	EPA 547M	Glyphosate	50.32	µg/L		4	5	50	PR 101		None	PR 76-127
Laboratory QA Samples	LCS	2.00	01/30/08	0:00	EPA 547M	Glyphosate	50.35	µg/L		4	5	50	PR 101	RPD 0.064	None	PR 76-127 RPD <25
Laboratory QA Samples	LCS	1.00	02/14/08	0:00	EPA 547M	Glyphosate	53.11	µg/L		4	5	50	PR 106		None	PR 76-127
Laboratory QA Samples	LCS	2.00	02/14/08	0:00	EPA 547M	Glyphosate	52.44	µg/L		4	5	50	PR 105	RPD 1.3	None	PR 76-127 RPD <25
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 547M	Glyphosate	46.79	µg/L		4	5	50	PR 93.6		None	PR 76-127

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Administrative Record
Page 12668

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 547M	Glyphosate	40.61	µg/L		4	5	50	PR 81.2		None	PR 76-127
Laboratory QA Samples	LCS	2.00	02/29/08	0:00	EPA 547M	Glyphosate	45.51	µg/L		4	5	50	PR 91	RPD 2.8	None	PR 76-127 RPD <25
Laboratory QA Samples	LCS	2.00	02/29/08	0:00	EPA 547M	Glyphosate	39.59	µg/L		4	5	50	PR 79.2	RPD 2.6	None	PR 76-127 RPD <25
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 8321A	Isoxaben (Surrogate)	88	%		NA	NA	100			None	PR 47-134
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8321A	Isoxaben (Surrogate)	87.2	%		NA	NA	100			None	PR 47-134
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8321A	Isoxaben (Surrogate)	108	%		NA	NA	100			None	PR 47-134
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 8321A	Isoxaben (Surrogate)	108	%		NA	NA	100			None	PR 47-134
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 8321A	Linuron	1.1	µg/L		0.2	0.4	1.07	PR 103		Surrogate recovery is outside of control limits	PR 49-144
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8321A	Linuron	1.03	µg/L		0.2	0.4	1.07	PR 96.3		None	PR 49-144
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8321A	Linuron	1.06	µg/L		0.2	0.4	1.07	PR 99.1		None	PR 49-144
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 8321A	Linuron	0.919	µg/L		0.2	0.4	1.07	PR 85.9		None	PR 49-144
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Malathion	0.613	µg/L		0.05	0.1	0.5	PR 123		None	PR 47-125
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Malathion	0.561	µg/L		0.05	0.1	0.5	PR 112		None	PR 47-125
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Malathion	0.44	µg/L		0.05	0.1	0.5	PR 88.0		None	PR 47-125
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Malathion	0.513	µg/L		0.05	0.1	0.5	PR 103		None	PR 47-125

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	01/30/08	0:00	EPA 8141A	Methamidophos	0.442	µg/L		0.01	0.2	0.5	PR 88.4		Surrogate recovery is outside of control limits	PR 40-135
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Methamidophos	0.365	µg/L		0.01	0.2	0.5	PR 73.0		Surrogate recovery is outside of control limits	PR 40-135
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8141A	Methamidophos	0.366	µg/L		0.01	0.2	0.5	PR 73.2		None	PR 40-135
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Methamidophos	0.378	µg/L		0.01	0.2	0.5	PR 75.6		None	PR 40-135
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Methidathion	0.881	µg/L		0.04	0.1	1	PR 88.1		None	PR 50-150
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Methidathion	0.804	µg/L		0.04	0.1	1	PR 80.4		None	PR 50-150
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Methidathion	1.1	µg/L		0.04	0.1	1	PR 110		None	PR 50-150
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Methidathion	1.1	µg/L		0.04	0.1	1	PR 110		None	PR 50-150
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 8321A	Methiocarb	0.711	µg/L		0.2	0.4	1.07	PR 66.4		Surrogate recovery is outside of control limits	PR 35-142
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8321A	Methiocarb	0.844	µg/L		0.2	0.4	1.07	PR 78.9		None	PR 35-142
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8321A	Methiocarb	1.08	µg/L		0.2	0.4	1.07	PR 101		None	PR 35-142
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 8321A	Methiocarb	0.963	µg/L		0.2	0.4	1.07	PR 90.0		None	PR 35-142

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12670

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 8321A	Methomyl	0.183	µg/L		0.05	0.07	0.267	PR 68.5		Surrogate recovery is outside of control limits	PR 23-152
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8321A	Methomyl	0.209	µg/L		0.05	0.07	0.267	PR 78.3		None	PR 23-152
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8321A	Methomyl	0.252	µg/L		0.05	0.07	0.267	PR 94.4		None	PR 23-152
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 8321A	Methomyl	0.201	µg/L		0.05	0.07	0.267	PR 75.3		None	PR 23-152
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Methoxychlor	0.272	µg/L		0.008	0.01	0.3	PR 90.7		None	PR 30-163
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Methoxychlor	0.309	µg/L		0.008	0.01	0.3	PR 103		None	PR 30-163
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Methoxychlor	0.279	µg/L		0.008	0.01	0.3	PR 93.0		None	PR 30-163
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Methoxychlor	0.259	µg/L		0.008	0.01	0.3	PR 86.3		None	PR 30-163
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Molinate	1.38	µg/L		0.13	0.5	2.5	PR 55.2		None	PR 50-150
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Molinate	1.8	µg/L		0.13	0.5	2.5	PR 72.0		None	PR 50-150
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Molinate	2.36	µg/L		0.13	0.5	2.5	PR 94.4		None	PR 50-150
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Molinate	1.97	µg/L		0.13	0.5	2.5	PR 78.8		None	PR 50-150
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 8321A	Oxamyl	0.532	µg/L		0.2	0.4	1.07	PR 49.7		Surrogate recovery is outside of control limits	PR 10-117
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8321A	Oxamyl	0.675	µg/L		0.2	0.4	1.07	PR 63.1		None	PR 10-117
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8321A	Oxamyl	0.757	µg/L		0.2	0.4	1.07	PR 70.7		None	PR 10-117

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Administrative Record
Page 12671

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 8321A	Oxamyl	0.963	µg/L		0.2	0.4	1.07	PR 90.0		None	PR 10-117
Laboratory QA Samples	LCS	1.00	01/30/08	0:00	EPA 549.2M	Paraquat dichloride	0.868	µg/L		0.21	0.4	2	PR 43.4		None	PR 50-126
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 549.2M	Paraquat dichloride	1.97	µg/L		0.21	0.4	2	PR 98.5		None	PR 50-126
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 549.2M	Paraquat dichloride	1.97	µg/L		0.21	0.4	2	PR 98.5		None	PR 50-126
Laboratory QA Samples	LCS	2.00	01/31/08	0:00	EPA 549.2M	Paraquat dichloride	1.75	µg/L		0.21	0.4	2	PR 87.5	RPD 11.8	None	PR 50-126 RPD <25
Laboratory QA Samples	LCS	2.00	01/31/08	0:00	EPA 549.2M	Paraquat dichloride	1.75	µg/L		0.21	0.4	2	PR 87.5	RPD 11.8	None	PR 50-126 RPD <25
Laboratory QA Samples	LCS	1.00	02/27/08	0:00	EPA 549.2M	Paraquat dichloride	2.13	µg/L		0.21	0.4	2	PR 107		LCS is outside of acceptance limits	PR 50-126
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 549.2M	Paraquat dichloride	1.46	µg/L		0.21	0.4	2	PR 73.0		None	PR 50-126
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Parathion, Methyl	0.425	µg/L		0.075	0.1	0.5	PR 85.0		None	PR 55-164
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Parathion, Methyl	0.369	µg/L		0.08	0.1	0.5	PR 73.8		None	PR 55-164
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Parathion, Methyl	0.439	µg/L		0.075	0.1	0.5	PR 87.8		None	PR 55-164
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Parathion, Methyl	0.431	µg/L		0.075	0.1	0.5	PR 86.2		None	PR 55-164
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Permethrin, total	0.187	µg/L		0.009	0.02	0.2	PR 93.5		None	PR 24-166
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Permethrin, total	0.229	µg/L		0.009	0.02	0.2	PR 115		None	PR 24-166
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Permethrin, total	0.206	µg/L		0.009	0.02	0.2	PR 103		None	PR 24-166
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Permethrin, total	0.183	µg/L		0.009	0.02	0.2	PR 91.5		None	PR 24-166
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Phorate	0.4	µg/L		0.072	0.1	0.5	PR 80.0		None	PR 44-117

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Phorate	0.517	µg/L		0.07	0.1	0.5	PR 103		None	PR 44-117
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Phorate	0.404	µg/L		0.072	0.1	0.5	PR 80.8		None	PR 44-117
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Phorate	0.424	µg/L		0.072	0.1	0.5	PR 84.8		None	PR 44-117
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Phosmet	0.644	µg/L		0.06	0.2	0.5	PR 129		None	PR 50-150
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Phosmet	0.424	µg/L		0.06	0.2	0.5	PR 84.8		None	PR 50-150
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Phosmet	0.413	µg/L		0.06	0.2	0.5	PR 82.6		None	PR 50-150
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Phosmet	0.469	µg/L		0.06	0.2	0.5	PR 93.8		None	PR 50-150
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 619	Simazine	2.47	µg/L		0.08	0.5	2.5	PR 98.8		None	PR 21-179
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 619	Simazine	2.61	µg/L		0.1	0.5	2.5	PR 104		None	PR 21-179
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 619	Simazine	2.12	µg/L		0.08	0.5	2.5	PR 84.8		None	PR 21-179
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 619	Simazine	1.96	µg/L		0.08	0.5	2.5	PR 78.4		None	PR 21-179
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	51	%		NA	NA	100			None	PR 15-98
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	65.3	%		NA	NA	100			None	PR 15-98
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	72.3	%		NA	NA	100			None	PR 15-98
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8081A	Tetrachloro-m-xylene (Surrogate)	59.7	%		NA	NA	100			None	PR 15-98
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Thiobencarb	2.28	µg/L		0.06	0.5	2.5	PR 91.2		None	PR 50-150
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Thiobencarb	1.75	µg/L		0.06	0.5	2.5	PR 70.0		None	PR 50-150
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Thiobencarb	2.56	µg/L		0.06	0.5	2.5	PR 102		None	PR 50-150

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Administrative Record
Page 12673

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Thiobencarb	2.21	µg/L		0.06	0.5	2.5	PR 88.4		None	PR 50-150
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 619	Tributylphosphate (Surrogate)	97.9	%		NA	NA	100			None	PR 62-145
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 619	Tributylphosphate (Surrogate)	87.3	%		NA	NA	100			None	PR 62-145
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 619	Tributylphosphate (Surrogate)	85.9	%		NA	NA	100			None	PR 62-145
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 619	Tributylphosphate (Surrogate)	92.6	%		NA	NA	100			None	PR 62-145
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	97.9	%		NA	NA	100			None	PR 60-150
Laboratory QA Samples	LCS	1.00	01/30/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	147	%		NA	NA	100			None	PR 60-150
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	91.9	%		NA	NA	100			None	PR 60-150
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	158	%		NA	NA	100			Surrogate recovery is outside of control limits	PR 60-150
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	89.3	%		NA	NA	100			None	PR 60-150
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	141	%		NA	NA	100			None	PR 60-150
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	134	%		NA	NA	100			None	PR 60-150
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Tributylphosphate (Surrogate)	73.6	%		NA	NA	100			None	PR 60-150
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 8321A	Tributylphosphate (Surrogate)	280	%		NA	NA	100			Surrogate recovery is outside of control limits	PR 36-140
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8321A	Tributylphosphate (Surrogate)	107	%		NA	NA	100			None	PR 36-140

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Administrative Record
Page 12674

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8321A	Tributylphosphate (Surrogate)	109	%		NA	NA	100			None	PR 36-140
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 8321A	Tributylphosphate (Surrogate)	120	%		NA	NA	100			None	PR 36-140
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 619	Triphenyl phosphate (Surrogate)	123	%		NA	NA	100			None	PR 54-144
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 619	Triphenyl phosphate (Surrogate)	128	%		NA	NA	100			None	PR 54-144
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 619	Triphenyl phosphate (Surrogate)	107	%		NA	NA	100			None	PR 54-144
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 619	Triphenyl phosphate (Surrogate)	94.2	%		NA	NA	100			None	PR 54-144
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	123	%		NA	NA	100			None	PR 56-129
Laboratory QA Samples	LCS	1.00	01/30/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	130	%		NA	NA	100			Surrogate recovery is outside of control limits	PR 56-129
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	136	%		NA	NA	100			Surrogate recovery is outside of control limits	PR 56-129
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	75.1	%		NA	NA	100			None	PR 56-129
Laboratory QA Samples	LCS	1.00	02/28/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	92.2	%		NA	NA	100			None	PR 56-129
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	94.4	%		NA	NA	100			None	PR 56-129
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	78.6	%		NA	NA	100			None	PR 56-129
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 8141A	Triphenyl phosphate (Surrogate)	83.5	%		NA	NA	100			None	PR 56-129

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Administrative Record
Page 12675

Table III -3. ESJWQC sample results including field blanks (FB), field duplicates (FD) and travel blanks (TB) for inorganic analysis including physical parameters, nutrients, metals and bacteria.

Expected values for field duplicates are the associated environmental sample result. Samples are sorted by station name, sample type code, sample date, and analyte.

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1	<0.1		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 200.8	Arsenic	<0.1	µg/L	ND	0.1	0.5	<0.5		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 200.8	Boron	1	µg/L	DNQ	0.9	10	<10		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 200.8	Cadmium	<0.04	µg/L	ND	0.04	0.1	<0.1		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 110.2	Color	<3	color units	ND	3	3	<3		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 200.8	Copper	0.08	µg/L	DNQ	0.05	0.5	<0.5		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 160.1	Dissolved Solids	<4	mg/L	ND	4	10	<10		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	SM 9223 B	E. coli	<1	MPN/ 100 mL	ND	1	1	<1		None	<RL or < (sample ÷ 5)	Analysis Time=08:56 DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 130.2	Hardness as CaCO3	<3	mg/L	ND	3	5	<5		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 200.8	Lead	<0.05	µg/L	ND	0.05	0.25	<0.25		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 200.8	Nickel	<0.09	µg/L	ND	0.09	0.5	<0.5		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 300.0	Nitrate as N	<0.01	mg/L	ND	0.01	0.05	<0.05		A holding time violation has occurred.	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 354.1	Nitrite as N	<0.004	mg/L	ND	0.004	0.03	<0.03		None	<RL or < (sample ÷ 5)	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12676

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 351.3	Nitrogen, Total Kjeldahl	<0.08	mg/L	ND	0.08	0.1	<0.1		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 365.2	OrthoPhosphate as P	<0.01	mg/L	ND	0.01	0.01	<0.01		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 365.2	Phosphate as P	0.022	mg/L		0.01	0.01	<0.01		None	<RL or < (sample ÷ 5)	DF=1 Env sample= 0.38
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 200.8	Selenium	0.49	µg/L	DNQ	0.22	1	<1		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 415.1	Total Organic Carbon	1.3	mg/L		0.3	0.5	<0.5		None	<RL or < (sample ÷ 5)	DF=1 Env sample = 9.4
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 180.1	Turbidity	<0.03	NTU	ND	0.03	0.05	<0.05		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FB	1.00	01/25/08	9:40	EPA 200.8	Zinc	0.8	µg/L	DNQ	0.7	1	<1		None	<RL or < (sample ÷ 5)	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 350.2	Ammonia as N	0.2	mg/L		0.04	0.1	0.27	FD RPD 29.7	Field duplicate RPD above QC limit	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 200.8	Arsenic	2.5	µg/L		0.1	0.5	2.6	FD RPD 3.9	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 200.8	Boron	14	µg/L		0.9	10	14	FD RPD NA	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 200.8	Cadmium	0.05	µg/L	DNQ	0.04	0.1	0.07	FD RPD 33.3	Field duplicate RPD above QC limit	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 110.2	Color	180	color units		15	20	200	FD RPD 10.5	Analytes analyzed at a secondary dilution	RPD <25	DF=5
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 200.8	Copper	13	µg/L		0.05	0.5	13	FD RPD NA	None	RPD <25	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12677

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 160.1	Dissolved Solids	140	mg/L		4	10	140	FD RPD NA	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	SM 9223 B	E. coli	>2400	MPN/ 100 mL		1	1	>2400	FD RPD NA	None	RPD <25	Analysis Time=08:56 DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 130.2	Hardness as CaCO3	80	mg/L		3	5	96	FD RPD 18.2	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 200.8	Lead	2.7	µg/L		0.05	0.25	2.9	FD RPD 7.1	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 200.8	Nickel	12	µg/L		0.09	0.5	13	FD RPD 8.0	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 300.0	Nitrate as N	1.2	mg/L		0.01	0.05	1.3	FD RPD 8.0	A holding time violation has occurred.	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 354.1	Nitrite as N	0.026	mg/L	DNQ	0.004	0.03	0.025	FD RPD 3.9	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 351.3	Nitrogen, Total Kjeldahl	1.8	mg/L		0.08	0.1	1.8	FD RPD NA	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 365.2	OrthoPhosphate as P	0.14	mg/L		0.01	0.01	0.16	FD RPD 13.3	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 365.2	Phosphate as P	0.37	mg/L		0.01	0.01	0.38	FD RPD 2.6	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 200.8	Selenium	0.82	µg/L	DNQ	0.22	1	0.81	FD RPD 1.2	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 415.1	Total Organic Carbon	9.6	mg/L		0.3	0.5	9.4	FD RPD 2.10	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 180.1	Turbidity	110	NTU		0.3	0.5	95.8	FD RPD 13.6	Analytes analyzed at a secondary dilution	RPD <25	DF=10
Duck Slough @ Gurr Rd	FD	1.00	01/25/08	9:40	EPA 200.8	Zinc	17	µg/L		0.7	1	19	FD RPD 11.1	None	RPD <25	DF=1
Duck Slough @ Gurr Rd	TB	1.00	01/25/08	9:40	EPA 200.8	Arsenic	<0.1	µg/L	ND	0.1	0.5	<0.1		None	<RL	DF=1

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Administrative Record
Page 12678

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	TB	1.00	01/25/08	9:40	EPA 200.8	Boron	<0.9	µg/L	ND	0.9	10	<10		None	<RL	DF=1
Duck Slough @ Gurr Rd	TB	1.00	01/25/08	9:40	EPA 200.8	Cadmium	<0.04	µg/L	ND	0.04	0.1	<0.1		None	<RL	DF=1
Duck Slough @ Gurr Rd	TB	1.00	01/25/08	9:40	EPA 200.8	Copper	<0.05	µg/L	ND	0.05	0.5	<0.5		None	<RL	DF=1
Duck Slough @ Gurr Rd	TB	1.00	01/25/08	9:40	EPA 130.2	Hardness as CaCO3	<3	mg/L	ND	3	5	<5		None	<RL	DF=1
Duck Slough @ Gurr Rd	TB	1.00	01/25/08	9:40	EPA 200.8	Lead	<0.05	µg/L	ND	0.05	0.25	<0.25		None	<RL	DF=1
Duck Slough @ Gurr Rd	TB	1.00	01/25/08	9:40	EPA 200.8	Nickel	<0.09	µg/L	ND	0.09	0.5	<0.5		None	<RL	DF=1
Duck Slough @ Gurr Rd	TB	1.00	01/25/08	9:40	EPA 200.8	Selenium	0.59	µg/L	DNQ	0.22	1	<1		None	<RL	DF=1
Duck Slough @ Gurr Rd	TB	1.00	01/25/08	9:40	EPA 200.8	Zinc	0.7	µg/L	DNQ	0.7	1	<1		None	<RL	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1	<0.1		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 200.8	Arsenic	<0.03	µg/L	ND	0.03	0.5	<0.5		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 200.8	Boron	1	µg/L	DNQ	0.2	10	<10		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1	<0.1		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 110.2	Color	<3	color units	ND	3	3	<3		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 200.8	Copper	0.1	µg/L	DNQ	0.1	0.5	<0.5		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 160.1	Dissolved Solids	<4	mg/L	ND	4	10	<10		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	SM 9223 B	E. coli	<1	MPN/ 100 mL	ND	1	1	<1		None	<RL or < (sample ÷ 5)	Analysis Time=07:33 DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 130.2	Hardness as CaCO3	<3	mg/L	ND	3	5	<5		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 200.8	Lead	<0.01	µg/L	ND	0.01	0.25	<0.25		None	<RL or < (sample ÷ 5)	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12679

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 200.8	Nickel	0.1	µg/L	DNQ	0.01	0.5	<0.5		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 300.0	Nitrate as N	<0.01	mg/L	ND	0.01	0.05	<0.05		A holding time violation has occurred.	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 354.1	Nitrite as N	<0.004	mg/L	ND	0.004	0.03	<0.03		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 351.3	Nitrogen, Total Kjeldahl	<0.08	mg/L	ND	0.08	0.1	<0.1		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 365.2	OrthoPhosphate as P	<0.01	mg/L	ND	0.01	0.01	<0.01		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 365.2	Phosphate as P	<0.01	mg/L	ND	0.01	0.01	<0.01		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 200.8	Selenium	0.56	µg/L	DNQ	0.22	1	<1		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 415.1	Total Organic Carbon	2.4	mg/L		0.3	0.5	<0.5		None	<RL or < (sample ÷ 5)	DF=1 Env sample = 21
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 180.1	Turbidity	<0.03	NTU	ND	0.03	0.05	<0.05		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FB	1.00	01/24/08	10:00	EPA 200.8	Zinc	1	µg/L	DNQ	0.6	1	<1		None	<RL or < (sample ÷ 5)	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1	0.077	FD RPD NA	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 200.8	Arsenic	16	µg/L		0.03	0.5	15	FD RPD 6.5	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 200.8	Boron	200	µg/L		0.2	10	200	FD RPD NA	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1	<0.02	FD RPD NA	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 110.2	Color	40	color units		6	6	40	FD RPD NA	Analytes analyzed at a secondary dilution	RPD <25	DF=2

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Administrative Record
Page 12680

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 200.8	Copper	4.5	µg/L		0.1	0.5	4.7	FD RPD 4.3	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 160.1	Dissolved Solids	820	mg/L		4	10	820	FD RPD NA	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	SM 9223 B	E. coli	340	MPN/ 100 mL		1	1	410	FD RPD 18.6	None	RPD <25	Analysis Time=07:33 DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 130.2	Hardness as CaCO3	500	mg/L		15	20	460	FD RPD 8.3	Analytes analyzed at a secondary dilution	RPD <25	DF=5
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 200.8	Lead	0.12	µg/L	DNQ	0.01	0.25	0.14	FD RPD 15.4	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 200.8	Nickel	3.9	µg/L		0.01	0.5	3.9	FD RPD NA	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 300.0	Nitrate as N	22	mg/L		0.1	0.5	24	FD RPD 8.7	Analytes analyzed at secondary dilution; A holding time violation has occurred	RPD <25	DF=10
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 354.1	Nitrite as N	0.32	mg/L		0.004	0.03	0.32	FD RPD NA	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 351.3	Nitrogen, Total Kjeldahl	3.3	mg/L		0.08	0.1	1.2	FD RPD 93.3	Field duplicate RPD above QC limit	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 365.2	OrthoPhosphate as P	0.39	mg/L		0.01	0.01	0.39	FD RPD NA	None	RPD <25	DF=1

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Administrative Record
Page 12681

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 365.2	Phosphate as P	0.75	mg/L		0.01	0.01	0.52	FD RPD 36.2	Field duplicate RPD above QC limit	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 200.8	Selenium	0.99	µg/L	DNQ	0.22	1	0.79	FD RPD 22.5	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 415.1	Total Organic Carbon	10	mg/L		0.3	0.5	21	FD RPD 70.9	Field duplicate RPD above QC limit	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 180.1	Turbidity	5.6	NTU		0.03	0.05	5.19	FD RPD 11.3	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	FD	1.00	01/24/08	10:00	EPA 200.8	Zinc	4	µg/L		0.6	1	5	FD RPD 22.2	None	RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	TB	1.00	01/24/08	10:00	EPA 200.8	Arsenic	<0.03	µg/L	ND	0.03	0.5	<0.5		None	<RL	DF=1
Hatch Drain @ Tuolumne Rd	TB	1.00	01/24/08	10:00	EPA 200.8	Boron	1	µg/L	DNQ	0.2	10	<10		None	<RL	DF=1
Hatch Drain @ Tuolumne Rd	TB	1.00	01/24/08	10:00	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1	<0.1		None	<RL	DF=1
Hatch Drain @ Tuolumne Rd	TB	1.00	01/24/08	10:00	EPA 200.8	Copper	<0.1	µg/L	ND	0.1	0.5	<0.5		None	<RL	DF=1
Hatch Drain @ Tuolumne Rd	TB	1.00	01/24/08	10:00	EPA 130.2	Hardness as CaCO3	<3	mg/L	ND	3	5	<5		None	<RL	DF=1
Hatch Drain @ Tuolumne Rd	TB	1.00	01/24/08	10:00	EPA 200.8	Lead	<0.01	µg/L	ND	0.01	0.25	<0.25		None	<RL	DF=1
Hatch Drain @ Tuolumne Rd	TB	1.00	01/24/08	10:00	EPA 200.8	Nickel	<0.01	µg/L	ND	0.01	0.5	<0.5		None	<RL	DF=1
Hatch Drain @ Tuolumne Rd	TB	1.00	01/24/08	10:00	EPA 200.8	Selenium	<0.22	µg/L	ND	0.22	1	<1		None	<RL	DF=1
Hatch Drain @ Tuolumne Rd	TB	1.00	01/24/08	10:00	EPA 200.8	Zinc	0.9	µg/L	DNQ	0.6	1	<1		None	<RL	DF=1
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1	<0.1		None	<RL or < (sample ÷ 5)	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12682

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 110.2	Color	<3	color units	ND	3	3	<3		None	<RL or < (sample ÷ 5)	DF=1
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 160.1	Dissolved Solids	<4	mg/L	ND	4	10	<10		None	<RL or < (sample ÷ 5)	DF=1
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	SM 9223 B	E. coli	<1	MPN/ 100 mL	ND	1	1	<1		None	<RL or < (sample ÷ 5)	Analysis Time=07:32 DF=1
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 300.0	Nitrate as N	<0.01	mg/L	ND	0.01	0.05	<0.05		None	<RL or < (sample ÷ 5)	DF=1
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 354.1	Nitrite as N	<0.004	mg/L	ND	0.004	0.03	<0.3		None	<RL or < (sample ÷ 5)	DF=1
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 351.3	Nitrogen, Total Kjeldahl	<0.08	mg/L	ND	0.08	0.1	<0.1		None	<RL or < (sample ÷ 5)	DF=1
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 365.2	OrthoPhosphate as P	<0.01	mg/L	ND	0.01	0.01	<0.01		None	<RL or < (sample ÷ 5)	DF=1
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 365.2	Phosphate as P	0.015	mg/L		0.01	0.01	<0.01		None	<RL or < (sample ÷ 5)	DF=1 Env sample = 0.12
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 415.1	Total Organic Carbon	1.4	mg/L		0.3	0.5	<0.5		Analyte detected in method, trip, or equipment blank	<RL or < (sample ÷ 5)	DF=1 Env sample = 6.5
Livingston Drain @ Robin Ave	FB	1.00	02/26/08	12:50	EPA 180.1	Turbidity	<0.03	NTU	ND	0.03	0.05	<0.05		None	<RL or < (sample ÷ 5)	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12683

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 350.2	Ammonia as N	0.2	mg/L		0.04	0.1	0.099	FD RPD 68	Field duplicate RPD above QC limit	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 200.8	Arsenic	1.3	µg/L		0.03	0.5	1.3	FD RPD NA	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 200.8	Boron	19	µg/L		0.2	10	18	FD RPD 5.4	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1	<0.02	FD RPD NA	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 110.2	Color	75	color units		15	20	40	FD RPD 61	Analytes analyzed at a secondary dilution; Field Duplicate RPD above QC limit	RPD <25	DF=5
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 200.8	Copper	18	µg/L		0.1	0.5	15	FD RPD 18.2	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 160.1	Dissolved Solids	59	mg/L		4	10	65	FD RPD 9.6	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	SM 9223 B	E. coli	3.1	MPN/ 100 mL		1	1	3.1	FD RPD NA	None	RPD <25	Analysis Time=07:32 DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 130.2	Hardness as CaCO3	38	mg/L		3	5	38	FD RPD NA	None	RPD <25	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12684

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 200.8	Lead	0.93	µg/L		0.01	0.25	1.1	FD RPD 16.7	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 200.8	Nickel	1.2	µg/L		0.01	0.5	1.2	FD RPD NA	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 300.0	Nitrate as N	0.51	mg/L		0.01	0.05	0.5	FD RPD 1.9	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 354.1	Nitrite as N	0.029	mg/L	DNQ	0.004	0.03	0.028	FD RPD 3.5	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 351.3	Nitrogen, Total Kjeldahl	0.79	mg/L		0.08	0.1	0.65	FD RPD 19.4	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 365.2	OrthoPhosphate as P	0.033	mg/L		0.01	0.01	0.029	FD RPD 12.9	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 365.2	Phosphate as P	0.096	mg/L		0.01	0.01	0.12	FD RPD 22.2	None	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 200.8	Selenium	0.41	µg/L	DNQ	0.22	1	0.6	FD RPD 38	Field duplicate RPD above QC limit	RPD <25	DF=1
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 415.1	Total Organic Carbon	6	mg/L		0.3	0.5	6.5	FD RPD 8	None	RPD <25	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12685

Station Name	Sample Type Code	Sample Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 180.1	Turbidity	33	NTU		0.15	0.2	15	FD RPD 75	Analytes analyzed at a secondary dilution; Field Duplicate RPD above QC limit	RPD <25	DF=5
Livingston Drain @ Robin Ave	FD	1.00	02/26/08	12:50	EPA 200.8	Zinc	9	µg/L		0.6	1	9	FD RPD NA	None	RPD <25	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12686

Table III -4. ESJWQC laboratory quality assurance (LABQA) results for inorganic analysis including physical parameters, nutrients, metals and bacteria.

Results include blanks (Lab Blank), matrix spikes (MS), and laboratory control spikes (LCS) for inorganic analysis. LABQA was performed for samples collected during the 2008 storm season and results are sorted by sample type, station name, sample date, and analyte. For laboratory control samples, the sample date is equal to the extraction date or analysis date; some LABQA samples may appear to be duplicates due to multiple batches run on the same date. Non Ag Waiver QA samples are samples from other projects included to meet batch requirements.

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 350.2	Ammonia as N	4.8878	mg/L		0.04	0.1	5	PR 98		None	PR 90-110	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 350.2	Ammonia as N	4.9208	mg/L		0.04	0.1	5	PR 98	RPD 0.7	None	PR 90-110 RPD<25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 200.8	Arsenic	19.34	µg/L		0.03	0.5	21.4	PR 89		None	PR 85-115	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 200.8	Arsenic	19.43	µg/L		0.03	0.5	21.4	PR 90	RPD 0.5	None	PR 85-115 RPD<25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 200.8	Boron	31.17	µg/L		0.2	10	33	PR 90		None	PR 85-115	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 200.8	Boron	32.46	µg/L		0.2	10	33	PR 97	RPD 4.1	None	PR 85-115 RPD<25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 200.8	Cadmium	18.76	µg/L		0.02	0.1	20	PR 94		None	PR 85-115	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 200.8	Cadmium	18.77	µg/L		0.02	0.1	20	PR 94	RPD 0.1	None	PR 85-115 RPD <25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 200.8	Copper	26.68	µg/L		0.1	0.5	27.2	PR 97		None	PR 85-115	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 200.8	Copper	26.84	µg/L		0.1	0.5	27.2	PR 98	RPD 0.6	None	PR 85-115 RPD <25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 130.2	Hardness as CaCO3	158	mg/L		3	5	164	PR 94		None	PR 80-120	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 130.2	Hardness as CaCO3	164	mg/L		3	5	164	PR 100	RPD 3.7	None	PR 80-120 RPD<25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 200.8	Lead	21.92	µg/L		0.01	0.25	21.5	PR 102		None	PR 85-115	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 200.8	Lead	21.94	µg/L		0.01	0.25	21.5	PR 102	RPD 0.1	None	PR 85-115 RPD <25	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12687

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 200.8	Nickel	23.76	µg/L		0.01	0.5	23.9	PR 99		None	PR 85-115	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 200.8	Nickel	23.77	µg/L		0.01	0.5	23.9	PR 99	RPD 0	None	PR 85-115 RPD <25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 300.0	Nitrate as N	5.309	mg/L		0.01	0.05	5.4	PR 98		None	PR 90-110	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 300.0	Nitrate as N	5.323	mg/L		0.01	0.05	5.4	PR 98	RPD 0.3	None	PR 90-110 RPD <25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 354.1	Nitrite as N	0.197	mg/L		0.004	0.03	0.216	PR 91		None	PR 80-120	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 354.1	Nitrite as N	0.188	mg/L		0.004	0.03	0.216	PR 86	RPD 4.7	None	PR 80-120 RPD <25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 351.3	Nitrogen, Total Kjeldahl	5.8654	mg/L		0.08	0.1	6	PR 97		None	PR 90-110	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 351.3	Nitrogen, Total Kjeldahl	5.8654	mg/L		0.08	0.1	6	PR 97	RPD 0	None	PR 90-110 RPD <25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 365.2	OrthoPhosphate as P	0.285	mg/L		0.01	0.01	0.248	PR 119		Matrix spike recovery not within control limits	PR 90-110	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 365.2	OrthoPhosphate as P	0.301	mg/L		0.01	0.01	0.248	PR 127	RPD 5.5	Matrix spike recovery not within control limits	PR 90-110 RPD <25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 365.2	Phosphate as P	1.079	mg/L		0.01	0.01	1.14	PR 94		None	PR 90-110	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 365.2	Phosphate as P	1.073	mg/L		0.01	0.01	1.14	PR 94	RPD 0.6	None	PR 90-110 RPD <25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 200.8	Selenium	18.6	µg/L		0.22	1	20.31	PR 91		None	PR 85-115	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 200.8	Selenium	18.57	µg/L		0.22	1	20.31	PR 91	RPD 0.2	None	PR 85-115 RPD <25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 415.1	Total Organic Carbon	20.9	mg/L		0.3	0.5	21	PR 99		None	PR 80-120	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 415.1	Total Organic Carbon	20.78	mg/L		0.3	0.5	21	PR 98	RPD 0.6	None	PR 80-120 RPD <25	DF=1
Bear Creek @ Kibby Rd	MS	1.00	02/25/08	13:50	EPA 200.8	Zinc	28.85	µg/L		0.6	1	30	PR 96		None	PR 85-115	DF=1
Bear Creek @ Kibby Rd	MS	2.00	02/25/08	13:50	EPA 200.8	Zinc	28.97	µg/L		0.6	1	30	PR 97	RPD 0.4	None	PR 85-115 RPD<25	DF=1

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Administrative Record
Page 12688

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 350.2	Ammonia as N	5.1404	mg/L		0.04	0.1	5.27	PR 97		None	PR 90-110	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 350.2	Ammonia as N	5.1844	mg/L		0.04	0.1	5.27	PR 98	RPD 0.9	None	PR 90-110 RPD<25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 200.8	Arsenic	22.52	µg/L		0.1	0.5	22.6	PR 100		None	PR 85-115	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 200.8	Arsenic	22.28	µg/L		0.1	0.5	22.6	PR 98	RPD 1.1	None	PR 85-115 RPD<25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 200.8	Boron	32.3	µg/L		0.9	10	34	PR 92		None	PR 85-115	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 200.8	Boron	31.94	µg/L		0.9	10	34	PR 90	RPD 1.1	None	PR 85-115 RPD<25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 200.8	Cadmium	20.03	µg/L		0.04	0.1	20.07	PR 100		None	PR 85-115	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 200.8	Cadmium	20.05	µg/L		0.04	0.1	20.07	PR 100	RPD 0.1	None	PR 85-115 RPD <25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 200.8	Copper	33.98	µg/L		0.05	0.5	33	PR 103		None	PR 85-115	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 200.8	Copper	33.91	µg/L		0.05	0.5	33	PR 103	RPD 0.2	None	PR 85-115 RPD <25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 130.2	Hardness as CaCO3	184	mg/L		3	5	196	PR 88		None	PR 80-120	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 130.2	Hardness as CaCO3	178	mg/L		3	5	196	PR 82	RPD 3.3	None	PR 80-120 RPD<25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 200.8	Lead	23.48	µg/L		0.05	0.25	22.9	PR 103		None	PR 85-115	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 200.8	Lead	23.17	µg/L		0.05	0.25	22.9	PR 102	RPD 1.3	None	PR 85-115 RPD <25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 200.8	Nickel	33.86	µg/L		0.09	0.5	33	PR 104		None	PR 85-115	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 200.8	Nickel	33.74	µg/L		0.09	0.5	33	PR 103	RPD 0.4	None	PR 85-115 RPD <25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 300.0	Nitrate as N	5.907	mg/L		0.01	0.05	6.3	PR 92		None	PR 90-110	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 300.0	Nitrate as N	6.027	mg/L		0.01	0.05	6.3	PR 94	RPD 2	None	PR 90-110 RPD <25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 354.1	Nitrite as N	0.184	mg/L		0.004	0.03	0.225	PR 80		None	PR 80-120	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 354.1	Nitrite as N	0.188	mg/L		0.004	0.03	0.225	PR 82	RPD 2.2	None	PR 80-120 RPD <25	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12689

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 351.3	Nitrogen, Total Kjeldahl	6.8869	mg/L		0.08	0.1	6.8	PR 101		None	PR 90-110	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 351.3	Nitrogen, Total Kjeldahl	6.9418	mg/L		0.08	0.1	6.8	PR 102	RPD 0.8	None	PR 90-110 RPD <25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 365.2	OrthoPhosphate as P	0.357	mg/L		0.01	0.01	0.36	PR 100		None	PR 90-110	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 365.2	OrthoPhosphate as P	0.352	mg/L		0.01	0.01	0.36	PR 98	RPD 1.4	None	PR 90-110 RPD <25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 365.2	Phosphate as P	1.355	mg/L		0.01	0.01	1.38	PR 98		None	PR 90-110	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 365.2	Phosphate as P	1.371	mg/L		0.01	0.01	1.38	PR 99	RPD 1.2	None	PR 90-110 RPD <25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 200.8	Selenium	20.57	µg/L		0.22	1	20.81	PR 99		None	PR 85-115	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 200.8	Selenium	20.36	µg/L		0.22	1	20.81	PR 98	RPD 1	None	PR 85-115 RPD <25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 415.1	Total Organic Carbon	19.23	mg/L		0.3	0.5	19.4	PR 99		None	PR 80-120	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 415.1	Total Organic Carbon	19.33	mg/L		0.3	0.5	19.4	PR 100	RPD 0.5	None	PR 80-120 RPD <25	DF=1
Duck Slough @ Gurr Rd	MS	1.00	01/25/08	9:40	EPA 200.8	Zinc	39.51	µg/L		0.7	1	39	PR 104		None	PR 85-115	DF=1
Duck Slough @ Gurr Rd	MS	2.00	01/25/08	9:40	EPA 200.8	Zinc	39.39	µg/L		0.7	1	39	PR 104	RPD 0.3	None	PR 85-115 RPD<25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 350.2	Ammonia as N	4.9317	mg/L		0.04	0.1	5.077	PR 97		None	PR 90-110	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 350.2	Ammonia as N	4.9427	mg/L		0.04	0.1	5.077	PR 97	RPD 0.2	None	PR 90-110 RPD<25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 200.8	Arsenic	36.02	µg/L		0.03	0.5	35	PR 104		None	PR 85-115	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 200.8	Arsenic	36.24	µg/L		0.03	0.5	35	PR 105	RPD 0.6	None	PR 85-115 RPD<25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 200.8	Boron	211.1	µg/L		0.2	10	220	PR 68		Matrix spike recovery not within control limits	PR 85-115	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 200.8	Boron	209.3	µg/L		0.2	10	220	PR 59	RPD 0.9	None	PR 85-115 RPD<25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 200.8	Cadmium	19.14	µg/L		0.02	0.1	20	PR 96		None	PR 85-115	DF=1

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Administrative Record
Page 12690

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 200.8	Cadmium	19.6	µg/L		0.02	0.1	20	PR 98	RPD 2.4	None	PR 85-115 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 200.8	Copper	24.09	µg/L		0.1	0.5	24.7	PR 97		None	PR 85-115	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 200.8	Copper	24.19	µg/L		0.1	0.5	24.7	PR 98	RPD 0.4	None	PR 85-115 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 130.2	Hardness as CaCO3	940	mg/L		15	20	960	PR 96		Analytes analyzed at a secondary dilution	PR 80-120	DF=5
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 130.2	Hardness as CaCO3	910	mg/L		15	20	960	PR 90	RPD 3.2	Analytes analyzed at a secondary dilution	PR 80-120 RPD<25	DF=5
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 200.8	Lead	19.74	µg/L		0.01	0.25	20.14	PR 98		None	PR 85-115	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 200.8	Lead	20.04	µg/L		0.01	0.25	20.14	PR 99	RPD 1.5	None	PR 85-115 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 200.8	Nickel	23.31	µg/L		0.01	0.5	23.9	PR 97		None	PR 85-115	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 200.8	Nickel	23.41	µg/L		0.01	0.5	23.9	PR 98	RPD 0.4	None	PR 85-115 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 300.0	Nitrate as N	29.373	mg/L		0.01	0.05	29	PR 103		Matrix spike recovery not within control limits	PR 90-110	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 300.0	Nitrate as N	30.629	mg/L		0.01	0.05	29	PR 128	RPD 4.2	Matrix spike recovery not within control limits	PR 90-110 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 354.1	Nitrite as N	0.718	mg/L		0.008	0.06	0.72	PR 99		Analytes analyzed at a secondary dilution	PR 80-120	DF=2
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 354.1	Nitrite as N	0.71	mg/L		0.008	0.06	0.72	PR 97	RPD 1.1	Analytes analyzed at a secondary dilution	PR 80-120 RPD <25	DF=2

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Administrative Record
Page 12691

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Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 351.3	Nitrogen, Total Kjeldahl	5.47	mg/L		0.08	0.1	6.2	PR 86		Matrix spike recovery not within control limits	PR 90-110	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 351.3	Nitrogen, Total Kjeldahl	5.6896	mg/L		0.08	0.1	6.2	PR 91	RPD 3.9	None	PR 90-110 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 365.2	OrthoPhosphate as P	0.589	mg/L		0.01	0.01	0.59	PR 100		None	PR 90-110	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 365.2	OrthoPhosphate as P	0.582	mg/L		0.01	0.01	0.59	PR 97	RPD 1.2	None	PR 90-110 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 365.2	Phosphate as P	1.526	mg/L		0.01	0.01	1.52	PR 101		None	PR 90-110	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 365.2	Phosphate as P	1.533	mg/L		0.01	0.01	1.52	PR 102	RPD 0.5	None	PR 90-110 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 200.8	Selenium	20.51	µg/L		0.22	1	20.79	PR 99		None	PR 85-115	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 200.8	Selenium	21.06	µg/L		0.22	1	20.79	PR 101	RPD 2.6	None	PR 85-115 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 415.1	Total Organic Carbon	25.5	mg/L		0.3	0.5	31	PR 41		Matrix spike recovery not within control limits	PR 80-120	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 415.1	Total Organic Carbon	25.5	mg/L		0.3	0.5	31	PR 41		Matrix spike recovery not within control limits	PR 80-120	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 415.1	Total Organic Carbon	25.77	mg/L		0.3	0.5	31	PR 44	RPD 1.1	Matrix spike recovery not within control limits	PR 80-120 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 415.1	Total Organic Carbon	25.77	mg/L		0.3	0.5	31	PR 44	RPD 1.1	Matrix spike recovery not within control limits	PR 80-120 RPD <25	DF=1
Hatch Drain @ Tuolumne Rd	MS	1.00	01/24/08	10:00	EPA 200.8	Zinc	23.91	µg/L		0.6	1	25	PR 92		None	PR 85-115	DF=1
Hatch Drain @ Tuolumne Rd	MS	2.00	01/24/08	10:00	EPA 200.8	Zinc	23.96	µg/L		0.6	1	25	PR 92	RPD 0.2	None	PR 85-115 RPD<25	DF=1

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Administrative Record
Page 12692

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Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 350.2	Ammonia as N	4.5144	mg/L		0.04	0.1	5.099	PR 88		Matrix spike recovery not within control limits	PR 90-110	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 350.2	Ammonia as N	4.7011	mg/L		0.04	0.1	5.099	PR 92	RPD 4.1	None	PR 90-110 RPD<25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 200.8	Arsenic	21.37	µg/L		0.03	0.5	21.3	PR 100		None	PR 85-115	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 200.8	Arsenic	21.6	µg/L		0.03	0.5	21.3	PR 101	RPD 1.1	None	PR 85-115 RPD<25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 200.8	Boron	40.85	µg/L		0.2	10	38	PR 112		None	PR 85-115	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 200.8	Boron	41.58	µg/L		0.2	10	38	PR 116	RPD 1.8	Matrix spike recovery not within control limits	PR 85-115 RPD<25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 200.8	Cadmium	19.02	µg/L		0.02	0.1	20	PR 95		None	PR 85-115	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 200.8	Cadmium	19.07	µg/L		0.02	0.1	20	PR 95	RPD 0.3	None	PR 85-115 RPD <25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 200.8	Copper	36.68	µg/L		0.1	0.5	35	PR 110		None	PR 85-115	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 200.8	Copper	36.67	µg/L		0.1	0.5	35	PR 110	RPD 0	None	PR 85-115 RPD <25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 130.2	Hardness as CaCO3	136	mg/L		3	5	138	PR 98		None	PR 80-120	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 130.2	Hardness as CaCO3	136	mg/L		3	5	138	PR 98	RPD 0	None	PR 80-120 RPD<25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 200.8	Lead	22.48	µg/L		0.01	0.25	21.1	PR 107		None	PR 85-115	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 200.8	Lead	22.52	µg/L		0.01	0.25	21.1	PR 107	RPD 0.2	None	PR 85-115 RPD <25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 200.8	Nickel	22.62	µg/L		0.01	0.5	21.2	PR 107		None	PR 85-115	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 200.8	Nickel	22.59	µg/L		0.01	0.5	21.2	PR 107	RPD 0.1	None	PR 85-115 RPD <25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 300.0	Nitrate as N	5.419	mg/L		0.01	0.05	5.5	PR 98		None	PR 90-110	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 300.0	Nitrate as N	5.448	mg/L		0.01	0.05	5.5	PR 99	RPD 0.5	None	PR 90-110 RPD <25	DF=1

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Administrative Record
Page 12693

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Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 354.1	Nitrite as N	0.219	mg/L		0.004	0.03	0.228	PR 96		None	PR 80-120	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 354.1	Nitrite as N	0.211	mg/L		0.004	0.03	0.228	PR 92	RPD 3.7	None	PR 80-120 RPD <25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 351.3	Nitrogen, Total Kjeldahl	5.7775	mg/L		0.08	0.1	5.65	PR 103		None	PR 90-110	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 351.3	Nitrogen, Total Kjeldahl	5.7555	mg/L		0.08	0.1	5.65	PR 102	RPD 0.4	None	PR 90-110 RPD <25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 365.2	OrthoPhosphate as P	0.218	mg/L		0.01	0.01	0.229	PR 95		None	PR 90-110	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 365.2	OrthoPhosphate as P	0.222	mg/L		0.01	0.01	0.229	PR 97	RPD 1.8	None	PR 90-110 RPD <25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 365.2	Phosphate as P	1.028	mg/L		0.01	0.01	1.12	PR 91		None	PR 90-110	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 365.2	Phosphate as P	1.025	mg/L		0.01	0.01	1.12	PR 90	RPD 0.3	None	PR 90-110 RPD <25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 200.8	Selenium	21.29	µg/L		0.22	1	20.6	PR 103		None	PR 85-115	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 200.8	Selenium	21.52	µg/L		0.22	1	20.6	PR 105	RPD 1.1	None	PR 85-115 RPD <25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 415.1	Total Organic Carbon	15.97	mg/L		0.3	0.5	16.5	PR 95		None	PR 80-120	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 415.1	Total Organic Carbon	16.17	mg/L		0.3	0.5	16.5	PR 97	RPD 1.2	None	PR 80-120 RPD <25	DF=1
Livingston Drain @ Robin Ave	MS	1.00	02/26/08	12:50	EPA 200.8	Zinc	30.9	µg/L		0.6	1	29	PR 108		None	PR 85-115	DF=1
Livingston Drain @ Robin Ave	MS	2.00	02/26/08	12:50	EPA 200.8	Zinc	30.21	µg/L		0.6	1	29	PR 104	RPD 2.3	None	PR 85-115 RPD<25	DF=1
Non Ag Waiver QA Sample	MS	1.00	01/23/08	0:00	EPA 200.8	Arsenic	21.47	µg/L		0.03	0.5	21.5	PR 100		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	01/23/08	0:00	EPA 200.8	Arsenic	21.96	µg/L		0.03	0.5	21.5	PR 102	RPD 2.3	Batch Quality Assurance data from another project	PR 85-115 RPD<25	DF=1

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Administrative Record
Page 12694

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Non Ag Waiver QA Sample	MS	1.00	01/23/08	0:00	EPA 200.8	Boron	599	µg/L		0.2	10	620	PR 27		Batch Quality Assurance data from another project; Matrix spike recovery not within control limits	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	01/23/08	0:00	EPA 200.8	Boron	633.2	µg/L		0.2	10	620	PR 145	RPD 5.6	Batch Quality Assurance data from another project	PR 85-115 RPD<25	DF=1
Non Ag Waiver QA Sample	MS	1.00	01/23/08	0:00	EPA 200.8	Cadmium	19.34	µg/L		0.02	0.1	20.06	PR 96		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	01/23/08	0:00	EPA 200.8	Cadmium	19.35	µg/L		0.02	0.1	20.06	PR 96	RPD 0.1	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	01/23/08	0:00	EPA 200.8	Copper	30.54	µg/L		0.1	0.5	31	PR 96		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	01/23/08	0:00	EPA 200.8	Copper	31.29	µg/L		0.1	0.5	31	PR 100	RPD 2.4	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1

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Non Ag Waiver QA Sample	MS	1.00	01/23/08	0:00	EPA 130.2	Hardness as CaCO3	960	mg/L		15	20	1000	PR 92		Analytes analyzed at secondary dilution; Batch quality assurance from another project	PR 80-120	DF=5
Non Ag Waiver QA Sample	MS	2.00	01/23/08	0:00	EPA 130.2	Hardness as CaCO3	990	mg/L		15	20	1000	PR 98	RPD 3.1	Analytes analyzed at secondary dilution; Batch quality assurance from another project	PR 80-120 RPD<25	DF=5
Non Ag Waiver QA Sample	MS	1.00	01/23/08	0:00	EPA 200.8	Lead	20.06	µg/L		0.01	0.25	20.31	PR 99		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	01/23/08	0:00	EPA 200.8	Lead	20.06	µg/L		0.01	0.25	20.31	PR 99	RPD 0	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	01/23/08	0:00	EPA 200.8	Nickel	24.61	µg/L		0.01	0.5	24.7	PR 100		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	01/23/08	0:00	EPA 200.8	Nickel	25.35	µg/L		0.01	0.5	24.7	PR 103	RPD 3	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1

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Administrative Record
Page 12696

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Non Ag Waiver QA Sample	MS	1.00	01/23/08	0:00	EPA 200.8	Selenium	19.85	µg/L		0.22	1	20.81	PR 95		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	01/23/08	0:00	EPA 200.8	Selenium	20.01	µg/L		0.22	1	20.81	PR 96	RPD 0.8	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	01/23/08	0:00	EPA 200.8	Zinc	45.5	µg/L		0.6	1	51	PR 73		Batch Quality Assurance data from another project; Matrix spike recovery not within control limits	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	01/23/08	0:00	EPA 200.8	Zinc	46.19	µg/L		0.6	1	51	PR 76	RPD 1.5	Batch Quality Assurance data from another project	PR 85-115 RPD<25	DF=1
Non Ag Waiver QA Sample	MS	1.00	01/24/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	4.756	mg/L		0.08	0.1	5	PR 95		Batch Quality Assurance data from another project	PR 90-110	DF=1
Non Ag Waiver QA Sample	MS	2.00	01/24/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	4.756	mg/L		0.08	0.1	5	PR 95	RPD 0	Batch Quality Assurance data from another project	PR 90-110 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/06/08	0:00	EPA 200.8	Selenium	20.46	µg/L		0.22	1	20.48	PR 100		Batch Quality Assurance data from another project	PR 85-115	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12697

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Non Ag Waiver QA Sample	MS	2.00	02/06/08	0:00	EPA 200.8	Selenium	19.95	µg/L		0.22	1	20.48	PR 97	RPD 2.5	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/25/08	0:00	EPA 200.8	Arsenic	22.49	µg/L		0.03	0.5	22.9	PR 98		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	02/25/08	0:00	EPA 200.8	Arsenic	22.46	µg/L		0.03	0.5	22.9	PR 98	RPD 0.1	Batch Quality Assurance data from another project	PR 85-115 RPD<25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/25/08	0:00	EPA 200.8	Boron	448.8	µg/L		0.8	40	430	PR 186		Analytes analyzed at a secondary dilution; Batch Quality Assurance data from another project; Matrix spike recovery not within control limits	PR 85-115	DF=4
Non Ag Waiver QA Sample	MS	2.00	02/25/08	0:00	EPA 200.8	Boron	422.4	µg/L		0.8	40	430	PR 54	RPD 6.1	Analytes analyzed at secondary dilution; Batch quality assurance from another project	PR 85-115 RPD<25	DF=4

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12698

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Non Ag Waiver QA Sample	MS	1.00	02/25/08	0:00	EPA 200.8	Cadmium	18.95	µg/L		0.02	0.1	20.05	PR 95		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	02/25/08	0:00	EPA 200.8	Cadmium	18.96	µg/L		0.02	0.1	20.05	PR 95	RPD 0.1	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/25/08	0:00	EPA 200.8	Copper	26	µg/L		0.1	0.5	25.5	PR 102		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	02/25/08	0:00	EPA 200.8	Copper	25.86	µg/L		0.1	0.5	25.5	PR 102	RPD 0.5	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/25/08	0:00	EPA 200.8	Lead	21.65	µg/L		0.01	0.25	21.1	PR 103		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	02/25/08	0:00	EPA 200.8	Lead	21.49	µg/L		0.01	0.25	21.1	PR 102	RPD 0.7	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/25/08	0:00	EPA 200.8	Nickel	64.18	µg/L		0.01	0.5	60	PR 121		Batch Quality Assurance data from another project; Matrix spike recovery not within control limits	PR 85-115	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12699

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Non Ag Waiver QA Sample	MS	2.00	02/25/08	0:00	EPA 200.8	Nickel	62.09	µg/L		0.01	0.5	60	PR 111	RPD 3.3	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/25/08	0:00	EPA 354.1	Nitrite as N	0.188	mg/L		0.004	0.03	0.2	PR 94		Batch Quality Assurance data from another project	PR 80-120	DF=1
Non Ag Waiver QA Sample	MS	2.00	02/25/08	0:00	EPA 354.1	Nitrite as N	0.189	mg/L		0.004	0.03	0.2	PR 95	RPD 0.5	Batch Quality Assurance data from another project	PR 80-120 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/25/08	0:00	EPA 200.8	Selenium	22.69	µg/L		0.22	1	22.6	PR 100		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	02/25/08	0:00	EPA 200.8	Selenium	22.47	µg/L		0.22	1	22.6	PR 99	RPD 1	Batch Quality Assurance data from another project	PR 85-115 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/25/08	0:00	EPA 200.8	Zinc	31.77	µg/L		0.6	1	32	PR 98		Batch Quality Assurance data from another project	PR 85-115	DF=1
Non Ag Waiver QA Sample	MS	2.00	02/25/08	0:00	EPA 200.8	Zinc	31.23	µg/L		0.6	1	32	PR 95	RPD 1.7	Batch Quality Assurance data from another project	PR 85-115 RPD<25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/26/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	8.0072	mg/L		0.08	0.1	8.4	PR 91		Batch Quality Assurance data from another project	PR 90-110	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Non Ag Waiver QA Sample	MS	2.00	02/26/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	8.139	mg/L		0.08	0.1	8.4	PR 94	RPD 1.6	Batch Quality Assurance data from another project	PR 90-110 RPD <25	DF=1
Non Ag Waiver QA Sample	MS	1.00	02/28/08	0:00	EPA 130.2	Hardness as CaCO3	180	mg/L		3	5	186	PR 94		Batch Quality Assurance data from another project	PR 80-120	DF=1
Non Ag Waiver QA Sample	MS	2.00	02/28/08	0:00	EPA 130.2	Hardness as CaCO3	186	mg/L		3	5	186	PR 100	RPD 3.3	Batch Quality Assurance data from another project	PR 80-120 RPD<25	DF=1
Non Ag Waiver QA Sample	MS	1.00	03/03/08	0:00	EPA 350.2	Ammonia as N	5.0526	mg/L		0.04	0.1	5.055	PR 100		Batch Quality Assurance data from another project	PR 90-110	DF=1
Non Ag Waiver QA Sample	MS	2.00	03/03/08	0:00	EPA 350.2	Ammonia as N	5.1185	mg/L		0.04	0.1	5.055	PR 101	RPD 1.3	Batch Quality Assurance data from another project	PR 90-110 RPD<25	DF=1
Non Ag Waiver QA Sample	MS	1.00	03/04/08	0:00	EPA 415.1	Total Organic Carbon	33.38	mg/L		0.3	0.5	32	PR 109		Batch Quality Assurance data from another project	PR 80-120	DF=1
Non Ag Waiver QA Sample	MS	2.00	03/04/08	0:00	EPA 415.1	Total Organic Carbon	33.08	mg/L		0.3	0.5	32	PR 106	RPD 0.9	Batch Quality Assurance data from another project	PR 80-120 RPD <25	DF=1
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 110.2	Color	<3	color units	ND	3	3				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	SM 9223 B	E. coli	<1	MPN/ 100 mL	ND	1	1				None	<RL	Analysis Time=07:33 DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12701

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 300.0	Nitrate as N	<0.01	mg/L	ND	0.01	0.05				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 354.1	Nitrite as N	<0.004	mg/L	ND	0.004	0.03				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 365.2	OrthoPhosphate as P	<0.01	mg/L	ND	0.01	0.01				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/25/08	0:00	EPA 180.1	Turbidity	<0.03	NTU	ND	0.03	0.05				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/26/08	0:00	EPA 110.2	Color	<3	color units	ND	3	3				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/26/08	0:00	SM 9223 B	E. coli	<1	MPN/ 100 mL	ND	1	1				None	<RL	Analysis Time=08:56 DF=1
Laboratory QA Samples	LabBlank	1.00	01/26/08	0:00	EPA 354.1	Nitrite as N	<0.004	mg/L	ND	0.004	0.03				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/26/08	0:00	EPA 180.1	Turbidity	<0.03	NTU	ND	0.03	0.05				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/27/08	0:00	EPA 300.0	Nitrate as N	<0.01	mg/L	ND	0.01	0.05				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/28/08	0:00	EPA 365.2	OrthoPhosphate as P	<0.01	mg/L	ND	0.01	0.01				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 160.1	Dissolved Solids	<4	mg/L	ND	4	10				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/29/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	<0.08	mg/L	ND	0.08	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/30/08	0:00	EPA 160.1	Dissolved Solids	<4	mg/L	ND	4	10				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/30/08	0:00	EPA 365.2	Phosphate as P	<0.01	mg/L	ND	0.01	0.01				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 200.8	Arsenic	<0.03	µg/L	ND	0.03	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 200.8	Boron	<0.2	µg/L	ND	0.2	10				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 200.8	Copper	<0.1	µg/L	ND	0.1	0.5				None	<RL	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 200.8	Lead	<0.01	µg/L	ND	0.01	0.25				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 200.8	Nickel	<0.01	µg/L	ND	0.01	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	<0.08	mg/L	ND	0.08	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	<0.08	mg/L	ND	0.08	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 365.2	Phosphate as P	<0.01	mg/L	ND	0.01	0.01				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 200.8	Selenium	<0.22	µg/L	ND	0.22	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	01/31/08	0:00	EPA 200.8	Zinc	<0.6	µg/L	ND	0.6	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Arsenic	<0.03	µg/L	ND	0.03	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Arsenic	<0.1	µg/L	ND	0.1	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Cadmium	<0.04	µg/L	ND	0.04	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Copper	<0.1	µg/L	ND	0.1	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Copper	<0.05	µg/L	ND	0.05	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Lead	<0.01	µg/L	ND	0.01	0.25				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Lead	<0.05	µg/L	ND	0.05	0.25				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Nickel	<0.01	µg/L	ND	0.01	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Nickel	<0.09	µg/L	ND	0.09	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Zinc	<0.6	µg/L	ND	0.6	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/01/08	0:00	EPA 200.8	Zinc	<0.7	µg/L	ND	0.7	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/04/08	0:00	EPA 200.8	Boron	<0.9	µg/L	ND	0.9	10				None	<RL	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LabBlank	1.00	02/04/08	0:00	EPA 200.8	Boron	<0.2	µg/L	ND	0.2	10				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/04/08	0:00	EPA 200.8	Selenium	<0.22	µg/L	ND	0.22	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/04/08	0:00	EPA 415.1	Total Organic Carbon	0.31	mg/L	DNQ	0.3	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/04/08	0:00	EPA 415.1	Total Organic Carbon	<0.3	mg/L	ND	0.3	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/05/08	0:00	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/06/08	0:00	EPA 130.2	Hardness as CaCO3	<3	mg/L	ND	3	5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/08/08	0:00	EPA 130.2	Hardness as CaCO3	<3	mg/L	ND	3	5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/11/08	0:00	EPA 130.2	Hardness as CaCO3	<3	mg/L	ND	3	5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/12/08	0:00	EPA 200.8	Selenium	0.23	µg/L	DNQ	0.22	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/13/08	0:00	EPA 200.8	Selenium	0.24	µg/L	DNQ	0.22	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/26/08	0:00	EPA 110.2	Color	<3	color units	ND	3	3				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/26/08	0:00	SM 9223 B	E. coli	<1	MPN/ 100 mL	ND	1	1				None	<RL	Analysis Time=07:57 DF=1
Laboratory QA Samples	LabBlank	1.00	02/26/08	0:00	EPA 300.0	Nitrate as N	<0.01	mg/L	ND	0.01	0.05				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/26/08	0:00	EPA 354.1	Nitrite as N	<0.004	mg/L	ND	0.004	0.03				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/26/08	0:00	EPA 354.1	Nitrite as N	<0.004	mg/L	ND	0.004	0.03				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/26/08	0:00	EPA 365.2	OrthoPhosphate as P	<0.01	mg/L	ND	0.01	0.01				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/26/08	0:00	EPA 180.1	Turbidity	<0.03	NTU	ND	0.03	0.05				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/27/08	0:00	EPA 110.2	Color	<3	color units	ND	3	3				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/27/08	0:00	SM 9223 B	E. coli	<1	MPN/ 100 mL	ND	1	1				None	<RL	Analysis Time=07:25 DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12704

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LabBlank	1.00	02/27/08	0:00	EPA 300.0	Nitrate as N	<0.01	mg/L	ND	0.01	0.05				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/27/08	0:00	EPA 354.1	Nitrite as N	<0.004	mg/L	ND	0.004	0.03				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/27/08	0:00	EPA 365.2	OrthoPhosphate as P	<0.01	mg/L	ND	0.01	0.01				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/27/08	0:00	EPA 180.1	Turbidity	<0.03	NTU	ND	0.03	0.05				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 200.8	Arsenic	0.09	µg/L	DNQ	0.03	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 200.8	Copper	<0.1	µg/L	ND	0.1	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 200.8	Lead	<0.01	µg/L	ND	0.01	0.25				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 200.8	Nickel	0.03	µg/L	DNQ	0.01	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 200.8	Selenium	<0.22	µg/L	ND	0.22	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	02/29/08	0:00	EPA 200.8	Zinc	<0.6	µg/L	ND	0.6	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/01/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	<0.08	mg/L	ND	0.08	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/02/08	0:00	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/02/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	<0.08	mg/L	ND	0.08	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 160.1	Dissolved Solids	<4	mg/L	ND	4	10				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/03/08	0:00	EPA 160.1	Dissolved Solids	<4	mg/L	ND	4	10				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 200.8	Arsenic	<0.03	µg/L	ND	0.03	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 200.8	Boron	<0.2	µg/L	ND	0.2	10				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 200.8	Copper	<0.1	µg/L	ND	0.1	0.5				None	<RL	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12705

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 160.1	Dissolved Solids	<4	mg/L	ND	4	10				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 200.8	Lead	<0.01	µg/L	ND	0.01	0.25				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 200.8	Nickel	0.01	µg/L	DNQ	0.01	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	<0.08	mg/L	ND	0.08	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 365.2	Phosphate as P	<0.01	mg/L	ND	0.01	0.01				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 200.8	Selenium	<0.22	µg/L	ND	0.22	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/04/08	0:00	EPA 200.8	Zinc	<0.6	µg/L	ND	0.6	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/05/08	0:00	EPA 200.8	Arsenic	<0.03	µg/L	ND	0.03	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/05/08	0:00	EPA 200.8	Boron	1	µg/L	DNQ	0.2	10				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/05/08	0:00	EPA 200.8	Cadmium	<0.02	µg/L	ND	0.02	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/05/08	0:00	EPA 200.8	Copper	<0.1	µg/L	ND	0.1	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/05/08	0:00	EPA 130.2	Hardness as CaCO3	<3	mg/L	ND	3	5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/05/08	0:00	EPA 200.8	Lead	0.01	µg/L	DNQ	0.01	0.25				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/05/08	0:00	EPA 200.8	Nickel	0.1	µg/L	DNQ	0.01	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/05/08	0:00	EPA 200.8	Zinc	0.8	µg/L	DNQ	0.6	1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/06/08	0:00	EPA 200.8	Boron	0.2	µg/L	DNQ	0.2	10				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/06/08	0:00	EPA 365.2	Phosphate as P	<0.01	mg/L	ND	0.01	0.01				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/06/08	0:00	EPA 415.1	Total Organic Carbon	<0.3	mg/L	ND	0.3	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/07/08	0:00	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/07/08	0:00	EPA 350.2	Ammonia as N	<0.04	mg/L	ND	0.04	0.1				None	<RL	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LabBlank	1.00	03/10/08	0:00	EPA 130.2	Hardness as CaCO3	<3	mg/L	ND	3	5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/10/08	0:00	EPA 130.2	Hardness as CaCO3	<3	mg/L	ND	3	5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/11/08	0:00	EPA 415.1	Total Organic Carbon	<0.3	mg/L	ND	0.3	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	03/12/08	0:00	EPA 415.1	Total Organic Carbon	<0.3	mg/L	ND	0.3	0.5				None	<RL	DF=1
Laboratory QA Samples	LabBlank	1.00	04/04/08	0:00	EPA 200.8	Selenium	0.3	µg/L	DNQ	0.22	1				None	<RL	DF=1
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 110.2	Color	10	color units		3	3	10	PR 100		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 300.0	Nitrate as N	4.03	mg/L		0.01	0.05	4	PR 101		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 354.1	Nitrite as N	0.207	mg/L		0.004	0.03	0.2	PR 104		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 365.2	OrthoPhosphate as P	0.197	mg/L		0.01	0.01	0.2	PR 99		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/25/08	0:00	EPA 180.1	Turbidity	4.18	NTU		0.03	0.05	4	PR 105		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/26/08	0:00	EPA 110.2	Color	10	color units		3	3	10	PR 100		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	01/26/08	0:00	EPA 354.1	Nitrite as N	0.201	mg/L		0.004	0.03	0.2	PR 101		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	01/26/08	0:00	EPA 180.1	Turbidity	3.67	NTU		0.03	0.05	4	PR 92		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/27/08	0:00	EPA 300.0	Nitrate as N	4.034	mg/L		0.01	0.05	4	PR 101		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/28/08	0:00	EPA 365.2	OrthoPhosphate as P	0.2	mg/L		0.01	0.01	0.2	PR 100		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 160.1	Dissolved Solids	506	mg/L		8	20	500	PR 101		Analytes analyzed at a secondary dilution	PR 80-120	DF=2
Laboratory QA Samples	LCS	1.00	01/29/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	5.0196	mg/L		0.08	0.1	5	PR 100		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/30/08	0:00	EPA 160.1	Dissolved Solids	500	mg/L		8	20	500	PR 100		Analytes analyzed at a secondary dilution	PR 80-120	DF=2

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12707

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LCS	1.00	01/30/08	0:00	EPA 365.2	Phosphate as P	1.073	mg/L		0.01	0.01	1	PR 107		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 350.2	Ammonia as N	4.9317	mg/L		0.04	0.1	5	PR 99		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 200.8	Arsenic	19.91	µg/L		0.03	0.5	20	PR 100		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 200.8	Boron	17.79	µg/L		0.2	10	20	PR 89		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 200.8	Cadmium	20.38	µg/L		0.02	0.1	20	PR 102		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 200.8	Copper	21.41	µg/L		0.1	0.5	20	PR 107		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 200.8	Lead	21.23	µg/L		0.01	0.25	20	PR 106		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 200.8	Nickel	21.41	µg/L		0.01	0.5	20	PR 107		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	5.0855	mg/L		0.08	0.1	5	PR 102		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	4.9647	mg/L		0.08	0.1	5	PR 99		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 365.2	Phosphate as P	0.968	mg/L		0.01	0.01	1	PR 97		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 200.8	Selenium	20.29	µg/L		0.22	1	20	PR 101		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	01/31/08	0:00	EPA 200.8	Zinc	21.49	µg/L		0.6	1	20	PR 107		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Arsenic	20.25	µg/L		0.03	0.5	20	PR 101		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Arsenic	20.06	µg/L		0.1	0.5	20	PR 100		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Boron	18.57	µg/L		0.9	10	20	PR 93		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Boron	21.27	µg/L		0.2	10	20	PR 106		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Cadmium	20.2	µg/L		0.04	0.1	20	PR 101		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Cadmium	20.47	µg/L		0.02	0.1	20	PR 102		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Copper	20.39	µg/L		0.05	0.5	20	PR 102		None	PR 85-115	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12708

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Copper	21	µg/L		0.1	0.5	20	PR 105		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Lead	21.16	µg/L		0.05	0.25	20	PR 106		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Lead	21.1	µg/L		0.01	0.25	20	PR 106		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Nickel	19.96	µg/L		0.09	0.5	20	PR 100		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Nickel	20.52	µg/L		0.01	0.5	20	PR 103		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Selenium	21.95	µg/L		0.22	1	20	PR 110		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Zinc	21.58	µg/L		0.6	1	20	PR 108		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/01/08	0:00	EPA 200.8	Zinc	21.39	µg/L		0.7	1	20	PR 107		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/04/08	0:00	EPA 415.1	Total Organic Carbon	10.38	mg/L		0.3	0.5	10	PR 104		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	02/04/08	0:00	EPA 415.1	Total Organic Carbon	10.18	mg/L		0.3	0.5	10	PR 102		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	02/05/08	0:00	EPA 350.2	Ammonia as N	4.9537	mg/L		0.04	0.1	5	PR 99		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	02/06/08	0:00	EPA 130.2	Hardness as CaCO3	1000	mg/L		3	5	1000	PR 100		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	02/08/08	0:00	EPA 130.2	Hardness as CaCO3	1000	mg/L		3	5	1000	PR 100		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	02/11/08	0:00	EPA 130.2	Hardness as CaCO3	1000	mg/L		3	5	1000	PR 100		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	02/12/08	0:00	EPA 200.8	Selenium	22.09	µg/L		0.22	1	20	PR 110		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/13/08	0:00	EPA 200.8	Selenium	19.96	µg/L		0.22	1	20	PR 100		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/26/08	0:00	EPA 110.2	Color	10	color units		3	3	10	PR 100		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	02/26/08	0:00	EPA 300.0	Nitrate as N	4.24	mg/L		0.01	0.05	4	PR 106		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	02/26/08	0:00	EPA 354.1	Nitrite as N	0.209	mg/L		0.004	0.03	0.2	PR 105		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	02/26/08	0:00	EPA 354.1	Nitrite as N	0.209	mg/L		0.004	0.03	0.2	PR 105		None	PR 80-120	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12709

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LCS	1.00	02/26/08	0:00	EPA 365.2	OrthoPhosphate as P	0.2	mg/L		0.01	0.01	0.2	PR 100		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	02/26/08	0:00	EPA 180.1	Turbidity	4.08	NTU		0.03	0.05	4	PR 102		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	02/27/08	0:00	EPA 110.2	Color	10	color units		3	3	10	PR 100		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	02/27/08	0:00	EPA 300.0	Nitrate as N	4.046	mg/L		0.01	0.05	4	PR 101		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	02/27/08	0:00	EPA 354.1	Nitrite as N	0.207	mg/L		0.004	0.03	0.2	PR 104		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	02/27/08	0:00	EPA 365.2	OrthoPhosphate as P	0.194	mg/L		0.01	0.01	0.2	PR 97		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	02/27/08	0:00	EPA 180.1	Turbidity	4.16	NTU		0.03	0.05	4	PR 104		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 200.8	Arsenic	17.24	µg/L		0.03	0.5	20	PR 86		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 200.8	Boron	21.61	µg/L		0.2	10	20	PR 108		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 200.8	Cadmium	18.67	µg/L		0.02	0.1	20	PR 93		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 200.8	Copper	18.93	µg/L		0.1	0.5	20	PR 95		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 200.8	Lead	20.81	µg/L		0.01	0.25	20	PR 104		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 200.8	Nickel	19.09	µg/L		0.01	0.5	20	PR 95		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 200.8	Selenium	18.04	µg/L		0.22	1	20	PR 90		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	02/29/08	0:00	EPA 200.8	Zinc	19.62	µg/L		0.6	1	20	PR 98		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/01/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	4.8219	mg/L		0.08	0.1	5	PR 96		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	03/02/08	0:00	EPA 350.2	Ammonia as N	4.767	mg/L		0.04	0.1	5	PR 95		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	03/02/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	5.0306	mg/L		0.08	0.1	5	PR 101		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 160.1	Dissolved Solids	500	mg/L		8	20	500	PR 100		Analytes analyzed at a secondary dilution	PR 80-120	DF=2

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12710

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LCS	1.00	03/03/08	0:00	EPA 160.1	Dissolved Solids	500	mg/L		8	20	500	PR 100		Analytes analyzed at a secondary dilution	PR 80-120	DF=2
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 200.8	Arsenic	20.07	µg/L		0.03	0.5	20	PR 100		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 200.8	Boron	21.7	µg/L		0.2	10	20	PR 109		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 200.8	Cadmium	20.06	µg/L		0.02	0.1	20	PR 100		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 200.8	Copper	22.36	µg/L		0.1	0.5	20	PR 112		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 160.1	Dissolved Solids	484	mg/L		8	20	500	PR 97		Analytes analyzed at a secondary dilution	PR 80-120	DF=2
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 200.8	Lead	22.56	µg/L		0.01	0.25	20	PR113		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 200.8	Nickel	22.01	µg/L		0.01	0.5	20	PR 110		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 351.3	Nitrogen, Total Kjeldahl	4.9757	mg/L		0.08	0.1	5	PR 100		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 365.2	Phosphate as P	0.9949	mg/L		0.01	0.01	1	PR 99		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 200.8	Selenium	21.09	µg/L		0.22	1	20	PR 105		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/04/08	0:00	EPA 200.8	Zinc	22.1	µg/L		0.6	1	20	PR 111		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/05/08	0:00	EPA 200.8	Arsenic	19.94	µg/L		0.03	0.5	20	PR 100		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/05/08	0:00	EPA 200.8	Boron	19.23	µg/L		0.2	10	20	PR 96		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/05/08	0:00	EPA 200.8	Cadmium	19.69	µg/L		0.02	0.1	20	PR 98		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/05/08	0:00	EPA 200.8	Copper	21.86	µg/L		0.1	0.5	20	PR 109		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/05/08	0:00	EPA 130.2	Hardness as CaCO3	1000	mg/L		3	5	1000	PR 100		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	03/05/08	0:00	EPA 200.8	Lead	21.84	µg/L		0.01	0.25	20	PR 109		None	PR 85-115	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Station Name	Sample Type Code	Lab Replicate	Sample Date	Sample Time	Method Name	Analyte	Result	Unit	Qualifier Code	MDL	RL	Expected Value	PR	RPD	Quality Assurance	Data Acceptability Criteria	Lab Comments
Laboratory QA Samples	LCS	1.00	03/05/08	0:00	EPA 200.8	Nickel	21.52	µg/L		0.01	0.5	20	PR 108		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/05/08	0:00	EPA 200.8	Selenium	21.71	µg/L		0.22	1	20	PR 109		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/05/08	0:00	EPA 200.8	Zinc	21.38	µg/L		0.6	1	20	PR 107		None	PR 85-115	DF=1
Laboratory QA Samples	LCS	1.00	03/06/08	0:00	EPA 365.2	Phosphate as P	0.937	mg/L		0.01	0.01	1	PR 94		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	03/06/08	0:00	EPA 415.1	Total Organic Carbon	10.49	mg/L		0.3	0.5	10	PR 105		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	03/07/08	0:00	EPA 350.2	Ammonia as N	5.0636	mg/L		0.04	0.1	5	PR 101		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	03/07/08	0:00	EPA 350.2	Ammonia as N	4.5363	mg/L		0.04	0.1	5	PR 91		None	PR 90-110	DF=1
Laboratory QA Samples	LCS	1.00	03/10/08	0:00	EPA 130.2	Hardness as CaCO3	1000	mg/L		3	5	1000	PR 100		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	03/10/08	0:00	EPA 130.2	Hardness as CaCO3	1000	mg/L		3	5	1000	PR 100		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	03/11/08	0:00	EPA 415.1	Total Organic Carbon	9.874	mg/L		0.3	0.5	10	PR 99		None	PR 80-120	DF=1
Laboratory QA Samples	LCS	1.00	03/12/08	0:00	EPA 415.1	Total Organic Carbon	9.868	mg/L		0.3	0.5	10	PR 99		None	PR 80-120	DF=1

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12712

Table III -5. ESJWQC water toxicity testing results.

Results are for *Ceriodaphnia dubia, Pimephales promelas and Selenastrum capricornutum* field duplicates (FD) samples collected during the 2008 storm season. Data are sorted by station name, species and sample date.

Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Data Acceptability Criteria	Toxicity Test Comments
Deadman Creek @ Hwy 59	FD	01/25/08	12:00	water	01/26/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	RPD <25	FD RPD 0
Deadman Creek @ Hwy 59	FD	01/25/08	12:00	water	01/26/08	*Pimephales promelas*	Survival (%)	100	97.5	98	NSG	RPD <25	FD RPD 2.5
Deadman Creek @ Hwy 59	FD	01/25/08	12:00	water	01/26/08	*Selenastrum capricornutum*	Total Cell Count	1250261	719452	58	SL	RPD <25	FD RPD 26.7; Resampled on 01/25/08; toxicity was not persistent. Absorbance values converted to cells/mL.
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	water	01/25/08	*Selenastrum capricornutum*	Total Cell Count	1120001	1025563	92	NSG	RPD <25	FD RPD 21; Absorbance values converted to cells/mL.
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	water	01/25/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	RPD <25	FD RPD 0
Hatch Drain @ Tuolumne Rd	FD	01/24/08	10:00	water	01/25/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	RPD <25	FD RPD 0
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	water	02/27/08	*Ceriodaphnia dubia*	Survival (%)	100	100	100	NSG	RPD <25	FD RPD 0
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	water	02/27/08	*Pimephales promelas*	Survival (%)	100	100	100	NSG	RPD <25	FD RPD 0

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12713

Station Name	Sample Type Code	Sample Date	Sample Time	Matrix	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Data Acceptability Criteria	Toxicity Test Comments
Livingston Drain @ Robin Ave	FD	02/26/08	12:50	water	02/27/08	*Selenastrum capricornutum*	Total Cell Count	1133027	732478	65	SL	RPD <25	FD RPD 5.9; Resample not taken; site dry. Absorbance values converted to cells/mL.

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12714

Table III -6. ESJWQC sediment toxicity testing results.

Results are for *Hyalella azteca* field duplicates (FD) samples collected during the 2008 storm season. Data are sorted by station name, species and sample date.

Station Name	Sample Type Code	Sample Date	Sample Time	Matrix Name	Toxicity Start Date	Species	Toxicity End Point	Control Mean	Sample Mean	Percent Control	Toxicity Significance	Data Acceptability Criteria	Toxicity Test Comments
Hatch Drain @ Tuolumne Rd	FD	03/04/08	10:30	sediment	03/11/08	*Hyalella azteca*	Survival (%)	91	0	0	SL	RPD <25	FD RPD 0 Resampled on 03/28/08; toxicity was persistent.

DF = Dilution Factor DNQ = Detected but Not Quantifiable E = Environmental sample FB = Field Blank FD = Field Duplicate FD RPD = Relative Percent Difference between the environmental sample and the field duplicate sample MDL = Minimum Detection Limit NA = Not Applicable ND = Not Detectable NSG = not statistically different from control and result is greater than 80% threshold PR = Percent Recovery RL = Reporting Limit RPD = Relative Percent Difference RS = Resample SL = statistically different from control and less than 80% threshold SG = statistically different from control and greater than 80% threshold TB = Travel Blank TIE = Toxic Identification Evaluation

Administrative Record
Page 12715

Appendix IV

Pesticide Use Reports

Table of Contents

LIST OF TABLES **4**

LIST OF FIGURES **6**

BEAR CREEK @ KIBBY RD SITE SUBWATERSHED 8
Pesticide Use Reports for metal exceedances in the water column *8*
Storm 1 (1/24/08) - copper exceedance 8
Storm 2 (2/25/08) - copper exceedance 8
BLACK RASCAL @ YOSEMITE RD SITE SUBWATERSHED 8
Pesticide Use Reports for water column toxicity *8*
Storm 2 (2/25/08) - Selenastrum capricornutum toxicity 8
COTTONWOOD CREEK @ RD 20 SITE SUBWATERSHED 9
Pesticide Use Reports for pesticide exceedances in the water column *9*
Storm 1 (1/25/08) - chlorpyrifos exceedance 9
Storm 2 (2/25/08) - chlorpyrifos exceedance 9
Storm 1 (1/25/08) - diuron exceedance 11
Storm 2 (2/25/08) - diuron exceedance 13
Storm 2 (2/25/08) - diazinon exceedance 15
Storm 2 (2/25/08) - Simazine exceedance 17
Pesticide Use Reports for metal exceedances in the water column *21*
Storm 1 (1/25/08) - copper exceedance 21
Storm 2 (2/25/08) - copper exceedance 26
Pesticide Use Reports for sediment toxicity exceedances *28*
Storm sediment (3/04/008) – Hyalella azteca toxicity 28
Pesticide Use Reports for water column toxicity *47*
Storm 1 (1/25/008) – Pimephales promelas toxicity 47
DEADMAN CREEK @ GURR RD SITE SUBWATERSHED 47
Pesticide Use Reports for metal exceedances in the water column *47*
Storm 1 (1/25/08) - copper exceedance 47
Pesticide Use Reports for water column toxicity *50*
Storm 2 (2/25/08) - Selenastrum capricornutum toxicity 50
DEADMAN CREEK @ HWY 59 SITE SUBWATERSHED 65
Pesticide Use Reports for pesticide exceedances in the water column *65*
Storm 1 (1/25/08) - diuron exceedance 65
Storm 1 (1/25/08) - simazine exceedance 67
Pesticide Use Reports for water column toxicity *69*
Storm 1 (1/25/08) - Selenastrum capricornutum toxicity 69
DRY CREEK @ RD 18 SITE SUBWATERSHED 79
Pesticide Use Reports for pesticide exceedances in the water column *79*
Storm 1 (1/25/08) - diuron exceedance 79
Storm 2 (2/25/08) - diuron exceedance 81
Storm 2 (2/25/08) -chlopryrifos exceedance 83
Storm 2 (2/25/08) -diazinon exceedance 85
Pesticide Use Reports for metal exceedances in the water column *87*
Storm 1 (1/25/08) -copper exceedance 87
Storm 2 (2/25/08) -copper exceedance 92
Pesticide Use Reports for sediment toxicity exceedances *94*
Storm 1 (1/25/08) – Selenastrum capricornutum toxicity 94
Storm 2 (2/25/08) – Selenastrum capricornutum toxicity 109
Storm 2 RS (3/4/08) – Selenastrum capricornutum toxicity 123
DRY CREEK @ WELLSFORD SITE SUBWATERSHED 129
Pesticide Use Reports for metal exceedances in the water column *129*
Storm 2 (2/25/08) - copper exceedance 129
Pesticide Use Reports for sediment toxicity exceedances *133*
Storm sediment (3/4/08) – Hyalella azteca toxicity 133
Pesticide Use Reports for water column toxicity *149*

Administrative Record
Page 12717

Storm 2 (2/25/08)) - Selenastrum capricornutum toxicity 149
DUCK SLOUGH @ GURR RD SITE SUBWATERSHED 167
Pesticide Use Reports for metal exceedances in the water column *167*
Storm 1 (1/25/08) - copper exceedance 167
Storm 2 (2/25/08) - copper exceedance 169
DUCK SLOUGH @ HWY 99 SITE SUBWATERSHED 170
Pesticide Use Reports for metal exceedances in the water column *170*
Storm 2 (2/25/08) - copper exceedance 170
HATCH DRAIN @ TUOLUMNE RD SITE SUBWATERSHED 172
Pesticide Use Reports for sediment toxicity exceedances *172*
Storm sediment (3/4/08) – Hyalella azteca toxicity 172
Storm sediment RS (3/28/08) – Hyalella azteca toxicity 174
Pesticide Use Reports for water column toxicity *176*
Storm 1 (1/24/08) - Selenastrum capricornutum toxicity 176
Storm 2 (2/26/08) - Selenastrum capricornutum toxicity 181
Storm 2 RS (3/4/08) - Selenastrum capricornutum toxicity 183
HIGHLINE CANAL @ HWY 99 SITE SUBWATERSHED 185
Pesticide Use Reports for pesticide exceedances in the water column *185*
Storm 1 (1/24/08) - chlorpyrifos exceedance 185
Storm 1 (1/24/08) - diuron exceedance 185
Pesticide Use Reports for metal exceedances in the water column *186*
Storm 1 (1/24/08) - copper exceedance 186
Storm 2 (2/26/08) - copper exceedance 192
Pesticide Use Reports for sediment toxicity exceedances *194*
Storm sediment (3/4/08) – Hyalella azteca toxicity 194
Pesticide Use Reports for water column toxicity *207*
Storm 2 (2/26/08) - Selenastrum capricornutum toxicity 207
HIGHLINE CANAL @ LOMBARDY SITE SUBWATERSHED 224
Pesticide Use Reports for pesticide exceedances in the water column *224*
Storm 1 (1/24/08) - chlorpyrifos exceedance 224
Storm 2 (2/26/08) - simazine exceedance 224
Pesticide Use Reports for metal exceedances in the water column *227*
Storm 1 (1/24/08) - copper exceedance 227
Storm 2 (2/26/08) - copper exceedance 231
Pesticide Use Reports for sediment toxicity exceedances *233*
Storm sediment (3/4/08) – Hyalella azteca toxicity 233
Pesticide Use Reports for water column toxicity *244*
Storm 1 (1/25/08) - Ceriodaphnia dubia toxicity 244
Storm 1RS (1/30/08) - Ceriodaphnia dubia toxicity 253
Storm 2 (2/26/08) – Pimephales promelas toxicity 255
Storm 2 RS (3/4/08) – Pimephales promelas toxicity 255
HILMAR DRAIN @ CENTRAL AVE SITE SUBWATERSHED 256
Pesticide Use Reports for sediment toxicity exceedances *256*
Storm sediment (3/4/08) – Hyalella azteca toxicity 256
LIVINGSTON DRAIN @ ROBIN AVE SITE SUBWATERSHED 258
Pesticide Use Reports for pesticide exceedances in the water column *258*
Storm 1 (1/24/08) - chlorpyrifos exceedance 258
Pesticide Use Reports for metal exceedances in the water column *259*
Storm 1 (1/24/08) - copper exceedance 259
Storm 2 (2/26/08) - copper exceedance 261
Pesticide Use Reports for water column toxicity *263*
Storm 2 (2/26/08) - Selenastrum capricornutum toxicity 263
MERCED RIVER @ SANTA FE SITE SUBWATERSHED 267
Pesticide Use Reports for pesticide exceedances in the water column *267*
Storm 1 (1/24/08) - chlorpyrifos exceedance 267
Pesticide Use Reports for metal exceedances in the water column *269*
Storm 1 (1/24/08) - copper exceedance 269
Pesticide Use Reports for water column toxicity *275*
Storm 1 (1/24/08) - Ceriodaphnia dubia toxicity 275

Storm 1 RS (1/30/08) - Ceriodaphnia dubia toxicity 287
MILES CREEK @ REILLY RD SITE SUBWATERSHED 289
Pesticide Use Reports for pesticide exceedances in the water column *289*
Storm 1 (1/25/08) - Methidathion exceedance 289
Pesticide Use Reports for metal exceedances in the water column *290*
Storm 1 (1/25/08) - Copper exceedance 290
Storm 2 (2/25/08) - Copper exceedance 292
Pesticide Use Reports for water column toxicity *292*
Storm 1 (1/25/08) - Ceriodaphnia dubia toxicity 292
Storm 1 RS (1/30/08) - Ceriodaphnia dubia toxicity 296
MUSTANG CREEK @ EAST AVE SITE SUBWATERSHED 298
Pesticide Use Reports for pesticide exceedances in the water column *298*
Storm 1 (1/24/08) - Chlorpyrifos exceedance 298
Storm 1 (1/24/08) - Simazine exceedance 300
Storm 2 (2/26/08) - Chlorpyrifos exceedance 302
Storm 2 (2/26/08) - Simazine exceedance 302
Pesticide Use Reports for sediment toxicity exceedances *304*
Storm sediment (3/4/08) – Hyalella azteca toxicity 304
Pesticide Use Reports for water column toxicity *308*
Storm 1 (1/24/08) - Ceriodaphnia dubia toxicity 308
Storm 1 RS (1/30/08) - Ceriodaphnia dubia toxicity 311
Storm 2 (2/26/08) - Selenastrum capricornutum toxicity 313
PRAIRIE FLOWER DRAIN @ CROWS LANDING RD SITE SUBWATERSHED 318
Pesticide Use Reports for water column toxicity *318*
Storm 1 (1/24/08) - Selenastrum capricornutum toxicity 318
Storm 2 (2/26/08) - Selenastrum capricornutum toxicity 321
WESTPORT DRAIN @ VIVIAN RD SITE SUBWATERSHED 324
Pesticide Use Reports for water column toxicity *324*
Storm 2 (2/26/08) - Selenastrum capricornutum toxicity 324
Storm 2 RS (3/408) - Selenastrum capricornutum toxicity 328

List of Tables

Table 1. Chlorpyrifos use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1. 9
Table 2. Diuron use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1. 11
Table 3. Diuron use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2. 13
Table 4. Diazinon use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2. 15
Table 5. Simazine use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2. 17
Table 6. Copper use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1. 21
Table 7. Copper use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2. 26
Table 8. Pesticide use for Cottonwood Creek @ Rd 20 site subwatershed – storm sediment. 28
Table 10. Copper use for Deadman Creek @ Gurr Rd site subwatershed - storm 1 47
Table 11. Pesticide use for Deadman Creek @ Gurr Rd site subwatershed - storm 2. 50
Table 12. Diuron use for Deadman Creek @ Hwy 59 site subwatershed - storm 1. 65
Table 13. Simazine use for Deadman Creek @ Hwy 59 site subwatershed - storm 1. 67
Table 14. Pesticide use for Deadman Creek @ Hwy 59 site subwatershed - storm 1. 69
Table 15. Diuron use for Dry Creek @ Rd 18 site subwatershed – storm 1 79
Table 16. Diuron use for Dry Creek @ Rd 18 site subwatershed – storm 2 81
Table 17. Chlorpyrifos use for Dry Creek @ Rd 18 site subwatershed – storm 2. 83
Table 18. Diazinon use for Dry Creek @ Rd 18 site subwatershed – storm 2. 85
Table 19. Copper use for Dry Creek @ Rd 18 site subwatershed – storm 1. 87
Table 20. Copper use for Dry Creek @ Rd 18 site subwatershed – storm 2. 92
Table 21. Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 1. 94
Table 22. Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 2. 109
Table 23. Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 2 RS. 123
Table 24. Copper use for Dry Creek @ Wellsford site subwatershed – storm 2. 129
Table 25. Pesticide use for Dry Creek @ Wellsford site subwatershed – storm sediment. 133
Table 26. Pesticide use for Dry Creek @ Wellsford site subwatershed – storm 2. 149
Table 27. Copper use for Duck Slough @ Gurr Rd site subwatershed – storm 1. 167
Table 28. Copper use for Duck Slough @ Hwy 99 site subwatershed – storm 2. 170
Table 29. Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm sediment 172
Table 30. Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm sediment RS. 174
Table 31. Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 1 176
Table 32. Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 2 181
Table 33. Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 2 RS. 183
Table 34. Copper use for Highline Canal @ Hwy 99 site subwatershed – storm 1. 186
Table 35. Copper use for Highline Canal @ Hwy 99 site subwatershed – storm 2. 192
Table 36. Pesticide use for Highline Canal @ Hwy 99 site subwatershed – storm sediment 194
Table 37. Pesticide use for Highline Canal @ Hwy 99 site subwatershed – storm 2 207
Table 38. Simazine use for Highline Canal @ Lombardy site subwatershed – storm 2. 224
Table 39. Copper use for Highline Canal @ Lombardy site subwatershed – storm 1. 227
Table 40. Copper use for Highline Canal @ Lombardy site subwatershed – storm 2. 231
Table 41. Pesticide use for Highline Canal @ Lombardy site subwatershed – storm sediment. 233
Table 42. Pesticide use for Highline Canal @ Lombardy site subwatershed – storm 1 244
Table 43. Pesticide use for Highline Canal @ Lombardy site subwatershed – storm 1 RS. 253
Table 44. Pesticide use for Hilmar Drain @ East Ave site subwatershed - storm sediment. 256
Table 45. Copper use for Livingston Drain @ Robin Ave site subwatershed – storm 1. 259
Table 46. Copper use for Livingston Drain @ Robin Ave site subwatershed – storm 2. 261
Table 47. Pesticide use for Livingston Drain @ Robin Ave site subwatershed – storm 2. 263
Table 48. Chlopryrifos use for Merced River @ Santa Fe site subwatershed – storm 1. 267
Table 49. Copper use for Merced River @ Santa Fe site subwatershed – storm 1. 269
Table 50. Pesticide use for Merced River @ Santa Fe site subwatershed – storm 1 275
Table 51. Pesticide use for Merced River @ Santa Fe site subwatershed – storm 1 RS. 287
Table 52. Copper use for Miles Creek @ Reilly Rd site subwatershed – storm 1. 290
Table 53. Pesticide use for Miles Creek @ Reilly Rd site subwatershed – storm 1. 292

Administrative Record
Page 12720

Table 54. Pesticide use for Miles Creek @ Reilly Rd site subwatershed – storm 1 RS. *296*
Table 55. Chlorpyrifos use for Mustang Creek @ East Ave site subwatershed – storm 1. .....*298*
Table 56. Simazine use for Mustang Creek @ East Ave site subwatershed – storm 1. .....*300*
Table 57. Simazine use for Mustang Creek @ East Ave site subwatershed – storm 2. .....*302*
Table 58. Pesticide use for Mustang Creek @ East Ave site subwatershed – storm sediment. *304*
Table 59. Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 1. .....*308*
Table 60. Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 1 RS. *311*
Table 61. Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 2. .....*313*
Table 62. Pesticide use for Prairie Flower Drain @ Crows Landing Rd Way site subwatershed – storm 1. .....*318*
Table 63. Pesticide use for Prairie Flower Drain @ Crows Landing Rd Way site subwatershed – storm 2. .....*321*
Table 64. Pesticide use for Westport Drain @ Vivian Rd site subwatershed – storm 2. .....*324*
Table 65. Pesticide use for Westport Drain @ Vivian Rd site subwatershed – storm 2 RS. *328*

Administrative Record
Page 12721

List of Figures

Figure 1. Location of Chlorpyrifos use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1..... 10
Figure 2. Location of Diuron use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1. 12
Figure 3. Location of Diuron use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2. 14
Figure 4. Diazinon use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2. 16
Figure 5. Location of Simazine use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2. 20
Figure 6. Location of Copper use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1. 25
Figure 7. Location of Copper use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2. 27
Figure 8. Location of Pesticide use for Cottonwood Creek @ Rd 20 site subwatershed – storm sediment. 46
Figure 9. Location of Copper use for Deadman Creek @ Gurr Rd site subwatershed - storm 1..... 49
Figure 10. Location of Pesticide use for Deadman Creek @ Gurr Rd site subwatershed - storm 2..... 64
Figure 11. Location of Diuron use for Deadman Creek @ Hwy 59 site subwatershed - storm 1. 66
Figure 12. Location of Simazine use for Deadman Creek @ Hwy 59 site subwatershed - storm 1. 68
Figure 13. Location of Pesticide use for Deadman Creek @ Hwy 59 site subwatershed - storm 1. 78
Figure 14. Location of Diuron use for Dry Creek @ Rd 18 site subwatershed – storm 1..... 80
Figure 15. Location of Diuron use for Dry Creek @ Rd 18 site subwatershed – storm 2..... 82
Figure 16. Location of Chlorpyrifos use for Dry Creek @ Rd 18 site subwatershed – storm 2..... 84
Figure 17. Location of Diazinon use for Dry Creek @ Rd 18 site subwatershed – storm 2. 86
Figure 18. Location of Copper use for Dry Creek @ Rd 18 site subwatershed – storm 1. 91
Figure 19. Location of Copper use for Dry Creek @ Rd 18 site subwatershed – storm 2. 93
Figure 20. Location of Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 1. 108
Figure 21. Location of Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 2. 122
Figure 22. Location of Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 2 RS. 128
Figure 23. Location of Copper use for Dry Creek @ Wellsford site subwatershed – storm 2. 132
Figure 24. Location of Pesticide use for Dry Creek @ Wellsford site subwatershed – storm sediment. 148
Figure 25. Location of Pesticide use for Dry Creek @ Wellsford site subwatershed – storm 2. 166
Figure 26. Location of Copper use for Duck Slough @ Gurr Rd site subwatershed – storm 1. 168
Figure 27. Location of Copper use for Duck Slough @ Hwy 99 site subwatershed – storm 2.....171
Figure 28. Location of Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm sediment. 173
Figure 29. Location of Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm sediment RS. 175
Figure 30. Location of Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 1.....180
Figure 31. Location of Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 2.....182
Figure 32. Location of Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 2 RS. ..184
Figure 33. Location of Copper use for Highline Canal @ Hwy 99 site subwatershed – storm 1. 191
Figure 34. Copper use for Highline Canal @ Hwy 99 site subwatershed – storm 2. 193
Figure 35. Location of Pesticide use for Highline Canal @ Hwy 99 site subwatershed – storm sediment.206
Figure 36. Pesticide use for Highline Canal @ Hwy 99 site subwatershed – storm 2. 223
Figure 37. Location of Simazine use for Highline Canal @ Lombardy site subwatershed – storm 2. 226
Figure 38. Location of Copper use for Highline Canal @ Lombardy site subwatershed – storm 1. 230
Figure 39. Location of Copper use for Highline Canal @ Lombardy site subwatershed – storm 2. 232
Figure 40. Location of Pesticide use for Highline Canal @ Lombardy site subwatershed – storm sediment. 243
Figure 41. Location of Pesticide use for Highline Canal @ Lombardy site subwatershed – storm 1.....252
Figure 42. Location of Pesticide use for Highline Canal @ Lombardy site subwatershed – storm 1 RS. ..254
Figure 43. Location of Pesticide use for Hilmar Drain @ East Ave site subwatershed - storm sediment. .257
Figure 44. Location of Copper use for Livingston Drain @ Robin Ave site subwatershed – storm 1.....260
Figure 45. Location of Copper use for Livingston Drain @ Robin Ave site subwatershed – storm 2.....262
Figure 46. Location of Pesticide use for Livingston Drain @ Robin Ave site subwatershed – storm 2. 266
Figure 47. Location of Chlopryrifos use for Merced River @ Santa Fe site subwatershed – storm 1. 268
Figure 48. Location of Copper use for Merced River @ Santa Fe site subwatershed – storm 1. 274
Figure 49. Location of Pesticide use for Merced River @ Santa Fe site subwatershed – storm 1.....286
Figure 50. Location of Pesticide use for Merced River @ Santa Fe site subwatershed – storm 1 RS. 288

Figure 51. Location of Copper use for Miles Creek @ Reilly Rd site subwatershed – storm 1. 291
Figure 52. Location of Pesticide use for Miles Creek @ Reilly Rd site subwatershed – storm 1.....295
Figure 53. Location of Pesticide use for Miles Creek @ Reilly Rd site subwatershed – storm 1 RS. 297
Figure 54. Location of Chlorpyrifos use for Mustang Creek @ East Ave site subwatershed – storm 1. 299
Figure 55. Location of Simazine use for Mustang Creek @ East Ave site subwatershed – storm 1. 301
Figure 56. Location of Simazine use for Mustang Creek @ East Ave site subwatershed – storm 2. 303
Figure 57. Location of Pesticide use for Mustang Creek @ East Ave site subwatershed – storm sediment. 307
Figure 58. Location of Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 1. 310
Figure 59. Location of Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 1 RS.....312
Figure 60. Location of Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 2. 317
Figure 61. Location of Pesticide use for Prairie Flower Drain @ Crows Landing Rd Way site subwatershed – storm 1. 320
Figure 62. Location of Pesticide use for Prairie Flower Drain @ Crows Landing Rd Way site subwatershed – storm 2. 323
Figure 63. Pesticide use for Westport Drain @ Vivian Rd site subwatershed – storm 2. 327
Figure 64. Location of Pesticide use for Westport Drain @ Vivian Rd site subwatershed – storm 2 RS....329

Bear Creek @ Kibby Rd site subwatershed

Pesticide Use Reports for metal exceedances in the water column

Storm 1 (1/24/08) - copper exceedance

No reported use of copper in the site subwatershed for the last 6 months.

Storm 2 (2/25/08) - copper exceedance

No reported use of copper in the site subwatershed for the last 6 months.

Black Rascal @ Yosemite Rd site subwatershed

Pesticide Use Reports for water column toxicity

Storm 2 (2/25/08) - Selenastrum capricornutum toxicity

There were no reported use of products known to be toxic to *Selenastrum* in January and February 2008. The last application of any relevant pesticides to *Selenastrum* toxicity occurred on December 18, 2007, however the half-life and retention in the soil of these herbicides makes it unlikely that they would be detected in February 2008.

Cottonwood Creek @ Rd 20 site subwatershed

Pesticide Use Reports for pesticide exceedances in the water column

Storm 1 (1/25/08) - chlorpyrifos exceedance

There was no reported use of chlorpyrifos in January 2008. Previous use was reported in October 2007.

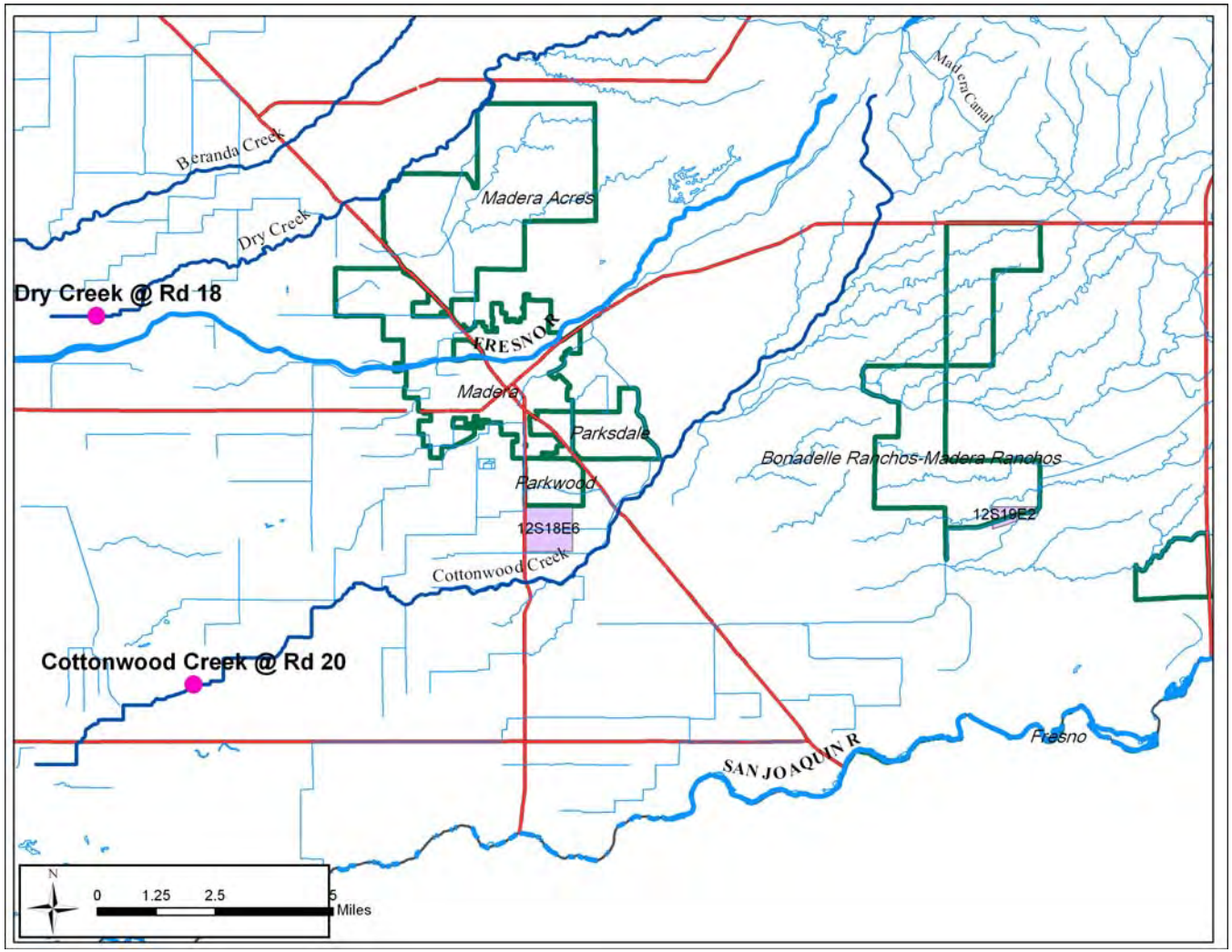
Table 1. Chlorpyrifos use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ORANGE	10/13/07	GOVERN 4E INSECTICIDE	CHLORPYRIFOS	G	20.25	GA	27	12S19E2
WINE GRAPES	10/26/07	LORSBAN-4E	CHLORPYRIFOS	G	9	GA	18	12S18E6

Storm 2 (2/25/08) - chlorpyrifos exceedance

There was no additional reported use after 10/26/07.

Figure 1. Location of Chlorpyrifos use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1.



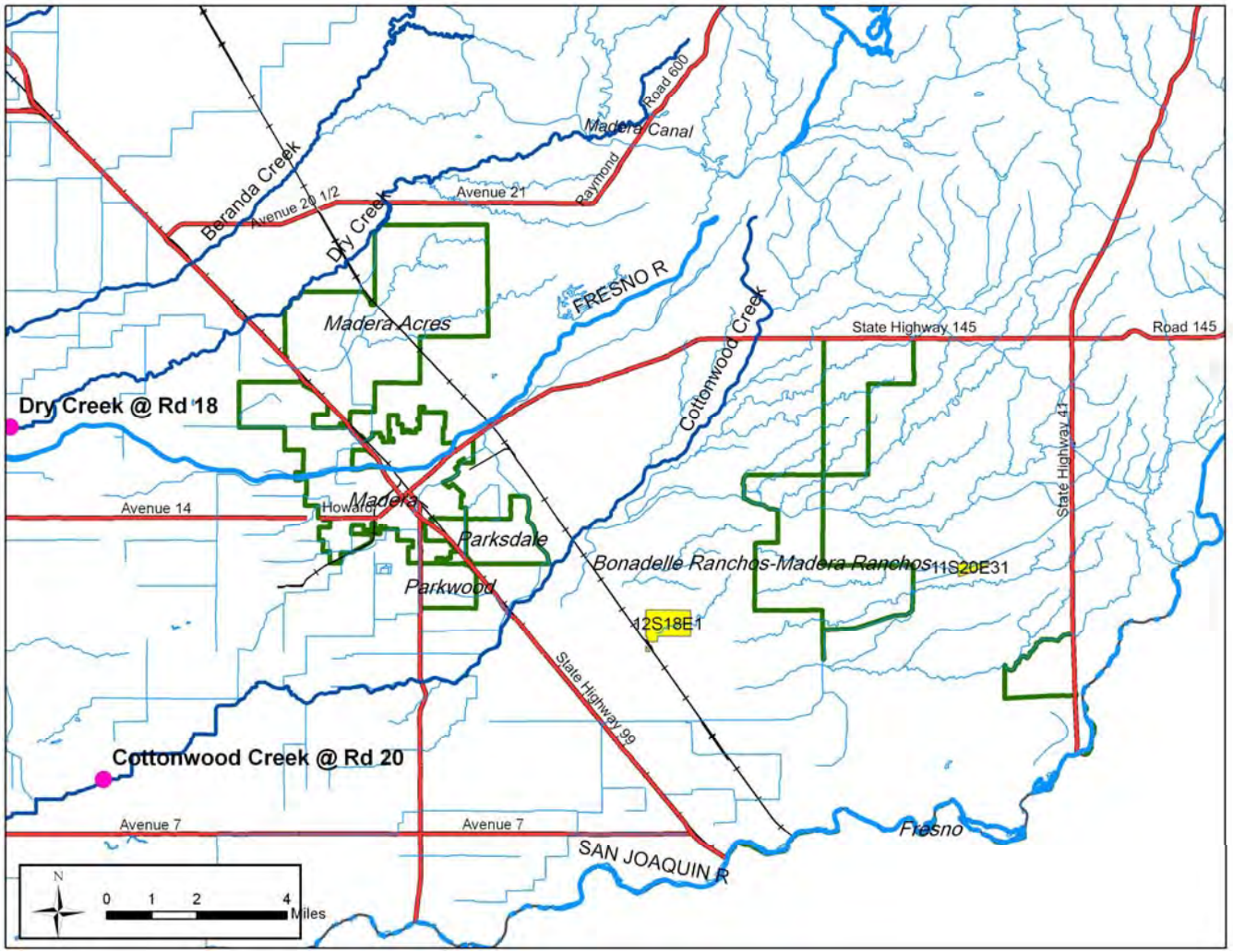
Storm 1 (1/25/08) - diuron exceedance

There was no reported use of diuron in January 2008. Previous use was reported in December 2007.

Table 2. Diuron use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ORANGE	12/4/07	DU PONT KROVAR I DF HERBICIDE	DIURON	G	129	LB	25.8	11S20E31
TANGELO	12/4/07	DU PONT KROVAR I DF HERBICIDE	DIURON	G	80	LB	16	11S20E31
ORANGE	12/6/07	DIREX 80DF	DIURON	G	60	LB	21	11S20E31
ORANGE	12/6/07	DIREX 80DF	DIURON	G	120	LB	41	11S20E31
ORANGE	12/6/07	DIREX 80DF	DIURON	G	120	LB	40	11S20E31
WALNUT	12/16/07	DIREX 4L	DIURON	G	5	GA	10	12S18E1

Figure 2. Location of Diuron use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1.

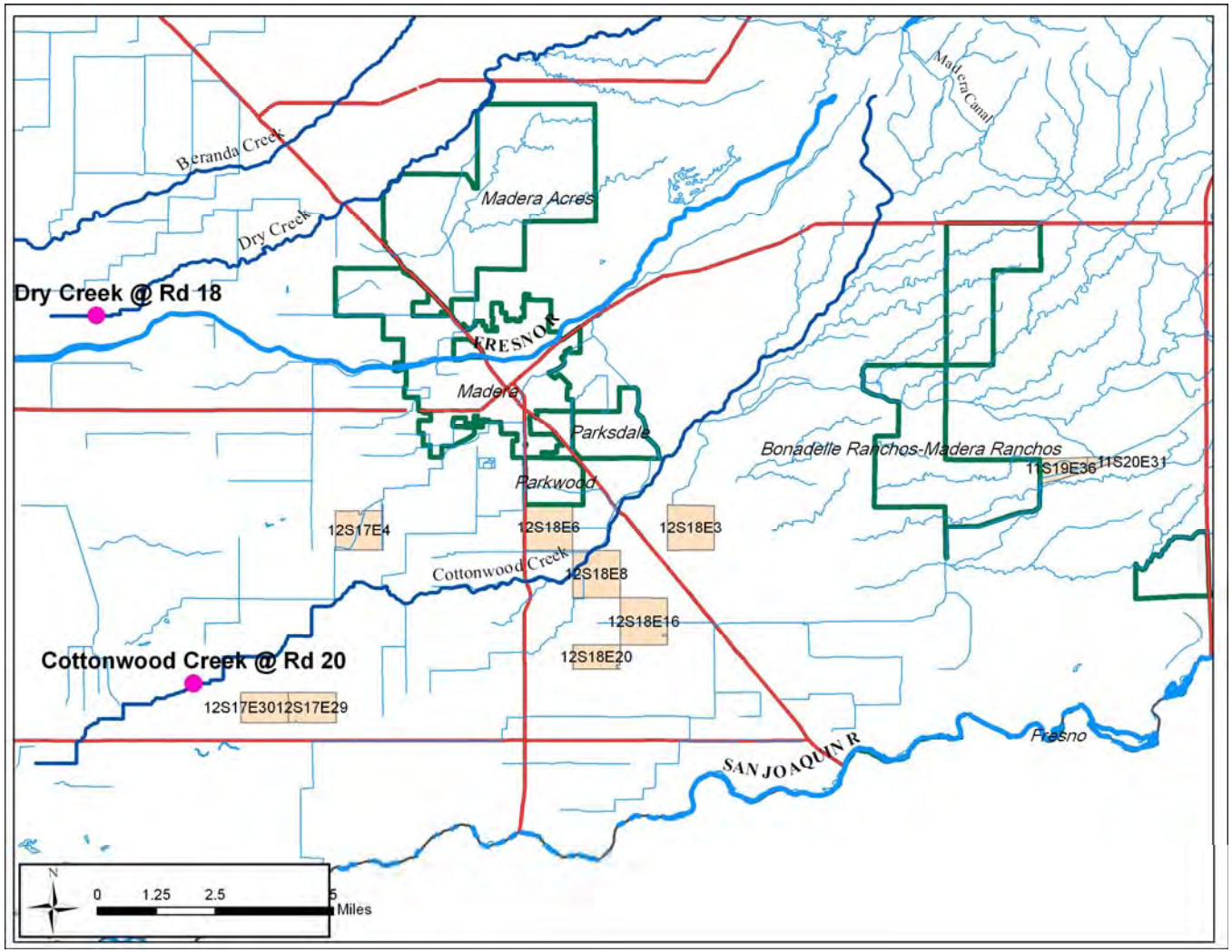


Storm 2 (2/25/08) - diuron exceedance

Table 3. Diuron use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	2/10/2008	DIURON 80 DF HERBICIDE	DIURON	G	38	LB	38	12S17E30
ALFALFA	2/10/2008	DIURON 80 DF HERBICIDE	DIURON	G	39	LB	39	12S17E30
ALFALFA	2/10/2008	DIURON 80 DF HERBICIDE	DIURON	G	78	LB	78	12S17E30
WINE GRAPES	2/11/2008	DIREX 4L	DIURON	G	6	QT	2.25	12S18E6
GRAPE, RAISIN	2/11/2008	DIREX 80DF	DIURON	G	2	LB	40	12S18E8
GRAPE, RAISIN	2/11/2008	DREXEL DIURON 80 HERBICIDE	DIURON	G	68	LB	34	12S17E4
ALFALFA	2/11/2008	DIURON 80 DF HERBICIDE	DIURON	G	10	LB	10	12S17E29
ALFALFA	2/11/2008	DIURON 80 DF HERBICIDE	DIURON	G	85	LB	85	12S17E29
GRAPE, RAISIN	2/12/2008	DREXEL DIURON 80 HERBICIDE	DIURON	G	40	LB	20	12S18E3
GRAPE, RAISIN	2/13/2008	DREXEL DIURON 80 HERBICIDE	DIURON	G	32	LB	16	12S18E16
TANGELO	2/14/2008	DU PONT KROVAR I DF HERBICIDE	DIURON	G	56	LB	14	11S19E36
ORANGE	2/14/2008	DU PONT KROVAR I DF HERBICIDE	DIURON	G	320	LB	80	11S19E36
TANGELO	2/19/2008	DU PONT KROVAR I DF HERBICIDE	DIURON	G	160	LB	40	11S20E31
TANGELO	2/19/2008	DU PONT KROVAR I DF HERBICIDE	DIURON	G	120	LB	30	11S20E31
GRAPE, RAISIN	2/20/2008	DIURON 80 WP WEED KILLER	DIURON	G	6	LB	6	12S18E20

Figure 3. Location of Diuron use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2.

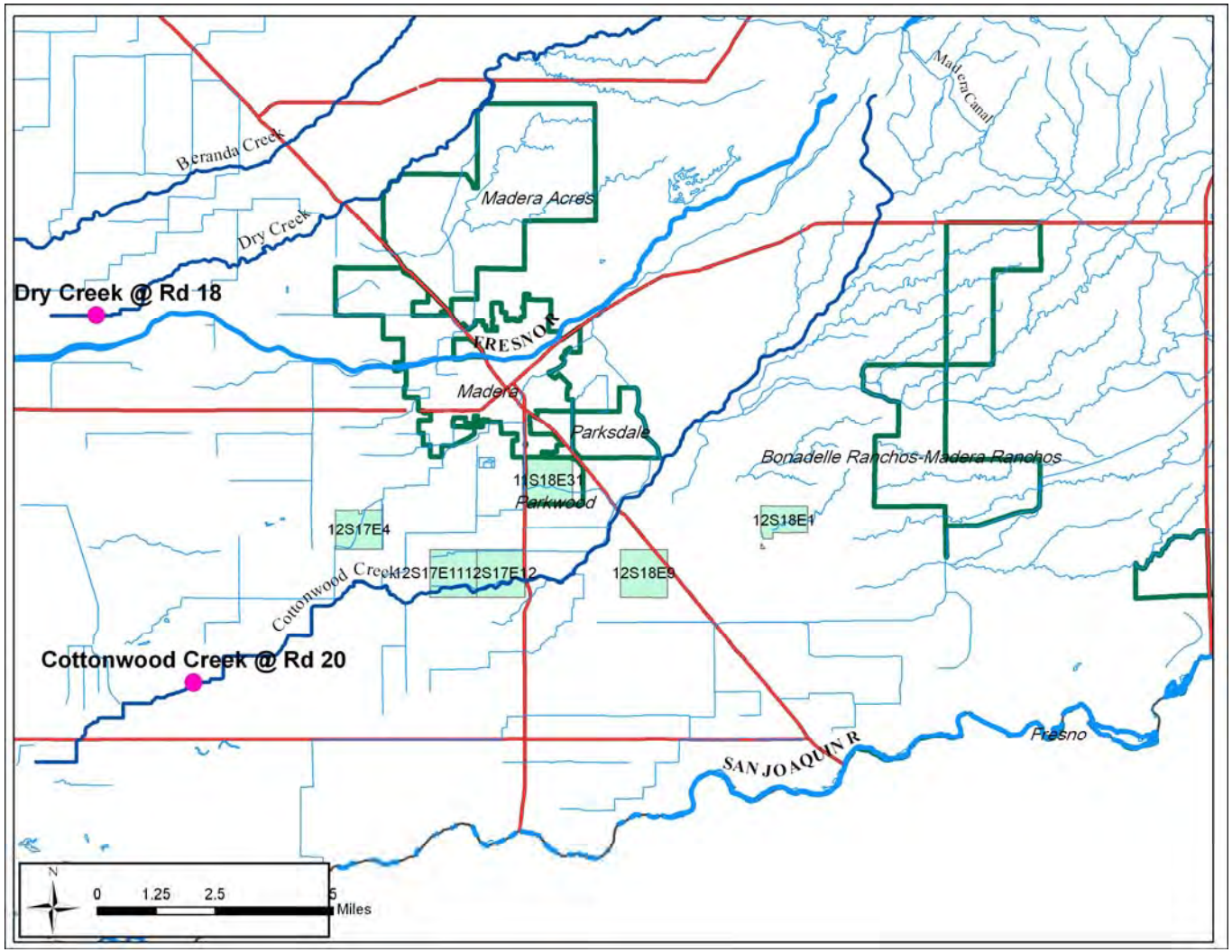


Storm 2 (2/25/08) - diazinon exceedance

Table 4. Diazinon use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	1/30/2008	CLEAN CROP DIAZINON AG500 INSECTICIDE	DIAZINON	G	1.89	GA	4	11S18E31
PEACH	1/30/2008	CLEAN CROP DIAZINON AG500 INSECTICIDE	DIAZINON	G	4.96	GA	10.5	11S18E31
PLUM	2/1/2008	CLEAN CROP DIAZINON AG500 INSECTICIDE	DIAZINON	G	7.08	GA	15	12S17E11
PEACH	2/1/2008	CLEAN CROP DIAZINON AG500 INSECTICIDE	DIAZINON	G	15.35	GA	32.5	12S17E12
PEACH	2/1/2008	CLEAN CROP DIAZINON AG500 INSECTICIDE	DIAZINON	G	13.7	GA	29	12S17E12
PEACH	2/1/2008	CLEAN CROP DIAZINON AG500 INSECTICIDE	DIAZINON	G	18.42	GA	39	12S17E12
ALMOND	2/2/2008	CLEAN CROP DIAZINON AG500 INSECTICIDE	DIAZINON	G	17	GA	36	12S17E4
PEACH	2/7/2008	CLEAN CROP DIAZINON AG500 INSECTICIDE	DIAZINON	G	1.89	GA	4	12S18E9
CHERRY	2/15/2008	CLEAN CROP DIAZINON AG500 INSECTICIDE	DIAZINON	G	4.72	GA	10	12S17E11
FIG	2/15/2008	DIAZOL AG 500	DIAZINON	G	16.88	GA	135	12S18E1

Figure 4. Diazinon use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2.



Storm 2 (2/25/08) - Simazine exceedance

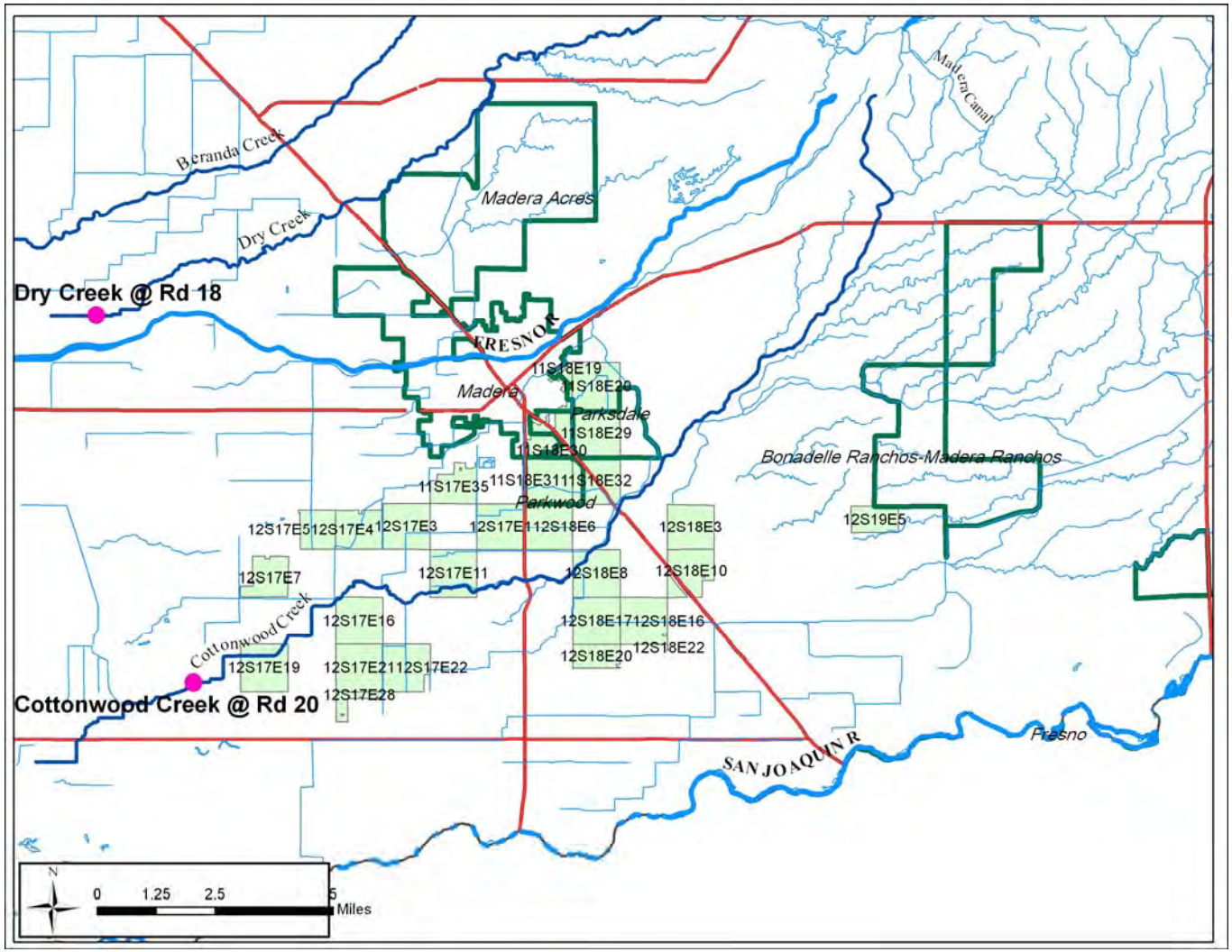
Table 5. Simazine use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
GRAPE	2/1/2008	SIMAZINE 90DF	SIMAZINE	G	20	LB	20	12S18E22
GRAPE	2/1/2008	SIMAZINE 90DF	SIMAZINE	G	36	LB	36	12S18E22
GRAPE	2/1/2008	SIMAZINE 90DF	SIMAZINE	G	16	LB	16	12S18E22
GRAPE	2/1/2008	SIMAZINE 90DF	SIMAZINE	G	35	LB	35	12S18E22
GRAPE	2/2/2008	SIMAZINE 90DF	SIMAZINE	G	4	LB	4	12S18E22
GRAPE	2/2/2008	SIMAZINE 90DF	SIMAZINE	G	36	LB	36	12S18E22
GRAPE, RAISIN	2/2/2008	SIMAZINE 90DF	SIMAZINE	G	117	LB	39	12S17E22
GRAPE, RAISIN	2/3/2008	SIMAZINE 90DF	SIMAZINE	G	49.5	LB	33	12S17E11
GRAPE, RAISIN	2/6/2008	SIMAZINE 90DF	SIMAZINE	G	230	LB	153.5	12S17E7
GRAPE, RAISIN	2/7/2008	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	8.6	LB	17.2	11S17E35
WINE GRAPES	2/7/2008	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	8.6	LB	17.2	11S17E35
WINE GRAPES	2/9/2008	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	20	LB	10	12S17E19
WINE GRAPES	2/9/2008	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	19	LB	9.5	12S17E19
WINE GRAPES	2/9/2008	SIM-TROL 90DF	SIMAZINE	G	5	LB	5	12S18E17
WINE GRAPES	2/9/2008	SIM-TROL 90DF	SIMAZINE	G	10	LB	10	12S18E17
GRAPE, RAISIN	2/9/2008	SIM-TROL 90DF	SIMAZINE	G	58	LB	58	12S18E17
GRAPE, RAISIN	2/10/2008	PRINCEP 4L	SIMAZINE	G	14	QT	30	12S17E4
GRAPE, RAISIN	2/11/2008	PRINCEP DF HERBICIDE	SIMAZINE	G	20	LB	40	12S18E8
WINE GRAPES	2/11/2008	SIM-TROL 4L	SIMAZINE	G	9	QT	2.25	12S18E6
GRAPE, RAISIN	2/11/2008	SIM-TROL 90DF	SIMAZINE	G	68	LB	34	12S17E4
GRAPE, RAISIN	2/11/2008	SIM-TROL 90DF	SIMAZINE	G	56	LB	56	12S18E3

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WINE GRAPES	2/12/2008	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	15	LB	7.5	12S17E19
GRAPE, RAISIN	2/12/2008	SIM-TROL 90DF	SIMAZINE	G	40	LB	20	12S18E3
WINE GRAPES	2/13/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	72	QT	24	12S18E20
WINE GRAPES	2/13/2008	SIMAZINE 90 WATER DISPERSIBLE GRANULAR H	SIMAZINE	G	120	LB	40	12S17E4
GRAPE, RAISIN	2/13/2008	SIM-TROL 90DF	SIMAZINE	G	32	LB	16	12S18E16
WINE GRAPES	2/14/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	72	QT	24	11S18E20
WINE GRAPES	2/14/2008	SIMAZINE 90 WATER DISPERSIBLE GRANULAR H	SIMAZINE	G	240	LB	80	12S17E4
WINE GRAPES	2/15/2008	SIMAZINE 90DF	SIMAZINE	G	21.75	LB	14.5	11S18E31
WINE GRAPES	2/15/2008	SIMAZINE 90DF	SIMAZINE	G	24	LB	16	11S18E31
WINE GRAPES	2/15/2008	SIMAZINE 90DF	SIMAZINE	G	40.5	LB	27	11S18E31
GRAPE, RAISIN	2/15/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	21	QT	7	11S18E19
GRAPE, RAISIN	2/15/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	9	QT	3	11S18E29
GRAPE, RAISIN	2/15/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	9	QT	3	11S18E20
GRAPE, RAISIN	2/15/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	3	QT	1	11S18E30
WINE GRAPES	2/15/2008	SIMAZINE 90 WATER DISPERSIBLE GRANULAR H	SIMAZINE	G	186	LB	62	12S17E3
GRAPE, RAISIN	2/15/2008	SIM-TROL 90DF	SIMAZINE	G	56	LB	56	12S18E3
WINE GRAPES	2/16/2008	SIMAZINE 90DF	SIMAZINE	G	10	LB	6	12S17E28
GRAPE	2/16/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	27	QT	9	11S18E20
WINE GRAPES	2/16/2008	SIMAZINE 90 WATER DISPERSIBLE GRANULAR H	SIMAZINE	G	165	LB	60	12S17E4
WINE GRAPES	2/16/2008	SIMAZINE 90 WATER DISPERSIBLE GRANULAR H	SIMAZINE	G	90	LB	30	12S17E4
WINE GRAPES	2/17/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	72	QT	24	12S18E10
GRAPE, RAISIN	2/18/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	105	QT	35	11S18E32

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WINE GRAPES	2/18/2008	SIMAZINE 90 WATER DISPERSIBLE GRANULAR H	SIMAZINE	G	54	LB	18	12S17E4
WINE GRAPES	2/19/2008	SIMAZINE 90DF	SIMAZINE	G	35	LB	70	12S17E16
WINE GRAPES	2/19/2008	SIMAZINE 90DF	SIMAZINE	G	47.5	LB	95	12S17E1
WINE GRAPES	2/19/2008	SIMAZINE 90 WATER DISPERSIBLE GRANULAR H	SIMAZINE	G	360	LB	140	12S17E3
WINE GRAPES	2/20/2008	PRINCEP DF HERBICIDE	SIMAZINE	G	23.33	LB	46.66	12S19E5
WINE GRAPES	2/21/2008	SIMAZINE 90 WATER DISPERSIBLE GRANULAR H	SIMAZINE	G	75	LB	25	12S17E4
WINE GRAPES	2/21/2008	SIMAZINE 90 WATER DISPERSIBLE GRANULAR H	SIMAZINE	G	150	LB	76	12S17E5
GRAPE, RAISIN	2/23/2008	SIM-TROL 9DF	SIMAZINE	G	20.01	LB	13.34	12S17E21

Figure 5. Location of Simazine use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2.



Pesticide Use Reports for metal exceedances in the water column

Storm 1 (1/25/08) - copper exceedance

Table 6. Copper use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1.

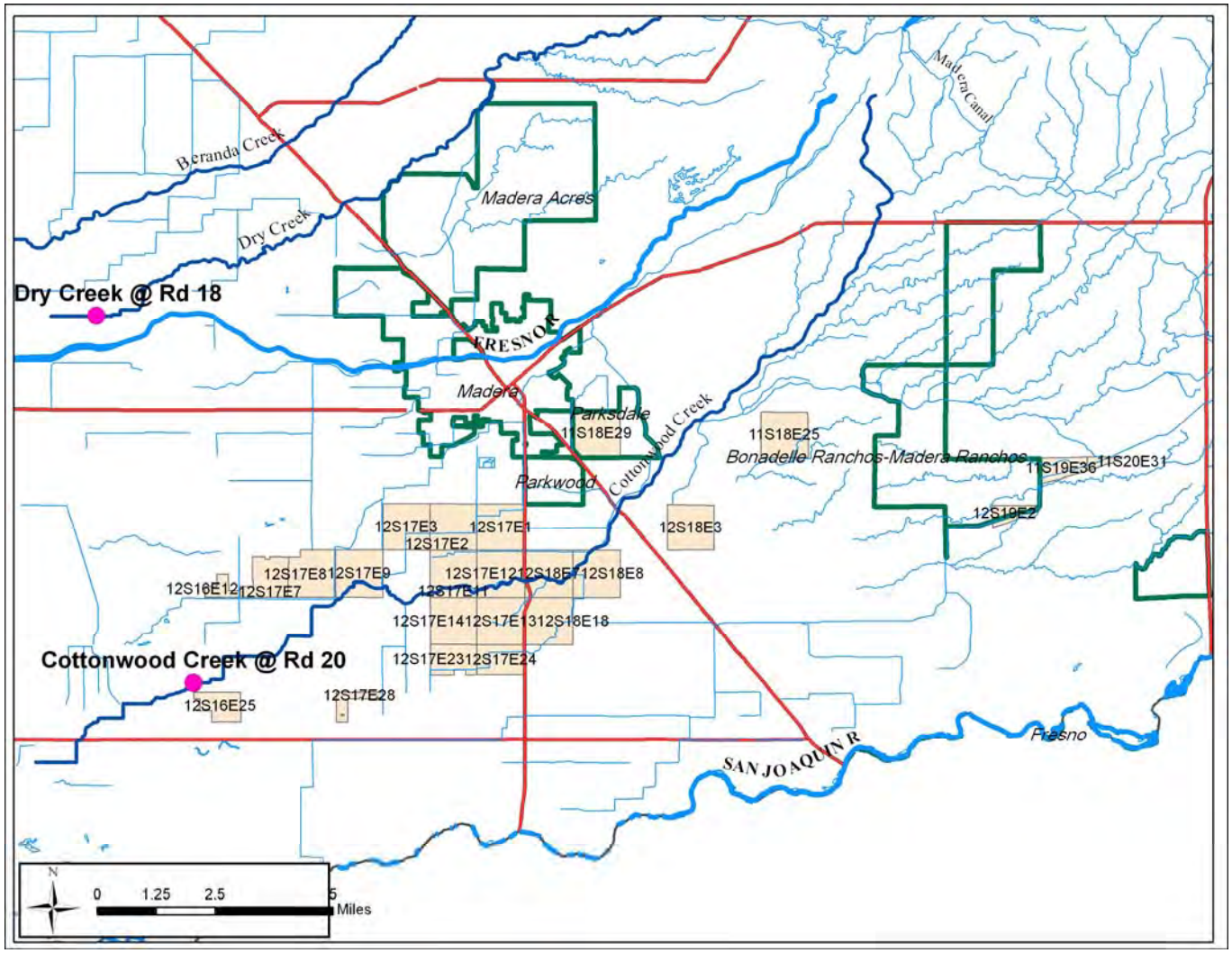
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
TANGELO	10/24/07	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	96	LB	16	11S20E31
ORANGE	11/9/07	NORDOX	COPPER OXIDE (OUS)	G	320	LB	80	11S19E36
ORANGE	11/9/07	NORDOX	COPPER OXIDE (OUS)	G	80	LB	20	11S20E31
ORANGE	11/10/07	NORDOX	COPPER OXIDE (OUS)	G	120	LB	31	11S20E31
ORANGE	11/12/07	NORDOX	COPPER OXIDE (OUS)	G	26	LB	6.5	11S20E31
TANGELO	11/12/07	NORDOX	COPPER OXIDE (OUS)	G	120	LB	30	11S20E31
TANGELO	11/13/07	NORDOX	COPPER OXIDE (OUS)	G	160	LB	40	11S20E31
TANGELO	11/14/07	NORDOX	COPPER OXIDE (OUS)	G	56	LB	14	11S19E36
ORANGE	11/30/07	COP-O-ZINC	COPPER	G	324	LB	27	12S19E2
OLIVE	12/14/07	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	360	LB	40	12S18E8
OLIVE	12/15/07	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	180	LB	20	11S18E29
TANGELO	12/27/07	NORDOX	COPPER OXIDE (OUS)	G	66.6	LB	16	11S20E31
ALMOND	1/10/2008	KOCIDE 101	COPPER HYDROXIDE	G	72	LB	36	12S17E1
ALMOND	1/11/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	13.75	LB	110	12S16E12
NECTARINE	1/12/2008	KOCIDE 2000	COPPER HYDROXIDE	G	242.88	LB	30.36	12S17E23
ALMOND	1/12/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	480	LB	160	12S16E25

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/14/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	140	LB	40	12S17E2
ALMOND	1/14/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	140	LB	40	12S17E3
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	80	GA	80	12S18E18
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	123	GA	123	12S17E13
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	33	GA	33	12S18E18
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	91	GA	91	12S18E18
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	86	GA	86	12S17E13
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	77	GA	77	12S17E13
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	106	GA	106	12S18E7
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	114	GA	114	12S17E12
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	76	GA	76	12S17E13
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	96	GA	96	12S17E12
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	94	GA	94	12S17E11
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	57	GA	57	12S18E18

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	77	GA	77	12S17E14
ALMOND	1/14/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	60	GA	60	12S17E14
NECTARINE	1/15/2008	KOCIDE 2000	COPPER HYDROXIDE	G	286.88	LB	35.86	12S17E23
PEACH	1/15/2008	KOCIDE 2000	COPPER HYDROXIDE	G	312.24	LB	39.03	12S17E23
PEACH	1/15/2008	KOCIDE 2000	COPPER HYDROXIDE	G	294.16	LB	36.77	12S17E23
PEACH	1/15/2008	KOCIDE 2000	COPPER HYDROXIDE	G	293.52	LB	36.69	12S17E23
ALMOND	1/15/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	102	LB	17	12S18E3
ALMOND	1/15/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	198	LB	33	12S18E3
ALMOND	1/16/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	640	LB	156.97	12S17E28
ALMOND	1/16/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	157	LB	78.5	12S17E8
ALMOND	1/16/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	115	LB	57.5	12S17E9
ALMOND	1/18/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	102	LB	17	12S18E3
ALMOND	1/18/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	198	LB	33	12S18E3
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	4.13	LB	33	12S17E24
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	240	LB	80	12S16E12
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	112.5	LB	37.5	12S17E7

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	2.5	LB	20	12S17E13
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	240	LB	80	12S17E7
ALMOND	1/21/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	65.16	LB	65.16	12S18E18
ALMOND	1/21/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	195.84	LB	97.2	12S18E18
ALMOND	1/22/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	945	LB	315	11S18E25
ALMOND	1/22/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	115	LB	57.5	12S17E9
ALMOND	1/22/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	157	LB	78.5	12S17E8
ORANGE	1/25/2008	NORDOX	COPPER OXIDE (OUS)	G	205	LB	41	11S20E31

Figure 6. Location of Copper use for Cottonwood Creek @ Rd 20 site subwatershed – storm 1.

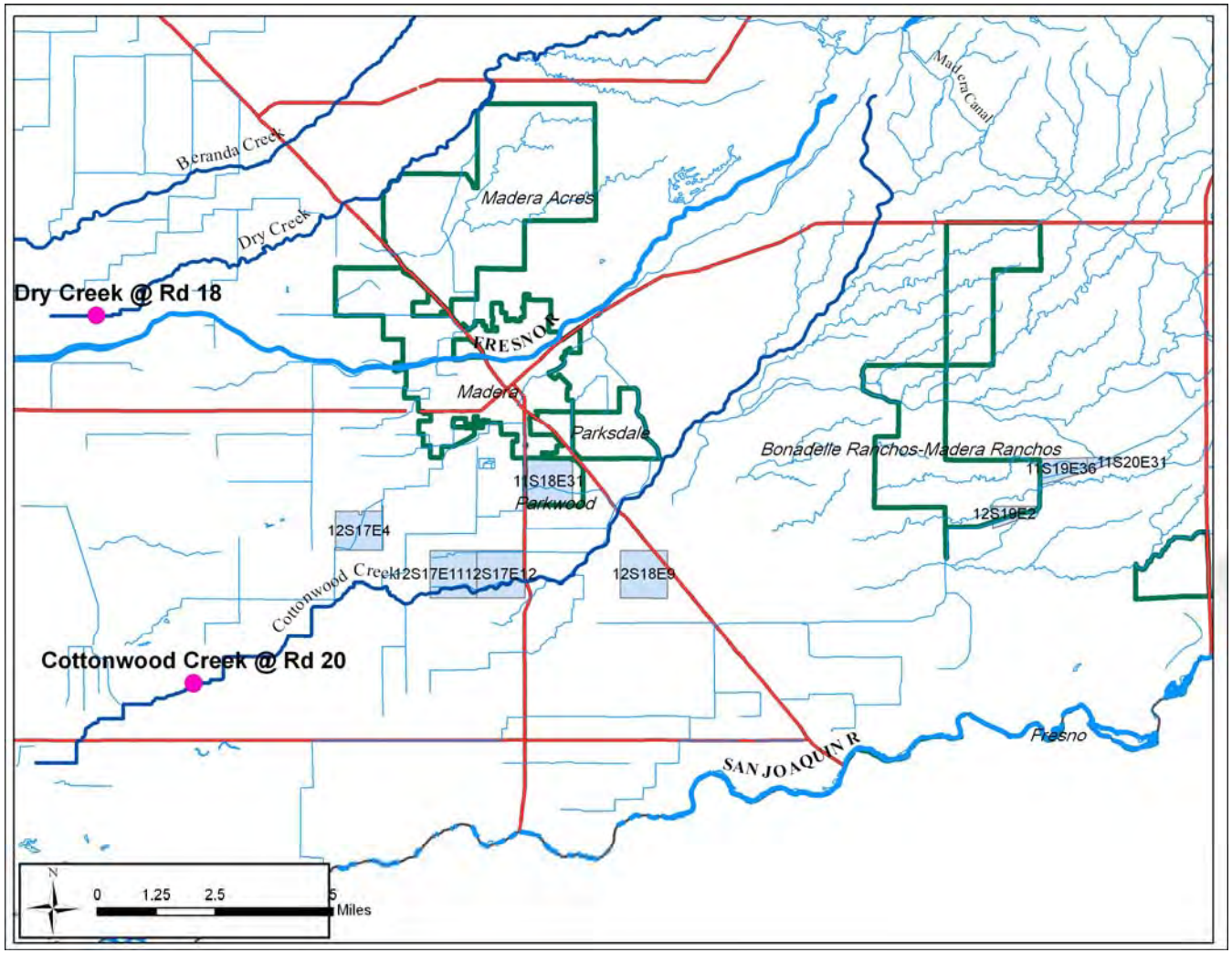


Storm 2 (2/25/08) - copper exceedance

Table 7. Copper use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	1/30/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	24	LB	4	11S18E31
PEACH	1/30/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	63	LB	10.5	11S18E31
ORANGE	1/31/2008	NORDOX	COPPER OXIDE (OUS)	G	320	LB	80	11S19E36
PEACH	2/1/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	195	LB	32.5	12S17E12
PLUM	2/1/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	90	LB	15	12S17E11
PEACH	2/1/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	234	LB	39	12S17E12
PEACH	2/1/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	174	LB	29	12S17E12
ALMOND	2/2/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	216	LB	36	12S17E4
ORANGE	2/2/2008	NORDOX	COPPER OXIDE (OUS)	G	124	LB	31	11S20E31
PEACH	2/7/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	24	LB	4	12S18E9
TANGELO	2/14/2008	NORDOX	COPPER OXIDE (OUS)	G	160	LB	40	11S20E31
ORANGE	2/14/2008	NORDOX	COPPER OXIDE (OUS)	G	80	LB	20	11S20E31
TANGELO	2/15/2008	NORDOX	COPPER OXIDE (OUS)	G	120	LB	30	11S20E31
TANGELO	2/15/2008	NORDOX	COPPER OXIDE (OUS)	G	56	LB	14	11S19E36
ORANGE	2/16/2008	COP-O-ZINC	COPPER	G	276	LB	23	12S19E2

Figure 7. Location of Copper use for Cottonwood Creek @ Rd 20 site subwatershed – storm 2.



Pesticide Use Reports for sediment toxicity exceedances

Storm sediment (3/04/008) – Hyalella azteca toxicity

Table 8. Pesticide use for Cottonwood Creek @ Rd 20 site subwatershed – storm sediment.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	5.16	GA	55	11S19E6	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	5.91	GA	63	11S19E5	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	6.19	GA	66	11S19E6	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	7.31	GA	78	11S19E6	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	7.31	GA	78	11S19E5	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	7.41	GA	79	11S19E6	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	7.59	GA	81	11S19E6	100000
PISTACHIO	9/15/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	6.88	GA	55	11S19E6	100000
PISTACHIO	9/15/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	9.75	GA	78	11S19E6	100000
PISTACHIO	9/15/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	9.75	GA	78	11S19E5	100000
PISTACHIO	9/15/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	14	GA	112	11S18E2	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PISTACHIO	9/17/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	8.25	GA	66	11S19E6	100000
PISTACHIO	9/17/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	20.5	GA	164	11S18E13	100000
PISTACHIO	9/17/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	29.75	GA	238	11S18E13	100000
PISTACHIO	9/17/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	39.5	GA	316	11S18E14	100000
PISTACHIO	9/17/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	39.75	GA	318	11S18E11	100000
ALMOND	1/10/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	360	OZ	36	12S17E1	5300
ALMOND	1/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1100	OZ	110	12S16E12	5300
NECTARINE	1/12/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.13	GA	30.36	12S17E23	5300
ALMOND	1/12/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1280	OZ	160	12S16E25	5300
ALMOND	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3.25	GA	40	12S17E3	5300
ALMOND	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3.25	GA	40	12S17E2	5300
NECTARINE	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.52	GA	35.86	12S17E23	5300
PEACH	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.58	GA	36.69	12S17E23	5300
PEACH	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.59	GA	36.77	12S17E23	5300

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.74	GA	39.03	12S17E23	5300
ALMOND	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	170	OZ	17	12S18E3	5300
ALMOND	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	330	OZ	33	12S18E3	5300
ALMOND	1/16/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	460	OZ	57.5	12S17E9	5300
ALMOND	1/16/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	628	OZ	78.5	12S17E8	5300
ALMOND	1/16/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1920	OZ	156.97	12S17E28	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.25	GA	17	12S18E3	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.44	GA	33	12S18E3	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	160	OZ	20	12S17E13	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	264	OZ	33	12S17E24	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	300	OZ	37.5	12S17E7	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	640	OZ	80	12S16E12	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	640	OZ	80	12S17E7	5300
ALMOND	1/20/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	750	OZ	75	12S17E8	5300

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	1/20/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1200	OZ	120	12S17E8	5300
ALMOND	1/21/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	325.8	OZ	65.16	12S18E18	5300
ALMOND	1/21/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	979.2	OZ	97.92	12S18E18	5300
ALMOND	1/22/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	460	OZ	57.5	12S17E9	5300
ALMOND	1/22/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	628	OZ	78.5	12S17E8	5300
PEACH	1/30/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	0.3	GA	4	11S18E31	5300
PEACH	1/30/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	0.77	GA	10.5	11S18E31	5300
ALMOND	1/31/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	8.45	GA	108	12S18E10	5300
ALMOND	1/31/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	16	GA	190	12S18E15	5300
PLUM	2/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.11	GA	15	12S17E11	5300
PEACH	2/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.14	GA	29	12S17E12	5300
PEACH	2/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.4	GA	32.5	12S17E12	5300
PEACH	2/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.88	GA	39	12S17E12	5300
ALMOND	2/2/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.66	GA	36	12S17E4	5300
ALMOND	2/4/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	97.92	PT	32.64	12S18E18	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
GRAPE, RAISIN	2/4/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	GA	13	12S17E21	24000
GRAPE, RAISIN	2/4/2008	GOAL 2XL	OXYFLUORFEN	G	13	GA	13	12S17E21	100000
ALMOND	2/4/2008	GOAL 2XL	OXYFLUORFEN	G	32.64	QT	32.64	12S18E18	100000
WINE GRAPES	2/4/2008	GOAL 2XL	OXYFLUORFEN	G	39.99	PT	26.66	12S18E22	100000
WINE GRAPES	2/4/2008	GOAL 2XL	OXYFLUORFEN	G	112.5	PT	75	12S18E22	100000
PISTACHIO	2/5/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6.87	GA	18.33	12S19E2	24000
PISTACHIO	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	6.87	GA	18.33	12S19E2	100000
ALMOND	2/6/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	65.16	PT	21.72	12S18E18	24000
ALMOND	2/6/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	65.16	QT	21.72	12S18E18	5000
GRAPE, RAISIN	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3070	OZ	153.5	12S17E7	24000
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	21.72	PT	21.72	12S18E18	100000
GRAPE, RAISIN	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	4912	OZ	153.5	12S17E7	100000
PEACH	2/7/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	0.3	GA	4	12S18E9	5300
ALMOND	2/7/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2	GA	36	12S18E8	5300
ALMOND	2/7/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3.54	GA	40	12S18E10	5300
CHERRY	2/7/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.2	GA	11	12S18E18	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
GRAPE, RAISIN	2/7/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	17.2	PT	17.2	11S17E35	24000
WINE GRAPES	2/7/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	17.2	PT	17.2	11S17E35	24000
PISTACHIO	2/7/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.87	GA	5	12S19E2	24000
PISTACHIO	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	1.87	GA	5	12S19E2	100000
CHERRY	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	7.92	GA	11	12S18E18	100000
GRAPE, RAISIN	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	11.47	QT	17.2	11S17E35	100000
WINE GRAPES	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	11.47	QT	17.2	11S17E35	100000
PRUNE	2/8/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	168	QT	56	12S16E12	5000
ALMOND	2/8/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	0.62	GA	7	12S18E9	5300
POMEGRANATE	2/8/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	18	PT	6	12S17E13	24000
PRUNE	2/8/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	168	PT	56	12S16E12	24000
PISTACHIO	2/8/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	7.5	GA	20	12S19E2	24000
WINE GRAPES	2/8/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	26.66	QT	13.33	12S18E21	24000
PISTACHIO	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	7.5	GA	20	12S19E2	100000
POMEGRANATE	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	18	QT	6	12S17E13	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WINE GRAPES	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	39.99	QT	13.33	12S18E21	100000
GRAPE, RAISIN	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5.1	QT	1.7	12S17E10	5000
GRAPE, RAISIN	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	11.25	QT	3.74	12S17E10	5000
WHEAT FOR/FOD	2/9/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	G	400	OZ	25	12S17E3	10000
WHEAT FOR/FOD	2/9/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	G	480	OZ	30	12S17E3	10000
WINE GRAPES	2/9/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.78	GA	9.5	12S17E19	24000
WINE GRAPES	2/9/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.88	GA	10	12S17E19	24000
WINE GRAPES	2/9/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	6.67	PT	5	12S18E17	24000
WINE GRAPES	2/9/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	13.33	PT	10	12S18E17	24000
GRAPE, RAISIN	2/9/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	77.33	PT	58	12S18E17	24000
PISTACHIO	2/9/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	8.94	GA	23.83	12S19E3	24000
WINE GRAPES	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	1.19	GA	9.5	12S17E19	100000
WINE GRAPES	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	1.25	GA	10	12S17E19	100000
GRAPE, RAISIN	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	5.1	QT	1.7	12S17E10	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PISTACHIO	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	8.94	GA	23.83	12S19E3	100000
GRAPE, RAISIN	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	11.25	QT	3.74	12S17E10	100000
WINE GRAPES	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	20	OZ	5	12S18E17	100000
WINE GRAPES	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	40	OZ	10	12S18E17	100000
GRAPE, RAISIN	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	232	OZ	58	12S18E17	100000
GRAPE, RAISIN	2/10/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3.5	GA	30	12S17E4	24000
PRUNE	2/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	120	OZ	15	12S17E24	5300
PRUNE	2/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	224	OZ	28	12S17E24	5300
GRAPE, RAISIN	2/11/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.5	GA	40	12S18E8	24000
GRAPE, RAISIN	2/11/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	8.5	GA	34	12S17E4	24000
PISTACHIO	2/11/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6.01	GA	16.04	12S19E2	24000
GRAPE, RAISIN	2/11/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1792	OZ	56	12S18E3	24000
GRAPE, RAISIN	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	1.5	GA	40	12S18E8	100000
PISTACHIO	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	6.01	GA	16.04	12S19E2	100000
GRAPE, RAISIN	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	8.5	GA	34	12S17E4	100000
WINE GRAPES	2/12/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.41	GA	7.5	12S17E19	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
GRAPE, RAISIN	2/12/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	GA	20	12S18E3	24000
ALMOND	2/12/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	112.5	PT	75	12S17E8	24000
ALMOND	2/12/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	180	PT	120	12S17E8	24000
WINE GRAPES	2/12/2008	GOAL 2XL	OXYFLUORFEN	G	0.94	GA	7.5	12S17E19	100000
GRAPE, RAISIN	2/12/2008	GOAL 2XL	OXYFLUORFEN	G	4	QT	12	12S18E9	100000
GRAPE, RAISIN	2/12/2008	GOAL 2XL	OXYFLUORFEN	G	5	GA	20	12S18E3	100000
ALMOND	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	2.5	GA	18	12S18E8	5000
WINE GRAPES	2/13/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	24	QT	24	12S18E20	24000
WINE GRAPES	2/13/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1540	OZ	40	12S17E4	24000
GRAPE, RAISIN	2/13/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4	GA	16	12S18E16	24000
ALMOND	2/13/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	43.64	PT	40	12S17E16	24000
ALMOND	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	7	OZ	18	12S18E8	24000
ALMOND	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	2.5	GA	18	12S18E8	100000
GRAPE, RAISIN	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	4	GA	16	12S18E16	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WINE GRAPES	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	24	PT	24	12S18E20	100000
WINE GRAPES	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	40	GA	40	12S17E4	100000
ALMOND	2/14/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	88	QT	44	12S16E12	5000
WINE GRAPES	2/14/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	24	QT	24	11S18E20	24000
WINE GRAPES	2/14/2008	HONCHO HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3080	OZ	80	12S17E4	24000
ALMOND	2/14/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	132	PT	44	12S16E12	24000
WINE GRAPES	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	24	PT	24	11S18E20	100000
WINE GRAPES	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	80	OZ	80	12S17E4	100000
GRAPE, RAISIN	2/14/2008	ALECTO 41S	GLYPHOSATE	G	30	QT	20	11S17E35	24000
CHERRY	2/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	0.74	GA	10	12S17E11	5300
GRAPE, RAISIN	2/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1	QT	1	11S18E30	24000
GRAPE, RAISIN	2/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3	QT	3	11S18E29	24000
GRAPE, RAISIN	2/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3	QT	3	11S18E20	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
GRAPE, RAISIN	2/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7	QT	7	11S18E19	24000
ALMOND	2/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	27.64	GA	76	11S19E32	24000
WINE GRAPES	2/15/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2387	OZ	62	12S17E3	24000
WINE GRAPES	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	290	OZ	14.5	11S18E31	24000
WINE GRAPES	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	320	OZ	16	11S18E31	24000
WINE GRAPES	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	540	OZ	27	11S18E31	24000
GRAPE, RAISIN	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1792	OZ	56	12S18E3	24000
GRAPE, RAISIN	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	1	PT	1	11S18E30	100000
GRAPE, RAISIN	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	3	PT	3	11S18E29	100000
GRAPE, RAISIN	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	3	PT	3	11S18E20	100000
GRAPE, RAISIN	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	7	PT	7	11S18E19	100000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	221.09	OZ	76	11S19E32	100000
WINE GRAPES	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	464	OZ	14.5	11S18E31	100000
WINE GRAPES	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	512	OZ	16	11S18E31	100000
WINE GRAPES	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	864	OZ	27	11S18E31	100000
WINE GRAPES	2/15/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	3968	OZ	62	12S17E3	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ORANGE	2/16/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.37	GA	3.64	11S18E3	24000
GRAPE, RAISIN	2/16/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4.17	GA	13.33	12S18E9	24000
GRAPE	2/16/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	9	QT	9	11S18E20	24000
WINE GRAPES	2/16/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1155	OZ	30	12S17E4	24000
WINE GRAPES	2/16/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2117.5	OZ	60	12S17E4	24000
GRAPE	2/16/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	148	OZ	7	12S17E20	24000
GRAPE	2/16/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1000	OZ	47.5	12S17E20	24000
WINE GRAPES	2/16/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2.5	GA	6	12S17E28	24000
WINE GRAPES	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	2.5	GA	6	12S17E28	100000
GRAPE	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	10	GA	80	12S17E24	100000
GRAPE	2/16/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	10	GA	80	12S17E24	1000000
PISTACHIO	2/16/2008	GOAL 1.6E HERBICIDE	OXYFLUORFEN	G	13.5	QT	4.5	11S19E31	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WINE GRAPES	2/16/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1920	OZ	30	12S17E4	100000
WINE GRAPES	2/16/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	3520	OZ	60	12S17E4	100000
GRAPE, RAISIN	2/16/2008	ALECTO HL	GLYPHOSATE, ISOPROPYLAMINE SALT	G	640	OZ	15.27	12S17E22	24000
WINE GRAPES	2/17/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	24	QT	24	12S18E10	24000
GRAPE, RAISIN	2/17/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	39	PT	13	12S17E14	24000
GRAPE, RAISIN	2/17/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	147	PT	49	12S17E11	24000
GRAPE, RAISIN	2/18/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	35	QT	35	11S18E32	24000
WINE GRAPES	2/18/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	693	OZ	18	12S17E4	24000
WINE GRAPES	2/18/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20	QT	10	12S17E15	24000
GRAPE, RAISIN	2/18/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20	PT	20	12S17E15	24000
WINE GRAPES	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	10	QT	10	12S17E15	100000
PISTACHIO	2/18/2008	GOAL 1.6E HERBICIDE	OXYFLUORFEN	G	13.5	QT	4.5	11S19E31	100000
WINE GRAPES	2/18/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1152	OZ	18	12S17E4	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH	2/19/2008	VANGARD WG	CYPRODINIL	G	183.85	OZ	36.77	12S17E23	2030
WINE GRAPES	2/19/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4620	OZ	140	12S17E3	24000
WINE GRAPES	2/19/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	70	PT	70	12S17E16	24000
WINE GRAPES	2/19/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	95	PT	95	12S17E1	24000
PRUNE	2/19/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	18	PT	6	12S17E24	24000
WINE GRAPES	2/19/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	99	PT	33	12S17E13	24000
WINE GRAPES	2/19/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	204	PT	68	12S17E24	24000
PRUNE	2/19/2008	GOAL 2XL	OXYFLUORFEN	G	18	PT	6	12S17E24	100000
WINE GRAPES	2/19/2008	GOAL 2XL	OXYFLUORFEN	G	7680	OZ	140	12S17E3	100000
WINE GRAPES	2/20/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	93.32	QT	46.66	12S19E5	24000
WINE GRAPES	2/21/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	962.5	OZ	25	12S17E4	24000
WINE GRAPES	2/21/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1925	OZ	76	12S17E5	24000

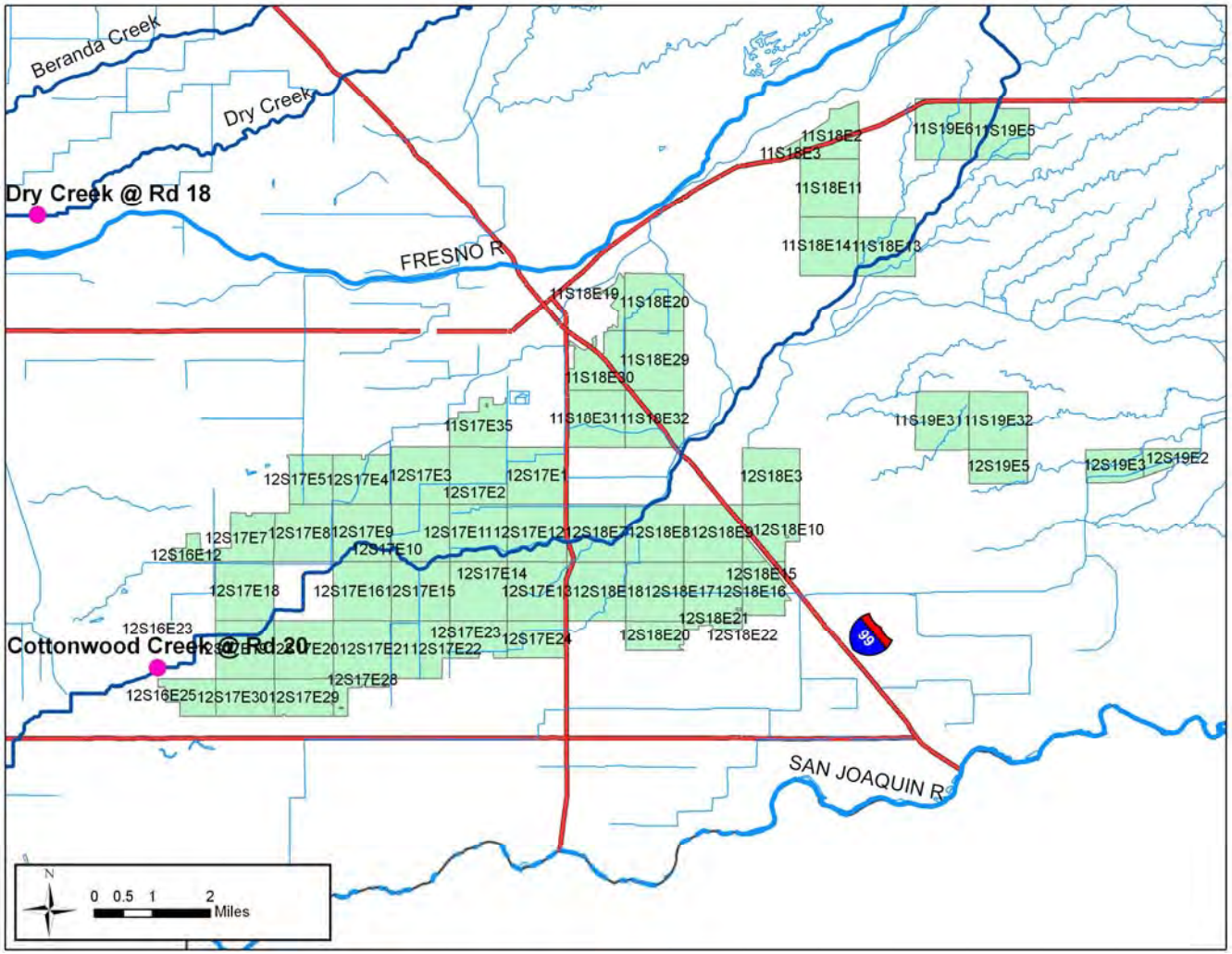
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WINE GRAPES	2/21/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6	GA	30	11S17E35	24000
WINE GRAPES	2/21/2008	GOAL 2XL	OXYFLUORFEN	G	120	PT	80	12S18E22	100000
WINE GRAPES	2/21/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1600	OZ	25	12S17E4	100000
WINE GRAPES	2/21/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	3225	OZ	76	12S17E5	100000
ALMOND	2/22/2008	VANGARD WG	CYPRODINIL	G	85	OZ	17	12S18E3	2030
ALMOND	2/22/2008	VANGARD WG	CYPRODINIL	G	165	OZ	33	12S18E3	2030
CHERRY	2/23/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	6	GA	37.77	12S17E18	1000000
CHERRY	2/23/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	92	PT	44	12S17E18	1000000
GRAPE, RAISIN	2/23/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	450.89	LB	13.34	12S17E21	24000
PEACH	2/25/2008	VANGARD WG	CYPRODINIL	G	183.45	OZ	36.69	12S17E23	2030
ALMOND	2/25/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	200	OZ	20	12S17E15	16000
ALMOND	2/25/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	200	OZ	20	12S17E16	16000
ALMOND	2/25/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	400	OZ	40	12S17E16	16000
ALMOND	2/25/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	400	OZ	40	12S17E21	16000
PEACH	2/26/2008	VANGARD WG	CYPRODINIL	G	195.15	OZ	39.03	12S17E23	2030
GRAPE, RAISIN	2/26/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	300	PT	100	12S18E7	24000
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	2.66	LB	8.5	12S18E10	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	2.97	LB	9.5	12S18E10	2030
ALMOND	2/27/2008	PROWL HERBICIDE	PENDIMETHALIN	G	60	GA	80	12S17E30	5000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	0.8	GA	8.5	12S18E10	10000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	0.9	GA	9.5	12S18E10	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	A	2.91	GA	31	12S17E12	10000
GRAPE, RAISIN	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	GA	40	12S17E20	24000
GRAPE, RAISIN	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	GA	40	12S17E28	24000
ALMOND	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	14.63	GA	78	12S17E30	24000
ALMOND	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	15	GA	80	12S17E30	24000
ALMOND	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	27.75	GA	148	12S17E30	24000
WINE GRAPES	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	39.75	GA	318	12S17E29	24000
WINE GRAPES	2/27/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	25	QT	25	12S17E1	24000
GRAPE, RAISIN	2/27/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	600	OZ	30	12S17E4	24000
GRAPE, RAISIN	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	15	GA	40	12S17E28	100000
GRAPE, RAISIN	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	15	GA	40	12S17E20	100000
ALMOND	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	39	GA	78	12S17E30	100000
ALMOND	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	40	GA	80	12S17E30	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	74	GA	148	12S17E30	100000
WINE GRAPES	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	119.25	GA	318	12S17E29	100000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	6.25	LB	20	11S19E31	2030
NECTARINE	2/28/2008	VANGARD WG	CYPRODINIL	G	151.8	OZ	30.36	12S17E23	2030
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	1.89	GA	20	11S19E31	10000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	6.09	GA	65	12S17E5	10000
GRAPE, RAISIN	2/28/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	449.96	OZ	13.34	12S17E21	24000
WINE GRAPES	2/28/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	75	OZ	25	12S17E4	24000
ALMOND	2/28/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	1100	OZ	110	12S16E12	16000
PISTACHIO	2/29/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	26.67	GA	64	12S16E23	5000
WINE GRAPES	2/29/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1790.25	OZ	13	12S17E4	24000
GRAPE	2/29/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5.61	GA	33.63	12S17E20	24000
GRAPE	2/29/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	33.5	GA	195.23	12S17E20	24000
ALMOND	2/29/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3	GA	10	12S18E17	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
GRAPE, RAISIN	2/29/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	103.32	QT	51.66	12S19E5	24000
ALMOND	2/29/2008	GOAL 2XL	OXYFLUORFEN	G	4	GA	10	12S18E17	100000
PISTACHIO	2/29/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	80	PT	64	12S16E23	24000
ALMOND	2/29/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	A	46	LB	57.5	12S17E9	16000
ALMOND	2/29/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	A	62.8	LB	78.5	12S17E8	16000
ALMOND	2/29/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	275	OZ	27.5	12S18E15	16000
ALMOND	2/29/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	400	OZ	40	12S17E16	16000
ALMOND	2/29/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	400	OZ	40	12S17E21	16000
ALMOND	3/2/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2.5	GA	10.18	12S17E10	24000
GRAPE, RAISIN	3/3/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	137.6	OZ	4.3	12S18E21	24000
GRAPE, RAISIN	3/4/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	768	OZ	24	12S18E21	24000

Figure 8. Location of Pesticide use for Cottonwood Creek @ Rd 20 site subwatershed – storm sediment.



Pesticide Use Reports for water column toxicity

Storm 1 (1/25/008) – Pimephales promelas toxicity

There were no reported applications of pesticides known to be toxic to *Pimephales* within three months of the sample collection date. In addition there was no toxicity in the water sample to any of the more sensitive test species in the laboratory. As a result, the source of toxicity to *Pimephales* in this sample is unknown.

Deadman Creek @ Gurr Rd site subwatershed

Pesticide Use Reports for metal exceedances in the water column

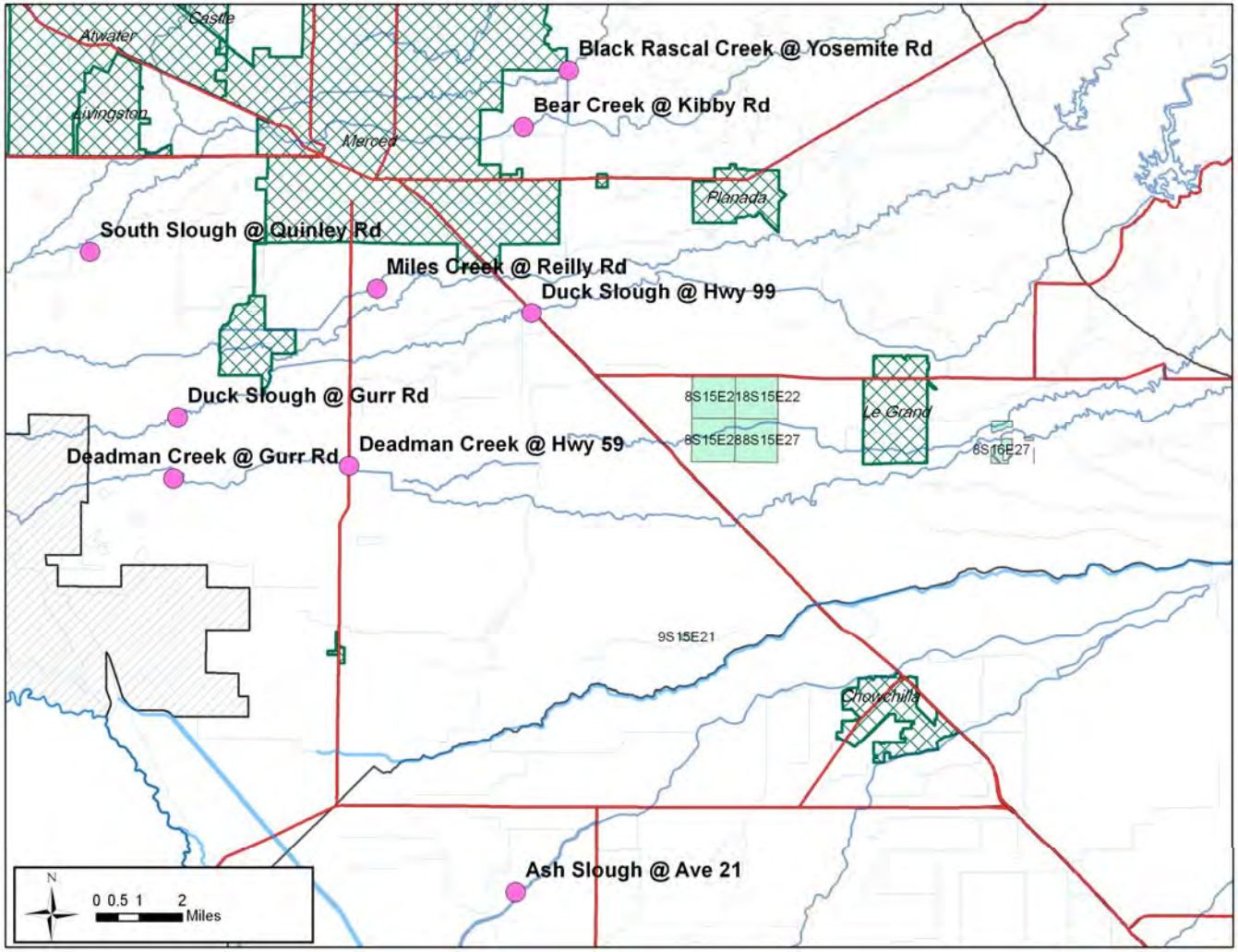
Storm 1 (1/25/08) - copper exceedance

Table 9. Copper use for Deadman Creek @ Gurr Rd site subwatershed - storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
N-OUTDOOR PLANT	11/9/2007	KOCIDE 2000	COPPER HYDROXIDE	A	432	LB	54	9S15E21
N-OUTDOOR PLANT	11/9/2007	KOCIDE 2000	COPPER HYDROXIDE	A	298.4	LB	37.3	9S15E21
N-OUTDOOR PLANT	11/9/2007	KOCIDE 2000	COPPER HYDROXIDE	A	176	LB	22	8S15E21
N-OUTDOOR PLANT	12/1/2007	KOCIDE 2000	COPPER HYDROXIDE	A	432	LB	54	9S15E21

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
N-OUTDOOR PLANT	12/1/2007	KOCIDE 2000	COPPER HYDROXIDE	A	298.4	LB	37.3	9S15E21
N-OUTDOOR PLANT	12/1/2007	KOCIDE 2000	COPPER HYDROXIDE	A	176	LB	22	8S15E21
PEACH	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	108	LB	18	8S15E27
PEACH	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	36	LB	6	8S15E28
N-OUTDOOR PLANT	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	78	LB	13	8S15E22
PEACH	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	42	LB	7	8S15E22
PEACH	12/15/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	30	LB	5	8S16E27
N-OUTDOOR PLANT	12/17/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	216	LB	36	8S16E27

Figure 9. Location of Copper use for Deadman Creek @ Gurr Rd site subwatershed - storm 1.



Pesticide Use Reports for water column toxicity

Storm 2 (2/25/08) - Selenastrum capricornutum toxicity

Table 10. Pesticide use for Deadman Creek @ Gurr Rd site subwatershed - storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	108	LB	18	8S15E27
PEACH	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	36	LB	6	8S15E28
N-OUTDOOR PLANT	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	78	LB	13	8S15E22
PEACH	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	42	LB	7	8S15E22
PEACH	12/15/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	30	LB	5	8S16E27
N-OUTDOOR PLANT	12/17/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	216	LB	36	8S16E27
ALFALFA	1/26/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	21.25	GA	85	9S13E12
ALFALFA	1/26/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	11	GA	44	9S13E1
ALFALFA	1/26/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	14.25	GA	57	9S13E1
ALFALFA	1/26/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	42.5	GA	85	9S13E12
ALFALFA	1/26/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	28.5	GA	57	9S13E1
ALFALFA	1/26/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	22	GA	44	9S13E1

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	1/28/2008	PURSUIT HERBICIDE	IMAZETHAPYR, AMMONIUM SALT	G	225	OZ	75	9S13E16
ALFALFA	1/28/2008	RAPTOR HERBICIDE	IMAZAMOX, AMMONIUM SALT	G	300	OZ	75	9S13E16
N-OUTDOOR PLANT	1/29/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	18.75	GA	75	8S15E15
N-OUTDOOR PLANT	1/29/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.75	GA	7	8S15E21
ALMOND	1/31/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	7.5	GA	20	8S15E15
ALMOND	1/31/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	8.25	GA	22	8S15E15
ALMOND	1/31/2008	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	5	LB	20	8S15E15
ALMOND	1/31/2008	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	5.5	LB	22	8S15E15
OAT FOR/FOD	1/31/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	1.5	GA	12	9S13E13
OAT FOR/FOD	1/31/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.75	LB	12	9S13E13
ALMOND	1/31/2008	GOAL 2XL	OXYFLUORFEN	G	7.5	GA	20	8S15E15
ALMOND	1/31/2008	GOAL 2XL	OXYFLUORFEN	G	8.25	GA	22	8S15E15
ALMOND	2/2/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	1350	LB	150	9S14E14
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	18.3	GA	73.2	8S14E21
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	18.88	GA	75.5	8S14E21

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	22	GA	88	9S13E2
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	21.25	GA	85	9S13E2
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	10.07	GA	40.3	8S14E28
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	21.25	GA	85	9S13E12
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	19.2	GA	76.8	8S14E21
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	9.2	GA	36.8	8S14E28
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	21.25	GA	85	9S13E11
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	16.2	GA	64.8	8S14E28
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	14.23	GA	56.9	8S14E28
ALFALFA	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	12.25	GA	49	9S13E1
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	24.5	GA	49	9S13E1
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	38.4	GA	76.8	8S14E21
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	42.5	GA	85	9S13E11
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	37.75	GA	75.5	8S14E21
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	36.6	GA	73.2	8S14E21
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	42.5	GA	85	9S13E2
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	44	GA	88	9S13E2
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	42.5	GA	85	9S13E12

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	18.4	GA	36.8	8S14E28
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	28.45	GA	56.9	8S14E28
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	32.4	GA	64.8	8S14E28
ALFALFA	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	20.15	GA	40.3	8S14E28
WHEAT FOR/FOD	2/6/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	3.5	GA	28	9S13E24
OAT FOR/FOD	2/6/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	2.5	GA	20	9S13E13
OAT FOR/FOD	2/6/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	0.5	GA	4	9S13E24
WHEAT FOR/FOD	2/6/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	4	GA	32	9S13E24
OAT	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	1.54	QT	49.4	8S15E21
WHEAT SEED	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.24	GA	30	8S16E20
FORAGE HAY/SILAGE	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	1.25	QT	40	8S15E28
OAT SEED	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	1.47	QT	47	8S15E22
OAT FOR/FOD	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.25	LB	4	9S13E24
WHEAT FOR/FOD	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	1.75	LB	28	9S13E24

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WHEAT FOR/FOD	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2	LB	32	9S13E24
WHEAT	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	1.41	QT	45	9S16E12
WHEAT	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.81	QT	90	9S16E12
OAT	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.03	QT	65	9S16E12
WHEAT SEED	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.2	GA	25	8S16E20
OAT FOR/FOD	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	1.25	LB	20	9S13E13
FORAGE HAY/SILAGE	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	1.17	QT	37.5	8S15E22
OAT	2/6/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	1.16	GA	49.4	8S15E21
OAT SEED	2/6/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	1.1	GA	47	8S15E22
WHEAT	2/6/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	1.05	GA	45	9S16E12

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WHEAT	2/6/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	2.11	GA	90	9S16E12
WHEAT SEED	2/6/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	0.71	GA	30	8S16E20
WHEAT SEED	2/6/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	0.59	GA	25	8S16E20
OAT	2/6/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	1.58	GA	65	9S16E12
OAT	2/7/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	14.8	GA	158	9S15E1
OAT	2/7/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	14.8	GA	35	9S16E9
ALFALFA	2/7/2008	PURSUIT HERBICIDE	IMAZETHAPYR, AMMONIUM SALT	A	1.87	GA	79.72	9S14E7
ALFALFA	2/7/2008	RAPTOR HERBICIDE	IMAZAMOX, AMMONIUM SALT	A	2.49	GA	79.72	9S14E7
OAT	2/7/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL HEPTANOATE	A	3.28	GA	35	9S16E9

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT	2/7/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	A	3.28	GA	35	9S16E9
ALFALFA	2/7/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL HEPTANOATE	A	4.98	GA	79.72	9S14E7
ALFALFA	2/7/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	A	4.98	GA	79.72	9S14E7
OAT	2/7/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL HEPTANOATE	A	3.28	GA	158	9S15E1
OAT	2/7/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	A	3.28	GA	158	9S15E1
TRITICALE	2/7/2008	OSPREY HERBICIDE	MESOSULFURON-METHYL	A	363.38	OZ	76.5	9S13E9
ALMOND	2/8/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	7.87	GA	21	8S16E30
ALMOND	2/8/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	11.81	GA	31.5	8S16E30
ALMOND	2/8/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	6.56	GA	17.5	8S16E30
ALMOND	2/8/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	5	GA	21	8S16E30
ALMOND	2/8/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	7.87	GA	31.5	8S16E30
ALMOND	2/8/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	4.37	GA	17.5	8S16E30
ALFALFA	2/8/2008	PURSUIT HERBICIDE	IMAZETHAPYR, AMMONIUM SALT	A	1.56	GA	40	8S15E22
ALFALFA	2/8/2008	PURSUIT HERBICIDE	IMAZETHAPYR, AMMONIUM SALT	A	1.56	GA	40	8S15E28
ALFALFA	2/8/2008	PURSUIT HERBICIDE	IMAZETHAPYR, AMMONIUM SALT	A	1.05	GA	27	8S15E21
CORN FOR/FOD	2/8/2008	SHARK HERBICIDE	CARFENTRAZONE-ETHYL	A	47.6	OZ	68	9S14E8
CORN HUMAN CONSUMP	2/8/2008	SHARK HERBICIDE	CARFENTRAZONE-ETHYL	A	46.31	OZ	66.16	9S14E8

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	2/8/2008	SHARK HERBICIDE	CARFENTRAZONE-ETHYL	A	53.51	OZ	76.44	8S14E34
CORN FOR/FOD	2/8/2008	SHARK HERBICIDE	CARFENTRAZONE-ETHYL	G	45.5	OZ	65	9S14E6
CORN FOR/FOD	2/8/2008	SHARK HERBICIDE	CARFENTRAZONE-ETHYL	A	31.79	OZ	45.42	9S14E7
CORN FOR/FOD	2/8/2008	SHARK HERBICIDE	CARFENTRAZONE-ETHYL	A	28.49	OZ	40.7	9S14E7
CORN FOR/FOD	2/8/2008	SHARK HERBICIDE	CARFENTRAZONE-ETHYL	A	32.96	OZ	47.08	9S14E7
OAT FOR/FOD	2/8/2008	SHARK HERBICIDE	CARFENTRAZONE-ETHYL	A	43.55	OZ	62.21	8S14E34
ALFALFA	2/8/2008	BUTYRAC 200	4(2,4-DB), DIMETHYLAMINE SALT	A	10	GA	40	8S15E22
ALFALFA	2/8/2008	BUTYRAC 200	4(2,4-DB), DIMETHYLAMINE SALT	A	10	GA	40	8S15E28
ALFALFA	2/8/2008	BUTYRAC 200	4(2,4-DB), DIMETHYLAMINE SALT	A	6.75	GA	27	8S15E21
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	7.87	GA	21	8S16E30
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	11.81	GA	31.5	8S16E30
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	6.56	GA	17.5	8S16E30
CORN FOR/FOD	2/8/2008	NUFARM WEEDAR 64 BROADLEAF HERBICIDE	2,4-D, DIMETHYLAMINE SALT	A	40.7	PT	40.7	9S14E7

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
CORN FOR/FOD	2/8/2008	NUFARM WEEDAR 64 BROADLEAF HERBICIDE	2,4-D, DIMETHYLAMINE SALT	A	47.08	PT	47.08	9S14E7
OAT FOR/FOD	2/8/2008	NUFARM WEEDAR 64 BROADLEAF HERBICIDE	2,4-D, DIMETHYLAMINE SALT	A	76.44	PT	76.44	8S14E34
OAT FOR/FOD	2/8/2008	NUFARM WEEDAR 64 BROADLEAF HERBICIDE	2,4-D, DIMETHYLAMINE SALT	A	62.21	PT	62.21	8S14E34
CORN FOR/FOD	2/8/2008	NUFARM WEEDAR 64 BROADLEAF HERBICIDE	2,4-D, DIMETHYLAMINE SALT	G	65	PT	65	9S14E6
CORN HUMAN CONSUMP	2/8/2008	NUFARM WEEDAR 64 BROADLEAF HERBICIDE	2,4-D, DIMETHYLAMINE SALT	A	66.16	PT	66.16	9S14E8
CORN FOR/FOD	2/8/2008	NUFARM WEEDAR 64 BROADLEAF HERBICIDE	2,4-D, DIMETHYLAMINE SALT	A	45.42	PT	45.42	9S14E7
CORN FOR/FOD	2/8/2008	NUFARM WEEDAR 64 BROADLEAF HERBICIDE	2,4-D, DIMETHYLAMINE SALT	A	68	PT	68	9S14E8
SUDANGRASS	2/8/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	17.5	PT	35	8S13E25
WHEAT FOR/FOD	2/8/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	17.5	PT	35	8S13E25
WHEAT FOR/FOD	2/8/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	11.55	OZ	35	8S13E25

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
SUDANGRASS	2/8/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	11.55	OZ	35	8S13E25
WHEAT FOR/FOD	2/8/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	70	OZ	35	8S13E25
SUDANGRASS	2/8/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	70	OZ	35	8S13E25
ALMOND	2/9/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	6.75	GA	18	8S16E30
ALMOND	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	6.75	GA	18	8S16E30
ALFALFA	2/11/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	72	PT	36	9S14E18
ALFALFA	2/11/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	74.4	PT	37.2	9S14E18
ALFALFA	2/11/2008	PURSUIT HERBICIDE	IMAZETHAPYR, AMMONIUM SALT	A	5	GA	128	8S15E32
WHEAT FOR/FOD	2/11/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	45	OZ	36	9S13E10
ALFALFA	2/11/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	93	OZ	62	9S13E10
ALFALFA	2/11/2008	BUTYRAC 200	4(2,4-DB), DIMETHYLAMINE SALT	A	32	GA	128	8S15E32
ALFALFA	2/11/2008	POAST	SETHOXYDIM	A	40	GA	128	8S15E32
CORN FOR/FOD	2/12/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.82	GA	94	8S14E29

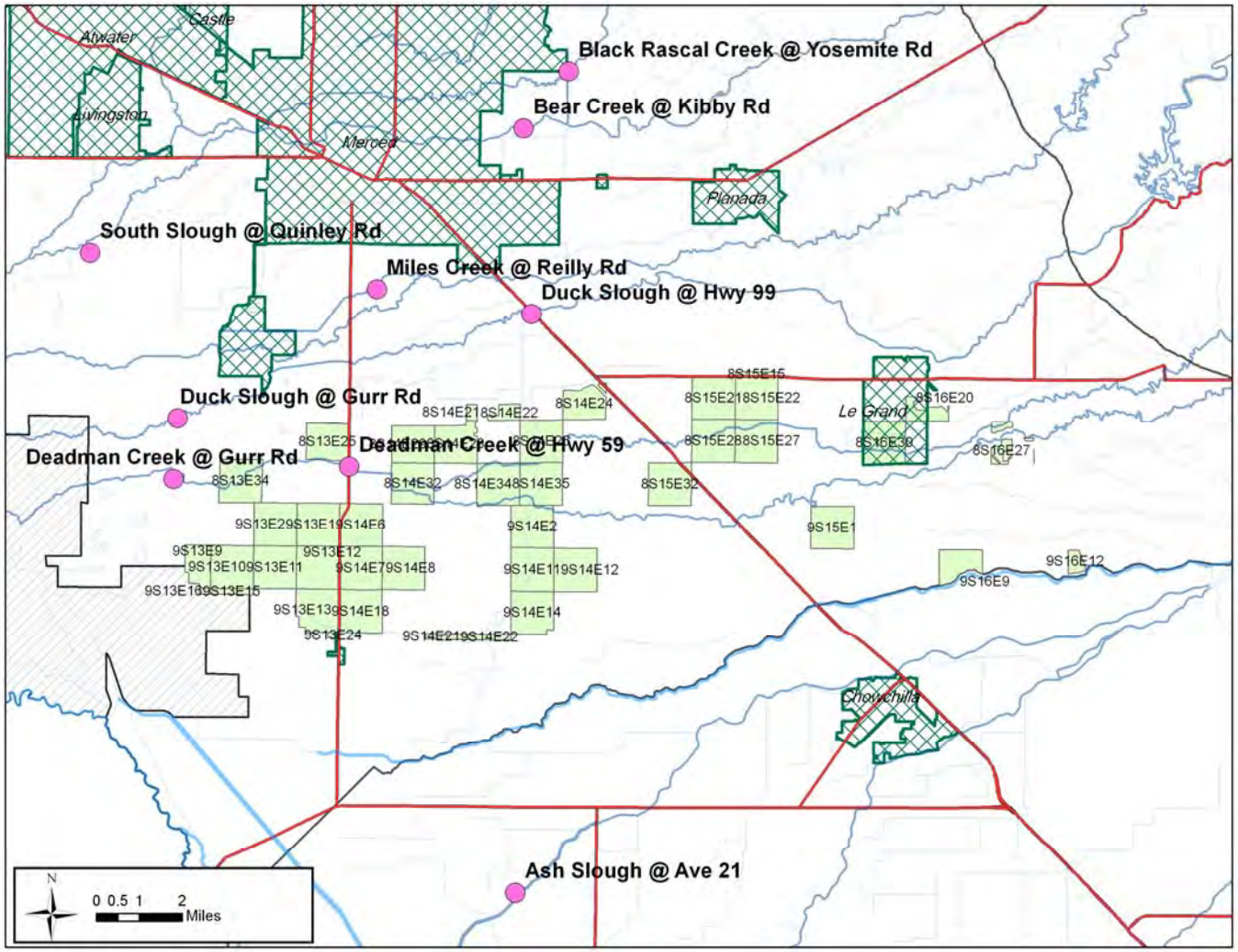
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WHEAT FOR/FOD	2/12/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.61	GA	79	9S14E14
WHEAT FOR/FOD	2/12/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.7	GA	90	9S14E11
WHEAT FOR/FOD	2/12/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	1.14	GA	148	9S14E11
WHEAT FOR/FOD	2/12/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.79	GA	102	9S14E12
WHEAT FOR/FOD	2/12/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.94	GA	108	8S14E32
TOMATO	2/15/2008	TOUCHDOWN HITECH	GLYPHOSATE, POTASSIUM SALT	A	8.13	GA	65	8S14E34
TOMATO	2/15/2008	TOUCHDOWN HITECH	GLYPHOSATE, POTASSIUM SALT	A	3.5	GA	28	8S14E35
TOMATO	2/15/2008	TOUCHDOWN HITECH	GLYPHOSATE, POTASSIUM SALT	A	3.75	GA	30	8S14E34
TOMATO	2/15/2008	TOUCHDOWN HITECH	GLYPHOSATE, POTASSIUM SALT	A	6.25	GA	50	8S14E35
TOMATO	2/15/2008	TOUCHDOWN HITECH	GLYPHOSATE, POTASSIUM SALT	A	10	GA	80	8S14E34
TOMATO	2/15/2008	TOUCHDOWN HITECH	GLYPHOSATE, POTASSIUM SALT	A	16.5	GA	88	8S14E34
WHEAT FOR/FOD	2/15/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	9314	OZ	73	8S14E24
WHEAT FOR/FOD	2/15/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	1044	OZ	58	8S14E24

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WHEAT FOR/FOD	2/15/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	1800	OZ	100	8S14E26
WHEAT FOR/FOD	2/15/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	684	OZ	38	8S14E26
WHEAT FOR/FOD	2/15/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	5.4	GA	40	9S14E2
WHEAT FOR/FOD	2/15/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	12.15	GA	90	9S14E2
OAT FOR/FOD	2/15/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	3.38	LB	45	8S13E34
WHEAT FOR/FOD	2/15/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	5.51	LB	90	9S14E2
WHEAT FOR/FOD	2/15/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.45	LB	40	9S14E2
TOMATO	2/15/2008	GOAL 2XL	OXYFLUORFEN	A	3.75	GA	80	8S14E34
TOMATO	2/15/2008	GOAL 2XL	OXYFLUORFEN	A	2.34	GA	50	8S14E35
TOMATO	2/15/2008	GOAL 2XL	OXYFLUORFEN	A	1.41	GA	30	8S14E34
TOMATO	2/15/2008	GOAL 2XL	OXYFLUORFEN	A	3.05	GA	65	8S14E34
TOMATO	2/15/2008	GOAL 2XL	OXYFLUORFEN	A	5.5	GA	88	8S14E34
TOMATO	2/15/2008	GOAL 2XL	OXYFLUORFEN	A	1.31	GA	28	8S14E35
TRITICALE	2/15/2008	NUFARM WEEDAR 64 BROADLEAF HERBICIDE	2,4-D, DIMETHYLAMINE SALT	A	114.75	PT	76.5	9S13E9

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	2/16/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	3.84	GA	41	8S14E28
OAT FOR/FOD	2/16/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.64	QT	41	8S14E28
WHEAT FOR/FOD	2/16/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.58	GA	74	9S14E22
WHEAT FOR/FOD	2/16/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.31	GA	40	9S14E21
WHEAT FOR/FOD	2/16/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.27	GA	35	9S14E21
WHEAT FOR/FOD	2/16/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.05	GA	7	9S14E21
OAT FOR/FOD	2/16/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	1.28	GA	41	8S14E28
WHEAT FOR/FOD	2/17/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	240	OZ	75	9S13E15
OAT FOR/FOD	2/17/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	1280.25	OZ	75	9S13E9
OAT FOR/FOD	2/18/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	17.6	GA	138	8S14E22
OAT FOR/FOD	2/18/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	4.44	QT	138	8S14E22

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	2/18/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	3.23	GA	138	8S14E22

Figure 10. Location of Pesticide use for Deadman Creek @ Gurr Rd site subwatershed - storm 2.



Deadman Creek @ Hwy 59 site subwatershed

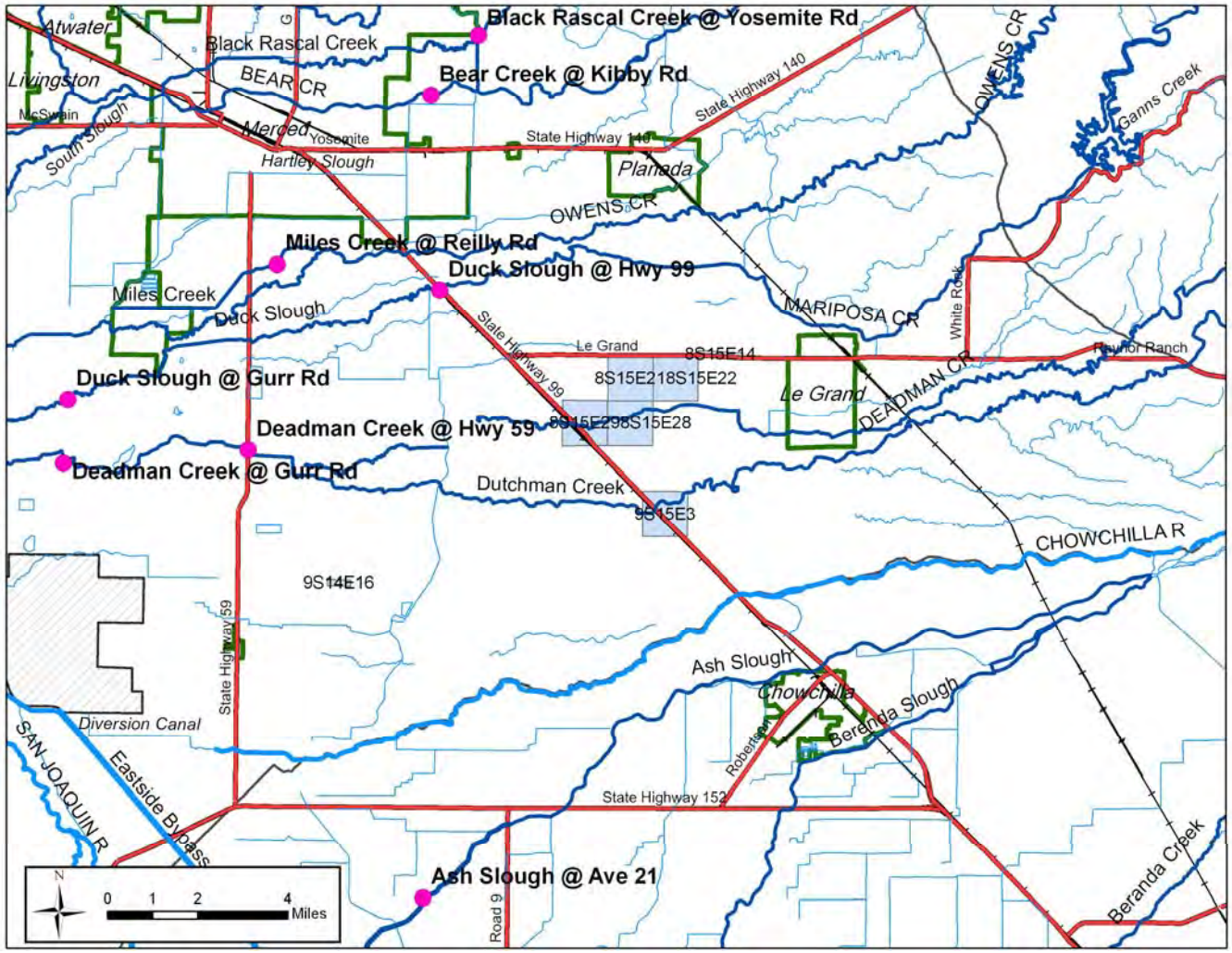
Pesticide Use Reports for pesticide exceedances in the water column

Storm 1 (1/25/08) - diuron exceedance

Table 11. Diuron use for Deadman Creek @ Hwy 59 site subwatershed - storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	1/1/2008	DIURON 400 HERBICIDE	DIURON	G	198.96	PT	66.32	9S14E16
ALFALFA	1/2/2008	DIURON 400 HERBICIDE	DIURON	G	119.19	PT	39.73	9S14E17
ALFALFA	1/9/2008	4L HERBICIDE	DIURON	G	15.55	GA	62.2	8S15E21
ALFALFA	1/9/2008	4L HERBICIDE	DIURON	G	8.75	GA	35	8S15E21
ALFALFA	1/9/2008	4L HERBICIDE	DIURON	G	9.38	GA	37.5	8S15E22
ALFALFA	1/9/2008	4L HERBICIDE	DIURON	G	7	GA	28	8S15E22
ALFALFA	1/9/2008	4L HERBICIDE	DIURON	G	18.75	GA	75	8S15E28
ALFALFA	1/16/2008	4L HERBICIDE	DIURON	G	18.5	GA	74	8S15E14
ALFALFA	1/16/2008	DUPONT KARMEX XP HERBICIDE	DIURON	G	60.5	LB	40.3	8S15E28
GRAPE RAISIN	1/16/2008	KARMEX XP HERBICIDE	DIURON	G	113.1	LB	64.63	9S15E3
ALFALFA	1/17/2008	DUPONT KARMEX XP HERBICIDE	DIURON	G	54.5	LB	36.3	8S15E29

Figure 11. Location of Diuron use for Deadman Creek @ Hwy 59 site subwatershed - storm 1.

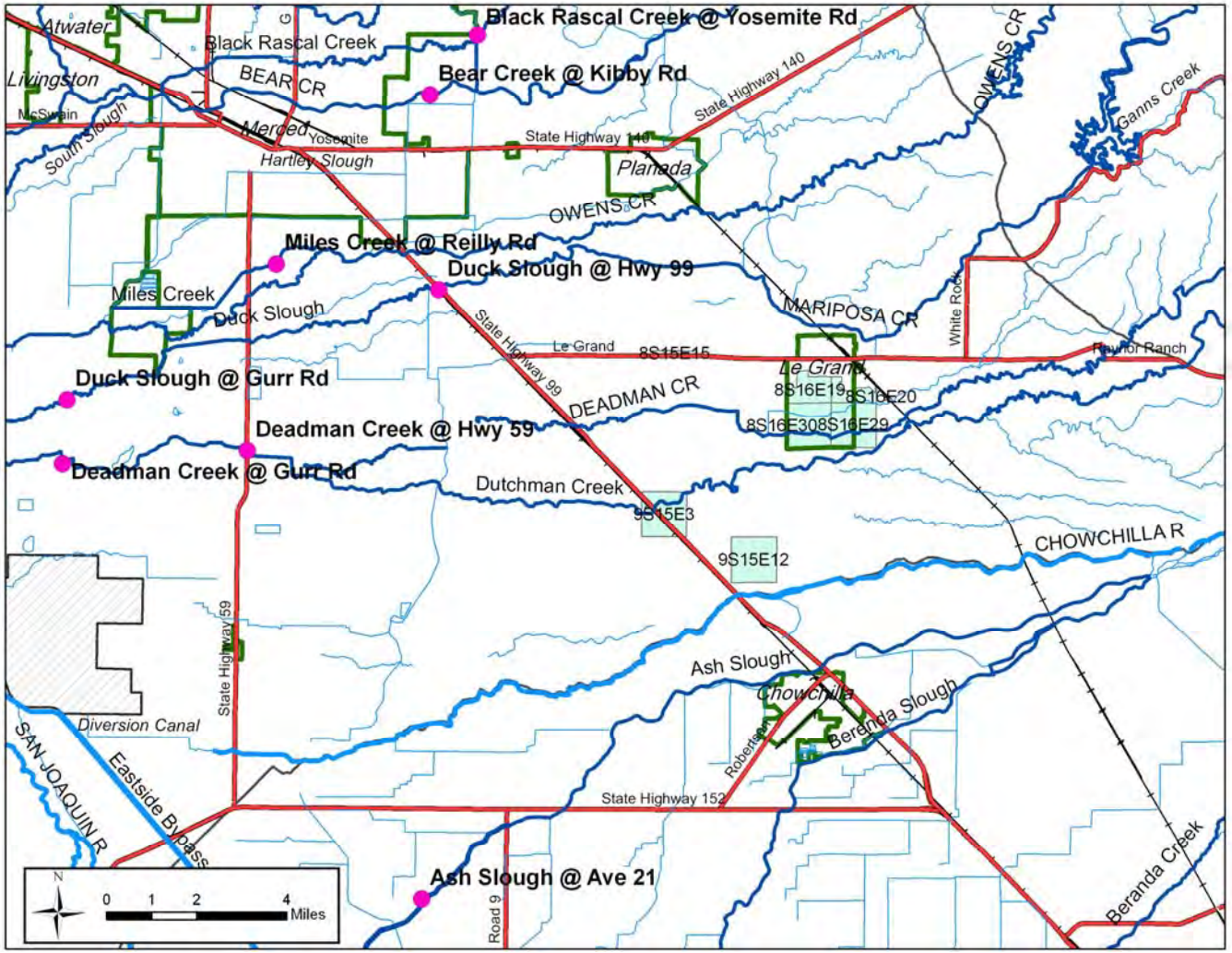


Storm 1 (1/25/08) - simazine exceedance

Table 12. Simazine use for Deadman Creek @ Hwy 59 site subwatershed - storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/3/2008	PRINCEP 4L	SIMAZINE	G	145	OZ	5	8S16E20
ALMOND	1/8/2008	PRINCEP 4L	SIMAZINE	G	290	OZ	10	8S16E29
ALMOND	1/11/2008	PRINCEP 4L	SIMAZINE	G	290	OZ	10	8S16E29
GRAPE RAISIN	1/16/2008	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	113.1	LB	64.63	9S15E3
ALMOND	1/21/2008	SIMAZINE 90DF	SIMAZINE	G	28	LB	28	8S16E19

Figure 12. Location of Simazine use for Deadman Creek @ Hwy 59 site subwatershed - storm 1.



Pesticide Use Reports for water column toxicity

Storm 1 (1/25/08) - Selenastrum capricornutum toxicity

Table 13. Pesticide use for Deadman Creek @ Hwy 59 site subwatershed - storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
N-OUTDOOR PLANT	11/9/2007	KOCIDE 2000	COPPER HYDROXIDE	A	176	LB	22	8S15E21
N-OUTDOOR PLANT	12/1/2007	KOCIDE 2000	COPPER HYDROXIDE	A	176	LB	22	8S15E21
N-OUTDOOR PLANT	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	78	LB	13	8S15E22
PEACH	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	108	LB	18	8S15E27
PEACH	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	42	LB	7	8S15E22
PEACH	12/14/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	36	LB	6	8S15E28
PEACH	12/15/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	30	LB	5	8S16E27
N-OUTDOOR PLANT	12/17/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	216	LB	36	8S16E27
ALMOND	12/27/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	194.5	PT	49	8S15E29
ALMOND	12/27/2007	BUCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	37.4	PT	49	8S15E29
ALMOND	12/27/2007	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	289.31	OZ	49	8S15E29
ALMOND	12/31/2007	GOAL 2XL	OXYFLUORFEN	G	1.1	GA	28	9S15E2

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/31/2007	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	8.75	GA	28	9S15E2
WHEAT FOR/FOD	12/31/2007	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	G	557.6	OZ	34.85	8S13E25
ALMOND	12/31/2007	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	21	LB	28	9S15E2
WHEAT FOR/FOD	12/31/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	34.85	OZ	34.85	8S13E25
ALMOND	12/31/2007	PROWL 3.3 EC HERBICIDE	PENDIMETHALIN	G	21	GA	28	9S15E2
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	110	GA	108	8S16E34
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	110	GA	27	8S16E34
ALFALFA	1/1/2008	DIURON 400 HERBICIDE	DIURON	G	66.32	PT	198.96	9S14E16
ALFALFA	1/1/2008	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	66.32	PT	66.32	9S14E16
PISTACHIO	1/2/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	116	GA	114	8S16E33
PISTACHIO	1/2/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	116	GA	28.5	8S16E33
ALFALFA	1/2/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	105	LB	2100	9S15E6
ALMOND	1/2/2008	GOAL 2XL	OXYFLUORFEN	G	28	GA	1.1	9S15E2
ALMOND	1/2/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	28	LB	21	9S15E2
ALMOND	1/2/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	28	GA	8.75	9S15E2
ALFALFA	1/2/2008	DIURON 400 HERBICIDE	DIURON	G	39.73	PT	119.19	9S14E17

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	1/2/2008	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	39.73	PT	39.73	9S14E17
ALMOND	1/3/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	5	PT	15	8S16E20
ALMOND	1/3/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	5	PT	20	8S16E20
ALMOND	1/3/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	30	LB	22.5	8S16E20
ALMOND	1/3/2008	PRINCEP 4L	SIMAZINE	G	5	OZ	145	8S16E20
ALMOND	1/3/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	30	GA	7.5	8S16E20
ALMOND	1/3/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	5	LB	11.25	8S16E20
ALMOND	1/3/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	40	GA	40	8S16E29
ALMOND	1/3/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	40	OZ	480	8S16E29
ALMOND	1/3/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	40	PT	120	8S16E29
PISTACHIO	1/7/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	80	GA	19.5	8S16E34
PISTACHIO	1/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	80	GA	79	8S16E34
ALMOND	1/8/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	10	PT	30	8S16E29
ALMOND	1/8/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	10	LB	22.5	8S16E29

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/8/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	10	PT	40	8S16E29
ALMOND	1/8/2008	PRINCEP 4L	SIMAZINE	G	10	OZ	290	8S16E29
ALMOND	1/9/2008	ROUNDUP PRO HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	8	QT	2	8S15E14
ALMOND	1/9/2008	GOAL 2XL	OXYFLUORFEN	G	8	QT	2	8S15E14
ALFALFA	1/9/2008	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	62.2	GA	15.55	8S15E21
ALFALFA	1/9/2008	4L HERBICIDE	DIURON	G	62.2	GA	15.55	8S15E21
ALFALFA	1/9/2008	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	35	GA	8.75	8S15E21
ALFALFA	1/9/2008	4L HERBICIDE	DIURON	G	35	GA	8.75	8S15E21
ALFALFA	1/9/2008	4L HERBICIDE	DIURON	G	37.5	GA	9.38	8S15E22
ALFALFA	1/9/2008	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	28	GA	7	8S15E22
ALFALFA	1/9/2008	4L HERBICIDE	DIURON	G	28	GA	7	8S15E22
ALFALFA	1/9/2008	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	37.5	GA	9.38	8S15E22
ALFALFA	1/9/2008	POAST	SETHOXYDIM	G	40	GA	12.5	8S15E28
ALFALFA	1/9/2008	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	75	GA	18.75	8S15E28
ALFALFA	1/9/2008	4L HERBICIDE	DIURON	G	75	GA	18.75	8S15E28
ALMOND	1/11/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	100	OZ	200	8S16E29
ALMOND	1/11/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	100	OZ	1000	8S16E29

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/11/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	10	PT	30	8S16E29
ALMOND	1/11/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	10	PT	40	8S16E29
ALMOND	1/11/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	10	LB	22.5	8S16E29
ALMOND	1/11/2008	PRINCEP 4L	SIMAZINE	G	10	OZ	290	8S16E29
ALMOND	1/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	100	PT	200	8S16E29
ALMOND	1/14/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	48	OZ	96	8S16E29
ALMOND	1/14/2008	DUPONT MATRIX FNV HERBICIDE	RIMSULFURON	G	48	OZ	192	8S16E29
ALMOND	1/14/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	48	OZ	96	8S16E29
ALMOND	1/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	30	PT	60	8S15E20
ALMOND	1/15/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	30	OZ	300	8S15E20
ALMOND	1/15/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	30	PT	60	8S15E20
ALMOND	1/16/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	3	QT	9	8S15E15
ALMOND	1/16/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	3	OZ	24	8S15E15
ALMOND	1/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	3	PT	6	8S15E15
ALFALFA	1/16/2008	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	74	GA	13.88	8S15E14
ALFALFA	1/16/2008	4L HERBICIDE	DIURON	G	74	GA	18.5	8S15E14

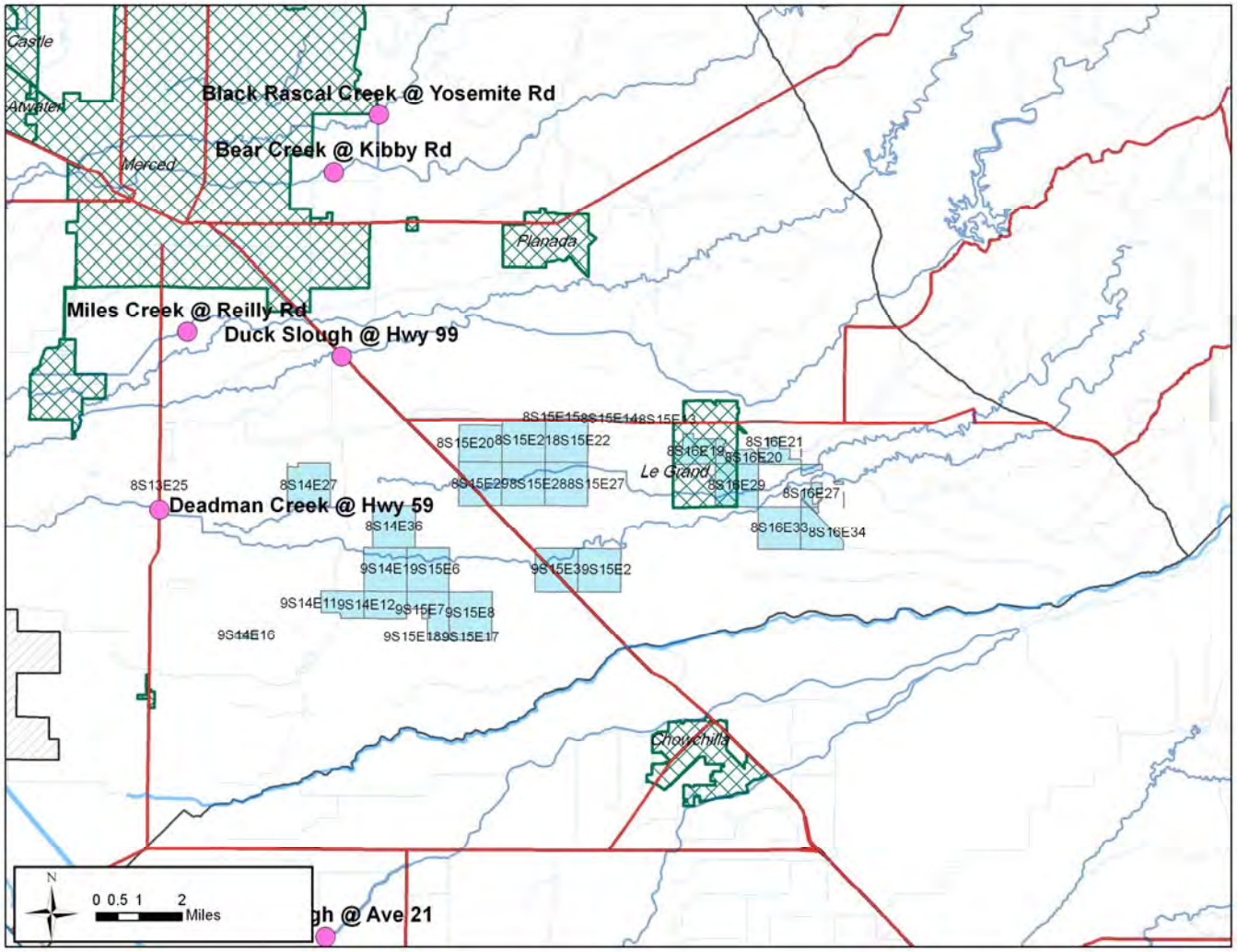
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/16/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	22	GA	5.5	8S15E13
ALMOND	1/16/2008	GOAL 2XL	OXYFLUORFEN	G	22	GA	5.5	8S15E13
ALFALFA	1/16/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	31.8	GA	4.97	8S15E21
ALFALFA	1/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	75	GA	75	8S15E21
ALFALFA	1/16/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	75	GA	14.06	8S15E21
ALFALFA	1/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	120	GA	120	8S15E21
ALFALFA	1/16/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	38.8	GA	6.06	8S15E21
ALFALFA	1/16/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	A	120	GA	22.5	8S15E21
ALFALFA	1/16/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	27	GA	4.22	8S15E22
ALFALFA	1/16/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	40	GA	6.25	8S15E22
ALFALFA	1/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	GA	40	8S15E22
ALFALFA	1/16/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	40.3	PT	42	8S15E28
ALFALFA	1/16/2008	DU PONT VELPAR DF HERBICIDE	HEXAZINONE	G	40.3	LB	14.73	8S15E28

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	1/16/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	9	GA	1.41	8S15E27
GRAPE RAISIN	1/16/2008	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	64.63	LB	113.1	9S15E3
GRAPE RAISIN	1/16/2008	GOAL 2XL	OXYFLUORFEN	G	64.63	GA	16.16	9S15E3
GRAPE RAISIN	1/16/2008	KARMEX XP HERBICIDE	DIURON	G	64.63	LB	113.1	9S15E3
GRAPE RAISIN	1/16/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	64.63	GA	11.31	9S15E3
ALMOND	1/17/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	62.5	QT	187.5	8S15E20
ALMOND	1/17/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	62.5	OZ	500	8S15E20
ALMOND	1/17/2008	GOAL 2XL	OXYFLUORFEN	G	20	OZ	80	8S16E21
ALMOND	1/17/2008	BUCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	20	QT	20	8S16E21
ALFALFA	1/17/2008	DU PONT VELPAR DF HERBICIDE	HEXAZINONE	G	36.3	LB	13.27	8S15E29
ALFALFA	1/17/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	36.3	PT	37.91	8S15E29
PISTACHIO	1/17/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	80	GA	19.5	8S16E34
PISTACHIO	1/17/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	80	GA	79	8S16E34
ALFALFA	1/18/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	78	GA	19.5	8S16E19
ALFALFA	1/18/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	78	GA	14.63	8S16E19

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	1/19/2008	RAPTOR HERBICIDE	IMAZAMOX, AMMONIUM SALT	G	155	GA	6.96	8S14E27
ALMOND	1/20/2008	DUPONT MATRIX FNV HERBICIDE	RIMSULFURON	G	10	OZ	40	8S16E21
TOMATO	1/20/2008	GOAL 2XL	OXYFLUORFEN	G	15.7	QT	3.92	8S14E36
TOMATO	1/20/2008	ROUNDUP ULTRAMAX HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	15.7	GA	2.94	8S14E36
ALMOND	1/21/2008	SIMAZINE 90DF	SIMAZINE	G	28	LB	28	8S16E19
ALMOND	1/21/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	28	LB	84	8S16E19
ALMOND	1/22/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	8	LB	5	8S16E19
ALMOND	1/22/2008	PROWL 3.3 EC HERBICIDE	PENDIMETHALIN	G	8	GA	2	8S16E19
ALMOND	1/23/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	14.5	GA	5.43	8S15E15
ALMOND	1/23/2008	GOAL 2XL	OXYFLUORFEN	G	14.5	GA	5.43	8S15E15
ALFALFA	1/23/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	32	LB	640	9S14E1
ALFALFA	1/23/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	115	LB	2300	9S14E11
ALFALFA	1/23/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	110	LB	2200	9S14E11
ALFALFA	1/23/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	77	LB	1540	9S14E11
ALFALFA	1/23/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	78	LB	1560	9S14E12
ALFALFA	1/23/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	158	LB	3160	9S15E18
ALFALFA	1/23/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	155	LB	3100	9S15E18
ALFALFA	1/23/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	153	LB	3060	9S15E17
ALFALFA	1/25/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	53	LB	1060	9S15E6
ALFALFA	1/25/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	69	LB	1380	9S15E6
ALFALFA	1/25/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	46	LB	920	9S15E6

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	1/25/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	80	LB	1600	9S15E6
ALFALFA	1/25/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	45	LB	900	9S15E6
ALFALFA	1/25/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	156	LB	3120	9S15E8
ALFALFA	1/25/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	155	LB	3100	9S15E7
ALFALFA	1/25/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	151	LB	3020	9S15E7
ALFALFA	1/25/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	49	LB	980	9S15E7
ALFALFA	1/25/2008	TRILIN 10G HERBICIDE	TRIFLURALIN	G	81	LB	1620	9S15E17

Figure 13. Location of Pesticide use for Deadman Creek @ Hwy 59 site subwatershed - storm 1.



Dry Creek @ Rd 18 site subwatershed

Pesticide Use Reports for pesticide exceedances in the water column

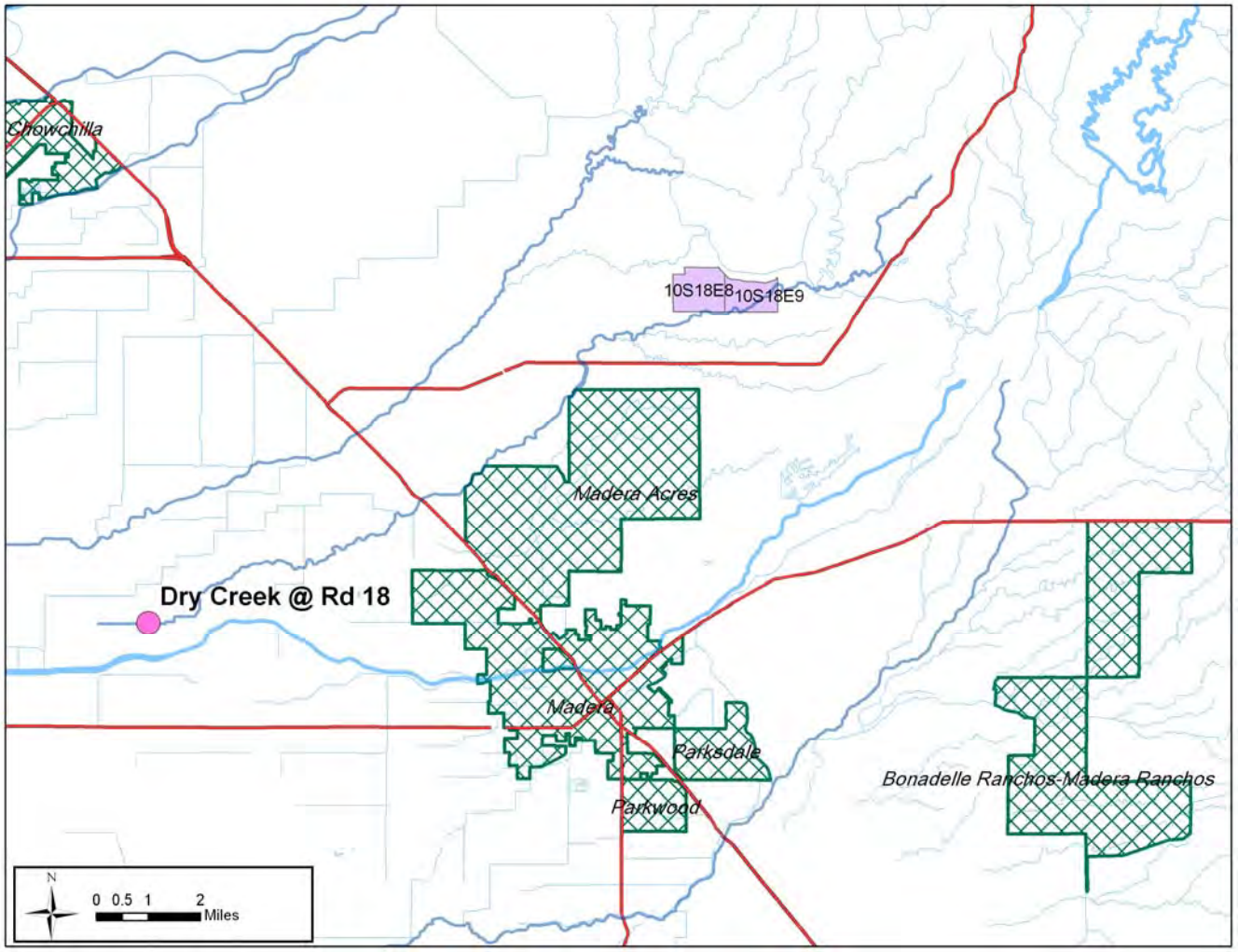
Storm 1 (1/25/08) - diuron exceedance

There was no reported use in January and previous reported use goes back 2 months from sample date.

Table 14. Diuron use for Dry Creek @ Rd 18 site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ORANGE	11/6/07	DU PONT KROVAR I DF HERBICIDE	DIURON	G	272	LB	68	10S18E9
ORANGE	11/6/07	DU PONT KROVAR I DF HERBICIDE	DIURON	G	128	LB	32	10S18E8
ORANGE	11/13/07	DIREX 80DF	DIURON	G	165.6	LB	82.8	10S18E9
ORANGE	11/13/07	KARMEX DF HERBICIDE	DIURON	G	148	LB	74	10S18E8
ORANGE	11/14/07	KARMEX DF HERBICIDE	DIURON	G	80	LB	40	10S18E9

Figure 14. Location of Diuron use for Dry Creek @ Rd 18 site subwatershed – storm 1.

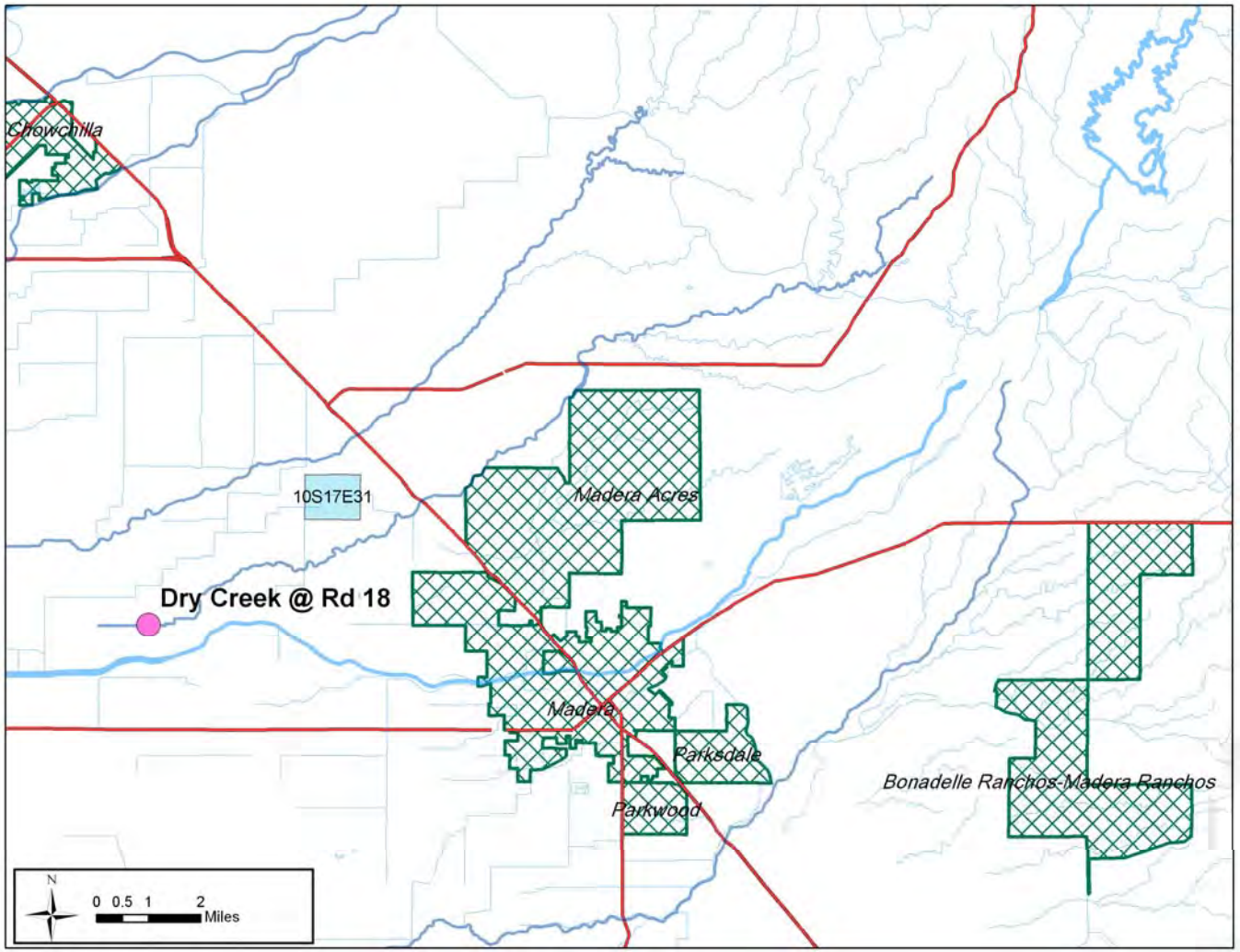


Storm 2 (2/25/08) - diuron exceedance

Table 15. Diuron use for Dry Creek @ Rd 18 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
GRAPE, RAISIN	2/14/2008	DREXEL DIURON 80 HERBICIDE	DIURON	G	12	LB	6	10S17E31
GRAPE, RAISIN	2/14/2008	DREXEL DIURON 80 HERBICIDE	DIURON	G	5	LB	2.5	10S17E31

Figure 15. Location of Diuron use for Dry Creek @ Rd 18 site subwatershed – storm 2.

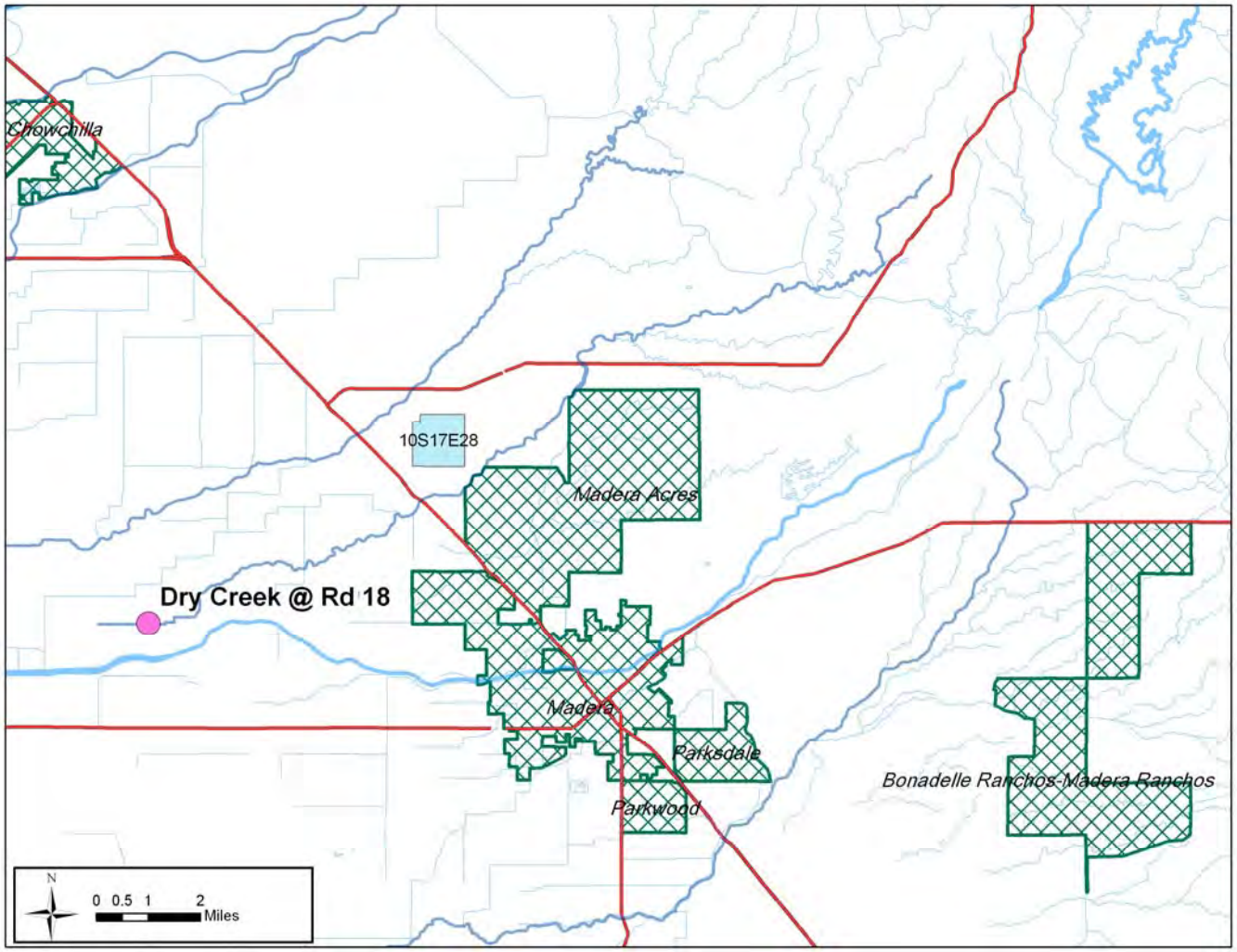


Storm 2 (2/25/08) -chlopryrifos exceedance

Table 16. Chlorpyrifos use for Dry Creek @ Rd 18 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/18/2008	LORSBAN-4E	CHLORPYRIFOS	G	9	GA	18	10S17E28
ALMOND	1/19/2008	LORSBAN-4E	CHLORPYRIFOS	G	8.5	GA	17	10S17E28

Figure 16. Location of Chlorpyrifos use for Dry Creek @ Rd 18 site subwatershed – storm 2.

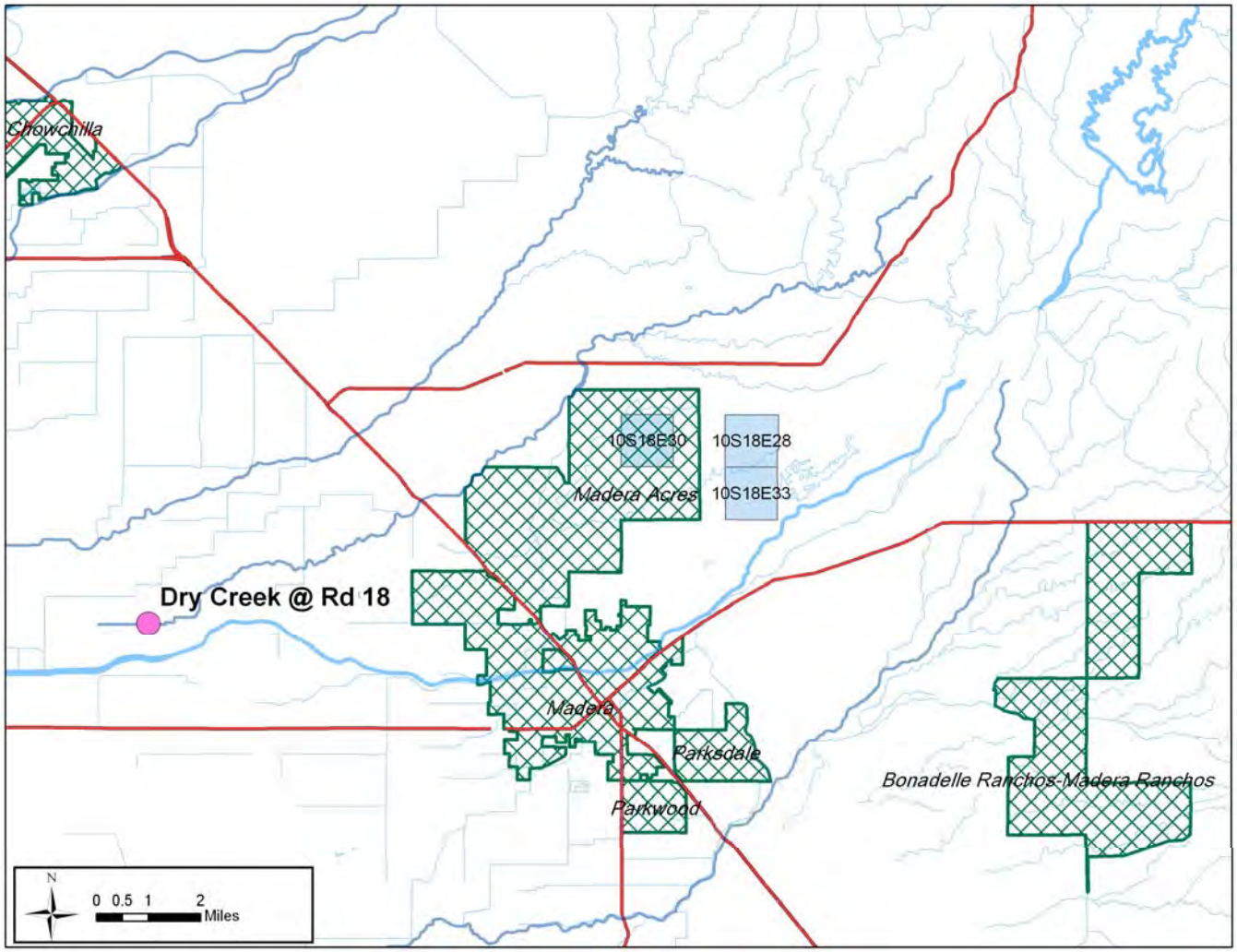


Storm 2 (2/25/08) -diazinon exceedance

Table 17. Diazinon use for Dry Creek @ Rd 18 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
FIG	2/5/2008	DIAZOL AG 500	DIAZINON	G	40	GA	320	10S18E28
FIG	2/5/2008	DIAZOL AG 500	DIAZINON	G	20	GA	160	10S18E33
FIG	2/15/2008	DIAZOL AG 500	DIAZINON	G	37.5	GA	300	10S18E30

Figure 17. Location of Diazinon use for Dry Creek @ Rd 18 site subwatershed – storm 2.



Pesticide Use Reports for metal exceedances in the water column

Storm 1 (1/25/08) -copper exceedance

Table 18. Copper use for Dry Creek @ Rd 18 site subwatershed – storm 1.

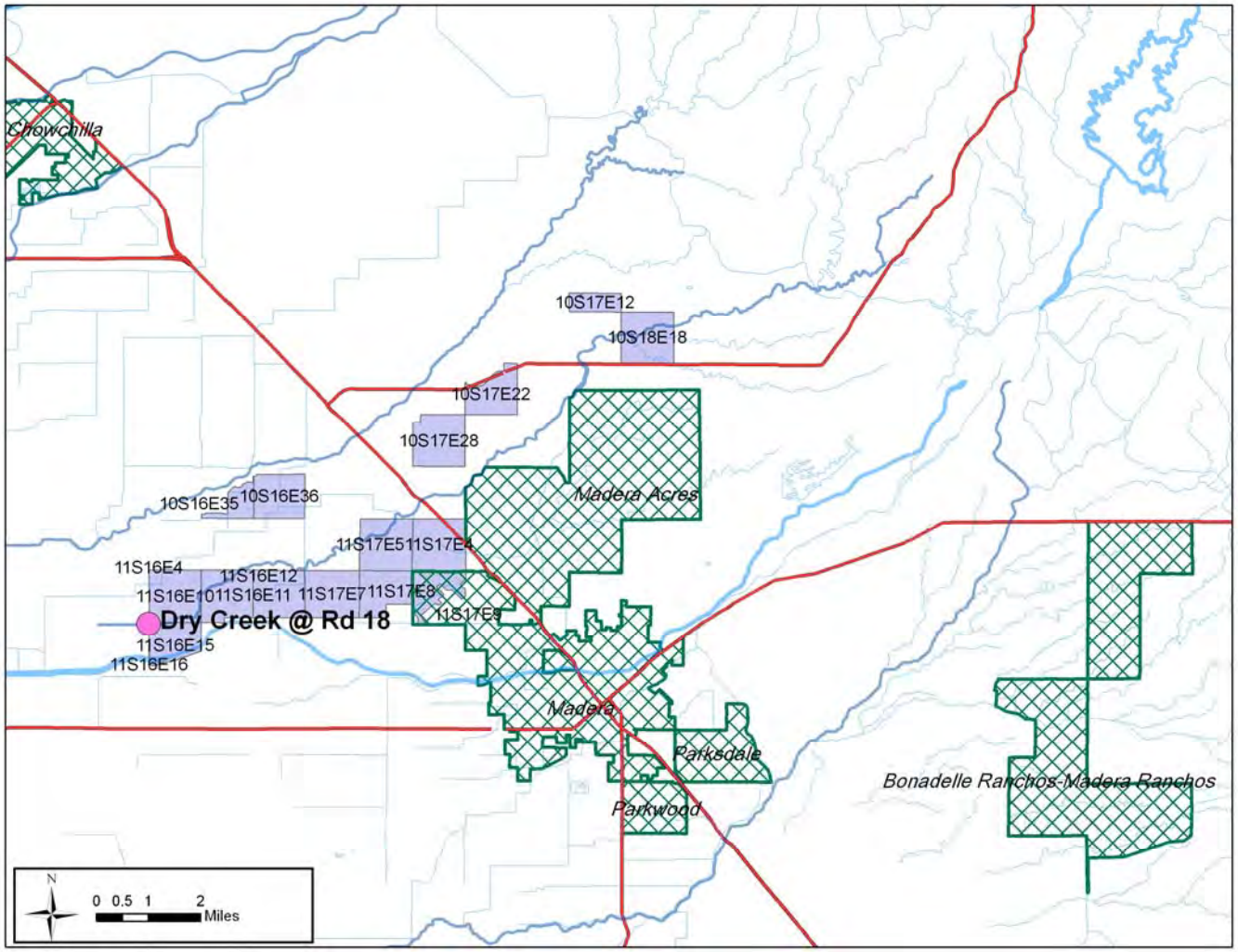
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OLIVE	10/31/07	NORDOX	COPPER OXIDE (OUS)	G	120	LB	20	10S17E12
N-GRNHS FLOWER	11/1/07	PHYTON 27 NEW DIMENSION	COPPER SULFATE (PENTAHYDRATE)	G	80	OZ	0.5	10S16E36
ORANGE	11/10/07	NORDOX	COPPER OXIDE (OUS)	G	20	LB	80	10S18E18
TANGERINE	11/13/07	NORDOX	COPPER OXIDE (OUS)	G	20	LB	108	10S17E22
N-GRNHS FLOWER	11/15/07	PHYTON 27 NEW DIMENSION	COPPER SULFATE (PENTAHYDRATE)	G	104	OZ	0.6	10S16E36
N-GRNHS FLOWER	11/21/07	PHYTON 27 NEW DIMENSION	COPPER SULFATE (PENTAHYDRATE)	G	80	OZ	0.5	10S16E36
N-GRNHS FLOWER	12/19/07	PHYTON 27 NEW DIMENSION	COPPER SULFATE (PENTAHYDRATE)	G	128	OZ	0.73	10S16E36
ALMOND	12/23/07	NU-COP 50DF	COPPER HYDROXIDE	G	272	LB	34	11S16E10
ALMOND	12/23/07	NU-COP 50DF	COPPER HYDROXIDE	G	264	LB	33	11S16E15
ALMOND	12/24/07	NU-COP 50DF	COPPER HYDROXIDE	G	520	LB	65	11S16E11

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/26/07	NU-COP 50DF	COPPER HYDROXIDE	G	664	LB	83	11S17E7
N-GRNHS FLOWER	1/3/2008	PRESCRIPTION TREATMENT BRAND CAMELOT FUN	COPPER SALTS OF FATTY AND ROSIN ACIDS	G	46.4	OZ	2.9	10S16E36
ALMOND	1/12/2008	KOCIDE DF	COPPER HYDROXIDE	G	1035	LB	172.5	11S17E5
ALMOND	1/14/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	480	LB	160	10S17E12
ALMOND	1/15/2008	CHAMP DP	COPPER HYDROXIDE	G	144	LB	24	11S16E4
ALMOND	1/15/2008	NU-COP 50DF	COPPER HYDROXIDE	G	240	LB	30	11S17E4
ALMOND	1/15/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	273	LB	91	11S16E12
ALMOND	1/15/2008	NU-COP 50DF	COPPER HYDROXIDE	G	920	LB	115	11S17E7
ALMOND	1/16/2008	CHAMP FORMULA II DRY FLOWABLE	COPPER HYDROXIDE	G	216	LB	34	11S16E4
ALMOND	1/16/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	303	LB	101	11S16E11
APRICOT	1/16/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	114	LB	19	11S17E7
PLUM	1/16/2008	NU-COP 50DF	COPPER HYDROXIDE	G	600	LB	72	11S17E7
N-GRNHS FLOWER	1/17/2008	PHYTON-27 BACTERICIDE & FUNGICIDE	COPPER SULFATE (PENTAHYDRATE)	G	45.9	OZ	1.4	10S16E36

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PLUM	1/17/2008	NU-COP 50DF	COPPER HYDROXIDE	G	264	LB	33	11S17E7
ALMOND	1/17/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	18.87	LB	6.29	11S16E16
ALMOND	1/18/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	81	LB	18	10S17E28
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	36.8	LB	18.4	11S16E11
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	213.51	LB	71.17	11S16E16
ALMOND	1/18/2008	DUPONT KOCIDE DF FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	210	LB	40	11S16E16
ALMOND	1/19/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	5	GA	10	10S17E28
ALMOND	1/19/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	76.5	LB	17	10S17E28
ALMOND	1/20/2008	DUPONT KOCIDE DF FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	200	LB	38	10S16E35
ALMOND	1/20/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	270	LB	76	11S16E11
ALMOND	1/20/2008	NU-COP 50DF	COPPER HYDROXIDE	G	1168	LB	146	11S17E7
ALMOND	1/20/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	330	LB	110	11S17E9
PLUM	1/21/2008	NU-COP 50DF	COPPER HYDROXIDE	G	288	LB	36	11S16E11
PEACH	1/21/2008	NU-COP 50DF	COPPER HYDROXIDE	G	104	LB	13	11S16E11

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/21/2008	NU-COP 50DF	COPPER HYDROXIDE	G	1298	LB	162	11S17E7
ALMOND	1/25/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	240	LB	80	11S17E8

Figure 18. Location of Copper use for Dry Creek @ Rd 18 site subwatershed – storm 1.

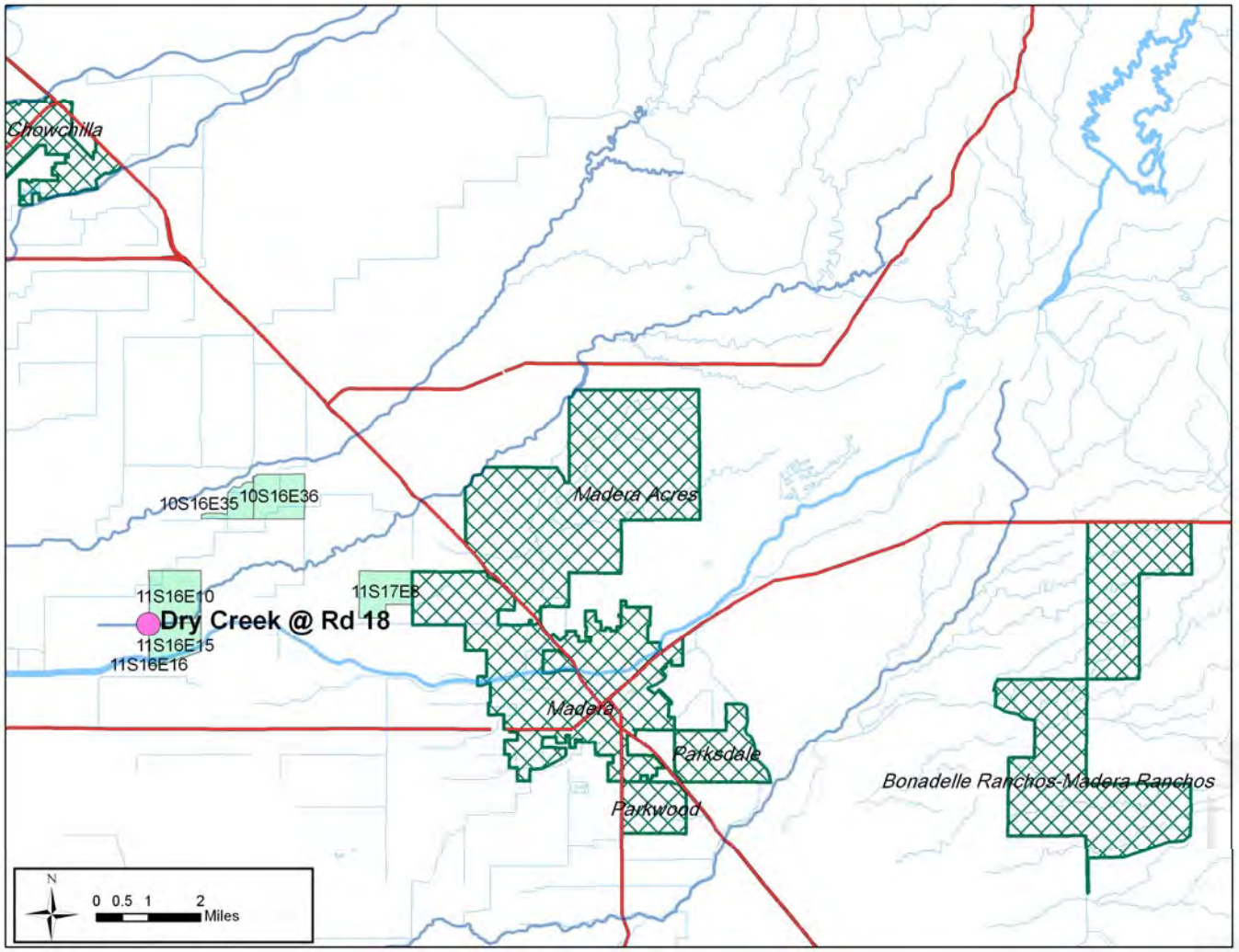


Storm 2 (2/25/08) -copper exceedance

Table 19. Copper use for Dry Creek @ Rd 18 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/26/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	120	LB	40	11S17E8
ALMOND	1/27/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	300	LB	100	11S17E8
ALMOND	2/11/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	287.5	LB	115	11S16E10
ALMOND	2/12/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	287.5	LB	115	11S16E16
ALMOND	2/13/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	387.5	LB	155	11S16E16
N-GRNHS FLOWER	2/14/2008	PHYTON-27 BACTERICIDE & FUNGICIDE	COPPER SULFATE (PENTAHYDRATE)	G	120	OZ	1.5	10S16E36
ALMOND	2/14/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	400	LB	160	11S16E15
ALMOND	2/15/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	80	LB	19.5	10S16E35
ALMOND	2/15/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	87.5	LB	35	11S16E15
N-GRNHS FLOWER	2/20/2008	PRESCRIPTION TREATMENT BRAND CAMELOT FUN	COPPER SALTS OF FATTY AND ROSIN ACIDS	G	16	OZ	1	10S16E36
N-GRNHS FLOWER	2/21/2008	PHYTON-27 BACTERICIDE & FUNGICIDE	COPPER SULFATE (PENTAHYDRATE)	G	22.5	OZ	0.7	10S16E36

Figure 19. Location of Copper use for Dry Creek @ Rd 18 site subwatershed – storm 2.



Pesticide Use Reports for sediment toxicity exceedances

Storm 1 (1/25/08) – Selenastrum capricornutum toxicity

Table 20. Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
N-GRNHS FLOWER	9/27/07	PHYTON 27 NEW DIMENSION	COPPER SULFATE (PENTAHYDRATE)	G	80	OZ	0.5	10S16E36
N-GRNHS FLOWER	10/11/07	PHYTON 27 NEW DIMENSION	COPPER SULFATE (PENTAHYDRATE)	G	80	OZ	0.5	10S16E36
OLIVE	10/31/07	NORDOX	COPPER OXIDE (OUS)	G	120	LB	20	10S17E12
N-GRNHS FLOWER	11/1/07	PHYTON 27 NEW DIMENSION	COPPER SULFATE (PENTAHYDRATE)	G	80	OZ	0.5	10S16E36
ORANGE	11/10/07	NORDOX	COPPER OXIDE (OUS)	G	20	LB	80	10S18E18
TANGERINE	11/13/07	NORDOX	COPPER OXIDE (OUS)	G	20	LB	108	10S17E22
N-GRNHS FLOWER	11/15/07	PHYTON 27 NEW DIMENSION	COPPER SULFATE (PENTAHYDRATE)	G	104	OZ	0.6	10S16E36
N-GRNHS FLOWER	11/21/07	PHYTON 27 NEW DIMENSION	COPPER SULFATE (PENTAHYDRATE)	G	80	OZ	0.5	10S16E36
N-GRNHS FLOWER	12/19/07	PHYTON 27 NEW DIMENSION	COPPER SULFATE (PENTAHYDRATE)	G	128	OZ	0.73	10S16E36
ALMOND	12/23/07	NU-COP 50DF	COPPER HYDROXIDE	G	272	LB	34	11S16E10
ALMOND	12/23/07	NU-COP 50DF	COPPER HYDROXIDE	G	264	LB	33	11S16E15

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/24/07	NU-COP 50DF	COPPER HYDROXIDE	G	520	LB	65	11S16E11
ALMOND	12/26/07	NU-COP 50DF	COPPER HYDROXIDE	G	664	LB	83	11S17E7
ALMOND	12/27/07	PROWL H2O HERBICIDE	PENDIMETHALIN	G	75	QT	30	10S17E32
ALMOND	12/27/07	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.28	GA	19	10S17E31
ALMOND	12/27/07	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	90	PT	30	10S17E32
ALMOND	12/27/07	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	360	OZ	30	10S17E32
ALMOND	12/27/07	GOAL 2XL	OXYFLUORFEN	G	11.4	GA	19	10S17E31
ALMOND	12/27/07	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	19	GA	19	10S17E31
SOIL FUM/PREPLT	12/28/07	TELONE II CA	1,3-DICHLOROPROPENE	G	240	GA	7.5	10S16E35
PISTACHIO	12/29/07	TOUCHDOWN TOTAL	GLYPHOSATE	G	2.38	GA	45	10S17E33
PISTACHIO	12/29/07	TOUCHDOWN HITECH	GLYPHOSATE, POTASSIUM SALT	G	14.5	GA	45	10S17E33
PISTACHIO	12/29/07	PROWL H2O HERBICIDE	PENDIMETHALIN	G	45	GA	45	10S17E33
PISTACHIO	12/29/07	SHARK EW	CARFENTRAZONE-ETHYL	G	1.41	QT	45	10S17E33
PISTACHIO	12/29/07	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	33.75	LB	45	10S17E33
PISTACHIO	12/31/07	TOUCHDOWN TOTAL	GLYPHOSATE	G	5.12	GA	13.55	10S17E27
PISTACHIO	12/31/07	PROWL H2O HERBICIDE	PENDIMETHALIN	G	13.61	GA	13.55	10S17E27
PISTACHIO	12/31/07	SHARK EW	CARFENTRAZONE-ETHYL	G	0.43	QT	13.55	10S17E27
PISTACHIO	12/31/07	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	10.17	LB	13.55	10S17E27

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5	GA	13	10S17E11
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	11.25	GA	160	10S17E11
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	45	GA	160	10S17E11
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2.5	GA	13	10S17E11
PISTACHIO	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	90	OZ	20	10S18E14
PISTACHIO	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	60	OZ	7	10S18E14
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5	GA	7	10S18E14
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.25	GA	7	10S18E14
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	GA	20	10S18E14
PISTACHIO	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	300	OZ	60	10S18E14
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	25	GA	60	10S18E14
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6.25	GA	60	10S18E14
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	20	10S18E14
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3.75	GA	40	10S18E13
PISTACHIO	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	180	OZ	40	10S18E13
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15	GA	40	10S18E13
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15	GA	40	10S18E23
ALMOND	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	1080	OZ	200	10S18E23
ALMOND	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	90	GA	200	10S18E23
PISTACHIO	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	180	OZ	40	10S18E23

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3.75	GA	40	10S18E23
ALMOND	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	22.5	GA	200	10S18E23
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	19	GA	181	10S18E24
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	75	GA	181	10S18E24
PISTACHIO	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	900	OZ	181	10S18E24
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	0.75	GA	20	10S18E28
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	4	GA	20	10S18E28
PISTACHIO	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	50	OZ	20	10S18E28
PISTACHIO	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	90	OZ	40	10S18E28
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.75	GA	40	10S18E28
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	40	10S18E28
PISTACHIO	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	90	OZ	20	10S18E26
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	GA	20	10S18E26
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	20	10S18E26
PISTACHIO	1/1/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	180	OZ	35	11S17E6
PISTACHIO	1/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15	GA	35	11S17E6
PISTACHIO	1/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3.75	GA	35	11S17E6
PISTACHIO	1/2/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	90	OZ	20	10S18E14
PISTACHIO	1/2/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	20	10S18E14
PISTACHIO	1/2/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.75	GA	20	10S18E14

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	1/2/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.75	GA	18	10S18E14
PISTACHIO	1/2/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	90	OZ	18	10S18E14
PISTACHIO	1/2/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	18	10S18E14
PISTACHIO	1/3/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	90	OZ	21	10S18E14
PISTACHIO	1/3/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.75	GA	21	10S18E14
PISTACHIO	1/3/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	21	10S18E14
WINE GRAPES	1/3/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	12	QT	5.78	10S17E21
WINE GRAPES	1/3/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	19	QT	9.6	10S17E21
WINE GRAPES	1/3/2008	SIM-TROL 90DF	SIMAZINE	G	14	LB	9.6	10S17E21
WINE GRAPES	1/3/2008	FARMSAVER.COM ORYZALIN 4 A.S.	ORYZALIN	G	38	QT	9.6	10S17E21
WINE GRAPES	1/3/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	17	QT	5.78	10S17E21
WINE GRAPES	1/3/2008	FARMSAVER.COM ORYZALIN 4 A.S.	ORYZALIN	G	23	QT	5.78	10S17E21
WINE GRAPES	1/3/2008	SIM-TROL 90DF	SIMAZINE	G	9	LB	5.78	10S17E21
WINE GRAPES	1/3/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	29	QT	9.6	10S17E21
PISTACHIO	1/3/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	20	10S17E24
PISTACHIO	1/3/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.75	GA	20	10S17E24
PISTACHIO	1/3/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	90	OZ	20	10S17E24
PISTACHIO	1/3/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	20	10S18E21

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	1/3/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.75	GA	20	10S18E21
PISTACHIO	1/3/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	90	OZ	20	10S18E21
PISTACHIO	1/3/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.25	GA	20	10S18E21
PISTACHIO	1/3/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5	GA	20	10S18E21
PISTACHIO	1/3/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	60	OZ	20	10S18E21
PISTACHIO	1/3/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	90	OZ	20	10S18E28
PISTACHIO	1/3/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	20	10S18E28
PISTACHIO	1/3/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.75	GA	20	10S18E28
N-GRNHS FLOWER	1/3/2008	PRESCRIPTION TREATMENT BRAND CAMELOT FUN	COPPER SALTS OF FATTY AND ROSIN ACIDS	G	46.4	OZ	2.9	10S16E36
PISTACHIO	1/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	21.2	GA	21.2	10S17E31
PISTACHIO	1/7/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	15.9	LB	21.2	10S17E31
PISTACHIO	1/7/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.66	QT	21.2	10S17E31
PISTACHIO	1/7/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	7.95	GA	21.2	10S17E31
PISTACHIO	1/8/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.4	QT	12.8	10S17E31
PISTACHIO	1/8/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	12.8	GA	12.8	10S17E31
PISTACHIO	1/8/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	9.6	LB	12.8	10S17E31
PISTACHIO	1/8/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	4.8	GA	12.8	10S17E31
PISTACHIO	1/8/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.31	QT	10	10S16E36
PISTACHIO	1/8/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	3.75	GA	10	10S16E36

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	1/8/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	7.5	LB	10	10S16E36
PISTACHIO	1/8/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	10	GA	10	10S16E36
PISTACHIO	1/9/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.75	GA	21	10S18E14
PISTACHIO	1/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	21	10S18E14
PISTACHIO	1/9/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	90	OZ	21	10S18E14
PISTACHIO	1/9/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	20	PT	40	10S17E24
PISTACHIO	1/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	10	GA	40	10S17E24
PISTACHIO	1/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	10.8	GA	10.8	10S16E36
PISTACHIO	1/9/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	8.1	LB	10.8	10S16E36
PISTACHIO	1/9/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.33	QT	10.8	10S16E36
PISTACHIO	1/9/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	4.05	GA	10.8	10S16E36
PISTACHIO	1/10/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	180	OZ	40	10S18E14
PISTACHIO	1/10/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15	GA	40	10S18E14
PISTACHIO	1/10/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3.75	GA	40	10S18E14
PISTACHIO	1/10/2008	GOAL 2XL	OXYFLUORFEN	G	1.85	GA	3	10S17E24
PISTACHIO	1/10/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	0.9	GA	3	10S17E24
FIG	1/10/2008	GOAL 2XL	OXYFLUORFEN	G	6	GA	15	11S18E4
FIG	1/10/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	5	GA	15	11S18E4
PISTACHIO	1/12/2008	GOAL 2XL	OXYFLUORFEN	G	4.32	GA	7	10S18E21

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	1/12/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2.1	GA	7	10S18E21
PISTACHIO	1/12/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	90	GA	243	10S18E26
PISTACHIO	1/12/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	22.5	GA	243	10S18E26
PISTACHIO	1/12/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	1080	OZ	243	10S18E26
N-GRNHS FLOWER	1/12/2008	FINALE HERBICIDE	GLUFOSINATE-AMMONIUM	G	75	OZ	1	10S16E36
N-GRNHS FLOWER	1/12/2008	BARRICADE 4FL	PRODIAMINE	G	84	OZ	2	10S16E36
N-GRNHS FLOWER	1/12/2008	GALLERY 75 DRY FLOWABLE	ISOXABEN	G	42	OZ	2	10S16E36
ALMOND	1/12/2008	KOCIDE DF	COPPER HYDROXIDE	G	1035	LB	172.5	11S17E5
ALMOND	1/14/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	480	LB	160	10S17E12
PISTACHIO	1/14/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	GA	40	10S17E24
PISTACHIO	1/14/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	10	GA	40	10S17E24
ALMOND	1/14/2008	SIMAZINE 90DF	SIMAZINE	G	5	LB	5	10S16E35
ALMOND	1/14/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	30	PT	5	10S16E35
ALMOND	1/14/2008	GOAL 2XL	OXYFLUORFEN	G	5	PT	5	10S16E35
ALMOND	1/14/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	10	PT	5	10S16E35
ALMOND	1/14/2008	SIMAZINE 90DF	SIMAZINE	G	9	LB	9	10S16E35
ALMOND	1/14/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	54	PT	9	10S16E35

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/14/2008	GOAL 2XL	OXYFLUORFEN	G	9	PT	9	10S16E35
ALMOND	1/14/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	18	PT	9	10S16E35
ALMOND	1/14/2008	GOAL 2XL	OXYFLUORFEN	G	282	OZ	47	11S16E4
ALMOND	1/14/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	1974	OZ	47	11S16E4
PISTACHIO	1/15/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	480	OZ	40	10S18E13
PISTACHIO	1/15/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	GA	40	10S18E13
PISTACHIO	1/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	80	PT	40	10S18E13
PISTACHIO	1/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	80	PT	40	10S18E23
PISTACHIO	1/15/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	480	OZ	40	10S18E23
PISTACHIO	1/15/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	GA	40	10S18E23
PISTACHIO	1/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	80	PT	40	10S18E24
PISTACHIO	1/15/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	GA	40	10S18E24
PISTACHIO	1/15/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	480	OZ	40	10S18E24
PISTACHIO	1/15/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	GA	40	10S18E25
PISTACHIO	1/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	80	PT	40	10S18E25
PISTACHIO	1/15/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	480	OZ	40	10S18E25
ALMOND	1/15/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	66	PT	11	10S16E35
ALMOND	1/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	22	PT	11	10S16E35
ALMOND	1/15/2008	GOAL 2XL	OXYFLUORFEN	G	11	PT	11	10S16E35

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/15/2008	SIMAZINE 90DF	SIMAZINE	G	11	LB	11	10S16E35
ALMOND	1/15/2008	CHAMP DP	COPPER HYDROXIDE	G	144	LB	24	11S16E4
ALMOND	1/15/2008	NU-COP 50DF	COPPER HYDROXIDE	G	240	LB	30	11S17E4
ALMOND	1/15/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	273	LB	91	11S16E12
ALMOND	1/15/2008	NU-COP 50DF	COPPER HYDROXIDE	G	920	LB	115	11S17E7
PISTACHIO	1/16/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4.12	GA	14	10S17E24
PISTACHIO	1/16/2008	GOAL 2XL	OXYFLUORFEN	G	8.65	GA	14	10S17E24
PISTACHIO	1/16/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	180	OZ	40	10S18E23
PISTACHIO	1/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15	GA	40	10S18E23
PISTACHIO	1/16/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	40	10S18E23
PISTACHIO	1/16/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	40	10S18E24
PISTACHIO	1/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15	GA	40	10S18E24
PISTACHIO	1/16/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	180	OZ	40	10S18E24
PISTACHIO	1/16/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	180	OZ	40	10S18E25
PISTACHIO	1/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15	GA	40	10S18E25
PISTACHIO	1/16/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	40	10S18E25
ALMOND	1/16/2008	CHAMP FORMULA II DRY FLOWABLE	COPPER HYDROXIDE	G	216	LB	34	11S16E4
PISTACHIO	1/16/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	52.73	PT	58	11S16E2

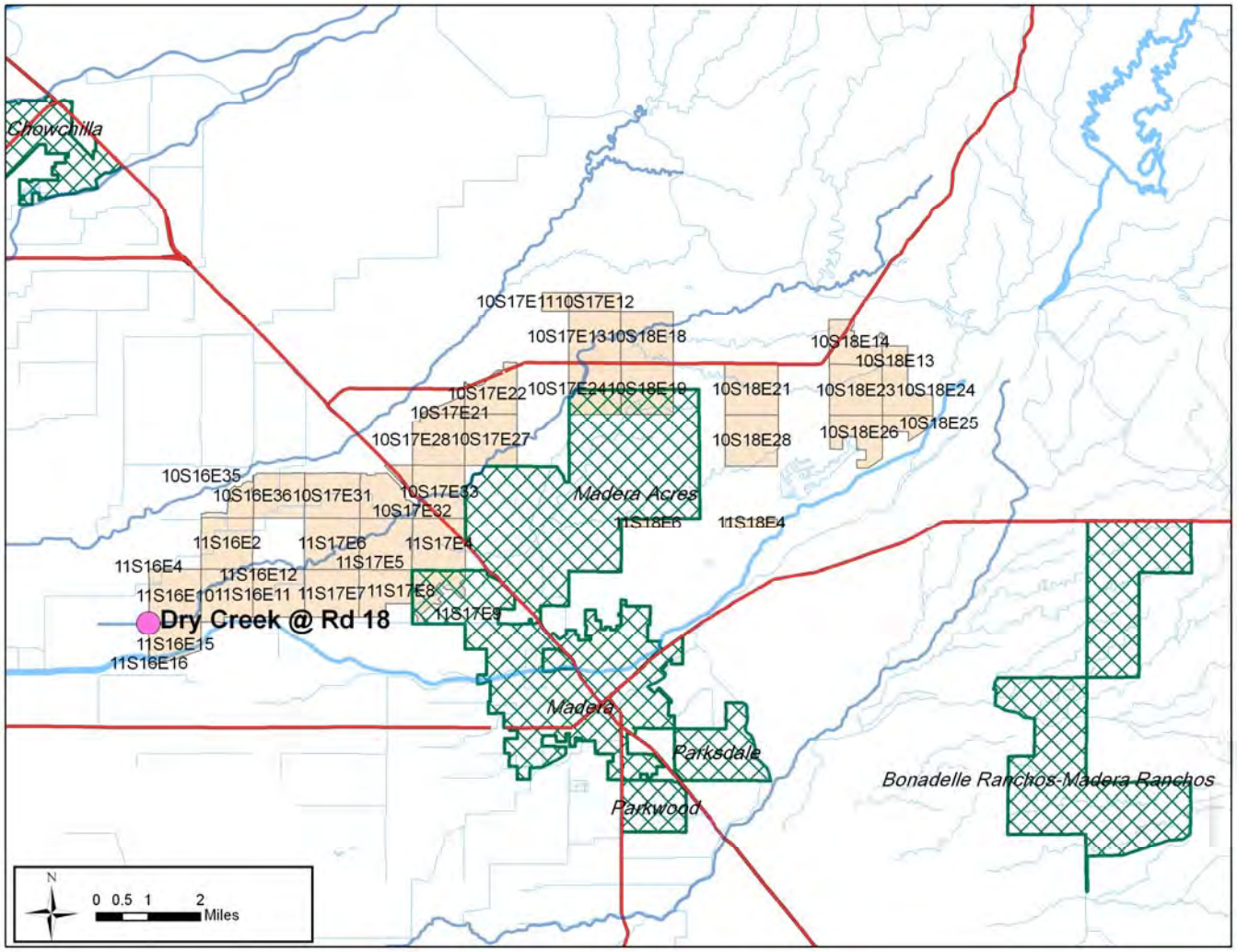
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	1/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	26.36	GA	58	11S16E2
ALMOND	1/16/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	303	LB	101	11S16E11
APRICOT	1/16/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	114	LB	19	11S17E7
PLUM	1/16/2008	NU-COP 50DF	COPPER HYDROXIDE	G	600	LB	72	11S17E7
PISTACHIO	1/17/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	40	10S18E23
PISTACHIO	1/17/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	180	OZ	40	10S18E23
PISTACHIO	1/17/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15	GA	40	10S18E23
PISTACHIO	1/17/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	40	10S18E24
PISTACHIO	1/17/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	180	OZ	40	10S18E24
PISTACHIO	1/17/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15	GA	40	10S18E24
WHEAT	1/17/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL HEPTANOATE	G	0.781	GA	20	10S17E27
WHEAT	1/17/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	G	0.781	GA	20	10S17E27
PISTACHIO	1/17/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	40	10S18E25
PISTACHIO	1/17/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15	GA	40	10S18E25
PISTACHIO	1/17/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	180	OZ	40	10S18E25
N-GRNHS FLOWER	1/17/2008	PHYTON-27 BACTERICIDE & FUNGICIDE	COPPER SULFATE (PENTAHYDRATE)	G	45.9	OZ	1.4	10S16E36
PLUM	1/17/2008	NU-COP 50DF	COPPER HYDROXIDE	G	264	LB	33	11S17E7

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/17/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	18.87	LB	6.29	11S16E16
PISTACHIO	1/18/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	18.3	GA	48.8	10S17E13
PISTACHIO	1/18/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	1.51	QT	48.8	10S17E13
PISTACHIO	1/18/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	36.6	LB	48.8	10S17E13
PISTACHIO	1/18/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	48.8	GA	48.8	10S17E13
PISTACHIO	1/18/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	60	QT	40	10S18E13
PISTACHIO	1/18/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	20	GA	40	10S18E13
ALMOND	1/18/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	7.5	GA	40	10S18E23
ALMOND	1/18/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	81	LB	18	10S17E28
ALMOND	1/18/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	5	GA	14	10S18E25
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	36.8	LB	18.4	11S16E11
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	213.51	LB	71.17	11S16E16
ALMOND	1/18/2008	DUPONT KOCIDE DF FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	210	LB	40	11S16E16
ALMOND	1/19/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	5	GA	10	10S17E28
ALMOND	1/19/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	76.5	LB	17	10S17E28
ALMOND	1/20/2008	DUPONT KOCIDE DF FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	200	LB	38	10S16E35
ALMOND	1/20/2008	GOAL 2XL	OXYFLUORFEN	G	52	GA	90	11S18E6

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/20/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	25	GA	90	11S18E6
ALMOND	1/20/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	270	LB	76	11S16E11
ALMOND	1/20/2008	NU-COP 50DF	COPPER HYDROXIDE	G	1168	LB	146	11S17E7
ALMOND	1/20/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	330	LB	110	11S17E9
PISTACHIO	1/21/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.88	GA	20	10S17E11
PISTACHIO	1/21/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	20	10S17E11
PISTACHIO	1/21/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.25	GA	10	10S18E28
PISTACHIO	1/21/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	60	OZ	10	10S18E28
PISTACHIO	1/21/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5	GA	10	10S18E28
PLUM	1/21/2008	NU-COP 50DF	COPPER HYDROXIDE	G	288	LB	36	11S16E11
PEACH	1/21/2008	NU-COP 50DF	COPPER HYDROXIDE	G	104	LB	13	11S16E11
ALMOND	1/21/2008	NU-COP 50DF	COPPER HYDROXIDE	G	1298	LB	162	11S17E7
PISTACHIO	1/24/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2.94	GA	10	10S17E24
PISTACHIO	1/24/2008	GOAL 2XL	OXYFLUORFEN	G	6.18	GA	10	10S17E24
PISTACHIO	1/24/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2.94	GA	10	10S18E19
PISTACHIO	1/24/2008	GOAL 2XL	OXYFLUORFEN	G	6.18	GA	10	10S18E19
WALNUT	1/24/2008	GOAL 2XL	OXYFLUORFEN	G	20.28	QT	10.14	10S16E36

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WALNUT	1/24/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	15.21	QT	10.14	10S16E36
WALNUT	1/25/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	12.87	QT	8.58	11S17E6
WALNUT	1/25/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	85.8	OZ	8.58	11S17E6
ALMOND	1/25/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	240	LB	80	11S17E8

Figure 20. Location of Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 1.



Storm 2 (2/25/08) – Selenastrum capricornutum toxicity

Table 21. Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	1/26/2008	GOAL 2XL	OXYFLUORFEN	G	35	GA	60	10S17E13
PISTACHIO	1/26/2008	RIVERDALE DRI-CLEAN HERBICIDE	2,4-D, DIMETHYLAMINE SALT	G	75	LB	60	10S17E13
PISTACHIO	1/26/2008	MON-35085	GLYPHOSATE, ISOPROPYLAMINE SALT	G	17.5	GA	60	10S17E13
ALMOND	1/26/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	1512	OZ	36	11S16E4
ALMOND	1/26/2008	GOAL 2XL	OXYFLUORFEN	G	216	OZ	36	11S16E4
ALMOND	1/26/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	120	LB	40	11S17E8
ALMOND	1/27/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	300	LB	100	11S17E8
PISTACHIO	1/28/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6	GA	20	10S17E11
PISTACHIO	1/28/2008	GOAL 2XL	OXYFLUORFEN	G	12	GA	20	10S17E11
PISTACHIO	1/28/2008	GOAL 2XL	OXYFLUORFEN	G	6	GA	10	10S17E11
PISTACHIO	1/28/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3	GA	10	10S17E11
WINE GRAPES	1/28/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	28.68	GA	78.86	10S18E7
WINE GRAPES	1/28/2008	SIMAZINE 90DF	SIMAZINE	G	47.79	LB	78.86	10S18E7

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WINE GRAPES	1/28/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	21.51	GA	78.86	10S18E7
WINE GRAPES	1/28/2008	SIMAZINE 90DF	SIMAZINE	G	16.91	LB	27.9	10S18E8
WINE GRAPES	1/28/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	10.15	GA	27.9	10S18E8
WINE GRAPES	1/28/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	7.61	GA	27.9	10S18E8
FIG	1/28/2008	GOAL 2XL	OXYFLUORFEN	G	35	GA	60	11S18E5
FIG	1/28/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	17.5	GA	60	11S18E5
WINE GRAPES	1/29/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	15.56	GA	42.8	10S18E8
WINE GRAPES	1/29/2008	SIMAZINE 90DF	SIMAZINE	G	25.94	LB	42.8	10S18E8
WINE GRAPES	1/29/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	11.67	GA	42.8	10S18E8
WINE GRAPES	1/29/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	36.8	GA	101.2	10S18E18
WINE GRAPES	1/29/2008	SIMAZINE 90DF	SIMAZINE	G	61.33	LB	101.2	10S18E18
WINE GRAPES	1/29/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	27.6	GA	101.2	10S18E18
WHEAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	9.18	GA	73.4	11S17E16
WHEAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.46	QT	78.8	11S17E16

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WHEAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	9.85	GA	78.8	11S17E16
WHEAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.13	QT	68.2	11S17E16
WHEAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	8.53	GA	68.2	11S17E16
WHEAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	9.74	GA	77.9	11S17E16
WHEAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.29	QT	73.4	11S17E16
WHEAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.43	QT	77.9	11S17E16
WHEAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	9.01	GA	72.1	11S17E16
WHEAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.25	QT	72.1	11S17E16
WHEAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.4	QT	76.9	11S17E16
WHEAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.39	QT	76.5	11S17E16
WHEAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	9.56	GA	76.5	11S17E16

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WHEAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	9.61	GA	76.9	11S17E16
WHEAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.49	QT	79.8	11S17E16
WHEAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	9.98	GA	79.8	11S17E16
WINE GRAPES	1/30/2008	SIMAZINE 90DF	SIMAZINE	G	28.48	LB	47	10S18E17
WINE GRAPES	1/30/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	17.09	GA	47	10S18E17
WINE GRAPES	1/30/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	12.82	GA	47	10S18E17
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2048	OZ	32	10S17E11
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	832	OZ	13	10S17E11
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S17E11
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	10240	OZ	160	10S17E11
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1280	OZ	20	10S18E18
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1152	OZ	18	10S18E17
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1344	OZ	21	10S18E14

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3840	OZ	60	10S18E14
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1280	OZ	20	10S18E14
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	448	OZ	7	10S18E14
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1152	OZ	18	10S18E14
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E14
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E13
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S17E24
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E19
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1280	OZ	20	10S18E19
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E20
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E21
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1280	OZ	20	10S18E21
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E23
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E24

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	256	OZ	4	10S17E28
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E30
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E29
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1280	OZ	20	10S18E29
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1280	OZ	20	10S18E28
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E28
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	640	OZ	10	10S18E28
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	15552	OZ	243	10S18E26
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1280	OZ	20	10S18E26
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1280	OZ	20	10S18E25
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	10S18E25
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3712	OZ	58	11S16E2
PISTACHIO	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2560	OZ	40	11S17E6
ALMOND	2/2/2008	SURFLAN A.S.	ORYZALIN	G	20	GA	40	11S16E9
ALMOND	2/2/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7	GA	40	11S16E9

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/2/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	5	GA	40	11S16E9
PISTACHIO	2/5/2008	SURFLAN A.S.	ORYZALIN	G	7.5	GA	10	10S18E17
PISTACHIO	2/5/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	7.5	LB	10	10S18E17
PISTACHIO	2/5/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3.13	GA	10	10S18E17
PISTACHIO	2/5/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3.13	GA	10	10S18E19
PISTACHIO	2/5/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	7.5	LB	10	10S18E19
PISTACHIO	2/5/2008	SURFLAN A.S.	ORYZALIN	G	7.5	GA	10	10S18E19
PISTACHIO	2/5/2008	SURFLAN A.S.	ORYZALIN	G	7.5	GA	10	10S18E21
PISTACHIO	2/5/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3.13	GA	10	10S18E21
PISTACHIO	2/5/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6.25	GA	20	10S18E21
PISTACHIO	2/5/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	15	LB	20	10S18E21
PISTACHIO	2/5/2008	SURFLAN A.S.	ORYZALIN	G	15	GA	20	10S18E21
PISTACHIO	2/5/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	7.5	LB	10	10S18E21
PISTACHIO	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6.25	GA	20	10S17E24
PISTACHIO	2/6/2008	SURFLAN A.S.	ORYZALIN	G	15	GA	20	10S17E24
PISTACHIO	2/6/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	15	LB	20	10S17E24
PISTACHIO	2/6/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	7.5	LB	10	10S18E19
PISTACHIO	2/6/2008	SURFLAN A.S.	ORYZALIN	G	15	GA	20	10S18E19
PISTACHIO	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3.13	GA	10	10S18E19
PISTACHIO	2/6/2008	SURFLAN A.S.	ORYZALIN	G	7.5	GA	10	10S18E19
PISTACHIO	2/6/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	15	LB	20	10S18E19

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PISTACHIO	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6.25	GA	20	10S18E19
PISTACHIO	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6.25	GA	20	10S18E30
PISTACHIO	2/6/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	15	LB	20	10S18E30
PISTACHIO	2/6/2008	SURFLAN A.S.	ORYZALIN	G	15	GA	20	10S18E30
ALMOND	2/6/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	5	GA	5	11S16E4
ALMOND	2/6/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	40	OZ	5	11S16E4
WINE GRAPES	2/8/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	12	GA	24	10S16E34
WINE GRAPES	2/8/2008	GOAL 1.6E HERBICIDE	OXYFLUORFEN	G	6	GA	24	10S16E34
ALMOND	2/9/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	682.67	OZ	56	11S16E1
ALMOND	2/9/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	2730.67	OZ	56	11S16E1
ALMOND	2/9/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	256	OZ	56	11S16E1
ALMOND	2/9/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	183.27	OZ	40	11S16E16
ALMOND	2/9/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	397.09	OZ	40	11S16E16
ALMOND	2/9/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	244.36	OZ	40	11S16E16
ALMOND	2/10/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	8.63	GA	37	10S17E31
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	8.63	GA	37	10S17E31
ALMOND	2/11/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	287.5	LB	115	11S16E10

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FODDER	2/12/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	50	OZ	50	10S17E21
PLUM	2/12/2008	SURFLAN A.S.	ORYZALIN	G	14	GA	14	11S17E7
PLUM	2/12/2008	WISE UP PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.5	GA	14	11S17E7
ALMOND	2/12/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	287.5	LB	115	11S16E16
ALMOND	2/13/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	146.36	PT	115	11S16E10
ALMOND	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	585.45	OZ	115	11S16E10
ALMOND	2/13/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	387.5	LB	155	11S16E16
PISTACHIO	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	16	GA	32	10S17E11
PISTACHIO	2/14/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	8	GA	32	10S17E11
PISTACHIO	2/14/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	16	10S17E11
PISTACHIO	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	8	GA	16	10S17E11
ALMOND	2/14/2008	ROUNDUP ULTRAMAX HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	20.8	GA	160	10S17E12
ALMOND	2/14/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	880	OZ	160	10S17E12
PISTACHIO	2/14/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	15	10S17E24
PISTACHIO	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	7.5	GA	15	10S17E24
PISTACHIO	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	7.5	GA	15	10S18E21
PISTACHIO	2/14/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	15	10S18E21
GRAPE, RAISIN	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	1.44	GA	6	10S17E31

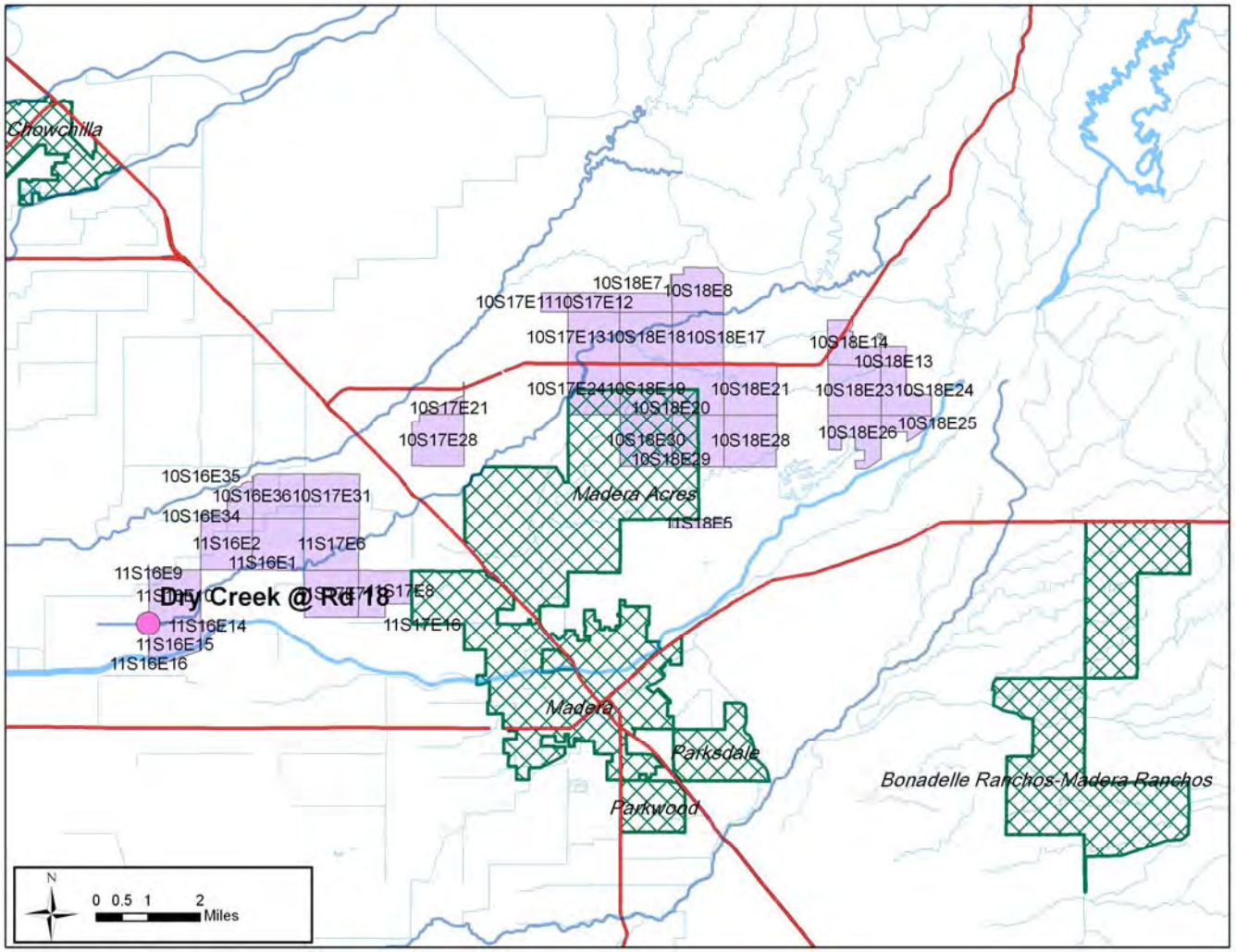
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
GRAPE, RAISIN	2/14/2008	DREXEL DIURON 80 HERBICIDE	DIURON	G	12	LB	6	10S17E31
GRAPE, RAISIN	2/14/2008	SIM-TROL 90DF	SIMAZINE	G	12	LB	6	10S17E31
GRAPE, RAISIN	2/14/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.44	GA	6	10S17E31
GRAPE, RAISIN	2/14/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	0.6	GA	2.5	10S17E31
GRAPE, RAISIN	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	0.6	GA	2.5	10S17E31
GRAPE, RAISIN	2/14/2008	SIM-TROL 90DF	SIMAZINE	G	5	LB	2.5	10S17E31
GRAPE, RAISIN	2/14/2008	DREXEL DIURON 80 HERBICIDE	DIURON	G	5	LB	2.5	10S17E31
N-GRNHS FLOWER	2/14/2008	PHYTON-27 BACTERICIDE & FUNGICIDE	COPPER SULFATE (PENTAHYDRATE)	G	120	OZ	1.5	10S16E36
WINE GRAPES	2/14/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	550.4	OZ	43	11S16E9
WINE GRAPES	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	275.2	OZ	43	11S16E9
ALMOND	2/14/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	146.36	PT	115	11S16E16
ALMOND	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	585.45	OZ	115	11S16E16
ALMOND	2/14/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	400	LB	160	11S16E15
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	24	PT	6	10S17E31
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	24	PT	6	10S17E31
WINE GRAPES	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	2.25	GA	15	10S16E35
WINE GRAPES	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.13	GA	15	10S16E35

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/15/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	80	LB	19.5	10S16E35
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	789.09	OZ	155	11S16E16
ALMOND	2/15/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	197.27	PT	155	11S16E16
ALMOND	2/15/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	87.5	LB	35	11S16E15
ALMOND	2/16/2008	WEEDAXE HERBICIDE	2,4-D, DIMETHYLAMINE SALT	G	10	PT	10	10S17E28
ALMOND	2/16/2008	ALECTO 41S	GLYPHOSATE	G	10	PT	10	10S17E28
ALMOND	2/16/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	10	PT	10	10S17E28
ALMOND	2/16/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	10	PT	10	10S17E28
N-GRNHS FLOWER	2/16/2008	GALLERY 75 DRY FLOWABLE	ISOXABEN	G	42	OZ	2	10S16E36
N-GRNHS FLOWER	2/16/2008	BARRICADE 4FL	PRODIAMINE	G	84	OZ	2	10S16E36
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	38.18	PT	30	11S16E15
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	814.55	OZ	160	11S16E15
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	152.73	OZ	30	11S16E15
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	203.64	PT	160	11S16E15
ALMOND	2/18/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	50.91	QT	35	11S16E4
OAT FOR/FODDER	2/18/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	20	OZ	20	11S16E9

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FODDER	2/18/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	11	OZ	11	11S16E10
OAT FOR/FODDER	2/18/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	8	OZ	8	11S16E10
WINE GRAPES	2/18/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	45	PT	45	11S16E15
WINE GRAPES	2/19/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	9	GA	25	10S16E34
WINE GRAPES	2/19/2008	GOAL 1.6E HERBICIDE	OXYFLUORFEN	G	4.5	GA	25	10S16E34
ALMOND	2/19/2008	TRILIN HERBICIDE	TRIFLURALIN	G	86.67	PT	35	11S16E15
WINE GRAPES	2/19/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	75	PT	75	11S16E14
N-GRNHS FLOWER	2/20/2008	PRESCRIPTION TREATMENT BRAND CAMELOT FUN	COPPER SALTS OF FATTY AND ROSIN ACIDS	G	16	OZ	1	10S16E36
WINE GRAPES	2/20/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	77	PT	77	11S16E15
N-GRNHS FLOWER	2/21/2008	PHYTON-27 BACTERICIDE & FUNGICIDE	COPPER SULFATE (PENTAHYDRATE)	G	22.5	OZ	0.7	10S16E36
N-GRNHS FLOWER	2/24/2008	SCYTHE	NONANOIC ACID	G	192	OZ	1	10S16E36
ALMOND	2/24/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	83.64	PT	115	11S16E10
ALMOND	2/24/2008	MATRIX FNV	RIMSULFURON	G	167.27	OZ	115	11S16E10
ALMOND	2/24/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	334.55	PT	115	11S16E10
WINE GRAPES	2/25/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	31.17	GA	114.3	10S17E12

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WINE GRAPES	2/25/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	41.56	GA	114.3	10S17E12
WINE GRAPES	2/25/2008	SIMAZINE 90DF	SIMAZINE	G	69.24	LB	114.3	10S17E12
WINE GRAPES	2/25/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	27.71	LB	114.3	10S17E12
ALMOND	2/25/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	334.55	PT	115	11S16E16
ALMOND	2/25/2008	MATRIX FNV	RIMSULFURON	G	167.27	OZ	115	11S16E16
ALMOND	2/25/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	83.64	PT	115	11S16E16

Figure 21. Location of Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 2.



Storm 2 RS (3/4/08) – Selenastrum capricornutum toxicity

Table 22. Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 2 RS.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WINE GRAPES	2/26/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	85.01	GA	233.78	10S18E7
WINE GRAPES	2/26/2008	SIMAZINE 90DF	SIMAZINE	G	141.68	LB	233.78	10S18E7
WINE GRAPES	2/26/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	63.76	GA	233.78	10S18E7
WINE GRAPES	2/26/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	40.55	GA	148.7	10S18E7
WINE GRAPES	2/26/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	36.05	LB	148.7	10S18E7
WINE GRAPES	2/26/2008	SIMAZINE 90DF	SIMAZINE	G	90.12	LB	148.7	10S18E7
WINE GRAPES	2/26/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	56.67	LB	233.78	10S18E7
WINE GRAPES	2/26/2008	SIMAZINE 90DF	SIMAZINE	G	46	LB	75.9	10S18E8
WINE GRAPES	2/26/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	27.6	GA	75.9	10S18E8
WINE GRAPES	2/26/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20.7	GA	75.9	10S18E8
WINE GRAPES	2/26/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	18.4	LB	75.9	10S18E8
ALMOND	2/26/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	144	PT	72	11S17E5
ALMOND	2/26/2008	GOAL 2XL	OXYFLUORFEN	G	576	OZ	72	11S17E5

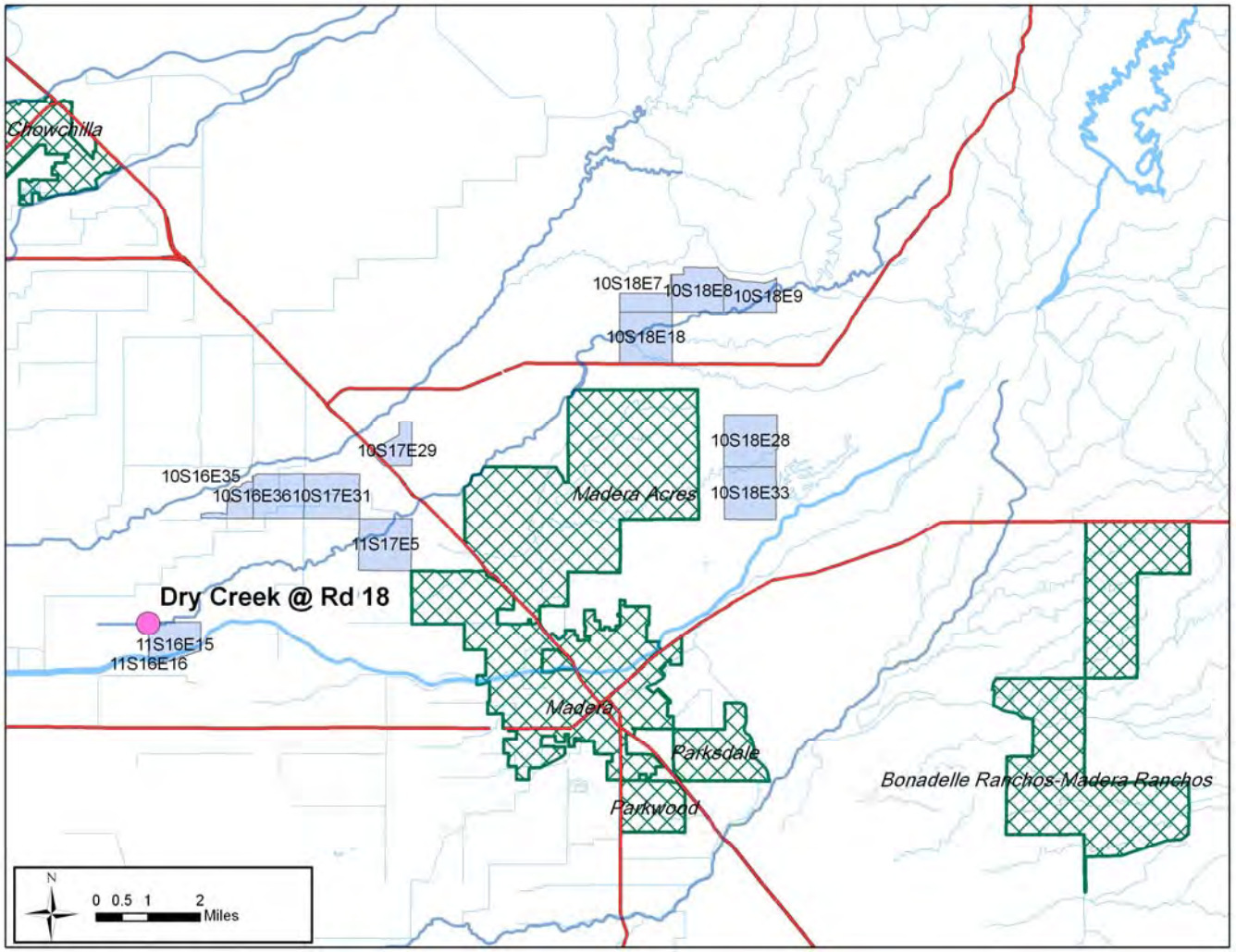
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/26/2008	MATRIX FNV	RIMSULFURON	G	225.45	OZ	155	11S16E16
ALMOND	2/26/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	450.91	PT	155	11S16E16
ALMOND	2/26/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	112.73	PT	155	11S16E16
WINE GRAPES	2/27/2008	SIMAZINE 90DF	SIMAZINE	G	95.45	LB	157.5	10S18E7
WINE GRAPES	2/27/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	57.27	GA	157.5	10S18E7
WINE GRAPES	2/27/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	42.95	GA	157.5	10S18E7
WINE GRAPES	2/27/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	54.36	GA	155.9	10S18E8
WINE GRAPES	2/27/2008	SIMAZINE 90DF	SIMAZINE	G	90.61	LB	155.9	10S18E8
WINE GRAPES	2/27/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	40.77	GA	155.9	10S18E8
WINE GRAPES	2/27/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	29.51	GA	108.2	10S18E18
WINE GRAPES	2/27/2008	SIMAZINE 90DF	SIMAZINE	G	65.58	LB	108.2	10S18E18
WINE GRAPES	2/27/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	39.35	GA	108.2	10S18E18
FIG	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	40	GA	80	10S18E28
FIG	2/27/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20	GA	80	10S18E28
ALMOND	2/27/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	96	PT	48	11S17E5

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	288	OZ	36	11S17E5
ALMOND	2/27/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	72	PT	36	11S17E5
ALMOND	2/27/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	465.45	PT	160	11S16E15
ALMOND	2/27/2008	MATRIX FNV	RIMSULFURON	G	232.73	OZ	160	11S16E15
ALMOND	2/27/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	116.36	PT	160	11S16E15
ORANGE	2/28/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	10	GA	20	10S18E8
ORANGE	2/28/2008	KARMEX XP HERBICIDE	DIURON	G	204	LB	68	10S18E9
ORANGE	2/28/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	34	GA	68	10S18E9
WINE GRAPES	2/28/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	80	PT	32	10S16E36
WINE GRAPES	2/28/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20.27	PT	32	10S16E36
ALMOND	2/28/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	10	GA	19.5	10S16E35
ALMOND	2/28/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	87.27	PT	30	11S16E15
ALMOND	2/28/2008	MATRIX FNV	RIMSULFURON	G	43.64	OZ	30	11S16E15

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/28/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	21.82	PT	30	11S16E15
GRAPE, RAISIN	2/29/2008	GOAL 2XL	OXYFLUORFEN	G	60	OZ	10	10S17E31
GRAPE, RAISIN	2/29/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	60	OZ	10	10S17E31
GRAPE, RAISIN	2/29/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	20	PT	10	10S17E31
GRAPE, RAISIN	2/29/2008	DIURON 80 DF HERBICIDE	DIURON	G	14.55	LB	20	10S16E36
GRAPE, RAISIN	2/29/2008	SIMAZINE 90DF	SIMAZINE	G	21.82	LB	20	10S16E36
GRAPE, RAISIN	2/29/2008	GOALTENDER	OXYFLUORFEN	G	43.64	OZ	20	10S16E36
GRAPE, RAISIN	2/29/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	14.55	QT	20	10S16E36
N-GRNHS FLOWER	2/29/2008	PHYTON-27 BACTERICIDE & FUNGICIDE	COPPER SULFATE (PENTAHYDRATE)	G	60	OZ	0.08	10S16E36
FIG	2/29/2008	GOAL 2XL	OXYFLUORFEN	G	70	GA	140	10S18E33
FIG	2/29/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	35	GA	140	10S18E33
WINE GRAPES	2/29/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	18	PT	18	11S16E15
ORANGE	3/1/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	16	GA	32	10S18E8
ORANGE	3/1/2008	KARMEX XP HERBICIDE	DIURON	G	96	LB	32	10S18E8

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OATS	3/4/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	135	OZ	90	10S17E29

Figure 22. Location of Pesticide use for Dry Creek @ Rd 18 site subwatershed – storm 2 RS.



Dry Creek @ Wellsford site subwatershed

Pesticide Use Reports for metal exceedances in the water column

Storm 2 (2/25/08) - copper exceedance

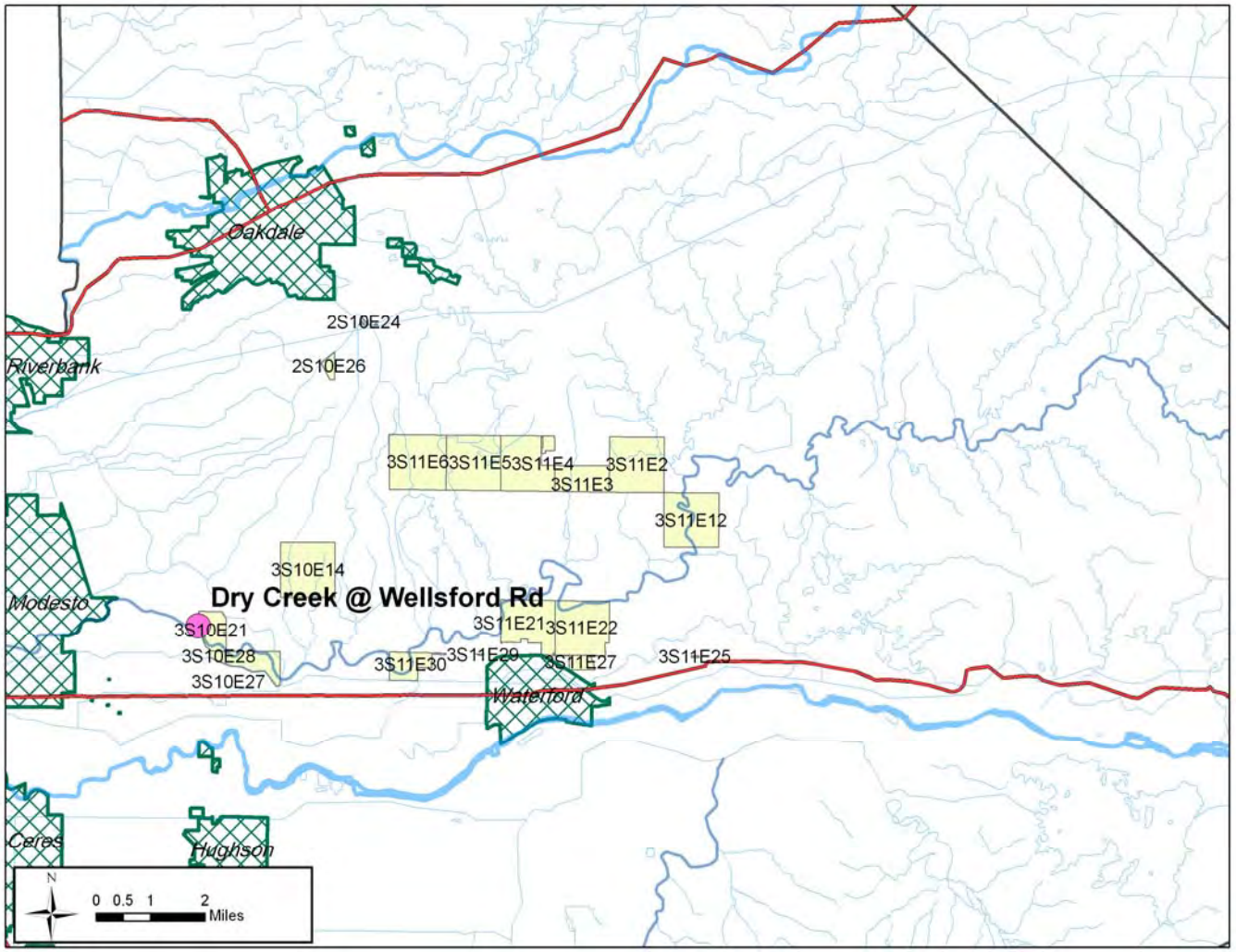
Table 23. Copper use for Dry Creek @ Wellsford site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/11/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	18	LB	3	3S11E2
GRAPE, WINE	12/12/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	4	LB	2	3S10E21
PEACH PROCESSNG	12/19/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	72	LB	9	3S10E27
OT-DEC. TREE	12/26/2007	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	13.75	GA	22	3S11E5
OT-DEC. TREE	12/27/2007	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	14.38	GA	23	3S11E5
PLUM	1/1/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	13.6	LB	2	3S11E3
ALMOND	1/2/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	90	LB	14	3S11E2
PEACH PROCESSNG	1/14/2008	HYDROX	COPPER HYDROXIDE	G	260	LB	26	3S10E28
ALMOND	1/14/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	100	LB	16	2S10E24

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/17/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	120	PT	20	3S11E30
ALMOND	1/18/2008	HYDROX	COPPER HYDROXIDE	G	1050	LB	175	3S11E2
ALMOND	1/19/2008	HYDROX	COPPER HYDROXIDE	G	340	LB	42.5	3S11E12
PEACH PROCESSNG	1/23/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	88.4	LB	13	3S11E29
ALMOND	1/30/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	120	LB	20	3S10E14
ALMOND	1/31/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	550	LB	110	3S11E25
ALMOND	1/31/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	96	PT	24	3S11E22
ALMOND	1/31/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	164	PT	41	3S11E27
ALMOND	1/31/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	240	PT	60	3S11E27
ALMOND	2/10/2008	KOCIDE 2000	COPPER HYDROXIDE	G	1	LB	65	2S10E26
ALMOND	2/13/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	270	LB	55	3S11E6
ALMOND	2/13/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	540	LB	100	3S11E6
ALMOND	2/14/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	270	LB	56	3S11E6
ALMOND	2/25/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	12.5	LB	10	3S11E29

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/25/2008	NU-COP 50DF	COPPER HYDROXIDE	G	16	LB	160	3S11E4
ALMOND	2/25/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	8	QT	4	3S11E30
ALMOND	2/25/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	66	QT	33	3S11E30
ALMOND	2/25/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	36	QT	18	3S11E30
ALMOND	2/26/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	A	630	OZ	15	3S11E21
ALMOND	2/26/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	20	QT	10	3S11E30
ALMOND	2/26/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	76	QT	38	3S11E29

Figure 23. Location of Copper use for Dry Creek @ Wellsford site subwatershed – storm 2.



Pesticide Use Reports for sediment toxicity exceedances

Storm sediment (3/4/08) – Hyalella azteca toxicity

Table 24. Pesticide use for Dry Creek @ Wellsford site subwatershed – storm sediment.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WALNUT	9/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	102.4	OZ	16	3S11E29	5300
ALMOND	9/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	64	OZ	10	3S11E30	5300
WALNUT	9/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	115.2	OZ	18	3S11E30	5300
WALNUT	9/9/2007	SILENCER	LAMBDA-CYHALOTHRIN	G	45	OZ	15	3S11E29	180000
WALNUT	9/9/2007	SILENCER	LAMBDA-CYHALOTHRIN	G	48	OZ	16	3S11E30	180000
PLUM	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	19.2	OZ	2	3S11E3	5300
ALMOND	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	128	OZ	16	2S10E24	5300
PEACH PROCESSNG	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	260	OZ	26	3S10E28	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2240	LB	175	3S11E2	5300
PEACH PROCESSNG	1/23/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	124.8	OZ	13	3S11E29	5300
ALMOND	1/31/2008	SILENCER	LAMBDA-CYHALOTHRIN	G	281.6	OZ	110	3S11E25	180000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
CHESTNUT	2/5/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	320	OZ	10	2S11E35	24000
ALMOND	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	625.44	PT	78.18	3S11E15	5000
CHESTNUT	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	213.33	OZ	10	2S11E35	5000
ALMOND	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	218.18	PT	100	3S11E25	5000
ALMOND	2/5/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	109.09	PT	100	3S11E25	24000
ALMOND	2/5/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	75	OZ	23.3	3S11E30	24000
ALMOND	2/5/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	32	OZ	10	3S11E29	24000
ALMOND	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	93	QT	23.3	3S11E30	100000
CHESTNUT	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	26.67	OZ	10	2S11E35	100000
ALMOND	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	40	QT	10	3S11E29	100000
ALMOND	2/5/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	195.45	PT	78.18	3S11E15	1000000
ALMOND	2/5/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	72.73	PT	100	3S11E25	100000
ALMOND	2/5/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	312.72	PT	78.18	3S11E15	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/6/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	10.5	OZ	3.3	3S10E25	24000
WALNUT	2/6/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	20	GA	40	2S11E35	24000
WALNUT	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	PT	2	3S10E28	24000
WALNUT	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	PT	1	3S10E28	24000
WALNUT	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1	QT	0.75	3S10E27	24000
WALNUT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	5	PT	1	3S10E28	100000
WALNUT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	1	QT	0.75	3S10E27	100000
WALNUT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	10	PT	2	3S10E28	100000
GRAPE, WINE	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	64.5	PT	21.5	3S10E24	100000
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	13.2	QT	3.3	3S10E25	100000
GRAPE, WINE	2/6/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	129	PT	21.5	3S10E24	24000
ALMOND	2/7/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	65	PT	65	3S10E27	1000000
ALMOND	2/7/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	23	PT	23	3S10E22	1000000
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	63.64	GA	63.64	2S12E32	5000
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	130	PT	65	3S10E27	5000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	46	PT	23	3S10E22	5000
ALMOND	2/7/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7.64	GA	15.27	3S11E8	24000
WALNUT	2/7/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	PT	1	3S10E28	24000
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	86.67	PT	65	3S10E27	100000
WALNUT	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	5	PT	1	3S10E28	100000
GRAPE, WINE	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	34.8	PT	11.6	3S10E14	100000
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	30.67	PT	23	3S10E22	100000
ALMOND	2/7/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	19.89	GA	63.64	2S12E32	1000000
GRAPE, WINE	2/7/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	69.6	PT	11.6	3S10E14	24000
WALNUT	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	17	OZ	5.3	3S11E30	24000
WALNUT	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	16	OZ	5	3S11E29	24000
ALMOND	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	467.73	PT	245	3S11E16	24000
WALNUT	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	19	OZ	6	3S11E30	24000
WALNUT	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	64	OZ	5.3	3S11E30	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WALNUT	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	10	QT	5	3S11E29	100000
WALNUT	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	72	OZ	6	3S11E30	100000
ALMOND	2/8/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	1870.91	OZ	245	3S11E16	100000
UNCUL NON-AG	2/9/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	PT	1	3S10E28	24000
UNCUL NON-AG	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	5	PT	1	3S10E28	100000
ALMOND	2/10/2008	VANGARD WG	CYPRODINIL	G	5	OZ	65	2S10E26	2030
ALMOND	2/10/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	21	GA	21	3S11E21	5000
ALMOND	2/10/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	2	QT	159	2S10E26	5000
ALMOND	2/10/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	42	PT	21	3S11E21	24000
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	2	QT	159	2S10E26	100000
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	38.4	OZ	18	3S11E29	100000
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	21	PT	21	3S11E21	100000
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	21.93	OZ	10	3S11E29	100000
ALMOND	2/10/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7	GA	15	3S11E21	24000
ALMOND	2/10/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	19.2	PT	18	3S11E29	24000
ALMOND	2/10/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	10.67	PT	10	3S11E29	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	9.09	GA	25	3S11E20	5000
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	3.64	GA	10	3S11E20	5000
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	4.36	GA	12	3S11E20	5000
ALMOND	2/11/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	7.27	PT	10	3S11E20	24000
ALMOND	2/11/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	18.18	PT	25	3S11E20	24000
ALMOND	2/11/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	8.73	PT	12	3S11E20	24000
GRAPE, WINE	2/11/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.68	GA	3.5	3S10E21	24000
GRAPE, WINE	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	96.3	PT	32.1	3S10E14	100000
GRAPE, WINE	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	37	OZ	3.5	3S10E21	100000
ALMOND	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	8.73	PT	12	3S11E20	100000
ALMOND	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	7.27	PT	10	3S11E20	100000
ALMOND	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	18.18	PT	25	3S11E20	100000
GRAPE, WINE	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	4.8	GA	6.2	3S10E21	100000
GRAPE, WINE	2/11/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	192.6	PT	32.1	3S10E14	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WALNUT	2/12/2008	ROUNDUP HERBICIDE (WITHDRAWN)	GLYPHOSATE, ISOPROPYLAMINE SALT	G	16	OZ	5	3S11E29	24000
WALNUT	2/12/2008	GOAL 2XL	OXYFLUORFEN	G	10	QT	5	3S11E29	100000
ALMOND	2/13/2008	VANGARD WG	CYPRODINIL	G	25	LB	86	3S12E7	2030
WALNUT	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5	GA	11	3S10E27	5000
ALMOND	2/13/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	8	GA	16	3S10E25	24000
ALMOND	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	10	GA	39.88	3S12E7	24000
GRAPE, WINE	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	5.2	GA	13	3S10E21	24000
WALNUT	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	100	OZ	11	3S10E27	24000
WALNUT	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	30	OZ	11	3S10E27	100000
GRAPE, WINE	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	10.4	GA	13	3S10E21	100000
ALMOND	2/13/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1.3	GA	39.88	3S12E7	100000
ALMOND	2/13/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	2.5	GA	16	3S10E25	100000
ALMOND	2/14/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	50	QT	25	3S11E6	24000
ALMOND	2/14/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	586.36	PT	215	3S11E15	24000
ALMOND	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	50	QT	25	3S11E6	100000
ALMOND	2/14/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	1563.64	OZ	215	3S11E15	100000
ALMOND	2/15/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	50	QT	25	3S11E6	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	10	3S11E29	24000
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	GA	5	3S11E29	24000
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6	QT	6	3S11E23	24000
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	5.62	GA	22.5	3S11E23	24000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	50	QT	25	3S11E6	100000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	32	OZ	10	3S11E29	100000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	2.81	GA	22.5	3S11E23	100000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	16	OZ	5	3S11E29	100000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	6	PT	6	3S11E23	100000
ALMOND	2/16/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	10	PT	10	3S10E27	1000000
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	20	PT	10	3S10E27	5000
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	GA	40	3S12E19	5000
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5	GA	8	3S11E30	5000
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	10	GA	20.5	3S11E30	5000
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.76	GA	20.5	3S11E30	24000
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.88	GA	8	3S11E30	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	QT	2.5	3S11E30	24000
ALMOND	2/16/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	887.73	PT	465	3S11E15	24000
ALMOND	2/16/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4.27	PT	4	3S11E30	24000
WALNUT	2/16/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	9	PT	3	3S10E26	24000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	0.62	GA	8	3S11E30	100000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	13.33	PT	10	3S10E27	100000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	1.24	GA	20.5	3S11E30	100000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	8.53	OZ	4	3S11E30	100000
WALNUT	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	12	PT	3	3S10E26	100000
ALMOND	2/16/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	3550.91	OZ	465	3S11E15	100000
ALMOND	2/16/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1	QT	2.5	3S11E30	100000
ALMOND	2/16/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	8	GA	30	3S12E6	1000000
ALMOND	2/18/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	100	QT	50	3S11E6	24000
WALNUT	2/18/2008	TOUCHDOWN HITECH	GLYPHOSATE, POTASSIUM SALT	G	7500	OZ	375	2S11E35	24000
WALNUT	2/18/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	20	GA	58	2S11E33	5000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WALNUT	2/18/2008	AGRISOLUTIONS CORNERSTONE PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	GA	58	2S11E33	24000
ALMOND	2/18/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	76.67	PT	92	3S11E7	24000
ALMOND	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	100	QT	50	3S11E6	100000
ALMOND	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	76.67	PT	92	3S11E7	100000
WALNUT	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	1250	OZ	375	2S11E35	100000
WALNUT	2/18/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	10	GA	58	2S11E33	100000
WALNUT	2/19/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	7.68	PT	12	3S10E25	1000000
WALNUT	2/19/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	8	PT	10	3S10E25	1000000
WALNUT	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	25.6	PT	12	3S10E25	5000
ALMOND	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	72	PT	12	3S10E26	5000
WALNUT	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	26.67	PT	10	3S10E25	5000
WALNUT	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	11	3S11E30	5000
WALNUT	2/19/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.82	GA	11	3S11E30	24000
ALMOND	2/19/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	7	QT	7	3S11E25	24000
WALNUT	2/19/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	21	QT	21	3S11E25	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/19/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	64	OZ	20	3S11E22	24000
ALMOND	2/19/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	12	QT	12	3S10E26	24000
ALMOND	2/19/2008	GOAL 2XL	OXYFLUORFEN	G	14	QT	7	3S11E25	100000
WALNUT	2/19/2008	GOAL 2XL	OXYFLUORFEN	G	42	QT	21	3S11E25	100000
WALNUT	2/19/2008	GOALTENDER	OXYFLUORFEN	G	10.67	PT	10	3S10E25	100000
WALNUT	2/19/2008	GOALTENDER	OXYFLUORFEN	G	10.24	PT	12	3S10E25	100000
WALNUT	2/19/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	0.93	GA	11	3S11E30	100000
WALNUT	2/20/2008	PROWL 3.3 EC HERBICIDE	PENDIMETHALIN	G	20	GA	20	2S12E33	5000
ALMOND	2/20/2008	GEM 500 SC FUNGICIDE	TRIFLOXYSTROBIN	G	0.5	GA	22	3S11E20	4000
ALMOND	2/20/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	6.25	GA	25	2S11E29	1000000
ALMOND	2/21/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	8	GA	140	3S11E12	1000000
ALMOND	2/21/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	6.25	GA	25	2S11E29	1000000
ALMOND	2/25/2008	VANGARD WG	CYPRODINIL	G	45	LB	140	3S11E12	2030
ALMOND	2/25/2008	VANGARD WG	CYPRODINIL	G	550	OZ	110	3S10E12	2030
ALMOND	2/25/2008	VANGARD WG	CYPRODINIL	G	375	OZ	75	3S10E12	2030
ALMOND	2/25/2008	VANGARD WG	CYPRODINIL	G	50	OZ	10	3S10E12	2030
ALMOND	2/25/2008	DIMILIN 2L	DIFLUBENZURON	A	1280	OZ	160	3S11E4	10000
ALMOND	2/25/2008	DIMILIN 2L	DIFLUBENZURON	G	128	OZ	10	3S11E29	10000
ALMOND	2/25/2008	TREFLAN HFP	TRIFLURALIN	G	77	QT	77	3S11E2	8000

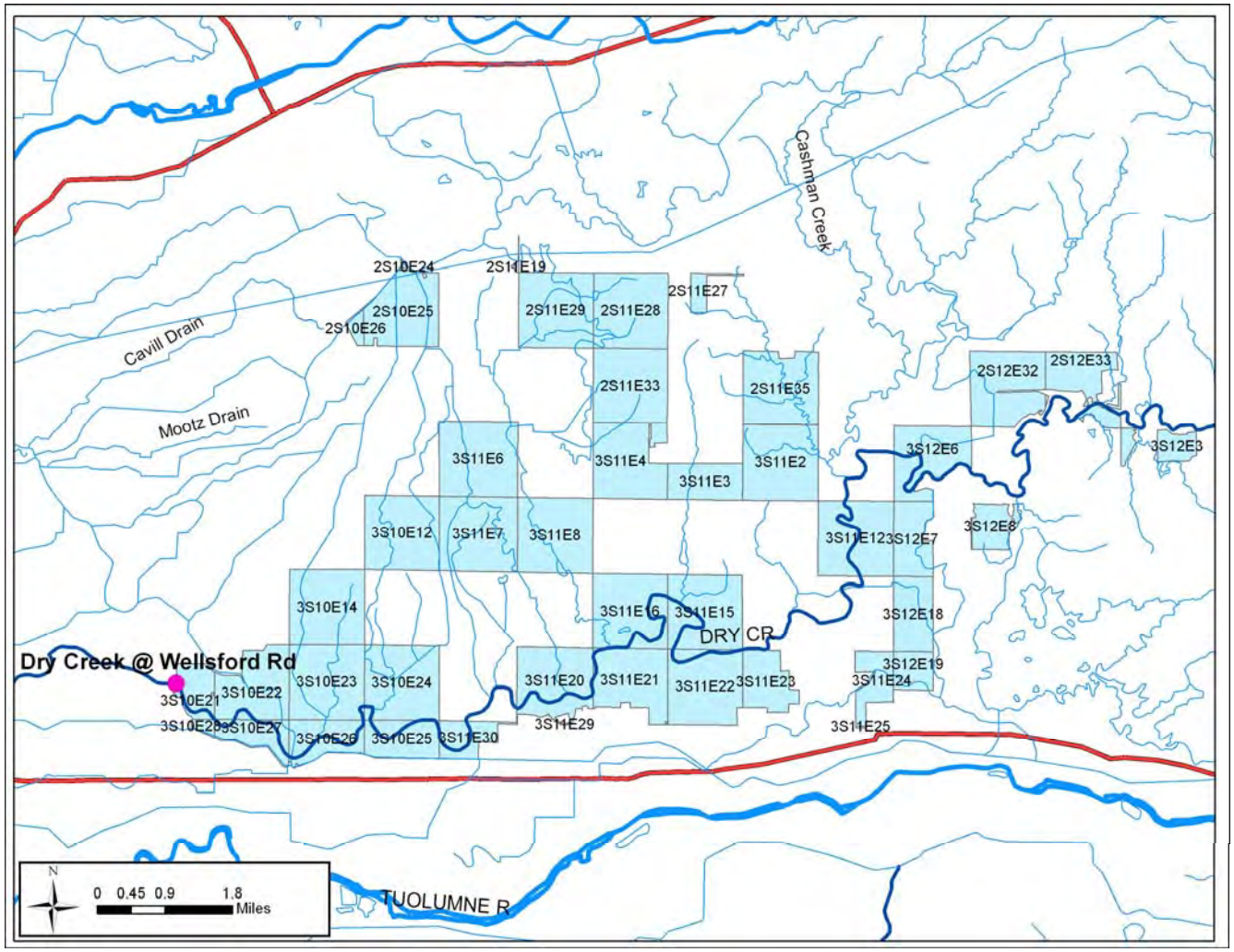
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/26/2008	VANGARD WG	CYPRODINIL	G	50	OZ	10	3S11E20	2030
ALMOND	2/26/2008	VANGARD WG	CYPRODINIL	G	45	OZ	20.5	3S11E30	2030
ALMOND	2/26/2008	VANGARD WG	CYPRODINIL	G	15	OZ	8	3S11E30	2030
WALNUT	2/26/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	4.5	PT	3	2S11E33	5000
ALMOND	2/26/2008	DIMILIN 2L	DIFLUBENZURON	G	51.2	OZ	4	3S10E25	10000
ALMOND	2/26/2008	DIMILIN 2L	DIFLUBENZURON	G	896	OZ	70	3S10E25	10000
ALMOND	2/26/2008	DIMILIN 2L	DIFLUBENZURON	G	320	OZ	25	3S10E26	10000
WALNUT	2/26/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	12	PT	3	2S11E33	24000
WALNUT	2/26/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	6	PT	3	2S11E33	100000
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	50	OZ	10	2S10E26	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	425	OZ	84	3S11E24	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	10	OZ	2.5	3S10E28	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	100	OZ	20	3S11E20	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	400	OZ	80	3S11E20	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	250	OZ	50	2S10E26	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	20	OZ	4	3S11E30	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	175	OZ	35	3S10E26	2030
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	256	OZ	20	3S11E20	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	1024	OZ	80	3S11E20	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	1.56	GA	20	2S10E26	10000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/27/2008	GLY STAR ORIGINAL	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2	QT	65	2S10E26	24000
OP-DEC. TREE	2/27/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	12	PT	3	3S11E4	24000
OP-DEC. TREE	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	12	PT	3	3S11E4	100000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	94.4	OZ	16	3S11E30	2030
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	285	OZ	57	3S12E18	2030
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	140	OZ	28	3S12E19	2030
ALMOND	2/28/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	30	GA	65	2S11E27	5000
WALNUT	2/28/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	20	GA	45	2S12E33	5000
ALMOND	2/28/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	130	GA	288	2S10E25	5000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	729.6	OZ	57	3S12E18	10000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	896	OZ	70	3S11E24	10000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	358.4	OZ	28	3S12E19	10000
WALNUT	2/28/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	750	OZ	13.8	3S10E26	24000
WALNUT	2/28/2008	GOAL 2XL	OXYFLUORFEN	G	560	OZ	13.8	3S10E26	100000
ALMOND	2/29/2008	VANGARD WG	CYPRODINIL	G	50.15	OZ	8.5	3S11E21	2030
ALMOND	2/29/2008	VANGARD WG	CYPRODINIL	G	25	LB	86	3S12E7	2030
ALMOND	2/29/2008	VANGARD WG	CYPRODINIL	G	1400	OZ	288	2S10E25	2030
ALMOND	2/29/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	QT	40	3S11E24	5000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
OAT FOR/FOD	2/29/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	G	3.5	GA	28	3S10E23	10000
ALMOND	2/29/2008	DIMILIN 2L	DIFLUBENZURON	G	1.2	GA	12	3S11E23	10000
WALNUT	2/29/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	12	PT	3	2S11E33	24000
ALMOND	2/29/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	28	QT	84	3S11E24	24000
ALMOND	2/29/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	42.67	PT	40	3S11E24	24000
WALNUT	2/29/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	14	QT	42	3S12E8	24000
ALMOND	2/29/2008	TREFLAN HFP	TRIFLURALIN	G	160	QT	160	3S11E21	8000
WALNUT	2/29/2008	GOAL 2XL	OXYFLUORFEN	G	12	PT	3	2S11E33	100000
ALMOND	3/1/2008	VANGARD WG	CYPRODINIL	G	70	OZ	14	3S11E21	2030
ALMOND	3/1/2008	VANGARD WG	CYPRODINIL	G	50	OZ	10	3S11E21	2030
ALMOND	3/1/2008	VANGARD WG	CYPRODINIL	G	400	OZ	80	2S10E26	2030
ALMOND	3/1/2008	VANGARD WG	CYPRODINIL	G	300	OZ	60	2S11E28	2030
ALMOND	3/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	39	QT	39	3S10E26	5000
ALMOND	3/1/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	41.6	PT	39	3S10E26	24000
ALMOND	3/2/2008	VANGARD WG	CYPRODINIL	G	49.5	OZ	9	3S11E29	2030
ALMOND	3/2/2008	AUXIGRO WP WETTABLE POWDER	GAMMA AMINOBUTYRIC ACID	G	36	OZ	9	3S11E29	2000
ALMOND	3/2/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	400	OZ	40	3S10E27	16000
ALMOND	3/3/2008	VANGARD WG	CYPRODINIL	G	45	OZ	20.5	3S11E30	2030
ALMOND	3/3/2008	VANGARD WG	CYPRODINIL	G	15	OZ	8	3S11E30	2030
ALMOND	3/3/2008	DIMILIN 2L	DIFLUBENZURON	G	512	OZ	40	2S11E27	10000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WALNUT	3/3/2008	ROUNDUP ULTRAMAX HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	6	QT	5	3S11E21	24000
ALMOND	3/3/2008	AUXIGRO WP WETTABLE POWDER	GAMMA AMINOBUTYRIC ACID	G	24	OZ	6	3S11E29	2000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	12.47	LB	14	2S11E19	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	12.5	LB	16	2S10E24	16000
ALMOND	3/4/2008	VANGARD WG	CYPRODINIL	G	75	OZ	15	3S11E22	2030
ALMOND	3/4/2008	VANGARD WG	CYPRODINIL	G	50	OZ	8	3S12E3	2030
ALMOND	3/4/2008	DIMILIN 2L	DIFLUBENZURON	G	2560	OZ	200	3S11E25	10000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	100	OZ	8	3S10E28	16000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	380	OZ	38	3S10E25	16000

Figure 24. Location of Pesticide use for Dry Creek @ Wellsford site subwatershed – storm sediment.



Pesticide Use Reports for water column toxicity

Storm 2 (2/25/08)) - Selenastrum capricornutum toxicity

Table 25. Pesticide use for Dry Creek @ Wellsford site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/11/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	18	LB	3	3S11E2
GRAPE, WINE	12/12/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	4	LB	2	3S10E21
PEACH PROCESSNG	12/19/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	72	LB	9	3S10E27
OT-DEC. TREE	12/26/2007	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	13.75	GA	22	3S11E5
OT-DEC. TREE	12/27/2007	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	14.38	GA	23	3S11E5
PLUM	1/1/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	13.6	LB	2	3S11E3
ALMOND	1/2/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	90	LB	14	3S11E2
WHEAT FOR/FOD	1/28/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	181.39	PT	17	3S11E19
WHEAT FOR/FOD	1/28/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	661.54	PT	62	3S11E19
WHEAT FOR/FOD	1/28/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	49.6	OZ	62	3S11E19

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WHEAT FOR/FOD	1/28/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	13.6	OZ	17	3S11E19
ALMOND	1/28/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	67.2	PT	21	3S11E30
ALMOND	1/28/2008	GOAL 2XL	OXYFLUORFEN	G	84	QT	21	3S11E30
ALMOND	1/30/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	120	LB	20	3S10E14
ALMOND	1/30/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	38.4	PT	12	3S11E30
ALMOND	1/30/2008	GOAL 2XL	OXYFLUORFEN	G	48	QT	12	3S11E30
ALMOND	1/31/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	550	LB	110	3S11E25
ALMOND	1/31/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	22.4	PT	7	3S11E30
ALMOND	1/31/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	57.6	PT	18	3S11E29
ALMOND	1/31/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	96	PT	24	3S11E22
ALMOND	1/31/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	164	PT	41	3S11E27
ALMOND	1/31/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	240	PT	60	3S11E27
ALMOND	1/31/2008	GOAL 2XL	OXYFLUORFEN	G	28	QT	7	3S11E30
ALMOND	1/31/2008	GOAL 2XL	OXYFLUORFEN	G	72	QT	18	3S11E29
OAT FOR/FOD	2/1/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	85	OZ	85	3S11E19
ALMOND	2/1/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	254.55	PT	175	2S12E32

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/1/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	1018.18	OZ	175	2S12E32
ALMOND	2/1/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	160	QT	160	2S11E28
WALNUT	2/2/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	20	QT	20	2S11E28
WALNUT	2/2/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	10	QT	10	2S11E28
CHESTNUT	2/5/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	320	OZ	10	2S11E35
ALMOND	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	625.44	PT	78.18	3S11E15
CHESTNUT	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	213.33	OZ	10	2S11E35
ALMOND	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	218.18	PT	100	3S11E25
ALMOND	2/5/2008	SIM-TROL 4L	SIMAZINE	G	72.73	PT	100	3S11E25
ALMOND	2/5/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	109.09	PT	100	3S11E25
ALMOND	2/5/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	75	OZ	23.3	3S11E30
ALMOND	2/5/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	32	OZ	10	3S11E29
ALMOND	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	93	QT	23.3	3S11E30
CHESTNUT	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	26.67	OZ	10	2S11E35
ALMOND	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	40	QT	10	3S11E29
ALMOND	2/5/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	195.45	PT	78.18	3S11E15
ALMOND	2/5/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	72.73	PT	100	3S11E25

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/5/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	312.72	PT	78.18	3S11E15
OAT FOR/FOD	2/6/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	40	PT	40	3S11E6
OAT FOR/FOD	2/6/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	20	PT	20	3S11E6
OAT FOR/FOD	2/6/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	60	PT	60	3S11E6
WALNUT	2/6/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	15	GA	40	2S11E35
OAT FOR/FOD	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	53.2	OZ	40	3S11E6
OAT FOR/FOD	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	26.6	OZ	20	3S11E6
OAT FOR/FOD	2/6/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	79.8	OZ	60	3S11E6
ALMOND	2/6/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	10.5	OZ	3.3	3S10E25
WALNUT	2/6/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	20	GA	40	2S11E35
WALNUT	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	PT	2	3S10E28
WALNUT	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	PT	1	3S10E28
WALNUT	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1	QT	0.75	3S10E27
WALNUT	2/6/2008	SURFLAN A.S.	ORYZALIN	G	24	OZ	0.75	3S10E27
WALNUT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	5	PT	1	3S10E28

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WALNUT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	1	QT	0.75	3S10E27
WALNUT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	10	PT	2	3S10E28
GRAPE, WINE	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	64.5	PT	21.5	3S10E24
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	13.2	QT	3.3	3S10E25
WALNUT	2/6/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	12	PT	2	3S10E28
WALNUT	2/6/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	6	PT	1	3S10E28
GRAPE, WINE	2/6/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	258	PT	21.5	3S10E24
GRAPE, WINE	2/6/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	129	PT	21.5	3S10E24
ALMOND	2/7/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	65	PT	65	3S10E27
ALMOND	2/7/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	23	PT	23	3S10E22
ALMOND	2/7/2008	GORDON'S ORCHARD MASTER CA BROADLEAF HER	2,4-D, DIMETHYLAMINE SALT	G	5.73	GA	15.27	3S11E8
ALMOND	2/7/2008	GORDON'S ORCHARD MASTER CA BROADLEAF HER	2,4-D, DIETHANOLAMINE SALT	G	5.73	GA	15.27	3S11E8
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	63.64	GA	63.64	2S12E32
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	130	PT	65	3S10E27
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	46	PT	23	3S10E22

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/7/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7.64	GA	15.27	3S11E8
WALNUT	2/7/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	PT	1	3S10E28
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	86.67	PT	65	3S10E27
WALNUT	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	5	PT	1	3S10E28
GRAPE, WINE	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	34.8	PT	11.6	3S10E14
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	30.67	PT	23	3S10E22
ALMOND	2/7/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	19.89	GA	63.64	2S12E32
WALNUT	2/7/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	6	PT	1	3S10E28
GRAPE, WINE	2/7/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	69.6	PT	11.6	3S10E14
ALMOND	2/8/2008	GORDON'S ORCHARD MASTER BROADLEAF HERBIC	2,4-D, DIETHANOLAMINE SALT	G	1870.91	OZ	245	3S11E16
ALMOND	2/8/2008	GORDON'S ORCHARD MASTER BROADLEAF HERBIC	2,4-D, DIMETHYLAMINE SALT	G	1870.91	OZ	245	3S11E16
WALNUT	2/8/2008	DIREX 4L HERBICIDE	DIURON	G	10.6	QT	5.3	3S11E30
WALNUT	2/8/2008	DIREX 4L HERBICIDE	DIURON	G	12	QT	6	3S11E30
WALNUT	2/8/2008	SIM-TROL 4L	SIMAZINE	G	8	QT	5.3	3S11E30
WALNUT	2/8/2008	SIM-TROL 4L	SIMAZINE	G	9	QT	6	3S11E30
WALNUT	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	17	OZ	5.3	3S11E30

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WALNUT	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	16	OZ	5	3S11E29
ALMOND	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	467.73	PT	245	3S11E16
WALNUT	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	19	OZ	6	3S11E30
WALNUT	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	64	OZ	5.3	3S11E30
WALNUT	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	10	QT	5	3S11E29
WALNUT	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	72	OZ	6	3S11E30
ALMOND	2/8/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	1870.91	OZ	245	3S11E16
WALNUT	2/8/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	10	QT	5	3S11E29
UNCUL NON-AG	2/9/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	PT	1	3S10E28
UNCUL NON-AG	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	5	PT	1	3S10E28
UNCUL NON-AG	2/9/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	6	PT	1	3S10E28
ALMOND	2/10/2008	KOCIDE 2000	COPPER HYDROXIDE	G	1	LB	65	2S10E26
ALMOND	2/10/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	21	GA	21	3S11E21
ALMOND	2/10/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	2	QT	159	2S10E26
ALMOND	2/10/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	7	GA	15	3S11E21

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/10/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	42	PT	21	3S11E21
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	2	QT	159	2S10E26
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	38.4	OZ	18	3S11E29
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	21	PT	21	3S11E21
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	21.93	OZ	10	3S11E29
ALMOND	2/10/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7	GA	15	3S11E21
ALMOND	2/10/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	19.2	PT	18	3S11E29
ALMOND	2/10/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	10.67	PT	10	3S11E29
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	9.09	GA	25	3S11E20
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	3.64	GA	10	3S11E20
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	4.36	GA	12	3S11E20
GRAPE, WINE	2/11/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	6	GA	6.2	3S10E21
ALMOND	2/11/2008	SIM-TROL 4L	SIMAZINE	G	18.18	PT	25	3S11E20
ALMOND	2/11/2008	SIM-TROL 4L	SIMAZINE	G	8.73	PT	12	3S11E20
ALMOND	2/11/2008	SIM-TROL 4L	SIMAZINE	G	7.27	PT	10	3S11E20
ALMOND	2/11/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	7.27	PT	10	3S11E20
ALMOND	2/11/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	18.18	PT	25	3S11E20

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/11/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	8.73	PT	12	3S11E20
GRAPE, WINE	2/11/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.68	GA	3.5	3S10E21
GRAPE, WINE	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	96.3	PT	32.1	3S10E14
GRAPE, WINE	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	37	OZ	3.5	3S10E21
ALMOND	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	8.73	PT	12	3S11E20
ALMOND	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	7.27	PT	10	3S11E20
ALMOND	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	18.18	PT	25	3S11E20
GRAPE, WINE	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	4.8	GA	6.2	3S10E21
GRAPE, WINE	2/11/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	4.8	GA	6.2	3S10E21
GRAPE, WINE	2/11/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	192.6	PT	32.1	3S10E14
WALNUT	2/12/2008	ROUNDUP HERBICIDE (WITHDRAWN)	GLYPHOSATE, ISOPROPYLAMINE SALT	G	16	OZ	5	3S11E29
WALNUT	2/12/2008	GOAL 2XL	OXYFLUORFEN	G	10	QT	5	3S11E29
WALNUT	2/12/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	10	QT	5	3S11E29
WALNUT	2/13/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	12.5	LB	11	3S10E27
ALMOND	2/13/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	3	GA	16	3S10E25
WALNUT	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5	GA	11	3S10E27
ALMOND	2/13/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	270	LB	55	3S11E6

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/13/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	540	LB	100	3S11E6
ALMOND	2/13/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	8	GA	16	3S10E25
ALMOND	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	10	GA	39.88	3S12E7
GRAPE, WINE	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	5.2	GA	13	3S10E21
WALNUT	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	100	OZ	11	3S10E27
WALNUT	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	30	OZ	11	3S10E27
GRAPE, WINE	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	10.4	GA	13	3S10E21
GRAPE, WINE	2/13/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	10.4	GA	13	3S10E21
ALMOND	2/13/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1.3	GA	39.88	3S12E7
ALMOND	2/13/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	2.5	GA	16	3S10E25
ALMOND	2/14/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	50	QT	25	3S11E6
OAT FOR/FOD	2/14/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	8	PT	8	3S10E26
OAT FOR/FOD	2/14/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	14	PT	14	3S10E26
OAT FOR/FOD	2/14/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	8	OZ	8	3S10E26
OAT FOR/FOD	2/14/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	14	OZ	14	3S10E26
ALMOND	2/14/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	270	LB	56	3S11E6

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/14/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	586.36	PT	215	3S11E15
ALMOND	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	50	QT	25	3S11E6
ALMOND	2/14/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	1563.64	OZ	215	3S11E15
ALMOND	2/14/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	50	QT	25	3S11E6
ALMOND	2/15/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	50	QT	25	3S11E6
ALMOND	2/15/2008	SIM-TROL 4L	SIMAZINE	G	3	GA	6	3S11E23
ALMOND	2/15/2008	SIM-TROL 4L	SIMAZINE	G	11.25	GA	22.5	3S11E23
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	10	3S11E29
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	GA	5	3S11E29
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6	QT	6	3S11E23
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	5.62	GA	22.5	3S11E23
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	50	QT	25	3S11E6
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	32	OZ	10	3S11E29
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	2.81	GA	22.5	3S11E23
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	16	OZ	5	3S11E29
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	6	PT	6	3S11E23
ALMOND	2/15/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	50	QT	25	3S11E6

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/16/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	10	PT	10	3S10E27
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	20	PT	10	3S10E27
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	GA	40	3S12E19
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5	GA	8	3S11E30
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	10	GA	20.5	3S11E30
ALMOND	2/16/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	40	GA	40	3S12E19
ALMOND	2/16/2008	SIM-TROL 4L	SIMAZINE	G	2.48	GA	20.5	3S11E30
ALMOND	2/16/2008	SIM-TROL 4L	SIMAZINE	G	1.24	GA	8	3S11E30
ALMOND	2/16/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	3.76	GA	20.5	3S11E30
ALMOND	2/16/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	1.88	GA	8	3S11E30
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.76	GA	20.5	3S11E30
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.88	GA	8	3S11E30
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	QT	2.5	3S11E30
ALMOND	2/16/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	887.73	PT	465	3S11E15
ALMOND	2/16/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4.27	PT	4	3S11E30
WALNUT	2/16/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	9	PT	3	3S10E26
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	0.62	GA	8	3S11E30
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	13.33	PT	10	3S10E27

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	1.24	GA	20.5	3S11E30
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	8.53	OZ	4	3S11E30
WALNUT	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	12	PT	3	3S10E26
ALMOND	2/16/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	3550.91	OZ	465	3S11E15
ALMOND	2/16/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	24	GA	30	3S12E6
ALMOND	2/16/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1	QT	2.5	3S11E30
ALMOND	2/16/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	8	GA	30	3S12E6
ALMOND	2/18/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	100	QT	50	3S11E6
WALNUT	2/18/2008	TOUCHDOWN HITECH	GLYPHOSATE, POTASSIUM SALT	G	7500	OZ	375	2S11E35
OAT FOR/FOD	2/18/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	2520	OZ	210	2S11E36
OAT FOR/FOD	2/18/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	600	OZ	50	2S12E36
WALNUT	2/18/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	20	GA	58	2S11E33
OAT FOR/FOD	2/18/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	210	OZ	210	2S11E36
OAT FOR/FOD	2/18/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	50	OZ	50	2S12E36
ALMOND	2/18/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	38.33	PT	92	3S11E7
WALNUT	2/18/2008	SIM-TROL 4L	SIMAZINE	G	7	GA	58	2S11E33
WALNUT	2/18/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	5	GA	58	2S11E33

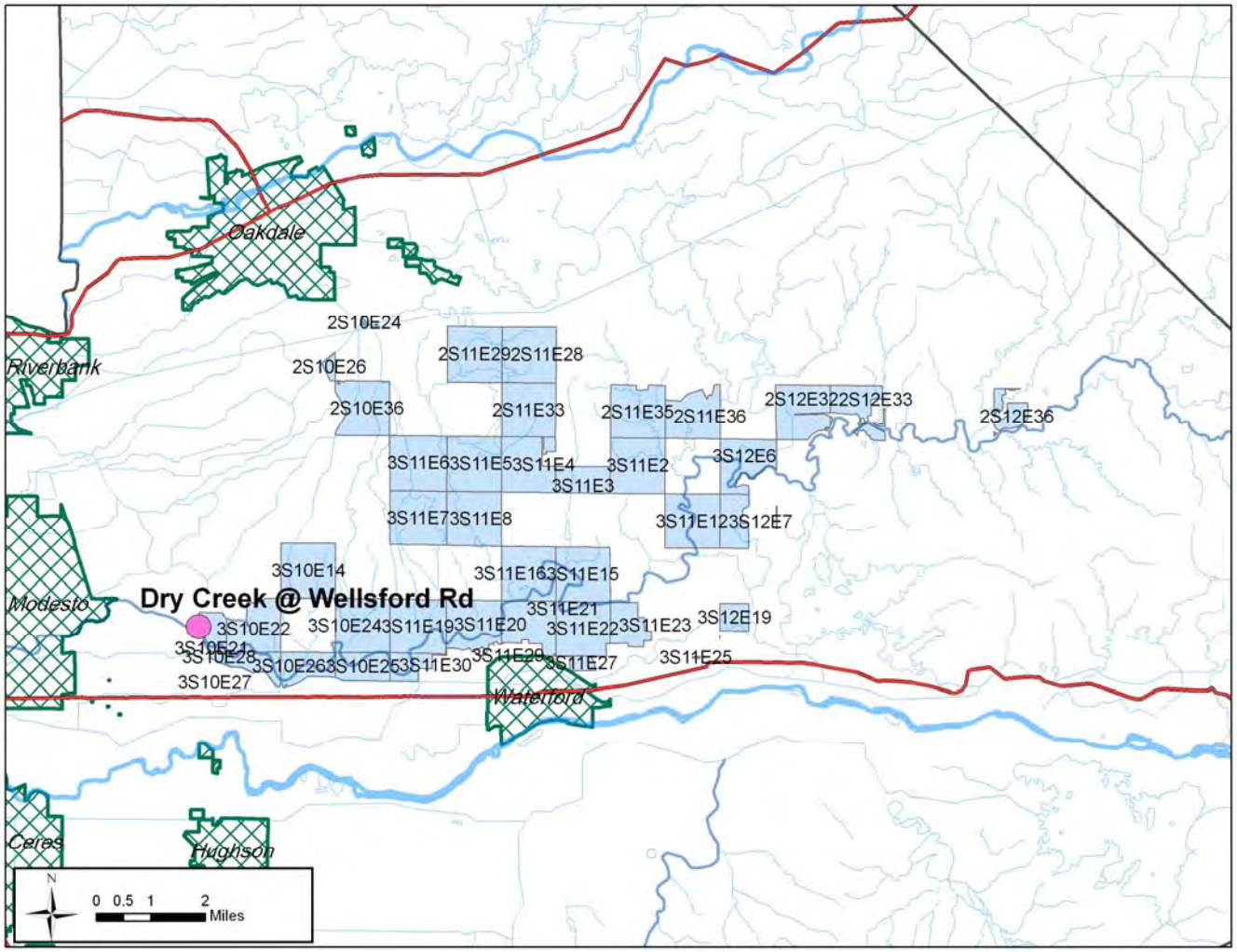
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WALNUT	2/18/2008	AGRISOLUTIONS CORNERSTONE PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	GA	58	2S11E33
ALMOND	2/18/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	76.67	PT	92	3S11E7
ALMOND	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	100	QT	50	3S11E6
ALMOND	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	76.67	PT	92	3S11E7
WALNUT	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	1250	OZ	375	2S11E35
WALNUT	2/18/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	10	GA	58	2S11E33
ALMOND	2/18/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	153.33	PT	92	3S11E7
ALMOND	2/18/2008	SURFLAN 0.25 A.S.	ORYZALIN	G	100	QT	50	3S11E6
OAT FOR/FOD	2/18/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	630	OZ	210	2S11E36
OAT FOR/FOD	2/18/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	A	150	OZ	50	2S12E36
WALNUT	2/19/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	7.68	PT	12	3S10E25
WALNUT	2/19/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	8	PT	10	3S10E25
WALNUT	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	25.6	PT	12	3S10E25
ALMOND	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	72	PT	12	3S10E26
WALNUT	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	26.67	PT	10	3S10E25
WALNUT	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	11	3S11E30
WALNUT	2/19/2008	SIM-TROL 4L	SIMAZINE	G	21	QT	21	3S11E25

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/19/2008	SIM-TROL 4L	SIMAZINE	G	7	QT	7	3S11E25
WALNUT	2/19/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	8	PT	10	3S10E25
WALNUT	2/19/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	2.82	GA	11	3S11E30
WALNUT	2/19/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	7.68	PT	12	3S10E25
WALNUT	2/19/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.82	GA	11	3S11E30
ALMOND	2/19/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	7	QT	7	3S11E25
WALNUT	2/19/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	21	QT	21	3S11E25
ALMOND	2/19/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	64	OZ	20	3S11E22
ALMOND	2/19/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	12	QT	12	3S10E26
ALMOND	2/19/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	120	OZ	12	3S10E26
ALMOND	2/19/2008	GOAL 2XL	OXYFLUORFEN	G	14	QT	7	3S11E25
WALNUT	2/19/2008	GOAL 2XL	OXYFLUORFEN	G	42	QT	21	3S11E25
WALNUT	2/19/2008	GOALTENDER	OXYFLUORFEN	G	10.67	PT	10	3S10E25
WALNUT	2/19/2008	GOALTENDER	OXYFLUORFEN	G	10.24	PT	12	3S10E25
WALNUT	2/19/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	0.93	GA	11	3S11E30
OAT FOR/FOD	2/20/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	39.9	PT	35	2S10E36
WALNUT	2/20/2008	PROWL 3.3 EC HERBICIDE	PENDIMETHALIN	G	20	GA	20	2S12E33
WALNUT	2/20/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	10	GA	20	2S12E33

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	2/20/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	31.85	OZ	35	2S10E36
ALMOND	2/20/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	6.25	GA	25	2S11E29
ALMOND	2/21/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	8	GA	140	3S11E12
ALMOND	2/21/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	6.25	GA	25	2S11E29
ALMOND	2/25/2008	PRINCEP 4L	SIMAZINE	G	462	OZ	77	3S11E2
OT-VINE	2/25/2008	BRITZ COTTON DEFOLIANT CONCENTRATE	SODIUM CHLORATE	G	32	OZ	5	3S11E2
OT-VINE	2/25/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	2	GA	5	3S11E2
ALMOND	2/25/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	12.5	LB	10	3S11E29
ALMOND	2/25/2008	NU-COP 50DF	COPPER HYDROXIDE	G	16	LB	160	3S11E4
ALMOND	2/25/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	8	QT	4	3S11E30
ALMOND	2/25/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	66	QT	33	3S11E30
ALMOND	2/25/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	36	QT	18	3S11E30
WALNUT	2/26/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	4.5	PT	3	2S11E33
WALNUT	2/26/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	6	PT	3	2S11E33
WALNUT	2/26/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	12	PT	3	2S11E33
ALMOND	2/26/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	A	630	OZ	15	3S11E21
ALMOND	2/26/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	20	QT	10	3S11E30

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/26/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	76	QT	38	3S11E29
WALNUT	2/26/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	6	PT	3	2S11E33

Figure 25. Location of Pesticide use for Dry Creek @ Wellsford site subwatershed – storm 2.



Duck Slough @ Gurr Rd site subwatershed

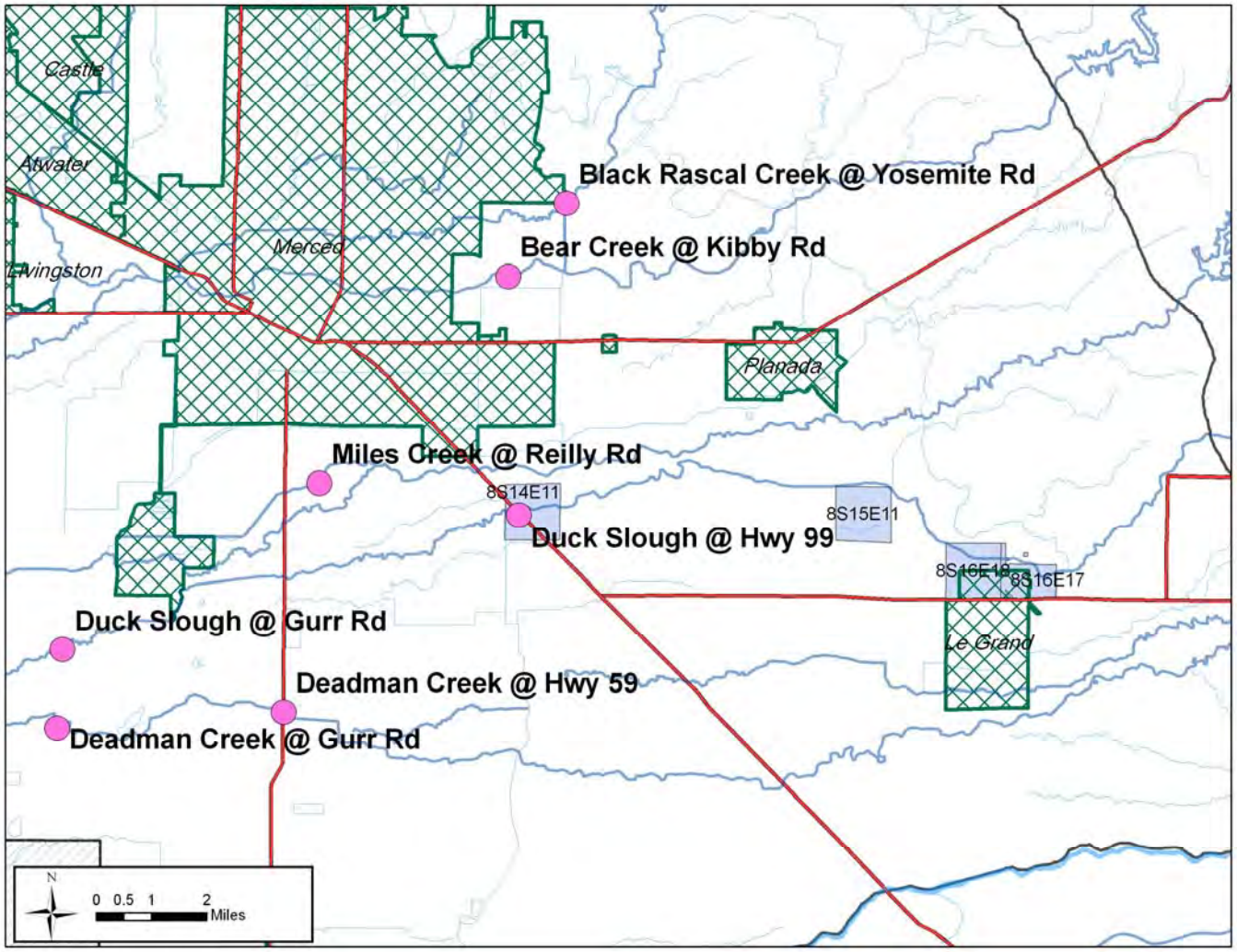
Pesticide Use Reports for metal exceedances in the water column

Storm 1 (1/25/08) - copper exceedance

Table 26. Copper use for Duck Slough @ Gurr Rd site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
N-OUTDOOR PLANT	12/13/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	115.9	LB	19	8S16E18
N-OUTDOOR PLANT	12/13/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	195.3	LB	32	8S15E11
N-OUTDOOR PLANT	12/13/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	115.9	LB	19	8S16E18
N-OUTDOOR PLANT	12/13/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	48.8	LB	8	8S15E11
NECTARINE	12/17/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	60	LB	10	8S15E11
ALMOND	1/10/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	56	LB	7	8S14E11
PEACH	1/11/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	200	LB	10	8S14E11
ALMOND	1/14/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	462	LB	77	8S14E11
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	64	LB	16	8S16E17

Figure 26. Location of Copper use for Duck Slough @ Gurr Rd site subwatershed – storm 1.



Storm 2 (2/25/08) - copper exceedance

No additional applications were reported after 1/18/08.

Duck Slough @ Hwy 99 site subwatershed

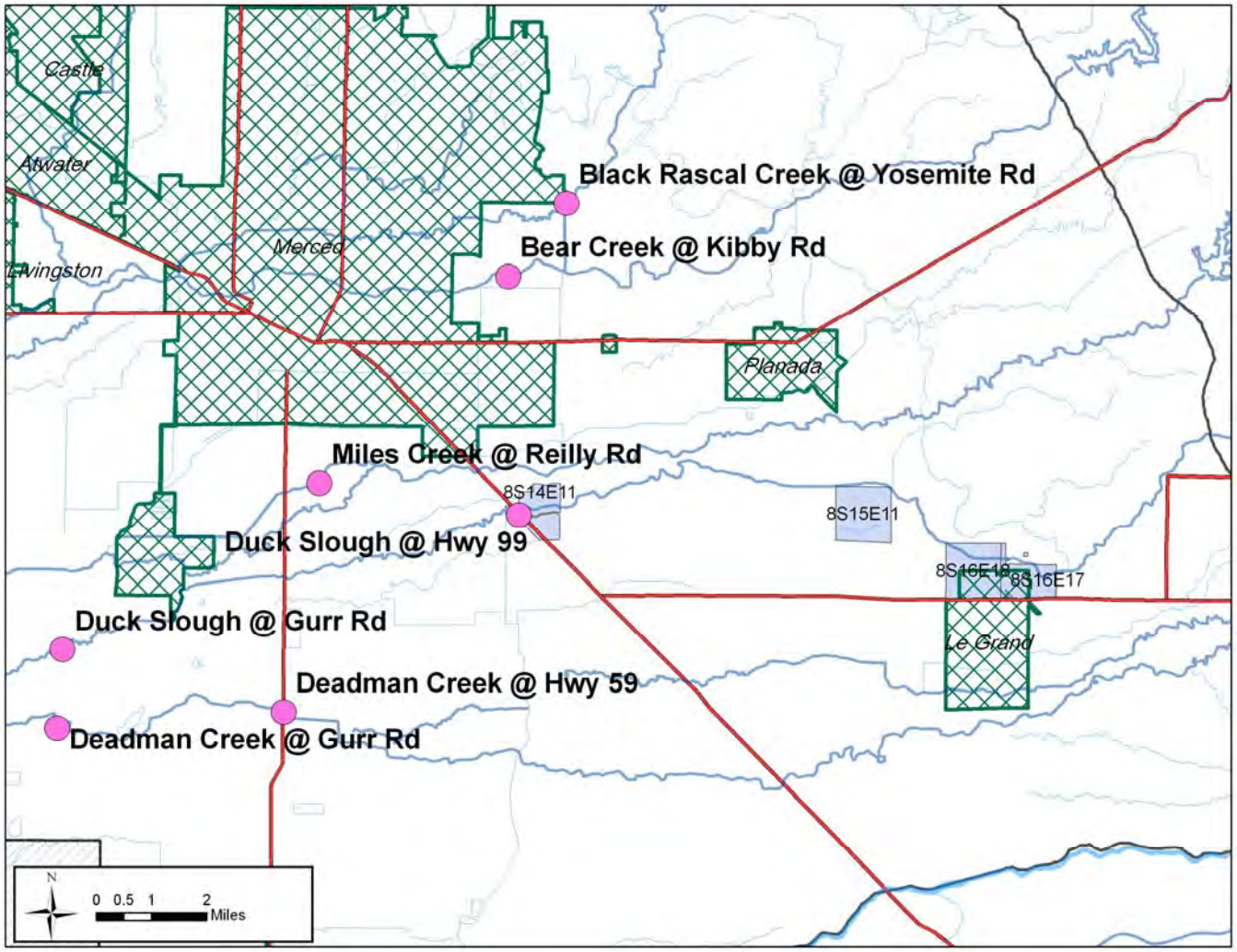
Pesticide Use Reports for metal exceedances in the water column

Storm 2 (2/25/08) - copper exceedance

Table 27. Copper use for Duck Slough @ Hwy 99 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
N-OUTDOOR PLANT	12/13/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	195.3	LB	32	8S15E11
N-OUTDOOR PLANT	12/13/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	48.8	LB	8	8S15E11
N-OUTDOOR PLANT	12/13/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	115.9	LB	19	8S16E18
NECTARINE	12/17/2007	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	60	LB	10	8S15E11
ALMOND	1/10/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	56	LB	7	8S14E11
PEACH	1/11/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	200	LB	10	8S14E11
ALMOND	1/14/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	462	LB	77	8S14E11
ALMOND	1/18/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	64	LB	16	8S16E17

Figure 27. Location of Copper use for Duck Slough @ Hwy 99 site subwatershed – storm 2.



Hatch Drain @ Tuolumne Rd site subwatershed

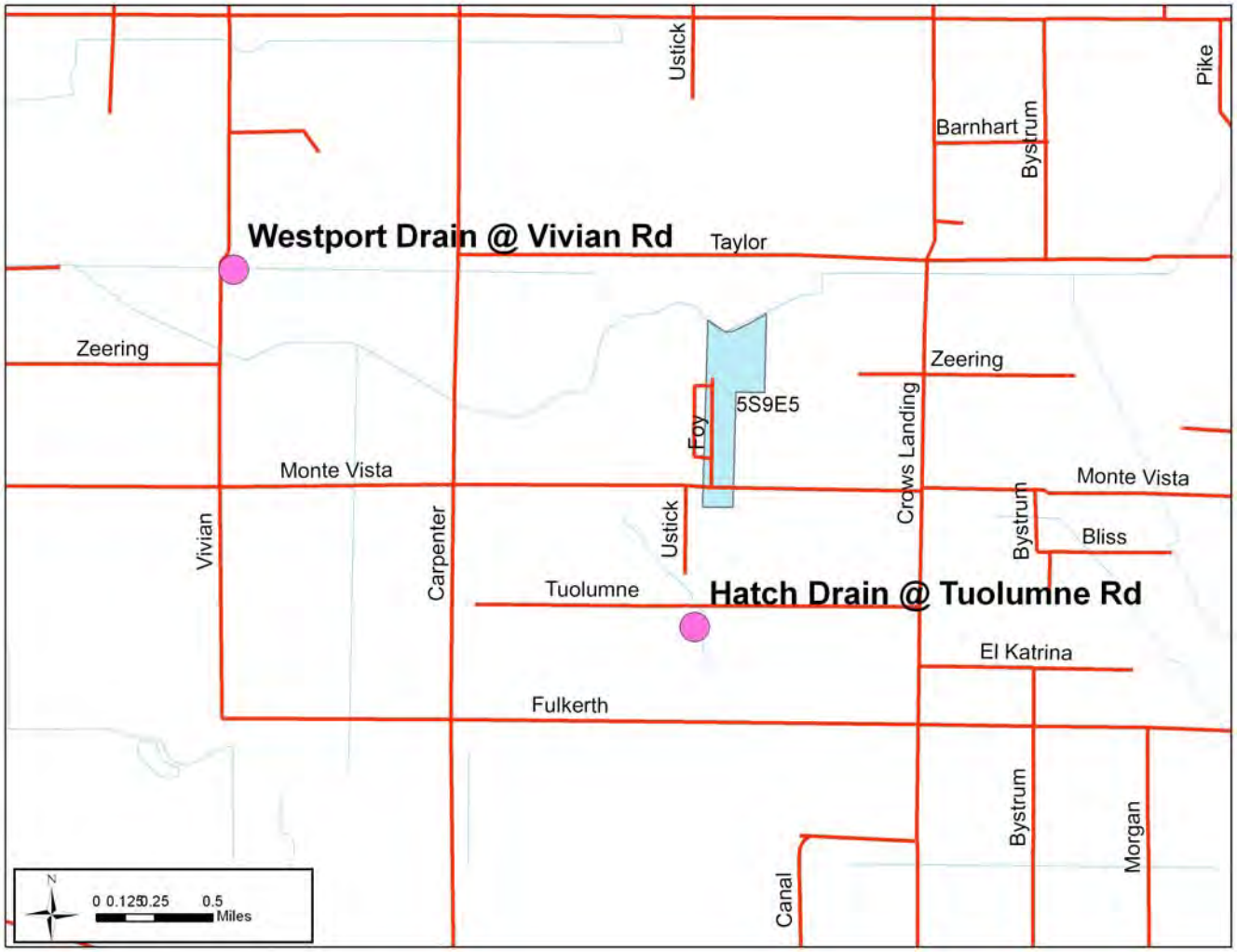
Pesticide Use Reports for sediment toxicity exceedances

Storm sediment (3/4/08) – Hyalella azteca toxicity

Table 28. Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm sediment.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/15/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	2.5	GA	10	5S9E5	24000
ALMOND	2/15/2008	GOALTENDER	OXYFLUORFEN	G	10	PT	10	5S9E5	100000
ALMOND	2/26/2008	VANGARD WG	CYPRODINIL	G	75	OZ	15	5S9E5	2030
ALFALFA	3/4/2008	NUFOS 4E	CHLORPYRIFOS	G	0.1	GA	1	5S9E5	3000
ALFALFA	3/4/2008	NUFOS 4E	CHLORPYRIFOS	G	1.17	GA	12	5S9E5	3000
ALFALFA	3/4/2008	WARRIOR INSECTICIDE WITH ZEON TECHNOLOGY	LAMBDA-CYHALOTHRIN	G	0.03	GA	1	5S9E5	180000
ALFALFA	3/4/2008	WARRIOR INSECTICIDE WITH ZEON TECHNOLOGY	LAMBDA-CYHALOTHRIN	G	0.36	GA	12	5S9E5	180000

Figure 28. Location of Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm sediment.

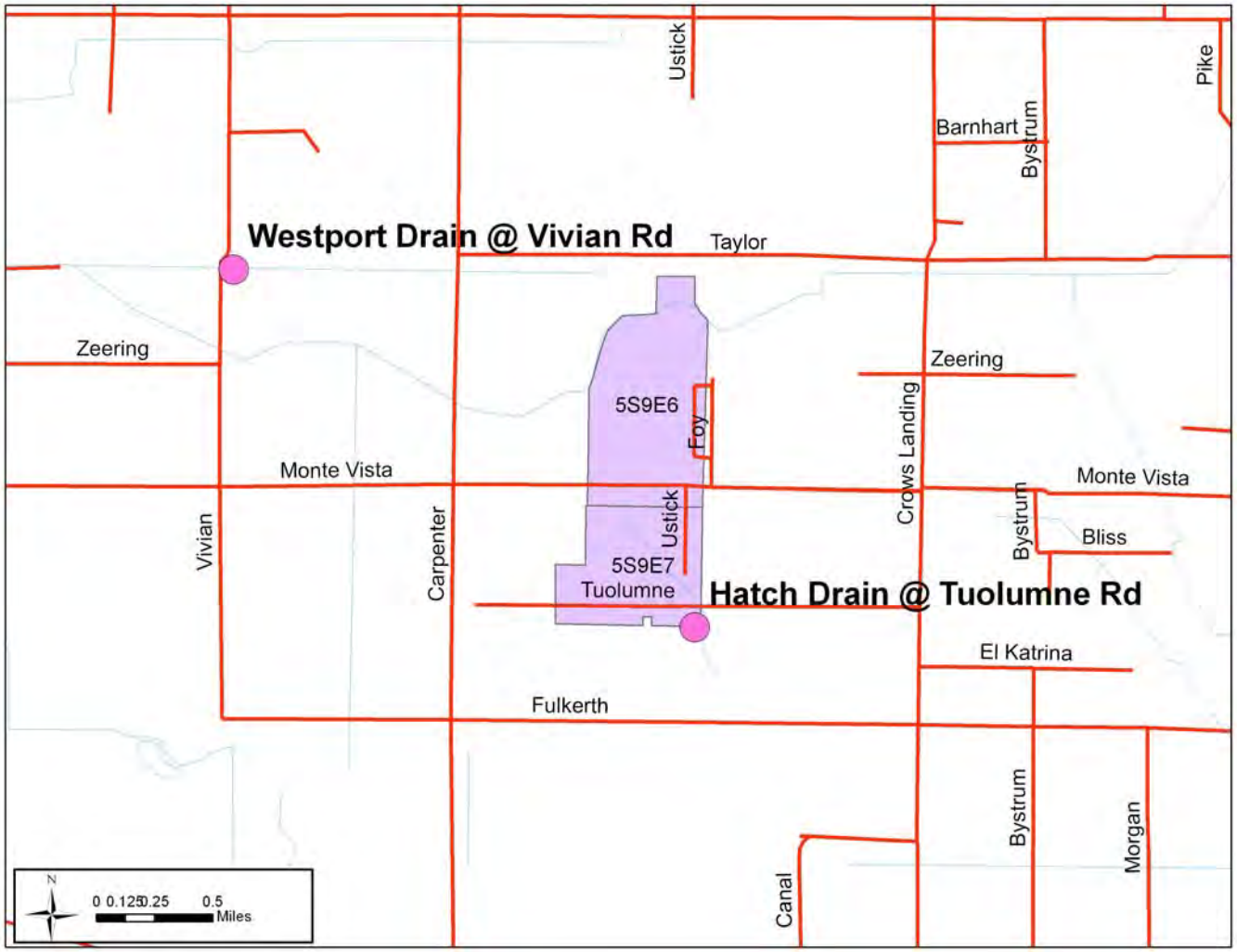


Storm sediment RS (3/28/08) – Hyalella azteca toxicity

Table 29. Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm sediment RS.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALFALFA	3/6/2008	CLEAN CROP MALATHION 8-E INSECTICIDE	MALATHION	G	1	GA	8	5S9E6	1800
ALFALFA	3/6/2008	WARRIOR INSECTICIDE WITH ZEON TECHNOLOGY	LAMBDA-CYHALOTHRIN	G	0.24	GA	8	5S9E6	180000
ALFALFA	3/7/2008	SILENCER	LAMBDA-CYHALOTHRIN	G	1.75	GA	59	5S9E7	180000
ALFALFA	3/10/2008	CLEAN CROP MALATHION 8-E INSECTICIDE	MALATHION	G	5	GA	40	5S9E7	1800
ALFALFA	3/10/2008	WARRIOR INSECTICIDE WITH ZEON TECHNOLOGY	LAMBDA-CYHALOTHRIN	G	1.2	GA	40	5S9E7	180000
ALFALFA	3/18/2008	SILENCER	LAMBDA-CYHALOTHRIN	G	0.93	GA	31	5S9E6	180000
ALFALFA	3/18/2008	SILENCER	LAMBDA-CYHALOTHRIN	G	1.65	GA	55	5S9E6	180000
ALFALFA	3/19/2008	MALATHION 8EC	MALATHION	G	2.25	GA	9	5S9E7	1800
ALFALFA	3/19/2008	WARRIOR INSECTICIDE WITH ZEON TECHNOLOGY	LAMBDA-CYHALOTHRIN	G	0.25	GA	9	5S9E7	180000

Figure 29. Location of Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm sediment RS.



Pesticide Use Reports for water column toxicity

Storm 1 (1/24/08) - Selenastrum capricornutum toxicity

Table 30. Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 1.

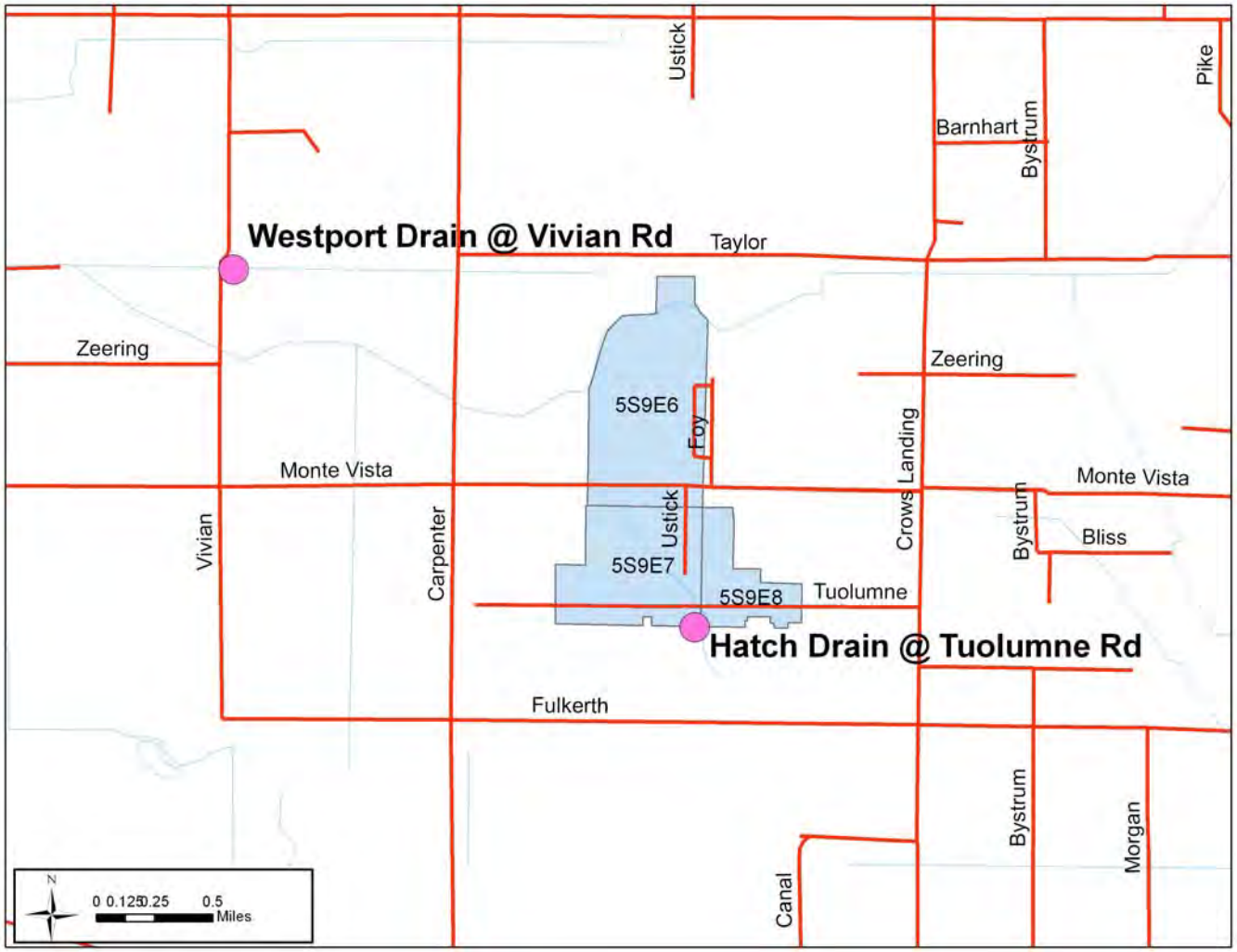
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/27/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15.27	GA	48	5S9E6
ALMOND	12/27/2007	MATRIX FHV HERBICIDE	RIMSULFURON	G	61.09	OZ	48	5S9E6
ALMOND	12/27/2007	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	3.82	GA	48	5S9E6
ALMOND	12/27/2007	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4.77	GA	48	5S9E6
ALMOND	12/27/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	9.58	GA	30.1	5S9E6
ALMOND	12/27/2007	MATRIX FHV HERBICIDE	RIMSULFURON	G	38.31	OZ	30.1	5S9E6
ALMOND	12/27/2007	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	2.39	GA	30.1	5S9E6
ALMOND	12/27/2007	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.99	GA	30.1	5S9E6
ALMOND	12/27/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	6.41	GA	17.63	5S9E6
ALMOND	12/27/2007	MATRIX FHV HERBICIDE	RIMSULFURON	G	25.64	OZ	17.63	5S9E6
ALMOND	12/27/2007	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	1.6	GA	17.63	5S9E6
ALMOND	12/27/2007	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2	GA	17.63	5S9E6
ALMOND	12/27/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	2.91	GA	8	5S9E6
ALMOND	12/27/2007	MATRIX FHV HERBICIDE	RIMSULFURON	G	11.64	OZ	8	5S9E6

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/27/2007	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	0.73	GA	8	5S9E6
ALMOND	12/27/2007	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	0.91	GA	8	5S9E6
ALMOND	12/27/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	12.73	GA	32	5S9E6
ALMOND	12/27/2007	MATRIX FHV HERBICIDE	RIMSULFURON	G	50.91	OZ	32	5S9E6
ALMOND	12/27/2007	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	3.18	GA	32	5S9E6
ALMOND	12/27/2007	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.98	GA	32	5S9E6
OAT FOR/FOD	12/28/2007	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	6.88	GA	55	5S9E6
OAT FOR/FOD	12/28/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	82.5	OZ	55	5S9E6
ALMOND	12/28/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	12.18	GA	33.5	5S9E6
ALMOND	12/28/2007	MATRIX FHV HERBICIDE	RIMSULFURON	G	48.73	OZ	33.5	5S9E6
ALMOND	12/28/2007	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	3.05	GA	33.5	5S9E6
ALMOND	12/28/2007	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.81	GA	33.5	5S9E6
ALMOND	12/28/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	9.45	GA	26	5S9E6
ALMOND	12/28/2007	MATRIX FHV HERBICIDE	RIMSULFURON	G	37.82	OZ	26	5S9E6
ALMOND	12/28/2007	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	2.36	GA	26	5S9E6
ALMOND	12/28/2007	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.95	GA	26	5S9E6
ALMOND	12/28/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	16.36	GA	45	5S9E7
ALMOND	12/28/2007	MATRIX FHV HERBICIDE	RIMSULFURON	G	65.45	OZ	45	5S9E7

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/28/2007	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	4.09	GA	45	5S9E7
ALMOND	12/28/2007	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5.11	GA	45	5S9E7
ALFALFA	12/29/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15.5	GA	31	5S9E6
ALFALFA	12/29/2007	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	7.75	GA	31	5S9E6
ALFALFA	12/29/2007	PROWL H2O HERBICIDE	PENDIMETHALIN	G	24.5	GA	49	5S9E6
ALFALFA	12/29/2007	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	12.25	GA	49	5S9E6
OAT FOR/FOD	12/29/2007	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	G	0.9	GA	7	5S9E6
OAT FOR/FOD	12/29/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	9.1	OZ	7	5S9E6
OAT FOR/FOD	12/29/2007	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	G	3.75	GA	30	5S9E8
OAT FOR/FOD	12/29/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	39	OZ	30	5S9E8
OAT FOR/FOD	12/29/2007	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	G	1.9	GA	15	5S9E8
OAT FOR/FOD	12/29/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	20	OZ	15	5S9E8
OAT FOR/FOD	12/30/2007	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	12	PT	6	5S9E7
OAT FOR/FOD	12/30/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	12	OZ	6	5S9E7
OAT FOR/FOD	12/30/2007	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	12	PT	12	5S9E8
OAT FOR/FOD	12/30/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	12	OZ	12	5S9E8
OAT FOR/FOD	12/30/2007	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	20	PT	10	5S9E8
OAT FOR/FOD	12/30/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	20	PT	10	5S9E8

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/31/2007	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	18.75	PT	15	5S9E7
ALMOND	12/31/2007	GOAL 2XL	OXYFLUORFEN	G	75	OZ	15	5S9E7
OAT FOR/FOD	1/18/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	4.63	GA	37	5S9E7
OAT FOR/FOD	1/18/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	1.16	GA	37	5S9E7
OAT FOR/FOD	1/18/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	14.63	GA	117	5S9E8
OAT FOR/FOD	1/18/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	3.66	GA	117	5S9E8
WHEAT FOR/FOD	1/23/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	3.46	GA	37	5S9E8
WHEAT FOR/FOD	1/23/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	1.15	QT	37	5S9E8

Figure 30. Location of Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 1.

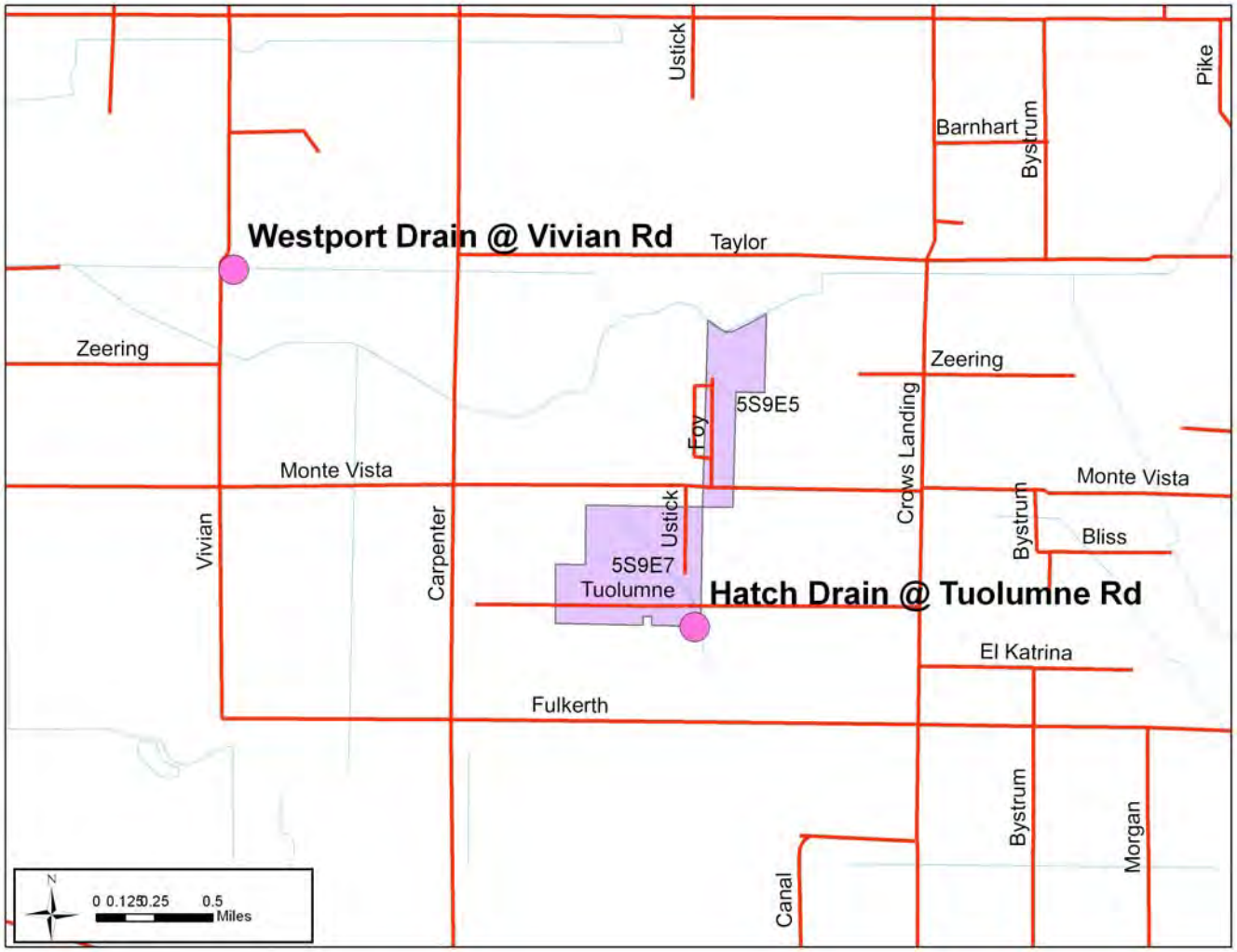


Storm 2 (2/26/08) - Selenastrum capricornutum toxicity

Table 31. Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	2/1/2008	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	17.81	GA	57	5S9E7
ALMOND	2/15/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	2.5	GA	10	5S9E5
ALMOND	2/15/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	7.5	LB	10	5S9E5
ALMOND	2/15/2008	GOALTENDER	OXYFLUORFEN	G	10	PT	10	5S9E5
ALMOND	2/15/2008	ORCHARD CLEAN 4L	2,4-D, DIMETHYLAMINE SALT	G	15	PT	10	5S9E5

Figure 31. Location of Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 2.

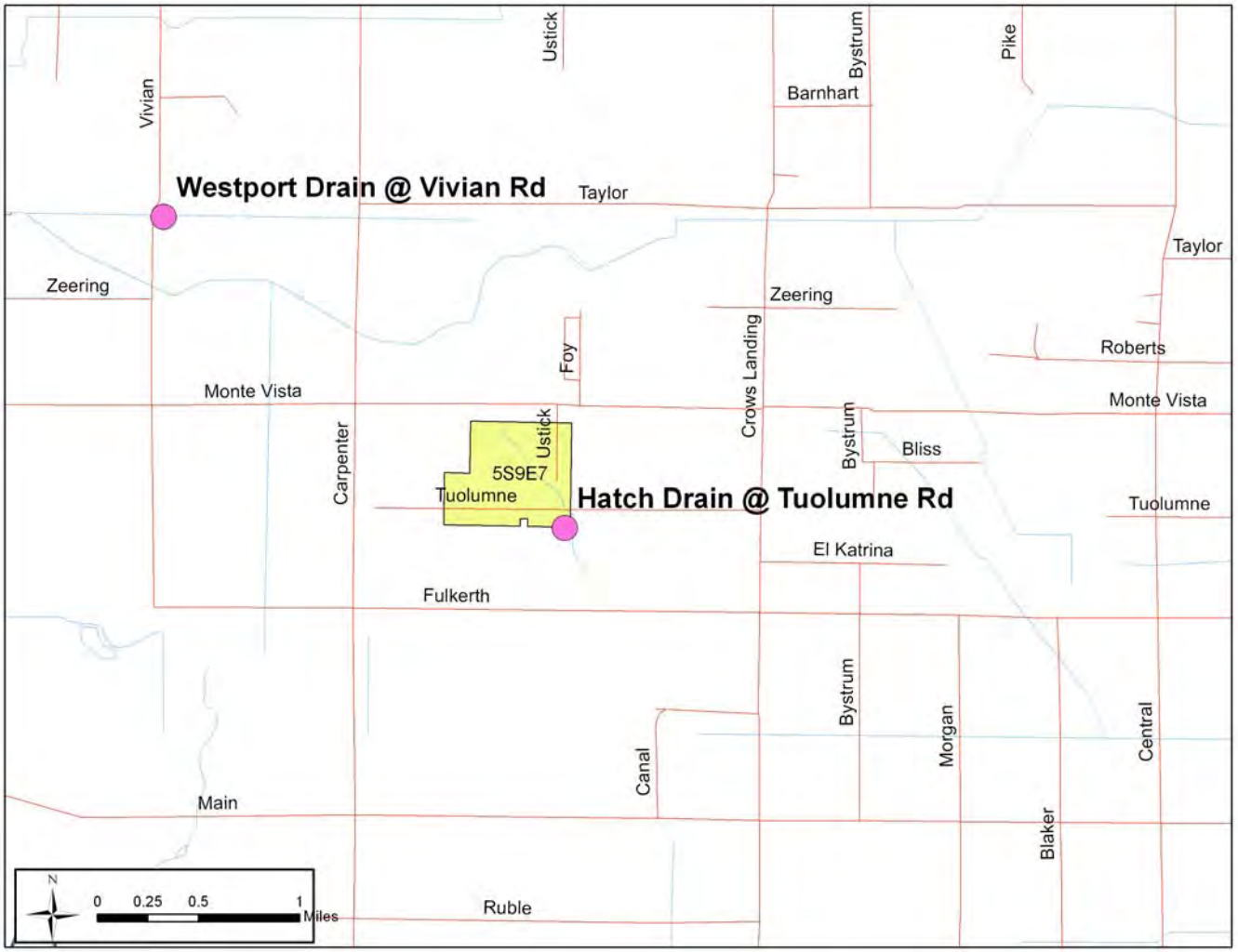


Storm 2 RS (3/4/08) - Selenastrum capricornutum toxicity

Table 32. Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 2 RS.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/29/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	67.5	LB	45	5S9E7
ALMOND	2/29/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	10.5	LB	7	5S9E7

Figure 32. Location of Pesticide use for Hatch Drain @ Tuolumne Rd site subwatershed - storm 2 RS.



Highline Canal @ Hwy 99 site subwatershed

Pesticide Use Reports for pesticide exceedances in the water column

Storm 1 (1/24/08) - chlorpyrifos exceedance

No use reported in the last 3 months.

Storm 1 (1/24/08) - diuron exceedance

No use reported in the last 3 months.

Pesticide Use Reports for metal exceedances in the water column

Storm 1 (1/24/08) - copper exceedance

Table 33. Copper use for Highline Canal @ Hwy 99 site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	11/10/2007	DUPONT KOCIDE DF FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	120	LB	15	6S11E2
ALMOND	11/26/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	556	LB	139	5S12E20
PEACH	12/8/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	442	LB	65	5S12E30
PEACH	12/9/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	217.6	LB	32	5S11E26
PEACH	12/9/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	149.6	LB	22	5S11E36
PEACH	12/13/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	163.2	LB	24	6S11E3
PEACH	12/13/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	20.4	LB	3	6S11E3
PEACH	12/13/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	136	LB	20	6S11E3
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	34.8	LB	2.32	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	54	LB	3.6	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	84	LB	5.6	5S11E34

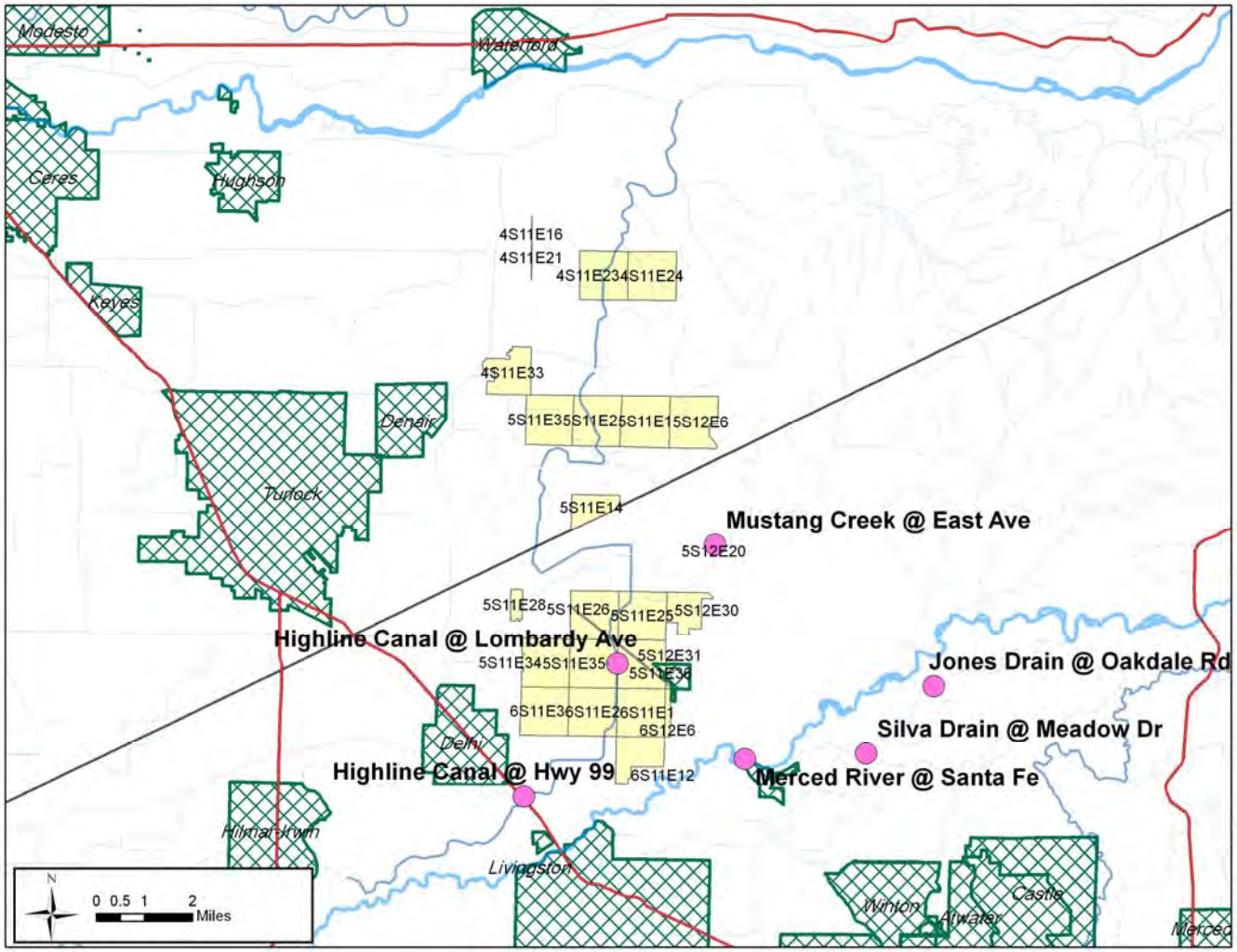
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	84.9	LB	5.66	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	270	LB	18	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	38.4	LB	2.56	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	208.5	LB	13.9	5S11E36
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	64.65	LB	4.31	6S11E3
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	53.55	LB	3.57	6S11E3
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	182.85	LB	12.19	6S11E2
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	55.35	LB	3.69	6S11E2
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	99.3	LB	6.62	6S11E2
ALMOND	12/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	240	LB	16	5S11E36
ALMOND	12/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	42.6	LB	2.84	5S11E36
PEACH	12/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	198.6	LB	13.24	5S11E36
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	128	LB	32	5S11E26
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	260	LB	65	5S12E30

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	88	LB	22	5S11E36
APRICOT	1/1/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	125.8	LB	18.5	5S11E3
PEACH	1/1/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	330	LB	22	5S11E36
PEACH	1/1/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	870	LB	58	5S11E36
PEACH	1/1/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	495	LB	33	6S11E3
PEACH	1/1/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	34	LB	5	5S11E3
ALMOND	1/2/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	390	LB	26	6S11E1
ALMOND	1/2/2008	NU-COP 50DF	COPPER HYDROXIDE	G	608	LB	76	5S12E6
PEACH	1/2/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	1350	LB	90	5S11E35
PEACH	1/2/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	465	LB	31	5S11E36
PEACH	1/3/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	540	LB	36	5S11E28
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	834	LB	139	5S12E20
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	3708	LB	618	5S11E2
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	1140	LB	190	5S11E2

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/9/2008	KOCIDE DF	COPPER HYDROXIDE	G	780	LB	135	5S11E3
ALMOND	1/10/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	600	LB	60	5S11E25
ALMOND	1/11/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	950	LB	190	5S11E14
PEACH	1/11/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	32	OZ	6.4	5S12E31
PEACH	1/11/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	25	LB	5	6S12E6
ALMOND	1/14/2008	NU-COP 50DF	COPPER HYDROXIDE	G	3480	LB	580	5S11E1
ALMOND	1/15/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	144	LB	18	6S11E1
ALMOND	1/15/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	210	LB	35	4S11E21
N-OUTDR PLANTS	1/15/2008	NU-COP 50 WP	COPPER HYDROXIDE	G	36	LB	9	4S11E33
ALMOND	1/16/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	272	LB	40	6S11E1
ALMOND	1/16/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	120	LB	20	6S11E12
ALMOND	1/16/2008	NU-COP 50DF	COPPER HYDROXIDE	G	2400	LB	400	5S11E1
ALMOND	1/18/2008	HYDROX	COPPER HYDROXIDE	G	1170	LB	195	4S11E23
ALMOND	1/18/2008	HYDROX	COPPER HYDROXIDE	G	1170	LB	195	4S11E24

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/22/2008	TRIANGLE BRAND COPPER SULFATE INSTANT PO	COPPER SULFATE (PENTAHYDRATE)	G	690	LB	69	4S11E16

Figure 33. Location of Copper use for Highline Canal @ Hwy 99 site subwatershed – storm 1.

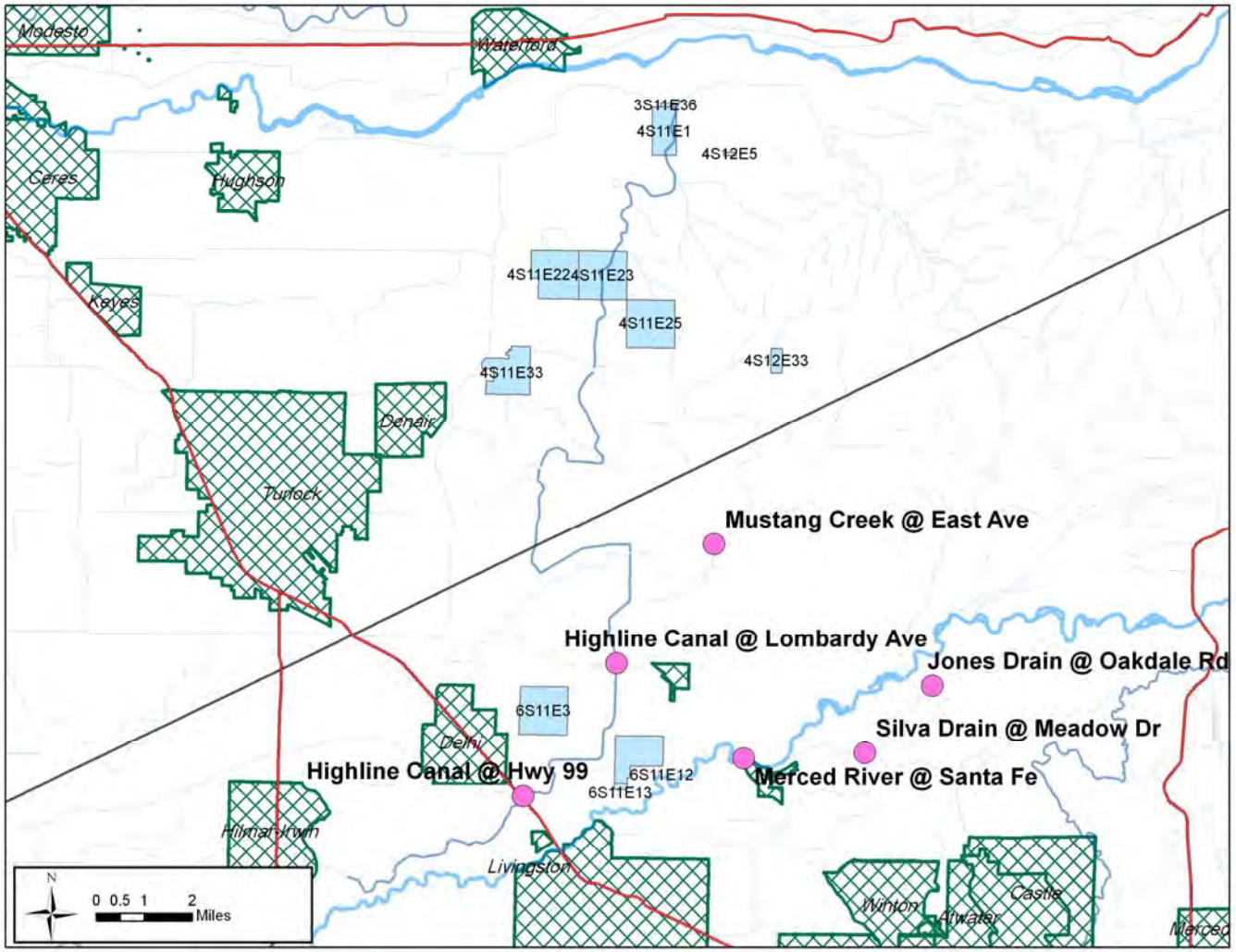


Storm 2 (2/26/08) - copper exceedance

Table 34. Copper use for Highline Canal @ Hwy 99 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/25/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	190.4	LB	28	6S11E13
ALMOND	1/29/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	1300	LB	260	4S11E25
PEACH	1/29/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	300	LB	20	6S11E12
PEACH	1/30/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	136	LB	20	6S11E3
PEACH	1/30/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	163.2	LB	24	6S11E3
PEACH	1/30/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	20.4	LB	3	6S11E3
ALMOND	1/31/2008	NU-COP 50DF	COPPER HYDROXIDE	G	592	LB	74	6S11E13
ALMOND	1/31/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	160	PT	40	4S12E5
ALMOND	1/31/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	80	PT	20	4S12E5
CHERRY	1/31/2008	CHAMPION WETTABLE POWDER	COPPER HYDROXIDE	G	30	LB	2.5	4S11E22
PEACH PROCESSNG	2/4/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	544	LB	80	4S11E23
ALMOND	2/6/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	5	GA	11	3S11E36
ALMOND	2/23/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	12.5	LB	10	4S11E1
ALMOND	2/25/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	A	94.5	LB	150	4S12E33
N-OUTDR PLANTS	2/25/2008	NU-COP 50 WP	COPPER HYDROXIDE	G	28	LB	7	4S11E33

Figure 34. Copper use for Highline Canal @ Hwy 99 site subwatershed – storm 2.



Pesticide Use Reports for sediment toxicity exceedances

Storm sediment (3/4/08) – Hyalella azteca toxicity

Table 35. Pesticide use for Highline Canal @ Hwy 99 site subwatershed – storm sediment.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	9/22/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1	100000
ALMOND	9/29/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1	100000
ALMOND	10/7/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1	100000
ALMOND	10/14/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1	100000
PEACH	12/8/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	520	OZ	65	5S12E30	5300
PEACH	12/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	256	OZ	32	5S11E26	5300
PEACH	12/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	176	OZ	22	5S11E36	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	23.2	OZ	2.32	5S11E34	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	36	OZ	3.6	5S11E34	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	56	OZ	5.6	5S11E34	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	56.6	OZ	5.66	5S11E34	5300

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	180	OZ	18	5S11E34	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	25.6	OZ	2.56	5S11E34	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	139	OZ	13.9	5S11E36	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	43.1	OZ	4.31	6S11E3	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	35.7	OZ	3.57	6S11E3	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	121.9	OZ	12.19	6S11E2	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	36.9	OZ	3.69	6S11E2	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	66.2	OZ	6.62	6S11E2	5300
ALMOND	12/21/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	160	OZ	16	5S11E36	5300
ALMOND	12/21/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	28.4	OZ	2.84	5S11E36	5300
PEACH	12/21/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	132.4	OZ	13.24	5S11E36	5300
PEACH	12/28/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	256	OZ	32	5S11E26	5300
PEACH	12/28/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	520	OZ	65	5S12E30	5300
PEACH	12/28/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	176	OZ	22	5S11E36	5300

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
APRICOT	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	177.6	OZ	18.5	5S11E3	5300
PEACH	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	281.6	OZ	22	5S11E36	5300
PEACH	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	742.4	OZ	58	5S11E36	5300
PEACH	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	422.4	OZ	33	6S11E3	5300
PEACH	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	48	OZ	5	5S11E3	5300
ALMOND	1/2/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	332.8	OZ	26	6S11E1	5300
PEACH	1/2/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1152	OZ	90	5S11E35	5300
PEACH	1/2/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	396.8	OZ	31	5S11E36	5300
PEACH	1/3/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	460.8	OZ	36	5S11E28	5300
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1779.2	OZ	139	5S12E20	5300
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	7910.4	OZ	618	5S11E2	5300
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2432	OZ	190	5S11E2	5300
ALMOND	1/9/2008	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	6.5	GA	135	5S11E3	100000
ALMOND	1/10/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	600	OZ	60	5S11E25	5300

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH	1/11/2008	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	51.2	OZ	6.4	5S12E31	100000
PEACH	1/11/2008	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	40	OZ	5	6S12E6	100000
ALMOND	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	7424	OZ	580	5S11E1	5300
ALMOND	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	172.8	OZ	18	6S11E1	5300
N-OUTDR PLANTS	1/15/2008	QUALI-PRO BIFENTHRIN NURSERY 7.9 F	BIFENTHRIN	G	90	OZ	9	4S11E33	240000
ALMOND	1/16/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	400	OZ	40	6S11E1	5300
ALMOND	1/16/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	5120	OZ	400	5S11E1	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2496	OZ	195	4S11E23	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2496	OZ	195	4S11E24	5300
ALMOND	1/25/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	280	OZ	28	6S11E13	5300
ALMOND	1/29/2008	SILENCER	LAMBDA-CYHALOTHRIN	G	832	OZ	260	4S11E25	180000
PEACH	1/29/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	200	OZ	20	6S11E12	5300
PEACH	1/30/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	120	OZ	20	6S11E3	5300
PEACH	1/30/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	144	OZ	24	6S11E3	5300

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH	1/30/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	18	OZ	3	6S11E3	5300
PEACH PROCESSNG	2/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	768	OZ	80	4S11E23	5300
ALFALFA	2/5/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	50	QT	50	3S11E36	1000000
ALMOND	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	81.82	PT	60	4S11E26	1000000
ALMOND	2/5/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	210	QT	420	4S11E25	24000
ALMOND	2/6/2008	GRAMOXONE MAX	PARAQUAT DICHLORIDE	G	2	QT	2	4S11E16	1000000
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	2	QT	2	4S11E16	100000
ALMOND	2/6/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	12000	OZ	250	4S11E24	24000
ALMOND	2/6/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	1000	PT	250	4S11E24	5000
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	4000	OZ	250	4S11E24	100000
ALMOND	2/6/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	330	QT	330	4S12E33	24000
APRICOT	2/6/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.19	GA	18.5	5S11E3	5000
APRICOT	2/6/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7.19	QT	18.5	5S11E3	24000
APRICOT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	43.17	OZ	18.5	5S11E3	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/7/2008	MON-52249 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	45	GA	140	4S12E22	24000
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	45	GA	140	4S12E22	100000
ALMOND	2/7/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	118	PT	118	4S11E26	1000000
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	177	QT	118	4S11E26	5000
ALMOND	2/8/2008	GLY-4 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4.29	GA	60	5S11E25	24000
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	1.07	GA	60	5S11E25	100000
ALMOND	2/8/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	15	QT	36	3S11E36	24000
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	60	PT	36	3S11E36	100000
ALMOND	2/8/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	220	PT	158	4S11E34	1000000
ALMOND	2/8/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	528.05	PT	158	4S11E34	5000
ALMOND	2/8/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.5	GA	17	5S11E17	24000
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	10	GA	17	5S11E17	100000
ALMOND	2/9/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	6.75	GA	18	5S11E34	24000
ALMOND	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	2.25	GA	18	5S11E34	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/9/2008	ACUMEN HERBICIDE	PENDIMETHALIN	G	0.75	GA	16	4S11E16	5000
ALMOND	2/9/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.5	GA	16	4S11E16	24000
ALMOND	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	0.75	GA	16	4S11E16	100000
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	50	GA	190	4S11E24	5000
ALMOND	2/9/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	190	QT	190	4S11E24	24000
ALMOND	2/9/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	60	GA	190	4S11E24	100000
ALMOND	2/9/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	2.613	GA	10.45	4S11E25	1000000
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	3.871	GA	7.74	4S11E25	5000
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5.226	GA	10.45	4S11E25	5000
ALMOND	2/9/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	1.936	GA	7.74	4S11E25	1000000
ALMOND	2/9/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	195	PT	128.7	4S12E33	1000000
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	234	QT	128.7	4S12E33	5000
ALMOND	2/10/2008	GLY-4 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.5	GA	10	3S12E31	24000
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	1.25	GA	10	3S12E31	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/12/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	114.29	GA	304.76	4S12E6	1000000
ALMOND	2/12/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	914.28	PT	304.76	4S12E6	5000
ALMOND	2/13/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	139.44	PT	111.5	4S11E26	1000000
ALMOND	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	167.33	QT	111.5	4S11E26	5000
ALMOND	2/13/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	24	GA	137	5S11E3	1000000
ALMOND	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	51	GA	137	5S11E3	5000
ALMOND	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	17	GA	137	5S11E3	100000
ALMOND	2/14/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	200	PT	25	5S11E34	5000
ALMOND	2/14/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	50	PT	25	5S11E34	24000
ALMOND	2/14/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	75	PT	25	5S11E34	100000
GRAPE	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	12	PT	6	5S11E5	100000
ALMOND	2/15/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	600	QT	600	4S11E12	24000
ALMOND	2/15/2008	GLY-4 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	73.75	GA	413	5S11E11	24000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	196.67	GA	413	5S11E11	100000

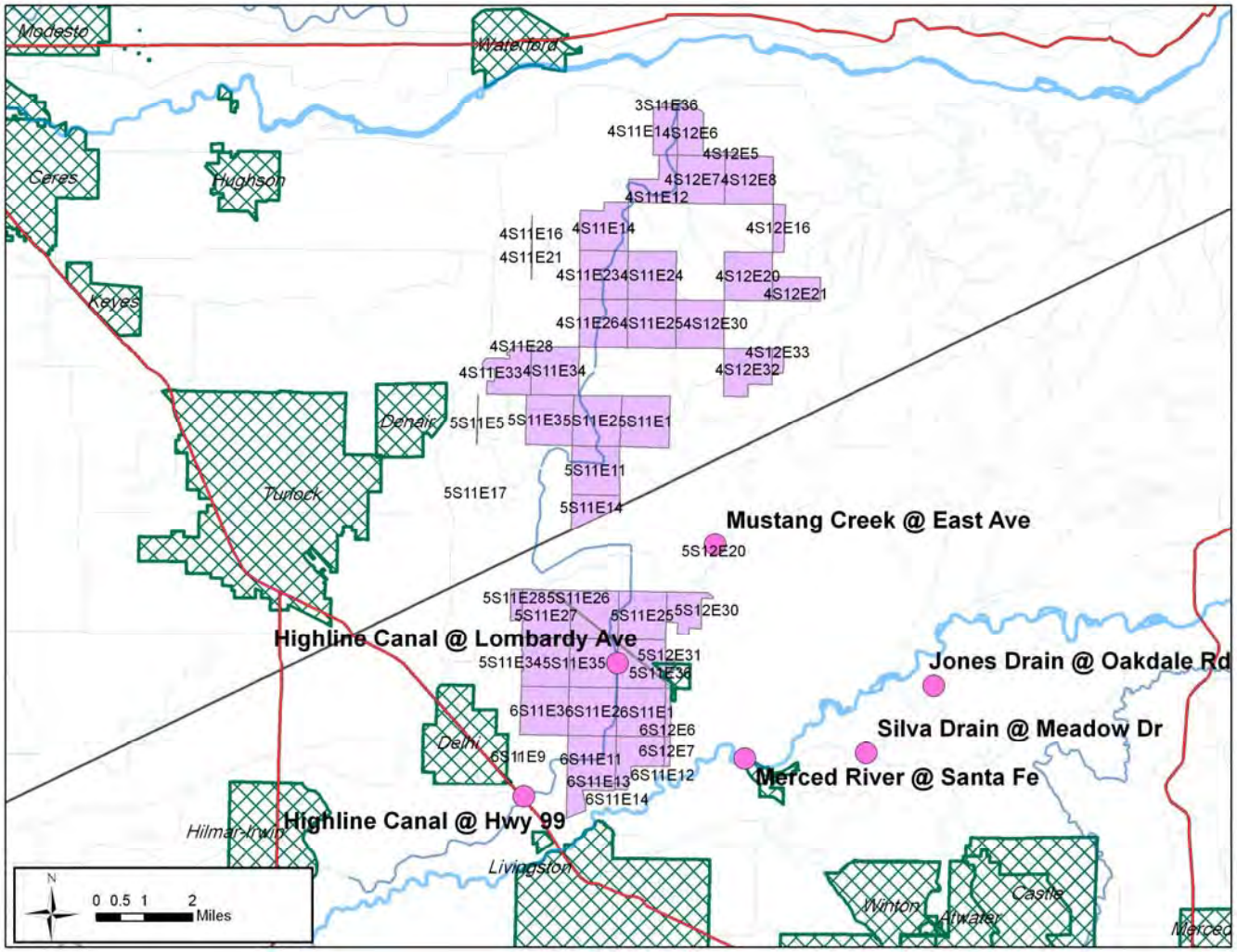
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/16/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20.4	PT	34	4S11E16	24000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	65.28	OZ	34	4S11E16	100000
ALMOND	2/18/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	114.29	GA	304.76	4S12E7	1000000
ALMOND	2/18/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	914.28	PT	304.76	4S12E7	5000
ALMOND	2/21/2008	VANGARD WG	CYPRODINIL	G	900	OZ	180	4S11E26	2030
ALMOND	2/21/2008	DIMILIN 2L	DIFLUBENZURON	G	2304	OZ	180	4S11E26	10000
ALMOND	2/22/2008	VANGARD WG	CYPRODINIL	G	63	LB	202	4S11E16	2030
ALMOND	2/22/2008	VANGARD WG	CYPRODINIL	G	190	OZ	38	4S11E25	2030
ALMOND	2/22/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3	GA	60	5S11E3	24000
ALMOND	2/23/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	240	GA	640	4S12E8	1000000
ALMOND	2/23/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	1920	PT	640	4S12E8	5000
ALMOND	2/23/2008	VANGARD WG	CYPRODINIL	G	74	LB	235.5	4S11E21	2030
ALMOND	2/24/2008	VANGARD WG	CYPRODINIL	G	20	LB	62.5	4S11E28	2030
ALMOND	2/25/2008	VANGARD WG	CYPRODINIL	G	100	OZ	20	3S11E36	2030
ALMOND	2/26/2008	DIMILIN 2L	DIFLUBENZURON	G	1600	OZ	125	4S12E16	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	1689.6	OZ	132	4S11E1	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	256	OZ	20	4S11E1	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	4096	OZ	320	4S12E8	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	1280	OZ	100	4S12E30	10000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH PROCESSNG	2/27/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15.56	GA	80	4S11E23	5000
PEACH PROCESSNG	2/27/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	46.67	QT	80	4S11E23	24000
ALMOND	2/28/2008	AUXIGRO WP WETTABLE POWDER	GAMMA AMINOBUTYRIC ACID	G	140	OZ	35	4S11E21	2000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	1920	OZ	150	4S12E20	10000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	3200	OZ	250	4S12E21	10000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	1300	OZ	260	4S11E26	2030
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	3328	OZ	260	4S11E26	10000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	750	OZ	150	4S12E33	2030
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	1920	OZ	150	4S12E33	10000
ALMOND	2/28/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20	PT	20	5S11E1	24000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	2560	OZ	200	5S11E11	10000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	780	OZ	156	5S11E14	2030
ALMOND	2/29/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	9	QT	27	3S11E36	24000
ALMOND	2/29/2008	DIMILIN 2L	DIFLUBENZURON	G	320	OZ	25	4S12E5	10000
ALMOND	2/29/2008	DIMILIN 2L	DIFLUBENZURON	G	512	OZ	40	4S12E5	10000
ALMOND	2/29/2008	VANGARD WG	CYPRODINIL	A	90	OZ	18	5S11E17	2030
ALMOND	2/29/2008	VANGARD WG	CYPRODINIL	G	170	OZ	34	5S11E14	2030
ALMOND	3/1/2008	AGRISOLUTIONS CORNERSTONE PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	QT	3.3	5S11E27	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	3/1/2008	GOAL 2XL	OXYFLUORFEN	G	13	OZ	3.3	5S11E27	100000
ALMOND	3/1/2008	DIMILIN 2L	DIFLUBENZURON	G	912	OZ	76	5S11E25	10000
ALMOND	3/1/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	798	OZ	76	5S11E25	16000
ALMOND	3/1/2008	DIMILIN 2L	DIFLUBENZURON	G	480	OZ	40	5S11E25	10000
ALMOND	3/1/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	420	OZ	40	5S11E25	16000
ALMOND	3/1/2008	VANGARD WG	CYPRODINIL	G	200.16	OZ	36	3S11E36	2030
ALMOND	3/2/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	6000	OZ	600	4S11E12	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	600	OZ	60	5S11E26	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	318	OZ	31.8	5S12E31	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	316	OZ	31.6	5S12E31	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	351	OZ	35.1	6S12E6	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	100	OZ	10	6S11E12	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	100	OZ	10	6S11E9	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	200	OZ	20	6S11E14	16000
ALMOND	3/3/2008	DIMILIN 2L	DIFLUBENZURON	G	4	GA	40	3S12E31	10000
ALMOND	3/3/2008	DIMILIN 2L	DIFLUBENZURON	G	4	GA	40	4S11E14	10000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	30	LB	40	4S11E14	16000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	3/3/2008	DIMILIN 2L	DIFLUBENZURON	G	13	GA	130	4S11E14	10000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	97.5	LB	130	4S11E14	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	500	OZ	50	4S11E25	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	4200	OZ	420	4S11E25	16000
ALMOND	3/4/2008	DIMILIN 2L	DIFLUBENZURON	G	6.9	GA	69	5S11E28	10000
ALMOND	3/4/2008	DIMILIN 2L	DIFLUBENZURON	G	371.2	OZ	29	6S11E11	10000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	150	OZ	18	6S11E12	16000
ALMOND	3/4/2008	ESTEEM 35 WP INSECT GROWTH REGULATOR	PYRIPROXYFEN	G	36	OZ	18	6S11E12	11600
ALMOND	3/4/2008	DIMILIN 2L	DIFLUBENZURON	G	409.6	OZ	32	6S12E7	10000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	294.4	OZ	23	6S11E13	16000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	350	OZ	35	5S11E27	16000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	460	OZ	46	5S11E36	16000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	490	OZ	35	4S11E21	16000
ALMOND	3/4/2008	VANGARD WG	CYPRODINIL	G	575	OZ	115	4S11E26	2030
ALMOND	3/4/2008	VANGARD WG	CYPRODINIL	G	300	OZ	60	4S12E32	2030

Figure 35. Location of Pesticide use for Highline Canal @ Hwy 99 site subwatershed – storm sediment.



Pesticide Use Reports for water column toxicity

Storm 2 (2/26/08) - Selenastrum capricornutum toxicity

Table 36. Pesticide use for Highline Canal @ Hwy 99 site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	11/26/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	556	LB	139	5S12E20
PEACH	12/8/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	442	LB	65	5S12E30
PEACH	12/9/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	217.6	LB	32	5S11E26
PEACH	12/9/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	149.6	LB	22	5S11E36
PEACH	12/13/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	163.2	LB	24	6S11E3
PEACH	12/13/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	20.4	LB	3	6S11E3
PEACH	12/13/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	136	LB	20	6S11E3
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	34.8	LB	2.32	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	54	LB	3.6	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	84	LB	5.6	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	84.9	LB	5.66	5S11E34

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	270	LB	18	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	38.4	LB	2.56	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	208.5	LB	13.9	5S11E36
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	64.65	LB	4.31	6S11E3
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	53.55	LB	3.57	6S11E3
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	182.85	LB	12.19	6S11E2
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	55.35	LB	3.69	6S11E2
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	99.3	LB	6.62	6S11E2
ALMOND	12/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	240	LB	16	5S11E36
ALMOND	12/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	42.6	LB	2.84	5S11E36
PEACH	12/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	198.6	LB	13.24	5S11E36
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	128	LB	32	5S11E26
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	260	LB	65	5S12E30
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	88	LB	22	5S11E36

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	1/1/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	330	LB	22	5S11E36
PEACH	1/1/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	870	LB	58	5S11E36
PEACH	1/1/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	495	LB	33	6S11E3
ALMOND	1/2/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	390	LB	26	6S11E1
PEACH	1/2/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	1350	LB	90	5S11E35
PEACH	1/2/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	465	LB	31	5S11E36
PEACH	1/3/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	540	LB	36	5S11E28
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	834	LB	139	5S12E20
ALMOND	1/10/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	600	LB	60	5S11E25
PEACH	1/11/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	32	OZ	6.4	5S12E31
PEACH	1/11/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	25	LB	5	6S12E6
ALMOND	1/15/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	144	LB	18	6S11E1
ALMOND	1/16/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	272	LB	40	6S11E1
ALMOND	1/16/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	120	LB	20	6S11E12

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/25/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	190.4	LB	28	6S11E13
ALMOND	1/28/2008	GOAL 2XL	OXYFLUORFEN	G	17.5	OZ	10.5	5S11E36
ALMOND	1/29/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	9	QT	15	6S12E6
ALMOND	1/29/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	84	OZ	15	6S12E6
ALMOND	1/29/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	96	OZ	16	6S11E12
ALMOND	1/29/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	43	PT	16	6S11E12
OAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	3.25	GA	26	6S11E14
OAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.81	QT	26	6S11E14
OAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	4.75	GA	38	6S11E14
OAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	1.19	QT	38	6S11E14
OAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	8.38	GA	67	6S11E13
OAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	2.09	QT	67	6S11E13
PEACH	1/29/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	300	LB	20	6S11E12
UNCUL NON-AG	1/29/2008	GLYFOS BULK	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4	GA	10	5S12E5

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
UNCUL NON-AG	1/29/2008	SIM-TROL 4L	SIMAZINE	G	16	PT	10	5S12E5
ALMOND	1/30/2008	DUPONT MATRIX FNV HERBICIDE	RIMSULFURON	G	6.36	OZ	7	6S11E11
ALMOND	1/30/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	2.39	QT	7	6S11E11
ALMOND	1/30/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.18	QT	7	6S11E11
ALMOND	1/30/2008	METHYL BROMIDE 98%	METHYL BROMIDE	G	220.99	LB	41	6S11E10
ALMOND	1/30/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	6080	OZ	190	4S11E24
ALMOND	1/30/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	3040	OZ	190	4S11E24
PEACH	1/30/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	136	LB	20	6S11E3
PEACH	1/30/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	163.2	LB	24	6S11E3
PEACH	1/30/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	20.4	LB	3	6S11E3
ALMOND	1/31/2008	NU-COP 50DF	COPPER HYDROXIDE	G	592	LB	74	6S11E13
ALMOND	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20	GA	80	4S11E13
ALMOND	1/31/2008	SURFLAN A.S.	ORYZALIN	G	80	GA	80	4S11E13
ALMOND	1/31/2008	GOAL 2XL	OXYFLUORFEN	G	5	GA	80	4S11E13

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/31/2008	ORCHARD CLEAN 4L	2,4-D, DIMETHYLAMINE SALT	G	30	GA	80	4S11E13
ALMOND	1/31/2008	PRINCEP 4L	SIMAZINE	G	276	PT	138	4S11E26
ALMOND	1/31/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	103.5	LB	138	4S11E26
ALMOND	1/31/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	207	PT	138	4S11E26
ALMOND	1/31/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	207	PT	138	4S11E26
ALMOND	1/31/2008	ALECTO 41S	GLYPHOSATE	G	149.09	PT	205	4S11E25
ALMOND	1/31/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	149.09	PT	205	4S11E25
ALMOND	1/31/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	149.09	PT	205	4S11E25
ALMOND	1/31/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	145.45	LB	160	4S12E27
ALMOND	1/31/2008	ALECTO 41S	GLYPHOSATE	G	174.55	PT	160	4S12E27
ALMOND	1/31/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	116.36	PT	160	4S12E27
ALMOND	1/31/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	116.36	PT	160	4S12E27
OAT FOR/FOD	1/31/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	58.83	PT	58.83	4S11E35
OAT FOR/FOD	1/31/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	80.01	OZ	58.83	4S11E35

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	1/31/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	159	PT	159	4S11E35
OAT FOR/FOD	1/31/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	216.24	OZ	159	4S11E35
OAT FOR/FOD	1/31/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	63.87	PT	63.87	4S11E35
OAT FOR/FOD	1/31/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	86.86	OZ	63.87	4S11E35
OAT FOR/FOD	1/31/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	141	PT	141	4S11E35
OAT FOR/FOD	1/31/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	191.76	OZ	141	4S11E35
ALMOND	2/1/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	80	GA	160	4S11E14
ALMOND	2/1/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	160	GA	160	4S11E14
ALMOND	2/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	12	QT	6	5S12E6
ALMOND	2/1/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	12	QT	6	5S12E6
OAT FOR/FOD	2/1/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	38	PT	38	4S11E33

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	2/1/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	38	OZ	38	4S11E33
OAT FOR/FOD	2/1/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	50	PT	50	4S11E33
OAT FOR/FOD	2/1/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	50	OZ	50	4S11E33
OAT FOR/FOD	2/1/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	41	PT	41	4S11E33
OAT FOR/FOD	2/1/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	41	OZ	41	4S11E33
ALMOND	2/2/2008	MON-52249 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.5	GA	11	3S11E36
ALMOND	2/2/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	4	QT	11	3S11E36
ALMOND	2/2/2008	ORYZALIN 4 A.S.	ORYZALIN	G	4	QT	11	3S11E36
ALMOND	2/2/2008	PRINCEP 4L	SIMAZINE	G	240	PT	114	4S11E11
ALMOND	2/2/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	90	LB	114	4S11E11
ALMOND	2/2/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	180	PT	114	4S11E11
ALMOND	2/2/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	180	PT	114	4S11E11
ALMOND	2/4/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	136.36	LB	150	4S12E33
ALMOND	2/4/2008	ALECTO 41S	GLYPHOSATE	G	163.64	PT	150	4S12E33

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/4/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	109.09	PT	150	4S12E33
ALMOND	2/4/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	109.09	PT	150	4S12E33
WALNUT	2/4/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	48	PT	24	3S12E31
WALNUT	2/4/2008	DIREX 4L HERBICIDE	DIURON	G	72	PT	24	3S12E31
WALNUT	2/4/2008	SIM-TROL 4L	SIMAZINE	G	72	PT	24	3S12E31
WALNUT	2/4/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	48	PT	24	3S12E31
WALNUT	2/4/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	44	PT	22	3S12E31
WALNUT	2/4/2008	DIREX 4L HERBICIDE	DIURON	G	66	PT	22	3S12E31
WALNUT	2/4/2008	SIM-TROL 4L	SIMAZINE	G	66	PT	22	3S12E31
WALNUT	2/4/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	44	PT	22	3S12E31
ALFALFA	2/5/2008	DIREX 4L HERBICIDE	DIURON	G	150	PT	50	3S11E36
ALFALFA	2/5/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	50	QT	50	3S11E36
ALMOND	2/5/2008	PRINCEP 4L	SIMAZINE	G	130.91	PT	60	4S11E26
ALMOND	2/5/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	49.09	LB	60	4S11E26
ALMOND	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	81.82	PT	60	4S11E26
ALMOND	2/5/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	81.82	PT	60	4S11E26

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/5/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	210	QT	420	4S11E25
OAT FOR/FOD	2/5/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	1040	OZ	60	5S11E28
OAT FOR/FOD	2/5/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	65	OZ	60	5S11E28
WALNUT	2/5/2008	TELONE II CA	1,3-DICHLOROPROPENE	G	53.12	GA	1.66	5S11E26
WHEAT FOR/FOD	2/5/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	528	OZ	55	3S11E36
WHEAT FOR/FOD	2/5/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	44	OZ	55	3S11E36
ALMOND	2/6/2008	PRINCEP 4L	SIMAZINE	G	1	QT	2	4S11E16
ALMOND	2/6/2008	GRAMOXONE MAX	PARAQUAT DICHLORIDE	G	2	QT	2	4S11E16
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	2	QT	2	4S11E16
ALMOND	2/6/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	12000	OZ	250	4S11E24
ALMOND	2/6/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	1000	PT	250	4S11E24
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	4000	OZ	250	4S11E24
ALMOND	2/6/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	330	QT	330	4S12E33
APRICOT	2/6/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.19	GA	18.5	5S11E3

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
APRICOT	2/6/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7.19	QT	18.5	5S11E3
APRICOT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	43.17	OZ	18.5	5S11E3
ALMOND	2/7/2008	MON-52249 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	45	GA	140	4S12E22
ALMOND	2/7/2008	SIM-TROL 4L	SIMAZINE	G	22.5	GA	140	4S12E22
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	45	GA	140	4S12E22
ALMOND	2/7/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	88.5	LB	118	4S11E26
ALMOND	2/7/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	118	PT	118	4S11E26
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	177	QT	118	4S11E26
ALMOND	2/7/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	118	PT	118	4S11E26
ALMOND	2/8/2008	GLY-4 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4.29	GA	60	5S11E25
ALMOND	2/8/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	4.29	GA	60	5S11E25
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	1.07	GA	60	5S11E25
ALMOND	2/8/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	15	QT	36	3S11E36
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	60	PT	36	3S11E36

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/8/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	60	QT	36	3S11E36
ALMOND	2/8/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	132.01	LB	158	4S11E34
ALMOND	2/8/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	220	PT	158	4S11E34
ALMOND	2/8/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	528.05	PT	158	4S11E34
ALMOND	2/8/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	264.03	PT	158	4S11E34
ALMOND	2/8/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.5	GA	17	5S11E17
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	10	GA	17	5S11E17
ALMOND	2/8/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	10	GA	17	5S11E17
ALMOND	2/9/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	6.75	GA	18	5S11E34
ALMOND	2/9/2008	2, 4-D AMINE 4 HERBICIDE	2,4-D, DIMETHYLAMINE SALT	G	6.75	GA	18	5S11E34
ALMOND	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	2.25	GA	18	5S11E34
ALMOND	2/9/2008	ACUMEN HERBICIDE	PENDIMETHALIN	G	0.75	GA	16	4S11E16
ALMOND	2/9/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.5	GA	16	4S11E16
ALMOND	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	0.75	GA	16	4S11E16

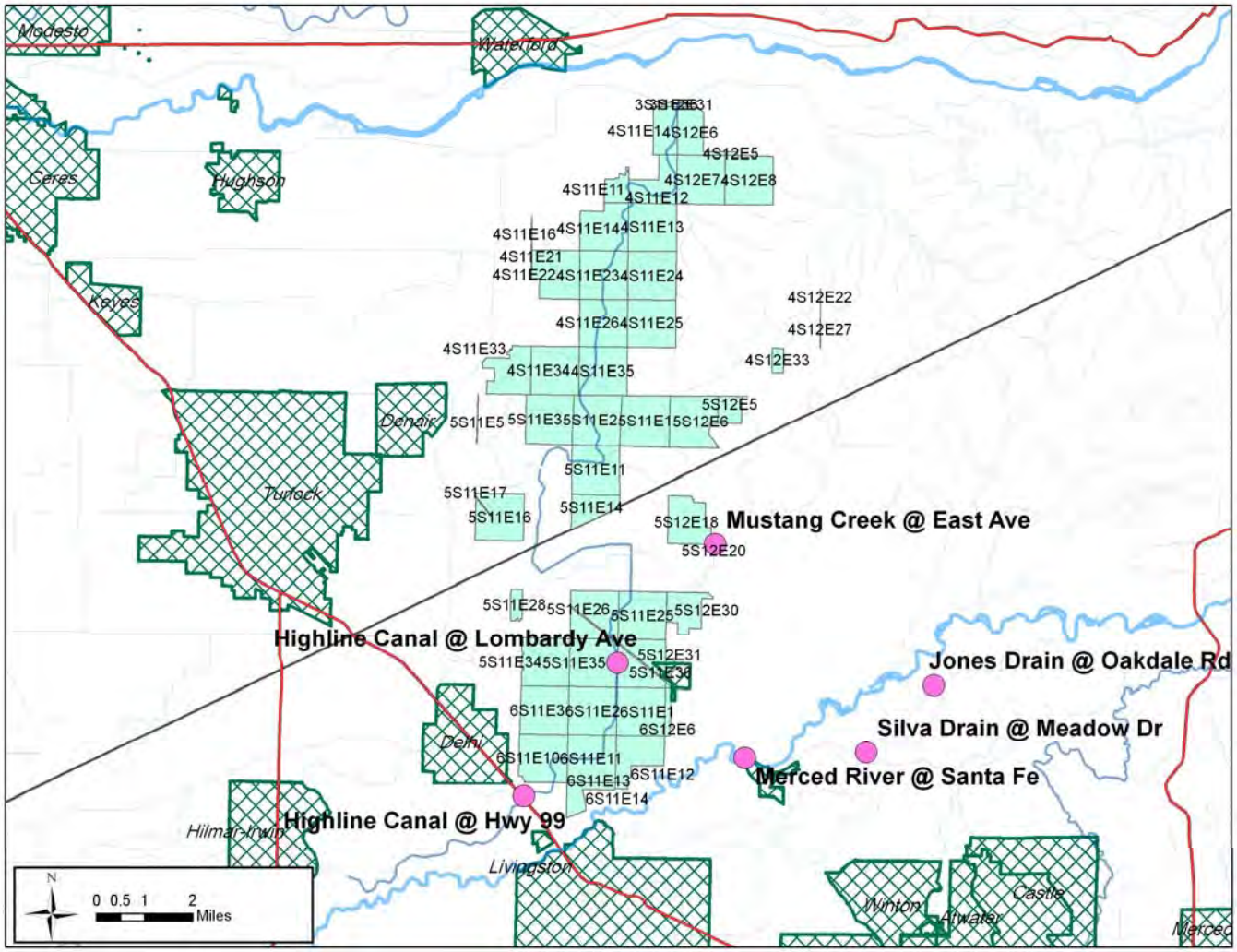
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	50	GA	190	4S11E24
ALMOND	2/9/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	190	QT	190	4S11E24
ALMOND	2/9/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	60	GA	190	4S11E24
ALMOND	2/9/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	11.613	LB	7.74	4S11E25
ALMOND	2/9/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	15.677	LB	10.45	4S11E25
ALMOND	2/9/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	2.613	GA	10.45	4S11E25
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	3.871	GA	7.74	4S11E25
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5.226	GA	10.45	4S11E25
ALMOND	2/9/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	5.226	GA	10.45	4S11E25
ALMOND	2/9/2008	2, 4-D AMINE 4 HERBICIDE	2,4-D, DIMETHYLAMINE SALT	G	0.968	GA	7.74	4S11E25
ALMOND	2/9/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	1.936	GA	7.74	4S11E25
ALMOND	2/9/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	117	LB	128.7	4S12E33
ALMOND	2/9/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	195	PT	128.7	4S12E33
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	234	QT	128.7	4S12E33
ALMOND	2/9/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	234	PT	128.7	4S12E33
ALMOND	2/10/2008	GLY-4 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.5	GA	10	3S12E31

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	1.25	GA	10	3S12E31
ALMOND	2/12/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	114.29	GA	304.76	4S12E6
ALMOND	2/12/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	914.28	PT	304.76	4S12E6
ALMOND	2/12/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	114.29	GA	304.76	4S12E6
ALMOND	2/13/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	83.66	LB	111.5	4S11E26
ALMOND	2/13/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	139.44	PT	111.5	4S11E26
ALMOND	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	167.33	QT	111.5	4S11E26
ALMOND	2/13/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	167.33	PT	111.5	4S11E26
ALMOND	2/13/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	24	GA	137	5S11E3
ALMOND	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	51	GA	137	5S11E3
ALMOND	2/13/2008	SIM-TROL 9DF	SIMAZINE	G	33	LB	137	5S11E3
ALMOND	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	17	GA	137	5S11E3
OAT FOR/FOD	2/13/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	333	PT	333	5S12E18
OAT FOR/FOD	2/13/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	266.4	OZ	333	5S12E18
ALMOND	2/14/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	200	PT	25	5S11E34
ALMOND	2/14/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	50	PT	25	5S11E34

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/14/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	75	PT	25	5S11E34
GRAPE	2/14/2008	RELY HERBICIDE	GLUFOSINATE-AMMONIUM	G	6	QT	6	5S11E5
GRAPE	2/14/2008	SIM-TROL 4L	SIMAZINE	G	3.34	PT	6	5S11E5
GRAPE	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	12	PT	6	5S11E5
ALMOND	2/15/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	600	QT	600	4S11E12
ALMOND	2/15/2008	GLY-4 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	73.75	GA	413	5S11E11
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	196.67	GA	413	5S11E11
ALMOND	2/15/2008	SURFLAN A.S. AGRICULTURAL HERBICIDE	ORYZALIN	G	196.67	GA	413	5S11E11
ALMOND	2/16/2008	METHYL BROMIDE 98%	METHYL BROMIDE	G	175	LBS	20	5S11E26
ALMOND	2/16/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20.4	PT	34	4S11E16
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	65.28	OZ	34	4S11E16
OAT FOR/FOD	2/16/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	43.75	GA	350	5S11E16
OAT FOR/FOD	2/16/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	8.75	QT	350	5S11E16
ALMOND	2/18/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	114.29	GA	304.76	4S12E7

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/18/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	914.28	PT	304.76	4S12E7
ALMOND	2/18/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	114.29	GA	304.76	4S12E7
OAT FOR/FOD	2/18/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	20	PT	20	4S11E21
OAT FOR/FOD	2/18/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	32	OZ	20	4S11E21
OAT FOR/FOD	2/19/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	46.9	GA	150	5S12E5
OAT FOR/FOD	2/19/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	61.25	GA	196	5S12E5
OAT FOR/FOD	2/19/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	57.5	GA	184	5S12E5
ALMOND	2/22/2008	TELONE II CA	1,3-DICHLOROPROPENE	G	219.05	GA	6.5	5S11E26
ALMOND	2/22/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3	GA	60	5S11E3
ALMOND	2/23/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	240	GA	640	4S12E8
ALMOND	2/23/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	1920	PT	640	4S12E8
ALMOND	2/23/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	240	GA	640	4S12E8

Figure 36. Pesticide use for Highline Canal @ Hwy 99 site subwatershed – storm 2.



Highline Canal @ Lombardy site subwatershed

Pesticide Use Reports for pesticide exceedances in the water column

Storm 1 (1/24/08) - chlorpyrifos exceedance

No use reported since August 2007.

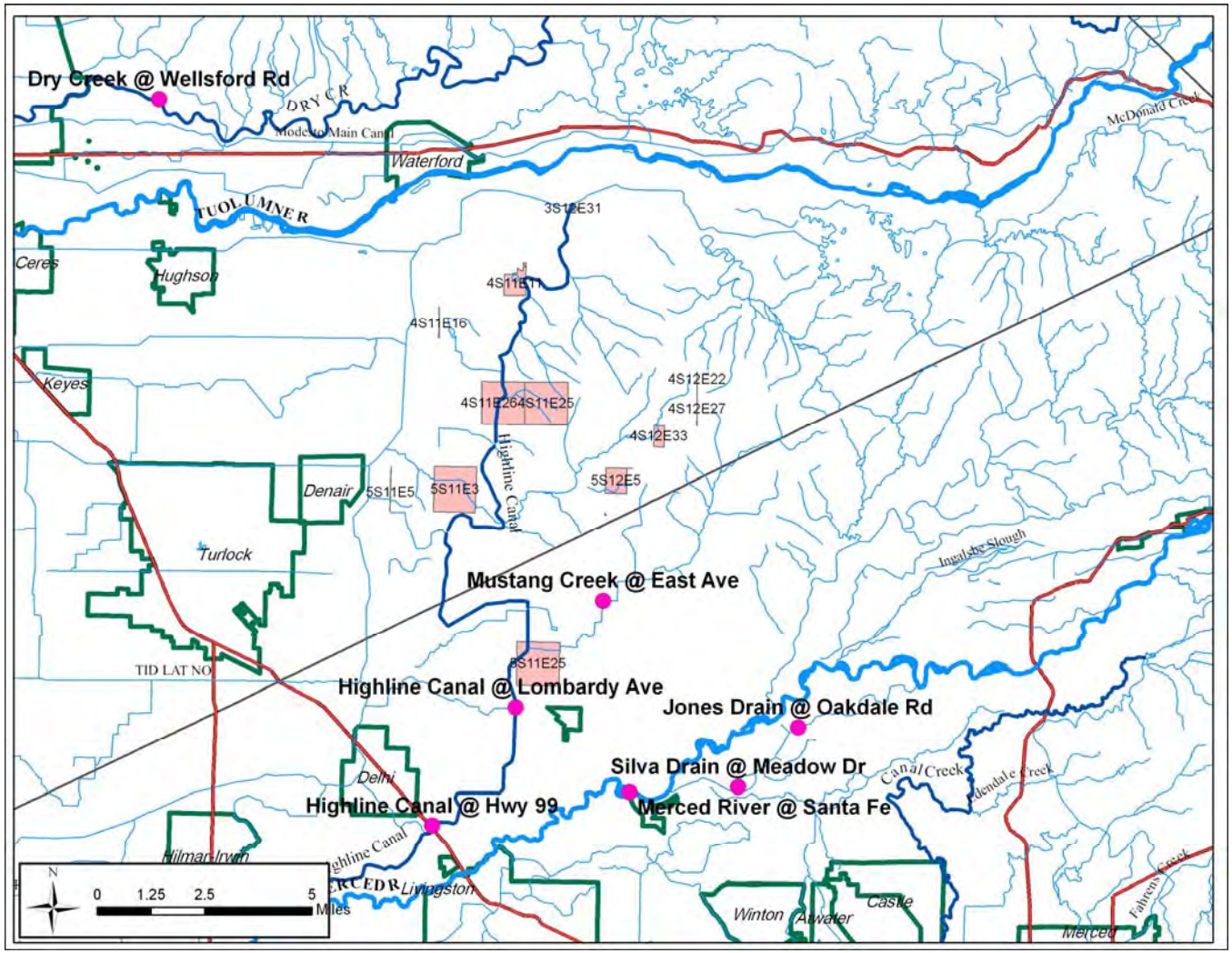
Storm 2 (2/26/08) - simazine exceedance

Table 37. Simazine use for Highline Canal @ Lombardy site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/7/2008	SIM-TROL 4L	SIMAZINE	G	7.5	PT	15	5S11E25
UNCUL NON-AG	1/29/2008	SIM-TROL 4L	SIMAZINE	G	16	PT	10	5S12E5
ALMOND	1/31/2008	PRINCEP 4L	SIMAZINE	G	276	PT	138	4S11E26
ALMOND	1/31/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	149.09	PT	205	4S11E25
ALMOND	1/31/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	116.36	PT	160	4S12E27
ALMOND	2/2/2008	PRINCEP 4L	SIMAZINE	G	240	PT	114	4S11E11
WALNUT	2/4/2008	SIM-TROL 4L	SIMAZINE	G	72	PT	24	3S12E31
WALNUT	2/4/2008	SIM-TROL 4L	SIMAZINE	G	66	PT	22	3S12E31

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/4/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	109.09	PT	150	4S12E33
ALMOND	2/5/2008	PRINCEP 4L	SIMAZINE	G	130.91	PT	60	4S11E26
ALMOND	2/6/2008	PRINCEP 4L	SIMAZINE	G	1	QT	2	4S11E16
ALMOND	2/7/2008	SIM-TROL 4L	SIMAZINE	G	22.5	GA	140	4S12E22
ALMOND	2/13/2008	SIM-TROL 9DF	SIMAZINE	G	33	LB	137	5S11E3
GRAPE	2/14/2008	SIM-TROL 4L	SIMAZINE	G	3.34	PT	6	5S11E5

Figure 37. Location of Simazine use for Highline Canal @ Lombardy site subwatershed – storm 2.



Pesticide Use Reports for metal exceedances in the water column

Storm 1 (1/24/08) - copper exceedance

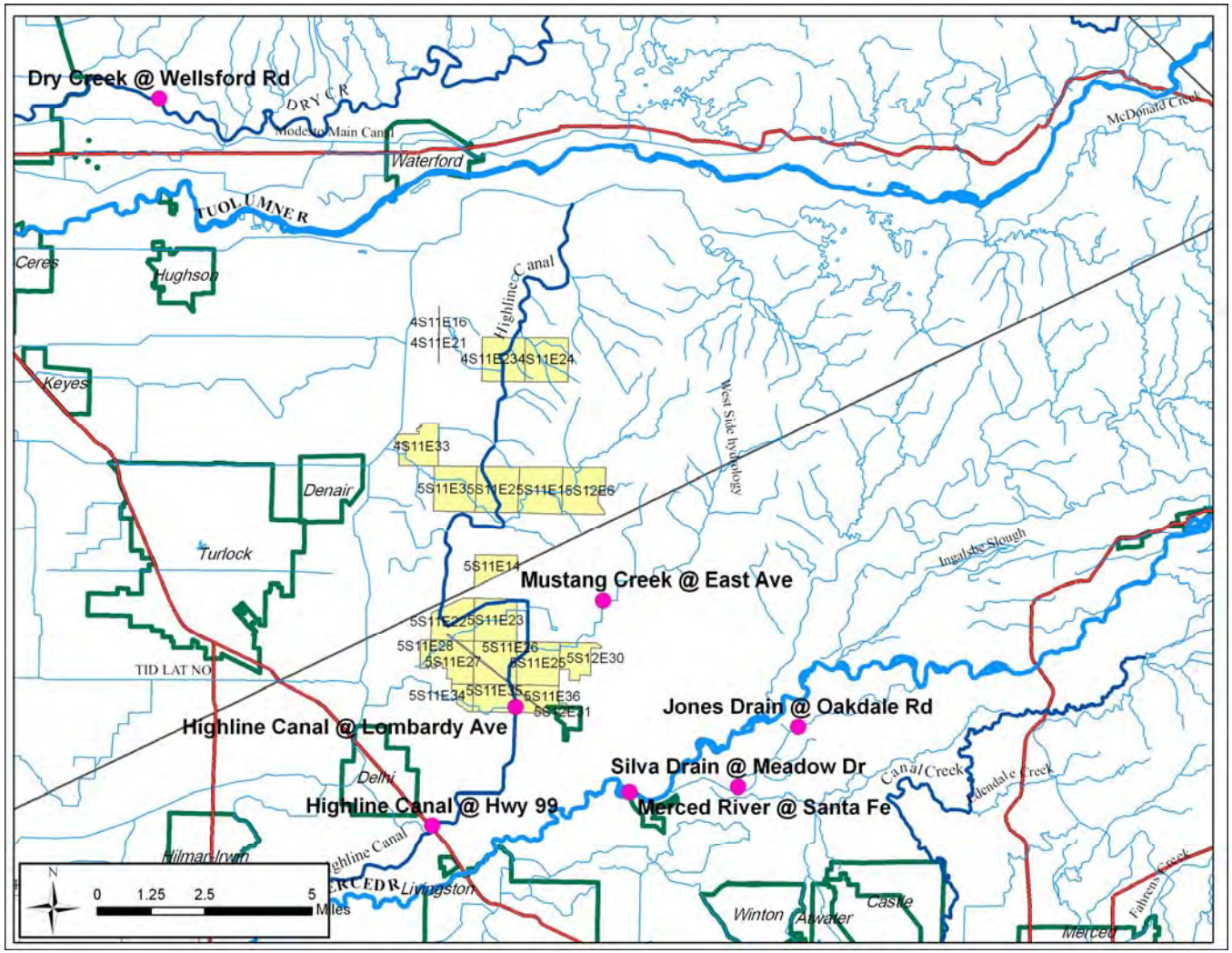
Table 38. Copper use for Highline Canal @ Lombardy site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	11/26/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	556	LB	139	5S12E20
PEACH	12/8/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	442	LB	65	5S12E30
PEACH	12/9/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	217.6	LB	32	5S11E26
PEACH	12/9/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	149.6	LB	22	5S11E36
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	34.8	LB	2.32	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	54	LB	3.6	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	84	LB	5.6	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	84.9	LB	5.66	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	270	LB	18	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	38.4	LB	2.56	5S11E34
PEACH	12/20/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	208.5	LB	13.9	5S11E36

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	240	LB	16	5S11E36
ALMOND	12/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	42.6	LB	2.84	5S11E36
PEACH	12/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	198.6	LB	13.24	5S11E36
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	128	LB	32	5S11E26
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	260	LB	65	5S12E30
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	88	LB	22	5S11E36
APRICOT	1/1/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	125.8	LB	18.5	5S11E3
PEACH	1/1/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	330	LB	22	5S11E36
PEACH	1/1/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	870	LB	58	5S11E36
PEACH	1/1/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	34	LB	5	5S11E3
ALMOND	1/2/2008	NU-COP 50DF	COPPER HYDROXIDE	G	608	LB	76	5S12E6
PEACH	1/2/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	1350	LB	90	5S11E35
PEACH	1/2/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	465	LB	31	5S11E36
PEACH	1/3/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	540	LB	36	5S11E28

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	834	LB	139	5S12E20
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	3708	LB	618	5S11E2
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	1140	LB	190	5S11E2
ALMOND	1/9/2008	KOCIDE DF	COPPER HYDROXIDE	G	780	LB	135	5S11E3
ALMOND	1/10/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	600	LB	60	5S11E25
ALMOND	1/11/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	950	LB	190	5S11E14
PEACH	1/11/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	32	OZ	6.4	5S12E31
ALMOND	1/14/2008	NU-COP 50DF	COPPER HYDROXIDE	G	3480	LB	580	5S11E1
ALMOND	1/15/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	210	LB	35	4S11E21
N-OUTDR PLANTS	1/15/2008	NU-COP 50 WP	COPPER HYDROXIDE	G	36	LB	9	4S11E33
ALMOND	1/16/2008	NU-COP 50DF	COPPER HYDROXIDE	G	2400	LB	400	5S11E1
ALMOND	1/18/2008	HYDROX	COPPER HYDROXIDE	G	1170	LB	195	4S11E23
ALMOND	1/18/2008	HYDROX	COPPER HYDROXIDE	G	1170	LB	195	4S11E24
ALMOND	1/22/2008	TRIANGLE BRAND COPPER SULFATE INSTANT PO	COPPER SULFATE (PENTAHYDRATE)	G	690	LB	69	4S11E16

Figure 38. Location of Copper use for Highline Canal @ Lombardy site subwatershed – storm 1.

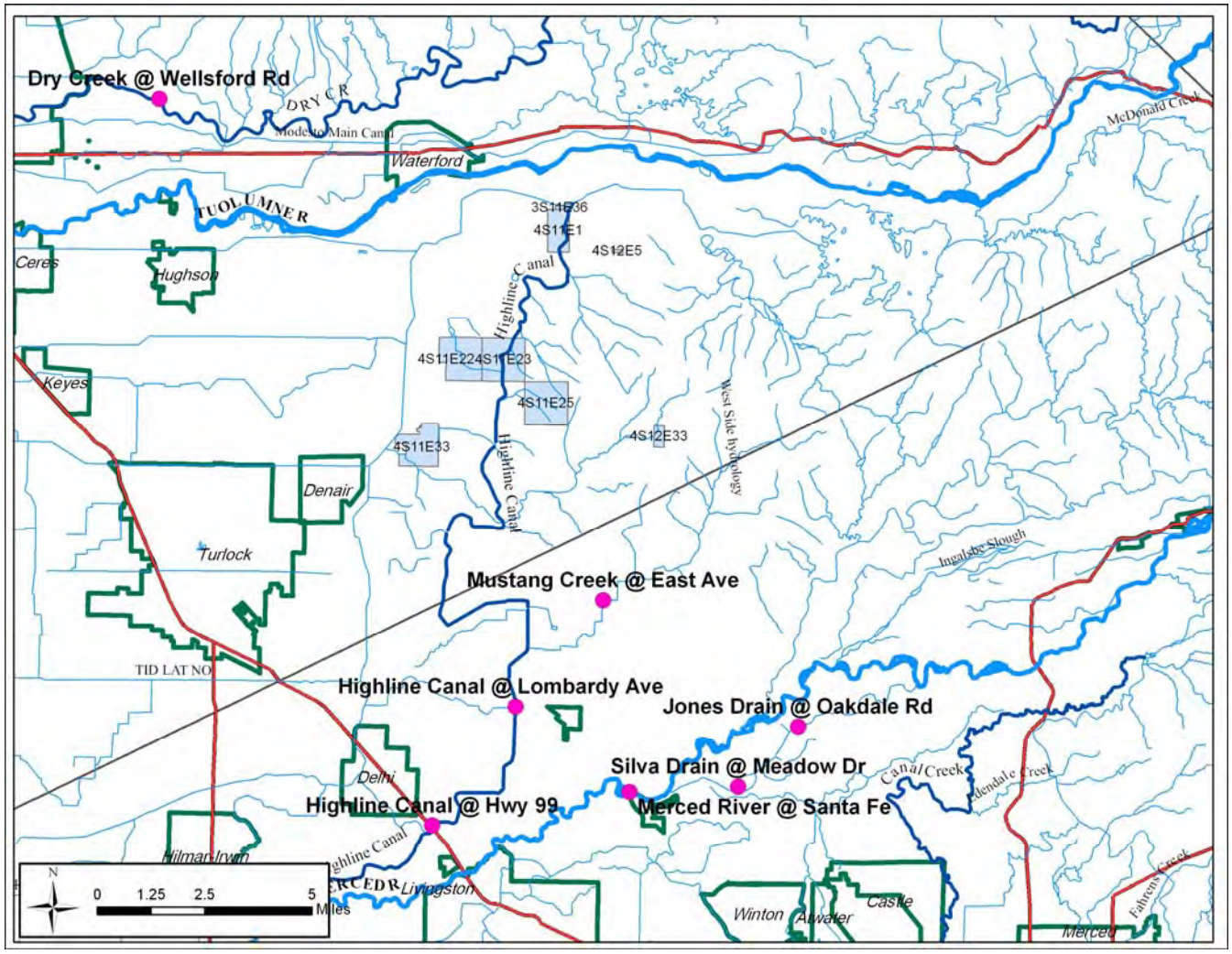


Storm 2 (2/26/08) - copper exceedance

Table 39. Copper use for Highline Canal @ Lombardy site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/29/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	1300	LB	260	4S11E25
ALMOND	1/31/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	160	PT	40	4S12E5
ALMOND	1/31/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	80	PT	20	4S12E5
CHERRY	1/31/2008	CHAMPION WETTABLE POWDER	COPPER HYDROXIDE	G	30	LB	2.5	4S11E22
PEACH PROCESSNG	2/4/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	544	LB	80	4S11E23
ALMOND	2/6/2008	CHAMP FORMULA 2 FLOWABLE	COPPER HYDROXIDE	G	5	GA	11	3S11E36
ALMOND	2/23/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	12.5	LB	10	4S11E1
N-OUTDR PLANTS	2/25/2008	NU-COP 50 WP	COPPER HYDROXIDE	G	28	LB	7	4S11E33
ALMOND	2/25/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	A	94.5	LB	150	4S12E33

Figure 39. Location of Copper use for Highline Canal @ Lombardy site subwatershed – storm 2.



Pesticide Use Reports for sediment toxicity exceedances

Storm sediment (3/4/08) – Hyalella azteca toxicity

Table 40. Pesticide use for Highline Canal @ Lombardy site subwatershed – storm sediment.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	9/22/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1	100000
ALMOND	9/29/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1	100000
ALMOND	10/7/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1	100000
ALMOND	10/14/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1	100000
PEACH	12/8/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	520	OZ	65	5S12E30	5300
PEACH	12/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	256	OZ	32	5S11E26	5300
PEACH	12/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	176	OZ	22	5S11E36	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	23.2	OZ	2.32	5S11E34	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	36	OZ	3.6	5S11E34	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	56	OZ	5.6	5S11E34	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	56.6	OZ	5.66	5S11E34	5300

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	180	OZ	18	5S11E34	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	25.6	OZ	2.56	5S11E34	5300
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	139	OZ	13.9	5S11E36	5300
ALMOND	12/21/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	160	OZ	16	5S11E36	5300
ALMOND	12/21/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	28.4	OZ	2.84	5S11E36	5300
PEACH	12/21/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	132.4	OZ	13.24	5S11E36	5300
PEACH	12/28/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	256	OZ	32	5S11E26	5300
PEACH	12/28/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	520	OZ	65	5S12E30	5300
PEACH	12/28/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	176	OZ	22	5S11E36	5300
APRICOT	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	177.6	OZ	18.5	5S11E3	5300
PEACH	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	48	OZ	5	5S11E3	5300
PEACH	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	281.6	OZ	22	5S11E36	5300
PEACH	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	742.4	OZ	58	5S11E36	5300
PEACH	1/2/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1152	OZ	90	5S11E35	5300

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH	1/2/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	396.8	OZ	31	5S11E36	5300
PEACH	1/3/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	460.8	OZ	36	5S11E28	5300
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	7910.4	OZ	618	5S11E2	5300
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2432	OZ	190	5S11E2	5300
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1779.2	OZ	139	5S12E20	5300
ALMOND	1/9/2008	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	6.5	GA	135	5S11E3	100000
ALMOND	1/10/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	600	OZ	60	5S11E25	5300
PEACH	1/11/2008	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	51.2	OZ	6.4	5S12E31	100000
ALMOND	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	7424	OZ	580	5S11E1	5300
N-OUTDR PLANTS	1/15/2008	QUALI-PRO BIFENTHRIN NURSERY 7.9 F	BIFENTHRIN	G	90	OZ	9	4S11E33	240000
ALMOND	1/16/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	5120	OZ	400	5S11E1	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2496	OZ	195	4S11E23	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2496	OZ	195	4S11E24	5300
ALMOND	1/29/2008	SILENCER	LAMBDA-CYHALOTHRIN	G	832	OZ	260	4S11E25	180000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH PROCESSNG	2/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	768	OZ	80	4S11E23	5300
ALFALFA	2/5/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	50	QT	50	3S11E36	1000000
ALMOND	2/5/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	81.82	PT	60	4S11E26	1000000
ALMOND	2/5/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	210	QT	420	4S11E25	24000
ALMOND	2/6/2008	GRAMOXONE MAX	PARAQUAT DICHLORIDE	G	2	QT	2	4S11E16	1000000
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	2	QT	2	4S11E16	100000
ALMOND	2/6/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	12000	OZ	250	4S11E24	24000
ALMOND	2/6/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	1000	PT	250	4S11E24	5000
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	4000	OZ	250	4S11E24	100000
ALMOND	2/6/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	330	QT	330	4S12E33	24000
APRICOT	2/6/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.19	GA	18.5	5S11E3	5000
APRICOT	2/6/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7.19	QT	18.5	5S11E3	24000
APRICOT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	43.17	OZ	18.5	5S11E3	100000
ALMOND	2/7/2008	MON-52249 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	45	GA	140	4S12E22	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	45	GA	140	4S12E22	100000
ALMOND	2/7/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	118	PT	118	4S11E26	1000000
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	177	QT	118	4S11E26	5000
ALMOND	2/8/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	15	QT	36	3S11E36	24000
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	60	PT	36	3S11E36	100000
ALMOND	2/8/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	220	PT	158	4S11E34	1000000
ALMOND	2/8/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	528.05	PT	158	4S11E34	5000
ALMOND	2/8/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.5	GA	17	5S11E17	24000
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	10	GA	17	5S11E17	100000
ALMOND	2/8/2008	GLY-4 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4.29	GA	60	5S11E25	24000
ALMOND	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	1.07	GA	60	5S11E25	100000
ALMOND	2/9/2008	ACUMEN HERBICIDE	PENDIMETHALIN	G	0.75	GA	16	4S11E16	5000
ALMOND	2/9/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.5	GA	16	4S11E16	24000
ALMOND	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	0.75	GA	16	4S11E16	100000
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	50	GA	190	4S11E24	5000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/9/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	190	QT	190	4S11E24	24000
ALMOND	2/9/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	60	GA	190	4S11E24	100000
ALMOND	2/9/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	2.613	GA	10.45	4S11E25	1000000
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	3.871	GA	7.74	4S11E25	5000
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5.226	GA	10.45	4S11E25	5000
ALMOND	2/9/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	1.936	GA	7.74	4S11E25	1000000
ALMOND	2/9/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	195	PT	128.7	4S12E33	1000000
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	234	QT	128.7	4S12E33	5000
ALMOND	2/9/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	6.75	GA	18	5S11E34	24000
ALMOND	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	2.25	GA	18	5S11E34	100000
ALMOND	2/10/2008	GLY-4 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.5	GA	10	3S12E31	24000
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	1.25	GA	10	3S12E31	100000
ALMOND	2/12/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	114.29	GA	304.76	4S12E6	1000000
ALMOND	2/12/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	914.28	PT	304.76	4S12E6	5000

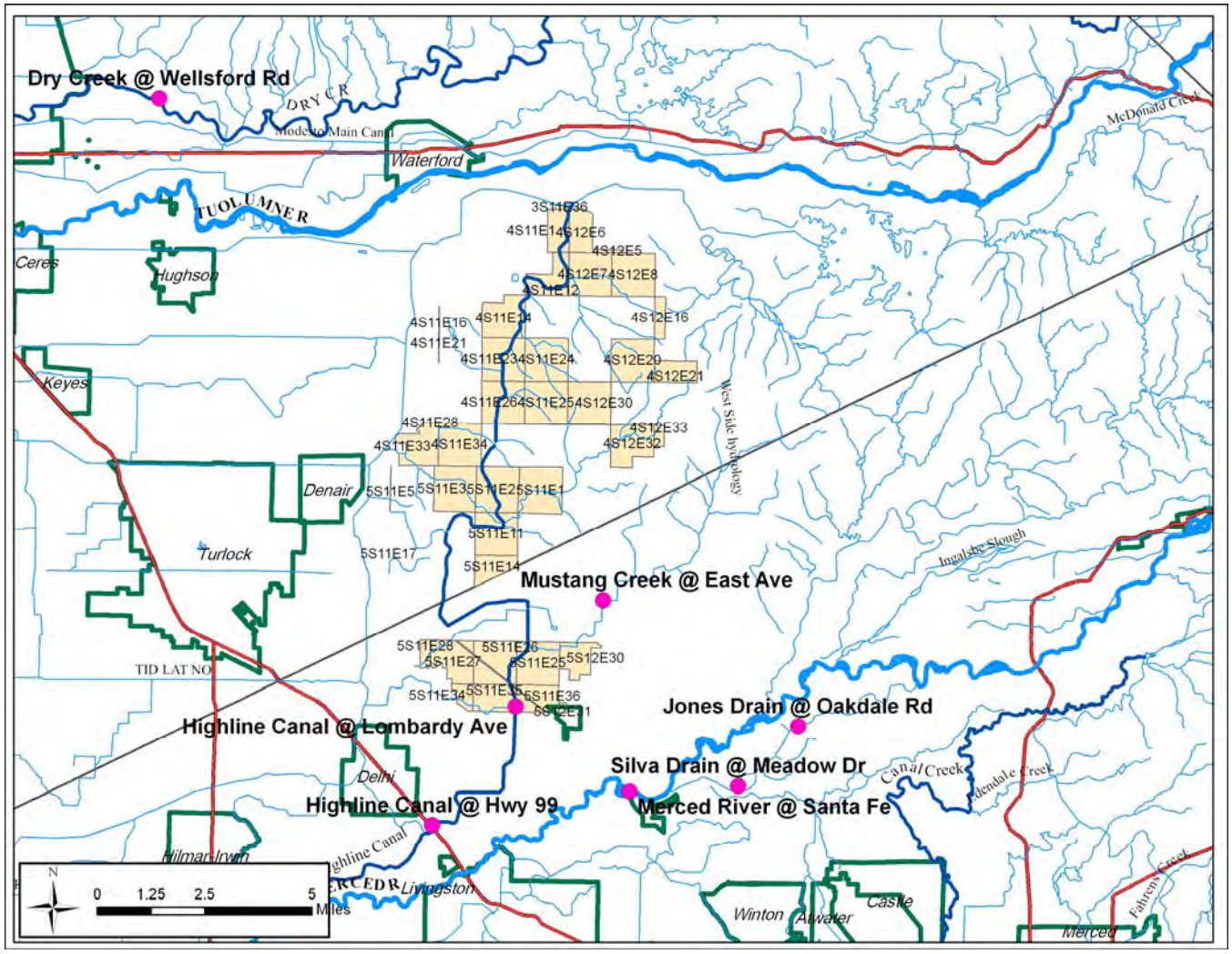
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/13/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	139.44	PT	111.5	4S11E26	1000000
ALMOND	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	167.33	QT	111.5	4S11E26	5000
ALMOND	2/13/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	24	GA	137	5S11E3	1000000
ALMOND	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	51	GA	137	5S11E3	5000
ALMOND	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	17	GA	137	5S11E3	100000
ALMOND	2/14/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	200	PT	25	5S11E34	5000
ALMOND	2/14/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	50	PT	25	5S11E34	24000
ALMOND	2/14/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	75	PT	25	5S11E34	100000
GRAPE	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	12	PT	6	5S11E5	100000
ALMOND	2/15/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	600	QT	600	4S11E12	24000
ALMOND	2/15/2008	GLY-4 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	73.75	GA	413	5S11E11	24000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	196.67	GA	413	5S11E11	100000
ALMOND	2/16/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20.4	PT	34	4S11E16	24000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	65.28	OZ	34	4S11E16	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/18/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	114.29	GA	304.76	4S12E7	1000000
ALMOND	2/18/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	914.28	PT	304.76	4S12E7	5000
ALMOND	2/21/2008	VANGARD WG	CYPRODINIL	G	900	OZ	180	4S11E26	2030
ALMOND	2/21/2008	DIMILIN 2L	DIFLUBENZURON	G	2304	OZ	180	4S11E26	10000
ALMOND	2/22/2008	VANGARD WG	CYPRODINIL	G	63	LB	202	4S11E16	2030
ALMOND	2/22/2008	VANGARD WG	CYPRODINIL	G	190	OZ	38	4S11E25	2030
ALMOND	2/22/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3	GA	60	5S11E3	24000
ALMOND	2/23/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	240	GA	640	4S12E8	1000000
ALMOND	2/23/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	1920	PT	640	4S12E8	5000
ALMOND	2/23/2008	VANGARD WG	CYPRODINIL	G	74	LB	235.5	4S11E21	2030
ALMOND	2/24/2008	VANGARD WG	CYPRODINIL	G	20	LB	62.5	4S11E28	2030
ALMOND	2/25/2008	VANGARD WG	CYPRODINIL	G	100	OZ	20	3S11E36	2030
ALMOND	2/26/2008	DIMILIN 2L	DIFLUBENZURON	G	1600	OZ	125	4S12E16	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	1689.6	OZ	132	4S11E1	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	256	OZ	20	4S11E1	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	4096	OZ	320	4S12E8	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	1280	OZ	100	4S12E30	10000
PEACH PROCESSNG	2/27/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	15.56	GA	80	4S11E23	5000
PEACH PROCESSNG	2/27/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	46.67	QT	80	4S11E23	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/28/2008	AUXIGRO WP WETTABLE POWDER	GAMMA AMINOBUTYRIC ACID	G	140	OZ	35	4S11E21	2000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	1920	OZ	150	4S12E20	10000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	3200	OZ	250	4S12E21	10000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	1300	OZ	260	4S11E26	2030
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	3328	OZ	260	4S11E26	10000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	750	OZ	150	4S12E33	2030
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	1920	OZ	150	4S12E33	10000
ALMOND	2/28/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20	PT	20	5S11E1	24000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	2560	OZ	200	5S11E11	10000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	780	OZ	156	5S11E14	2030
ALMOND	2/29/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	9	QT	27	3S11E36	24000
ALMOND	2/29/2008	DIMILIN 2L	DIFLUBENZURON	G	320	OZ	25	4S12E5	10000
ALMOND	2/29/2008	DIMILIN 2L	DIFLUBENZURON	G	512	OZ	40	4S12E5	10000
ALMOND	2/29/2008	VANGARD WG	CYPRODINIL	A	90	OZ	18	5S11E17	2030
ALMOND	2/29/2008	VANGARD WG	CYPRODINIL	G	170	OZ	34	5S11E14	2030
ALMOND	3/1/2008	VANGARD WG	CYPRODINIL	G	200.16	OZ	36	3S11E36	2030
ALMOND	3/1/2008	AGRISOLUTIONS CORNERSTONE PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	QT	3.3	5S11E27	24000
ALMOND	3/1/2008	GOAL 2XL	OXYFLUORFEN	G	13	OZ	3.3	5S11E27	100000
ALMOND	3/1/2008	DIMILIN 2L	DIFLUBENZURON	G	912	OZ	76	5S11E25	10000
ALMOND	3/1/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	798	OZ	76	5S11E25	16000
ALMOND	3/1/2008	DIMILIN 2L	DIFLUBENZURON	G	480	OZ	40	5S11E25	10000
ALMOND	3/1/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	420	OZ	40	5S11E25	16000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	3/2/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	6000	OZ	600	4S11E12	16000
ALMOND	3/3/2008	DIMILIN 2L	DIFLUBENZURON	G	4	GA	40	3S12E31	10000
ALMOND	3/3/2008	DIMILIN 2L	DIFLUBENZURON	G	4	GA	40	4S11E14	10000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	30	LB	40	4S11E14	16000
ALMOND	3/3/2008	DIMILIN 2L	DIFLUBENZURON	G	13	GA	130	4S11E14	10000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	97.5	LB	130	4S11E14	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	500	OZ	50	4S11E25	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	4200	OZ	420	4S11E25	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	600	OZ	60	5S11E26	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	318	OZ	31.8	5S12E31	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	316	OZ	31.6	5S12E31	16000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	490	OZ	35	4S11E21	16000
ALMOND	3/4/2008	VANGARD WG	CYPRODINIL	G	575	OZ	115	4S11E26	2030
ALMOND	3/4/2008	VANGARD WG	CYPRODINIL	G	300	OZ	60	4S12E32	2030
ALMOND	3/4/2008	DIMILIN 2L	DIFLUBENZURON	G	6.9	GA	69	5S11E28	10000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	350	OZ	35	5S11E27	16000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	460	OZ	46	5S11E36	16000

Figure 40. Location of Pesticide use for Highline Canal @ Lombardy site subwatershed – storm sediment.



Pesticide Use Reports for water column toxicity

Storm 1 (1/25/08) - Ceriodaphnia dubia toxicity

Table 41. Pesticide use for Highline Canal @ Lombardy site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	8/8/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	54.5	LB	109	5S12E30
ALMOND	8/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2	GA	24.96	5S11E35
ALMOND	8/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.4	GA	17.52	5S11E36
WALNUT	8/9/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	128	OZ	8	5S11E27
WALNUT	8/10/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	96	OZ	6	5S11E27
CORN FOR/FOD	8/13/2007	FANFARE	BIFENTHRIN	A	3.16	GA	67.5	5S11E22
CORN FOR/FOD	8/13/2007	FANFARE	BIFENTHRIN	G	1.35	GA	27	4S11E21
ALMOND	8/14/2007	WARRIOR INSECTICIDE WITH ZEON TECHNOLOGY	LAMBDA-CYHALOTHRIN	G	2.8	GA	120	4S11E21
CORN FOR/FOD	8/16/2007	FANFARE	BIFENTHRIN	G	3.98	GA	85	5S11E15
CORN FOR/FOD	8/16/2007	FANFARE	BIFENTHRIN	G	4.69	GA	100	5S11E10
WALNUT	8/22/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	7.5	LB	7.5	5S11E35

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WALNUT	8/25/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	5	LB	5	5S11E27
WALNUT	8/25/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	144	OZ	18	3S11E36
ALMOND	9/8/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1
WALNUT	9/11/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	34	OZ	8	5S11E27
ALMOND	9/15/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1
ALMOND	9/22/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1
ALMOND	9/29/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1
ALMOND	10/7/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1
ALMOND	10/14/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	2	PT	12	5S11E1
PEACH	12/8/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	520	OZ	65	5S12E30
PEACH	12/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	256	OZ	32	5S11E26
PEACH	12/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	176	OZ	22	5S11E36
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	23.2	OZ	2.32	5S11E34
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	36	OZ	3.6	5S11E34

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	56	OZ	5.6	5S11E34
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	56.6	OZ	5.66	5S11E34
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	180	OZ	18	5S11E34
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	25.6	OZ	2.56	5S11E34
PEACH	12/20/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	139	OZ	13.9	5S11E36
ALMOND	12/21/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	160	OZ	16	5S11E36
ALMOND	12/21/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	28.4	OZ	2.84	5S11E36
PEACH	12/21/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	132.4	OZ	13.24	5S11E36
PEACH	12/28/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	256	OZ	32	5S11E26
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	128	LB	32	5S11E26
PEACH	12/28/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	520	OZ	65	5S12E30
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	260	LB	65	5S12E30
PEACH	12/28/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	176	OZ	22	5S11E36
PEACH	12/28/2007	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	88	LB	22	5S11E36
ALMOND	12/31/2007	METHYL BROMIDE 99.5%	METHYL BROMIDE	G	19.4	LB	97	5S11E23

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	12/31/2007	METHYL BROMIDE 99.5%	CHLOROPICRIN	G	19.4	LB	97	5S11E23
ALMOND	12/31/2007	DEGESCH PHOSTOXIN TABLETS	ALUMINUM PHOSPHIDE	G	2.42	LB	97	5S11E23
PEACH	12/31/2007	ZIRAM GRANUFLO	ZIRAM	G	252	LB	42	5S12E31
APRICOT	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	177.6	OZ	18.5	5S11E3
APRICOT	1/1/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	125.8	LB	18.5	5S11E3
PEACH	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	281.6	OZ	22	5S11E36
PEACH	1/1/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	330	LB	22	5S11E36
PEACH	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	742.4	OZ	58	5S11E36
PEACH	1/1/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	870	LB	58	5S11E36
PEACH	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	48	OZ	5	5S11E3
PEACH	1/1/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	34	LB	5	5S11E3
ALMOND	1/2/2008	NU-COP 50DF	COPPER HYDROXIDE	G	608	LB	76	5S12E6
ALMOND	1/2/2008	PROAXIS INSECTICIDE	GAMMA-CYHALOTHRIN	G	212.8	OZ	76	5S12E6
PEACH	1/2/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1152	OZ	90	5S11E35
PEACH	1/2/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	1350	LB	90	5S11E35

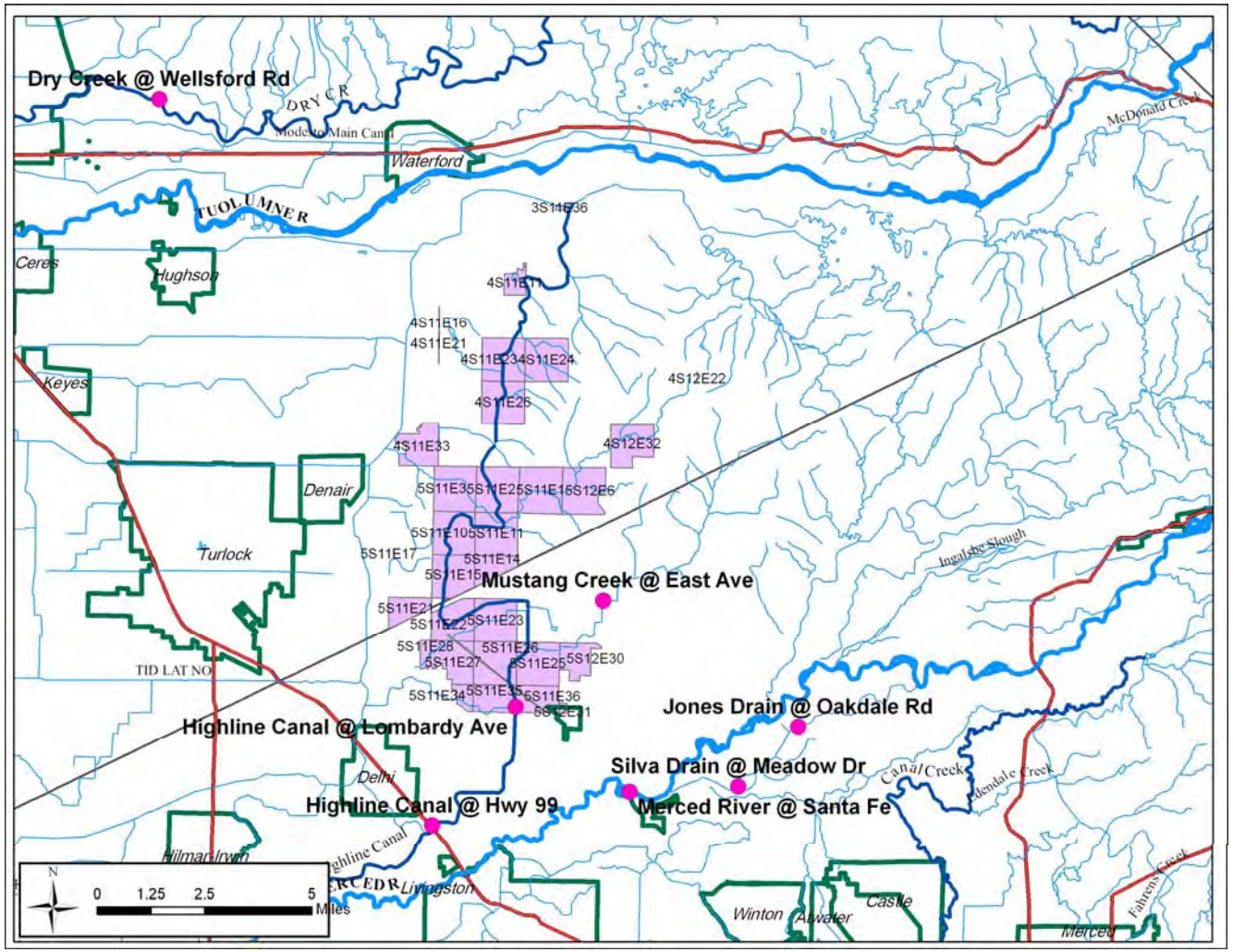
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	1/2/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	396.8	OZ	31	5S11E36
PEACH	1/2/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	465	LB	31	5S11E36
ALMOND	1/3/2008	TELONE II CA	1,3-DICHLOROPROPENE	G	176	GA	5.5	4S11E11
PEACH	1/3/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	460.8	OZ	36	5S11E28
PEACH	1/3/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	540	LB	36	5S11E28
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1779.2	OZ	139	5S12E20
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	834	LB	139	5S12E20
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	7910.4	OZ	618	5S11E2
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	3708	LB	618	5S11E2
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2432	OZ	190	5S11E2
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	1140	LB	190	5S11E2
ALMOND	1/9/2008	KOCIDE DF	COPPER HYDROXIDE	G	780	LB	135	5S11E3
ALMOND	1/9/2008	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	6.5	GA	135	5S11E3
ALMOND	1/10/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	600	OZ	60	5S11E25

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/10/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	600	LB	60	5S11E25
ALMOND	1/10/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	34	QT	17	5S11E17
ALMOND	1/11/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	950	LB	190	5S11E14
PEACH	1/11/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	32	OZ	6.4	5S12E31
PEACH	1/11/2008	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	51.2	OZ	6.4	5S12E31
ALMOND	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	7424	OZ	580	5S11E1
ALMOND	1/14/2008	NU-COP 50DF	COPPER HYDROXIDE	G	3480	LB	580	5S11E1
ALMOND	1/15/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	210	LB	35	4S11E21
ALMOND	1/15/2008	DIAZINON AG 500	DIAZINON	G	140	PT	35	4S11E21
ALMOND	1/15/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	300	QT	300	4S12E32
ALMOND	1/15/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	24	PT	20	5S11E11
ALMOND	1/15/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	32	PT	20	5S11E11
GRAPE	1/15/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	9.34	GA	18.67	4S12E32

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
N-OUTDR PLANTS	1/15/2008	NU-COP 50 WP	COPPER HYDROXIDE	G	36	LB	9	4S11E33
N-OUTDR PLANTS	1/15/2008	QUALI-PRO BIFENTHRIN NURSERY 7.9 F	BIFENTHRIN	G	90	OZ	9	4S11E33
ALMOND	1/16/2008	TELONE II CA	1,3-DICHLOROPROPENE	G	134.4	GA	4.2	5S11E35
ALMOND	1/16/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	10	QT	22	5S11E35
ALMOND	1/16/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	5120	OZ	400	5S11E1
ALMOND	1/16/2008	NU-COP 50DF	COPPER HYDROXIDE	G	2400	LB	400	5S11E1
ALFALFA	1/18/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	8.94	GA	55	5S11E21
ALMOND	1/18/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3	GA	20	5S11E28
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2496	OZ	195	4S11E23
ALMOND	1/18/2008	HYDROX	COPPER HYDROXIDE	G	1170	LB	195	4S11E23
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2496	OZ	195	4S11E24
ALMOND	1/18/2008	HYDROX	COPPER HYDROXIDE	G	1170	LB	195	4S11E24
ALMOND	1/18/2008	MON-52249 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	135	GA	400	4S12E22

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/19/2008	GLYFOS X-TRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.5	GA	6.25	5S11E27
ALMOND	1/19/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	1.5	GA	6.25	5S11E27
ALMOND	1/19/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	145.01	PT	106.34	4S11E26
ALMOND	1/19/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	145.01	PT	106.34	4S11E26
ALMOND	1/19/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	24	PT	20	5S11E11
ALMOND	1/19/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	32	PT	20	5S11E11
WALNUT	1/19/2008	METHYL BROMIDE 98%	METHYL BROMIDE	G	50	LB	50	5S11E26
ALMOND	1/21/2008	TELONE II CA	1,3-DICHLOROPROPENE	G	272	GA	8.5	5S11E23
ALMOND	1/21/2008	METHYL BROMIDE 98%	METHYL BROMIDE	G	166.98	LB	23	5S12E31
PEACH	1/21/2008	METHYL BROMIDE 98%	METHYL BROMIDE	G	448.96	LB	46	5S12E31
ALMOND	1/22/2008	TRIANGLE BRAND COPPER SULFATE INSTANT PO	COPPER SULFATE (PENTAHYDRATE)	G	690	LB	69	4S11E16
ALMOND	1/22/2008	REX LIME SULFUR SOLUTION	LIME-SULFUR	G	1800	GA	120	4S11E21
ALMOND	1/23/2008	REX LIME SULFUR SOLUTION	LIME-SULFUR	G	2760	GA	184	4S11E16

Figure 41. Location of Pesticide use for Highline Canal @ Lombardy site subwatershed – storm 1.

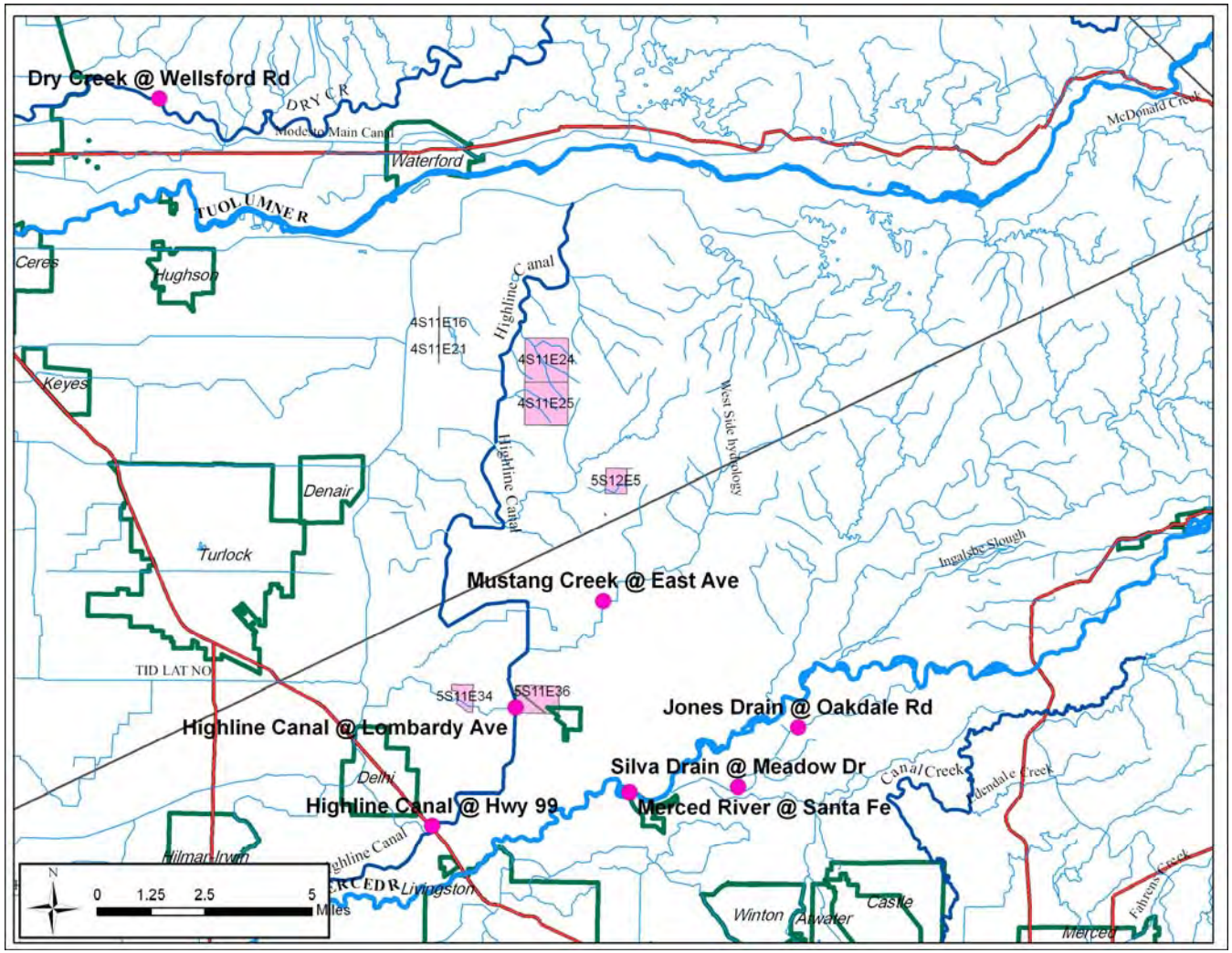


Storm 1RS (1/30/08) - Ceriodaphnia dubia toxicity

Table 42. Pesticide use for Highline Canal @ Lombardy site subwatershed – storm 1 RS.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/28/2008	BSP LIME SULFUR SOLUTION	LIME-SULFUR	G	1800	GA	120	4S11E21
ALMOND	1/29/2008	BSP LIME SULFUR SOLUTION	LIME-SULFUR	G	2760	GA	184	4S11E16
ALMOND	1/29/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	1300	LB	260	4S11E25
ALMOND	1/29/2008	SILENCER	LAMBDA-CYHALOTHRIN	G	832	OZ	260	4S11E25
UNCUL NON-AG	1/29/2008	GLYFOS BULK	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4	GA	10	5S12E5
ALMOND	1/30/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	3040	OZ	190	4S11E24
ALMOND	1/28/2008	BUCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.5	GA	10.5	5S11E36
ALMOND	1/30/2008	WEEVIL-CIDE TABLETS	ALUMINUM PHOSPHIDE	G	6000	GRAMS	23	5S11E34

Figure 42. Location of Pesticide use for Highline Canal @ Lombardy site subwatershed – storm 1 RS.



Storm 2 (2/26/08) – Pimephales promelas toxicity

Pimephales toxicity is most likely due to ammonia in the test water and therefore no PUR data have been compiled for this toxicity.

Storm 2 RS (3/4/08) – Pimephales promelas toxicity

Pimephales toxicity is most likely due to ammonia in the test water and therefore no PUR data have been compiled for this toxicity.

Hilmar Drain @ Central Ave site subwatershed

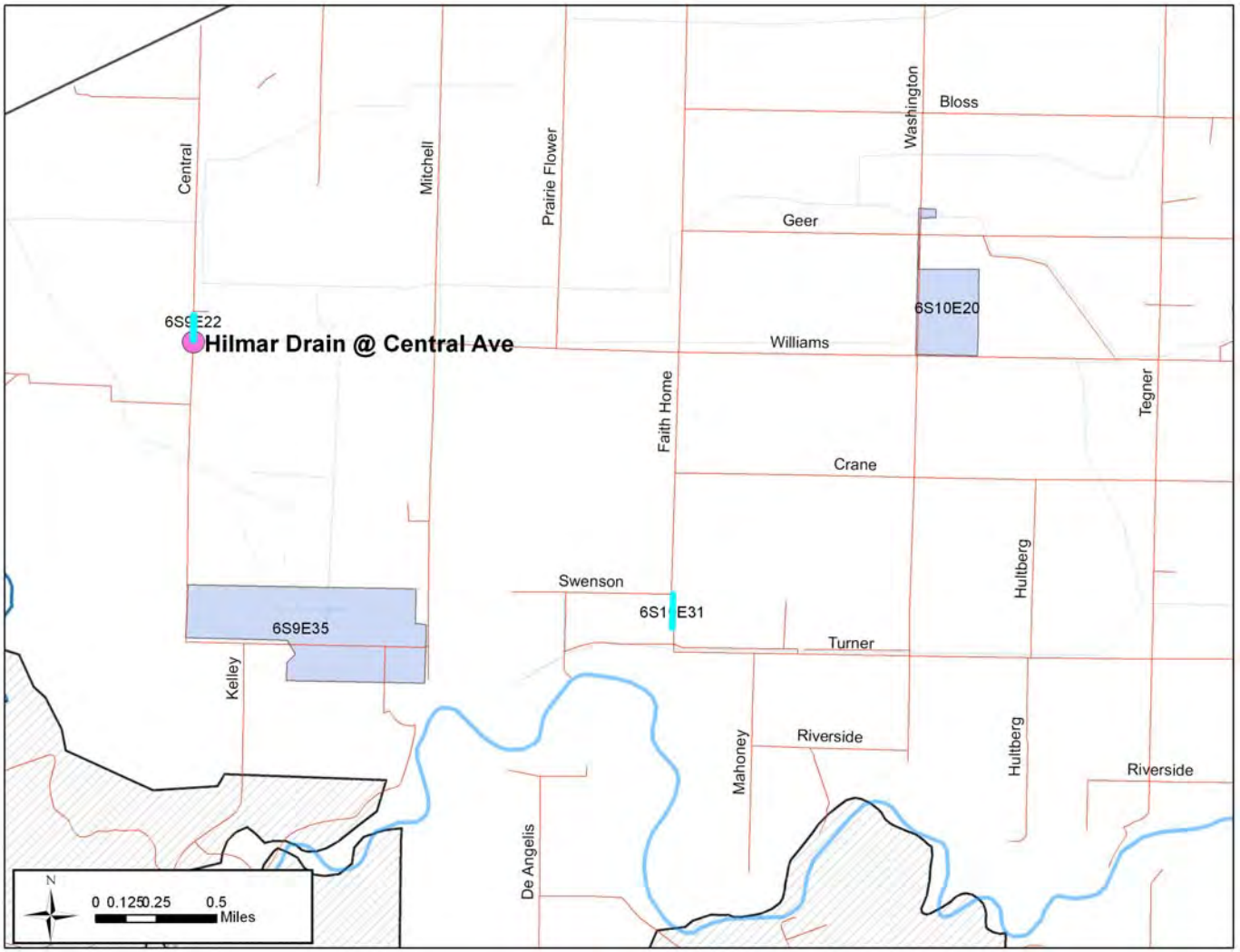
Pesticide Use Reports for sediment toxicity exceedances

Storm sediment (3/4/08) – Hyalella azteca toxicity

Table 43. Pesticide use for Hilmar Drain @ East Ave site subwatershed - storm sediment.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALFALFA	1/22/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	8320	OZ	130	6S9E35	5000
ALMOND	1/28/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	8.42	GA	20	6S10E20	5000
ALMOND	1/28/2008	GOAL 2XL	OXYFLUORFEN	G	40.42	PT	20	6S10E20	100000
ALMOND	1/28/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	16.84	PT	20	6S10E20	1000000
ALFALFA	2/7/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	7	GA	43	6S10E31	1000000
CORN FOR/FOD	2/15/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	G	5	GA	40	6S9E22	10000

Figure 43. Location of Pesticide use for Hilmar Drain @ East Ave site subwatershed - storm sediment.



Livingston Drain @ Robin Ave site subwatershed

Pesticide Use Reports for pesticide exceedances in the water column

Storm 1 (1/24/08) - chlorpyrifos exceedance

There was no reported use after August 2007.

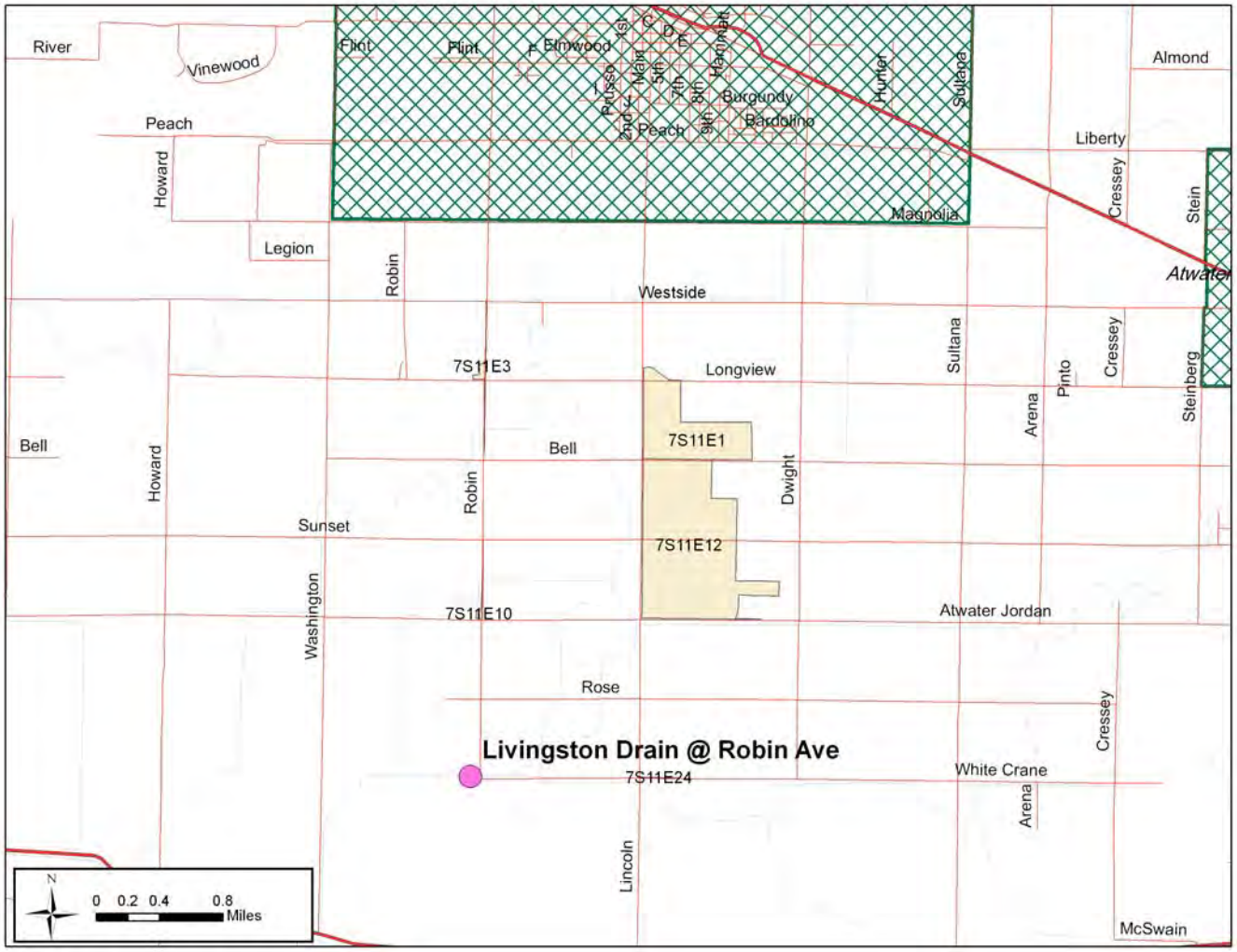
Pesticide Use Reports for metal exceedances in the water column

Storm 1 (1/24/08) - copper exceedance

Table 44. Copper use for Livingston Drain @ Robin Ave site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/8/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	380.8	LB	56	7S11E12
PEACH	12/8/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	367.2	LB	54	7S11E24
PEACH	12/19/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	80	LB	10	7S11E1
PEACH	12/23/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	367.2	LB	54	7S11E24
PEACH	1/3/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	170	LB	25	7S11E12
ALMOND	1/3/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	136	LB	20	7S11E12
PEACH	1/11/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	80	LB	10	7S11E1
ALMOND	1/16/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	270	LB	45	7S11E3
ALMOND	1/21/2008	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	136	LB	34	7S11E3
ALMOND	1/22/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	180	LB	30	7S11E10

Figure 44. Location of Copper use for Livingston Drain @ Robin Ave site subwatershed – storm 1.

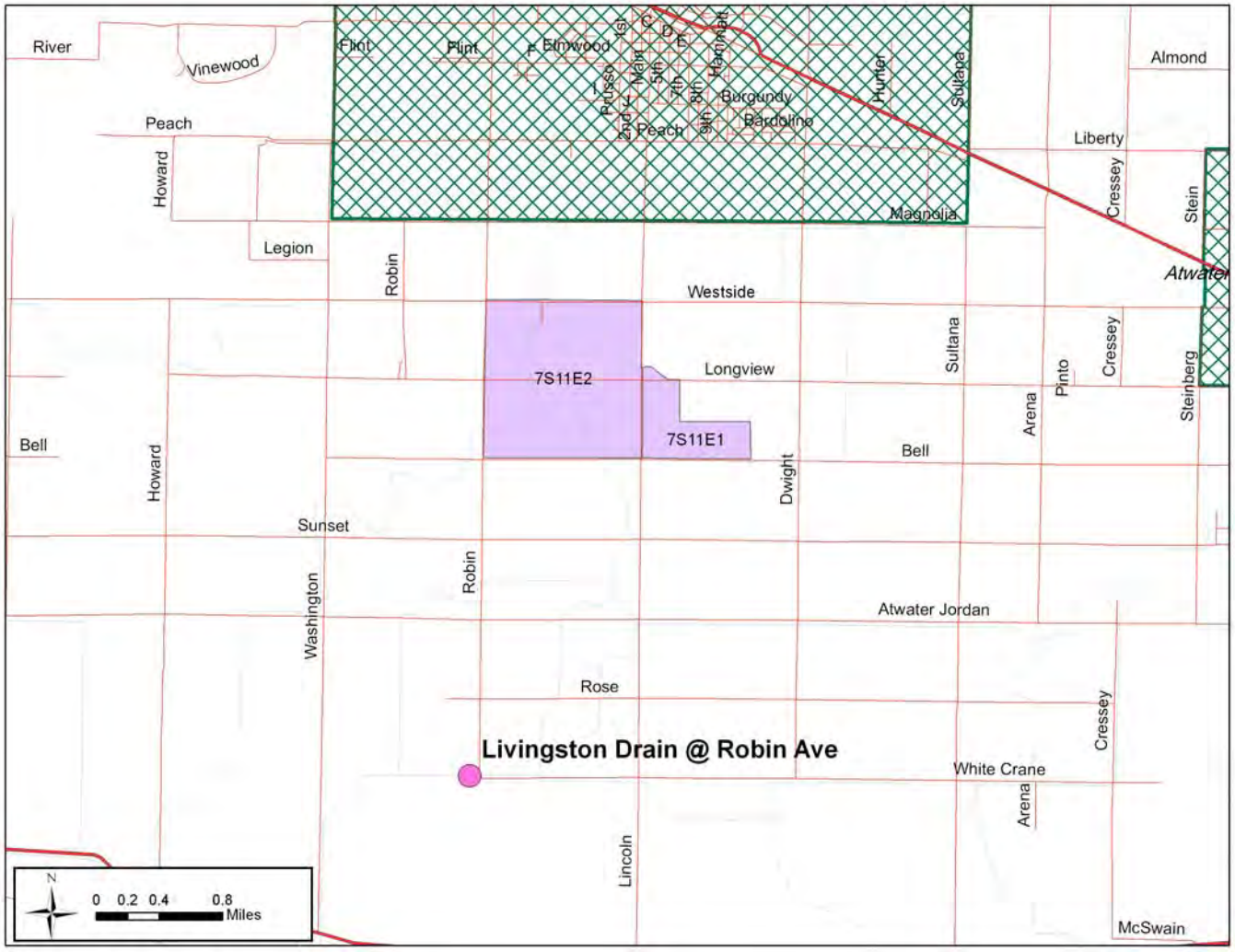


Storm 2 (2/26/08) - copper exceedance

Table 45. Copper use for Livingston Drain @ Robin Ave site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/1/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	80	LB	16	7S11E2
ALMOND	2/6/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	120	LB	20	7S11E1
ALMOND	2/6/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	170	LB	20	7S11E1

Figure 45. Location of Copper use for Livingston Drain @ Robin Ave site subwatershed – storm 2.



Pesticide Use Reports for water column toxicity

Storm 2 (2/26/08) - Selenastrum capricornutum toxicity

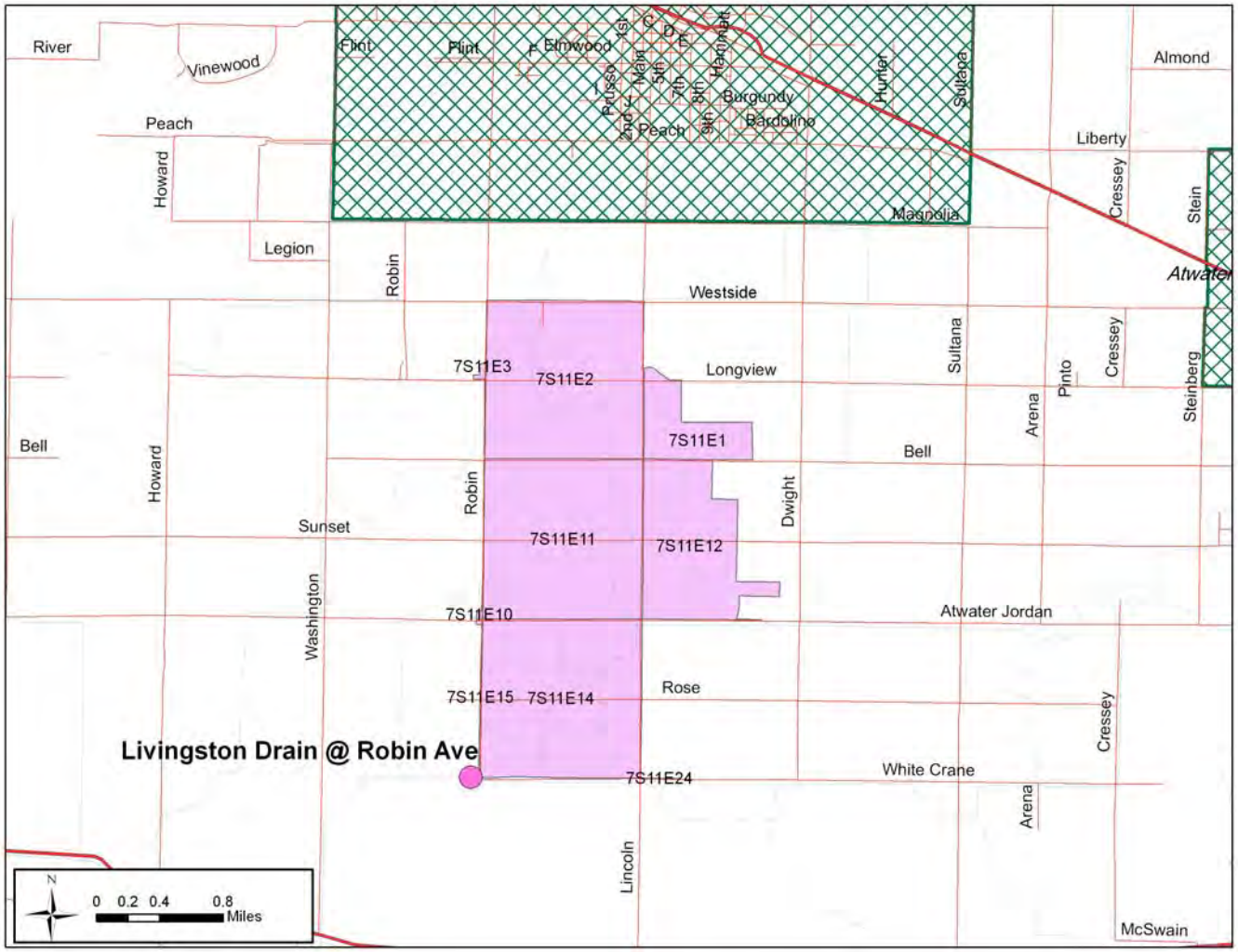
Table 46. Pesticide use for Livingston Drain @ Robin Ave site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/8/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	380.8	LB	56	7S11E12
PEACH	12/8/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	367.2	LB	54	7S11E24
PEACH	12/19/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	80	LB	10	7S11E1
PEACH	12/23/2007	NORDOX 75 WG	COPPER OXIDE (OUS)	G	367.2	LB	54	7S11E24
PEACH	1/3/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	170	LB	25	7S11E12
ALMOND	1/3/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	136	LB	20	7S11E12
ALMOND	1/16/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	270	LB	45	7S11E3
ALMOND	1/21/2008	DUPONT GX-569 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	136	LB	34	7S11E3
ALMOND	1/22/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	180	LB	30	7S11E10
N-OUTDOOR TRANSPL	1/29/2008	TRI-CON 57/43	METHYL BROMIDE	G	280	LB	0.75	7S11E2
N-OUTDOOR TRANSPL	1/30/2008	TRI-CON 57/43	METHYL BROMIDE	G	945	LB	2.7	7S11E12

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/31/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2240	OZ	140	7S11E24
ALMOND	2/1/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	80	LB	16	7S11E2
ALMOND	2/1/2008	METHYL BROMIDE 98%	METHYL BROMIDE	G	67	LB	67	7S11E15
ALMOND	2/1/2008	TELONE II CA	1,3-DICHLOROPROPENE	G	220.8	GA	6.9	7S11E24
ALMOND	2/6/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	120	LB	20	7S11E1
ALMOND	2/6/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	170	LB	20	7S11E1
ALMOND	2/6/2008	TELONE II CA	1,3-DICHLOROPROPENE	G	374.02	GA	12.8	7S11E24
ALMOND	2/8/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	25.8	PT	8.6	7S11E2
ALMOND	2/8/2008	BUCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	8.6	QT	8.6	7S11E2
ALMOND	2/9/2008	METHYL BROMIDE 98%	METHYL BROMIDE	G	40	LB	40	7S11E15
ALMOND	2/11/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	57	QT	38	7S11E11
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	114	QT	38	7S11E11
ALMOND	2/11/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	57	QT	38	7S11E11
ALMOND	2/11/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	52.5	QT	35	7S11E14
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	105	QT	35	7S11E14

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/11/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	52.5	QT	35	7S11E14

Figure 46. Location of Pesticide use for Livingston Drain @ Robin Ave site subwatershed – storm 2.



Merced River @ Santa Fe site subwatershed

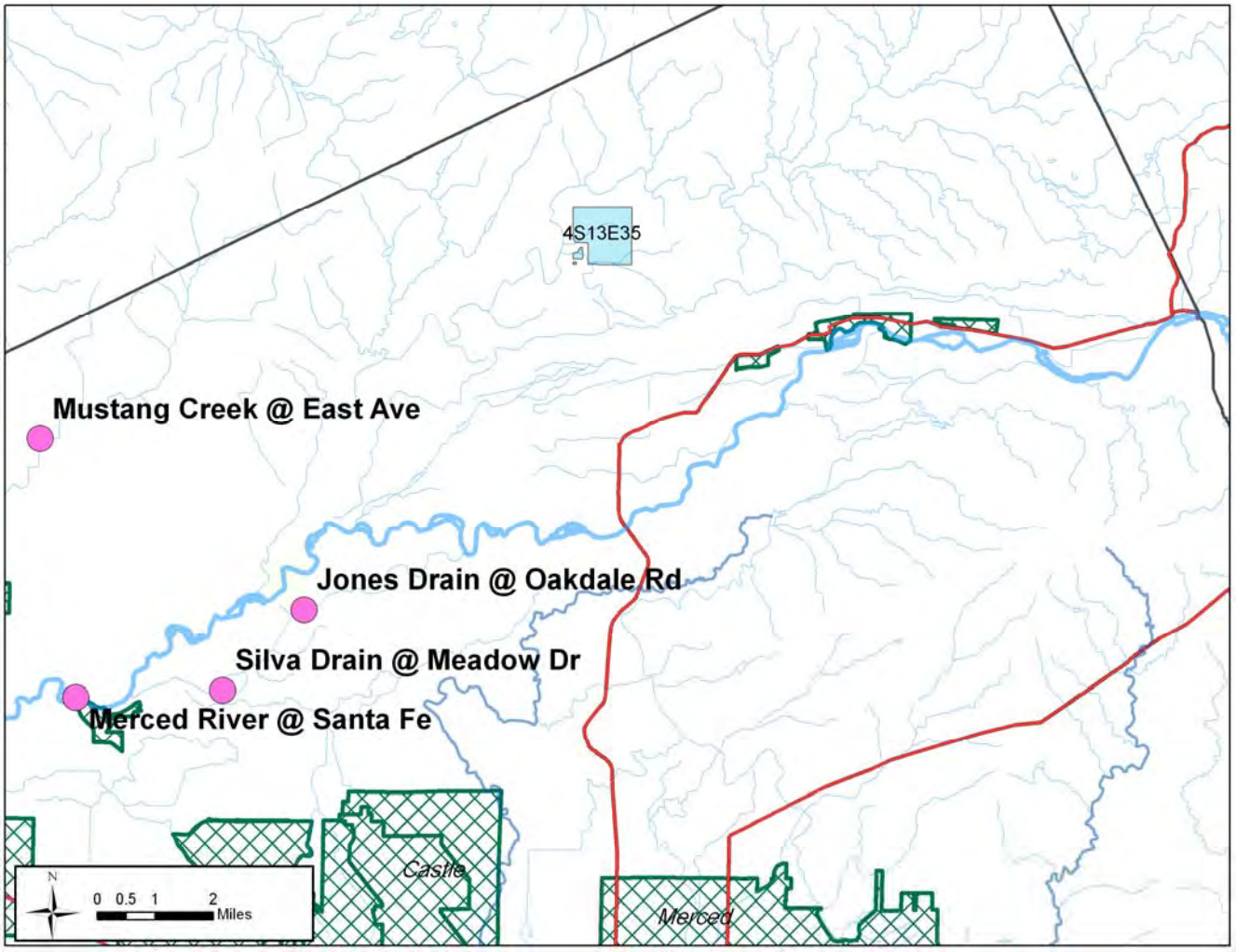
Pesticide Use Reports for pesticide exceedances in the water column

Storm 1 (1/24/08) - chlorpyrifos exceedance

Table 47. Chlopryrifos use for Merced River @ Santa Fe site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/10/2008	LORSBAN-4E	CHLORPYRIFOS	G	2200	PT	550	4S13E35

Figure 47. Location of Chlopryrifos use for Merced River @ Santa Fe site subwatershed – storm 1.



Pesticide Use Reports for metal exceedances in the water column

Storm 1 (1/24/08) - copper exceedance

Table 48. Copper use for Merced River @ Santa Fe site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	136	LB	34	6S12E11
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	140	LB	35	6S12E11
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	400	LB	100	6S12E1
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	160	LB	40	6S13E6
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	200	LB	50	6S12E12
ALMOND	11/26/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	296	LB	74	5S12E33
ALMOND	11/26/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	560	LB	140	5S12E33

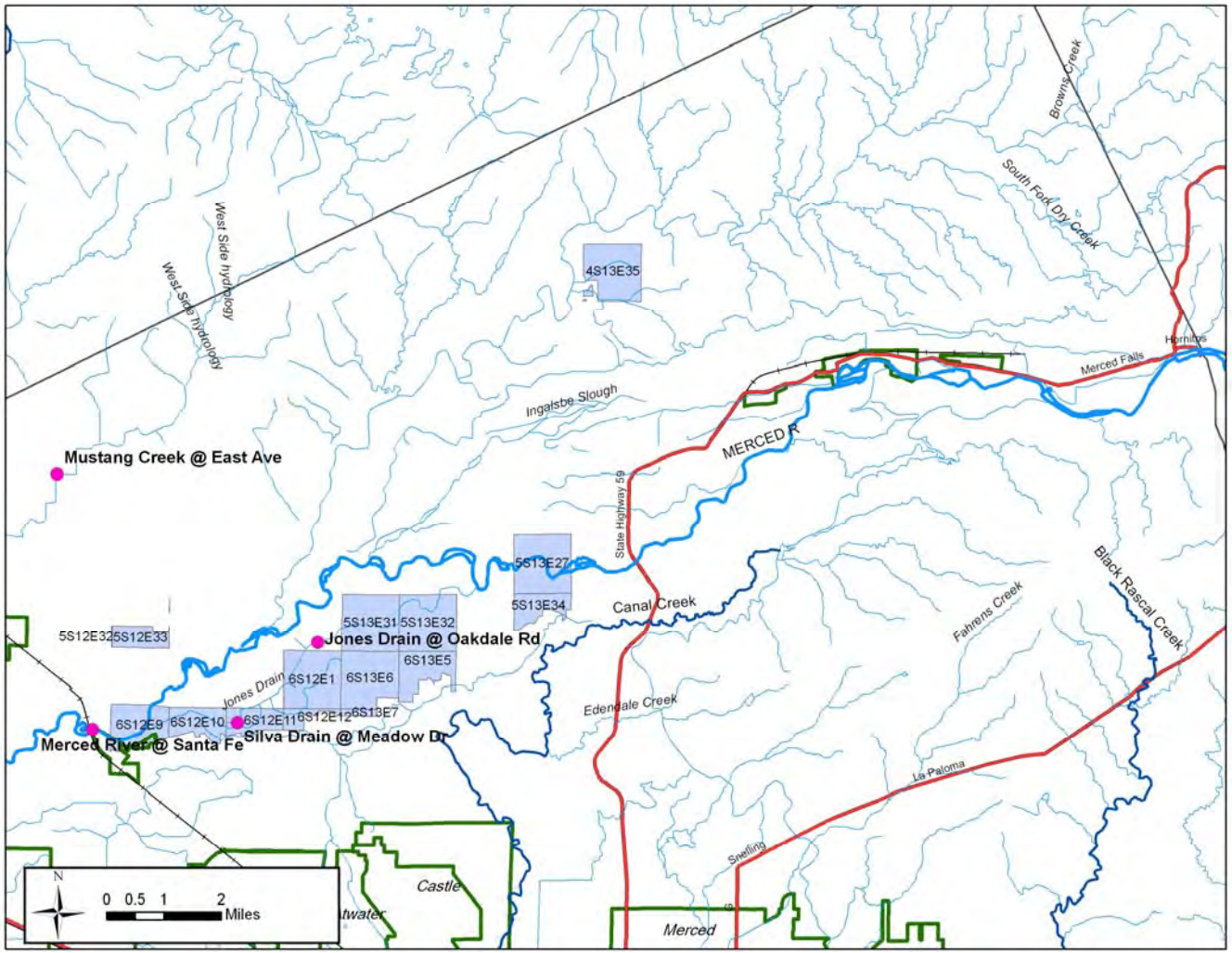
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/1/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	227.4	LB	15.16	5S13E31
STONE FRUIT	12/3/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	144	LB	18	6S12E10
STONE FRUIT	12/3/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	80	LB	10	6S12E10
STONE FRUIT	12/4/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	28	LB	3.5	6S12E10
STONE FRUIT	12/4/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	224	LB	28	6S12E10
PEAR ASIAN	12/4/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	8	LB	2	6S12E10
PEACH	12/5/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	488.1	LB	32.54	5S13E32
PEACH	12/5/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	310.2	LB	20.68	5S13E31
PEACH	12/6/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	306.6	LB	20.44	5S13E32
PEACH	12/10/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	410.9	LB	27.39	5S13E32
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	325.2	LB	27.1	6S13E5
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	387.6	LB	32.3	6S13E7

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	315.6	LB	26.3	6S13E5
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	106.8	LB	8.9	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	324	LB	27	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	336	LB	28	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	420	LB	35	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	480	LB	40	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	409.2	LB	34.1	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	340.8	LB	28.4	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	514.8	LB	42.9	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	325.2	LB	27.1	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	324	LB	27	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	226.8	LB	18.9	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	202.8	LB	16.9	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	376.8	LB	31.4	6S13E5

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	204	LB	34	6S12E11
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	600	LB	100	6S12E1
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	840	LB	140	5S12E33
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	444	LB	74	5S12E33
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	252	LB	42	6S12E12
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	210	LB	35	6S12E11
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	474	LB	79	6S13E6
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	300	LB	50	6S12E12
ALMOND	1/10/2008	NU-COP 50DF	COPPER HYDROXIDE	G	4400	LB	550	4S13E35
ALMOND	1/10/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	1450	LB	145	5S12E32
ALMOND	1/11/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	500	LB	100	6S12E1
ALMOND	1/11/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	170	LB	34	6S12E11
ALMOND	1/11/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	650	LB	65	6S12E1

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/12/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	132	LB	33	6S13E7
ALMOND	1/16/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	238	LB	45	5S13E34
ALMOND	1/18/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	170	LB	30	5S13E27
ALMOND	1/22/2008	NORDOX	COPPER OXIDE (OUS)	G	133.2	LB	18	6S12E9

Figure 48. Location of Copper use for Merced River @ Santa Fe site subwatershed – storm 1.



Pesticide Use Reports for water column toxicity

Storm 1 (1/24/08) - Ceriodaphnia dubia toxicity

Table 49. Pesticide use for Merced River @ Santa Fe site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	8/2/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	169.92	LB	10.62	5S12E13
ALMOND	8/6/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.9	GA	23.7	5S13E34
ALMOND	8/6/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.8	GA	23.08	5S13E32
ALMOND	8/6/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.2	GA	15.18	5S13E33
ALMOND	8/6/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.5	GA	19.51	5S13E33
ALMOND	8/6/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.3	GA	28.83	5S13E27
ALMOND	8/7/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3.5	QT	11.25	5S13E32
ALMOND	8/7/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3.3	QT	10.62	6S13E6
ALMOND	8/7/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.7	QT	8.5	6S13E4
ALMOND	8/7/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.1	GA	14.5	5S13E32

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	8/7/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3.7	QT	11.87	5S13E31
ALMOND	8/7/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3.3	QT	10.53	5S13E32
WALNUT	8/8/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	57.9	LB	57.89	5S13E28
ALMOND	8/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	4.4	GA	56.08	5S12E34
WALNUT	8/10/2007	WARRIOR INSECTICIDE WITH ZEON TECHNOLOGY	LAMBDA-CYHALOTHRIN	G	31.95	OZ	15	6S12E4
WALNUT	8/10/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	19	LB	19	6S12E8
ALMOND	8/10/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	4.2	GA	54.15	5S13E33
WALNUT	8/17/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	37.5	LB	37.54	5S13E29
WALNUT	8/17/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	28.9	LB	28.95	5S13E28
WALNUT	8/22/2007	WARRIOR INSECTICIDE WITH ZEON TECHNOLOGY	LAMBDA-CYHALOTHRIN	G	31.95	OZ	15	6S12E4
CORN FOR/FOD	8/23/2007	FANFARE	BIFENTHRIN	A	1.5	GA	30	6S13E5
WALNUT	8/25/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	19	LB	19	6S12E8
WALNUT	8/31/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	28.9	LB	28.95	5S13E28

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
SWEET BASIL	9/1/2007	PERMETHRIN 3.2 EC INSECTICIDE	PERMETHRIN	A	1.41	GA	45	6S12E5
SWEET BASIL	9/1/2007	PERMETHRIN 3.2 EC INSECTICIDE	PERMETHRIN	A	1.25	GA	40	6S12E5
ENDIVE (ESCAROLE)	9/8/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	2	GA	80	6S12E5
CUCUMBER, PICKLE	9/22/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	18	OZ	3	6S12E12
GRAPE WINE	9/28/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	382.96	OZ	135.8	5S13E21
CUCUMBER, PICKLE	9/28/2007	TENKOZ PERMETHRIN 3.2EC INSECTICIDE	PERMETHRIN	G	18	OZ	3	6S12E12
GRAPE WINE	9/29/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	440.8	OZ	152	5S13E21
GRAPE WINE	10/6/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	287.95	OZ	100.33	5S13E28
GRAPE WINE	10/6/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	63.84	OZ	24.65	5S13E28
GRAPE WINE	10/6/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	19.88	OZ	7.1	5S13E28
GRAPE WINE	10/12/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	287.36	OZ	101.9	5S13E21
GRAPE WINE	10/12/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	108.77	OZ	37.9	5S13E21
GRAPE WINE	10/13/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	208.91	OZ	74.6	5S13E29
GRAPE WINE	10/16/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	416.1	OZ	142.5	5S13E21

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
GRAPE WINE	10/16/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	47.85	OZ	16.5	5S13E20
GRAPE WINE	10/18/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	50.43	OZ	17.39	5S13E32
GRAPE WINE	10/18/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	223.56	OZ	81.59	5S13E28
GRAPE WINE	10/19/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	66.84	OZ	23.87	5S13E31
GRAPE WINE	10/20/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	41.88	OZ	14.8	5S13E19
GRAPE WINE	10/20/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	72.44	OZ	24.98	5S13E31
GRAPE WINE	10/20/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	58.86	OZ	20.8	5S13E19
GRAPE WINE	10/20/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	416	OZ	148.57	5S13E30
GRAPE WINE	11/8/2007	BAYTHROID XL	BETA-CYFLUTHRIN	G	12.5	OZ	5	5S13E20
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	136	LB	34	6S12E11
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	140	LB	35	6S12E11
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	400	LB	100	6S12E1
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	160	LB	40	6S13E6
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	200	LB	50	6S12E12

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	11/26/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	296	LB	74	5S12E33
ALMOND	11/26/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	560	LB	140	5S12E33
PEACH	12/1/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.2	GA	15.16	5S13E31
PEACH	12/1/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	227.4	LB	15.16	5S13E31
STONE FRUIT	12/3/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	144	LB	18	6S12E10
STONE FRUIT	12/3/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	80	LB	10	6S12E10
STONE FRUIT	12/4/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	28	LB	3.5	6S12E10
STONE FRUIT	12/4/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	224	LB	28	6S12E10
PEAR ASIAN	12/4/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	8	LB	2	6S12E10
PEACH	12/5/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.6	GA	20.68	5S13E31
PEACH	12/5/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.5	GA	32.54	5S13E32
PEACH	12/5/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	488.1	LB	32.54	5S13E32
PEACH	12/5/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	310.2	LB	20.68	5S13E31
PEACH	12/6/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.6	GA	20.44	5S13E32

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/6/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	306.6	LB	20.44	5S13E32
PEACH	12/10/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.1	GA	27.39	5S13E32
PEACH	12/10/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	410.9	LB	27.39	5S13E32
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	272.8	OZ	34.1	6S13E6
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	280	OZ	35	6S13E6
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	224	OZ	28	6S13E6
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	216.8	OZ	27.1	6S13E6
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	258.4	OZ	32.3	6S13E7
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	251.2	OZ	31.4	6S13E5
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	320	OZ	40	6S13E6
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	151.2	OZ	18.9	6S13E6
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	216	OZ	27	6S13E6
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	216.8	OZ	27.1	6S13E5
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	71.2	OZ	8.9	6S13E6

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	135.2	OZ	16.9	6S13E7
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	343.2	OZ	42.9	6S13E6
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	210.4	OZ	26.3	6S13E5
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	216	OZ	27	6S13E7
PEACH	12/26/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	227.2	OZ	28.4	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	325.2	LB	27.1	6S13E5
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	387.6	LB	32.3	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	315.6	LB	26.3	6S13E5
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	106.8	LB	8.9	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	324	LB	27	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	336	LB	28	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	420	LB	35	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	480	LB	40	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	409.2	LB	34.1	6S13E6

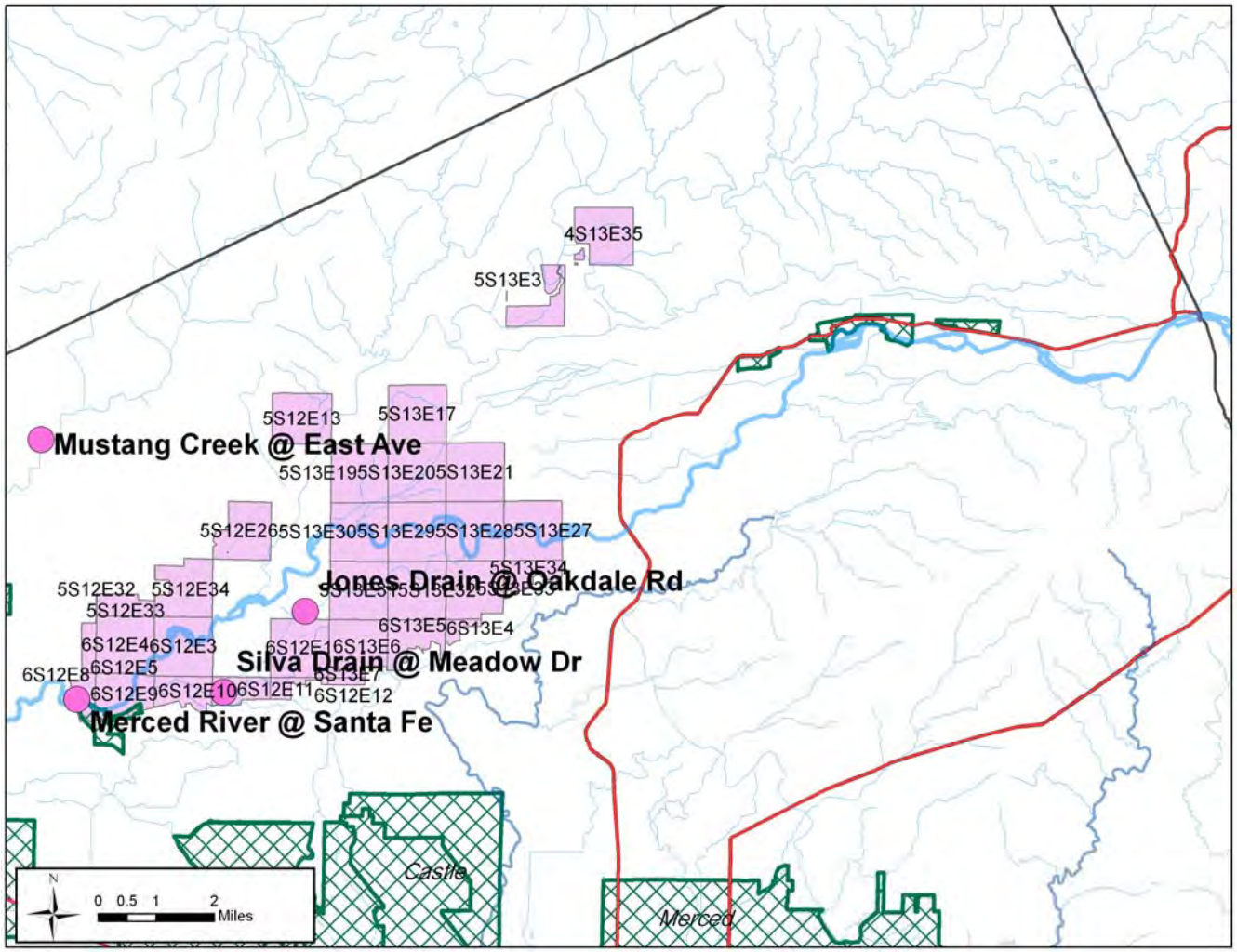
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	340.8	LB	28.4	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	514.8	LB	42.9	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	325.2	LB	27.1	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	324	LB	27	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	226.8	LB	18.9	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	202.8	LB	16.9	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	376.8	LB	31.4	6S13E5
ALMOND	12/29/2007	CORNERSTONE PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	22	GA	60	5S12E26
ALMOND	12/31/2007	DEGESCH PHOSTOXIN TABLETS	ALUMINUM PHOSPHIDE	G	3.25	LB	130	6S12E5
ALMOND	12/31/2007	METHYL BROMIDE 99.5%	METHYL BROMIDE	G	26	LB	130	6S12E5
ALMOND	12/31/2007	METHYL BROMIDE 99.5%	CHLOROPICRIN	G	26	LB	130	6S12E5
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	448	OZ	35	6S12E11
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	435.2	OZ	34	6S12E11
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	947.2	OZ	74	5S12E33

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1792	OZ	140	5S12E33
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1011.2	OZ	79	6S13E6
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	537.6	OZ	42	6S12E12
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	640	OZ	50	6S12E12
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1280	FLOZ	100	6S12E1
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	204	LB	34	6S12E11
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	600	LB	100	6S12E1
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	840	LB	140	5S12E33
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	444	LB	74	5S12E33
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	252	LB	42	6S12E12
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	210	LB	35	6S12E11
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	474	LB	79	6S13E6
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	300	LB	50	6S12E12
ALMOND	1/5/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	170	QT	170	5S13E3

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/10/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1450	OZ	145	5S12E32
ALMOND	1/10/2008	NU-COP 50DF	COPPER HYDROXIDE	G	4400	LB	550	4S13E35
ALMOND	1/10/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	1450	LB	145	5S12E32
ALMOND	1/10/2008	LORSBAN-4E	CHLORPYRIFOS	G	2200	PT	550	4S13E35
ALMOND	1/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	650	OZ	65	6S12E1
ALMOND	1/11/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	500	LB	100	6S12E1
ALMOND	1/11/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	170	LB	34	6S12E11
ALMOND	1/11/2008	DIMILIN 2L	DIFLUBENZURON	G	435.2	OZ	34	6S12E11
ALMOND	1/11/2008	DIMILIN 2L	DIFLUBENZURON	G	1280	OZ	100	6S12E1
ALMOND	1/11/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	650	LB	65	6S12E1
ALMOND	1/12/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	330	OZ	33	6S13E7
ALMOND	1/12/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	132	LB	33	6S13E7
ALMOND	1/14/2008	RIVERDALE DRI-CLEAN HERBICIDE	2,4-D, DIMETHYLAMINE SALT	G	67.5	LB	60	5S13E17
GRAPE WINE	1/15/2008	RIVERDALE SOLUTION WATER SOLUBLE	2,4-D, DIMETHYLAMINE SALT	G	13.5	LB	8	6S12E10

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
GRAPE WINE	1/15/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2	GA	8	6S12E10
ALMOND	1/16/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	238	LB	45	5S13E34
ALMOND	1/16/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	22	GA	88	6S13E4
ALMOND	1/16/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.13	GA	8.5	6S12E3
ALMOND	1/18/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	170	LB	30	5S13E27
WALNUT	1/21/2008	MBC CONCENTRATE SOIL FUMIGANT	METHYL BROMIDE	G	2	LB	19	6S13E6
ALMOND	1/22/2008	NORDOX	COPPER OXIDE (OUS)	G	133.2	LB	18	6S12E9
ALMOND	1/23/2008	CORNERSTONE PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	20	GA	95	5S12E26

Figure 49. Location of Pesticide use for Merced River @ Santa Fe site subwatershed – storm 1.

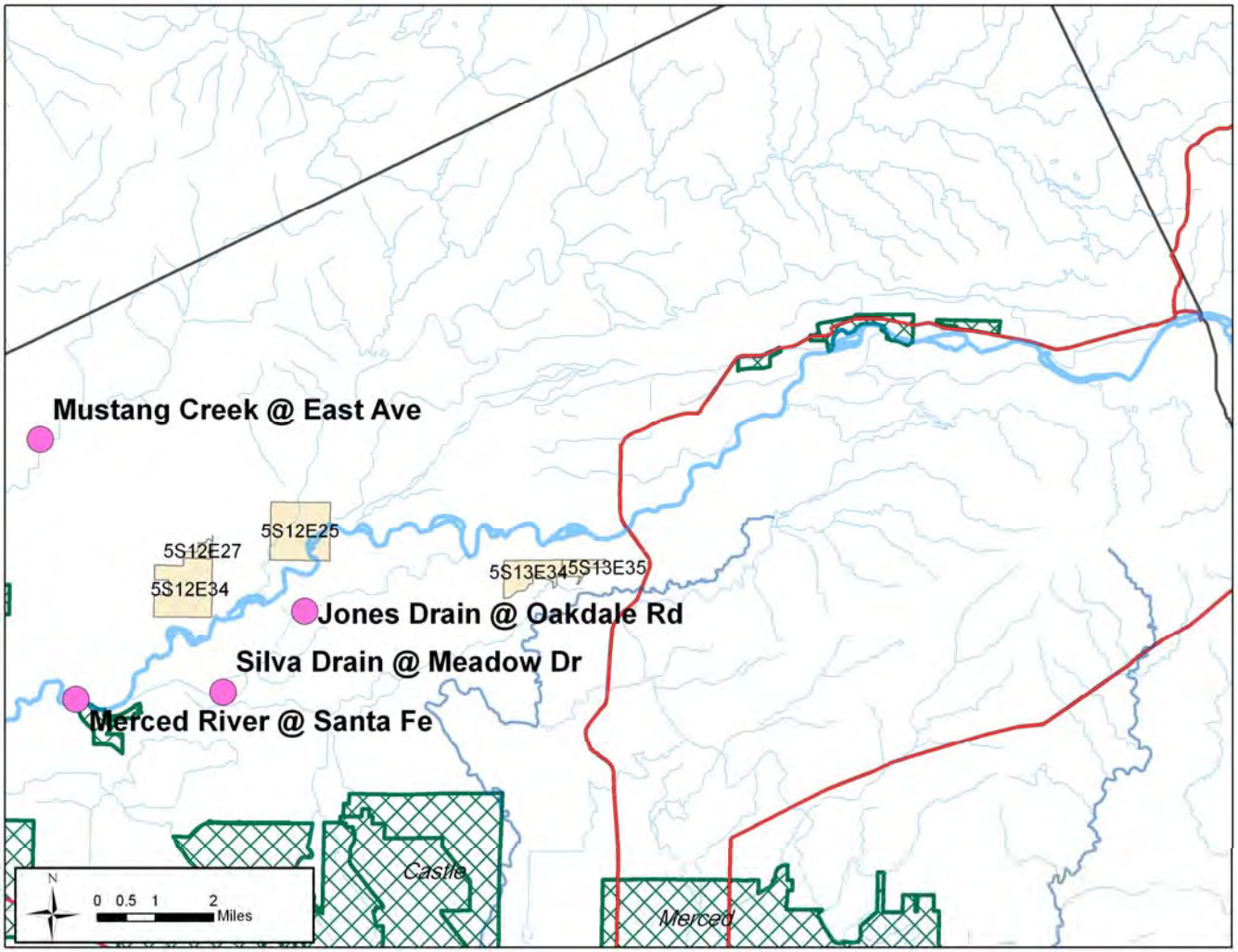


Storm 1 RS (1/30/08) - Ceriodaphnia dubia toxicity

Table 50. Pesticide use for Merced River @ Santa Fe site subwatershed – storm 1 RS.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/28/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5.2	GA	19	5S12E34
ALMOND	1/29/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	240	LB	53	5S12E27
ALMOND	1/30/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	102	LB	21	5S13E34
ALMOND	1/30/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	306	LB	59	5S13E35
WALNUT	1/30/2008	METHYL BROMIDE 98%	METHYL BROMIDE	G	175	LB	106	5S12E25

Figure 50. Location of Pesticide use for Merced River @ Santa Fe site subwatershed – storm 1 RS.



Miles Creek @ Reilly Rd site subwatershed

Pesticide Use Reports for pesticide exceedances in the water column

Storm 1 (1/25/08) - Methidathion exceedance

No reported use in 2007 or January 2008.

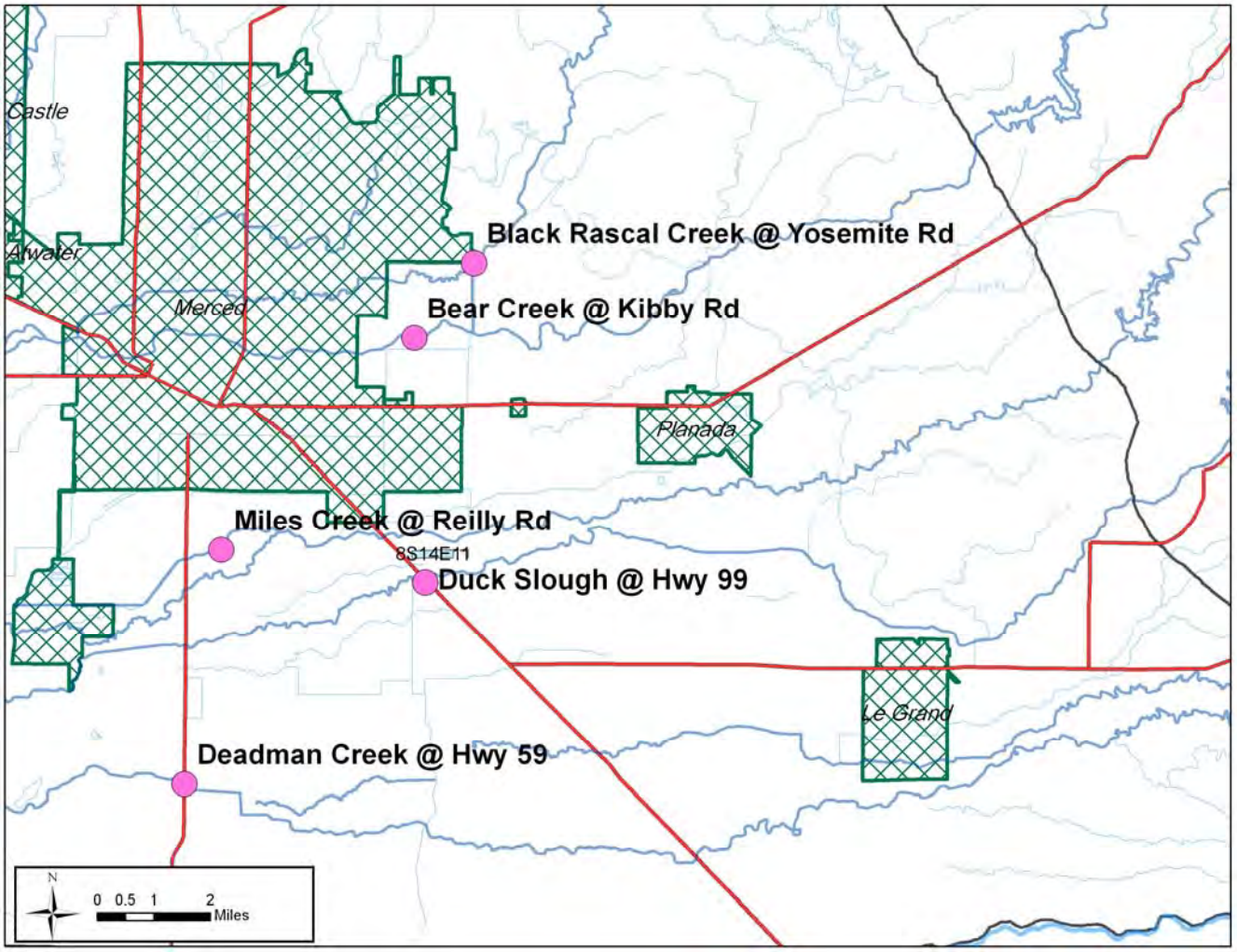
Pesticide Use Reports for metal exceedances in the water column

Storm 1 (1/25/08) - Copper exceedance

Table 51. Copper use for Miles Creek @ Reilly Rd site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/10/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	56	LB	7	8S14E11
PEACH	1/11/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	200	LB	10	8S14E11
PEACH	1/11/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	200	LB	10	8S14E11
PEACH	1/11/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	200	LB	10	8S14E11
ALMOND	1/14/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	462	LB	77	8S14E11
ALMOND	1/14/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	462	LB	77	8S14E11

Figure 51. Location of Copper use for Miles Creek @ Reilly Rd site subwatershed – storm 1.



Storm 2 (2/25/08) - Copper exceedance

No additional uses after 1/14/08.

Pesticide Use Reports for water column toxicity

Storm 1 (1/25/08) - Ceriodaphnia dubia toxicity

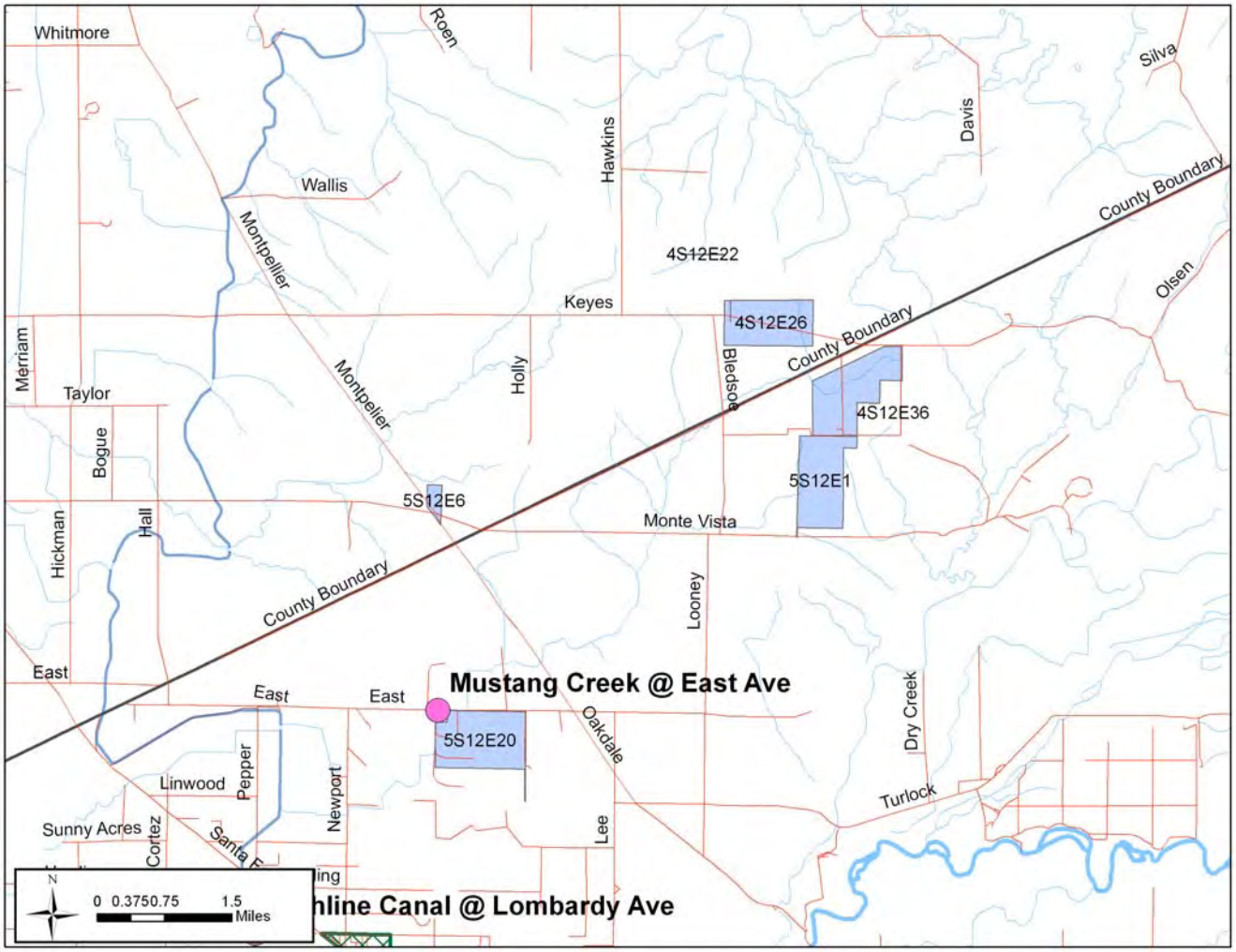
Table 52. Pesticide use for Miles Creek @ Reilly Rd site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	8/3/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	9.5	GA	76	8S15E8
ALMOND	8/3/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	9.75	GA	78	8S15E8
ALMOND	8/3/2007	BRIGADE WSB INSECTICIDE/MITICIDE	BIFENTHRIN	G	41	LB	41	8S14E8
ALMOND	8/8/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	4.12	GA	33	7S15E34
ALMOND	8/8/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	0.87	GA	7	7S15E34
ALMOND	8/9/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	3.12	GA	25	8S15E2
ALMOND	8/9/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	16.87	GA	135	8S15E2

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
TOMATO	8/9/2007	BAYTHROID XL	BETA-CYFLUTHRIN	A	200.2	OZ	65	8S15E5
ALMOND	8/15/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	32	PT	35	8S14E1
PISTACHIO	8/16/2007	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	400	OZ	40	8S15E5
TOMATO	8/23/2007	BAYTHROID XL	BETA-CYFLUTHRIN	A	2.29	GA	104.5	8S15E5
TOMATO	8/23/2007	BAYTHROID XL	BETA-CYFLUTHRIN	A	0.71	GA	32.5	8S14E2
RADICCHIO	9/4/2007	PYGANIC CROP PROTECTION EC 1.4 II	PYRETHRINS	A	4	GA	16	7S15E34
RADICCHIO	9/4/2007	PYGANIC CROP PROTECTION EC 1.4 II	PYRETHRINS	A	3.5	GA	14	8S15E4
TOMATO	9/7/2007	WARRIOR INSECTICIDE WITH ZEON TECHNOLOGY	LAMBDA-CYHALOTHRIN	A	0.98	GA	32.5	8S14E2
PISTACHIO	11/7/2007	PERMETHRIN 3.2 EC INSECTICIDE	PERMETHRIN	A	450	OZ	45	8S14E2
ALFALFA	12/28/2007	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	124	PT	62	8S14E8
WHEAT FOR/FOD	12/29/2007	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	53	PT	35	8S14E12
ALFALFA	12/30/2007	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	136	PT	68	8S14E2
ALFALFA	12/30/2007	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	272	PT	136	8S14E2

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/8/2008	ZIRAM 76DF FUNGICIDE	ZIRAM	G	1254	LB	209	8S15E1
ALMOND	1/8/2008	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	G	669	OZ	209	8S15E1
ALMOND	1/10/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	56	LB	7	8S14E11
PEACH	1/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	100	OZ	10	8S14E11
PRUNE	1/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1000	OZ	100	7S15E32
PRUNE	1/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	350	OZ	35	8S14E11
PRUNE	1/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3210	OZ	321	8S15E4
PRUNE	1/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1900	OZ	190	7S15E32
PEACH	1/11/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	200	LB	10	8S14E11
ALMOND	1/12/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	209	QT	209	8S15E1
PISTACHIO	1/12/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7.5	GA	100	7S15E23
ALMOND	1/14/2008	CUPROFIX ULTRA 40 DISPERSS	COPPER SULFATE	G	462	LB	77	8S14E11
PRUNE	1/19/2008	DIAZINON 50W	DIAZINON	G	27	LB	9	7S15E32

Figure 52. Location of Pesticide use for Miles Creek @ Reilly Rd site subwatershed – storm 1.

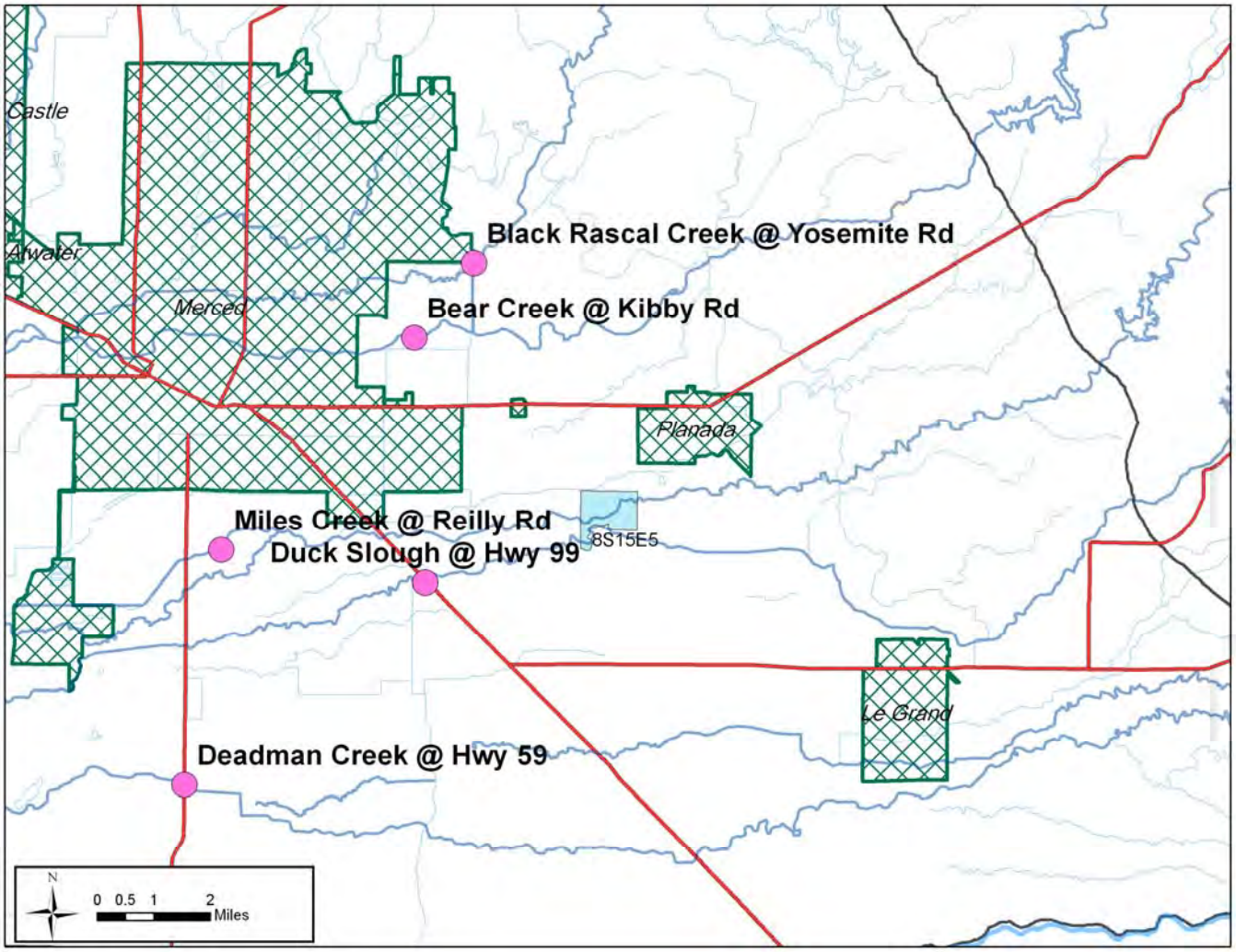


Storm 1 RS (1/30/08) - Ceriodaphnia dubia toxicity

Table 53. Pesticide use for Miles Creek @ Reilly Rd site subwatershed – storm 1 RS.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	1/26/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	150	PT	100	8S15E5

Figure 53. Location of Pesticide use for Miles Creek @ Reilly Rd site subwatershed – storm 1 RS.



Mustang Creek @ East Ave site subwatershed

Pesticide Use Reports for pesticide exceedances in the water column

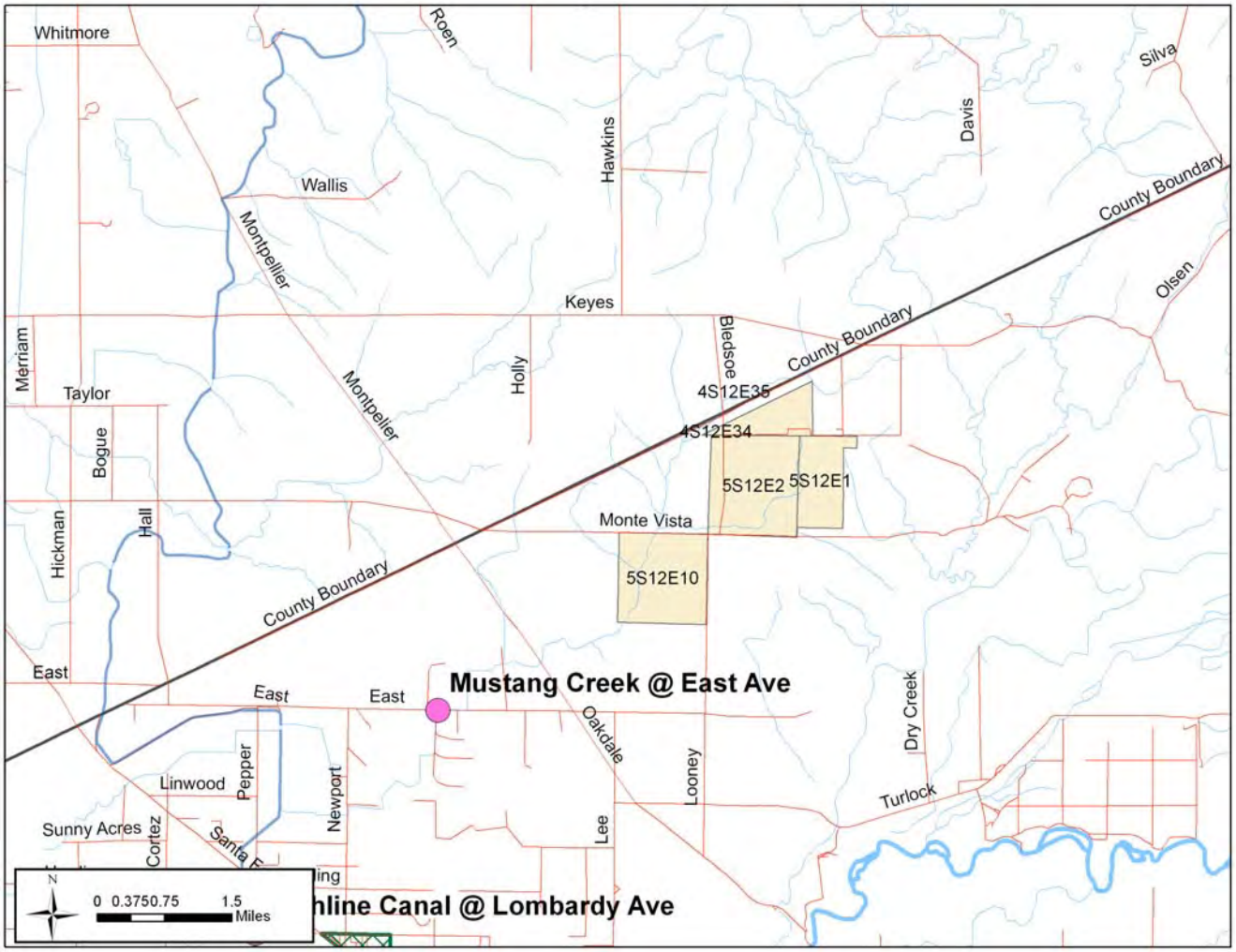
Storm 1 (1/24/08) - Chlorpyrifos exceedance

No chlorpyrifos use within one month of sampling. The last reported use of chlorpyrifos occurred 3 months prior to sampling.

Table 54. Chlorpyrifos use for Mustang Creek @ East Ave site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
GRAPE WINE	10/25/2007	LORSBAN 4E-HF	CHLORPYRIFOS	G	252.6	GA	505.2	5S12E2
GRAPE WINE	10/25/2007	LORSBAN 4E-HF	CHLORPYRIFOS	G	153.75	GA	307.5	5S12E10
GRAPE WINE	10/25/2007	LORSBAN 4E-HF	CHLORPYRIFOS	G	66.2	GA	132.4	5S12E1
GRAPE WINE	10/25/2007	LORSBAN 4E-HF	CHLORPYRIFOS	G	15.7	GA	31.4	4S12E35
GRAPE, WINE	10/25/2007	LORSBAN 4E-HF	CHLORPYRIFOS	G	145.4	GA	290.8	4S12E35
GRAPE, WINE	10/25/2007	LORSBAN 4E-HF	CHLORPYRIFOS	G	297.2	GA	594.4	4S12E34
GRAPE, WINE	10/25/2007	LORSBAN 4E-HF	CHLORPYRIFOS	G	75.15	GA	150.3	4S12E27
GRAPE, WINE	10/25/2007	LORSBAN 4E-HF	CHLORPYRIFOS	G	296.89	GA	590	4S12E28

Figure 54. Location of Chlorpyrifos use for Mustang Creek @ East Ave site subwatershed – storm 1.

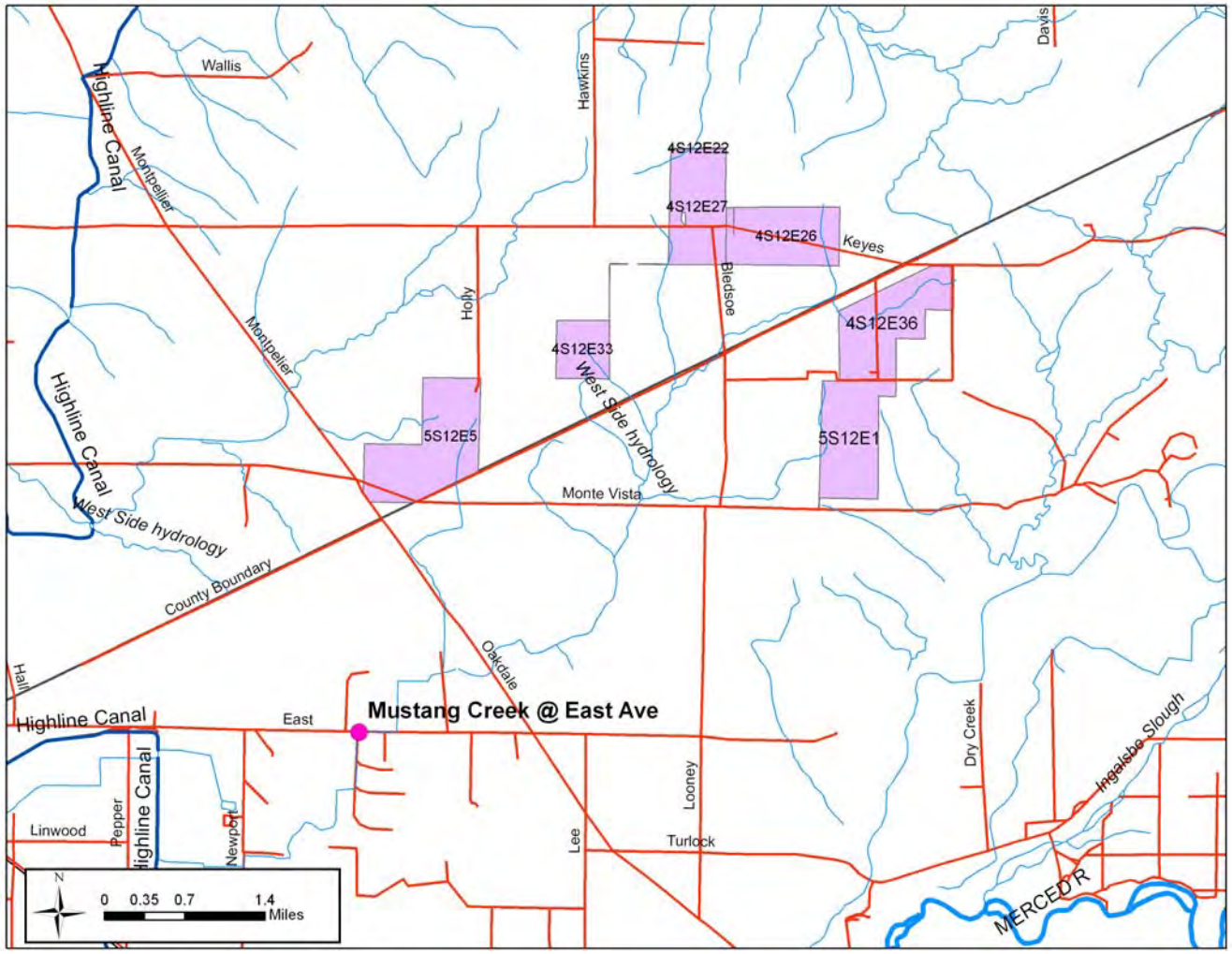


Storm 1 (1/24/08) - Simazine exceedance

Table 55. Simazine use for Mustang Creek @ East Ave site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/18/2008	SIM-TROL 4L	SIMAZINE	G	70	GA	400	4S12E22
ALMOND	1/21/2008	SIMAZINE 4L HERBICIDE	SIMAZINE	G	225	PT	225	5S12E1
ALMOND	1/22/2008	SIMAZINE 4L HERBICIDE	SIMAZINE	G	160	PT	160	4S12E36

Figure 55. Location of Simazine use for Mustang Creek @ East Ave site subwatershed – storm 1.



Storm 2 (2/26/08) - Chlorpyrifos exceedance

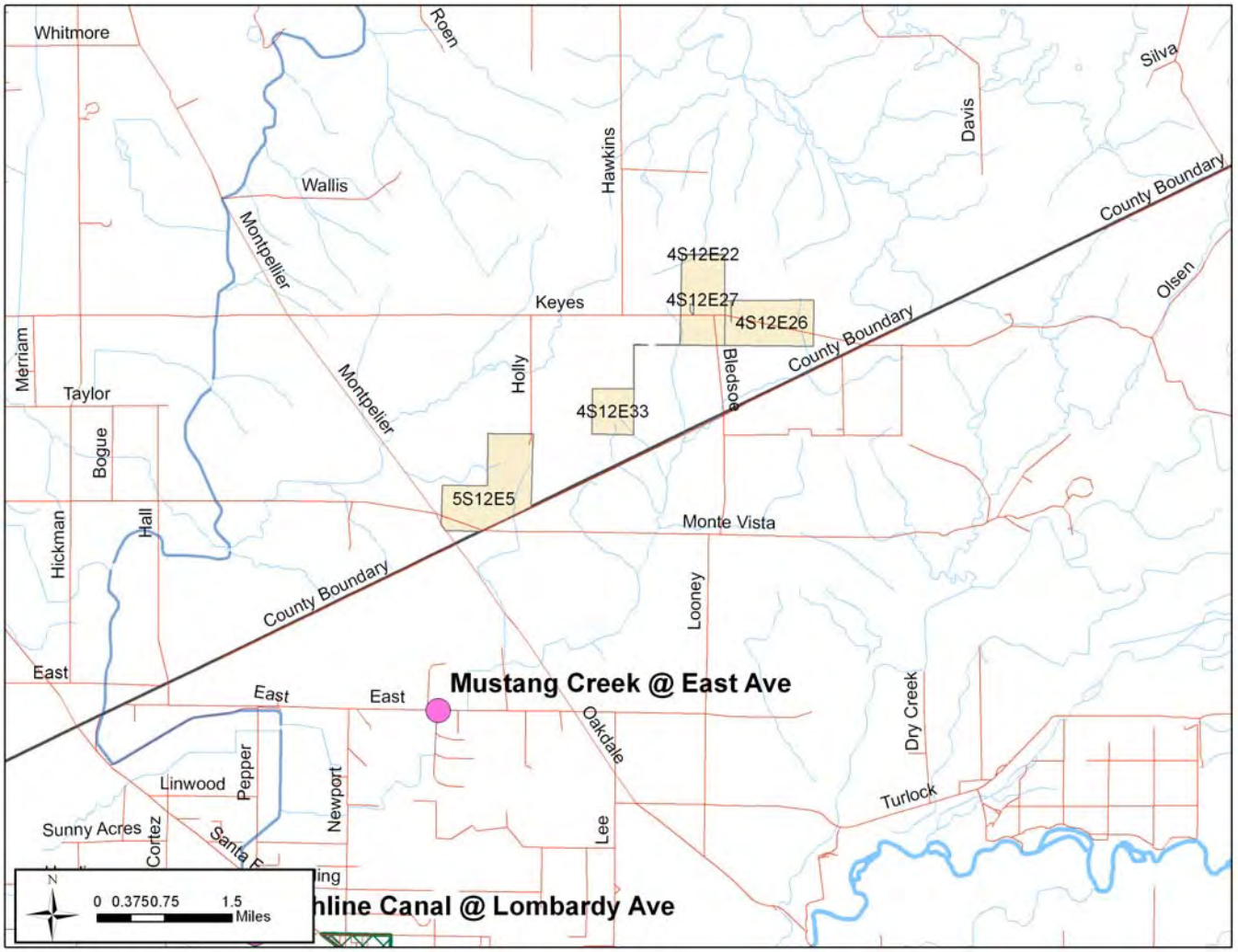
There was no reported use of chlorpyrifos in January or February of 2008.

Storm 2 (2/26/08) - Simazine exceedance

Table 56. Simazine use for Mustang Creek @ East Ave site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/25/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	116.36	PT	160	4S12E26
UNCUL NON-AG	1/29/2008	SIM-TROL 4L	SIMAZINE	G	16	PT	10	5S12E5
ALMOND	1/31/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	116.36	PT	160	4S12E27
ALMOND	2/4/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	109.09	PT	150	4S12E33
ALMOND	2/7/2008	SIM-TROL 4L	SIMAZINE	G	22.5	GA	140	4S12E22

Figure 56. Location of Simazine use for Mustang Creek @ East Ave site subwatershed – storm 2.



Pesticide Use Reports for sediment toxicity exceedances

Storm sediment (3/4/08) – Hyalella azteca toxicity

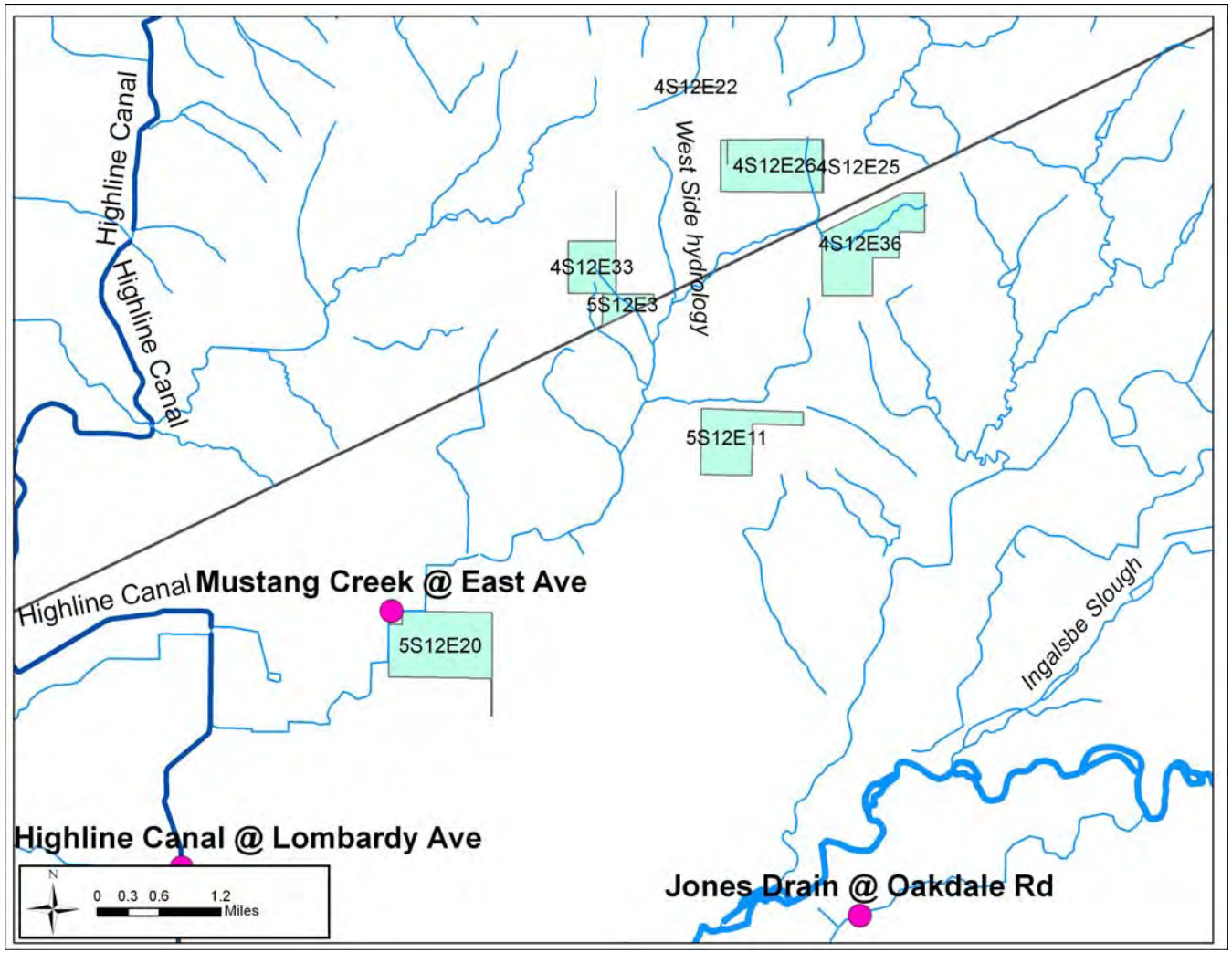
Table 57. Pesticide use for Mustang Creek @ East Ave site subwatershed – storm sediment.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1779.2	OZ	139	5S12E20	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	6144	OZ	480	4S12E26	5300
ALMOND	1/19/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1024	OZ	80	4S12E26	5300
ALMOND	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	50	GA	115	5S12E3	5000
ALMOND	2/5/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	350	QT	350	5S12E3	24000
ALMOND	2/5/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	65	GA	115	5S12E3	100000
ALMOND	2/6/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	330	QT	330	4S12E33	24000
ALMOND	2/7/2008	MON-52249 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	45	GA	140	4S12E22	24000
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	45	GA	140	4S12E22	100000
ALMOND	2/9/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	195	PT	128.7	4S12E33	1000000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	234	QT	128.7	4S12E33	5000
ALMOND	2/15/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	550	QT	550	4S12E25	24000
ALMOND	2/16/2008	BUCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	37.5	GA	135	4S12E36	24000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	750	OZ	135	4S12E36	100000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	750	OZ	150	4S12E33	2030
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	1920	OZ	150	4S12E33	10000
ALMOND	2/28/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	28	GA	56	4S12E26	24000
ALMOND	3/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	2.5	GA	20	5S13E6	5000
ALMOND	3/1/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	2.5	QT	20	5S13E6	1000000
ALMOND	3/1/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	6000	OZ	600	4S12E25	16000
ALMOND	3/3/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	5	GA	14	5S13E6	24000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	3500	OZ	350	5S12E3	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	5500	OZ	550	4S12E25	16000
PEACH	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	440	OZ	44	5S12E11	16000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	540	OZ	54	5S12E11	16000
ALMOND	3/4/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	5	GA	14	5S13E6	24000

Figure 57. Location of Pesticide use for Mustang Creek @ East Ave site subwatershed – storm sediment.



Pesticide Use Reports for water column toxicity

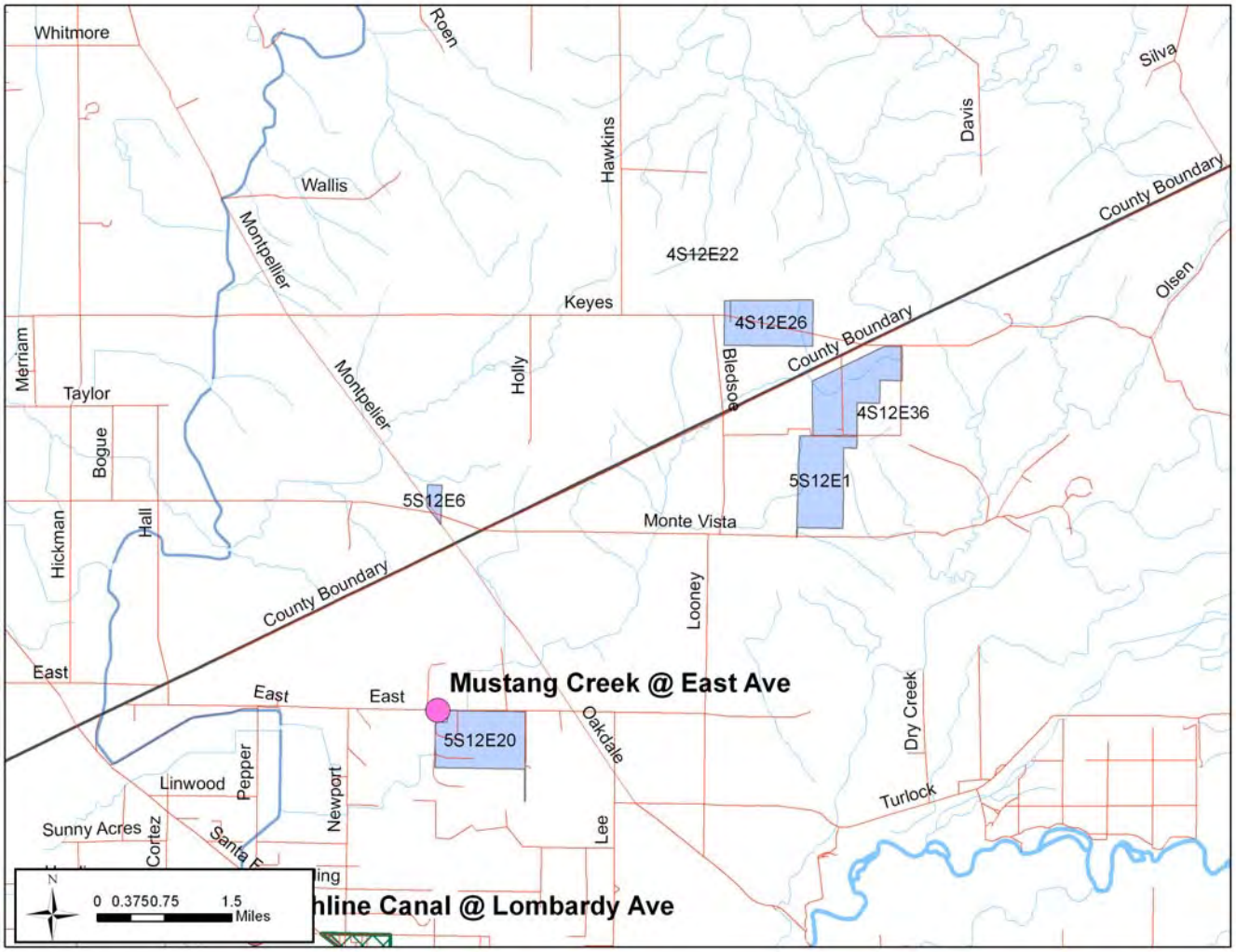
Storm 1 (1/24/08) - Ceriodaphnia dubia toxicity

Table 58. Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/2/2008	NU-COP 50DF	COPPER HYDROXIDE	G	608	LB	76	5S12E6
ALMOND	1/2/2008	PROAXIS INSECTICIDE	GAMMA-CYHALOTHRIN	G	212.8	OZ	76	5S12E6
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1779.2	OZ	139	5S12E20
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	834	LB	139	5S12E20
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	6144	OZ	480	4S12E26
ALMOND	1/18/2008	HYDROX	COPPER HYDROXIDE	G	2880	LB	480	4S12E26
ALMOND	1/18/2008	MON-52249 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	135	GA	400	4S12E22
ALMOND	1/19/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1024	OZ	80	4S12E26
ALMOND	1/19/2008	HYDROX	COPPER HYDROXIDE	G	480	LB	80	4S12E26
ALMOND	1/21/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	562.5	PT	225	5S12E1

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/22/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	400	PT	160	4S12E36

Figure 58. Location of Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 1.

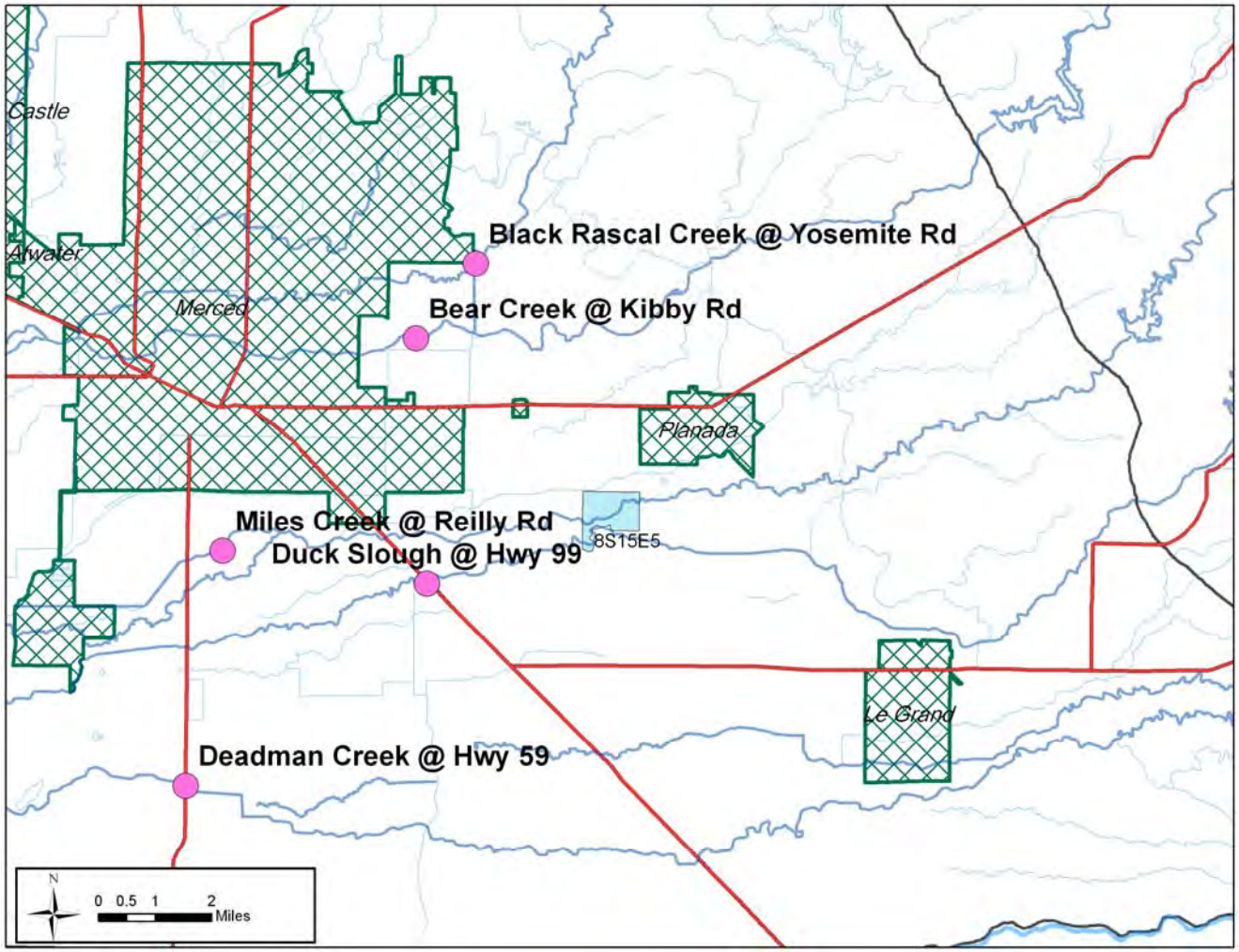


Storm 1 RS (1/30/08) - Ceriodaphnia dubia toxicity

Table 59. Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 1 RS.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/25/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	116.36	PT	160	4S12E26
UNCUL NON-AG	1/29/2008	GLYFOS BULK	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4	GA	10	5S12E5

Figure 59. Location of Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 1 RS.



Storm 2 (2/26/08) - Selenastrum capricornutum toxicity

Table 60. Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 2.

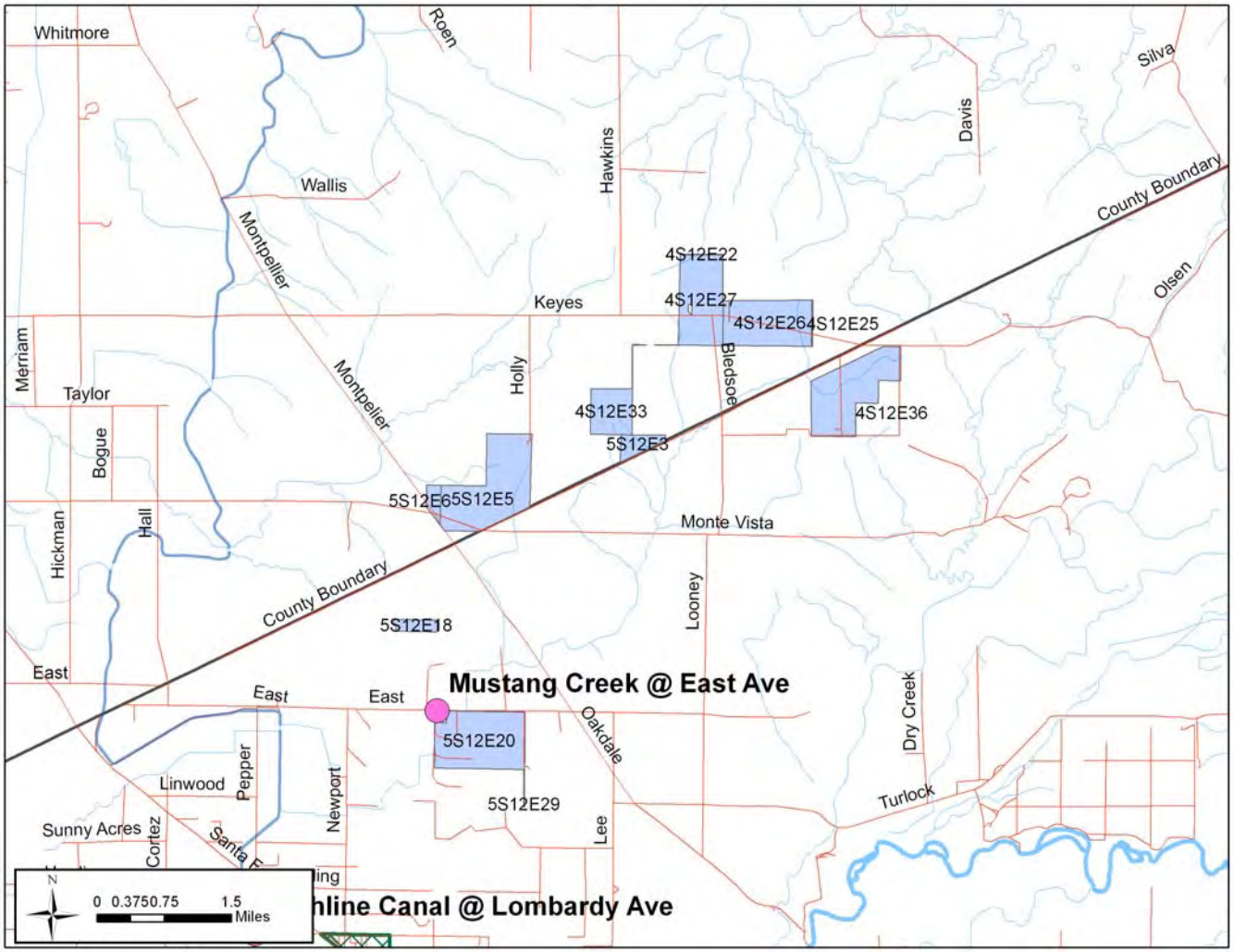
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/2/2008	NU-COP 50DF	COPPER HYDROXIDE	G	608	LB	76	5S12E6
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	834	LB	139	5S12E20
ALMOND	1/18/2008	HYDROX	COPPER HYDROXIDE	G	2880	LB	480	4S12E26
ALMOND	1/19/2008	HYDROX	COPPER HYDROXIDE	G	480	LB	80	4S12E26
ALMOND	1/21/2008	SIMAZINE 4L HERBICIDE	SIMAZINE	G	225	PT	225	5S12E1
ALMOND	1/21/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	675	PT	225	5S12E1
ALMOND	1/21/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	562.5	PT	225	5S12E1
ALMOND	1/21/2008	GOAL 2XL	OXYFLUORFEN	G	1800	OZ	225	5S12E1
ALMOND	1/22/2008	SIMAZINE 4L HERBICIDE	SIMAZINE	G	160	PT	160	4S12E36
ALMOND	1/22/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	480	PT	160	4S12E36
ALMOND	1/22/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	400	PT	160	4S12E36
ALMOND	1/22/2008	GOAL 2XL	OXYFLUORFEN	G	1280	OZ	160	4S12E36
ALMOND	1/25/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	116.36	PT	160	4S12E26

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/25/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	116.36	PT	160	4S12E26
ALMOND	1/25/2008	ALECTO 41S	GLYPHOSATE	G	174.55	PT	160	4S12E26
UNCUL NON-AG	1/29/2008	SIM-TROL 4L	SIMAZINE	G	16	PT	10	5S12E5
UNCUL NON-AG	1/29/2008	GLYFOS BULK	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4	GA	10	5S12E5
ALMOND	1/31/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	145.45	LB	160	4S12E27
ALMOND	1/31/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	116.36	PT	160	4S12E27
ALMOND	1/31/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	116.36	PT	160	4S12E27
ALMOND	1/31/2008	ALECTO 41S	GLYPHOSATE	G	174.55	PT	160	4S12E27
ALMOND	2/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	12	QT	6	5S12E6
ALMOND	2/1/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	12	QT	6	5S12E6
OAT FOR/FOD	2/2/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	40	GA	320	5S12E29
OAT FOR/FOD	2/2/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	12.5	QT	320	5S12E29
OAT FOR/FOD	2/2/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	7.75	GA	62	5S12E29
OAT FOR/FOD	2/2/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	2.42	QT	62	5S12E29

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/4/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	136.36	LB	150	4S12E33
ALMOND	2/4/2008	DREXEL SIMAZINE 4L	SIMAZINE	G	109.09	PT	150	4S12E33
ALMOND	2/4/2008	SABER CA	2,4-D, DIMETHYLAMINE SALT	G	109.09	PT	150	4S12E33
ALMOND	2/4/2008	ALECTO 41S	GLYPHOSATE	G	163.64	PT	150	4S12E33
ALMOND	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	50	GA	115	5S12E3
ALMOND	2/5/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	350	QT	350	5S12E3
ALMOND	2/5/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	65	GA	115	5S12E3
ALMOND	2/6/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	330	QT	330	4S12E33
ALMOND	2/7/2008	SIM-TROL 4L	SIMAZINE	G	22.5	GA	140	4S12E22
ALMOND	2/7/2008	MON-52249 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	45	GA	140	4S12E22
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	45	GA	140	4S12E22
ALMOND	2/9/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	195	PT	128.7	4S12E33
ALMOND	2/9/2008	SOLICAM DF HERBICIDE	NORFLURAZON	G	117	LB	128.7	4S12E33
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	234	QT	128.7	4S12E33
ALMOND	2/9/2008	ORCHARD STAR	2,4-D, DIMETHYLAMINE SALT	G	234	PT	128.7	4S12E33

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	2/13/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	333	PT	333	5S12E18
OAT FOR/FOD	2/13/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	266.4	OZ	333	5S12E18
ALMOND	2/15/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	550	QT	550	4S12E25
ALMOND	2/16/2008	BUCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	37.5	GA	135	4S12E36
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	750	OZ	135	4S12E36
OAT FOR/FOD	2/19/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	46.9	GA	150	5S12E5
OAT FOR/FOD	2/19/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	61.25	GA	196	5S12E5
OAT FOR/FOD	2/19/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	57.5	GA	184	5S12E5
ALMOND	2/25/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	A	94.5	LB	150	4S12E33

Figure 60. Location of Pesticide use for Mustang Creek @ East Ave site subwatershed – storm 2.



Prairie Flower Drain @ Crows Landing Rd site subwatershed

Pesticide Use Reports for water column toxicity

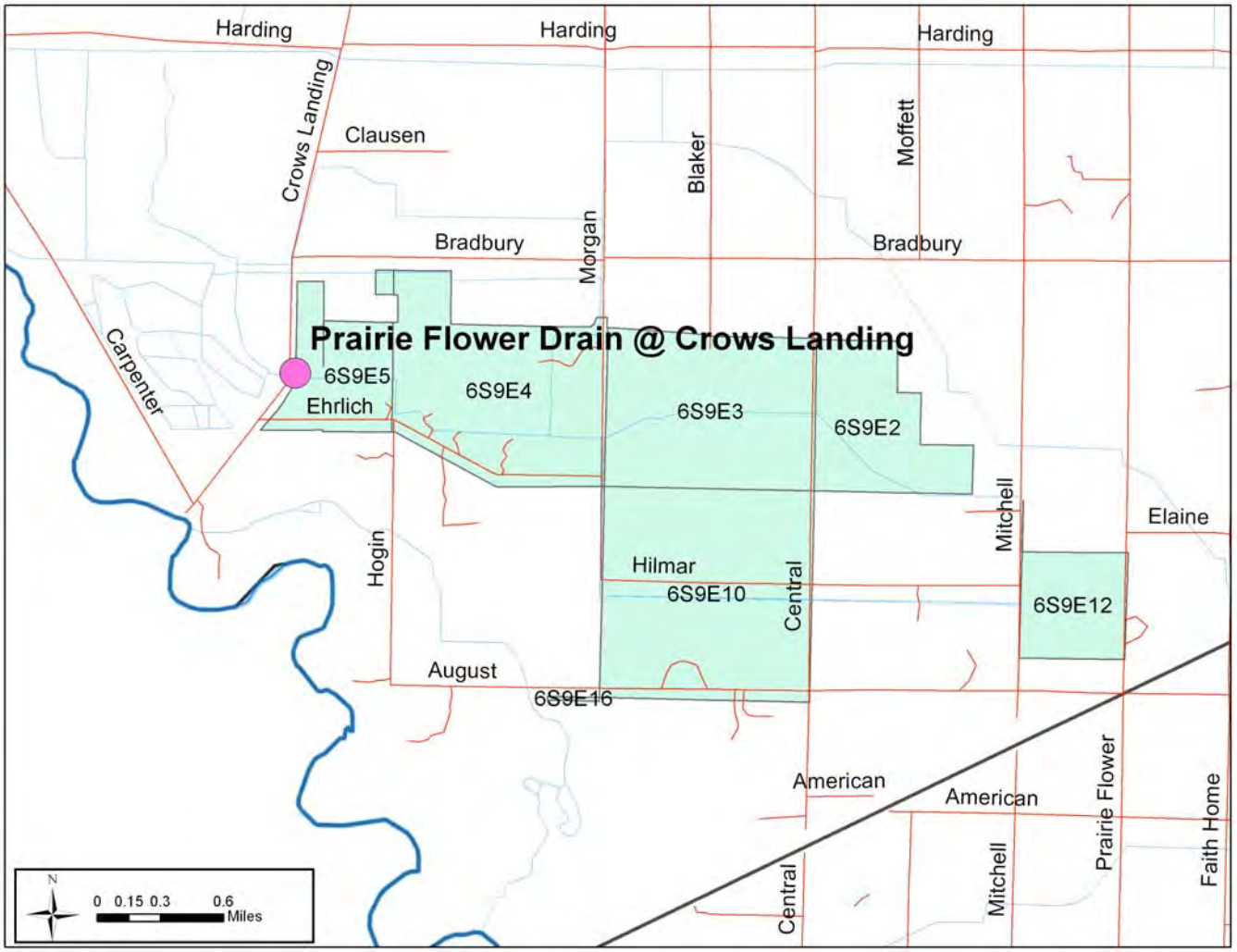
Storm 1 (1/24/08) - Selenastrum capricornutum toxicity

Table 61. Pesticide use for Prairie Flower Drain @ Crows Landing Rd Way site subwatershed – storm 1.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALFALFA	12/27/2007	DIREX 4L HERBICIDE	DIURON	G	12	GA	32	6S9E5
ALFALFA	12/27/2007	DIREX 4L HERBICIDE	DIURON	G	28	GA	75	6S9E5
ALFALFA	12/27/2007	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	12	GA	75	6S9E5
ALFALFA	12/27/2007	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	5	GA	32	6S9E5
ALFALFA	12/27/2007	PRO 90	ADJUVANT	G	3.75	GA	75	6S9E5
ALFALFA	12/27/2007	PRO 90	ADJUVANT	G	1.55	GA	32	6S9E5
OAT FOR/FOD	12/28/2007	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	1560	OZ	120	6S9E3
OAT FOR/FOD	12/28/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	156	OZ	120	6S9E3
OAT FOR/FOD	12/28/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	0.75	GA	50	6S9E2
OAT FOR/FOD	12/28/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	0.57	GA	37	6S9E2
OAT FOR/FOD	12/28/2007	PRO 90	ADJUVANT	G	360	OZ	120	6S9E3
OAT FOR/FOD	12/28/2007	PRO 90	ADJUVANT	G	2.3	GA	37	6S9E2
OAT FOR/FOD	12/28/2007	PRO 90	ADJUVANT	G	3	GA	50	6S9E2

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	12/28/2007	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	1.15	GA	37	6S9E2
OAT FOR/FOD	12/28/2007	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	1.5	GA	50	6S9E2
OAT FOR/FOD	12/29/2007	SHARK EW	CARFENTRAZONE-ETHYL	G	16.25	GA	40	6S9E3
OAT FOR/FOD	12/29/2007	PRO 90	ADJUVANT	G	2.5	GA	40	6S9E3
OAT FOR/FOD	12/29/2007	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	1.25	GA	40	6S9E3
ALFALFA	12/31/2007	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	12.5	GA	40	6S9E10
ALFALFA	12/31/2007	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	7.5	GA	40	6S9E10
ALFALFA	12/31/2007	PRO 90	ADJUVANT	G	1	GA	40	6S9E10
WHEAT FOR/FOD	1/18/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	G	4.4	GA	35	6S9E12
WHEAT FOR/FOD	1/18/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.27	GA	35	6S9E12
OAT FOR/FOD	1/19/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	G	2.5	GA	40	6S9E4
OAT FOR/FOD	1/19/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.42	GA	40	6S9E4
ALFALFA	1/21/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	45	GA	90	6S9E16
ALFALFA	1/21/2008	DU PONT VELPAR L HERBICIDE	HEXAZINONE	G	22.5	GA	90	6S9E16
ALFALFA	1/21/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	22.5	GA	90	6S9E16

Figure 61. Location of Pesticide use for Prairie Flower Drain @ Crows Landing Rd Way site subwatershed – storm 1.



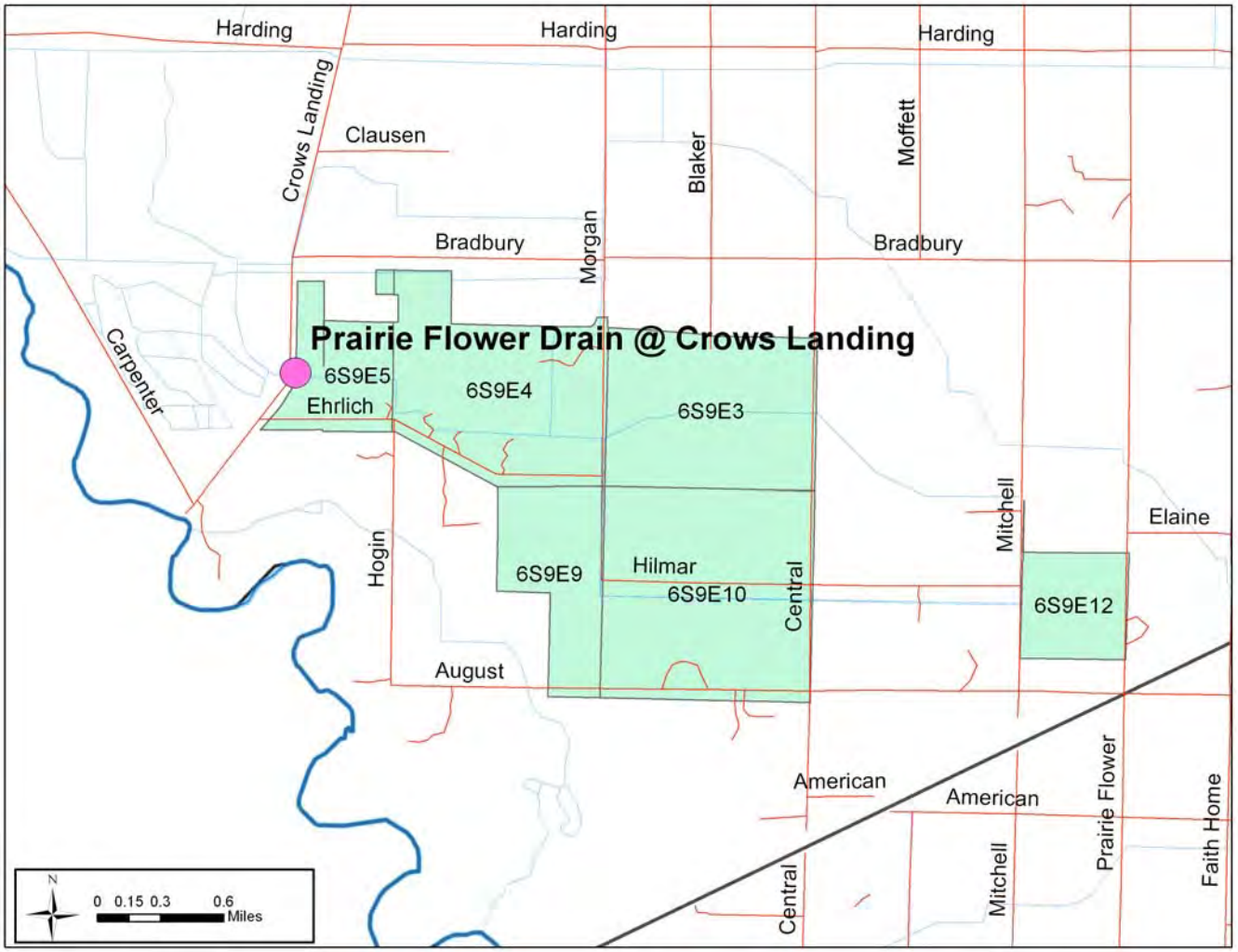
Storm 2 (2/26/08) - Selenastrum capricornutum toxicity

Table 62. Pesticide use for Prairie Flower Drain @ Crows Landing Rd Way site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	2/2/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	83.25	OZ	75	6S9E3
OAT FOR/FOD	2/2/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	83.25	GA	75	6S9E3
OAT FOR/FOD	2/9/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	A	19.5	GA	78	6S9E9
ALFALFA	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	32	GA	32	6S9E5
ALFALFA	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	75	GA	75	6S9E5
OAT FOR/FOD	2/16/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	80	OZ	80	6S9E9
OAT FOR/FOD	2/16/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	2.5	GA	80	6S9E9
OAT FOR/FOD	2/16/2008	MCP 4 AMINE HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	5	GA	80	6S9E9
OAT FOR/FOD	2/16/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	75	OZ	75	6S9E10
OAT FOR/FOD	2/16/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	2.3	GA	75	6S9E10
OAT FOR/FOD	2/16/2008	MCP 4 AMINE HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	4.7	GA	75	6S9E10
OAT FOR/FOD	2/16/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	76	OZ	76	6S9E10

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	2/16/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	2.4	GA	76	6S9E10
OAT FOR/FOD	2/16/2008	MCP 4 AMINE HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	4.75	GA	76	6S9E10
OAT FOR/FOD	2/16/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	40	OZ	40	6S9E10
OAT FOR/FOD	2/16/2008	CLARITY HERBICIDE	DIGLYCOLAMINE SALT OF 3,6-DICHLORO-O-ANISIC ACID	G	1.25	GA	40	6S9E10
OAT FOR/FOD	2/16/2008	MCP 4 AMINE HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	2.5	GA	40	6S9E10
OAT FOR/FOD	2/18/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	G	3.5	GA	15	6S9E12
OAT FOR/FOD	2/18/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	15	OZ	15	6S9E12
OAT FOR/FOD	2/19/2008	RIVERDALE MCPA-4 AMINE	MCPA, DIMETHYLAMINE SALT	G	14.25	GA	57	6S9E4
ALFALFA	2/20/2008	PURSUIT HERBICIDE	IMAZETHAPYR, AMMONIUM SALT	A	1.03	GA	22	6S9E9
ALFALFA	2/20/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	11	GA	22	6S9E9
ALFALFA	2/20/2008	BUTYRAC 200	4(2,4-DB), DIMETHYLAMINE SALT	A	5.5	GA	22	6S9E9
ALFALFA	2/20/2008	ARROW 2 EC HERBICIDE	CLETHODIM	A	2.23	GA	22	6S9E9
ALFALFA	2/26/2008	PURSUIT HERBICIDE	IMAZETHAPYR, AMMONIUM SALT	A	4.52	GA	96.5	6S9E9
ALFALFA	2/26/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	A	48.25	GA	96.5	6S9E9
ALFALFA	2/26/2008	ARROW 2 EC HERBICIDE	CLETHODIM	A	9.8	GA	96.5	6S9E9

Figure 62. Location of Pesticide use for Prairie Flower Drain @ Crows Landing Rd Way site subwatershed – storm 2.



Westport Drain @ Vivian Rd site subwatershed

Pesticide Use Reports for water column toxicity

Storm 2 (2/26/08) - Selenastrum capricornutum toxicity

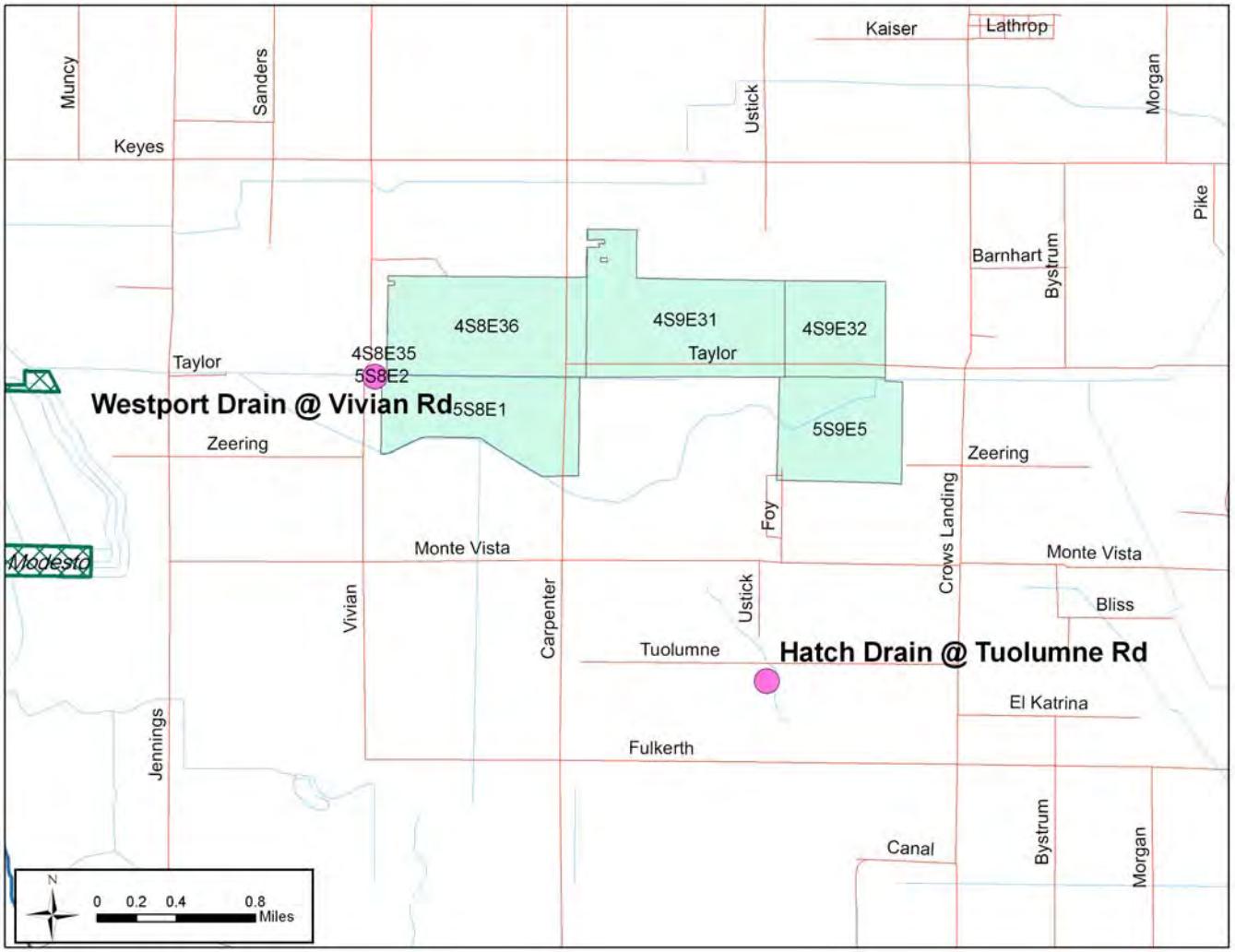
Table 63. Pesticide use for Westport Drain @ Vivian Rd site subwatershed – storm 2.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	1/12/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	260	LB	52	4S8E36
ALMOND	1/17/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	90	LB	15	5S8E2
OAT FOR/FOD	1/29/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	G	2	GA	16	4S8E36
OAT FOR/FOD	1/29/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	0.19	GA	16	4S8E36
ALFALFA	2/4/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	90	PT	60	4S8E36
ALFALFA	2/4/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	180	PT	60	4S8E36
ALMOND	2/5/2008	GLY STAR ORIGINAL	GLYPHOSATE, ISOPROPYLAMINE SALT	G	36	PT	12	5S8E2
ALMOND	2/5/2008	GLY STAR ORIGINAL	GLYPHOSATE, ISOPROPYLAMINE SALT	G	39	PT	13	5S8E2
ALMOND	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	120	OZ	12	5S8E2

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
ALMOND	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	130	OZ	13	5S8E2
ALFALFA	2/6/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	90	PT	60	5S8E2
ALFALFA	2/6/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	180	PT	60	5S8E2
ALMOND	2/6/2008	GLY STAR ORIGINAL	GLYPHOSATE, ISOPROPYLAMINE SALT	G	45	PT	15	5S8E2
ALMOND	2/6/2008	CHAMPION WETTABLE POWDER	COPPER HYDROXIDE	G	288	LB	36	4S8E35
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	150	OZ	15	5S8E2
ALMOND	2/9/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	225.45	PT	248	5S8E1
OAT FOR/FOD	2/9/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	10.75	GA	86	4S9E32
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	901.82	PT	248	5S8E1
OAT FOR/FOD	2/9/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL HEPTANOATE	A	8.06	GA	86	4S9E32
OAT FOR/FOD	2/9/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	A	8.06	GA	86	4S9E32
ALFALFA	2/9/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	10	GA	40	4S8E35
ALMOND	2/9/2008	GOALTENDER	OXYFLUORFEN	G	281.82	PT	248	5S8E1
ALMOND	2/9/2008	ORCHARD CLEAN 4L	2,4-D, DIMETHYLAMINE SALT	G	169.09	PT	248	5S8E1
PEACH PROCESSNG	2/10/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	240	LB	48	4S9E31

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
WALNUT	2/10/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2	GA	8	5S8E2
ALMOND	2/15/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	2.5	GA	10	5S9E5
WALNUT	2/15/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.3	QT	19	5S8E2
ALMOND	2/15/2008	CHATEAU HERBICIDE SW	FLUMIOXAZIN	G	7.5	LB	10	5S9E5
ALMOND	2/15/2008	GOALTENDER	OXYFLUORFEN	G	10	PT	10	5S9E5
ALMOND	2/15/2008	ORCHARD CLEAN 4L	2,4-D, DIMETHYLAMINE SALT	G	15	PT	10	5S9E5
PEACH PROCESSNG	2/24/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	24	GA	24	4S9E31
PEACH PROCESSNG	2/24/2008	SHARK EW	CARFENTRAZONE-ETHYL	G	24	OZ	24	4S9E31
PEACH PROCESSNG	2/24/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	36	QT	24	4S9E31

Figure 63. Pesticide use for Westport Drain @ Vivian Rd site subwatershed – storm 2.

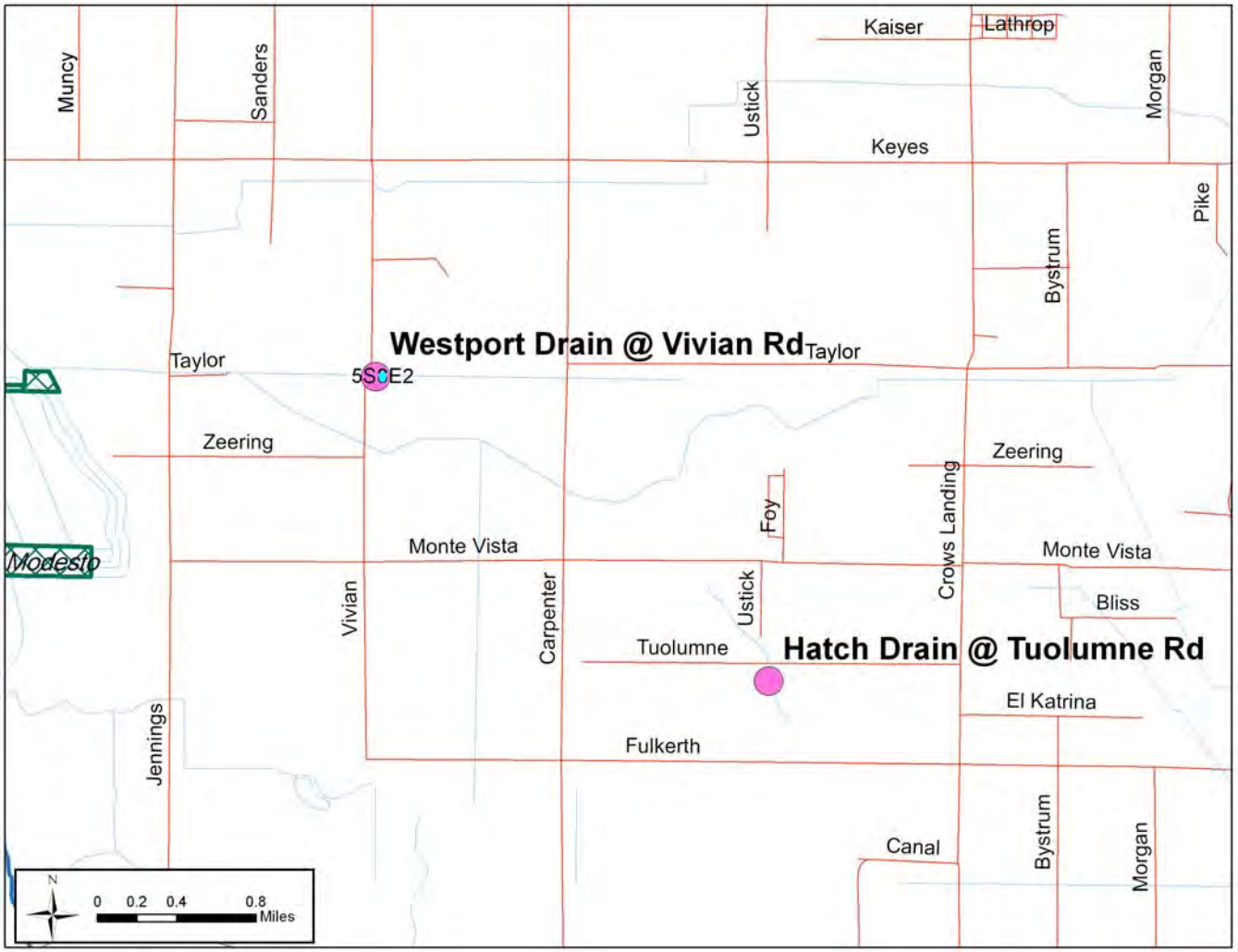


Storm 2 RS (3/408) - Selenastrum capricornutum toxicity

Table 64. Pesticide use for Westport Drain @ Vivian Rd site subwatershed – storm 2 RS.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
OAT FOR/FOD	2/28/2008	NUFARM RHOMENE MCPA BROADLEAF HERBICIDE	MCPA, DIMETHYLAMINE SALT	A	1.88	GA	15	5S8E2
OAT FOR/FOD	2/28/2008	SHARK EW	CARFENTRAZONE-ETHYL	A	0.75	QT	15	5S8E2

Figure 64. Location of Pesticide use for Westport Drain @ Vivian Rd site subwatershed – storm 2 RS.



Appendix V
Exceedance and Communication Reports

Table of Contents

ESJWQC Exceedance Reports 2008 3
- Sent: Thursday, January 24, 2008 at 11:31 PM 3
- Sent: Friday, January 25, 2008 at 7:19 PM 4
- Sent: Wednesday, January 30, 2008 at 2:34 PM 4
- Sent: Wednesday, January 30, 2008 at 6:24 PM 7
- Sent: Tuesday, February 5, 2008 at 11:13 AM 8
- Sent: Tuesday, February 26, 2008 at 5:39 PM 9
- Sent: Wednesday, February 27, 2008 at 12:07 PM 10
- Sent: Tuesday, March 4, 2008 at 10:40 AM 13
- Sent: Wednesday, March 5, 2008 at 12:01 PM 14
- Sent: Friday, March 7, 2008 at 6:05 PM 16
- Sent: Monday, March 10, 2008 at 2:24 PM 18
- Sent: Thursday, March 13, 2008 at 8:54 AM 21
- Sent: Thursday, March 27, 2008 at 2:08 PM 23
- Sent: Monday, March 31, 2008 at 2:47 PM 24
- Sent: Thursday, April 10, 2008 at 11:05 AM 25
- Sent: Monday, April 14, 2008 at 11:55 AM 26
- Sent: Thursday, April 17, 2008 at 1:34 PM 30

ESJWQC Communication Reports 2008 32
- Sent: Thursday, April 3, 2008 at 2:40 PM 32
- Sent: Wednesday, April 30, 2008 at 1:04 PM 41
- Sent: Wednesday, May 7, 2008 at 4:02 PM 46
- Sent: Friday, May 9, 2008 at 10:09 AM 54
- Sent: Tuesday, May 13, 2008 at 11:49 AM 66
- Sent: Monday, June 2, 2008 at 11:25 AM 76
- Sent: Friday, June 13, 2008 at 12:51 PM 114
- Sent: Monday, June 16, 2008 at 3:09 PM 127

ESJWQC Exceedance Reports 2008

Sent: Thursday, January 24, 2008 at 11:31 PM
From: Melissa Turner mturner@mlj-llc.com
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, K Callinan kcallinan@mlj-llc.com
Subject: Field Exceedance Report - Storm1 Day1 2008
Attachments: ESJWQC_08_ER_field_storm1_table_012408.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a) On January 23, 2008, normal monitoring was conducted in the ESJWQC region for the first storm season sampling event. During the sampling field parameters were measured. Exceedances of the receiving water limitation for electrical conductivity (EC) and dissolved oxygen (DO) were experienced during this sampling event. All sites that experienced field exceedances were sampled for water toxicity and chemistry. During this sampling the following locations were dry and field parameters were not taken: Silva Drain @ Meadow Dr. See attached Table 1 for details of the sites where exceedances occurred. Raw data for these exceedances are available upon request as scanned field sheets.

b) Immediate follow-up sampling will not be conducted. If any of the sites listed above experience toxicity in the samples taken during this event and require re-sampling, field parameters will then be measured again at that site.

c) DO exceedances are common in the Coalition region due to low flow as well as possible high levels of biological oxygen demand in the test drains (though this may not be the case for all samples). Measures of electrical conductivity are consistently high at some sites in the ESJWQC Coalition region. Potential sources of salts and metals (detected in the field as conductivity) include upstream surface water, ground water or drain water from irrigated agricultural lands. All exceedances included in this report have been addressed through management plans or previous communication reports. Therefore a communication report will not be submitted for these exceedances.

Mike Johnson

Table 1. Field parameter water quality objective exceedances experienced during the first storm sampling event for ESJWQC receiving waters on January 24, 2008.

Sample Site	Sample Date	Season	Electrical Conductivity	Dissolved Oxygen
Hatch Drain @ Tuolumne Rd	1/24/08	Storm	1199	4.67
Prairie Flower Drain @ Crows Landing Rd	1/24/08	Storm	2371	
Westport Drain @ Vivian Rd	1/24/08	Storm	1086	
Hilmar Drain @ Central Ave	1/24/08	Storm	1528	

Sent: Friday, January 25, 2008 at 7:19 PM
From: Melissa Turner mturner@mlj-llc.com
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, K Callinan kcallinan@mlj-llc.com
Subject: Field (No) Exceedance Report - Storm1 Day2 2008
Attachments: none

Dear Dania,

On January 24, 2008 monitoring continued in the ESJWQC region for the first storm season sampling event. During the sampling field parameters were measured, but no sites experienced exceedances of the receiving water limitation for pH, electrical conductivity, or dissolved oxygen. If any of the sites sampled today experience toxicity during this event and require re-sampling field parameters will not be measured again at that time.

Mike Johnson

Sent: Wednesday, January 30, 2008 at 2:34 PM
From: Melissa Turner mturner@mlj-llc.com
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, mjohnson@mlj-llc.com, fjohnson@mlj-llc.com, Lara Reising <ltreising@gmail.com>, K Callinan kcallinan@mlj-llc.com, Melissa Turner <mturner@mlj-llc.com>
Subject: ESJWQC Toxicity Exceedance Report- Storm1 2008
Attachments: ESJWQC_08_ER_toxicity_storm_table_013008.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a.) On January 24 and 25, 2008, sampling was conducted in the ESJWQC region for the first storm season sampling event. Toxicity results from the laboratory were finalized on January 30, 2008 for both sampling dates and communicated to the Coalition. Toxicity to *Ceriodaphnia* was experienced in samples collected from Merced River, Highline Canal, and Miles Creek; toxicity to *Selenastrum* was experienced in samples collected from Prairie Flower Drain, Hatch Drain, Deadman's Creek @ Hwy 59 (both the environmental and field duplicate sample) and Dry Creek @ Wellsford Rd; toxicity to *Pimephales* was experienced in samples collected from Cottonwood Creek (see attached Table 1). Dilution series have been initiated for Merced River , Miles Creek and Mustang Creek and TIEs have been iniated for Cottonwood Creek, Highline Canal, Merced River, Mustang Creek, Deadman's Creek and Dry Creek.

b.) Follow-up sampling will be conducted on January 30, 2008. The results from the resample will indicate whether the toxicity is persistent at this site.

c.) The *Ceriodaphnia* toxicity experienced at Mustang Creek, the *Selenastrum* toxicity experienced at Hatch Drain and Deadman's Creek @ Hwy59, and the *Pimephales* toxicity experienced at Cottonwood Creek during this sampling event occurred for the first time during Coalition monitoring, and as a result a Communication Report will be submitted for these exceedances by April 3, 2008.

Mike Johnson

Table 1. Water sample toxicity experienced in samples collected during the first storm sampling event for ESJWQC receiving waters on January 24 and 25, 2008.

Sample Site	Sample Date	*Ceriodaphnia dubia* (% survival compared to control)	*Selenastrum capricornutum* (% growth compared to control)	*Pimephales Promelas* (% survival compared to control)
Hatch Drain @ Tuolumne Rd	1/24/08		75	
Highline Canal @ Lombardy Ave	1/24/08	40		
Merced River @ Santa Fe	1/24/08	0		
Mustang Creek @ East Ave	1/24/08	0		
Prairie Flower Drain @ Crows Landing Rd	1/24/08		72	
Cottonwood Creek @ Rd 20	1/25/08			45
Dry Creek @ Wellsford Rd	1/25/08		33	
Deadman's Creek @ Hwy 59	1/25/08		45	
Deadman's Creek @ Hwy 59 FD	1/25/08		59	
Miles Creek @ Reilly Rd	1/25/08	0		

FD= field duplicate

Sent: Wednesday, March 26, 2008 at 10:30 AM

From: K Callinan kcallinan@mlj-llc.com
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen pklassen@unwiredbb.com, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: AMENDED Toxicity Exceedance Report - Storm1 2008
Attachments: ESJWQC_08_ER_toxicity_storm_table_013008_amended.doc

Dear Dania,

Due to a misreported result from the laboratory, one *Selenastrum* toxicity exceedance experienced during the first storm sampling event on January 25, 2008 was reported for the wrong site. Dry Creek @ Rd 18 experienced 33% growth of *Selenastrum* relative to the control, however this result was reported for Dry Creek @ Wellsford Rd. The laboratory notified us of this discrepancy today, March 26, 2008. An amended report for this exceedance is provided herein. Please, feel free to contact me if you have any questions.

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a.) On January 24 and 25, 2008, sampling was conducted in the ESJWQC region for the first storm season sampling event. Toxicity to *Ceriodaphnia* was experienced in samples collected from Merced River, Highline Canal, and Miles Creek; toxicity to *Selenastrum* was experienced in samples collected from Prairie Flower Drain, Hatch Drain, Deadman Creek @ Hwy 59 (both the environmental and field duplicate sample) and Dry Creek @ Rd 18; toxicity to *Pimephales* was experienced in samples collected from Cottonwood Creek (see attached Table 1). Dilution series were conducted for Merced River, Miles Creek and Mustang Creek and TIEs occurred for Cottonwood Creek, Highline Canal, Merced River, Mustang Creek, Deadman Creek and Dry Creek.

b.) Follow-up sampling occurred on January 30, 2008. The results from the resample are provided in the resample exceedance report sent on February 5, 2008.

c.) The *Ceriodaphnia* toxicity experienced at Mustang Creek, the *Selenastrum* toxicity experienced at Hatch Drain and Deadman Creek @ Hwy59, and the *Pimephales* toxicity experienced at Cottonwood Creek during this sampling event occurred for the first time during Coalition monitoring, and as a result a Communication Report will be submitted for these exceedances by April 3, 2008.

Mike Johnson

--
Krista Callinan
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Fax: 530-756-5225
kcallinan@mlj-llc.com

Table 1. Water sample toxicity experienced in samples collected during the first storm sampling event for ESJWQC receiving waters on January 24 and 25, 2008.

Sample Site	Sample Date	*Ceriodaphnia dubia* (% survival compared to control)	*Selenastrum capricornutum* (% growth compared to control)	*Pimephales Promelas* (% survival compared to control)
Hatch Drain @ Tuolumne Rd	1/24/08		75	
Highline Canal @ Lombardy Ave	1/24/08	40		
Merced River @ Santa Fe	1/24/08	0		
Mustang Creek @ East Ave	1/24/08	0		
Prairie Flower Drain @ Crows Landing Rd	1/24/08		72	
Cottonwood Creek @ Rd 20	1/25/08			45
Dry Creek @ Rd 18	1/25/08		33	
Deadman Creek @ Hwy 59	1/25/08		45	
Deadman Creek @ Hwy 59 FD	1/25/08		59	
Miles Creek @ Reilly Rd	1/25/08	0		

FD= field duplicate

Sent: Wednesday, January 30, 2008 at 6:24 PM
From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: : Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: RS Field Exceedance Report - Storm1 2008
Attachments: ESJWQC_08_ER_field_storm1_RS_table_013008.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a.) On January 30, 2008 toxicity resampling was conducted in the ESJWQC region at sites that experienced toxicity in the original samples collected on January 24 and 25, 2008 for the first storm season event. During the resampling field parameters were measured at sites that experienced field exceedances during the original sampling event. Exceedances of receiving water limitations for field parameters were experienced in dissolved oxygen (DO) and electrical conductivity (EC). See attached Table 1 for details. If you wish to see the raw data for these exceedances, the field sheets can be provided as scanned pdfs upon request.

b.) This sampling event was conducted as follow-up to the original sampling event, therefore additional follow-up sampling will not be conducted. Coalition sampling will occur again following the next storm event this season.

c.) DO exceedances are common in the Coalition region due to low flow, high water temperatures, as well as possible high levels of biological oxygen demand in the test drains (though this may not be the case for all samples). Sites sampled in previous events have also experienced frequent DO exceedances. Elevated levels of electrical conductivity are well documented in the Coalition region and have been consistently detected at some of the sampling sites. Potential sources of salts and metals (detected in the field as conductivity) include upstream surface water, ground water, or drain water from irrigated agriculture. All exceedances listed in the attached table have been addressed in previous Communication Reports or Management Plans and therefore a Communication Report will not be submitted for these exceedances.

Table 1. Field parameter water quality trigger exceedances experienced during resampling on 01/30/08 conducted at sample sites that experienced toxicity and field exceedances during sampling on 01/24/08 and 01/25/08.

Site Name	Sample Date	Event	Dissolved Oxygen	Electrical Conductivity
Hilmar Drain @ Tuolumne Rd	1/30/2008	Storm	5.18	1343
Prairie Flower Drain @ Crows Landing Rd	1/30/2008	Storm		2944

Sent: Tuesday, February 5, 2008 at 11:13 AM
From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: RS Toxicity Exceedance Report - Storm1 2008
Attachments: ESJWQC_08_ER_toxicity_storm1_RS_table_020508.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a.) On January 30, 2008 toxicity resampling was conducted in the ESJWQC region at sites that experienced toxicity in the original samples collected on January 24 and 25, 2008 for the first storm season event. Toxicity to *Ceriodaphnia dubia* was experienced in the resamples at four sites: Highline Canal @ Lombardy Rd, Merced River @ Santa Fe, Miles Creek @ Reilly Rd and Mustang Creek @ East Ave. See attached Table 1 for details.

b.) This sampling event was conducted as follow-up to the original sampling event, therefore additional follow-up sampling will not be conducted. Coalition sampling will occur again following the next storm event this season.

c.) The *Ceriodaphnia* toxicity experienced at Mustang Creek during the initial sampling event occurred for the first time during Coalition monitoring, and as a result a Communication Report is planned to be submitted for this toxicity by April 3, 2008. Resample results will be included in this report.

Mike Johnson

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Table 1. Water sample toxicity experienced in samples collected during the first storm resampling event for ESJWQC receiving waters on January 30, 2008.

Sample Site	Sample Date	Season	*Ceriodaphnia dubia* (% survival compared to control)
Highline Canal @ Lombardy Ave	1/30/08	Storm	30
Merced River @ Santa Fe	1/30/08	Storm	0
Miles Creek @ Reilly Rd	1/30/08	Storm	15
Mustang Creek @ East Ave	1/30/08	Storm	0

Sent: Tuesday, February 26, 2008 at 5:39 PM
From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Field Exceedance Report - Storm2 2008
Attachments: ESJWQC_08_ER_field_storm2_table_022608.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a) On February 25, 2008, normal monitoring was conducted in the ESJWQC region for the second storm season sampling event. During the sampling field parameters were measured, however the following locations were dry and field parameters were not taken: South Slough @ Quinley Rd, Berenda Slough along Ave 18 ½, Ash Slough @ Ave 21. One exceedance of the receiving water limitation for pH was experienced at the Deadman Creek @ Gurr Rd site during this sampling event. See attached Table 1 for details on this exceedance. Ambient water samples were collected from this site for water toxicity and chemistry analyses. Raw data for the field exceedance is available upon request as a scanned field sheet.

b) Immediate follow-up sampling will not be conducted. If the site listed above experiences toxicity in the samples collected during this event and requires re-sampling, field parameters will then be measured again at that site.
c) Exceedances in pH occur occasionally and intermittently in the Coalition region and are difficult to source. The high pH experienced at Deadman Creek may be due to a particular input into the water body or natural conditions of the water body itself, among other possible sources. The exceedance included in this report is the first pH exceedance experienced at this site. As a result, a Communication Report will be submitted for this exceedance by April 30, 2008.

Mike Johnson

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Table 1. Field parameter water quality objective exceedances experienced during the second storm sampling event for ESJWQC receiving waters on February 25, 2008.

Sample Site	Sample Date	Season	pH
Deadman Creek @ Gurr Rd	2/25/08	Storm	8.51

Sent: Wednesday, February 27, 2008 at 12:07 PM
From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Field Exceedance Report - Storm2 2008 (Day 2)
Attachments: ESJWQC_08_ER_field_storm2_table_022708.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a) On February 26, 2008, normal monitoring was conducted in the ESJWQC region for the second storm season sampling event. During the sampling field parameters were measured, however the Silva Drain @ Meadow Dr site was dry and field parameters were not taken. Five exceedances of the receiving water quality trigger (WQT) for electrical conductivity (EC) and four exceedances of the WQT for dissolved oxygen (DO) were experienced during this sampling event. See attached Table 1 for details on these exceedances. Ambient water samples were collected from these sites for water toxicity and chemistry analyses. Raw data for the field exceedances are available upon request as a scanned field sheets.
b) Immediate follow-up sampling will not be conducted. If any of the sites listed above experience toxicity in the samples collected during this event and require re-sampling, field parameters will then be measured again at the sites.

c) DO exceedances are common in the Coalition region due to low flow as well as possible high levels of biological oxygen demand in the test drains (though this may not be the case for all samples). Measures of EC are consistently high at some sites in the ESJWQC Coalition region. Potential sources of salts and metals (detected in the field as conductivity) include upstream surface water, ground water or drain water from irrigated agricultural lands. Three of the exceedances included in this report occurred for the first time at these sites, including the EC exceedance at Highline Canal @ Lombardy Rd and DO

exceedances at Livingston Drain @ Robin Ave and Westport Drain @ Vivian Ave. As a result, a Communication Report will be submitted for these exceedances by May 1, 2008.

Mike Johnson

--
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Table 1. Field parameter water quality objective exceedances experienced during the second storm sampling event for ESJWQC receiving waters on February 26, 2008. Exceedances that occurred for the first time during this sampling event are shown in bold.

Sample Site	Sample Date	Season	Electrical Conductivity (uS/cm)	Dissolved Oxygen (mg/L)
Hatch Drain @ Tuolumne Rd	2/26/08	Storm	1298	1.9
Highline Canal @ Lombardy Rd	2/26/08	Storm	**747**	
Hilmar Drain @ Central Ave	2/26/08	Storm	1476	
Livingston Drain @ Robin Ave	2/26/08	Storm		**5.68**
Mustang Creek @ East Ave	2/26/08	Storm		4.06
Prairie Flower Drain @ Crows Landing Rd	2/26/08	Storm	2722	
Westport Drain @ Vivian Rd	2/26/08	Storm	1104	**5.7**

Sent: Mon, March 3, 2008 at 11:20 AM

From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Re: AMENDED Field Exceedance Report - Storm2 2008 (Day 2)
Attachments: ESJWQC_08_ER_field_storm2_table_030308_amended.doc

Dear Dania,

I am submitting an amended Field Exceedance Report for the second storm monitoring event that occurred on February 26, 2008. There was a typo with regards to one exceedance of Electrical Conducivity (EC) measured at 747 uS/cm that occurred at Highline Canal @ Hwy 99. In the original report, this exceedance was shown to occur at Highline Canal @ Lombardy Rd. This mistake has been corrected in this amended report. I am sorry for the inconvenience. The amended Exceedance Report is below and a table of exceedances details is attached.

Thanks,

Krista

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a) On February 26, 2008, normal monitoring was conducted in the ESJWQC region for the second storm season sampling event. During the sampling field parameters were measured, however the Silva Drain @ Meadow Dr site was dry and field parameters were not taken. Five exceedances of the receiving water quality trigger (WQT) for electrical conductivity (EC) and four exceedances of the WQT for dissolved oxygen (DO) were experienced during this sampling event. See attached Table 1 for details on these exceedances. Ambient water samples were collected from these sites for water toxicity and chemistry analyses. Raw data for the field exceedances are available upon request as a scanned field sheets.

b) Immediate follow-up sampling will not be conducted. If any of the sites listed above experience toxicity in the samples collected during this event and require re-sampling, field parameters will then be measured again at the sites.

c) DO exceedances are common in the Coalition region due to low flow as well as possible high levels of biological oxygen demand in the test drains (though this may not be the case for all samples). Measures of EC are consistently high at some sites in the ESJWQC Coalition region. Potential sources of salts and metals (detected in the field as conductivity) include upstream surface water, ground water or drain water from irrigated agricultural lands. Three of the exceedances included in this report occurred for the first time at these sites, including the EC exceedance at Highline Canal @ Hwy 99 and DO exceedances at Livingston Drain @ Robin Ave and Westport Drain @ Vivian Ave. As a result, a Communication Report will be submitted for these exceedances by May 1, 2008.

Mike Johnson

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kcallinan@mlj-llc.com

Table 1. Field parameter water quality objective exceedances experienced during the second storm sampling event for ESJWQC receiving waters on February 26, 2008. Exceedances that occurred for the first time during this sampling event are shown in bold.

Sample Site	Sample Date	Season	Electrical Conductivity (uS/cm)	Dissolved Oxygen (mg/L)
Hatch Drain @ Tuolumne Rd	2/26/08	Storm	1298	1.9

Sample Site	Sample Date	Season	Electrical Conductivity (uS/cm)	Dissolved Oxygen (mg/L)
Highline Canal @ Hwy 99	2/26/08	Storm	**747**	
Hilmar Drain @ Central Ave	2/26/08	Storm	1476	
Livingston Drain @ Robin Ave	2/26/08	Storm		**5.68**
Mustang Creek @ East Ave	2/26/08	Storm		4.06
Prairie Flower Drain @ Crows Landing Rd	2/26/08	Storm	2722	
Westport Drain @ Vivian Rd	2/26/08	Storm	1104	**5.7**

Sent: Tuesday, March 4, 2008 at 10:40 AM
From: K Callinan <kcallinan@mlj-llc.com>
To Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Toxicity Exceedance Report - Storm2 2008
Attachments: ESJWQC_08_ER_toxicity_storm2_table_030408.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a.) On February 25 and 26, 2008, sampling was conducted in the ESJWQC region for the second storm season sampling event. Toxicity results from the laboratory were finalized on March 3, 2008 for both sampling dates and provided to the Coalition. Toxicity to *Selenastrum* was experienced in samples collected from 11 sites and toxicity to *Pimephales* was experienced in samples collected from one site. See attached Table 1 for details on these exceedances. Toxicity Identification Evaluations have been initiated for all samples that experienced 50% or greater reduction relative to the control.

b.) Follow-up sampling is being conducted today, March 4, 2008. The results from the resampling event will indicate whether the toxicity is persistent at these sites.

c.) The *Selenastrum* toxicity experienced at Black Rascal Creek @ Yosemite Ave, Livingston Drain @ Robin Ave and Mustang Creek @ East Ave, and the *Pimephales* toxicity experienced at Highline Canal @ Lombardy Ave during this sampling event occurred for the first time during Coalition monitoring, and as a result a Communication Report will be submitted for these exceedances by May 7, 2008.

Mike Johnson

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kcallinan@mlj-llc.com

Table 1. Water sample toxicity experienced in samples collected during the second storm sampling event for ESJWQC receiving waters on February 25 and 26, 2008. Exceedances experienced for the first time at a sample site are shown in bold.

Sample Site	Sample Date	*Selenastrum capricornutum* (% growth relative to control)*	*Pimephales Promelas* (% survival relative to control)
Black Rascal Creek @ Yosemite Rd	2/25/2008	**41****	
Deadman Creek @ Gurr Rd	2/25/2008	50**	
Dry Creek @ Rd 18	2/25/2008	78	
Dry Creek @ Wellsford Rd	2/26/2008	34**	
Hatch Drain @ Tuolumne Rd	2/26/2008	8**	
Highline Canal @ Hwy 99	2/26/2008	73	
Highline Canal @ Lombardy Ave	2/26/2008		90
Livingston Drain @ Robin Ave	2/26/2008	**62**	
Livingston Drain @ Robin Ave (FD)	2/26/2008	**66**	
Mustang Creek @ East Ave	2/26/2008	**26****	
Prairie Flower Drain @ Crows Landing Rd	2/26/2008	41**	
Westport Drain @ Vivian Rd	2/26/2008	14**	

FD = field duplicate
* Percent growth relative to control calculations for *Selenastrum* are based on absorbance values and may differ from values reported in the SWAMP database, calculated as cell growth.
** Toxicity Identification Evaluation initiated for this sample.

Sent: Wednesday, March 5, 2008 at 12:01 PM
From: K Callinan [kcallinan@mlj-llc.com]
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Field Exceedance Report - Storm2 Sediment Sampling and Water Resampling 2008
Attachments: ESJWQC_08_ER_field_storm2_RS_&_sediment_table_030508.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a.) On March 4, 2008 sediment sampling was conducted in the ESJWQC region at all sample sites and water column toxicity resampling was conducted at sites that experienced water toxicity in the original

samples collected on February 25 and 26, 2008 for the second storm season event. During the sampling field parameters were measured. Five sites were dry during this sampling event including: Silva Drain @ Meadow Dr, Berenda Slough along Ave 18 ½, Ash Slough @ Ave 21, Livingston Drain @ Robin Ave and South Slough @ Quinley Rd, and field parameters were not measured at these sites. In addition, sediment sampling was not conducted at Merced River @ Santa Fe due to a lack of sediment available at the site, and because resampling also did not occur at that site field parameters were not taken. Exceedances of receiving water limitations for field parameters were experienced in dissolved oxygen (DO), electrical conductivity (EC) and pH. See attached Table 1 for details. If you wish to see the raw data for these exceedances, the field sheets can be provided as scanned pdfs upon request.

b.) Follow-up sampling will not be conducted for these exceedances. However if sediment toxicity is experienced at one or more sample sites, then resampling will occur and field parameters will be measured again.

c.) DO exceedances are common in the Coalition region due to low flow, high water temperatures, as well as possible high levels of biological oxygen demand in the test drains (though this may not be the case for all samples). Sites sampled in previous events have also experienced frequent DO exceedances. Elevated levels of electrical conductivity are well documented in the Coalition region and have been consistently detected at some of the sampling sites. Potential sources of salts and metals (detected in the field as conductivity) include upstream surface water, ground water, or drain water from irrigated agriculture. Exceedances in pH occur occasionally and intermittently in the Coalition region and are difficult to source. Elevated pH in a water body may be due to a particular input or natural conditions of the water body itself, among other possible sources. The DO and EC exceedances experienced at Highline Canal @ Lombardy Rd occurred for the first time during this sampling event. As a result a Communication Report will be submitted for these exceedances by May 8, 2008. All other exceedances listed in the attached table have been addressed in previous Communication Reports or Management Plans and therefore do not require follow-up reporting.

Mike Johnson

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Table 1. Field parameter water quality trigger exceedances experienced during sediment sampling (Storm Sed) and water toxicity resampling (RS) conducted on March 4, 2008. Exceedances that occurred for the first time during this sampling event are shown in bold.

Site Name	Sample Date	Event	Dissolved Oxygen	Electrical Conductivity	pH
Hatch Drain @ Tuolumne Rd	3/4/2008	Storm Sed & RS	2.12	1271	
Highline Canal @ Hwy 99	3/4/2008	Storm Sed & RS			9.32
Mustang Creek @ East Ave	3/4/2008	Storm Sed & RS	2.44		
Prairie Flower Drain @ Crows Landing Rd	3/4/2008	Storm Sed & RS		2639	
Westport Drain @ Vivian Rd	3/4/2008	Storm Sed & RS		1096	
Bear Creek @ Kibby Rd	3/4/2008	Storm Sediment			8.72
Duck Slough @ Hwy 99	3/4/2008	Storm Sediment			8.65
Highline Canal @ Lombardy Ave	3/4/2008	Storm Sediment	**0.34**	**1402**	
Hilmar Drain @ Central Ave	3/4/2008	Storm Sediment		1429	

Sent: Friday, March 7, 2008 at 6:05 PM
From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen pklassen@unwiredbb.com, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Pesticide Exceedance Report - Storm1 2008
Attachments: ESJWQC_08_ER_Pesticide_Storm1_table_030708.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an exceedance report is being submitted to address the following issues a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a. On January 24 and 25, 2008 sampling was conducted in the ESJWQC region for the first storm season monitoring event. Data were received from the laboratory on March 6 and 7, 2008. Exceedances were experienced in chlorpyrifos, DDT, diuron, methidithion and simazine. See attached Table 1 for details on these exceedances.

b. Follow-up sampling for these pesticide exceedances will not be conducted. Monitoring for the second storm event occurred on March 4, 2008, and results from this monitoring event will indicate if any of the exceedances are persistent.

c. The chlorpyrifos and simazine exceedances experienced in samples collected from Mustang Creek @ East Ave on January 24, 2008 occurred for the first time. All exceedances that occurred in samples collected on January 25, 2008 were experienced for the first time at those sites. As a result, a Communication Report will be submitted for these exceedances by May 10, 2008. All other exceedances in this report have been addressed in Management Plans or previous Communication Reports and do not require follow-up reporting.

Mike Johnson

--
Krista Callinan
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Michael L. Johnson LLC
1490 Drew Ave, Suite 175
Davis, CA 95618

Tel: 530-756-5200
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kcallinan@mlj-llc.com

Table 1. Pesticide exceedances from the ESJWQC region for samples collected during the first storm sampling event in 2008. The water quality objective or trigger is listed below the constituent header. Exceedances experienced for the first time at a sample site are shown in bold.

Site Name	Sample Date	Chlorpyrifos	DDT	Diuron	Methidathion	Simazine
		0.015 µg/L	0.00059 µg/L	2 µg/L	0.7 µg/L	4.0 µg/L
Livingston Drain @ Robin Ave	1/24/2008	0.02				
Mustang Creek @ East Ave	1/24/2008	**0.067**				**4.2**
Highline Canal @ Lombardy Rd	1/24/2008	0.028				
Merced River @ Santa Fe	1/24/2008	0.59				
Highline Canal @ Hwy 99	1/24/2008	0.019*		3.2		
Deadman Creek @ Gurr Rd	1/25/2008		**0.0073***			
Miles Creek @ Reilly Rd	1/25/2008				**2.3**	
Deadman Creek @ Hwy 59	1/25/2008			**6.2**		**25**
Deadman Creek @ Hwy 59 (FD)	1/25/2008			**6.3**		**19**
Cottonwood Creek @ Rd 20	1/25/2008	**0.019***		**68**		
Dry Creek @ Rd 18	1/25/2008			**21**		

*Between the laboratory minimum detection limit and reporting limit and therefore considered an estimate.

Sent: Monday, March 10, 2008 at 2:24 PM
From: K Callinan kcallinan@mlj-llc.com
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: E. coli, Inorganics, Metals Exceedance Report - Storm1 2008
Attachments: ESJWQC_08_ER_Ecoli_Metals_Nut_Tbl_Storm1_031008_final.xls

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedance.

a.) On January 24 and 25, 2008 regular monitoring was conducted in the ESJWQC region for the first 2008 storm monitoring event. Water was collected for analysis of physical parameters, nutrients, metals and bacteria. Exceedances of receiving water limitations for *E. coli*, total dissolved solids (TDS), color, ammonia, nitrate and metals were experienced. Final data were received from the laboratory on March 6, 2008. The sites, sampling dates and exceedances are provided in an excel spreadsheet attached to this email with the exceedance trigger listed under each constituent in the column headers. Raw data are available upon request.

b.) Follow-up sampling will not be conducted for these exceedances. Data for this monitoring event was received after monitoring had already occurred for the second storm sampling event. Therefore the results from the second storm event should indicate where water quality exceedances included in this report are persistent.

c.) First-time exceedances were experienced at Dry Creek @ Wellsford Rd (lead), Highline Canal @ Hwy 99 (TDS and ammonia), Hatch Drain @ Tuolumne Rd (nitrate), Livingston Drain @ Robin Ave (*E. coli* and lead), Merced River @ Santa Fe (copper), Deadman Creek @ Gurr Rd (lead and nickel) and Duck Slough @ Gurr Rd (nickel). As a result, a Communication Report will be submitted for these exceedances by May 13, 2008. All other exceedances in this report have been addressed in Management Plans or previous Communication Reports and do not require follow-up reporting.

Mike Johnson

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Site Name	SampleDate	E. Coli (235 MPN/100)	Color (15 color units)	TDS (>450 mg/L)	Ammonia (1.5 mg/L or variable based on pH and temperature)	Arsenic (10 ug/L)	Hardness (mg/L)	Copper (based on hardness)	Lead (based on hardness)	Nickel (based on hardness)	Nitrate as N (10 mg/L)
Black Rascal Creek @ Yosemite Rd	24/Jan/2008	>2400	85								
Bear Creek @ Kibby Rd	24/Jan/2008	2400	150				80	8.6			
Dry Creek @ Wellsford Rd	24/Jan/2008	>2400	200				150		**2.4**		
Highline Canal @ Lombardy Ave	24/Jan/2008	2000	220				150	28	3.2		
Highline Canal @ Hwy 99	24/Jan/2008	>2400	250	**500**	**3.3**		170	37	3.4		
Hilmar Drain @ Central Ave	24/Jan/2008		44	970							
Hatch Drain @ Tuolumne Rd	24/Jan/2008	410	40	820		15					**24**
Hatch Drain @ Tuolumne Rd (FD)	24/Jan/2008	340	40	820		16					**22**
Livingston Drain @ Robin Ave	24/Jan/2008	**1700**	35				28	6.7	**2.4**		
Mustang Creek @ East Ave	24/Jan/2008	460	200								
Merced River @ Santa Fe	24/Jan/2008		300				42	**22**	5.6		
Prairie Flower Drain @ Crows Landing Rd	24/Jan/2008	1100	85	1500							23
Westport Drain	24/Jan/2008	290	22	740							28

@ Vivian Rd											
Deadman Creek @ Hwy 59	25/Jan/2008	>2400	350								
Deadman Creek @ Gurr Rd	25/Jan/2008	870	150			15	130	19	**3.2**	**18**	
Duck Slough @ Gurr Rd	25/Jan/2008	>2400	200				96	13	2.9	**13**	
Duck Slough @ Gurr Rd (FD)	25/Jan/2008	>2400	180				80	13	2.7		
Duck Slough @ Hwy 99	25/Jan/2008	>2400	120								
Miles Creek @ Reilly Rd	25/Jan/2008	>2400	150				62	15	3.2		
Cottonwood Creek @ Rd 20	25/Jan/2008	1200	100				26	24	5.4		
Dry Creek @ Rd 18	25/Jan/2008	>2400	76				58	20			

***First-time exceedances are shown in bold**

Sent: Thursday, March 13, 2008 at 8:54 AM
From: K Callinan [kcallinan@mlj-llc.com]
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Resample Toxicity Exceedance Report - Storm2 2008
Attachments: ESJWQC_08_ER_toxicity_storm2_RS_table_031308.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a.) On March 4, 2008 toxicity resampling was conducted in the ESJWQC region at sites that experienced toxicity in the original samples collected on February 25 and 26, 2008 for the second storm season event. Toxicity to *Pimephales promelas* was experienced in the resample at Highline Canal @ Lombardy Ave. See attached Table 1 for details.

b.) This sampling event was conducted as follow-up to the original sampling event, therefore additional follow-up sampling will not be conducted. Coalition sampling will occur again with the onset of the irrigation season.

c.) The *Pimephales* toxicity experienced at Highline Canal during the initial sampling event occurred for the first time during Coalition monitoring, and as a result a Communication Report is planned to be submitted for this toxicity by May 7, 2008. Resample results will be included in this report.

Mike Johnson

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Krista Callinan
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Michael L. Johnson LLC
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Tel: 530-756-5200
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Table 1. Water sample toxicity experienced in samples collected during the second storm resampling event for ESJWQC receiving waters on March 4, 2008.

Sample Site	Sample Date	Season	***Pimephales promelas*** **(% survival compared to control)**
Highline Canal @ Lombardy Ave	1/30/08	Storm	0

Sent: Thursday, March 13, 2008 at 10:35 AM
From: K Callinan [kcallinan@mlj-llc.com]
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: AMENDED Resample Toxicity Exceedance Report - Storm2 2008
Attachments: ESJWQC_08_ER_toxicity_storm2_RS_table_031308_amended.doc

Dear Dania,

I am submitting an amended report for toxicity exceedances experienced in resamples collected on March 4, 2008 as follow-up to exceedances experienced during the second storm season monitoring event. Three samples experienced toxicity to *Selenastrum capricornutum* during the resampling event that were not included in the initial report sent earlier today, March 13, 2008. These results have been added to this report and the table attached to this electronic message.

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a.) On March 4, 2008 toxicity resampling was conducted in the ESJWQC region at sites that experienced toxicity in the original samples collected on February 25 and 26, 2008 for the second storm season event. Toxicity to *Pimephales promelas* was experienced in the resample at Highline Canal @ Lombardy Ave and toxicity to *Selenastrum capricornutum* was experienced in the resamples at Hatch Drain @ Tuolumne Rd, Westport Drain @ Vivian Rd and Dry Creek @ Rd 18. See attached Table 1 for details.

b.) This sampling event was conducted as follow-up to the original sampling event, therefore additional follow-up sampling will not be conducted. Coalition sampling will occur again with the onset of the irrigation season.

c.) The *Pimephales* toxicity experienced at Highline Canal during the initial sampling event occurred for the first time during Coalition monitoring, and as a result a Communication Report is planned to be submitted for this toxicity by May 7, 2008. Resample results will be included in this report.

Mike Johnson

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Table 1. Water sample toxicity experienced in samples collected during the second storm resampling event for ESJWQC receiving waters on March 4, 2008.

Sample Site	Sample Date	Season	*Pimephales promelas* (% survival relative to control)	*Selenastrum capricornutum* (% growth relative to control)
Highline Canal @ Lombardy Ave	3/4/2008	Storm	0	
Hatch Drain @ Tuolumne Rd	3/4/2008	Storm		73
Westport Drain @ Vivian Rd	3/4/2008	Storm		66
Dry Creek @ Rd 18	3/4/2008	Storm		34

Sent: Thursday, March 27, 2008 at 2:08 PM
From: K Callinan [kcallinan@mlj-llc.com]
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson mjohnson@mlj-llc.com, Melissa Turner mturner@mlj-llc.com, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Sediment Toxicity Exceedance Report - Storm 2008
Attachments: ESJWQC_08_ER_toxicity_storm_sediment_table_032708.doc

Dear Dania

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedance.

a) On March 4, 2008 sampling was conducted in the ESJWQC region for the 2008 storm season sediment sampling event. Sediment toxicity data on these samples was received from the laboratory on March 26, 2008. Significant toxicity to *Hyalella azteca* was found in samples collected from seven sites. See the attached Table 1 for details on these exceedances. The Coalition has not yet received the raw data for these tests.

b) Follow-up sampling for these exceedances will be conducted on Friday, March 28, 2008. Field parameters will also be measured at sites that experienced exceedances in dissolved oxygen, electrical conductivity, or pH during the initial sediment sampling event. Results from the resampling will indicate whether sediment toxicity is persistent at any of these sites.

c) The Coalition will review Pesticide Use Reports for the site subwatersheds in which these exceedances were found. Pesticides with a high Koc (organic carbon partition coefficient) will be reviewed to determine if applications occurred in the relevant site subwatersheds during months prior to the sediment sampling. Chemicals with a high Koc bind to organic material and sediment and thus have a higher probability of causing sediment toxicity. Sediment toxicity occurred for the first time at Dry Creek @ Wellsford Rd, Mustang Creek @ East Ave and Cottonwood Creek @ Rd 20. As a result, a Communication Report will be submitted for these exceedances by June 2, 2008.

Mike Johnson

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Table 1. ESJWQC sediment toxicity exceedances from the 2008 storm sediment sampling event that occurred on March 4, 2008. Samples that experienced significant reduction are shown as mean percentage survival relative to the control of *Hyalella azteca*. Sediment toxicity exceedances experienced for the first time at a site are bolded.

Site Name	Sample Date	Season	*Hyalella azteca* mean % survival relative to control
Cottonwood Creek @ Rd 20	3/4/2008	Storm	**96**
Dry Creek @ Wellsford Rd	3/4/2008	Storm	**88**
Hatch Drain @ Tuolumne Rd	3/4/2008	Storm	0
Hatch Drain @ Tuolumne Rd (FD)	3/4/2008	Storm	0
Highline Canal @ Hwy 99	3/4/2008	Storm	90
Highline Canal @ Lombardy Ave	3/4/2008	Storm	91
Hilmar Drain @ Central Ave	3/4/2008	Storm	91
Mustang Creek @ East Ave	3/4/2008	Storm	**78**

FD – field duplicate

Sent: Monday, March 31, 2008 at 2:47 PM
From: K Callinan [kcallinan@mlj-llc.com]
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Field Exceedance Report - Storm Sed RS 2008
Attachments: ESJWQC_08_ER_field_storm_sediment_RS_table_033108.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues: a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a.) On March 28, 2008 sediment toxicity resampling was conducted in the ESJWQC region at sites that experienced sediment toxicity in the original samples collected on March 4, 2008 for the storm sediment event. During the sampling field parameters were measured. However, the Cottonwood Creek @ Rd 20 site was not resampled due to a lack of flow in the water body, and therefore field parameters were not measured at that site. Exceedances of water quality trigger limits for field parameters were experienced

in dissolved oxygen (DO) and electrical conductivity (EC). See attached Table 1 for details. If you wish to see the raw data for these exceedances, the field sheets can be provided as scanned pdfs upon request.

b.) This sampling event was conducted as follow-up to the original sediment sampling event, therefore additional follow-up sampling will not be conducted. Field measures will be collected again at these sites during the first irrigation season water sampling event which will occur in April, 2008.

c.) DO exceedances are common in the Coalition region due to low flow, high water temperatures, as well as possible high levels of biological oxygen demand in the test drains (though this may not be the case for all samples). Sites sampled in previous events have also experienced frequent DO exceedances. Elevated levels of electrical conductivity are also well documented in the Coalition region and have been consistently detected at some of the sampling sites. Potential sources of salts and metals (detected in the field as conductivity) include upstream surface water, ground water, or drain water from irrigated agriculture. All exceedances listed in the attached table have been addressed in previous Communication Reports or Management Plans and therefore do not require follow-up reporting.

Mike Johnson

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Tel: 530-756-5200
Fax: 530-756-5225
kcallinan@mlj-llc.com

Table 1. Field parameter water quality trigger exceedances experienced during sediment resampling conducted on March 28, 2008.

Site Name	Sample Date	Event	Dissolved Oxygen	Electrical Conductivity
Hatch Drain @ Tuolumne Rd	3/28/2008	Storm Sediment	5.22	1373
Mustang Creek @ East Ave	3/28/2008	Storm Sediment	4.1	1467
Hilmar Drain @ Central Ave	3/28/2008	Storm Sediment	6.3	1111

Sent: Thursday, April 10, 2008 at 11:05 AM
From: K Callinan [kcallinan@mlj-llc.com]
To: Dania Huggins dhuggins@waterboards.ca.gov
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Pesticide Exceedance Report - Storm2 2008
Attachments: ESJWQC_08_ER_Pesticide_Storm2_table_041008.doc

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an exceedance report is being submitted to address the following issues a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedances.

a. On February 25 and 26, 2008 sampling was conducted in the ESJWQC region for the second storm season monitoring event. Data were received from the laboratory on April 10, 2008. Exceedances were experienced in chlorpyrifos, diazinon, diuron and simazine. See attached Table 1 for details on these exceedances.

b. Follow-up sampling for these pesticide exceedances will not be conducted. Monitoring for the first irrigation season event will occur on April 22 and 29, 2008, and results from this monitoring event will indicate if any of the exceedances are persistent.

c. The diazinon and simazine exceedances experienced in samples collected from Cottonwood Creek @ Rd 20 and the simazine exceedance experienced in samples collected from Highline Canal @ Lombardy Ave occurred for the first time. As a result, a Communication Report will be submitted for these exceedances by June 13, 2008. All other exceedances in this report have been or will be addressed in Management Plans or previously scheduled Communication Reports and do not require follow-up reporting.

Mike Johnson

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Krista Callinan
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Table 1. Pesticide exceedances from the ESJWQC region for samples collected during the second storm sampling event in 2008. The water quality objective or trigger is listed below the constituent header. Exceedances experienced for the first time at a sample site are shown in bold.

Site Name	Sample Date	Chlorpyrifos	Diazinon	Diuron	Simazine
		0.015 µg/L	0.1 µg/L	2 µg/L	4.0 µg/L
Dry Creek @ Rd 18	2/25/2008	0.034	0.24	2.1	
Cottonwood Creek @ Rd 20	2/25/2008	0.036	**0.24**	65*	**5.1**
Mustang Creek @ East Ave	2/26/2008	0.028			17
Highline Canal @ Lombardy Ave	2/26/2008				**12**

*Original test exceeded linear range, and sample was diluted by a factor of 20.

Sent: Monday, April 14, 2008 at 11:55 AM
From: K Callinan [kcallinan@mlj-llc.com]

To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Metals, Nutrients and Bacteria Exceedance Report - Storm2 2008
Attachments: ESJWQC_08_ER_E.coli_inorganics_metals_storm2_041408.doc, ESJWQC_08_ER_Ecoli_Metals_Nut_Tbl_Storm2_041408.xls

Dear Dania,

Attached is a metals, nutrients and bacteria exceedance report and table for storm water samples collected on February 25 and 26, 2008. Please let us know if you have any questions on this report.

Krista

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Krista Callinan
Environmental Specialist
Michael L. Johnson LLC
1490 Drew Ave, Suite 175
Davis, CA 95618

Tel: 530-756-5200
Fax: 530-756-5225
kcallinan@mlj-llc.com

Dear Dania,

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedance.

a.) On February 25 and 26, 2008 regular monitoring was conducted in the ESJWQC region for the second 2008 storm monitoring event. Water was collected for analysis of physical parameters, nutrients, metals and bacteria. Exceedances of receiving water limitations for *E. coli*, total dissolved solids (TDS), color, ammonia, nitrate and metals were experienced. Final data were received from the laboratory on April 9, 2008. The sites, sampling dates and exceedances are provided in an excel spreadsheet attached to this email with the exceedance trigger listed under each constituent in the column headers. Raw data are available upon request.

b.) Follow-up sampling will not be conducted for these exceedances. Irrigation season monitoring will commence this month on April 22 and 29, 2008. Results from this monitoring event should indicate where water quality exceedances included in this report are persistent.

c.) First-time exceedances were experienced at Dry Creek @ Wellsford Rd (cadmium), Duck Slough @ Gurr Rd (cadmium), Duck Slough @ Hwy 99 (cadmium), Highline Canal @ Hwy 99 (cadmium), Highline Canal @ Lombardy Rd (cadmium and ammonia) and Miles Creek @ Reilly Rd (cadmium and nickel). As a result, a Communication Report will be submitted for these exceedances by June 17, 2008. All other exceedances in this report have been or will be addressed in Management Plans or previously scheduled Communication Reports and do not require follow-up reporting.

Mike Johnson

Site Name	Monitoring Type	Sample Date	E. Coli (235 MPN/100)	Color (15 color units)	TDS (>450 mg/L)	Ammonia (1.5 mg/L or variable based on pH and temperature)	Arsenic (10 ug/L)	Hardness (mg/L)	Cadmium (0.04 ug/L or based on hardness)	Copper (170 ug/L or based on hardness)	Lead (2 ug/L or based on hardness)	Nickel (12 ug/L or based on hardness)	Nitrate as N (10 mg/L)
Ash Slough @ Ave 21	NM	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site
Bear Creek @ Kibby Rd	NM	25/Feb/2008	>2400	150				64		7.2			
Berenda Slough along Ave 18 1/2	NM	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site
Black Rascal Creek @ Yosemite Rd	NM	25/Feb/2008	>2400	170									
Cottonwood Creek @ Rd 20	NM	25/Feb/2008		120				66		21	1.9		
Deadman Creek @ Gurr Rd	NM	25/Feb/2008	550	58			13						
Deadman Creek @ Hwy 59	NM	25/Feb/2008	1200	540									
Dry Creek @ Rd 18	NM	25/Feb/2008		85				54		33			
Dry Creek @ Wellsford Rd	NM	26/Feb/2008	>2400	250				60	**0.05**	11	1.8		
Duck Slough @ Gurr Rd	NM	25/Feb/2008	>2400	250				100	**0.1**	17	3.7	17	
Duck Slough @ Hwy 99	NM	25/Feb/2008	>2400	140				84	**0.05**	9.9	2.1		
Hatch Drain @ Tuolumne Rd	NM	26/Feb/2008	920	37	900		16						24
Highline Canal @ Hwy 99	NM	26/Feb/2008	>2400	300	520	8.3		190	**0.096**	81			
Highline Canal @ Lombardy Ave	NM	26/Feb/2008		330		**1.7**		110	**0.09**	32	2.7		

Hilmar Drain @ Central Ave	NM	26/Feb/2008		35	910								
Livingston Drain @ Robin Ave (FD)	NM	26/Feb/2008		75				38		18	0.93		
Livingston Drain @ Robin Ave	NM	26/Feb/2008		40				38		15	1.1		
Merced River @ Santa Fe	NM	26/Feb/2008		130									
Miles Creek @ Reilly Rd	NM	25/Feb/2008	2000	620				84	**0.2**	34	7.7	**26**	
Mustang Creek @ East Ave	NM	26/Feb/2008		250									
Prairie Flower Drain @ Crows Landing Rd	NM	26/Feb/2008		56	1600								28
Silva Drain @ Meadow Dr	NM	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site
South Slough @ Quinley Rd	NM	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site	Dry site
Westport Drain @ Vivian Rd	NM	26/Feb/2008			730								26

FD- field duplicated
J- estimated value; between laboratory reporting limit and minimum detection limit
NM- normal monitoring
MPM- management plan monitoring
Bold - exceedance experienced for the first time at that site

Sent: Thursday, April 17, 2008 at 1:34 PM
From: K Callinan kcallinan@mlj-llc.com
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Sediment Toxicity Exceedance Report - Storm RS 2008
Attachments: ESJWQC_08_ER_toxicity_storm_sediment_RS_table_041708.doc

Dear Dania

As required in the Monitoring and Reporting Program (Order No. R5-2005-0833) for Coalition Groups, an Exceedance Report is being submitted to address the following issues a) the exceedances, b) the follow-up monitoring, and c) any analysis or other actions the Coalition Group may take to address the exceedance.

a) On March 28, 2008 sediment toxicity resampling was conducted in the ESJWQC region at sites that experienced toxicity in the original sediment samples collected on March 4, 2008 for the storm season event. Data for these samples were received from the laboratory on April 17, 2008. Significant toxicity to *Hyalella azteca* was found in samples collected from one site, indicating that sediment toxicity was persistent at that site. See the attached Table 1 for details on this exceedance. The Coalition has not yet received the raw data for these tests.

b) This sampling event was conducted as follow-up to toxicity experienced in previous samples, therefore additional follow-up sampling will not be conducted. Coalition sampling will occur again with the onset of the irrigation season on April 22 and 29, 2008.

c) The Coalition will review Pesticide Use Reports for the site subwatershed in which the exceedance was found. Pesticides with a high Koc (organic carbon partition coefficient) will be reviewed to determine if applications occurred in the relevant site subwatershed during months prior to the sediment sampling. Chemicals with a high Koc bind to organic material and sediment and thus have a higher probability of causing sediment toxicity. The sediment toxicity exceedance included in this report has been addressed in a previous Communication Report and therefore does not require follow-up reporting.

Mike Johnson

--
Krista Callinan
Environmental Specialist
Michael L. Johnson LLC
1490 Drew Ave, Suite 175
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Tel: 530-756-5200
Fax: 530-756-5225
kcallinan@mlj-llc.com

Table 1. Sediment toxicity exceedance from the March 28, 2008 resampling event as follow-up to sediment toxicity in samples collected on March 4, 2008. Results are shown as mean percent survival of *Hyalella azteca* relative to the lab control. The mean percent survival in the lab control was 91%.

Site Name	Sample Date	Season	***Hyalella azteca*** mean % survival relative to control
Hatch Drain @ Tuolumne Rd	3/28/2008	Storm	2

ESJWQC Communication Reports 2008

Sent: Thursday, April 3, 2008 at 2:40 PM
From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Toxicity Communication Report - Storm1 2008
Attachments: ESJWQC_08_CR_Toxicity_Storm1_040308_final.doc

Dear Dania,

Attached is a Communication Report due today for toxicity exceedances experienced during the first storm sampling event on January 24 and 25, 2008. A summary of the final analytical results has not yet been received from the laboratory and will be provided to you by April 11, 2008. Let us know if you have any questions on this report.

Krista

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Krista Callinan
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East San Joaquin Water Quality Coalition
1201 L Street
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April 3, 2007

Dania Huggins
Irrigated Lands Conditional Waiver Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114
Dear Dania,

We are submitting the formal Communication Report for the toxicity exceedances reported on January 30, 2008 that occurred in water samples collected from ESJWQC sample site on January 24 and 25, 2008 (see Table 1 below). Only toxicity exceedances that occurred for the first time at sample site are included in this report.

Table 1. ESJWQC toxicity in samples collected during the first 2008 storm sampling event conducted on January 24 and 25, 2008. Only first time toxicity exceedances at a sample site are shown.

Sample Site	Sample Date	*Ceriodaphnia dubia* (% survival compared to control)	*Selenastrum capricornutum* (% growth compared to control)	*Pimephales promelas* (% survival compared to control)
Cottonwood Creek @ Rd 20	1/25/08			45*
Deadman Creek @ Hwy 59	1/25/08		45*	
Deadman Creek @ Hwy 59 (FD)	1/25/08		59	
Hatch Drain @ Tuolumne Rd	1/24/08		75	
Mustang Creek @ East Ave	1/24/08	0*		

*Toxicity Identification Evaluation tests conducted, dilution series conducted for samples that experienced complete mortality.
FD – field duplicate

1. Follow-up monitoring and analyses conducted

Toxicity Identification Evaluation (TIE) tests were performed to further analyze the *Ceriodaphnia, Selenastrum* and *Pimephales* toxicities experienced in samples collected

from Mustang Creek, Deadman Creek and Cottonwood Creek (respectively) due to greater than 50% reduction in the test species relative to the control. A dilution series was also run for the *Ceriodaphnia* test which experienced complete mortality, to determine the level of toxicity in the water sample. Re-sampling for these exceedances occurred on January 30, 2008 and results showed persistent toxicity at the Mustang Creek @ East Ave sample site, but no significant toxicity in any of the other samples in this report, indicating that the previously observed toxicity at Cottonwood Creek, Deadman Creek, and Hatch Drain was not persistent.

2. Actions taken to identify the source of the exceedance.

Exceedances of pesticides, metals and/or physical parameters that are associated with toxicity may help to determine the likely source(s) of toxicity at a sample site. In addition, for samples that undergo TIE testing and/or dilution series analysis, results from these tests can be evaluated along with the chemistry results to identify the source(s) of toxicity with more certainty.

Cottonwood Creek

Samples collected from the Cottonwood Creek @ Rd 20 site experienced toxicity to *Pimephales* and also experienced exceedances in copper (24 µg/L) and lead (5.4 µg/L), chlorpyrifos (0.019 µg/L) and diuron (68 µg/L). Though none of these constituents are known to be acutely toxic to *Pimephales* at the detected concentrations, toxicity may have resulted from the synergistic effects of more than one constituent combined. The TIE results for this sample did not retain toxicity through the time of the test, but an SPE add-back recovered (amplified) the toxicity, indicating that a nonpolar organic toxicant was present in the sample water at sublethal concentrations (Table 2). It is uncertain which of the constituents detected in the sample water may have contributed to the *Pimephales* toxicity. Pesticide Use Reports (PURs) for all of these constituents will be evaluated and followed up on due to their possible contribution to the toxicity and their exceedance level detections in the sample water.

Deadman Creek

Both the grab sample and the duplicate sample collected from Deadman Creek @ Hwy 59 experienced toxicity to *Selenastrum* and also experienced exceedances in diuron (6.2 µg/L, 6.3 µg/L) and simazine (25 µg/L, 19 µg/L). Diuron and simazine are herbicides known to be acutely toxic to phytoplankton and therefore are likely sources of the toxicity experienced in these samples. TIE results also indicate the source of toxicity to be a nonpolar organic (Table 3). As a result, PUR data for both diuron and simazine will be evaluated in the Deadman Creek @ Hwy 59 site subwatershed in order to determine the timing and location of pesticide applications that may have contributed to the toxicity.

Hatch Drain

Samples collected from Hatch Drain @ Tuolumne Rd experienced toxicity to *Selenastrum* and also experienced an exceedance in arsenic; however the level of arsenic detected in the sample water was not at a concentration known to be acutely toxic to algae. Therefore, while arsenic may have contributed to the toxicity in this sample, it is likely that other constituents or parameters (possibly not tested by the Coalition) were involved. According to PUR data provided by the Agricultural Commissioner's office, there has been no use of pesticides containing arsenic in Stanislaus County over the past ten years. Therefore, exceedances in arsenic are attributed to naturally occurring geological sources or legacy use. The Coalition will continue to monitor for agricultural use of arsenic in the Coalition region.

Mustang Creek

Samples collected from the Mustang Creek @ East Ave sample site experienced toxicity to *Ceriodaphnia* and also experienced exceedances in chlorpyrifos (0.067 µg/L) and simazine (4.2 µg/L). TIE and dilution series results from this sample indicated that there were 1.7 acute toxic units in the sample water, and that the *Ceriodaphnia* toxicity was likely a result of a non-polar organic such as a pyrethroid pesticide. Chemistry results, however, showed no detections of pyrethroid pesticides in the sample water. As a result, PUR data for all applications that may be relevant to the *Ceriodaphnia* toxicity will be reviewed and compiled to more clearly determine possible sources of this toxicity.

Refer to Tables 2-4 and conclusions below for results of all TIE tests. PUR data for applications in January are not yet available for the subwatersheds included in this report. However, PUR data and maps showing pesticide applications relevant to the toxicity exceedances in this report will be provided in the June 30, 2008 Semi-Annual Monitoring Report (SAMR).

Table 2. Summary of Acute Phase I *Pimephales promelas* TIE on Cottonwood Creek sample collected on 1/25/08.

Treatment	***Concentration (%)***	***96-hr Survival (%)***	***Comment***
Baseline	Lab Control 100	100 100	Sample lost toxicity prior to or during TIE (NOEC > 100%)
Baseline + 100 ppb PBO	PBO Control 100	100 90	Treatment ineffective since no toxicity in baseline
C-8 SPE Through-Column	Column Blank 100	95 100	Treatment ineffective since no toxicity in baseline
C-8 SPE Column 2X Add-Back	MeOH Ctrl 2X add-back	100 40*	Toxicity recovered in methanol eluate; toxicity amplified by add-back – non-polar organic toxicant(s) may be present at subtoxic concentrations
Baseline + EDTA	EDTA Control 100	100 95	Treatment ineffective since no toxicity in baseline

Sample Date: 1/25/08
Test Date: 1/30/08
NOEC: No observed effect concentration
SPE: Solid phase extraction
EDTA: Ethylenediaminetetraacetic acid
PBO: piperonyl butoxide
* significantly different from control ($p<0.05$)

Conclusion:

Sample lost toxicity. However, SPE add-back results indicate that non-polar organic toxicant(s) may be present at subtoxic concentrations.

Table 3. Summary of Chronic Phase I *Selenastrum capricornutum* TIE on Deadman Creek @ Hwy 59 sample collected on 1/25/08.

Treatment	***Concentration (%)***	***Absorbance @ 750 nm***	***Comment***
Baseline	Lab Control 100	0.0920 0.0770	Slight reductiona in cell growth compared with control (NOEC = 100%)
Baseline + 1 mg/L EDTA	EDTA Control 100	0.0610 0.0655	No improvement in cell growth
C-8 SPE Through-Column	Column Blank 100	0.1425 0.2390	Increased cell growth compared with untreated sample
C-8 SPE Column 2X Add-Back	Treatment Ctrl 4X Add-Back	0.0860 0.0020*	Toxicity amplified in 4X add-back

Sample Date: 1/25/08
Test Date: 2/2/08
NOEC: No observed effect concentration
SPE: Solid phase extraction
EDTA: Ethylenediaminetetraacetic acid
a % reduction = (control OD – sample OD) / sample OD (Miller et al., 2005)
* significantly different from control ($p<0.05$)

Conclusion:

Low level toxicity observed in TIE. Cell growth markedly improved by SPE treatment. Non-polar organic toxicant(s) suspected.

Table 4. Summary of Acute Phase I *Ceriodaphnia dubia* TIE and dilution series on Mustang Creek @ East Ave sample collected on 1/24/08,

Treatment	***Concentration (%)***	***96-hr Survival (%)***	***Toxic Units (TUa)[a]***	***Comment***
Baseline	Lab Control 6.25 12.5 25 50 100	100 100 100 100 60* 0*	NOEC = 25% (4 TUa) EC50 = 58.3 (1.7 TUa)	Based on the EC50, the sample contained 1.7 TUa
Baseline + 100 ppb PBO	PBO Control 6.25 12.5 25 50 100	100 100 100 95 0* 0*	NOEC = 25% (4 TUa) EC50 = 36.8 (2.7 TUa)	PBO slightly increase in toxicity in the 50% concentration. Low-level pyrethroid suspected
C-8 SPE Through-Column	Column Blank 100	100 100	--	Toxicity removed by SPE extraction. Non-polar organic toxicity indicated
C-8 SPE Column 2X Add-Back	MeOH Ctrl 2X add-back	100 0*	--	Toxicity recovered in methanol eluate
Baseline + EDTA	EDTA Control 100	100 0*	--	EDTA treatment ineffective - cationic metals not responsible for sample toxicity

Sample Date: 1/24/08
Test Date: 1/27/08
NOEC: No observed effect concentration
EC_{50}: Half maximal effective concentration
SPE: Solid phase extraction
EDTA: Ethylenediaminetetraacetic acid
PBO: piperonyl butoxide
a TUa = 100/NOEC; TUa = $100/EC_{50}$
* significantly different from control ($p<0.05$)

Conclusion:

PBO addition caused a slight decrease in survival. SPE removed all toxicity, which was recovered in the SPE add-back, indicating that the majority of the toxicity was caused by non-polar organics. These results are consistent with pyrethroid toxicity.

3. Complete analytical results

A summary of the analytical results will be provided electronically in pdf format once they are received from the laboratory. These results should be available by April 11, 2008.

4. Time schedule to identify and implement the Management Practice Effectiveness evaluation.

Table 5. Time Schedule

Action	Anticipated Completion Date
Obtain PURs	June 30, 2008
Contact Growers in Watersheds	May 30, 2008
Perform Management Practices Survey	May 30, 2008
Outreach/BMP Education	May, 2008
Management Plan	Not yet scheduled

Justification for dates:

Obtain PURs – PURs for applications that occurred in the site subwatersheds in this report are not yet available for the month of January from the Merced County and Madera County Agricultural Commissioner's Office. Data should be available to the Coalition within the next 1-2 months and will be provided with the June 30, 2008 SAMR.

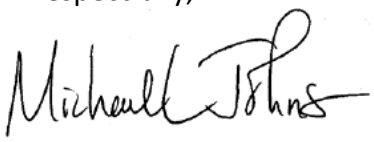
Contact growers in the watersheds – The Coalition is currently updating their database of contact information for all Coalition members. Once the update is complete, mailings will go out to all growers containing exceedance notification, information on best management practices (BMPs), and Coalition updates.

Perform management practices survey – BMP surveys have been provided to growers through mailings and at grower meetings. Results from these surveys were compiled and provided with the December 31, 2007 SAMR. For growers that do not currently have a survey on record, a survey will be provided to them along with their notification letter by May 30, 2008.

Outreach/ BMP Education – The most recent grower meetings hosted by the Coalition occurred in December, 2007. Monitoring results were presented from the 2007 irrigation season, and information was provided on management practices to reduce the potential for runoff of pesticides and sediment. Once all results are received from the 2008 storm season sampling events, outreach will occur again to follow up on the storm runoff exceedances. Meetings are planned to occur in locations throughout the Coalition area during the month of May, 2008.

Management Plan – An updated Management Plan will be submitted for all subwatersheds that have experienced two or more exceedances in one constituent. A time schedule for these Management Plans has not yet been determined.
Let us know if further explanation or documentation is necessary.

Respectfully,



Michael L. Johnson, Technical Program Manager

Sent: Wednesday, April 30, 2008 at 1:04 PM

From: K Callinan kcallinan@mlj-llc.com
To: Dania Huggins <dhuggins@waterboards.ca.gov
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Field Communication Report - Storm2 2008
Attachments: ESJWQC_08_CR_Field_Storm2_043008_final.doc

Dear Dania,

Attached is a Communication Report for field exceedances that occurred for the first time during the second storm sampling event on February 26 and 27, 2008. A copy of the field sheets (pdf) for each day of this monitoring event are too large to submit electronically with this report, but can be provided upon request. Please let us know if you have any questions.

Krista

--
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April 30, 2008

Dania Huggins
Irrigated Lands Conditional Waiver Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Dear Dania,

We are submitting the formal communication report for field parameter exceedances that occurred during the second 2008 storm season sampling event reported on February 26 and 27, 2008 (see Table 1 below). Only exceedances that were experienced for the first time at a sample site are included in this report.

Table 1. Field exceedance experienced in receiving waters sampled for the ESJWQC on February 25 and 26, 2008 during the second storm sampling event.

Sample Site	Sample Date	Season	Electrical Conductivity (µS/cm)	pH (pH units)	Dissolved Oxygen (mg/L)
Deadman Creek @ Gurr Rd	2/25/08	Storm		8.51	
Highline Canal @ Hwy 99	2/26/08	Storm	747		
Livingston Drain @ Robin Ave	2/26/08	Storm			5.68
Westport Drain @ Vivian Rd	2/26/08	Storm			5.7

1. Follow-up monitoring and analyses conducted.

Follow-up sampling for field parameter exceedances occurred at all sites coinciding with toxicity resampling; however none of the field parameter exceedances in this report were detected again at those sites. Field parameters were also measured during the storm sediment sampling event on March 4, 2008 and again none of the field exceedances in this report were detected. The lack of persistence of the exceedances in this report indicates that the detected levels of electrical conductivity (EC), pH and dissolved oxygen (DO) at those samples sites were due to temporary conditions in the water body. If any of these exceedances are experienced a second time, they will then be addressed in the management plan for that site.

2. Actions taken to identify the source of the exceedance.

Electrical Conductivity

Elevated conductivity may be due to anthropogenic factors, as well as natural soil geological conditions. Irrigation water can originate from surface storage facilities or ground water. Water entering the drains comes from seepage into the drains from shallow ground water, direct discharge from surface irrigation return flows or rainfall events, and discharge from field drains. At this point it is uncertain what the source of EC is at the location sampled along the Highline Canal. At the sample location along the canal, the ground water is generally not high in salts. However, the primary flows in the canal are from both irrigated agriculture and the city of Merced. Urban storm water often contains elevated amounts of salts and it is possible that the salts originated from Merced. If additional exceedances occur, EC will be addressed in the management plan for that site.

pH

pH dynamics in surface waters are not well understood and can vary diurnally with photosynthetic rates and changes in the concentration of CO_2 and O_2 in the water. Control of pH in surface waters is a function of the balance between the buffering capacity of the water, inputs of organic acids from soil leaching, and the relative amount of photosynthesis. However, at this time of year, these factors are unlikely to affect pH with the exception of leaching of compounds from soils. The pH of 8.51 is .01 pH units above the limit and the level of accuracy of the pH meter the Coalition uses for its measurements is ± 0.2 pH units. As with EC, the source of the pH exceedance is unknown and the Coalition is unlikely to understand the source of this exceedance. Further exceedances will allow the Coalition to focus on this issue in this watershed and potentially identify conditions that could result in exceedances of pH.

Dissolved Oxygen

DO in surface waters is a function of several factors including flow and reaeration, water temperature, biological oxygen demand (BOD) including sediment oxygen demand (SOD), and chemical oxygen demand (COD), and the relative amount of photosynthesis. DO is a non-conserved constituent and can change dramatically across space and time, however some monitoring sites may be prone to persistent low levels of DO due to particular characteristics or processes in the water body.

Management of DO involves management of the processes that determine DO. Currently, the Coalition does not fully understand the processes that determine DO at the Livingston Drain and Westport Drain sites. However, in an attempt to attain a better understanding of the parameters involved in dissolved oxygen levels across Coalition monitoring site, the Coalition added BOD as a test periodically performed at all of their monitoring locations across irrigation and storm season events between September, 2006 and July, 2007. The conclusions of this analysis indicated that dissolved oxygen deficits at sample sites are a result of BOD, temperature, and nitrate. However, the

source of the organic material that is causing the decomposition problems remains to be determined. Several sources are possible including allochthonous material (benthic algae, rooted and nonrooted macrophytes), allochthonous inputs from the riparian zone, inputs from agricultural activities such as irrigated pasture, or organic carbon sources such as leaky sanitary sewers, leaky septic systems, or applied manure. Analysis of water chemistry data indicated no significant relationship between *E. coli* and DO suggesting that the organic matter in the stream responsible for the BOD was not solely a result of sewage in the stream. As a result, the Coalition will continue monitoring dissolved oxygen across the coalition region and will promote best management practices to eliminate discharge of nutrients and bacteria with the purpose of improving the dissolved oxygen levels in receiving water bodies.

3. Complete analytical results

Complete analytical results in the form of the field sheets in pdf format are too large to send by email with this report, but can be provided upon request.

4. Time schedule to identify and implement the Management Practice Effectiveness evaluation.

Table 2. Deliverables time schedule

Action	Anticipated Completion Date*
Contact Growers in Watersheds	May 30, 2008
Outreach/BMP Education	May, 2008
Management Plan	Not yet scheduled

*See justification below for details

Justification for dates:

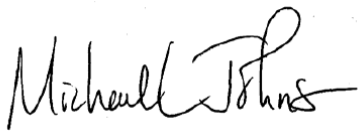
Contact growers in the watersheds – The Coalition is currently updating their database of contact information for all Coalition members. Once the update is complete, mailings will go out to all growers containing exceedance notification, information on best management practices (BMPs), and Coalition updates.

Outreach/ BMP Education – The most recent grower meetings hosted by the Coalition occurred in December, 2007. Monitoring results were presented from the 2007 irrigation season, and information was provided on management practices to reduce the potential for runoff of pesticides, nutrients and sediment. Outreach will occur again to follow up on the storm runoff exceedances in locations throughout the Coalition area during the month of May, 2008.

Management Plan – An updated Management Plan will be submitted for all subwatersheds that have experienced two or more exceedances in one constituent. A time schedule for these Management Plans has not yet been determined.

Let us know if further explanation or documentation is necessary.

Respectfully,



Michael L. Johnson, Technical Program Manager

Sent: Wednesday, May 7, 2008 at 4:02 PM
From: K Callinan [kcallinan@mlj-llc.com]
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Toxicity Communication Report - Storm2 2008
Attachments: ESJWQC_08_CR_Toxicity_Storm2_050708_final.doc

Dear Dania,

Attached is the Communication Report due today for toxicity exceedances that occurred for the first time during the second 2008 storm monitoring event. The Laboratory report relevant to these exceedances will be sent in a separate email due to its file size. Let us know if you have any questions on this report.

Krista

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Krista Callinan
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May 7, 2008

Dania Huggins
Irrigated Lands Conditional Waiver Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Dear Dania,

We are submitting the formal Communication Report for the toxicity exceedances reported on March 4, 2008 that occurred in water samples collected from ESJWQC sample site on February 25 and 26, 2008 (see Table 1 below). Only toxicity exceedances that occurred for the first time at sample site are included in this report.

Table 1. ESJWQC toxicity in samples collected during the first 2008 storm sampling event conducted on February 25 and 26, 2008. Only first time toxicity exceedances at a sample site are shown.

Sample Site	Sample Date	*Selenastrum capricornutum* (% growth compared to control)	*Pimephales promelas* (% survival compared to control)
Black Rascal Creek @ Yosemite Rd	2/25/2008	41*	
Highline Canal @ Lombardy Rd	2/26/2008		90
Livingston Drain @ Robin Ave	2/26/2008	62	
Livingston Drain @ Robin Ave (FD)	2/26/2008	66	
Mustang Creek @ East Ave	2/26/2008	26*	

*Toxicity Identification Evaluation tests conducted.
FD – field duplicate

1. Follow-up monitoring and analyses conducted

Toxicity Identification Evaluation (TIE) tests were performed to further analyze the *Selenastrum* toxicities experienced in samples collected from Black Rascal Creek and Mustang Creek due to greater than 50% reduction in the test species relative to the control. Re-sampling for all toxicities occurred on March 4, 2008 and results showed persistent *Pimephales* toxicity at the Highline Canal @ Lombardy Rd sample site, but no significant toxicity in any of the other samples in this report, indicating that the previously observed toxicity at Black Rascal Creek, Livingston Drain and Mustang Creek was not persistent.

2. Actions taken to identify the source of the exceedance.

The analysis of pesticides, metals and/or physical parameters exceedances that are associated with toxicity may help to determine the likely source(s) of toxicity at a sample site. In addition, for samples that undergo TIE testing and/or dilution series analysis, results from these tests can be evaluated along with chemistry data to identify the source(s) of toxicity with more certainty. The actions that have been taken to identify the source(s) of exceedances at each of the sites in this report are described below.

Black Rascal Creek @ Yosemite Rd

Samples collected from the Black Rascal Creek @ Yosemite Rd site experienced toxicity to *Selenastrum*, however did not show any exceedance level detections in pesticides or metals relevant to the toxicity. Furthermore, *Selenastrum* toxicity did not persist through the TIE tests therefore none of the treatments were able to provide useful information regarding the cause of toxicity in the initial test. At this time, the cause of the reduced growth of *Selenastrum* in the sample water is uncertain, however there is a chance that a constituent not tested by the Coalition is the cause of toxicity, and Pesticide Use Reports (PURs) data from the period prior to the sampling event will be evaluated for all pesticides that are known to cause *Selenastrum* toxicity.

Highline Canal @ Lombardy Rd

Samples collected from the Highline Canal @ Lombardy Rd site experienced toxicity to *Pimephales* and also experienced exceedances in ammonia (1.7 mg/L), cadmium (0.09 µg/L), copper (32 µg/L), lead (2.7 µg/L) and simazine (12 µg/L). Due to the lack of toxicity to the other (more sensitive) test species, it is unlikely that the listed metals and pesticide concentrations were the cause of toxicity. The level of ammonia in the water is well below the LC50 but it is possible that the combined effects of all contaminants were responsible for the slight mortality experienced in the test. PURs for all pesticides relevant to this exceedance will be evaluated due to the possible contribution of pesticides or metals to the toxicity and their exceedance level detections in the sample water.

Livingston Drain @ Robin Ave

Both the grab sample and the duplicate sample collected from Livingston Drain @ Robin Ave experienced toxicity to *Selenastrum* and also experienced exceedances in copper (15 µg/L, 18 µg/L) and lead (1.1 µg/L, 0.93 µg/L). Copper and lead are metals known have effects on phytoplankton and therefore are likely sources of the reduced growth experienced in these samples. Sources of copper and lead are widespread, however only copper is used for the purpose of agriculture (among numerous other uses). As a result, PUR data for copper and other relevant pesticides will be evaluated in the Livingston Drain site subwatershed in order to determine the timing and location of applications that may have contributed to the toxicity.

Mustang Creek @ East Ave

Samples collected from Mustang Creek @ East Ave experienced toxicity to *Selenastrum* and also experienced an exceedance in simazine (17 µg/L) and chlorpyrifos (0.028 µg/L). Simazine is an herbicide known to cause toxicity to algae and therefore is a likely cause (or one of the causes) of the toxicity. A TIE was conducted as follow-up to the toxicity due to less than 50% survival compared to the control, however sample water toxicity was lost prior to or during the TIE, therefore results from the treatments were inconclusive. The lack of persistence of toxicity in the sample water and the short half-life of simazine also points to the conclusion that the *Selenastrum* toxicity may have been caused by the elevated levels of simazine initially detected in the sample water. PUR data for simazine and other relevant pesticides will be evaluated in the Mustang Creek site subwatershed in order to determine the timing and location of applications that may have contributed to the toxicity.

Table 2. Summary of Acute Phase I *Selenastrum capricornutum* TIE on Black Rascal Creek sample collected on 2/25/08.

Treatment	***Concentration (%)***	***Absorbance @ 750 nm***	***Cells/mL (x 10^6) [a]***	***Comments***
Baseline	Lab Control 100	0.0240 0.1870	0.2798 2.4031	No toxicity detected in TIE
Baseline + 1 mg/L EDTA	EDTA Control 100	0.0955 0.2085	1.2112 2.6831	
C-8 SPE Through- Column	Column Blank 100 2X add-back	0.0225 0.0460 0.1470	0.2603 0.5664 1.8820	
C-8 SPE + EDTA	Column Blank 100	0.0225 0.1175	0.2603 1.4978	

Sample Date: 2/25/08
Test Date: 3/11/08
a Cell number x 10^6 = 13.026 x absorbance @ 750 nm – 0.0328
* significantly different from control ($p<0.05$)

Conclusion:

Sample toxicity was lost prior to or during the TIE, therefore none of the treatments provided any useful information regarding the cause(s) of toxicity detected in the initial toxicity test.

Table 3. Summary of Chronic Phase I *Selenastrum capricornutum* TIE on Mustang Creek @ East Ave sample collected on 2/26/08.

Treatment	***Concentration (%)***	***Absorbance @ 750 nm***	***Cells/mL (x 10^6) [a]***	***Comments***
Baseline	Lab Control 100	0.0240 0.0950	0.2798 1.2047	No toxicity detected in TIE
Baseline + 1 mg/L EDTA	EDTA Control 100	0.0955 0.1295	1.2112 1.6541	
C-8 SPE Through- Column	Column Blank 100 2X add-back	0.0740 0.1885 0.0320	0.9311 2.4226 0.3840	
C-8 SPE + EDTA	Column Blank 100	0.0740 0.0625	0.9311 0.7813	

Sample Date: 2/26/08
Test Date: 3/11/08
a Cell number x 10^6 = 13.026 x absorbance @ 750 nm – 0.0328
* significantly different from control ($p<0.05$)

Conclusion:

Sample toxicity was lost prior to or during the TIE, therefore none of the treatments provided any useful information regarding the cause(s) of toxicity detected in the initial toxicity test.

3. Complete analytical results

A summary of the analytical results are provided electronically in pdf format along with this report.

4. Time schedule to identify and implement the Management Practice Effectiveness evaluation.

Table 4. Time Schedule

Action	Anticipated Completion Date
Obtain PURs	June 30, 2008
Contact Growers in Watersheds	May 30, 2008
Perform Management Practices Survey	May 30, 2008
Outreach/BMP Education	May, 2008
Management Plan	Not yet scheduled

Justification for dates:

Obtain PURs – PURs for applications that occurred in the site subwatersheds in this report are not yet available for the month of February from the Merced County and Madera County Agricultural Commissioner's Office. Data should be available to the Coalition within the next month and will be provided with the June 30, 2008 Semi-Annual Monitoring Report (SAMR).

Contact growers in the watersheds – The Coalition is currently updating their database of contact information for all Coalition members. Once the update is complete, mailings will go out to all growers containing exceedance notification, information on best management practices (BMPs), and Coalition updates.

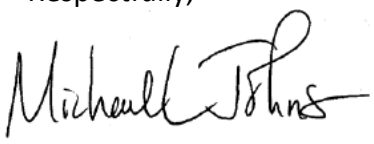
Perform management practices survey – BMP surveys have been provided to growers through mailings and at grower meetings. Results from these surveys were compiled and provided with the December 31, 2007 SAMR. For growers that do not currently have a survey on record, a survey will be provided to them along with their notification letter by May 30, 2008.

Outreach/ BMP Education – The most recent grower meetings hosted by the Coalition occurred in December, 2007. Monitoring results were presented from the 2007 irrigation season, and information was provided on management practices to reduce the potential for runoff of pesticides and sediment. Outreach will occur again to follow up on the storm runoff exceedances. Meetings are planned to occur in locations throughout the Coalition area during the month of May, 2008.

Management Plan – An updated Management Plan will be submitted for all subwatersheds that have experienced two or more exceedances in one constituent. A time schedule for these Management Plans has not yet been determined.

Let us know if further explanation or documentation is necessary.

Respectfully,



Michael L. Johnson, Technical Program Manager

Sent: Friday, May 9, 2008 at 10:09 AM
From: Melissa Turner <mturner@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Margie Read <MRead@waterboards.ca.gov>, Parry Klassen <pklassen@unwiredbb.com>, "Michael L. Johnson" <mbjohnson@ucdavis.edu>, Francisca Johnson <fjohnson@mlj-llc.com>, kcallinan@mlj-llc.com, Lara Reising <ltreising@gmail.com>
Subject: Communicatin Report- Pesticide Storm1 08
Attachments: none

Dear Dania,

The Communication Report due today for pesticide exceedances that occurred for the first time during the first 2008 storm monitoring event has been uploaded to the MLJ-LLC sharepoint due to its size. Laboratory reports relevant to these exceedances have also been uploaded to the sharepoint.

You can download these documents for your review by going to the following web address:

http://sharepoint.mlj-llc.com/MLJ-DB/Database/Forms/AllItems.aspx

Username: ftpuser

Password: Aqua2007!

There is a folder that is called “Regional Board Documents”. In this folder is a subfolder titled “ESJWQC_08_CR_Pesticides_Storm1_050908” and all documents relevant to this Communication Report can be downloaded from here.

Please let me know if you have any questions or problems with the sharepoint.

Melissa

Melissa Turner

Michael L. Johnson, LLC

1490 Drew Ave, Suite 175

Davis, CA 95618

Phone: 530-756-5200

Fax: 530-756-5225

Email: mturner@mlj-llc.com

East San Joaquin Water Quality Coalition
1201 L Street
Modesto, CA 95354
www.esjcoalition.org

May 9, 2007

Dania Huggins
Irrigated Lands Conditional Waiver Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Dear Dania,

We are submitting a formal Communication Report for the pesticide exceedances reported on March 7, 2008 that have not been addressed in a Management Plan or previous Communication Report (see Table 1 below). Sampling occurred at this site on January 24 and 25, 2008 during the first storm sampling event of 2008.

Table 1. Pesticide exceedance from the ESJWQC region for samples collected during the first 2008 storm sampling event. Only exceedances that occurred for the first time at a sample site are included. A field duplicate sample is noted by "FD".

Sample Site	Sample Date	Season	Chlorpyrifos µg/L	DDT µg/L	Diuron µg/L	Methidathion µg/L	Simazine µg/L
Cottonwood Creek @ Rd 20	1/25/2008	Storm	0.019*		68		
Deadman Creek @ Gurr Rd	1/25/2008	Storm		0.0073*			
Deadman Creek @ Hwy 59	1/25/2008	Storm			6.2		25
Deadman Creek @ Hwy 59 FD	1/25/2008	Storm			6.3		19
Dry Creek @ Rd 18	1/25/2008	Storm			21		
Miles Creek @ Reilly Rd	1/25/2008	Storm				2.3	
Mustang Creek @ East Ave	1/24/2008	Storm	0.067				4.2

*between the laboratory minimum detection limit and reporting limit and therefore considered an estimated value

1. Follow-up monitoring and analyses conducted.

No follow-up sampling was conducted as a result of the pesticide exceedances. However, follow-up sampling for toxicity occurred at sites where toxicity was experienced in the original samples, including the Cottonwood Creek, Deadman Creek,

Miles Creek and Mustang Creek sample sites. During the resampling, samples were collected for toxicity analysis only and chemistry analysis was not conducted. Toxicity to *Ceriodaphnia* was persistent at the Miles Creek and Mustang Creek sites. Details on the possible sources of toxicity and whether the toxicity is a result of the exceedances in this report are provided below. The second storm sampling event occurred one month after the samples in this report were collected. Persistent levels of pesticides were apparent at a few of the sample sites, including the chlorpyrifos and diuron exceedances at Cottonwood Creek, the diuron exceedance at Dry Creek, and the chlorpyrifos and simazine exceedances at Mustang Creek. Further discussion on the pesticide exceedances is provided below.

2. Actions taken to identify the source of the exceedance.

Pesticide Use Reports (PUR) for the site subwatersheds that experienced pesticide exceedances have been compiled and mapped to analyze for potential sources.

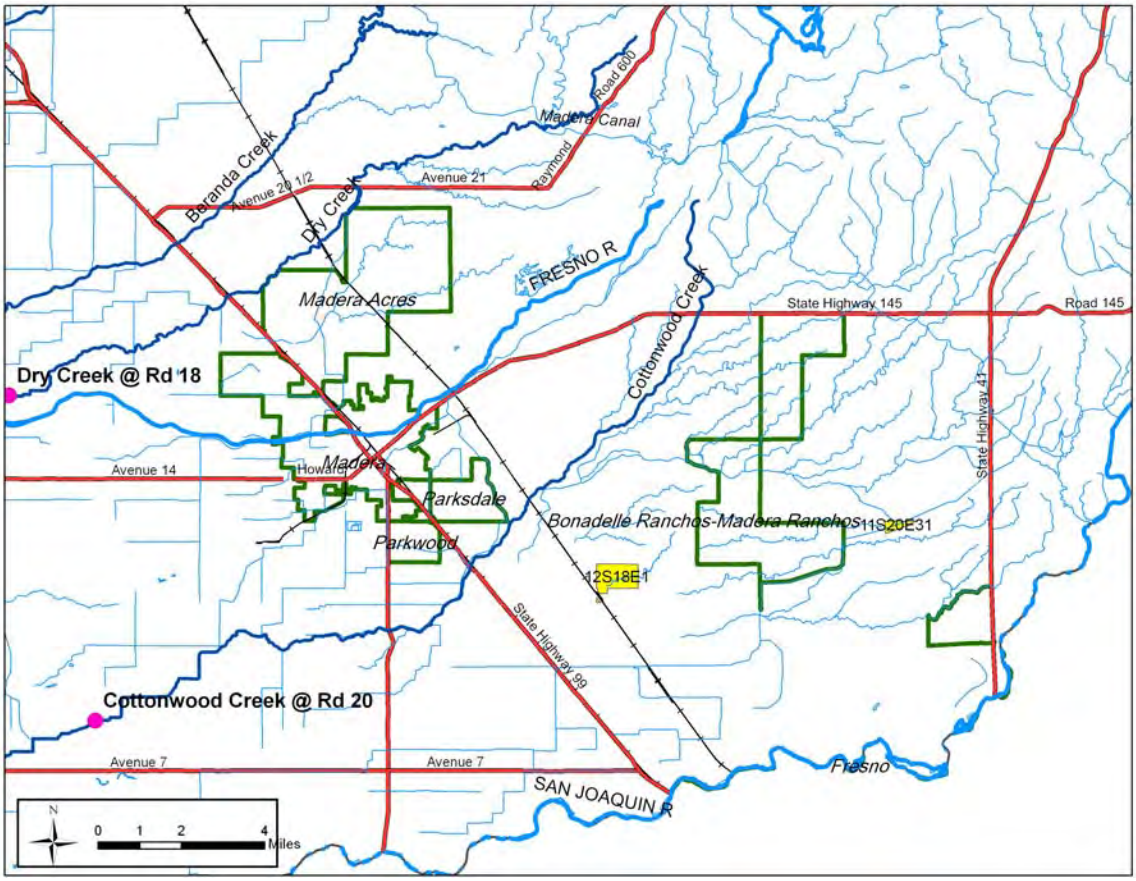
Cottonwood Creek @ Rd 20

Exceedances in chlorpyrifos and diuron were experienced at Cottonwood Creek @ Rd 20. In addition, toxicity to *Pimephales* occurred during the same monitoring event in samples collected from this site. Other exceedance level detections in the sample water that may have contributed to the toxicity include copper (24 µg/L). A Toxicity Identification Evaluation (TIE) was conducted on this sample however the toxicity did not persist through the test. Solid phase extraction (SPE) add-back results indicated that non-polar organic toxicant(s) may be present at sub-toxic concentrations. It is possible that the synergistic effect of diuron, chlorpyrifos, and copper caused the toxicity to *Pimephales*. Resampling for toxicity occurred on January 30, one week after the original sampling event, and *Pimephales* toxicity was not persistent at the site. According to the PUR data for the Cottonwood Creek site subwatershed, there were no applications of chlorpyrifos during the month of January. The last reported application of chlorpyrifos occurred in October of 2007. However, additional PUR data may be obtained in the next two months. If there is updated data regarding chlorpyrifos applications in the site subwatershed than those data will be provided with the June 2008 SAMR. PUR data relevant to the diuron exceedance are provided below. Applications of diuron occurred in December 2007.

Table 2. Agricultural applications of products containing diuron in the Cottonwood Creek @ Rd 20 site subwatershed within two months prior to the January 25, 2008 sampling event.

Commodity	Date Applied	EPA#	Product Name	Active Ingredient	Application Method	Amount Used	Unit	Acres Treated	TRS
ORANGE	12/4/07	352-505-AA	DU PONT KROVAR I DF HERBICIDE	DIURON	G	129	LB	25.8	11S20E31
TANGELO	12/4/07	352-505-AA	DU PONT KROVAR I DF HERBICIDE	DIURON	G	80	LB	16	11S20E31
ORANGE	12/6/07	1812-362-AA	DIREX 80DF	DIURON	G	60	LB	21	11S20E31
ORANGE	12/6/07	1812-362-AA	DIREX 80DF	DIURON	G	120	LB	41	11S20E31
ORANGE	12/6/07	1812-362-AA	DIREX 80DF	DIURON	G	120	LB	40	11S20E31
WALNUT	12/16/07	1812-257-AA	DIREX 4L	DIURON	G	5	GA	10	12S18E1

Figure 1. Map of diuron applications that occurred in the Cottonwood Creek @ Rd 20 site subwatershed within two months prior to the January 25, 2008 sampling event.



Deadman Creek @ Gurr Rd

DDT was detected at exceedance levels for the first time at the Deadman Creek @ Gurr Rd sample site during this monitoring event. DDT is an organochlorine pesticide that was used abundantly in the past, but is not currently registered for agricultural use. Due to the long half-life of the constituent, DDT and its breakdown products, DDD and DDE, are still found in Coalition water bodies. Current agricultural pesticide applications are not the source of these exceedances and PUR data will not be evaluated to follow-up on the detections at Deadman Creek. If additional exceedances in DDT occur at this site, then the exceedances will be addressed through actions stated in the Deadman Creek subwatershed management plan.

Deadman Creek @ Hwy 59

Exceedances of diuron and simazine were detected in sample water collected from the Deadman Creek @ Hwy 59 sample site. Toxicity to *Selenastrum* was also experienced in the sample water and may be attributed to the herbicides detected in the water. The TIE conducted for this sample indicated that a non-polar organic toxicant, such as an herbicide(s), was the likely cause of toxicity. PUR data for applications of diuron and simazine one month before the sampling date are provided below.

Table 3. Agricultural applications of products containing diuron in the Deadman Creek @ Hwy 59 site subwatershed during the month of January, 2008.

Commodity	Application Date	EPA#	Product Name	Active Ingredient	Application Method	Acres Treated	Quantity Used	Unit	TRS
ALFALFA	1/1/2008	1812-257-AA-34704	DIURON 400 HERBICIDE	DIURON	G	66.32	198.96	PT	9S14E16
ALFALFA	1/2/2008	1812-257-AA-34704	DIURON 400 HERBICIDE	DIURON	G	39.73	119.19	PT	9S14E17
ALFALFA	1/9/2008	352-678-AA	4L HERBICIDE	DIURON	G	62.2	15.55	GA	8S15E21
ALFALFA	1/9/2008	352-678-AA	4L HERBICIDE	DIURON	G	35	8.75	GA	8S15E21
ALFALFA	1/9/2008	352-678-AA	4L HERBICIDE	DIURON	G	37.5	9.38	GA	8S15E22
ALFALFA	1/9/2008	352-678-AA	4L HERBICIDE	DIURON	G	28	7	GA	8S15E22
ALFALFA	1/9/2008	352-678-AA	4L HERBICIDE	DIURON	G	75	18.75	GA	8S15E28
ALFALFA	1/16/2008	352-678-AA	4L HERBICIDE	DIURON	G	74	18.5	GA	8S15E14
ALFALFA	1/16/2008	352-692-AA	DUPONT KARMEX XP HERBICIDE	DIURON	G	40.3	60.5	LBS	8S15E28
GRAPE RAISIN	1/16/2008	1812-362-ZD	KARMEX XP	DIURON	G	64.63	113.1	LBS	9S15E3
ALFALFA	1/17/2008	352-692-AA	DUPONT KARMEX	DIURON	G	36.3	54.5	LBS	8S15E29

Figure 2. Map of diuron applications that occurred in the Deadman Creek @ Hwy 59 site subwatershed during the month of January 2008.

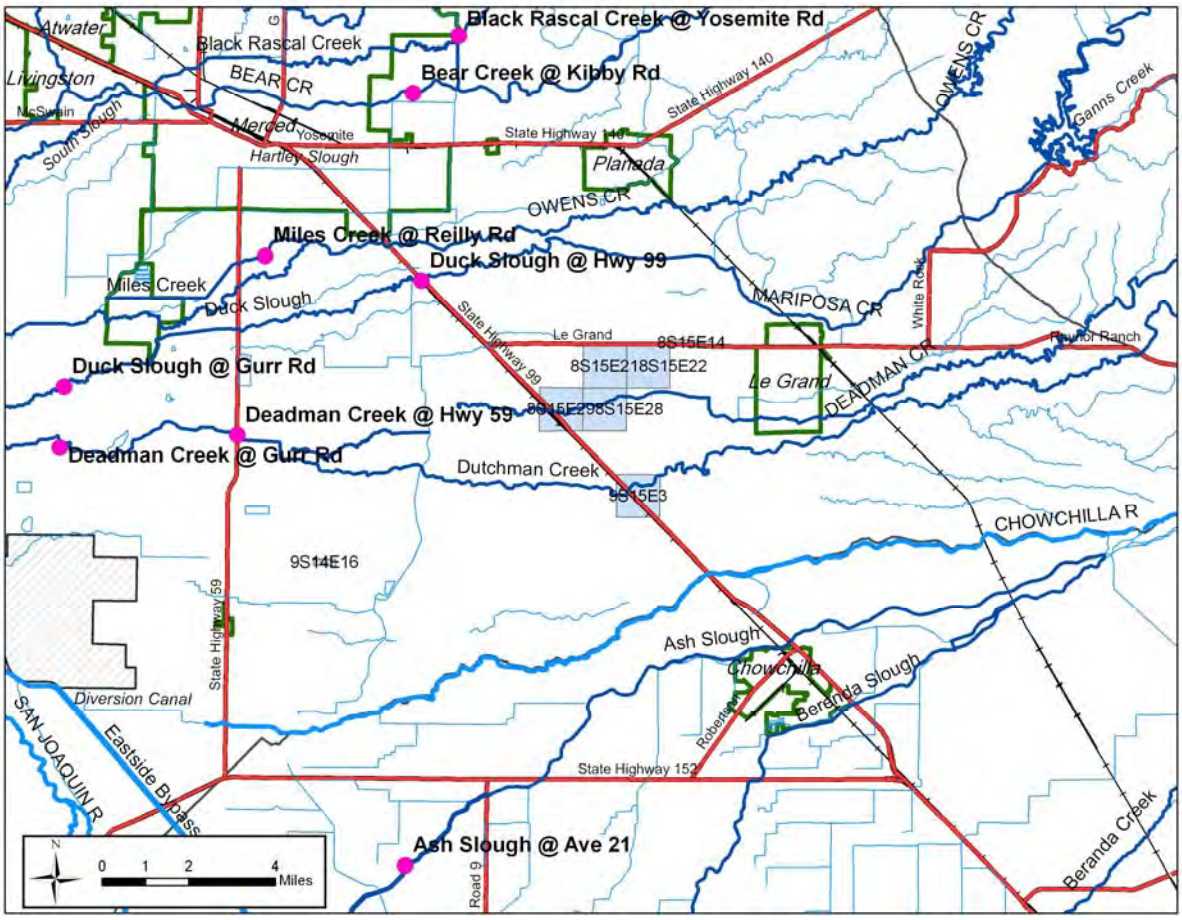
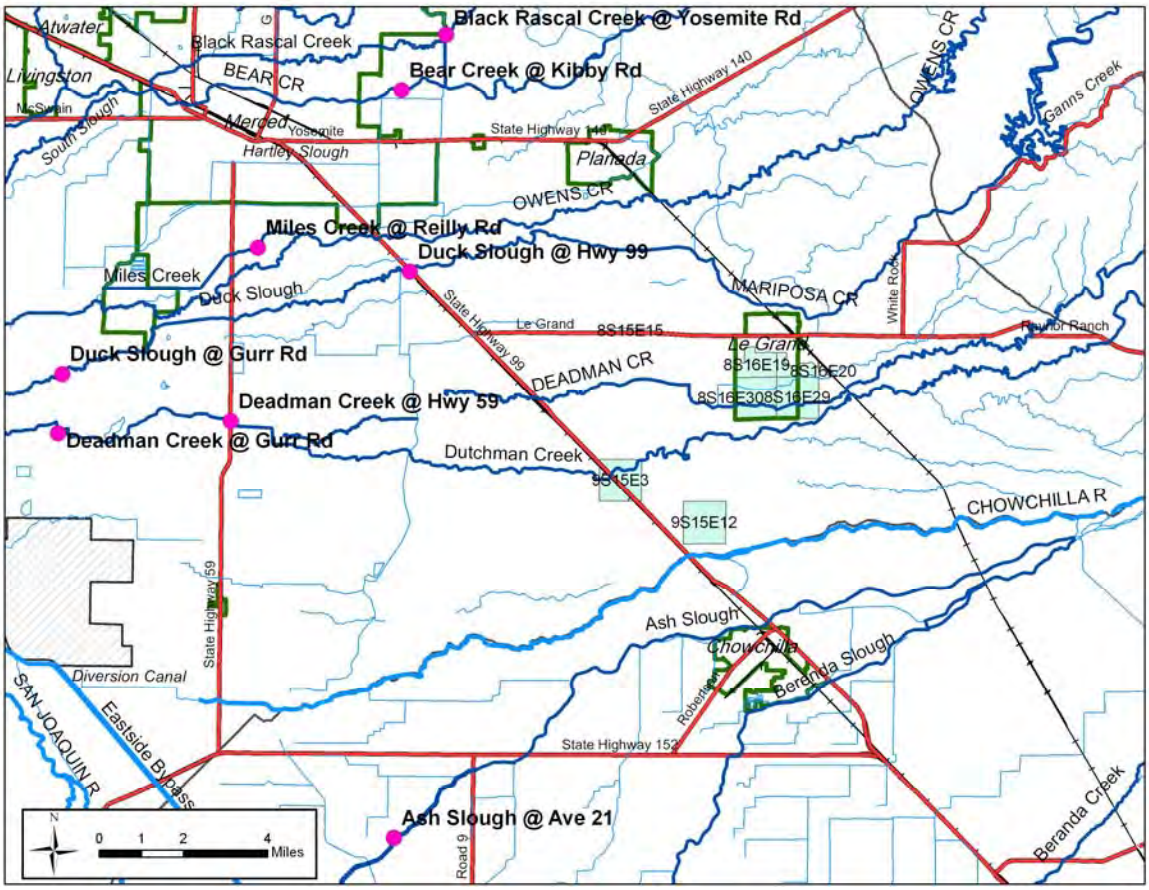


Table 4. Agricultural applications of products containing simazine in the Deadman Creek @ Hwy 59 site subwatershed during the month of January, 2008.

Commodity	Application Date	EPA#	Product Name	Active Ingredient	Application Method	Acres Treated	Quantity Used	Unit	TRS
ALMOND	1/3/2008	100-526-ZD	PRINCEP 4L	SIMAZINE	G	5	145	OZ	8S16E20
ALMOND	1/8/2008	100-526-ZD	PRINCEP 4L	SIMAZINE	G	10	290	OZ	8S16E29
ALMOND	1/11/2008	100-526-ZD	PRINCEP 4L	SIMAZINE	G	10	290	OZ	8S16E29
GRAPE RAISIN	1/16/2008	100-603-ZB	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	64.63	113.1	LBS	9S15E3
ALMOND	1/21/2008	19713-252-AA	SIMAZINE 90DF	SIMAZINE	G	28	28	LBS	8S16E19
ALMOND	1/31/2008	100-603-ZB	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	20	5	LBS	8S15E15
ALMOND	1/31/2008	100-603-ZB	PRINCEP CALIBER 90 HERBICIDE	SIMAZINE	G	22	5.5	LBS	8S15E15
ALMOND	2/8/2008	19713-60-AA	DREXEL SIMAZINE 4L	SIMAZINE	G	31.5	7.87	GA	8S16E30
ALMOND	2/8/2008	19713-60-AA	DREXEL SIMAZINE 4L	SIMAZINE	G	21	5	GA	8S16E30
ALMOND	2/8/2008	19713-60-AA	DREXEL SIMAZINE 4L	SIMAZINE	G	31.5	7.87	GA	8S16E30
ALMOND	2/8/2008	19713-60-AA	DREXEL SIMAZINE 4L	SIMAZINE	G	17.5	4.37	GA	8S16E30
GRAPE WINE	3/20/2008	19713-252-AA	SIMAZINE 90DF	SIMAZINE	G	627.8	380.48	LBS	9S15E12

Figure 3. Map of simazine applications that occurred in the Deadman Creek @ Hwy 59 site subwatershed during the month of January 2008.



Dry Creek @ Rd 18

An exceedance of diuron was detected in samples collected from the Dry Creek @ Rd 18 sample site. Corresponding *Selenastrum* toxicity was experienced in the samples collected from this site. Copper was also detected in the sample water at 20 µg/L which may have contributed to the toxicity. Sample toxicity was lost prior to or during the TIE conducted on this sample; therefore none of the treatments provided any useful information regarding the cause(s) of toxicity detected in the initial toxicity test. PUR data for the Dry Creek @ Rd 18 site subwatershed show the last application of diuron to have occurred in November of 2007. Due to the short half-life of diuron, it is unlikely that an application greater than two months prior to sampling would have caused this exceedance. Additional PUR data may come in during the next two months and if there is updated data regarding diuron applications in the site subwatershed, than those data will be provided with the June 2008 SAMR.

Miles Creek @ Reilly Rd

An exceedance of methidathion was detected in samples collected from the Miles Creek @ Reilly Rd sample site. Toxicity to *Ceriodaphnia* was also experienced in samples collected from this site. Methidathion is an organophosphate pesticide known to be toxic to invertebrates and the detected levels of the chemical in the sample water may have contributed to the water flea toxicity. On the other hand, the TIE conducted in the laboratory showed enhanced toxicity with treatment of piperonyl butoxide (PBO), a result indicative of a pyrethroid insecticide as the source contaminant. It may be the case that a pyrethroid pesticide that is not analyzed for by the Coalition was in the sample water at a more toxic concentration than the methidathion resulting in enhanced toxicity with the PBO treatment. The toxicity exceedance will be further dealt with in the Management Plan for Miles Creek and in the June 2008 SAMR. PUR data for the Miles Creek @ Reilly Rd site subwatershed show no applications of methidathion anytime during the previous year. Additional PUR data may come in over time, and if there is updated data regarding methidathion applications in the site subwatershed, than those data will be provided with the June 2008 SAMR.

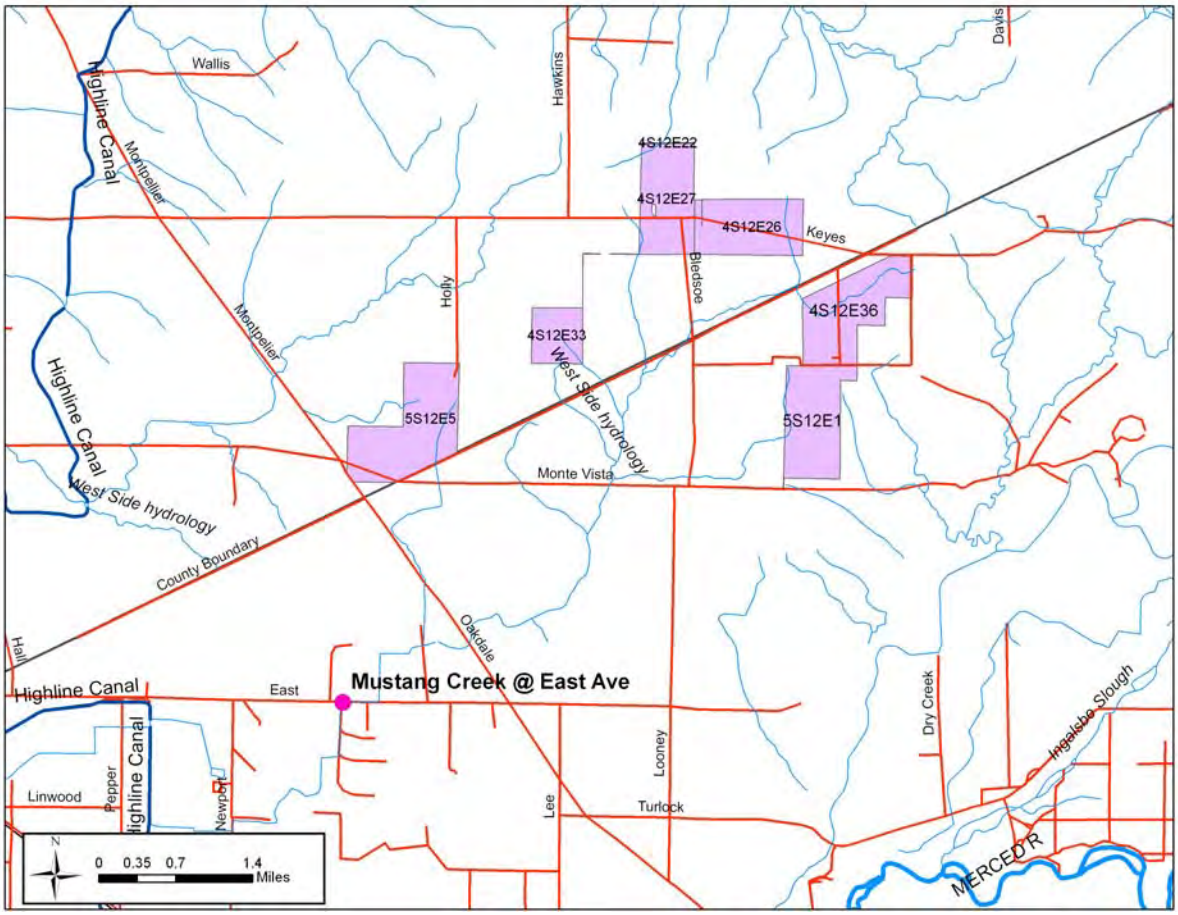
Mustang Creek @ East Ave

Exceedance of chlorpyrifos and simazine were detected in samples collected from the Mustang Creek @ East Ave sample site. Toxicity to *Ceriodaphnia* was also experienced in samples collected from this site. The TIE for this sample resulted in a decrease in survival with the addition of PBO and complete removal of toxicity when run through a column (also recovered in the SPE add-back) indicating that the majority of the toxicity was caused by non-polar organics, such as a pyrethroid pesticide. No pyrethroids were detected in water collected during the same sampling event. It may be the case that a pyrethroid pesticide that is not analyzed for by the Coalition resulted in toxicity. As a result, PUR data for all pesticides that could be relevant to the toxicity exceedance will be provided in the June 2008 SAMR. There were no reported applications of chlorpyrifos in the Mustang Creek site subwatershed during the month of January, 2008. The last application shown in the PUR data is on October 23, 2007. It is unlikely that an application that occurred over three months prior to the date of sampling would have caused the exceedance. However, additional PUR data may come in over time, and if there is updated data regarding chlorpyrifos applications in the site subwatershed, than those data will be provided with the June 2008 SAMR. Simazine was applied within the Mustang Creek site subwatershed on January 25, 2008 and January 18, 2008 within one month of the sampling event. PUR data relevant to the simazine exceedance are provided below in Table 5.

Table 5. Agricultural applications of products containing simazine in the Mustang Creek @ East Ave site subwatershed during the month of January, 2008.

Commodity	Date Applied	EPA#	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Acres Treated	TRS
ALMOND	1/18/2008	35915-11-AA-60063	SIM-TROL 4L	SIMAZINE	G	70	GA	400	4S12E22
ALMOND	1/25/2008	19713-60-AA	DREXEL SIMAZINE 4L	SIMAZINE	G	116.36	PT	160	4S12E26
UNCUL NON-AG	1/29/2008	35915-11-AA-60063	SIM-TROL 4L	SIMAZINE	G	16	PT	10	5S12E5
ALMOND	1/31/2008	19713-60-AA	DREXEL SIMAZINE 4L	SIMAZINE	G	116.36	PT	160	4S12E27
ALMOND	2/4/2008	19713-60-AA	DREXEL SIMAZINE 4L	SIMAZINE	G	109.09	PT	150	4S12E33
ALMOND	2/7/2008	35915-11-AA-60063	SIM-TROL 4L	SIMAZINE	G	22.5	GA	140	4S12E22

Figure 4. Map of simazine applications that occurred in the Mustang Creek @ East Ave site subwatershed during the month of January 2008.



3. Complete analytical results

Analytical results for these exceedances are attached to the transmittal message. These results include all organophosphate, organochlorine and triazine data reports for this monitoring event provided to the Coalition by the analytical laboratory. QC and calibration data are included in the data reports.

4. Time schedule to identify and implement the Management Practice Effectiveness evaluation.

Table 6. Time Schedule.

Action	Anticipated Completion Date
Obtain PURs	Done
Contact Growers in Watersheds	May 30, 2008
Perform Management Practices Survey	May 30, 2008
Outreach/BMP Education	June, 2008
Management Plan	Not yet scheduled

Justification for dates:

Obtain PURs – PUR data for applications that occurred in the site subwatersheds in this report are provided in the form of tables and maps in this report. PUR data tables and maps for all pesticide applications relevant to exceedances will also be provided with the June 30, 2008 Semi-Annual Monitoring Report (SAMR). If additional PUR data, relevant to the exceedances in this report, are received from the county agricultural commissioner's office, than updates will be provided in the SAMR.

Contact growers in the watersheds – The Coalition is currently updating their database of contact information for all Coalition members. Once the update is complete, mailings will go out to all growers containing exceedance notification, information on best management practices (BMPs), and Coalition updates.

Perform management practices survey – BMP surveys have been provided to growers through mailings and at grower meetings. Results from these surveys were compiled and provided with the December 31, 2007 SAMR. For growers that do not currently have a survey on record, a survey will be provided to them along with their notification letter by May 30, 2008.

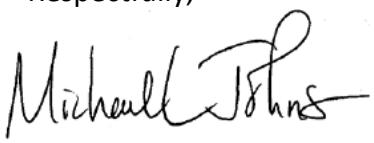
Outreach/ BMP Education – The most recent grower meetings hosted by the Coalition occurred in December 2007. Monitoring results were presented at these meeting which included data from the 2007 irrigation season. Information was provided on

management practices to reduce the potential for runoff of pesticides and sediment. Outreach will occur again to follow up on the storm runoff exceedances. Meetings were initially planned to occur in locations throughout the Coalition this month, however in order to allow enough time to update Coalition member information, meetings have been postponed until June. A schedule of Coalition meeting dates and locations will be provided to growers by mail this month.

Management Plan – An updated Management Plan will be submitted for all subwatersheds that have experienced two or more exceedances in one constituent. A time schedule for these Management Plans has not yet been determined.

Let us know if further explanation or documentation is necessary.

Respectfully,



Michael L. Johnson, Technical Program Manager

Sent: Tuesday, May 13, 2008 at 11:49 AM

From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Metals, Nutrients, Physical Parameters and E. coli Communication Report - Storm1 2008
Attachments: ESJWQC_08_CR_Ecoli_TDS_metals_Storm1_051308_final.doc
ESJWQC_I010962_Storm1_012408_REV.pdf
ESJWQC_I010996_Storm1_012508.pdf

Dear Dania,

Attached is a Communication Report due today for metals, nutrients, physical parameters, and *E. coli* exceedances experienced during the first storm sampling event of 2008. Also attached are the final laboratory reports that are relevant to these exceedances. Please let us know if you have any questions on this report.

Krista

--
Krista Callinan
Environmental Specialist
Michael L. Johnson LLC
1490 Drew Ave, Suite 175
Davis, CA 95618

Tel: 530-756-5200
Fax: 530-756-5225
kcallinan@mlj-llc.com

East San Joaquin Water Quality Coalition
1201 L Street
Modesto, CA 95354
www.esjcoalition.org

May 13, 2008

Dania Huggins
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Dear Dania,

We are submitting the formal communication report for the nutrients, metals, physical parameter and *E. coli* exceedances reported on March 10, 2008 (see Table 1). Only exceedances that occurred for the first time at a sample site are included in this report. Sampling occurred at these sites on January 24 and 25, 2008 for the first storm season monitoring event.

Table 1. Inorganic, metals, physical parameter and *E. coli* exceedances that were experienced for the first time at a sample site during the first storm monitoring event on 1/24 and 1/25/2008

Sample Site	Sample Date	Season	*E. coli*	TDS	Ammonia	Copper*	Lead	Nickel	Nitrate
			235 MPN/100mL	450 mg/L	1.5 mg/L	(based on hardness)	2 ug/L	12 ug/L	10 mg/L
Deadman Creek @ Gurr Rd	1/25/2008	Storm					**3.2**	**18**	
Dry Creek @ Wellsford Rd	1/25/2008	Storm					**2.4**		
Duck Slough @ Gurr Rd	1/25/2008	Storm						**13**	
Hatch Drain @ Tuolumne Rd	1/24/2008	Storm							**24**
Hatch Drain @ Tuolumne Rd (FD)	1/24/2008	Storm							**22**
Highline Canal @ Hwy 99	1/24/2008	Storm		**500**	**3.3**				
Livingston Drain @ Robin Ave	1/24/2008	Storm	**1700**				**2.4**		
Merced River @ Santa Fe	1/24/2008	Storm				**22 (4.4)**			

*The water quality trigger limit for copper is calculated based on hardness and is shown in parentheses next to the indicated exceedance

1. Follow-up monitoring and analyses conducted.

Results were not received from the laboratories until over one month after the next event of sampling occurred, and consequently no immediate follow-up sampling was performed. However, results from the second storm sampling event that occurred on February 25 and 26, were reported on April 14, 2008. Exceedances that occur more than once at a sample site will be addressed through a subwatershed management plan.

2. Actions taken to identify the source of the exceedance.

Copper

Copper in surface water can originate from a number of sources including natural weathering of rocks/soils, leaching of copper-based preservatives (used on wood and other materials) and pesticides. Pesticide Use Reports (PURs) for the Merced River @ Santa Fe site subwatershed have been received and compiled to analyze for the potential sources of copper detected in the sample water. Below in Table 2, PUR data are summarized and include all applications that occurred within three months prior to the sampling event. A map of applications is also provided for the site subwatershed (Figure 1). PUR data relevant to this exceedance may continue to be submitted to the agricultural commissioner's office, and as a result these data are considered preliminary.

Table 2. PUR data for copper applications that occurred in the Merced River @ Santa Fe site subwatershed prior to the first storm season monitoring event on January 24, 2008.

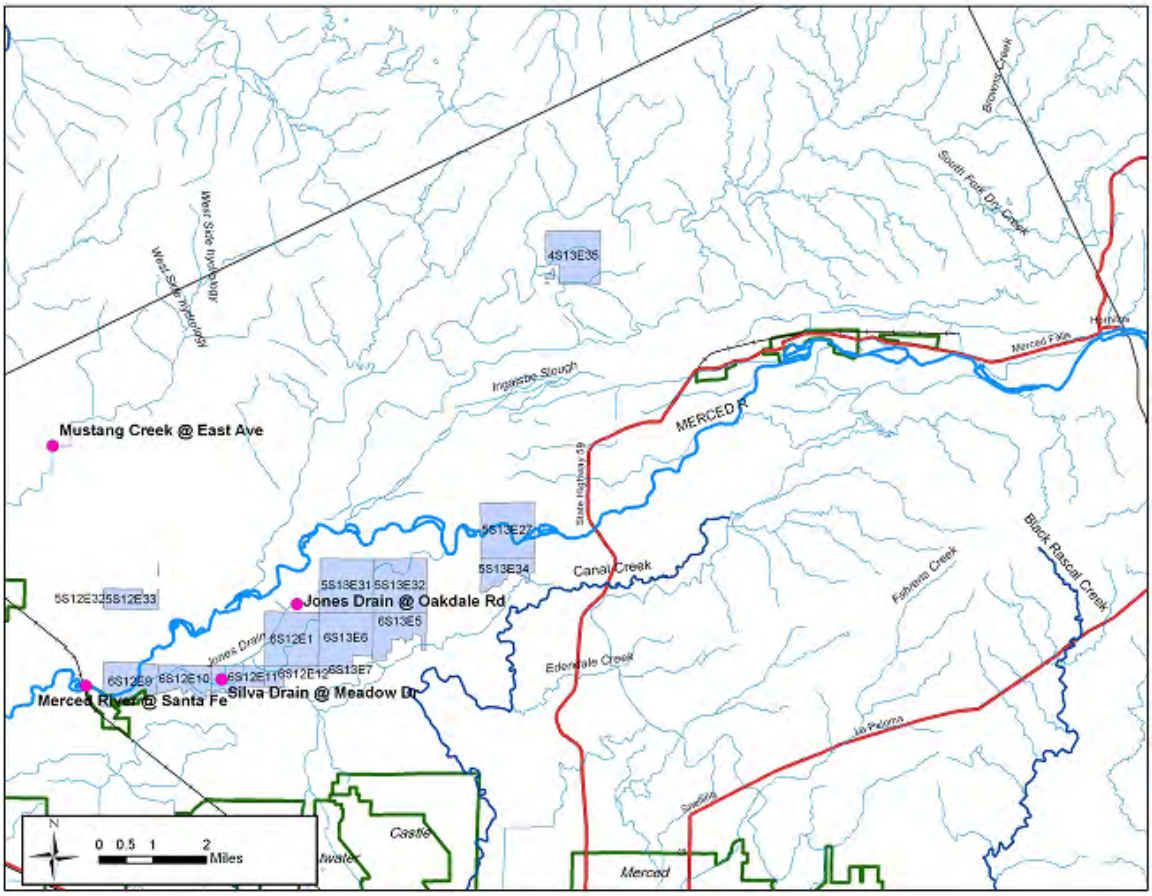
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Amount Used (lbs)	Acres Treated	TRS
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	136	34	6S12E11
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	140	35	6S12E11
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	400	100	6S12E1
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	160	40	6S13E6
ALMOND	11/21/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	200	50	6S12E12
ALMOND	11/26/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	296	74	5S12E33
ALMOND	11/26/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	560	140	5S12E33
PEACH	12/1/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	227.4	15.16	5S13E31
STONE FRUIT	12/3/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	144	18	6S12E10
STONE FRUIT	12/3/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	80	10	6S12E10
STONE FRUIT	12/4/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	28	3.5	6S12E10
STONE FRUIT	12/4/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	224	28	6S12E10
PEAR ASIAN	12/4/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	A	8	2	6S12E10
PEACH	12/5/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	488.1	32.54	5S13E32

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Amount Used (lbs)	Acres Treated	TRS
PEACH	12/5/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	310.2	20.68	5S13E31
PEACH	12/6/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	306.6	20.44	5S13E32
PEACH	12/10/2007	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	410.9	27.39	5S13E32
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	325.2	27.1	6S13E5
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	387.6	32.3	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	315.6	26.3	6S13E5
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	106.8	8.9	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	324	27	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	336	28	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	420	35	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	480	40	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	409.2	34.1	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	340.8	28.4	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	514.8	42.9	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	325.2	27.1	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	324	27	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	226.8	18.9	6S13E6
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	202.8	16.9	6S13E7
PEACH	12/26/2007	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	376.8	31.4	6S13E5
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	204	34	6S12E11
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	600	100	6S12E1
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	840	140	5S12E33
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	444	74	5S12E33
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	252	42	6S12E12
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	210	35	6S12E11
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	474	79	6S13E6

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Amount Used (lbs)	Acres Treated	TRS
ALMOND	1/4/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	300	50	6S12E12
ALMOND	1/10/2008	NU-COP 50DF	COPPER HYDROXIDE	G	4400	550	4S13E35
ALMOND	1/10/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	1450	145	5S12E32
ALMOND	1/11/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	500	100	6S12E1
ALMOND	1/11/2008	DUPONT KOCIDE 2000 FUNGICIDE/BACTERICIDE	COPPER HYDROXIDE	G	170	34	6S12E11
ALMOND	1/11/2008	BASIC COPPER 53	COPPER SULFATE (BASIC)	G	650	65	6S12E1
ALMOND	1/12/2008	DUPONT KOCIDE 3000 FUNGICIDE/BACTERICIDE	copper hydroxide	G	132	33	6S13E7
ALMOND	1/16/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	238	45	5S13E34
ALMOND	1/18/2008	NORDOX 75 WG	COPPER OXIDE (OUS)	G	170	30	5S13E27
ALMOND	1/22/2008	NORDOX	COPPER OXIDE (OUS)	G	133.2	18	6S12E9

G = Ground application
A = Arial application
TRS = Township, range and section

Figure 1. Map of copper applications that occurred in the Merced River @ Santa Fe site subwatershed prior to the first storm season monitoring event on January 24, 2008.



Lead

Lead in surface water can originate from numerous sources including parent geological material, lead-based paint, aerosols including dust, and previous deposition from lead-based gasoline. Currently, there are no pesticides applied that have lead as a material, although lead arsenate was used in the past. Lead arsenate was used generally only until the 1960s and has been banned on all food crops since 1991. Currently, the most probable source is contaminated soils that originated from old pesticide applications or the deposition of automobile exhaust along roadways. Lead currently found in surface waters is a legacy of the use in the past and will be very difficult to trace to a source or manage.

Nickel

Nickel may be found in slate, sandstone, clay minerals and basalt. The main nickel source is pentlandite (iron nickel sulfide) found in igneous rock intrusions. The element accumulates in sediments and is a part of various biological cycles. Some phosphate fertilizers contain trace element of nickel and can be applied to agriculture. Nickel also can be present in agricultural soils situated near fossil fuel industries. Organic matter often adsorbs nickel, causing coal and oil to contain traces of the element. Nickel may end up in water from both point and non-point sources. Diffuse nickel emissions may stem from power plants, waste incinerators and metal industries. Nickel is directly emitted from various industries through discharge on surface waters. It is applied in alloys for treatment of heavy metal polluted surface water, in nickel-cadmium batteries, as a catalyzer and as a pigment. Nickel tetra carbonyl is a by-product of nickel cleansing and is applied in various production processes. Nickel compounds may also be found in sludge, and in slags and fly ashes from waste incinerators. (source: http://www.lenntech.com/elements-and-water/nickel-and-water.htm)

In the Duck Slough subwatershed, detections of nickel at levels above the current water quality trigger limit (WQTL) have occurred during the storm runoff seasons (two years of data for nickel analysis). There have been no previous exceedances reported for nickel at the Duck Slough site because previous WQTLs were elevated relative to the current value. If current WQTLs were applied to past monitoring events, exceedance level detections occurred at both of the Duck Slough monitoring sites in the past. During the current sampling event nickel was detected in samples collected from the upstream (Duck Slough @ Hwy 99, 5.9 µg/L) and downstream (Duck Slough @ Gurr Rd, 13 µg/L) sites but not above the current WQTL at the upstream site. A closer look at the landscape of the upstream subwatershed revealed a sizeable gravel extraction facility within close proximity to the water body (www.maps.google.com). It is difficult to determine the type of operations that occur at this facility and whether discharge is released into the slough, however it may be the case that trace minerals are being released from the extraction and/or rinsing processes occurring at the site. Further investigations may be implemented in order to better understand the possible source(s) of nickel in the Duck Slough subwatershed. An exceedance of nickel occurred again at the Duck Slough @ Gurr Rd sample site during the second storm season event and

therefore this exceedance will be dealt with more extensively for this site subwatershed in the ESJWQC Management Plan.

An exceedance of nickel also occurred at the Deadman Creek @ Gurr Rd sample site during the first 2008 storm monitoring event. A detection of nickel occurred above the current WQTL during the first 2007 storm season event, however the detection was not considered an exceedance for nickel at that time. During the first 2008 storm monitoring event, nickel was detected at both the upstream (Deadman Creek @ Hwy 59, 12 µg/L) and downstream (Deadman Creek @ Gurr Rd, 18 µg/L) sites, but not above the current WQTL at the upstream site (WQTL = 12 µg/L). Exceedances of nickel have only occurred during storm season events indicating that the source of the exceedances are likely unrelated to fertilizer or pesticide applications that occur during the irrigation season. Other sources of nickel that may have contributed to the exceedances are described above and further investigations may be implemented in order to better understand the possible source(s) of nickel in the Deadman Creek subwatershed. Due to the recently updated WQTL of 12 µg/L, Deadman Creek @ Gurr Rd nickel exceedances will be addressed in the ESJWQC Management Plan. Actions to address nickel sources will be described further in the Management Plan.

Nitrate

High levels of nitrate and nitrite in the Sacramento and San Joaquin Counties are not uncommon. Potential sources of nitrates in surface waters include runoff of fertilizers or organic matter from irrigated pasture, leaking septic systems, waste-treatment facility effluent, and inputs from dairies. These sources can move to surface waters through above ground runoff or shallow subsurface flows.

There are no wastewater treatment plants upstream of the Hatch Drain sample site and the application of fertilizer is unlikely to occur during the storm season. On the other hand, animal waste can enter surface waters during a storm runoff event and can be converted to nitrate by nitrifying bacteria. There are a number of possible sources of animal waste in the site subwatershed including dairies, chicken lots and/or wildlife. There is a dairy located upstream of the Hatch Drain sample site and storm runoff from this dairy could be the source of nitrate in the drain. The Coalition will not be able to determine with certainty which particular source is responsible for this exceedance, however, if additional exceedances occur at this site, actions may be taken to address the issue through the subwatershed management plan.

E. coli

E. coli is a general indicator of fecal contamination and multiple sources may contribute to the coliform load. Potential sources include deposition from irrigated pasture, dairies, leaky sewer lines, leaky septic systems, application of manure, biosolids and liquid dairy waste, and a large array of wildlife.

A follow-up study identifying the source of *E. coli* in Coalition water bodies was conducted by the Coalition during the irrigation season of 2006. Obligately anaerobic bacteria from the genus *Bacteroides* were extracted from the water and DNA assigned to potential source species. Results from the study indicate that the source of the fecal contamination is a combination of human and bovine depending on the location. A final report on these results has been submitted. Sampling at the Livingston Drain was not conducted during the Coalition study so it is unknown if contamination at the site is a result of human or bovine sources. Pending additional studies to be performed, the source of the *E. coli* is unknown.

TDS

Potential sources of total dissolved solids (TDS) during a storm runoff event are upstream surface water, ground water intrusion, or drain water from storm runoff. Electrical conductivity (EC) and TDS are both measurements of the amount of dissolved salts or salinity in the water and it is common that exceedances in these two parameters are correlated. However, measured EC at the Highline Canal sample site fell below the water WQTL. The Coalition recognizes that the Salinity Total Maximum Daily Load (TMDL) is in the process of implementation and will actively participate in the Salinity TMDL program.

Ammonia

Ammonia can enter a water body through two sources, direct discharge from agricultural fertilizers or animal waste. During the dormant season fertilizers are not typically applied by agriculture. Furthermore, ammonia in fertilizer is typically converted to nitrite and then nitrate in soils over a short period of time and discharge of fertilizer would have to be immediate to detect ammonia in the receiving water body. It is likely that the ammonia detected in the Highline Canal is the result of storm runoff of animal waste from the upstream subwatershed. Within the site subwatershed a chicken farm lies in close proximity to Highline Canal and there are numerous dairies upstream. Both the chicken farm and the dairies may have contributed to the exceedance of ammonia at this site. If a second exceedance occurs, further investigations to determine the source may be implemented.

3. Complete analytical results

Analytical results are appended electronically to the transmittal message. These results include all data reports provided to the Coalition by the analytical laboratory. QC data are included in the data reports.

4. Time schedule to identify and implement the Management Practice Effectiveness evaluation.

Table 3. Deliverables time schedule

Action	Anticipated Completion Date
Obtain PURs	Complete
Contact Growers in Watersheds	May 30, 2008
Perform Management Practices Survey	May 30, 2008
Outreach/BMP Education	June, 2008
Management Plan	Not yet scheduled

Justification for dates:

Obtain PURs – PUR data relevant to exceedances are provided in the form of tables and maps in the body of this report. PUR data tables and maps for all pesticide (including copper) applications relevant to exceedances will also be provided with the June 30, 2008 Semi-Annual Monitoring Report (SAMR). If additional PUR data, relevant to the exceedances in this report, are received from the county agricultural commissioner's office, than updates will be provided in the SAMR.

Contact growers in the watersheds – The Coalition is currently updating their database of contact information for all Coalition members. Once the update is complete, mailings will go out to all growers containing exceedance notification, information on best management practices (BMPs), and Coalition updates.

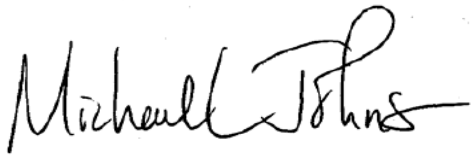
Perform management practices survey – BMP surveys have been provided to growers through mailings and at grower meetings. Results from these surveys were compiled and provided with the December 31, 2007 SAMR. For growers that do not currently have a survey on record, a survey will be provided to them along with their notification letter by May 30, 2008.

Outreach/ BMP Education – The most recent grower meetings hosted by the Coalition occurred in December, 2007. Monitoring results were presented from the 2007 irrigation season, and information was provided on management practices to reduce the potential for runoff of pesticides and sediment. Outreach will occur again to follow up on the storm runoff exceedances. Meetings were initially planned to occur in locations throughout the Coalition this month, however in order to allow enough time to update Coalition member information, meetings have been postponed until June. A schedule of Coalition meeting dates and locations will be provided to growers by mail this month.

Management Plan – An updated Management Plan will be submitted for all subwatersheds that have experienced two or more exceedances in one constituent. A time schedule for these Management Plans has not yet been determined.

Let us know if further explanation or documentation is necessary.

Respectfully,



Michael L. Johnson, Technical Program Manager

Sent: Monday, June 2, 2008 at 11:25 AM

From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov>
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Sediment Toxicity Communication Report - Storm 2008
Attachments: ESJWQC_07_CR_Toxicity_Sediment_Storm2_060208_final.doc
ESJWQC_Sediment_Rpt.pdf

Dear Dania,

Attached is the Communication Report due today for sediment toxicity exceedances that occurred for the first time during storm moniting on March 4, 2008. The final laboratory report relevant to these exceedances is also attached. The raw data for the sediment analyses can be found on the MLJ-LLC Sharepoint and will be provided with the June 30, 2008 SAMR. Go to http://sharepoint.mlj-llc.com/mlj-db/database/forms/allitems.aspx. User Name: ftpuser, Password: Aqua2007! All laboratory reports are provided in the Regional Board Documents folder, under "08 June SAMR - ESJWQC."

Krista

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Krista Callinan
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East San Joaquin Water Quality Coalition
1201 L Street
Modesto, CA 95354
www.esjcoalition.org

June 2, 2008

Dania Huggins
Irrigated Lands Conditional Waiver Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Dear Dania,

We are submitting the formal Communication Report for the sediment toxicity exceedances reported on March 27, 2008 that occurred in water samples collected from ESJWQC sample sites on March 4, 2008 (see Table 1 below). Only sediment toxicity exceedances that occurred for the first time at a sample site are included in this report. The toxicity observed at Cottonwood Creek is not substantial. In fact, if this sample were treated as a control, it would pass the test acceptability criterion for survival. The Dry Creek @ Wellsford Rd sample was slightly more toxic, but would not be considered biologically meaningful using US EPA guidelines. The Mustang Creek @ East Ave site did exhibit statistically and biologically significant toxicity.

Table 1. Sediment toxicity to *Hyalella azteca* for the ESJWQC 2008 storm season sampling conducted on March 4, 2008.

Site Name	Sample Date	Season	*Hyalella azteca* (% survival relative to control)
Cottonwood Creek @ Rd 20	3/4/2008	Storm	96
Dry Creek @ Wellsford Rd	3/4/2008	Storm	88
Mustang Creek @ East Ave	3/4/2008	Storm	78

1. Follow-up monitoring and analyses conducted.
Follow-up sampling for these exceedances was conducted on March 28, 2008. There was no toxicity experienced in the resamples collected from the Cottonwood Creek, Dry

Creek or Mustang Creek sample sites, indicating that the sediment toxicity at those sites was not persistent.

2. Actions taken to identify the source of the exceedance.

Various exceedance level detections of metals and pesticides were apparent in water samples collected one week prior to the sediment sampling event at the sites listed in Table 1. These detections are helpful in determining possible sources of toxicity, but cannot be directly correlated to sediment toxicity both because the timing of water and sediment sampling are different and the natures of the test matrices (and the types of constituents that they retain) are different as well. Constituents found in the water column of a stream may not also reside in the sediment nor will all constituents in the substrate necessarily be detected in the water column. As a result, constituents found in the water column can be used only as indications of what may be causing toxicity in the sediment, but cannot be directly attributed as a source of toxicity. Further discussion on each of the sites that experienced sediment toxicity for the first time during this event, and possible sources of the toxicity are provided below.

Cottonwood Creek @ Rd 20

Ambient water samples collected one week prior to sediment sampling revealed exceedance level detections of copper (21 µg/L), lead (1.9 µg/L), chlorpyrifos (0.036 µg/L), diazinon (0.24 µg/L), diuron (65 µg/L) and simazine (5.1 µg/L). Of these, chlorpyrifos is capable of binding to sediment and may have contributed to the *Hyalella* toxicity experienced in the sediment, though at the level detected is unlikely to be the sole source of toxicity. Copper could also contribute to the toxicity but the current analysis is for total metals and includes both sediment bound and dissolved compounds. Consequently it is unclear how much of the copper would be deposited in the sediment. Current Pesticide Use Report (PUR) data from the Cottonwood Creek site subwatershed are provided below (Table 2, Figure 1). Only applications of pesticides with a high soil organic carbon partitioning coefficient (K_{oc}) that are relevant to *Hyalella* toxicity are shown. There were no applications of chlorpyrifos in the site subwatershed, however applications of numerous pyrethroid pesticides occurred within one month prior to the sample collection date. The most common products used within this time period include glyphosate, oxyflourfen and esfenvalerate. Applications that occurred within six months prior to sampling are shown in Table 2.

Table 2. PUR data for pesticide applications relevant to *H. azteca* toxicity that occurred in the Cottonwood Creek @ Rd 20 site subwatershed prior to the storm sediment monitoring event on March 4, 2008.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	5.16	GA	55	11S19E6	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	5.91	GA	63	11S19E5	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	6.19	GA	66	11S19E6	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	7.31	GA	78	11S19E6	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	7.31	GA	78	11S19E5	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	7.41	GA	79	11S19E6	100000
PISTACHIO	9/5/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	7.59	GA	81	11S19E6	100000
PISTACHIO	9/15/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	6.88	GA	55	11S19E6	100000
PISTACHIO	9/15/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	9.75	GA	78	11S19E6	100000
PISTACHIO	9/15/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	9.75	GA	78	11S19E5	100000
PISTACHIO	9/15/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	14	GA	112	11S18E2	100000
PISTACHIO	9/17/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	8.25	GA	66	11S19E6	100000
PISTACHIO	9/17/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	20.5	GA	164	11S18E13	100000
PISTACHIO	9/17/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	29.75	GA	238	11S18E13	100000
PISTACHIO	9/17/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	39.5	GA	316	11S18E14	100000
PISTACHIO	9/17/07	PERM-UP 3.2 EC INSECTICIDE	PERMETHRIN	A	39.75	GA	318	11S18E11	100000
ALMOND	1/10/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	360	OZ	36	12S17E1	5300
ALMOND	1/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1100	OZ	110	12S16E12	5300
NECTARINE	1/12/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.13	GA	30.36	12S17E23	5300
ALMOND	1/12/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1280	OZ	160	12S16E25	5300
ALMOND	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3.25	GA	40	12S17E3	5300
ALMOND	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3.25	GA	40	12S17E2	5300
NECTARINE	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.52	GA	35.86	12S17E23	5300

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.58	GA	36.69	12S17E23	5300
PEACH	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.59	GA	36.77	12S17E23	5300
PEACH	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.74	GA	39.03	12S17E23	5300
ALMOND	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	170	OZ	17	12S18E3	5300
ALMOND	1/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	330	OZ	33	12S18E3	5300
ALMOND	1/16/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	460	OZ	57.5	12S17E9	5300
ALMOND	1/16/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	628	OZ	78.5	12S17E8	5300
ALMOND	1/16/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1920	OZ	156.97	12S17E28	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.25	GA	17	12S18E3	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.44	GA	33	12S18E3	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	160	OZ	20	12S17E13	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	264	OZ	33	12S17E24	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	300	OZ	37.5	12S17E7	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	640	OZ	80	12S16E12	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	640	OZ	80	12S17E7	5300
ALMOND	1/20/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	750	OZ	75	12S17E8	5300
ALMOND	1/20/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1200	OZ	120	12S17E8	5300
ALMOND	1/21/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	325.8	OZ	65.16	12S18E18	5300
ALMOND	1/21/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	979.2	OZ	97.92	12S18E18	5300
ALMOND	1/22/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	460	OZ	57.5	12S17E9	5300
ALMOND	1/22/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	628	OZ	78.5	12S17E8	5300
PEACH	1/30/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	0.3	GA	4	11S18E31	5300
PEACH	1/30/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	0.77	GA	10.5	11S18E31	5300
ALMOND	1/31/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	8.45	GA	108	12S18E10	5300
ALMOND	1/31/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	16	GA	190	12S18E15	5300
PLUM	2/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1.11	GA	15	12S17E11	5300

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PEACH	2/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.14	GA	29	12S17E12	5300
PEACH	2/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.4	GA	32.5	12S17E12	5300
PEACH	2/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.88	GA	39	12S17E12	5300
ALMOND	2/2/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2.66	GA	36	12S17E4	5300
ALMOND	2/4/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	97.92	PT	32.64	12S18E18	24000
GRAPE, RAISIN	2/4/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	GA	13	12S17E21	24000
GRAPE, RAISIN	2/4/2008	GOAL 2XL	OXYFLUORFEN	G	13	GA	13	12S17E21	100000
ALMOND	2/4/2008	GOAL 2XL	OXYFLUORFEN	G	32.64	QT	32.64	12S18E18	100000
WINE GRAPES	2/4/2008	GOAL 2XL	OXYFLUORFEN	G	39.99	PT	26.66	12S18E22	100000
WINE GRAPES	2/4/2008	GOAL 2XL	OXYFLUORFEN	G	112.5	PT	75	12S18E22	100000
PISTACHIO	2/5/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6.87	GA	18.33	12S19E2	24000
PISTACHIO	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	6.87	GA	18.33	12S19E2	100000
ALMOND	2/6/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	65.16	PT	21.72	12S18E18	24000
GRAPE, RAISIN	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3070	OZ	153.5	12S17E7	24000
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	21.72	PT	21.72	12S18E18	100000
GRAPE, RAISIN	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	4912	OZ	153.5	12S17E7	100000
ALMOND	2/6/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	65.16	QT	21.72	12S18E18	5000
PEACH	2/7/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	0.3	GA	4	12S18E9	5300
ALMOND	2/7/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2	GA	36	12S18E8	5300
ALMOND	2/7/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	3.54	GA	40	12S18E10	5300
CHERRY	2/7/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.2	GA	11	12S18E18	24000
GRAPE, RAISIN	2/7/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	17.2	PT	17.2	11S17E35	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WINE GRAPES	2/7/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	17.2	PT	17.2	11S17E35	24000
PISTACHIO	2/7/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1.87	GA	5	12S19E2	24000
PISTACHIO	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	1.87	GA	5	12S19E2	100000
CHERRY	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	7.92	GA	11	12S18E18	100000
GRAPE, RAISIN	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	11.47	QT	17.2	11S17E35	100000
WINE GRAPES	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	11.47	QT	17.2	11S17E35	100000
ALMOND	2/8/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	0.62	GA	7	12S18E9	5300
POMEGRANATE	2/8/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	18	PT	6	12S17E13	24000
PRUNE	2/8/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	168	PT	56	12S16E12	24000
PISTACHIO	2/8/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	7.5	GA	20	12S19E2	24000
WINE GRAPES	2/8/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	26.66	QT	13.33	12S18E21	24000
PISTACHIO	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	7.5	GA	20	12S19E2	100000
POMEGRANATE	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	18	QT	6	12S17E13	100000
WINE GRAPES	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	39.99	QT	13.33	12S18E21	100000
PRUNE	2/8/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	168	QT	56	12S16E12	5000
WHEAT FOR/FOD	2/9/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	G	400	OZ	25	12S17E3	10000
WHEAT FOR/FOD	2/9/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	G	480	OZ	30	12S17E3	10000
WINE GRAPES	2/9/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.78	GA	9.5	12S17E19	24000
WINE GRAPES	2/9/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.88	GA	10	12S17E19	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
WINE GRAPES	2/9/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	6.67	PT	5	12S18E17	24000
WINE GRAPES	2/9/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	13.33	PT	10	12S18E17	24000
GRAPE, RAISIN	2/9/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	77.33	PT	58	12S18E17	24000
PISTACHIO	2/9/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	8.94	GA	23.83	12S19E3	24000
WINE GRAPES	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	1.19	GA	9.5	12S17E19	100000
WINE GRAPES	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	1.25	GA	10	12S17E19	100000
GRAPE, RAISIN	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	5.1	QT	1.7	12S17E10	100000
PISTACHIO	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	8.94	GA	23.83	12S19E3	100000
GRAPE, RAISIN	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	11.25	QT	3.74	12S17E10	100000
WINE GRAPES	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	20	OZ	5	12S18E17	100000
WINE GRAPES	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	40	OZ	10	12S18E17	100000
GRAPE, RAISIN	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	232	OZ	58	12S18E17	100000
GRAPE, RAISIN	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5.1	QT	1.7	12S17E10	5000
GRAPE, RAISIN	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	11.25	QT	3.74	12S17E10	5000
GRAPE, RAISIN	2/10/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	3.5	GA	30	12S17E4	24000
PRUNE	2/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	120	OZ	15	12S17E24	5300
PRUNE	2/11/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	224	OZ	28	12S17E24	5300
GRAPE, RAISIN	2/11/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.5	GA	40	12S18E8	24000
GRAPE, RAISIN	2/11/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	8.5	GA	34	12S17E4	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
PISTACHIO	2/11/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6.01	GA	16.04	12S19E2	24000
GRAPE, RAISIN	2/11/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1792	OZ	56	12S18E3	24000
GRAPE, RAISIN	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	1.5	GA	40	12S18E8	100000
PISTACHIO	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	6.01	GA	16.04	12S19E2	100000
GRAPE, RAISIN	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	8.5	GA	34	12S17E4	100000
WINE GRAPES	2/12/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.41	GA	7.5	12S17E19	24000
GRAPE, RAISIN	2/12/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	GA	20	12S18E3	24000
ALMOND	2/12/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	112.5	PT	75	12S17E8	24000
ALMOND	2/12/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	180	PT	120	12S17E8	24000
WINE GRAPES	2/12/2008	GOAL 2XL	OXYFLUORFEN	G	0.94	GA	7.5	12S17E19	100000
GRAPE, RAISIN	2/12/2008	GOAL 2XL	OXYFLUORFEN	G	4	QT	12	12S18E9	100000
GRAPE, RAISIN	2/12/2008	GOAL 2XL	OXYFLUORFEN	G	5	GA	20	12S18E3	100000
WINE GRAPES	2/13/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	24	QT	24	12S18E20	24000
WINE GRAPES	2/13/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1540	OZ	40	12S17E4	24000
GRAPE, RAISIN	2/13/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4	GA	16	12S18E16	24000
ALMOND	2/13/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	43.64	PT	40	12S17E16	24000
ALMOND	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	7	OZ	18	12S18E8	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	2.5	GA	18	12S18E8	100000
GRAPE, RAISIN	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	4	GA	16	12S18E16	100000
WINE GRAPES	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	24	PT	24	12S18E20	100000
WINE GRAPES	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	40	GA	40	12S17E4	100000
ALMOND	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	2.5	GA	18	12S18E8	5000
GRAPE, RAISIN	2/14/2008	ALECTO 41S	GLYPHOSATE	G	30	QT	20	11S17E35	24000
WINE GRAPES	2/14/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	24	QT	24	11S18E20	24000
WINE GRAPES	2/14/2008	HONCHO HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3080	OZ	80	12S17E4	24000
ALMOND	2/14/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	132	PT	44	12S16E12	24000
WINE GRAPES	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	24	PT	24	11S18E20	100000
WINE GRAPES	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	80	OZ	80	12S17E4	100000
ALMOND	2/14/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	88	QT	44	12S16E12	5000
CHERRY	2/15/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	0.74	GA	10	12S17E11	5300
GRAPE, RAISIN	2/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1	QT	1	11S18E30	24000
GRAPE, RAISIN	2/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3	QT	3	11S18E29	24000
GRAPE, RAISIN	2/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3	QT	3	11S18E20	24000
GRAPE, RAISIN	2/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7	QT	7	11S18E19	24000
ALMOND	2/15/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE	G	27.64	GA	76	11S19E32	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
			SALT						
WINE GRAPES	2/15/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2387	OZ	62	12S17E3	24000
WINE GRAPES	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	290	OZ	14.5	11S18E31	24000
WINE GRAPES	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	320	OZ	16	11S18E31	24000
WINE GRAPES	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	540	OZ	27	11S18E31	24000
GRAPE, RAISIN	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1792	OZ	56	12S18E3	24000
GRAPE, RAISIN	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	1	PT	1	11S18E30	100000
GRAPE, RAISIN	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	3	PT	3	11S18E29	100000
GRAPE, RAISIN	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	3	PT	3	11S18E20	100000
GRAPE, RAISIN	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	7	PT	7	11S18E19	100000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	221.09	OZ	76	11S19E32	100000
WINE GRAPES	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	464	OZ	14.5	11S18E31	100000
WINE GRAPES	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	512	OZ	16	11S18E31	100000
WINE GRAPES	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	864	OZ	27	11S18E31	100000
WINE GRAPES	2/15/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	3968	OZ	62	12S17E3	100000
ORANGE	2/16/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.37	GA	3.64	11S18E3	24000
GRAPE, RAISIN	2/16/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4.17	GA	13.33	12S18E9	24000
GRAPE	2/16/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	9	QT	9	11S18E20	24000
WINE GRAPES	2/16/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE	G	1155	OZ	30	12S17E4	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
			SALT						
WINE GRAPES	2/16/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2117.5	OZ	60	12S17E4	24000
GRAPE	2/16/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	148	OZ	7	12S17E20	24000
GRAPE	2/16/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1000	OZ	47.5	12S17E20	24000
GRAPE, RAISIN	2/16/2008	ALECTO HL	GLYPHOSATE, ISOPROPYLAMINE SALT	G	640	OZ	15.27	12S17E22	24000
WINE GRAPES	2/16/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2.5	GA	6	12S17E28	24000
WINE GRAPES	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	2.5	GA	6	12S17E28	100000
GRAPE	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	10	GA	80	12S17E24	100000
PISTACHIO	2/16/2008	GOAL 1.6E HERBICIDE	OXYFLUORFEN	G	13.5	QT	4.5	11S19E31	100000
WINE GRAPES	2/16/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1920	OZ	30	12S17E4	100000
WINE GRAPES	2/16/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	3520	OZ	60	12S17E4	100000
GRAPE	2/16/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	10	GA	80	12S17E24	1000000
WINE GRAPES	2/17/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	24	QT	24	12S18E10	24000
GRAPE, RAISIN	2/17/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	39	PT	13	12S17E14	24000
GRAPE, RAISIN	2/17/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	147	PT	49	12S17E11	24000
GRAPE, RAISIN	2/18/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	35	QT	35	11S18E32	24000
WINE GRAPES	2/18/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE	G	693	OZ	18	12S17E4	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
			SALT						
WINE GRAPES	2/18/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20	QT	10	12S17E15	24000
GRAPE, RAISIN	2/18/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	20	PT	20	12S17E15	24000
WINE GRAPES	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	10	QT	10	12S17E15	100000
PISTACHIO	2/18/2008	GOAL 1.6E HERBICIDE	OXYFLUORFEN	G	13.5	QT	4.5	11S19E31	100000
WINE GRAPES	2/18/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1152	OZ	18	12S17E4	100000
PEACH	2/19/2008	VANGARD WG	CYPRODINIL	G	183.85	OZ	36.77	12S17E23	2030
WINE GRAPES	2/19/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4620	OZ	140	12S17E3	24000
WINE GRAPES	2/19/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	70	PT	70	12S17E16	24000
WINE GRAPES	2/19/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	95	PT	95	12S17E1	24000
PRUNE	2/19/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	18	PT	6	12S17E24	24000
WINE GRAPES	2/19/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	99	PT	33	12S17E13	24000
WINE GRAPES	2/19/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	204	PT	68	12S17E24	24000
PRUNE	2/19/2008	GOAL 2XL	OXYFLUORFEN	G	18	PT	6	12S17E24	100000
WINE GRAPES	2/19/2008	GOAL 2XL	OXYFLUORFEN	G	7680	OZ	140	12S17E3	100000
WINE GRAPES	2/20/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	93.32	QT	46.66	12S19E5	24000
WINE GRAPES	2/21/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	962.5	OZ	25	12S17E4	24000
WINE GRAPES	2/21/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE	G	1925	OZ	76	12S17E5	24000

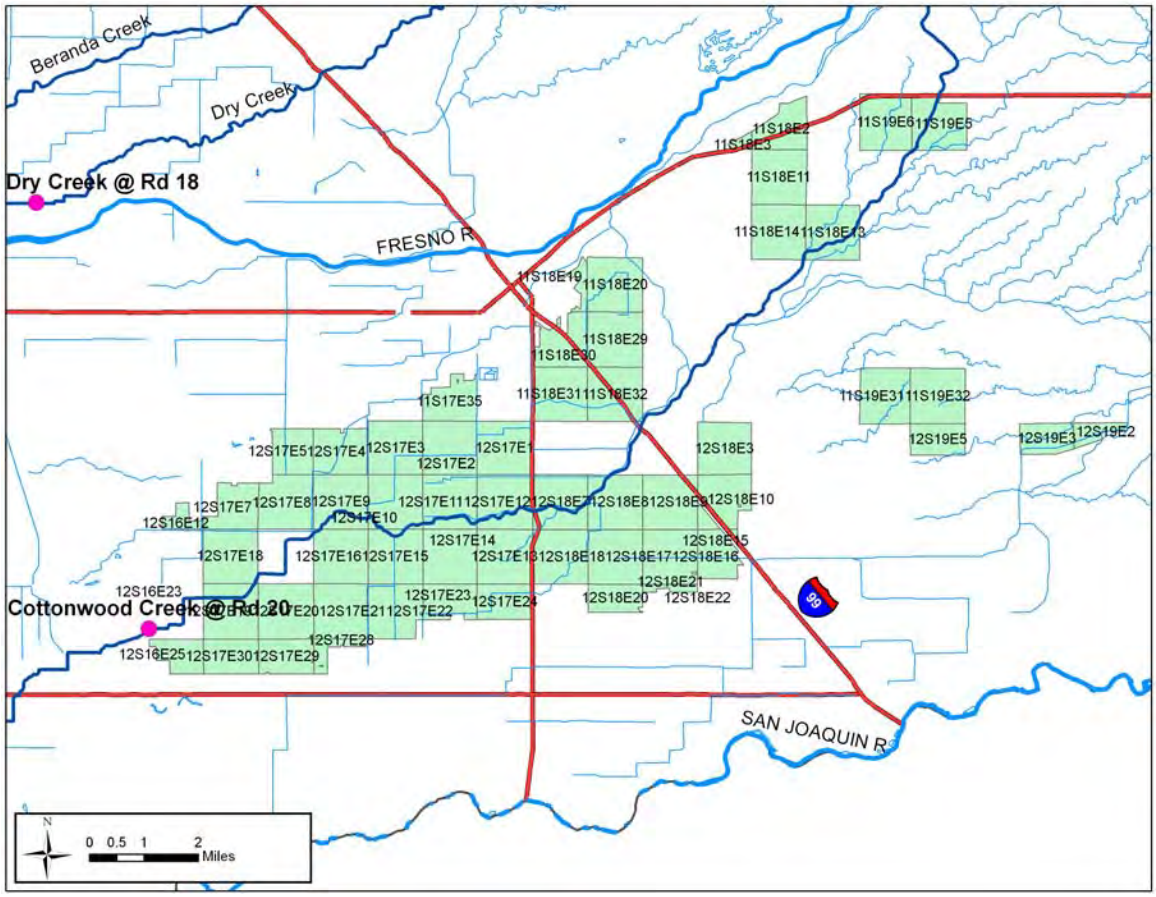
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
			SALT						
WINE GRAPES	2/21/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6	GA	30	11S17E35	24000
WINE GRAPES	2/21/2008	GOAL 2XL	OXYFLUORFEN	G	120	PT	80	12S18E22	100000
WINE GRAPES	2/21/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1600	OZ	25	12S17E4	100000
WINE GRAPES	2/21/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	3225	OZ	76	12S17E5	100000
ALMOND	2/22/2008	VANGARD WG	CYPRODINIL	G	85	OZ	17	12S18E3	2030
ALMOND	2/22/2008	VANGARD WG	CYPRODINIL	G	165	OZ	33	12S18E3	2030
GRAPE, RAISIN	2/23/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	450.89	LB	13.34	12S17E21	24000
CHERRY	2/23/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	6	GA	37.77	12S17E18	1000000
CHERRY	2/23/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	92	PT	44	12S17E18	1000000
PEACH	2/25/2008	VANGARD WG	CYPRODINIL	G	183.45	OZ	36.69	12S17E23	2030
ALMOND	2/25/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	200	OZ	20	12S17E15	16000
ALMOND	2/25/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	200	OZ	20	12S17E16	16000
ALMOND	2/25/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	400	OZ	40	12S17E16	16000
ALMOND	2/25/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	400	OZ	40	12S17E21	16000
PEACH	2/26/2008	VANGARD WG	CYPRODINIL	G	195.15	OZ	39.03	12S17E23	2030
GRAPE, RAISIN	2/26/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	300	PT	100	12S18E7	24000
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	2.66	LB	8.5	12S18E10	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	2.97	LB	9.5	12S18E10	2030
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	0.8	GA	8.5	12S18E10	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	0.9	GA	9.5	12S18E10	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	A	2.91	GA	31	12S17E12	10000
GRAPE, RAISIN	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE,	G	5	GA	40	12S17E20	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
			ISOPROPYLAMINE SALT						
GRAPE, RAISIN	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	GA	40	12S17E28	24000
ALMOND	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	14.63	GA	78	12S17E30	24000
ALMOND	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	15	GA	80	12S17E30	24000
ALMOND	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	27.75	GA	148	12S17E30	24000
WINE GRAPES	2/27/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	39.75	GA	318	12S17E29	24000
WINE GRAPES	2/27/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	25	QT	25	12S17E1	24000
GRAPE, RAISIN	2/27/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	600	OZ	30	12S17E4	24000
GRAPE, RAISIN	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	15	GA	40	12S17E28	100000
GRAPE, RAISIN	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	15	GA	40	12S17E20	100000
ALMOND	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	39	GA	78	12S17E30	100000
ALMOND	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	40	GA	80	12S17E30	100000
ALMOND	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	74	GA	148	12S17E30	100000
WINE GRAPES	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	119.25	GA	318	12S17E29	100000
ALMOND	2/27/2008	PROWL HERBICIDE	PENDIMETHALIN	G	60	GA	80	12S17E30	5000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	6.25	LB	20	11S19E31	2030
NECTARINE	2/28/2008	VANGARD WG	CYPRODINIL	G	151.8	OZ	30.36	12S17E23	2030
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	1.89	GA	20	11S19E31	10000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	6.09	GA	65	12S17E5	10000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
GRAPE, RAISIN	2/28/2008	TENKOZ BUCCANEER HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	449.96	OZ	13.34	12S17E21	24000
WINE GRAPES	2/28/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	75	OZ	25	12S17E4	24000
ALMOND	2/28/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	1100	OZ	110	12S16E12	16000
WINE GRAPES	2/29/2008	ROUNDUP ORIGINAL HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1790.25	OZ	13	12S17E4	24000
GRAPE	2/29/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5.61	GA	33.63	12S17E20	24000
GRAPE	2/29/2008	TENKOZ BUCCANEER PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	33.5	GA	195.23	12S17E20	24000
ALMOND	2/29/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3	GA	10	12S18E17	24000
PISTACHIO	2/29/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	80	PT	64	12S16E23	24000
GRAPE, RAISIN	2/29/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	103.32	QT	51.66	12S19E5	24000
ALMOND	2/29/2008	GOAL 2XL	OXYFLUORFEN	G	4	GA	10	12S18E17	100000
PISTACHIO	2/29/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	26.67	GA	64	12S16E23	5000
ALMOND	2/29/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	A	46	LB	57.5	12S17E9	16000
ALMOND	2/29/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	A	62.8	LB	78.5	12S17E8	16000
ALMOND	2/29/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	275	OZ	27.5	12S18E15	16000
ALMOND	2/29/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	400	OZ	40	12S17E16	16000
ALMOND	2/29/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	400	OZ	40	12S17E21	16000
ALMOND	3/2/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2.5	GA	10.18	12S17E10	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
GRAPE, RAISIN	3/3/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	137.6	OZ	4.3	12S18E21	24000
GRAPE, RAISIN	3/4/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	768	OZ	24	12S18E21	24000

Figure 1. Map of PUR data for pesticide applications relevant to *H. azteca* toxicity that occurred in the Cottonwood Creek @ Rd 20 site subwatershed prior to the storm sediment monitoring event on March 4, 2008.



Dry Creek @ Wellsford Rd

Ambient water samples collected one week prior to sediment sampling revealed exceedance level detections of cadmium (0.05 µg/L), copper (11 µg/L) and lead (1.8 µg/L). At the levels detected it is unlikely that any of these constituents caused sediment toxicity at the Dry Creek sample site, though it is possible that one or more of the metals could have contributed to the toxicity. Current PUR data from the Dry Creek site subwatershed are provided below (Table 3, Figure 2). Only applications of pesticides with a high soil organic carbon partitioning coefficient (K_{oc}) that are relevant to *Hyalella* toxicity are shown. Applications of numerous pyrethroid pesticides predominantly occurred between the months of January and March. The most common products used within this time period include glyphosate, oxyflourfen, pendimethalin, cyprodinil and esfenvalerate. Applications that occurred within six months prior to sampling are shown in Table 3.

Table 3. PUR data for pesticide applications relevant to *H. azteca* toxicity that occurred in the Dry Creek @ Wellsford Rd site subwatershed prior to the storm sediment monitoring event on March 4, 2008.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
WALNUT	9/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	102.4	OZ	16	3S11E29	5300
ALMOND	9/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	64	OZ	10	3S11E30	5300
WALNUT	9/9/2007	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	115.2	OZ	18	3S11E30	5300
WALNUT	9/9/2007	SILENCER	LAMBDA-CYHALOTHRIN	G	45	OZ	15	3S11E29	180000
WALNUT	9/9/2007	SILENCER	LAMBDA-CYHALOTHRIN	G	48	OZ	16	3S11E30	180000
PLUM	1/1/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	19.2	OZ	2	3S11E3	5300
ALMOND	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	128	OZ	16	2S10E24	5300
PEACH PROCESSNG	1/14/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	260	OZ	26	3S10E28	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	2240	LB	175	3S11E2	5300
PEACH PROCESSNG	1/23/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	124.8	OZ	13	3S11E29	5300
ALMOND	1/31/2008	SILENCER	LAMBDA-CYHALOTHRIN	G	281.6	OZ	110	3S11E25	180000
CHESTNUT	2/5/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	320	OZ	10	2S11E35	24000
ALMOND	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	625.44	PT	78.18	3S11E15	5000
CHESTNUT	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	213.33	OZ	10	2S11E35	5000
ALMOND	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	218.18	PT	100	3S11E25	5000
ALMOND	2/5/2008	BUCCANEER GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	109.09	PT	100	3S11E25	24000
ALMOND	2/5/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	75	OZ	23.3	3S11E30	24000
ALMOND	2/5/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	32	OZ	10	3S11E29	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
ALMOND	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	93	QT	23.3	3S11E30	100000
CHESTNUT	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	26.67	OZ	10	2S11E35	100000
ALMOND	2/5/2008	GOAL 2XL	OXYFLUORFEN	G	40	QT	10	3S11E29	100000
ALMOND	2/5/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	195.45	PT	78.18	3S11E15	1000000
ALMOND	2/5/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	72.73	PT	100	3S11E25	100000
ALMOND	2/5/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	312.72	PT	78.18	3S11E15	100000
ALMOND	2/6/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	10.5	OZ	3.3	3S10E25	24000
WALNUT	2/6/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	20	GA	40	2S11E35	24000
WALNUT	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	PT	2	3S10E28	24000
WALNUT	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	PT	1	3S10E28	24000
WALNUT	2/6/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	1	QT	0.75	3S10E27	24000
WALNUT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	5	PT	1	3S10E28	100000
WALNUT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	1	QT	0.75	3S10E27	100000
WALNUT	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	10	PT	2	3S10E28	100000
GRAPE, WINE	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	64.5	PT	21.5	3S10E24	100000
ALMOND	2/6/2008	GOAL 2XL	OXYFLUORFEN	G	13.2	QT	3.3	3S10E25	100000
GRAPE, WINE	2/6/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	129	PT	21.5	3S10E24	24000
ALMOND	2/7/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	65	PT	65	3S10E27	1000000
ALMOND	2/7/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	23	PT	23	3S10E22	1000000
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	63.64	GA	63.64	2S12E32	5000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	130	PT	65	3S10E27	5000
ALMOND	2/7/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	46	PT	23	3S10E22	5000
ALMOND	2/7/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7.64	GA	15.27	3S11E8	24000
WALNUT	2/7/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	PT	1	3S10E28	24000
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	86.67	PT	65	3S10E27	100000
WALNUT	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	5	PT	1	3S10E28	100000
GRAPE, WINE	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	34.8	PT	11.6	3S10E14	100000
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	30.67	PT	23	3S10E22	100000
ALMOND	2/7/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	19.89	GA	63.64	2S12E32	1000000
GRAPE, WINE	2/7/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	69.6	PT	11.6	3S10E14	24000
WALNUT	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	17	OZ	5.3	3S11E30	24000
WALNUT	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	16	OZ	5	3S11E29	24000
ALMOND	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	467.73	PT	245	3S11E16	24000
WALNUT	2/8/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	19	OZ	6	3S11E30	24000
WALNUT	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	64	OZ	5.3	3S11E30	100000
WALNUT	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	10	QT	5	3S11E29	100000
WALNUT	2/8/2008	GOAL 2XL	OXYFLUORFEN	G	72	OZ	6	3S11E30	100000
ALMOND	2/8/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	1870.91	OZ	245	3S11E16	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
UNCUL NON-AG	2/9/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	PT	1	3S10E28	24000
UNCUL NON-AG	2/9/2008	GOAL 2XL	OXYFLUORFEN	G	5	PT	1	3S10E28	100000
ALMOND	2/10/2008	VANGARD WG	CYPRODINIL	G	5	OZ	65	2S10E26	2030
ALMOND	2/10/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	21	GA	21	3S11E21	5000
ALMOND	2/10/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	2	QT	159	2S10E26	5000
ALMOND	2/10/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	42	PT	21	3S11E21	24000
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	2	QT	159	2S10E26	100000
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	38.4	OZ	18	3S11E29	100000
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	21	PT	21	3S11E21	100000
ALMOND	2/10/2008	GOAL 2XL	OXYFLUORFEN	G	21.93	OZ	10	3S11E29	100000
ALMOND	2/10/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	7	GA	15	3S11E21	24000
ALMOND	2/10/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	19.2	PT	18	3S11E29	24000
ALMOND	2/10/2008	NUFARM CREDIT SYSTEMIC HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	10.67	PT	10	3S11E29	24000
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	9.09	GA	25	3S11E20	5000
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	3.64	GA	10	3S11E20	5000
ALMOND	2/11/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	4.36	GA	12	3S11E20	5000
ALMOND	2/11/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	7.27	PT	10	3S11E20	24000
ALMOND	2/11/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	18.18	PT	25	3S11E20	24000
ALMOND	2/11/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	8.73	PT	12	3S11E20	24000
GRAPE, WINE	2/11/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE,	G	1.68	GA	3.5	3S10E21	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
			POTASSIUM SALT						
GRAPE, WINE	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	96.3	PT	32.1	3S10E14	100000
GRAPE, WINE	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	37	OZ	3.5	3S10E21	100000
ALMOND	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	8.73	PT	12	3S11E20	100000
ALMOND	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	7.27	PT	10	3S11E20	100000
ALMOND	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	18.18	PT	25	3S11E20	100000
GRAPE, WINE	2/11/2008	GOAL 2XL	OXYFLUORFEN	G	4.8	GA	6.2	3S10E21	100000
GRAPE, WINE	2/11/2008	NUFARM CREDIT SYSTEMIC EXTRA HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	192.6	PT	32.1	3S10E14	24000
WALNUT	2/12/2008	ROUNDUP HERBICIDE (WITHDRAWN)	GLYPHOSATE, ISOPROPYLAMINE SALT	G	16	OZ	5	3S11E29	24000
WALNUT	2/12/2008	GOAL 2XL	OXYFLUORFEN	G	10	QT	5	3S11E29	100000
ALMOND	2/13/2008	VANGARD WG	CYPRODINIL	G	25	LB	86	3S12E7	2030
WALNUT	2/13/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5	GA	11	3S10E27	5000
ALMOND	2/13/2008	GLY STAR PLUS	GLYPHOSATE, ISOPROPYLAMINE SALT	G	8	GA	16	3S10E25	24000
ALMOND	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	10	GA	39.88	3S12E7	24000
GRAPE, WINE	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	5.2	GA	13	3S10E21	24000
WALNUT	2/13/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	100	OZ	11	3S10E27	24000
WALNUT	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	30	OZ	11	3S10E27	100000
GRAPE, WINE	2/13/2008	GOAL 2XL	OXYFLUORFEN	G	10.4	GA	13	3S10E21	100000
ALMOND	2/13/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1.3	GA	39.88	3S12E7	100000
ALMOND	2/13/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	2.5	GA	16	3S10E25	100000
ALMOND	2/14/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	50	QT	25	3S11E6	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
ALMOND	2/14/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	586.36	PT	215	3S11E15	24000
ALMOND	2/14/2008	GOAL 2XL	OXYFLUORFEN	G	50	QT	25	3S11E6	100000
ALMOND	2/14/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	1563.64	OZ	215	3S11E15	100000
ALMOND	2/15/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	50	QT	25	3S11E6	24000
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	4	GA	10	3S11E29	24000
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	2	GA	5	3S11E29	24000
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	6	QT	6	3S11E23	24000
ALMOND	2/15/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	5.62	GA	22.5	3S11E23	24000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	50	QT	25	3S11E6	100000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	32	OZ	10	3S11E29	100000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	2.81	GA	22.5	3S11E23	100000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	16	OZ	5	3S11E29	100000
ALMOND	2/15/2008	GOAL 2XL	OXYFLUORFEN	G	6	PT	6	3S11E23	100000
ALMOND	2/16/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	10	PT	10	3S10E27	1000000
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	20	PT	10	3S10E27	5000
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	GA	40	3S12E19	5000
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	5	GA	8	3S11E30	5000
ALMOND	2/16/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	10	GA	20.5	3S11E30	5000
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	3.76	GA	20.5	3S11E30	24000
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	1.88	GA	8	3S11E30	24000
ALMOND	2/16/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE,	G	5	QT	2.5	3S11E30	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
			ISOPROPYLAMINE SALT						
ALMOND	2/16/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	887.73	PT	465	3S11E15	24000
ALMOND	2/16/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	4.27	PT	4	3S11E30	24000
WALNUT	2/16/2008	ROUNDUP WEATHERMAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	9	PT	3	3S10E26	24000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	0.62	GA	8	3S11E30	100000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	13.33	PT	10	3S10E27	100000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	1.24	GA	20.5	3S11E30	100000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	8.53	OZ	4	3S11E30	100000
WALNUT	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	12	PT	3	3S10E26	100000
ALMOND	2/16/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	3550.91	OZ	465	3S11E15	100000
ALMOND	2/16/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	1	QT	2.5	3S11E30	100000
ALMOND	2/16/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	8	GA	30	3S12E6	1000000
ALMOND	2/18/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	100	QT	50	3S11E6	24000
WALNUT	2/18/2008	TOUCHDOWN HITECH	GLYPHOSATE, POTASSIUM SALT	G	7500	OZ	375	2S11E35	24000
WALNUT	2/18/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	20	GA	58	2S11E33	5000
WALNUT	2/18/2008	AGRISOLUTIONS CORNERSTONE PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	5	GA	58	2S11E33	24000
ALMOND	2/18/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	76.67	PT	92	3S11E7	24000
ALMOND	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	100	QT	50	3S11E6	100000
ALMOND	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	76.67	PT	92	3S11E7	100000
WALNUT	2/18/2008	GOAL 2XL	OXYFLUORFEN	G	1250	OZ	375	2S11E35	100000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
WALNUT	2/18/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	10	GA	58	2S11E33	100000
WALNUT	2/19/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	7.68	PT	12	3S10E25	1000000
WALNUT	2/19/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	8	PT	10	3S10E25	1000000
WALNUT	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	25.6	PT	12	3S10E25	5000
ALMOND	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	72	PT	12	3S10E26	5000
WALNUT	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	26.67	PT	10	3S10E25	5000
WALNUT	2/19/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	7.5	GA	11	3S11E30	5000
WALNUT	2/19/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2.82	GA	11	3S11E30	24000
ALMOND	2/19/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	7	QT	7	3S11E25	24000
WALNUT	2/19/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	21	QT	21	3S11E25	24000
ALMOND	2/19/2008	HONCHO PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	64	OZ	20	3S11E22	24000
ALMOND	2/19/2008	ROUNDUP ORIGINAL MAX HERBICIDE	GLYPHOSATE, POTASSIUM SALT	G	12	QT	12	3S10E26	24000
ALMOND	2/19/2008	GOAL 2XL	OXYFLUORFEN	G	14	QT	7	3S11E25	100000
WALNUT	2/19/2008	GOAL 2XL	OXYFLUORFEN	G	42	QT	21	3S11E25	100000
WALNUT	2/19/2008	GOALTENDER	OXYFLUORFEN	G	10.67	PT	10	3S10E25	100000
WALNUT	2/19/2008	GOALTENDER	OXYFLUORFEN	G	10.24	PT	12	3S10E25	100000
WALNUT	2/19/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	0.93	GA	11	3S11E30	100000
WALNUT	2/20/2008	PROWL 3.3 EC HERBICIDE	PENDIMETHALIN	G	20	GA	20	2S12E33	5000
ALMOND	2/20/2008	GEM 500 SC FUNGICIDE	TRIFLOXYSTROBIN	G	0.5	GA	22	3S11E20	4000
ALMOND	2/20/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	6.25	GA	25	2S11E29	1000000
ALMOND	2/21/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	8	GA	140	3S11E12	1000000

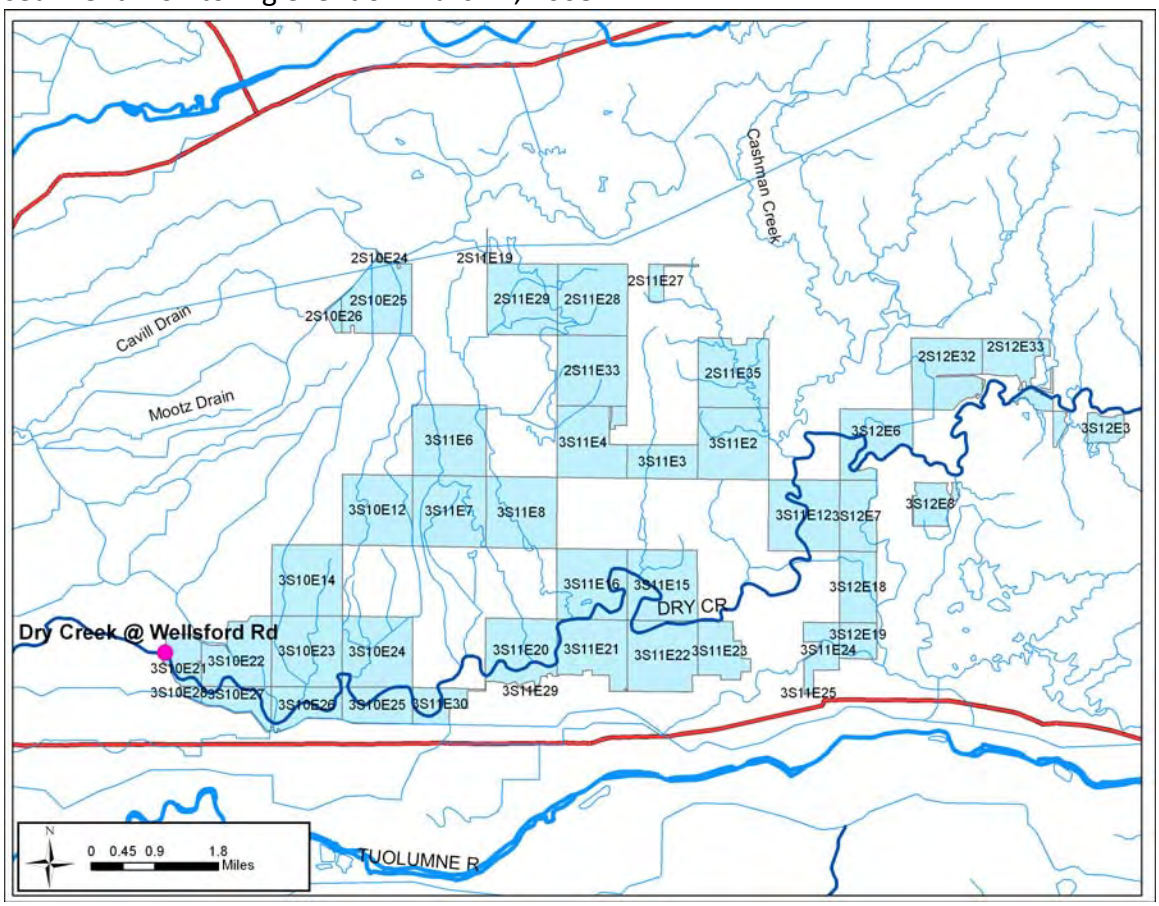
Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
ALMOND	2/21/2008	PARAZONE 3SL	PARAQUAT DICHLORIDE	G	6.25	GA	25	2S11E29	1000000
ALMOND	2/25/2008	VANGARD WG	CYPRODINIL	G	45	LB	140	3S11E12	2030
ALMOND	2/25/2008	VANGARD WG	CYPRODINIL	G	550	OZ	110	3S10E12	2030
ALMOND	2/25/2008	VANGARD WG	CYPRODINIL	G	375	OZ	75	3S10E12	2030
ALMOND	2/25/2008	VANGARD WG	CYPRODINIL	G	50	OZ	10	3S10E12	2030
ALMOND	2/25/2008	DIMILIN 2L	DIFLUBENZURON	A	1280	OZ	160	3S11E4	10000
ALMOND	2/25/2008	DIMILIN 2L	DIFLUBENZURON	G	128	OZ	10	3S11E29	10000
ALMOND	2/25/2008	TREFLAN HFP	TRIFLURALIN	G	77	QT	77	3S11E2	8000
ALMOND	2/26/2008	VANGARD WG	CYPRODINIL	G	50	OZ	10	3S11E20	2030
ALMOND	2/26/2008	VANGARD WG	CYPRODINIL	G	45	OZ	20.5	3S11E30	2030
ALMOND	2/26/2008	VANGARD WG	CYPRODINIL	G	15	OZ	8	3S11E30	2030
WALNUT	2/26/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	4.5	PT	3	2S11E33	5000
ALMOND	2/26/2008	DIMILIN 2L	DIFLUBENZURON	G	51.2	OZ	4	3S10E25	10000
ALMOND	2/26/2008	DIMILIN 2L	DIFLUBENZURON	G	896	OZ	70	3S10E25	10000
ALMOND	2/26/2008	DIMILIN 2L	DIFLUBENZURON	G	320	OZ	25	3S10E26	10000
WALNUT	2/26/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	12	PT	3	2S11E33	24000
WALNUT	2/26/2008	GALIGAN 2E OXYFLUORFEN HERBICIDE	OXYFLUORFEN	G	6	PT	3	2S11E33	100000
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	50	OZ	10	2S10E26	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	425	OZ	84	3S11E24	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	10	OZ	2.5	3S10E28	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	100	OZ	20	3S11E20	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	400	OZ	80	3S11E20	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	250	OZ	50	2S10E26	2030
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	20	OZ	4	3S11E30	2030

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
ALMOND	2/27/2008	VANGARD WG	CYPRODINIL	G	175	OZ	35	3S10E26	2030
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	256	OZ	20	3S11E20	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	1024	OZ	80	3S11E20	10000
ALMOND	2/27/2008	DIMILIN 2L	DIFLUBENZURON	G	1.56	GA	20	2S10E26	10000
ALMOND	2/27/2008	GLY STAR ORIGINAL	GLYPHOSATE, ISOPROPYLAMINE SALT	G	2	QT	65	2S10E26	24000
OP-DEC. TREE	2/27/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	12	PT	3	3S11E4	24000
OP-DEC. TREE	2/27/2008	GOAL 2XL	OXYFLUORFEN	G	12	PT	3	3S11E4	100000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	94.4	OZ	16	3S11E30	2030
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	285	OZ	57	3S12E18	2030
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	140	OZ	28	3S12E19	2030
ALMOND	2/28/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	30	GA	65	2S11E27	5000
WALNUT	2/28/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	20	GA	45	2S12E33	5000
ALMOND	2/28/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	130	GA	288	2S10E25	5000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	729.6	OZ	57	3S12E18	10000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	896	OZ	70	3S11E24	10000
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	358.4	OZ	28	3S12E19	10000
WALNUT	2/28/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	750	OZ	13.8	3S10E26	24000
WALNUT	2/28/2008	GOAL 2XL	OXYFLUORFEN	G	560	OZ	13.8	3S10E26	100000
ALMOND	2/29/2008	VANGARD WG	CYPRODINIL	G	50.15	OZ	8.5	3S11E21	2030
ALMOND	2/29/2008	VANGARD WG	CYPRODINIL	G	25	LB	86	3S12E7	2030
ALMOND	2/29/2008	VANGARD WG	CYPRODINIL	G	1400	OZ	288	2S10E25	2030
ALMOND	2/29/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	40	QT	40	3S11E24	5000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
OAT FOR/FOD	2/29/2008	BUCTRIL 4 EC HERBICIDE	BROMOXYNIL OCTANOATE	G	3.5	GA	28	3S10E23	10000
ALMOND	2/29/2008	DIMILIN 2L	DIFLUBENZURON	G	1.2	GA	12	3S11E23	10000
WALNUT	2/29/2008	GLY-4 PLUS HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	12	PT	3	2S11E33	24000
ALMOND	2/29/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	28	QT	84	3S11E24	24000
ALMOND	2/29/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	42.67	PT	40	3S11E24	24000
WALNUT	2/29/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	14	QT	42	3S12E8	24000
ALMOND	2/29/2008	TREFLAN HFP	TRIFLURALIN	G	160	QT	160	3S11E21	8000
WALNUT	2/29/2008	GOAL 2XL	OXYFLUORFEN	G	12	PT	3	2S11E33	100000
ALMOND	3/1/2008	VANGARD WG	CYPRODINIL	G	70	OZ	14	3S11E21	2030
ALMOND	3/1/2008	VANGARD WG	CYPRODINIL	G	50	OZ	10	3S11E21	2030
ALMOND	3/1/2008	VANGARD WG	CYPRODINIL	G	400	OZ	80	2S10E26	2030
ALMOND	3/1/2008	VANGARD WG	CYPRODINIL	G	300	OZ	60	2S11E28	2030
ALMOND	3/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	39	QT	39	3S10E26	5000
ALMOND	3/1/2008	GLYFOS HERBICIDE	GLYPHOSATE	G	41.6	PT	39	3S10E26	24000
ALMOND	3/2/2008	VANGARD WG	CYPRODINIL	G	49.5	OZ	9	3S11E29	2030
ALMOND	3/2/2008	AUXIGRO WP WETTABLE POWDER	GAMMA AMINOBUTYRIC ACID	G	36	OZ	9	3S11E29	2000
ALMOND	3/2/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	400	OZ	40	3S10E27	16000
ALMOND	3/3/2008	VANGARD WG	CYPRODINIL	G	45	OZ	20.5	3S11E30	2030
ALMOND	3/3/2008	VANGARD WG	CYPRODINIL	G	15	OZ	8	3S11E30	2030
ALMOND	3/3/2008	DIMILIN 2L	DIFLUBENZURON	G	512	OZ	40	2S11E27	10000
WALNUT	3/3/2008	ROUNDUP ULTRAMAX HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	6	QT	5	3S11E21	24000
ALMOND	3/3/2008	AUXIGRO WP WETTABLE POWDER	GAMMA AMINOBUTYRIC ACID	G	24	OZ	6	3S11E29	2000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	KOc
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	12.47	LB	14	2S11E19	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	12.5	LB	16	2S10E24	16000
ALMOND	3/4/2008	VANGARD WG	CYPRODINIL	G	75	OZ	15	3S11E22	2030
ALMOND	3/4/2008	VANGARD WG	CYPRODINIL	G	50	OZ	8	3S12E3	2030
ALMOND	3/4/2008	DIMILIN 2L	DIFLUBENZURON	G	2560	OZ	200	3S11E25	10000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	100	OZ	8	3S10E28	16000
ALMOND	3/4/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	380	OZ	38	3S10E25	16000

Figure 2. Map of PUR data for pesticide applications relevant to *H. azteca* toxicity that occurred in the Dry Creek @ Wellsford Rd site subwatershed prior to the storm sediment monitoring event on March 4, 2008.



Mustang Creek @ East Ave

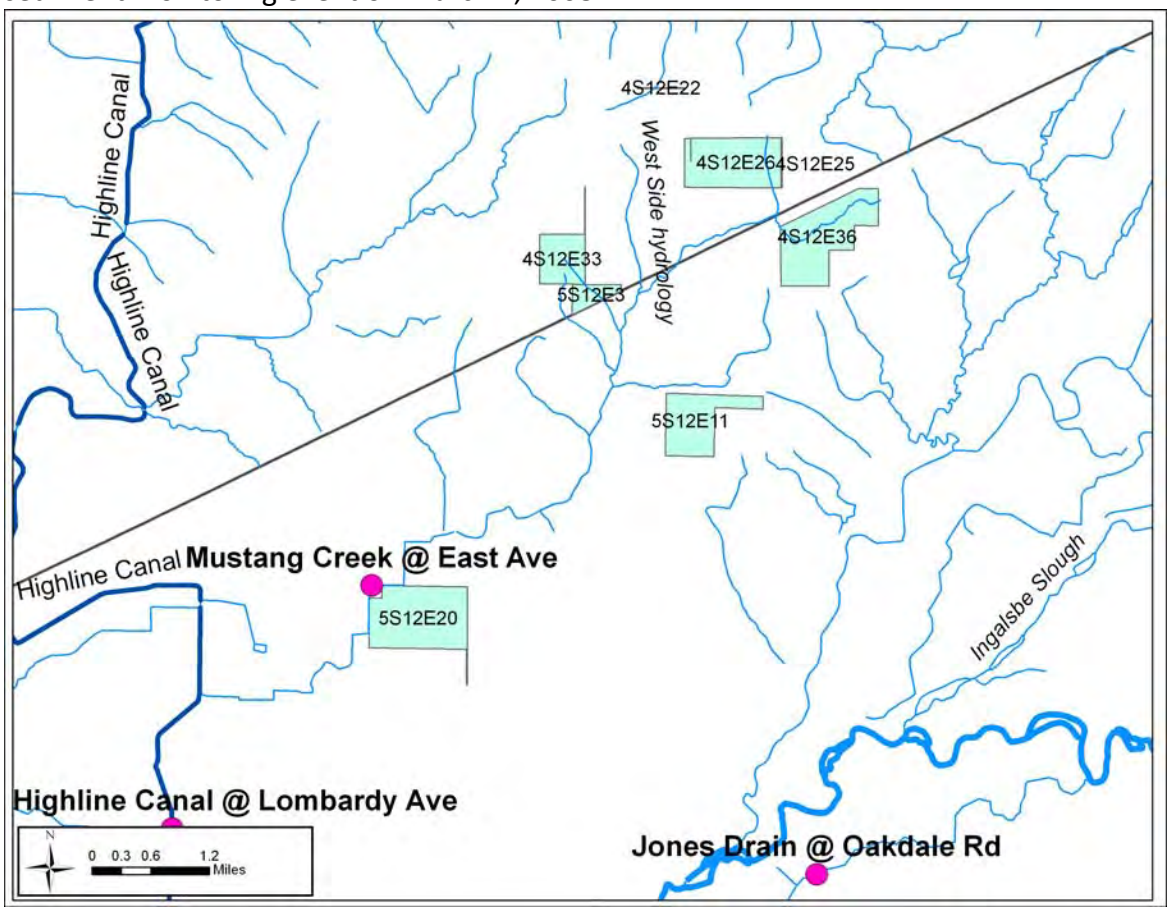
Ambient water samples collected one week prior to sediment sampling revealed exceedance level detections of chlorpyrifos (0.028 µg/L) and simazine (17 µg/L). Of these constituent, only chlorpyrifos has the chemical properties that allow it to bind to sediment and cause sediment toxicity, however it is not likely that the toxicity would have been caused solely by chlorpyrifos at the level detected. Furthermore, there were no applications of chlorpyrifos reported in the site subwatershed within 3 months prior to sampling. Current PUR data from the Mustang Creek site subwatershed are provided below (Table 4, Figure 3). Only applications of pesticides with a high soil organic carbon partitioning coefficient (K_{oc}) that are relevant to *Hyalella* toxicity are shown. Relevant pesticide applications occurred between the months of January and March, 2008 and include glyphosate, pyraclostrobin and esfenvalerate, among other products. All applications of relevant pesticides are shown below in Table 4.

Table 4. PUR data for pesticide applications relevant to *H. azteca* toxicity that occurred in the Mustang Creek @ East Ave site subwatershed prior to the storm sediment monitoring event on March 4, 2008.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
ALMOND	1/4/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1779.2	OZ	139	5S12E20	5300
ALMOND	1/18/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	6144	OZ	480	4S12E26	5300
ALMOND	1/19/2008	DU PONT ASANA XL INSECTICIDE	ESFENVALERATE	G	1024	OZ	80	4S12E26	5300
ALMOND	2/5/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	50	GA	115	5S12E3	5000
ALMOND	2/5/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	350	QT	350	5S12E3	24000
ALMOND	2/5/2008	GOAL 2XL HERBICIDE	OXYFLUORFEN	G	65	GA	115	5S12E3	100000
ALMOND	2/6/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	330	QT	330	4S12E33	24000
ALMOND	2/7/2008	MON-52249 HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	45	GA	140	4S12E22	24000
ALMOND	2/7/2008	GOAL 2XL	OXYFLUORFEN	G	45	GA	140	4S12E22	100000
ALMOND	2/9/2008	GRAMOXONE INTEON	PARAQUAT DICHLORIDE	G	195	PT	128.7	4S12E33	1000000
ALMOND	2/9/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	234	QT	128.7	4S12E33	5000
ALMOND	2/15/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	550	QT	550	4S12E25	24000
ALMOND	2/16/2008	BUCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE SALT	G	37.5	GA	135	4S12E36	24000
ALMOND	2/16/2008	GOAL 2XL	OXYFLUORFEN	G	750	OZ	135	4S12E36	100000
ALMOND	2/28/2008	VANGARD WG	CYPRODINIL	G	750	OZ	150	4S12E33	2030
ALMOND	2/28/2008	DIMILIN 2L	DIFLUBENZURON	G	1920	OZ	150	4S12E33	10000
ALMOND	2/28/2008	BUCCANEER PLUS GLYPHOSATE HERBICIDE	GLYPHOSATE, ISOPROPYLAMINE	G	28	GA	56	4S12E26	24000

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS	Koc
			SALT						
ALMOND	3/1/2008	PROWL H2O HERBICIDE	PENDIMETHALIN	G	2.5	GA	20	5S13E6	5000
ALMOND	3/1/2008	FIRESTORM	PARAQUAT DICHLORIDE	G	2.5	QT	20	5S13E6	1000000
ALMOND	3/1/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	6000	OZ	600	4S12E25	16000
ALMOND	3/3/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	5	GA	14	5S13E6	24000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	3500	OZ	350	5S12E3	16000
ALMOND	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	5500	OZ	550	4S12E25	16000
PEACH	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	440	OZ	44	5S12E11	16000
PEACH	3/3/2008	PRISTINE FUNGICIDE	PYRACLOSTROBIN	G	540	OZ	54	5S12E11	16000
ALMOND	3/4/2008	TOUCHDOWN TOTAL	GLYPHOSATE	G	5	GA	14	5S13E6	24000

Figure 3. Map of PUR data for pesticide applications relevant to *H. azteca* toxicity that occurred in the Mustang Creek @ East Ave site subwatershed prior to the storm sediment monitoring event on March 4, 2008.



3. Complete analytical results

The final report from the laboratory is appended electronically to the transmittal message. These results include all data reports for sediment toxicity provided to the Coalition by the analytical laboratory.

4. Time schedule to identify and implement the Management Practice Effectiveness evaluation.

Table 5. Deliverables time schedule

Action	Anticipated Completion Date
Obtain PURs	Complete
Contact Growers in Watersheds	June 30, 2008
Perform Management Practices Survey	June 30, 2008
Outreach/BMP Education	June, 2008
Management Plan	Not yet scheduled

Justification for dates:

Obtain PURs – PUR data relevant to the sediment toxicity are provided in the form of tables and maps in the body of this report. PUR data tables and maps will also be provided with the June 30, 2008 Semi-Annual Monitoring Report (SAMR). If additional data relevant to the exceedances in this report are received from the county agricultural commissioner's office, updates will be provided in the SAMR.

Contact growers in the subwatersheds – The Coalition is currently updating their database of contact information for all Coalition members. Once the update is complete, mailings will go out to growers containing exceedance notification, information on best management practices (BMPs), and Coalition updates. The update has taken longer than expected and notification and meetings that were intended to occur this month, have been postponed to June.

Perform management practices survey – BMP surveys have been provided to growers through mailings and at grower meetings. Results from these surveys were compiled and provided with the December 31, 2007 SAMR. For growers that do not currently have a survey on record, a survey will be provided to them along with their notification letter by June 30, 2008.

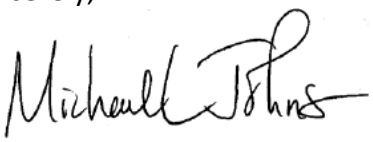
Outreach/ BMP Education – Grower meetings were hosted by the Coalition in December, 2007 to discuss monitoring results from the 2007 irrigation season and management practices to reduce the potential for runoff of pesticides and sediment. Outreach will occur again in June 2008 to follow up on the storm runoff exceedances

and to discuss best management practices that are applicable to the irrigation season. A schedule of Coalition meeting dates and locations will be provided to growers by mail within the next month.

Management Plan – An updated Management Plan will be submitted for all subwatersheds that have experienced two or more exceedances in one constituent. A time schedule for these Management Plans has not yet been determined.

Let us know if further explanation or documentation is necessary.

Sincerely,



Michael L. Johnson
Technical Program Manager

Sent: Friday, June 13, 2008 at 12:51 PM
From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Pesticide Communication Report - Storm2 2008
Attachments: ESJWQC_08_CR_Pesticide_Storm2_061308_final.zip
MLJ_55552_(8141_619)_022508.pdf
MLJ_55563_(8141_619)_022608_amended.pdf

Dear Dania,

Attached is a Communication Report (zipped file) for first-time pesticide exceedances experienced during the second storm monitoring event on February 25 and 26, 2008. Also attached are the final laboratory reports that are relevant to these exceedances. Please let us know if you have any questions on this report.

Sincerely,

Krista

--
Krista Callinan
Environmental Specialist
Michael L. Johnson LLC
1490 Drew Ave, Suite 175
Davis, CA 95618

Tel: 530-756-5200
Fax: 530-756-5225
kcallinan@mlj-llc.com

East San Joaquin Water Quality Coalition
1201 L Street
Modesto, CA 95354
www.esjcoalition.org

June 13, 2008

Dania Huggins
Irrigated Lands Conditional Waiver Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Dear Dania,

We are submitting a formal Communication Report for the pesticide exceedances reported on April 10, 2008 that have not been addressed in a Management Plan or previous Communication Report (see Table 1 below). Sampling occurred at these sites on February 25 and 26, 2008 during the second storm sampling event of 2008.

Table 1. Pesticide exceedance from the ESJWQC region for samples collected during the second 2008 storm sampling event. Only exceedances that occurred for the first time at a sample site are included.

Sample Site	Sample Date	Season	Diazinon µg/L	Simazine µg/L
Cottonwood Creek @ Rd 20	2/25/08	Storm	0.24	5.1
Highline Canal @ Lombardy Rd	2/26/08	Storm		12

1. Follow-up monitoring and analyses conducted.

No follow-up sampling was conducted as a result of the pesticide exceedances. The first irrigation season sampling event occurred in April, and results from that monitoring event have not yet been received. Further discussion on the pesticide exceedances is provided below.

2. Actions taken to identify the source of the exceedance.

Pesticide Use Reports (PUR) for the site subwatersheds that experienced pesticide exceedances have been compiled and mapped to identify potential sources.

Cottonwood Creek @ Rd 20

Exceedances in diazinon and simazine were experienced at Cottonwood Creek @ Rd 20 for the first time during this event. Both diazinon and simazine can be used as preemergent pesticides. Diazinon is used on orchards during the dormant season and simazine can be used on a variety of crops including orchards and grapes. PUR data from the site subwatershed show applications of both diazinon and simazine within one month of sampling. See Table 2-3 and Figures 1-2 below for details on pesticide use.

Administrative Record
Page 13161

Table 2. Agricultural applications of products containing diazinon in the Cottonwood Creek @ Rd 20 site subwatershed between 1/25/08 and 2/25/08.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Gallons Used	Treated Acres	TRS
Peach	1/30/2008	Clean Crop Diazinon Ag500 Insecticide	Diazinon	Ground	1.89	4	11S18E31
Peach	1/30/2008	Clean Crop Diazinon Ag500 Insecticide	Diazinon	Ground	4.96	10.5	11S18E31
Plum	2/1/2008	Clean Crop Diazinon Ag500 Insecticide	Diazinon	Ground	7.08	15	12S17E11
Peach	2/1/2008	Clean Crop Diazinon Ag500 Insecticide	Diazinon	Ground	15.35	32.5	12S17E12
Peach	2/1/2008	Clean Crop Diazinon Ag500 Insecticide	Diazinon	Ground	13.7	29	12S17E12
Peach	2/1/2008	Clean Crop Diazinon Ag500 Insecticide	Diazinon	Ground	18.42	39	12S17E12
Almond	2/2/2008	Clean Crop Diazinon Ag500 Insecticide	Diazinon	Ground	17	36	12S17E4
Peach	2/7/2008	Clean Crop Diazinon Ag500 Insecticide	Diazinon	Ground	1.89	4	12S18E9
Cherry	2/15/2008	Clean Crop Diazinon Ag500 Insecticide	Diazinon	Ground	4.72	10	12S17E11
Fig	2/15/2008	Diazol Ag 500	Diazinon	Ground	16.88	135	12S18E1

Figure 1. Map showing agricultural applications of products containing diazinon in the Cottonwood Creek @ Rd 20 site subwatershed between 1/25/08 and 2/25/08.

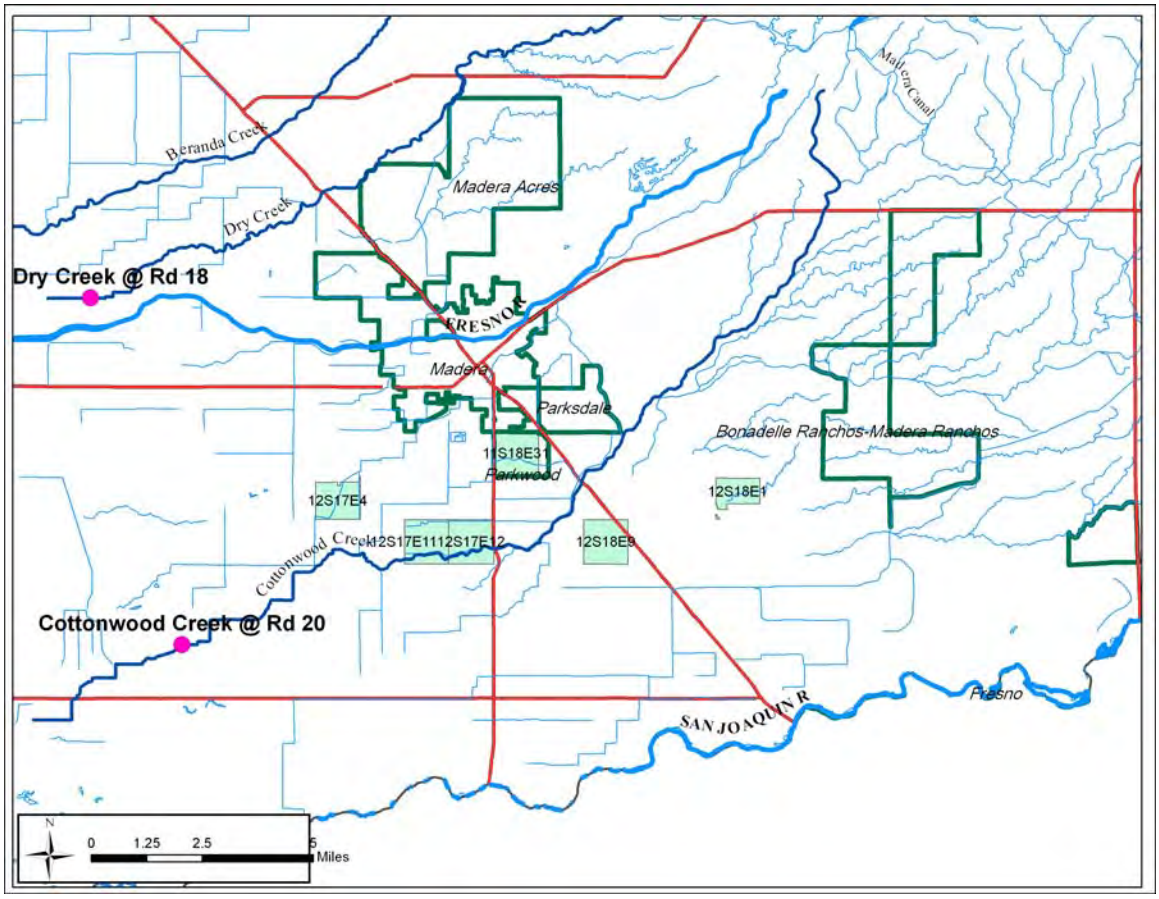


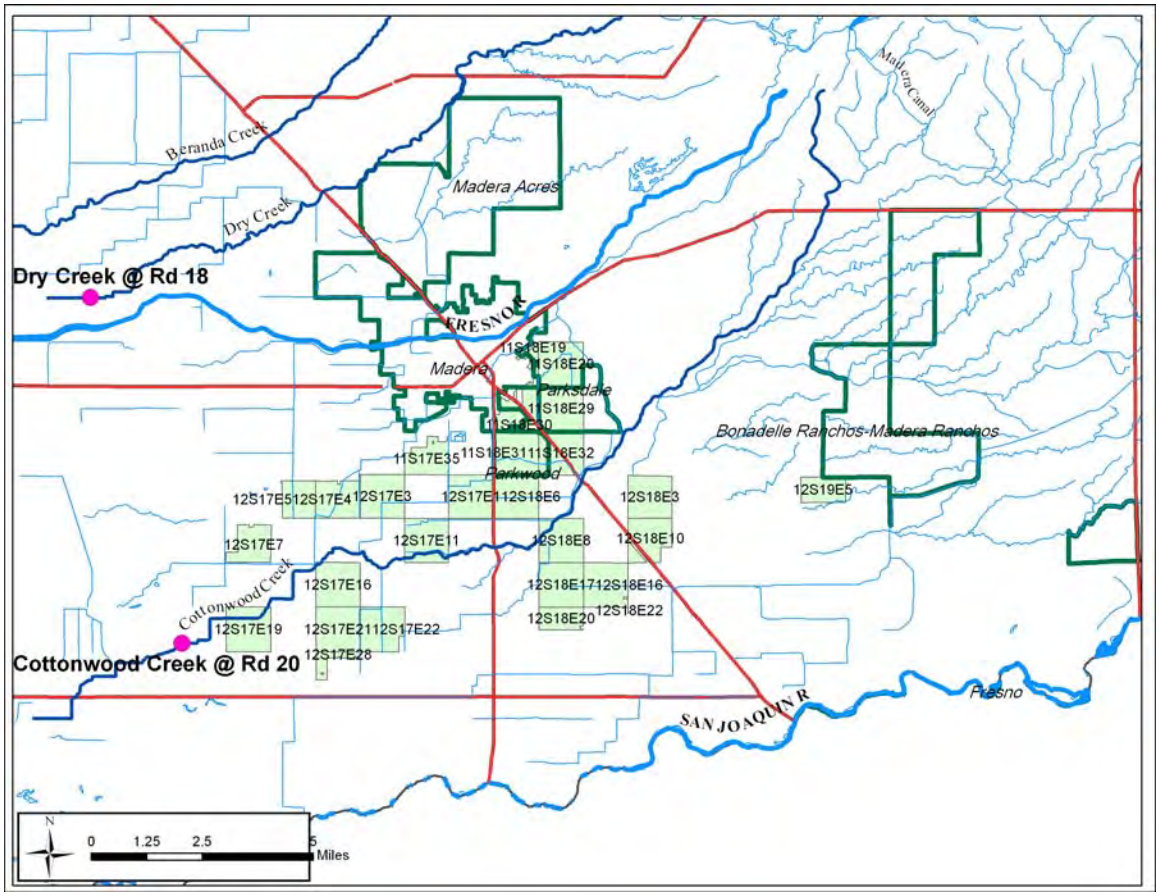
Table 3. Agricultural applications of products containing simazine in the Cottonwood Creek @ Rd 20 site subwatershed between 1/25/08 and 2/25/08.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
Grape	2/1/2008	Simazine 90df	Simazine	Ground	20	Lb	20	12S18E22
Grape	2/1/2008	Simazine 90df	Simazine	Ground	36	Lb	36	12S18E22
Grape	2/1/2008	Simazine 90df	Simazine	Ground	16	Lb	16	12S18E22
Grape	2/1/2008	Simazine 90df	Simazine	Ground	35	Lb	35	12S18E22
Grape	2/2/2008	Simazine 90df	Simazine	Ground	4	Lb	4	12S18E22
Grape	2/2/2008	Simazine 90df	Simazine	Ground	36	Lb	36	12S18E22
Grape, Raisin	2/2/2008	Simazine 90df	Simazine	Ground	117	Lb	39	12S17E22
Grape, Raisin	2/3/2008	Simazine 90df	Simazine	Ground	49.5	Lb	33	12S17E11
Grape, Raisin	2/6/2008	Simazine 90df	Simazine	Ground	230	Lb	153.5	12S17E7
Grape, Raisin	2/7/2008	Princep Caliber 90 Herbicide	Simazine	Ground	8.6	Lb	17.2	11S17E35
Wine Grapes	2/7/2008	Princep Caliber 90 Herbicide	Simazine	Ground	8.6	Lb	17.2	11S17E35
Wine Grapes	2/9/2008	Princep Caliber 90 Herbicide	Simazine	Ground	20	Lb	10	12S17E19
Wine Grapes	2/9/2008	Princep Caliber 90 Herbicide	Simazine	Ground	19	Lb	9.5	12S17E19
Wine Grapes	2/9/2008	Sim-Trol 90df	Simazine	Ground	5	Lb	5	12S18E17
Wine Grapes	2/9/2008	Sim-Trol 90df	Simazine	Ground	10	Lb	10	12S18E17
Grape, Raisin	2/9/2008	Sim-Trol 90df	Simazine	Ground	58	Lb	58	12S18E17
Grape, Raisin	2/10/2008	Princep 4l	Simazine	Ground	14	Qt	30	12S17E4
Grape, Raisin	2/11/2008	Princep Df Herbicide	Simazine	Ground	20	Lb	40	12S18E8

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
Wine Grapes	2/11/2008	Sim-Trol 4l	Simazine	Ground	9	Qt	2.25	12S18E6
Grape, Raisin	2/11/2008	Sim-Trol 90df	Simazine	Ground	68	Lb	34	12S17E4
Grape, Raisin	2/11/2008	Sim-Trol 90df	Simazine	Ground	56	Lb	56	12S18E3
Wine Grapes	2/12/2008	Princep Caliber 90 Herbicide	Simazine	Ground	15	Lb	7.5	12S17E19
Grape, Raisin	2/12/2008	Sim-Trol 90df	Simazine	Ground	40	Lb	20	12S18E3
Wine Grapes	2/13/2008	Drexel Simazine 4l	Simazine	Ground	72	Qt	24	12S18E20
Wine Grapes	2/13/2008	Simazine 90 Water Dispersible Granular H	Simazine	Ground	120	Lb	40	12S17E4
Grape, Raisin	2/13/2008	Sim-Trol 90df	Simazine	Ground	32	Lb	16	12S18E16
Wine Grapes	2/14/2008	Drexel Simazine 4l	Simazine	Ground	72	Qt	24	11S18E20
Wine Grapes	2/14/2008	Simazine 90 Water Dispersible Granular H	Simazine	Ground	240	Lb	80	12S17E4
Wine Grapes	2/15/2008	Simazine 90df	Simazine	Ground	21.75	Lb	14.5	11S18E31
Wine Grapes	2/15/2008	Simazine 90df	Simazine	Ground	24	Lb	16	11S18E31
Wine Grapes	2/15/2008	Simazine 90df	Simazine	Ground	40.5	Lb	27	11S18E31
Grape, Raisin	2/15/2008	Drexel Simazine 4l	Simazine	Ground	21	Qt	7	11S18E19
Grape, Raisin	2/15/2008	Drexel Simazine 4l	Simazine	Ground	9	Qt	3	11S18E29
Grape, Raisin	2/15/2008	Drexel Simazine 4l	Simazine	Ground	9	Qt	3	11S18E20
Grape, Raisin	2/15/2008	Drexel Simazine 4l	Simazine	Ground	3	Qt	1	11S18E30
Wine Grapes	2/15/2008	Simazine 90 Water Dispersible Granular H	Simazine	Ground	186	Lb	62	12S17E3
Grape, Raisin	2/15/2008	Sim-Trol 90df	Simazine	Ground	56	Lb	56	12S18E3
Wine Grapes	2/16/2008	Simazine 90df	Simazine	Ground	10	Lb	6	12S17E28
Grape	2/16/2008	Drexel Simazine 4l	Simazine	Ground	27	Qt	9	11S18E20
Wine Grapes	2/16/2008	Simazine 90 Water	Simazine	Ground	165	Lb	60	12S17E4

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
		Dispersible Granular H						
Wine Grapes	2/16/2008	Simazine 90 Water Dispersible Granular H	Simazine	Ground	90	Lb	30	12S17E4
Wine Grapes	2/17/2008	Drexel Simazine 4l	Simazine	Ground	72	Qt	24	12S18E10
Grape, Raisin	2/18/2008	Drexel Simazine 4l	Simazine	Ground	105	Qt	35	11S18E32
Wine Grapes	2/18/2008	Simazine 90 Water Dispersible Granular H	Simazine	Ground	54	Lb	18	12S17E4
Wine Grapes	2/19/2008	Simazine 90df	Simazine	Ground	35	Lb	70	12S17E16
Wine Grapes	2/19/2008	Simazine 90df	Simazine	Ground	47.5	Lb	95	12S17E1
Wine Grapes	2/19/2008	Simazine 90 Water Dispersible Granular H	Simazine	Ground	360	Lb	140	12S17E3
Wine Grapes	2/20/2008	Princep Df Herbicide	Simazine	Ground	23.33	Lb	46.66	12S19E5
Wine Grapes	2/21/2008	Simazine 90 Water Dispersible Granular H	Simazine	Ground	75	Lb	25	12S17E4
Wine Grapes	2/21/2008	Simazine 90 Water Dispersible Granular H	Simazine	Ground	150	Lb	76	12S17E5
Grape, Raisin	2/23/2008	Sim-Trol 9df	Simazine	Ground	20.01	Lb	13.34	12S17E21

Figure 2. Map showing agricultural applications of products containing simazine in the Cottonwood Creek @ Rd 20 site subwatershed between 1/25/08 and 2/25/08.



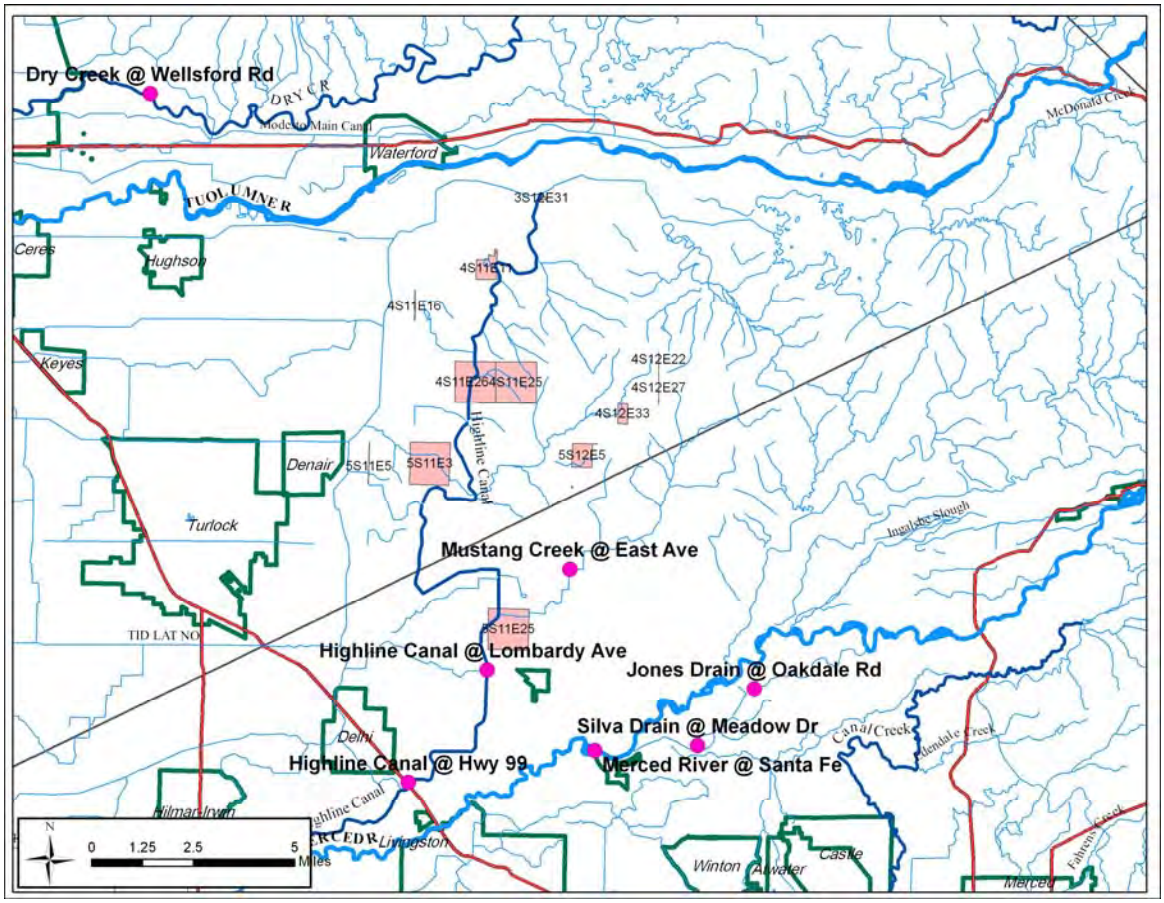
Highline Canal @ Lombardy Rd

An exceedance of simazine was detected at the Highline Canal @ Lombardy Rd sample site for the first time during the second 2008 storm monitoring event. Toxicity to *Pimephales* sp. was also experienced in samples collected from this site, however the toxicity was unlikely to be a result of simazine and was probably due to the elevated level of ammonia detected at 1.7 mg/L. Resampling of the Highline Canal @ Lombardy Rd site was triggered due to the toxicity exceedances and samples were collected again for toxicity analysis (only) on March 4, 2008. Toxicity to *Pimephales* sp. was persistent at the sample site, resulting in complete mortality in the resample test. Ammonia levels measured by the toxicity laboratory were 56.4 mg/L, a concentration that can account for all of the toxicity to *Pimephales* sp.. There was no toxicity experienced to *Selenastrum* sp., which is the more sensitive species to herbicides, therefore it is unlikely that simazine had an effect on *Pimephales* sp. PUR data show applications of simazine occurring in late January and throughout February within the site subwatershed. See below Table 4 and Figure 3 for details on these applications.

Table 4. Agricultural applications of products containing simazine in the Highline Canal @ Lombardy Rd site subwatershed between 1/26/08 and 2/26/08.

Commodity	Date Applied	Product Name	Active Ingredient	Application Method	Quantity Used	Unit	Treated Acres	TRS
Uncul Non-Ag	1/29/2008	Sim-Trol 4l	Simazine	Ground	16	Pt	10	5S12E5
Almond	1/31/2008	Princep 4l	Simazine	Ground	276	Pt	138	4S11E26
Almond	1/31/2008	Drexel Simazine 4l	Simazine	Ground	149.09	Pt	205	4S11E25
Almond	1/31/2008	Drexel Simazine 4l	Simazine	Ground	116.36	Pt	160	4S12E27
Almond	2/2/2008	Princep 4l	Simazine	Ground	240	Pt	114	4S11E11
Walnut	2/4/2008	Sim-Trol 4l	Simazine	Ground	72	Pt	24	3S12E31
Walnut	2/4/2008	Sim-Trol 4l	Simazine	Ground	66	Pt	22	3S12E31
Almond	2/4/2008	Drexel Simazine 4l	Simazine	Ground	109.09	Pt	150	4S12E33
Almond	2/5/2008	Princep 4l	Simazine	Ground	130.91	Pt	60	4S11E26
Almond	2/6/2008	Princep 4l	Simazine	Ground	1	Qt	2	4S11E16
Almond	2/7/2008	Sim-Trol 4l	Simazine	Ground	22.5	Ga	140	4S12E22
Almond	2/13/2008	Sim-Trol 9df	Simazine	Ground	33	Lb	137	5S11E3
Grape	2/14/2008	Sim-Trol 4l	Simazine	Ground	3.34	Pt	6	5S11E5

Figure 3. Map showing agricultural applications of products containing simazine in the Highline Canal @ Lombardy Rd site subwatershed between 1/26/08 and 2/26/08.



3. Complete analytical results

Analytical results for these exceedances are attached to the transmittal message. These results include all organophosphate and triazine data reports for this monitoring event provided to the Coalition by the analytical laboratory. QC and calibration data are included in the data reports.

4. Time schedule to identify and implement the Management Practice Effectiveness evaluation.

Table 5. Time Schedule

Action	Anticipated Completion Date
Obtain PURs	Done
Contact Growers in Watersheds	December, 2008
Perform Management Practices Survey	Done

Action	Anticipated Completion Date
Outreach/BMP Education	December, 2008
Management Plan	Not yet scheduled

Justification for dates:

Obtain PURs – PUR data for applications that occurred in the site subwatersheds are provided in the form of tables and maps in this report. PUR data tables and maps for all pesticide applications relevant to exceedances will also be provided with the June 30, 2008 Semi-Annual Monitoring Report (SAMR). If additional PUR data are received from the county agricultural commissioner's office, than updates will be provided in the SAMR.

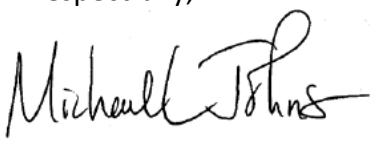
Contact growers in the watersheds – A proactive outreach strategy is being implemented by the Coalition, and information on exceedances and best management practices (BMPs) relevant to the upcoming season will be provided to growers just prior to the initiation of that season. As a result, information on storm season exceedances and management practices to address these exceedances will be provided to growers prior to the storm season in November-December, 2008. At this time the irrigation season is underway and the Coalition will be focusing on contact and outreach that is relevant to irrigation management practices.

Perform management practices survey – BMP surveys have been provided to growers through mailings and at grower meetings. Results from these surveys were compiled and provided with the December 31, 2007 SAMR. For growers that do not currently have a survey on record, a survey will be provided to them with the Coalition Annual Report by December 2008.

Outreach/ BMP Education – Grower meetings were hosted by the Coalition in December, 2007 to address exceedances that occurred during the 2007 storm and irrigation seasons, and information was provided on management practices to reduce the potential for runoff of pesticides and sediment. Outreach will occur again to follow up on the storm runoff exceedances prior to the 2008 storm season in November-December. Current outreach activities will occur to address exceedance that occurred during the 2007 irrigation season and management practices that can be implemented to reduce those exceedances. The next Coalition meeting is planned to occur in Stanislaus County on June 18, 2008.

Let us know if further explanation or documentation is necessary.

Respectfully,



Michael L. Johnson, Technical Program Manager

Sent: Monday, June 16, 2008 at 3:09 PM
From: K Callinan <kcallinan@mlj-llc.com>
To: Dania Huggins <dhuggins@waterboards.ca.gov
Cc: Parry Klassen <pklassen@unwiredbb.com>, Mike Johnson <mjohnson@mlj-llc.com>, Melissa Turner <mturner@mlj-llc.com>, Francisca Johnson <fjohnson@mlj-llc.com>, Lara Reising <ltreising@gmail.com>, kcallinan@mlj-llc.com
Subject: Metals and Nutrients Communication Report - Storm2 2008
Attachments: ESJWQC_08_CR_Ecoli_TDS_metals_Storm2_061708_final.doc
ESJWQC_I020959_Storm2_022508_REV.pdf
ESJWQC_I020991_Storm2_022608_REV.pdf

Dear Dania,

Attached is a Communication Report for metals and nutrients exceedances experienced for the first time during the second storm monitoring event on February 25 and 26, 2008. Also attached are the final laboratory reports relevant to these exceedances.

Sincerely,

Krista

--
Krista Callinan
Environmental Specialist
Michael L. Johnson LLC
1490 Drew Ave, Suite 175
Davis, CA 95618

Tel: 530-756-5200
Fax: 530-756-5225
kcallinan@mlj-llc.com

East San Joaquin Water Quality Coalition
1201 L Street
Modesto, CA 95354
www.esjcoalition.org

June 17, 2008

Dania Huggins
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Dear Dania,

We are submitting the formal Communication Report for the metals and nutrients exceedances reported on April 14, 2008 (see Table 1). Only exceedances that occurred for the first time at a sample site are included in this report. Sampling occurred at these sites on February 25 and 26, 2008 for the second storm season monitoring event.

Table 1. Metals and nutrients exceedances that were experienced for the first time at a sample site during the second storm monitoring event on February 25 and 26, 2008.

Sample Site	Sample Date	Season	Ammonia	Cadmium	Nickel
			1.5 mg/L	0.04 µg/L	12 µg/L
Dry Creek @ Wellsford Rd	2/26/2008	Storm2 NM		0.05	
Duck Slough @ Gurr Rd	2/25/2008	Storm2 NM		0.1	
Duck Slough @ Hwy 99	2/25/2008	Storm2 NM		0.05	
Highline Canal @ Hwy 99	2/26/2008	Storm2 NM		0.096	
Highline Canal @ Lombardy Rd	2/26/2008	Storm2 NM	1.7	0.09	
Miles Creek @ Reilly Rd	2/25/2008	Storm2 NM		0.2	26

1. Follow-up monitoring and analyses conducted.
No immediate follow-up sampling was performed. Results were not received from the laboratories until after the next event of sampling occurred. Samples were collected as part of normal monitoring for the analysis of metals and nutrients on April 22 and 29, and results from those samples were reported on May 30 and June 12, 2008. None of the exceedances shown above were experienced again. However, if additional exceedances do occur at these sites then those will be addressed through a subwatershed Management Plan.

2. Actions taken to identify the source of the exceedance.

Ammonia

Ammonia can enter a water body through two sources, direct discharge from agricultural fertilizers or animal waste, or from discharges from waste water treatment plants. Ammonia in fertilizer is typically converted to nitrite and then nitrate in soils over a short period of time and discharge of fertilizer would have to be immediate to detect ammonia in the receiving water body. There are no waste water inputs to Highline Canal, so it is likely that the ammonia detected in the Highline Canal is the result of storm runoff of animal waste from the upstream subwatershed. Within the site subwatershed a chicken farm lies in close proximity to Highline Canal and there are numerous dairies upstream. Both the chicken farm and the dairies may have contributed to the exceedance of ammonia at this site. Exceedances have occurred in the past at the downstream site, Highline Canal @ Hwy 99, and during this event ammonia levels were detected at 8.3 mg/L at that site. If a second exceedance occurs, further investigations to determine the source may be implemented.

Cadmium

Elevated concentrations of cadmium in a water body may be a result of agricultural application of sludge fertilizer, but also may arise from the erosion of soils and bedrock, atmospheric deposition, discharge from industrial operations or leakage from landfills and contaminated sites (e.g. disposal of NiCd batteries). Cadmium has high tendency to adsorb to sediments and persists indefinitely in the environment. Exceedances detected in the Dry Creek, Duck Slough, Highline Canal and Miles Creek sample site occurred for the first time during Coalition monitoring. All of the sites have shown detections of cadmium in the past and four sites have shown detections at current exceedance trigger levels. Due to the change in the water quality trigger limit (WQTL) for cadmium that occurred in March of 2008, detections of cadmium at sites are now triggering exceedances more frequently than in the past. The source of cadmium at these sites is not certain and it not likely to be related to agricultural practices, however if additional exceedances are experienced, then those exceedances will be addressed in Management Plans.

Nickel

Nickel may be found in slate, sandstone, clay minerals and basalt. The main nickel source is pentlandite (iron nickel sulfide) found in igneous rock intrusions. The element accumulates in sediments and is a part of various biological cycles. Some phosphate fertilizers contain trace element of nickel and can be applied to agriculture. Nickel also can be present in agricultural soils situated near fossil fuel industries. Organic matter often adsorbs nickel, causing coal and oil to contain traces of the element. Nickel may end up in water from both point and non-point sources. Diffuse nickel emissions may stem from power plants, waste incinerators and metal industries. Nickel is directly emitted from various industries through discharge on surface waters. It is applied in alloys for treatment of heavy metal polluted surface water, in nickel-cadmium batteries,

as a catalyzer and as a pigment. Nickel tetra carbonyl is a by-product of nickel cleansing and is applied in various production processes. Nickel compounds may also be found in sludge, and in slags and fly ashes from waste incinerators (source: http://www.lenntech.com/elements-and-water/nickel-and-water.htm). It is not certain what the particular source of nickel was in the Miles Creek site subwatershed at that time of sampling. If additional exceedances are experienced in the creek, then further investigations will occur to determine the source of exceedances and will be recorded in the Management Plan for that site.

3. Complete analytical results

Analytical results are appended electronically to the transmittal message. These results include all data reports provided to the Coalition by the analytical laboratory. QC data are included in the data reports.

4. Time schedule to identify and implement the Management Practice Effectiveness evaluation.

Table 3. Deliverables time schedule

Action	Anticipated Completion Date
Contact Growers in Watersheds	December, 2008
Perform Management Practices Survey	Done
Outreach/BMP Education	December, 2008
Management Plan	Not yet scheduled

Justification for dates:

Contact growers in the watersheds – A proactive outreach strategy is being implemented by the Coalition, and information on exceedances and best management practices (BMPs) relevant to the upcoming season will be provided to growers just prior to the initiation of that season. As a result, information on storm season exceedances and management practices to address these exceedances will be provided to growers prior to the storm season in November-December, 2008. At this time the irrigation season is underway and the Coalition will be focusing on contact and outreach that is relevant to irrigation management practices.

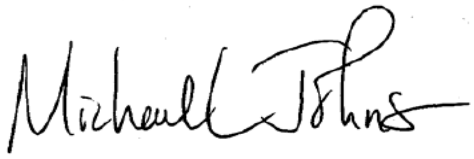
Perform management practices survey – BMP surveys have been provided to growers through mailings and at grower meetings. Results from these surveys were compiled and provided with the December 31, 2007 SAMR. For growers that do not currently have a survey on record, a survey will be provided to them with the Coalition Annual Report by December 2008.

Outreach/ BMP Education – Grower meetings were hosted by the Coalition in December, 2007 to address exceedances that occurred during the 2007 storm and irrigation seasons, and information was provided on management practices to reduce the potential for runoff of pesticides and sediment. Outreach will occur again to follow up on the storm runoff exceedances prior to the 2008 storm season in November-December. Current outreach activities will occur to address exceedance that occurred during the 2007 irrigation season and management practices that can be implemented to reduce those exceedances. The next Coalition meeting is planned to occur in Stanislaus County on June 18, 2008.

Management Plan – An updated Management Plan will be submitted for all subwatersheds that have experienced two or more exceedances in one constituent. A time schedule for these Management Plans has not yet been determined.

Let us know if further explanation or documentation is necessary.

Respectfully,



Michael L. Johnson, Technical Program Manager

Appendix VI
Toxicity Identification Evaluation Report

Identification of Causes of Toxicity to *Ceriodaphnia dubia*, Fathead Minnows (*Pimephales promelas*), and Green Algae *(Selenastrum capricornutum)* in Agriculture-Dominated Discharge Samples from the East San Joaquin Water Quality Coalition - Winter 2008

FINAL REPORT

Submitted to:

Michael L. Johnson LLC
Ecosystems Consulting
1490 Drew Ave., Suite 175
Davis, CA. 95618

Submitted by:

AQUA-Science
17 Arboretum Drive
Davis, CA 95616

June 6, 2008

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 2

2.0 INTRODUCTION 2

3.0 MATERIALS AND METHODS 3
- 3.1 Test Events 3
- 3.2 Test Samples 3
- 3.3 Toxicity Test Protocols 4
- 3.4 Algae Toxicity Tests 5
- 3.5 *Ceriodaphnia dubia* Toxicity Tests 5
- 3.6 Fathead Minnow Toxicity Tests 5
- 3.7 Statistical Analysis 6
- 3.8 Chemical Analysis 6
- 3.9 Retesting and Toxicity Identification Evaluation (TIE) Requirements 6
- 3.10 Toxicity Identification Evaluations (TIEs) 7
  - 3.10.1 Algae Phase I TIEs 7
  - 3.10.2 *C. dubia* and Fathead Minnow Phase I TIEs 8
  - 3.10.3 Phase III TIEs 9

4.0 RESULTS 10
- 4.1 Phase I TIEs Results 10
- 4.2 Phase III TIEs 13

5.0 DISCUSSION 15

REFERENCES 16

Administrative Record
Page 13179

Identification of Causes of Toxicity to *Ceriodaphnia dubia* and Green Algae *(Selenastrum capricornutum)* in Agriculture-Dominated Discharge Samples from the East San Joaquin Water Quality Coalition - Winter 2008

1.0 EXECUTIVE SUMMARY

A total of 43 samples of agriculturally-dominated discharge collected from within the boundaries of the East San Joaquin Water Quality Coalition, during two winter tests events in January and February 2008 were screened for toxicity to green algae *(Selenastrum capricornutun)*, the invertebrate *Ceriodaphnia dubia*, and larval fathead minnows *(Pimephales promelas)*. Toxicity was detected in 16 of the algae tests (11%), 4 of the *C. dubia* tests (9%), and 2 (4%) of the fathead minnow tests. Samples that produced ≥ 50% effect on the test species were subjected to Phase I Toxicity Identification Evaluations (TIEs) to identify chemical class of the toxicant(s) responsible for the toxicity. Thus, Phase I TIEs were conducted on 9 samples that caused algal chronic toxicity, 4 samples that caused acute *C. dubia* toxicity and 1 sample that caused toxicity to fathead minnows. The algae TIEs identified non-polar organic chemicals (NPOs) in 1 sample (Deadman's Creek @ Hwy 59), NPOs plus cationic metals in 2 samples (Hatch Drain @ Tuolomne Rd and Dry Creek @ Wellsford Rd), while toxicity was not detected in the remaining 6 samples. Algae Phase III TIEs on these samples confirmed that the herbicide, diuron, was the cause of toxicity in the Deadman's Creek sample, while cationic metals were responsible for some or all of the toxicity detected in the Hatch Drain and the Dry Creek samples. The *C. dubia* Phase I TIEs indicated that metabolically-activated organophosphate insecticides (OPs) were the cause of toxicity in 1 sample (Merced River @ Santa Fe Dr) and pyrethroid insecticides in 1 sample (Mustang Creek @ East Ave), while toxicity was not detected in TIEs with the remaining 2 samples. *C. dubia* Phase III TIEs on these samples confirmed that the OP insecticide, chlorpyrifos, accounted for the majority of the high level of toxicity (11.1 TUa) detected in the Merced River sample, while pyrethroid insecticides were not detected in the Mustang Creek sample, precluding them as a cause of the toxicity detected in the sample (1.7 TUa). The sample that exhibited toxicity to fathead minnows was not toxic in the TIE.

2.0 INTRODUCTION

AQUA-Science (A-S) was retained by MLJ-LLC (Davis, CA) to conduct aquatic toxicity tests and toxicity identification evaluations (TIEs) on samples collected from the East San Joaquin Water Quality Coalition (ESJWQC) in response to monitoring requirements of the Conditional Waiver of Waste Discharge for Irrigated Lands (Ag Waiver). A total of 43 samples collected during two storm events (January and February 2008) were tested using three-species toxicity tests with the cladoceran (*Ceriodaphnia dubia*), green algae (*Selenastrum capricornutum*), and

Administrative Record
Page 13180

larval fathead minnows (*Pimephales promelas*). TIEs were conducted on 9 samples with algae and 4 samples with *C. dubia* and 1 sample with fathead minnows, which demonstrated a ≥50% effect on the test species endpoint. Results of these analyses are reported herein.

3.0 MATERIALS AND METHODS

3.1 Test Events

Samples were collected in two winter months (January and February) and were timed to coincide, as closely as possible, with significant precipitation in the study area. The number of samples collected in each event is shown below:

Sample Date	*Test Event*	*No. Samples*
1/24/08	ESJ 08-01A	13
1/25/08	ESJ 08-01B	10
2/26/08	ESJ 08-02A	11
2/25/08	ESJ 08-02B	9
	Total	**43**

3.2 Test Samples

Test samples (4 gallon/site) were subsurface grabs obtained by MLJ-LLC sampling personnel under the direction of Dr. Mike Johnson. Sample name and GPS coordinates of the sample sites are shown in Table 1. Field measurements included temperature, dissolved oxygen (DO), pH, conductivity, and flow. Samples were placed in ice chests with sufficient wet ice to maintain sample temperature at ≤6 °C. Upon arrival at A-S, temperature, DO, conductivity, hardness, alkalinity, and pH were measured. Samples were stored in the dark at 4 °C until tested, within 24 hours of collection.

Administrative Record
Page 13181

Table 1. ESJ Sample Information

Site Name	*Site ID*	*GPS Coordinates*
Livingston Drain @ Robin Ave	535XLDARA	37.31690, -120.74203
Hilmar Drain @ Central Ave	535XHDACA	37.3904, -120.9592
Highline Canal @ Hwy 99	535XHCHNN	37.41245, -120.75945
Silva Drain @ Meadow Dr	535XSDAMD	37.42917, -120.62636
Merced River @ Santa Fe Dr	535XMRSFD	37.42778, -120.67375
Black Rascal Creek @ Yosemite Rd	535BRCAYR	37.33201, -120.39420
Prairie Flower Drain @ Crows Landing Rd	535XPFDCL	37.4418, -121.0035
Highline Canal @ Lombardy Ave	535XHCALR	37.45550, -120.72200
Mustang Creek @ East Ave	535XMCAEA	37.49186, -120.68505
Hatch Drain @ Tuolumne Rd	535XHDATR	37.51482, -121.01242
Westport Drain @ Vivian Rd	535XWDAVR	37.53677, -121.04869
Dry Creek @ Wellsford Rd	535XDCAWR	37.66037, -120.87444
Bear Creek @ Kibby Rd	535XBCAKR	37.3125, -120.4150
Cottonwood Creek @ Rd 20	545XCCART	36.8686, -120.1828
Dry Creek @ Rd 18	545XDCARE	36.9819, -120.2202
Berenda Slough along Ave 18 ½	545XBSAAE	37.0182, -120.3272
Ash Slough @ Ave 21	545XASAAT	37.0545, -120.4158
Deadman's Creek @ Gurr Rd	535XDCAGR	37.19477, -120.56133
Duck Slough @ Hwy 99	535XDSAHN	37.25006, -120.41013
Miles Creek @ Reilly Rd	535XMCARR	37.25825, -120.47499
South Slough @ Quinley Rd	535XSSAQR	37.26963, -120.59736
Deadman's Creek @ Hwy 59	535DMCAHF	37.19767, -120.48805
Duck Slough @ Gurr Rd	535XDSAGR	37.21403, -120.56069

3.3 Toxicity Test Protocols

The 96-hour acute *C. dubia* and 96-hour acute fathead minnow toxicity tests were conducted in accordance with the U.S. Environmental Protection Agency (USEPA) 5th edition protocol (USEPA 2002a). The 96-hour chronic algal toxicity tests were conducted in accordance with the USEPA 4th Edition protocol (USEPA 2002b). Control water for the toxicity tests and TIEs was reverse osmosis and granular carbon-treated well water amended with dry salts to attain USEPA moderately hard specifications (EPAMH).

Administrative Record
Page 13182

3.4 Algae Toxicity Tests

Algal toxicity tests were conducted in 4 replicates of 125-mL flasks containing 50-mL of test sample filtrate (0.45 µm). A fifth replicate was used as a surrogate for daily water quality measurements. The flasks, containing algal assay media without EDTA, were inoculated with 1 x 10^4 cells/mL of a 2-4 day-old culture of *S. capricornutum* (University of Texas Algae Type Collection, Austin, TX) in log phase growth. A sixth replicate was tested without algae inoculate to confirm that absence of indigenous algae. This replicate was also used as a sample blank and for water quality measurements. Flasks were placed on a shaker table (100 rpm) in an environmental chamber at 25 °C ± 2 °C with continuous lighting (400 ± 40 fc) and were randomized twice daily. After the 96-hour test period, the absorbance was measured with a spectrophotometer at 750 nm (Model DR2800, Hach Co., Loveland, CO). The absorbance units were corrected to cell number using a calibration curve as follows:

$$\text{cell number} = (\text{absorbance units @ 750 nm} \times 13.026) - 0.0328 \qquad (R^2 = 0.9995)$$

Using this conversion, the test was acceptable if the mean algal density in the control flasks was greater than or equal to 2 x 10^5 cells/mL and the coefficient of variation in the control replicates was ≤20%.

3.5 *Ceriodaphnia dubia* Toxicity Tests

C. dubia 96-hour acute toxicity tests were initiated with < 24 hour old neonates collected from in-house cultures. Each sample was tested using four replicates of 5 neonates each in a 20-mL glass scintillation vials containing 18-mL of test solutions. Test duration was 96 hours, and test solutions were renewed daily. *C. dubia* were fed a mixture of green algae (*S. capricornutum*) and YTC (a mixture of yeast, organic alfalfa and trout chow) 4 hours prior to 24-hour test solution renewal. Tests were conducted at 25 ± 2 °C with a 16 hour light:8 hour dark photoperiod. Mortality was noted daily. The test was acceptable if control survival was ≥90%.

3.6 Fathead Minnow Toxicity Tests

Fathead minnows were obtained from Aquatox, Inc. (Hot Springs, AK), and were maintained in EPA moderately hard (EPAMH) water until tested at 6-10 days old. Each test sample was tested using 4 replicates of 10 fish each in 400 mL glass beakers containing 250 mL of test solutions. Test duration was 96 hours and test solutions were renewed daily. Fish were fed *Artemia* nauplii 4 hours prior to daily sample renewal. Tests were conducted at 25 ± 2 °C with a 16 hour light:8 hour dark photoperiod. Mortality was noted daily. The test was acceptable if control survival was ≥90%.

Administrative Record
Page 13183

3.7 Statistical Analysis

Each test sample was subjected to statistical analysis using ToxCalc v. 5.23 (Tidepool Scientific, McKinleyville, CA, USA) according to USEPA procedures (USEPA 2002a,b) to determine if the observed effect was statistically different ($p<0.05$) from the control. In the TIEs, mortality data from the dilution series tests were used to estimate EC_{25}/EC_{50} values, e.g., the calculated concentration of the test sample that results a 25% or 50% effect on the test endpoint, respectively. Toxic units (TUs) were calculated from the EC_{25}/EC_{50} values ($100/EC_{25}$ or $100/EC_{50}$).

3.8 Chemical Analysis

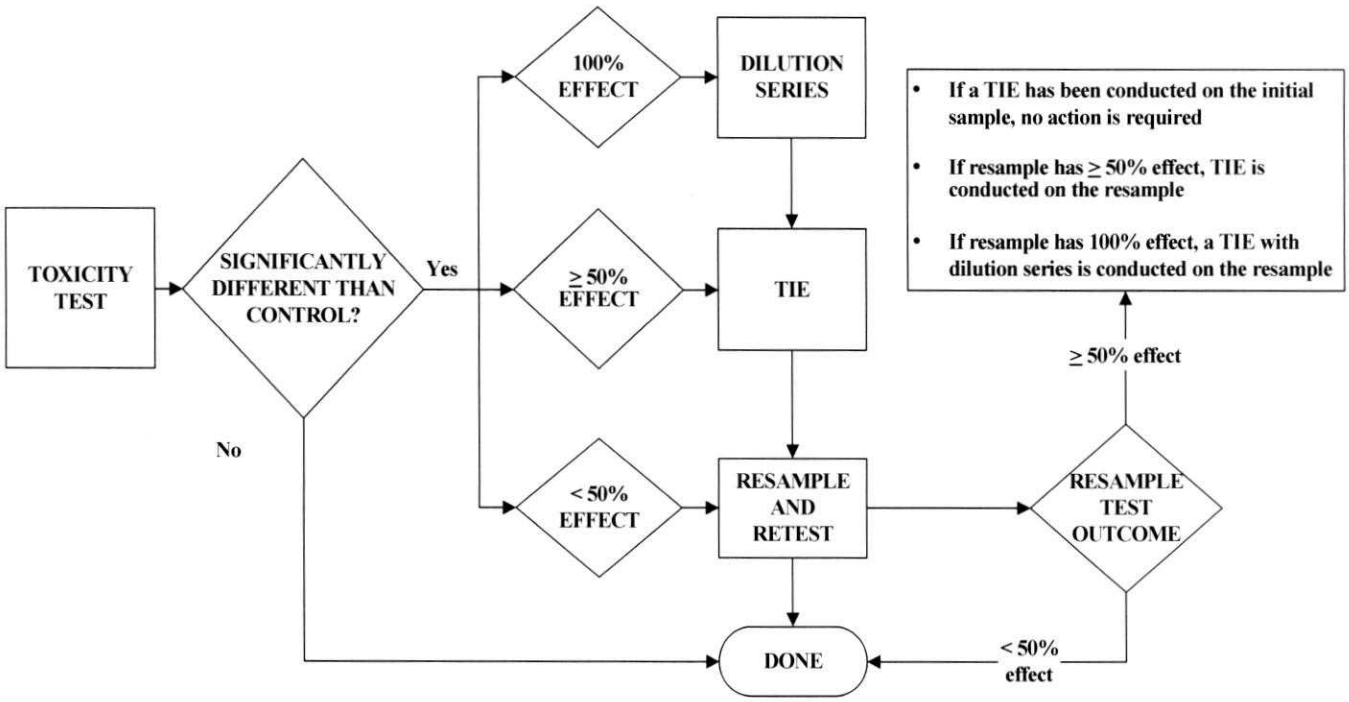
During storm monitoring events (not retesting/resampling events) water samples were collected for chemical analysis of five major groups of pesticides (pyrethroids, organochlorines, organophosphates, triazines, and carbamates) plus glyphosate and paraquot dichloride. The ESJWQC Quality Assurance Program Plan (QAPP) includes a list of all 39 pesticides that are analyzed, associated analytical methods, collection containers, reporting limits and hold times. In addition, total metals were analyzed (arsenic, boron, cadmium, copper, lead, nickel, selenium and zinc) using inductively coupled argon plasma-mass spectrometry analysis (EPA 200.8) at all sampling sites except Berenda Slough along Ave 18 ½, Black Rascal Creek @ Yosemite Rd, Mustang Creek @ East Ave, Silva Drain @ Meadow Dr and South Slough @ Quinley Rd. All samples were collected as outlined in the ESJWQC QAPP meeting all quality assurance requirements. Retesting or resampling was conducted if toxicity occurred to test for persistence as required by the Ag Waiver. Since these samples were collected for the testing of persistence, no additional water was collected for chemistry analysis.

3.9 Retesting and Toxicity Identification Evaluation (TIE) Requirements

Figure 1 depicts the retesting and TIE requirements. Briefly, if the sample shows no significant effect, no further action is required. If the sample is significantly different from the control but <50% effect, then the site must be resampled and retested. If there is a ≥50% effect, a TIE is initiated on the toxic sample, and the site must be resampled and retested. If there is a 100% effect, the TIE must incorporate a dilution series toxicity test. If a retest sample exhibits <50% effect, no further action is required. If there is a ≥50% effect in a retest, and a TIE was not conducted on the original sample, then a TIE must be initiated on the retest sample. If the retest sample has 100% effect, the TIE must also incorporate a dilution series.

Administrative Record
Page 13184

Figure 1. Retesting and Toxicity Identification Evaluation (TIE) Requirements.



3.10 Toxicity Identification Evaluations (TIEs)

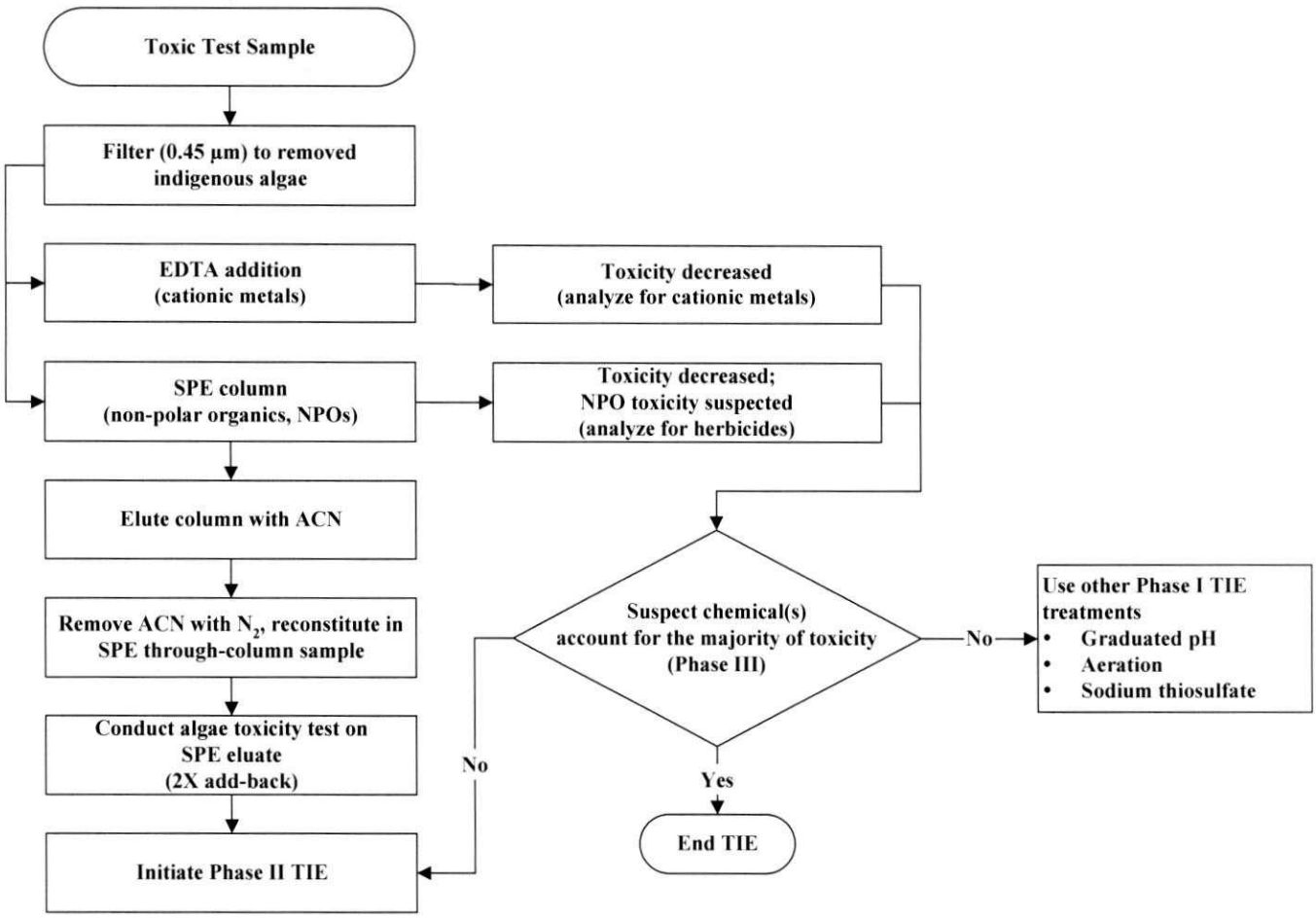
The purpose of the Phase I TIE is to identify the chemical class of the toxicant(s) in the test sample (USEPA 1991). The purpose of the Phase II TIE is to gain the identity of the material(s) responsible for the sample toxicity (USEPA 1993a). The purpose of the Phase III TIE is to determine if there is a robust relationship between the concentrations of the suspected toxicant(s) identified, and the amount of toxicity measured in the test sample (USEPA 1993b).

3.10.1 Algae Phase I TIEs

Algae Phase I TIEs included a baseline toxicity test, solid phase extraction (SPE) column treatment to identify non-polar organic chemicals (NPOs), ethylenediamine tetrachloroacetic acid (EDTA) addition to identify cationic metal toxicity, and EDTA addition to SPE-treated sample to determine the interaction between cationic chemicals and NPOs. The SPE column was eluted three times with 1-mL of acetonitrile (ACN), which was blown to dryness using a gentle stream of nitrogen. The ACN was removed from the eluate because algae are affected by even low concentrations of organic solvent (Miller et al, 2005). The eluate residue was reconstituted in the SPE through-column sample and added back to the sample at 2X or 4X. The algae Phase I TIE flow chart is shown in Figure 2 (Miller et al, 2005).

Administrative Record
Page 13185

Figure 2. Phase I TIE Flowchart Modified for Algae.

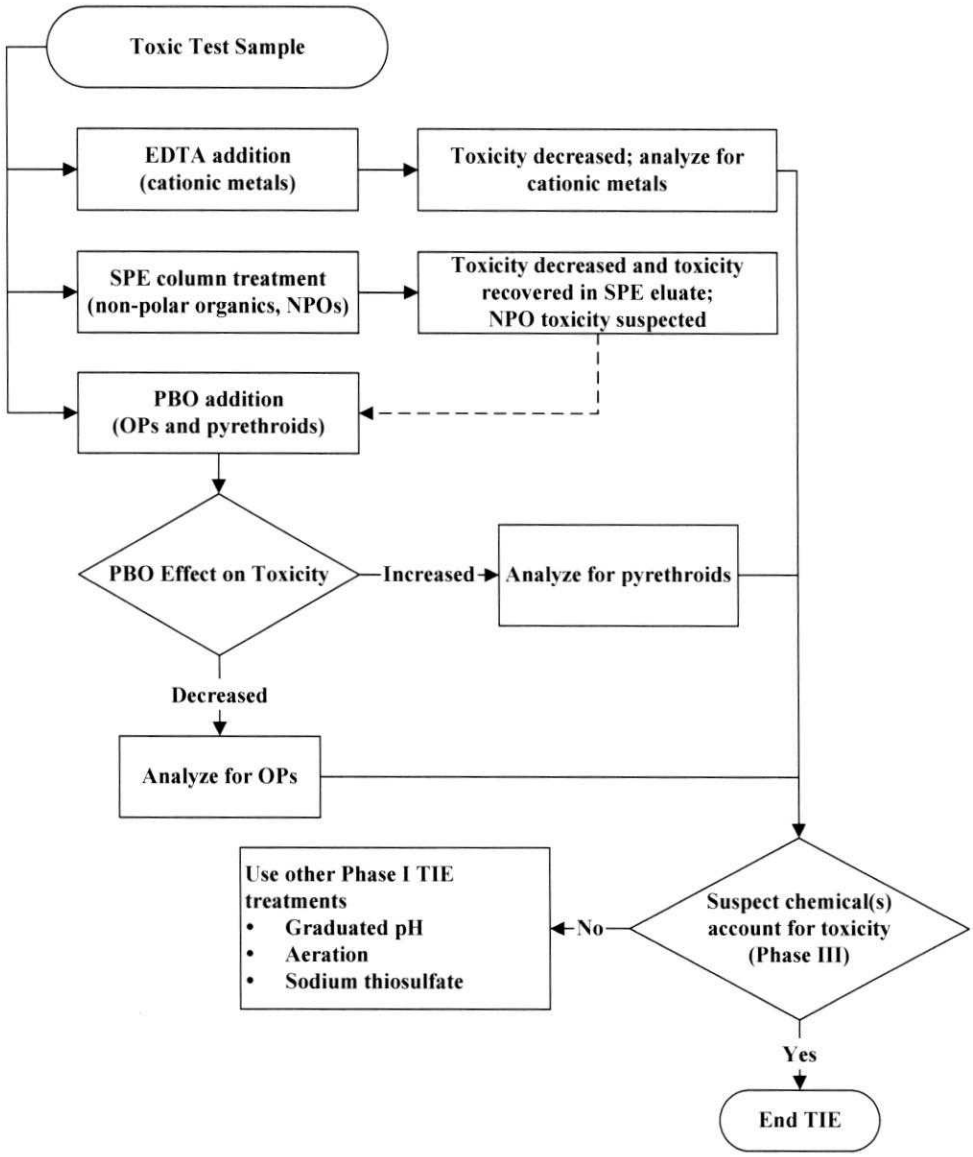


3.10.2 *C. dubia* and Fathead Minnow Phase I TIEs

The Phase I *C. dubia* and fathead minnow TIEs incorporated the same series of treatments as the algae, with the addition of a piperonyl butoxide (PBO) treatment. PBO binds *in vivo* with mixed-function oxidase enzymes that metabolize non-polar organic chemicals such as organophosphorous (OP) and pyrethroid insecticides. With OPs, PBO prevents the metabolism to their toxic oxone form, decreasing/preventing toxicity (Ankley et al, 1991). With pyrethroids, PBO prevents metabolism to less toxic forms, increasing/prolonging toxicity (Wheelock et al, 2004). The *C. dubia*/fathead minnow Phase I TIE flow chart is shown in Figure 3.

Administrative Record
Page 13186

Figure 3. Phase I TIE Flowchart for *C. dubia*.



3.10.3 Phase III TIEs

In the Phase III TIE, the sample toxic units (TUs; 100/ EC_{25}) measured in the dilution series toxicity test is compared with the TU calculated from the detected concentration of the suspect toxicants (predicted TUs = measured conc (µg/L)/suspect chemical EC_{25} or EC_{50}) (USPEA 1993b). If more than one suspect toxicant was present, the TUs were summed if there was evidence that they act jointly, e.g., diazinon and chlorpyrifos (Bailey et al, 1997). Although the USEPA TIE guidance has not established a minimum level of agreement between measured TU

Administrative Record
Page 13187

and predicted TU in a sample, these values should correlate, or the sample should be subjected to further Phase II TIE evaluation to identify additional toxicant(s).

4.0 RESULTS

4.1 Phase I TIEs Results

Phase I TIEs were conducted on samples that demonstrated ≥50% effect on the endpoint. TIE results for algae, *C. dubia* and fathead minnows are summarized in Tables 2A, 2B, 3, and 4, respectively.

Table 2A. Summary of Chronic Phase I Algae TIE: ESJ 08-01 TIE.

Test Sample (Sample ID) (Sample Date)	*Baseline Toxicity*	*Effect of TIE Treatment on Toxicity*			*Suspected Toxicants*	*Raw Data App. #*
		SPE Column[a]	*SPE Column Add-Back*[b]	*EDTA Addition*[c]		
Deadman's Creek @ Hwy 59 (535DMCAHF) (1/25/08)	Most toxicity lost (85% of control)	Marked reduction	Toxicity recovered	No effect	NPO(s)	I
Dry Creek @ Rd 18 (535XDCARE) (1/25/08)	No toxicity detected	n/a[d]	n/a	n/a	n/a	

a Sample treated with C-8 solid-phase (SPE) extraction column
b SPE column eluted and the eluate added back to the SPE through-column sample
c Sample amended with ethylenediaminetetraacetic acid (EDTA)
d n/a = not applicable since no toxicity was detected in the baseline test

The Deadman's Creek @ Hwy 59 sample exhibited a marked reduction in toxicity after SPE column treatment and toxicity was recovered in the SPE column eluate add-back, indicating NPO toxicity. EDTA addition had no effect on the toxicity, precluding cationic chemicals as a cause of toxicity. The Dry Creek @ Rd 18 sample did not exhibit toxicity in the TIE.

Administrative Record
Page 13188

Table 2B. Summary of Chronic Phase I Algae TIE: ESJ 08-02 TIE.

Test Sample (Sample ID) (Sample Date)	*Baseline Toxicity*	*Effect of TIE Treatment on Toxicity*				*Suspected Toxicants*	*Raw Data App. #*
		SPE Column[a]	*SPE Column Add-Back*[b]	*EDTA Addition*[c]	*SPE + EDTA*[d]		
Hatch Drain @ Tuolumne Rd (535XHDATR) (2/26/08)	70% of control	Marked reduction	Toxicity not recovered	Slight reduction	Reduction	NPO(s); cationic metals	II
Dry Creek @ Wellsford Rd (535XDCAWR) (2/26/08)	41% of control	Marked reduction	Toxicity recovered	Reduction	Marked reduction	NPO(s); cationic metals	
Deadman's Creek @ Gurr (535XDCAGR) (2/25/08)	No toxicity detected	n/a[e]	n/a	n/a	n/a	n/a	
Black Rascal Creek @ Yosemite Rd (535BRCAYR) (2/25/08)	No toxicity detected	n/a	n/a	n/a	n/a	n/a	
Prairie Flower Drain @ Crows Landing Rd (535XPFDCL) (2/26/08)	No toxicity detected	n/a	n/a	n/a	n/a	n/a	
Mustang Creek @ East Ave (535XMCAEA) (2/26/08)	No toxicity detected	n/a	n/a	n/a	n/a	n/a	
Westport Drain @ Vivian Rd (535XWDAVR) (2/26/08)	No toxicity detected	n/a	n/a	n/a	n/a	n/a	

a Sample treated with C-8 solid-phase (SPE) extraction column
b SPE column eluted and the eluate added back to the SPE through-column sample
c Sample amended with ethylenediaminetetraacetic acid (EDTA)
d EDTA added to the SPE through-column treatment
e n/a = not applicable since no toxicity was detected in the baseline test

The Hatch Drain TIE sample demonstrated a marked reduction in toxicity when treated with SPE, indicating the toxicity was caused by non-polar organic (NPO) chemicals. However, toxicity was not recovered in the SPE column add-back. EDTA addition resulted in a small reduction in toxicity, indicating that cationic metals had a minor role in the sample toxicity. The Dry Creek @ Wellsford Rd sample also exhibited a marked reduction in toxicity after treatment with SPE, and toxicity was recovered in the SPE eluate add-back. These results are consistent with NPO-caused toxicity. EDTA addition also reduced sample toxicity, indicating that cationic chemicals also had a role in the sample toxicity.

Administrative Record
Page 13189

The remaining six samples did not exhibit significant toxicity in the TIE baseline toxicity test sample, precluding identification of the chemical cause(s) of toxicity demonstrated in the initial toxicity test.

Table 3. Summary of Acute Phase I *C. dubia* TIE: ESJ 08-01 TIE.

Test Sample (Sample ID) (Sample Date)	*Baseline Toxicity[a] (TUa)*	*Effect of TIE Treatment on Toxicity*				*Suspected Toxicants*	*Raw Data App. #*
		SPE Column[b]	*SPE Column Add-Back[c]*	*PBO Addition[d]*	*EDTA Addition[e]*		
Merced River @ Santa Fe Dr (535XMRSFD) (1/24/08)	11.1	Toxicity eliminated	Toxicity recovered	Toxicity eliminated	No effect	OP insecticide(s)[f]	III
Mustang Creek @ East Ave (535XMCAEA) (1/24/08)	1.7	Toxicity eliminated	Toxicity recovered	Toxicity slightly increased	No effect	Pyrethroid insecticide(s)	IV
Highline Canal @ Lombardy Ave (535XHCALR) (1/24/08)	No toxicity detected	n/a[g]	Toxicity recovered	Toxicity increased	n/a	n/a	V
Miles Creek @ Reilly Rd (535XMCARR) (1/25/08)	No toxicity detected	n/a[g]	n/a	Toxicity increased (5.5 TUa)	n/a	n/a	VI

a Toxicity of baseline TIE sample (TUa = $100/EC_{50}$)
b Sample treated with C-8 solid-phase (SPE) extraction column
c SPE column eluted and the eluate added back to the SPE through-column sample
d Sample amended with piperonyl butoxide (PBO)
e Sample amended with ethylenediaminetetraacetic acid (EDTA)
f OP = metabolically-activated organophosphate insecticides (OP insecticides)
g n/a = not applicable since no toxicity was detected in the baseline test

The Merced River sample baseline toxicity test detected 11.1 TUa. The toxicity was eliminated by SPE column treatment and recovered in the SPE column add-back. PBO addition also prevented the toxicity. These results indicate that all the sample toxicity was caused by OP insecticide(s). EDTA addition had no effect on toxicity, precluding cationic chemical as a cause of toxicity.

The Mustang Creek sample had 1.7 TUa in the baseline toxicity test. Toxicity was eliminated by SPE treatment and recovered in the SPE eluate add-back. PBO addition increased the sample toxicity. These results are consistent with pyrethroid insecticide-caused toxicity.

The Highline Canal @ Lombardy Ave and Miles Creek samples did not exhibit toxicity in the baseline toxicity test. However, toxicity was detected in the SPE eluate 2X add-back and PBO

Administrative Record
Page 13190

addition increased toxicity. These results suggest that subtoxic concentrations of pyrethroid insecticides were present in these samples.

Table 4. Summary of Acute Phase I Fathead Minnow TIE: ESJ 08-01 TIE.

Test Sample (Sample ID) (Sample Date)	*Baseline Toxicity[a] (TUa)*	*Effect of TIE Treatment on Toxicity*				*Suspected Toxicants*	*Raw Data App. #*
		SPE Column[b]	*SPE Column Add-Back[c]*	*PBO Addition[d]*	*EDTA Addition[e]*		
Cottonwood Creek @ Rd 20 (545XCCART) (1/25/08)	No toxicity detected	n/a[f]	Toxicity recovered	n/a	n/a	n/a	VII

a Toxicity of baseline TIE sample (TUa = $100/EC_{50}$)
b Sample treated with C-8 solid-phase (SPE) extraction column
c SPE column eluted and the eluate added back to the SPE through-column sample
d Sample amended with piperonyl butoxide (PBO)
e Sample amended with ethylenediaminetetraacetic acid (EDTA)
f n/a = not applicable since no toxicity was detected in the baseline test

The Cottonwood Creek sample did not produce toxicity to the fathead minnows in the baseline toxicity test. However, toxicity was recovered in the SPE column eluate 2X add-back, indicating that NPO(s) were present in the sample at subtoxic concentrations.

4.2 Phase III TIEs

The purpose of the Phase III TIE is to determine if the suspect toxicant(s) account for the majority of toxicity detected in the sample. Information required to conduct the Phase III TIE process include: (a) TUa detected in the Phase I TIE baseline, if applicable, (b) concentration(s) of the suspect toxicant(s) detected in the sample, and (c) EC_{50} values for the suspect toxicant(s). In addition, the chemicals detected in the samples must be consistent with the Phase I TIE results. If any of this information is missing, the Phase III TIE analysis cannot be conducted. Results of the Phase III TIEs are summarized in Table 5A and 5B.

Administrative Record
Page 13191

Table 5A. Summary of Algae Phase III TIE Analyses.

Sample No. (Sample ID) (Sample Date)	*Sample Toxicity*	*Phase I Results* [a]	*Chemicals Detected*	*Conc. (µg/L)*	*EC_{50}* [b]	*TUc* [c]	*Total TUc* [d]	*Comments*
Deadman's Creek @ Hwy 59 (535DMCAHF) (1/25/08)	88% of control	NPO(s)	Diuron	6.2	2.4	2.5	2.8	Diuron responsible for the sample toxicity.
			Simazine	25	100	0.3		
Hatch Drain @ Tuolumne Rd (535XHDATR) (2/26/08)	70% of control	NPO(s)	NPOs not detected	--	--	--	--	Cationic metals accounted for 0.3 TUc (Attachment 1).
			Copper	4.4	43	0.1	0.3	
			Zinc	4.3	30	0.1		
			Nickel	3	45	0.1		
Dry Creek @ Wellsford Rd (535XDCAWR) (2/26/08)	41% of control	NPO(s)	Diuron	0.24	2.4	0.1	0.1	NPOs account for 0.1 TUc; metals account for 0.7 TUc (Attachment 1).
			Simazine	0.48	100	< 0.1		
			Copper	11	43	0.3	0.7	
			Zinc	14	45	0.3		
			Nickel	4.1	30	0.1		

a See Tables 2, 3 or 4
b USEPA ECOTOX database
c TUc = Concentration of chemicals detected / EC_{50} for species of interest
d Total TUc = sum of detected chemical TUs

Table 5B. Summary of *C. dubia* Phase III TIE Analyses.

Sample No. (Sample ID) (Sample Date)	*Sample Toxicity*	*Phase I Results* [a]	*Chemicals Detected*	*Conc. (µg/L)*	*EC_{50}* [b]	*TUa* [c]	*Total TUa* [d]	*Comments*
Merced River (535XMRSFD) (1/24/08)	11.1 TUa	OP insecticide(s)	Chlorpyrifos	0.59[e]	0.08	7.4	7.4	Chlorpyrifos accounts for the majority of the sample toxicity.
			Diazinon	0.01	0.30	< 0.1		
Mustang Creek (535XMCAEA) (1/24/08)	1.7 TUa	Pyrethroid insecticide(s)	Pyrethroids not detected					
			Simazine	17	100	0.2	0.2	Simazine accounts for 0.2 TUc.

a See Tables 2, 3 or 4
b USEPA ECOTOX database
c TUa =Concentration of chemicals detected / EC_{50} for species of interest
d Total TUs = sum of detected chemical TUs
e Enzyme-linked immunosorbant assay (ELISA) conducted at A-S detected 0.722 µg/L (9.0 TUa) of chlorpyrifos

Administrative Record
Page 13192

5.0 DISCUSSION

The Phase I TIEs conducted in this study employed treatments that are designed to identify toxicity caused by non-polar organics (NPOs) and cationic chemicals (including divalent metals). An additional treatment (PBO addition) was included for *C. dubia* and fathead minnows to identify toxicity caused by metabolically-activated organophosphate insecticide(s) (OPs). We believe this suite of treatments is optimal for identification of the chemical class of toxicants prevalent in agriculturally-dominated discharges. If the Phase I TIE treatments were successful in identifying the chemical class of the toxicant(s), a Phase III TIE analysis was conducted on the sample to confirm if the concentration(s) of the suspect toxicant(s) could, based on their EC/LC_{50} values, account for the level of toxicity detected in the sample. We relied primarily on the USEPA ECOTOX Data Base (http://cfpub.epa.gov/ecotox/) for the EC/LC_{50} information. Since this data base contains a range of values for each constituent of interest, we used the most conservative (lowest) value that appeared to be reasonably supported by the other values in the data set. Unfortunately, no toxicity information was available for some constituents, precluding the assessment of their role in the sample toxicity. This lack of toxicity information for chemicals of interest in ambient TIEs is problematic and we recommend that studies be conducted, under conditions used in these types of toxicity tests, to generate this information.

A total of 9 samples were subjected to Phase I TIEs with algae. The TIEs identified non-polar organic (NPO) toxicity in 3 samples while toxicity was not detected in TIEs with 6 samples. Phase III TIEs on these samples confirmed that the herbicide, diuron, was the cause of toxicity in the Deadman's Creek sample. Cationic metals were responsible for a portion of the toxicity exhibited by the Hatch Drain and Dry Creek @ Wellsford Rd samples.

A total of 4 Phase I TIEs were conducted with *C. dubia*. These TIEs indicated OPs were the cause of toxicity in 1 sample, pyrethroid insecticides were implicated in 1 sample, while toxicity was not detected in TIEs with the remaining 2 samples. *C. dubia* Phase III TIEs confirmed that the OP insecticide, chlorpyrifos, accounted for the majority of the high level of toxicity (11.1 TUa) detected in the Merced River sample, while pyrethroid insecticides were not detected in the Mustang Creek sample precluding them as a cause of the toxicity (1.7 TUa) measured in the sample.

The Cottonwood Creek sample that caused 55% mortality to fathead minnows was not toxic in the TIE.

Approved by/Issue Date: Jeff Miller 6/6/08

Jeff Miller, Ph.D., DABT

Administrative Record
Page 13193

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Administrative Record
Page 13194

ATTACHMENT 1

Summary of Algae Toxicity of Constituents Detected in TIE Samples

Sample No. (Sample ID) (Sample Date)	*Chemicals Detected*	*Conc. (µg/L)*	*EC_{50}[a] (µg/L)*	*TUc[b]*	*Total TUc[c]*
Hatch Drain @ Tuolumne Rd (535XHDATR) (2/26/08)	Arsenic	16	680	< 0.1	0.3
	Boron	170	n/a[d]	n/a	
	Copper	4.4	43	0.1	
	Lead	0.1	60	< 0.1	
	Nickel	4.3	30	0.1	
	Selenium	1	96000	< 0.1	
	Zinc	3	45	0.1	
Dry Creek @ Wellsford Rd (535XDCAWR) (2/26/08)	Diuron	0.24	2.4	< 0.1	< 0.1
	Simazine	0.48	25	< 0.1	
	Arsenic	0.8	690	< 0.1	
	Boron	21	n/a	n/a	
	Cadmium	0.05	23	< 0.1	
	Copper	11	43	0.3	
	Lead	1.8	60	< 0.1	
	Nickel	4.1	30	0.1	
	Selenium	0.46	96000	< 0.1	
	Zinc	14	45	0.3	

a USEPA ECOTOX database

b TUc = Concentration of chemicals detected / EC_{50} for species of interest

c Total TUs = sum of detected chemical TUs

d n/a = no toxicity information available for boron

Administrative Record
Page 13195

APPENDIX I

ALGAE PHASE I TIEs

ESJ 08-01 TIE
(1/24-25/08 Sample Date)

Deadman's Creek @ Hwy 59
Dry Creek @ Rd 18

Summary of Chronic Phase I Algae TIE on ESJ Deadman's Creek @ Hwy 59 1/25/08 Sample (535DMCAHF)

Treatment	*Conc. (%)*	*Absorbance @ 750 nm*	*Cells/mL (x 10^6) [a]*	*Comment*
Baseline	Lab Control 100	0.0920 0.0770	1.1656 0.9702	Slight reduction in cell growth compared with control (NOEC = 100%)
Baseline + 1 mg/L EDTA	EDTA Control 100	0.0610 0.0655	0.7618 0.8204	No improvement in cell growth
C-8 SPE Through-Column	Column Blank 100	0.1425 0.2390	1.8234 3.0804	Increased cell growth compared with untreated sample
C-8 SPE Column 4X Add-Back	Treatment Ctrl 4X add-back	0.0860 0.0020*	1.0874 0.0261	Toxicity amplified in 4X add-back

Sample Date: 1/25/08
Test Date: 2/2/08
a Cell number x 10^6 = 13.026 x absorbance @ 750 nm - 0.0328
* significantly different from control ($p<0.05$)

Conclusion:

Low level toxicity observed in TIE. Cell growth markedly improved by SPE treatment and toxicity was recovered in the SPE eluate. Non-polar organic toxicant(s) suspected.

Summary of Chronic Phase I Algae TIE on ESJ Dry Creek @ Rd 18 1/25/08 Sample (535XDCARE)

Treatment	*Conc. (%)*	*Absorbance @ 750 nm*	*Cells/mL (x 10^6)* [a]	*Comment*
Baseline	Lab Control	0.0920	1.1656	No toxicity detected in TIE
	100	0.2065	2.6571	
Baseline + 1 mg/L EDTA	EDTA Control	0.0610	0.7618	
	100	0.1670	2.1425	
C-8 SPE Through-Column	Column Blank	0.0985	1.2503	
	100	0.0880	1.1135	
C-8 SPE Column 4X Add-Back	Treatment Ctrl	0.0860	1.0874	
	4X add-back	0.0260*	0.3059	

Sample Date: 1/25/08
Test Date: 2/2/08

a Cell number x 10^6 = 13.026 x absorbance @ 750 nm - 0.0328

* significantly different from control ($p<0.05$)

Conclusion:

Sample toxicity was lost prior to or during the TIE, therefore none of the treatments provided any useful information regarding the cause(s) of toxicity detected in the initial toxicity test.

ESJ 08-01 TIE

Sample	Rep	Absorbance	Mean	Cell Number (13.026*abs-0.0328)	Mean	Cell Number x 10^6	Mean
Baseline Control	A	0.099		1.2568		1256774	
	B	0.085	0.0920	1.0744	1.1656	1074410	1165592
Dead Cr @ Hwy 59	A	0.072		0.9051		905072	
	B	0.082	0.0770	1.0353	0.9702	1035332	970202
EDTA Control	A	0.067		0.8399		839942	
	B	0.055	0.0610	0.6836	0.7618	683630	761786
EDTA	A	0.074		0.9311		931124	
	B	0.057	0.0655	0.7097	0.8204	709682	820403
Column blank	A	0.121		1.5433		1543346	
	B	0.164	0.1425	2.1035	1.8234	2103464	1823405
C-8	A	0.231		2.9762		2976206	
	B	0.247	0.2390	3.1846	3.0804	3184622	3080414
4X Add-back	A	0.002	0.002	0.0261	0.0261	26052	26052
Tx Control	A	0.086	0.086	1.0874	1.0874	1087436	1087436

Sample	Rep	Absorbance	Mean	Cell Number (13.026*abs-0.0328)	Mean	Cell Number x 10^6	Mean
Baseline Control	A	0.099		1.2568		1256774	
	B	0.085	0.0920	1.0744	1.1656	1074410	1165592
Dry Creek @ Rd 18	A	0.183		2.3510		2350958	
	B	0.230	0.2065	2.9632	2.6571	2963180	2657069
EDTA Control	A	0.067		0.8399		839942	
	B	0.055	0.0610	0.6836	0.7618	683630	761786
EDTA	A	0.155		1.9862		1986230	
	B	0.179	0.1670	2.2989	2.1425	2298854	2142542
Column blank	A	0.094		1.1916		1191644	
	B	0.103	0.0985	1.3089	1.2503	1308878	1250261
C-8	A	0.088		1.1135		1113488	
	B	0.088	0.0880	1.1135	1.1135	1113488	1113488
4X Add-back	A	0.026	0.026	0.3059	0.3059	305876	305876
Tx Control	A	0.086	0.0860	1.0874	1.0874	1087436	1087436

mr 6/2/08

Phytoplankton Test-Growth-Absorbance

Start Date:	2/2/2008	Test ID:	a1320801Ta	Sample ID:	DRY CREEK
End Date:	2/6/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-01 TIE: Algae Bioassay				

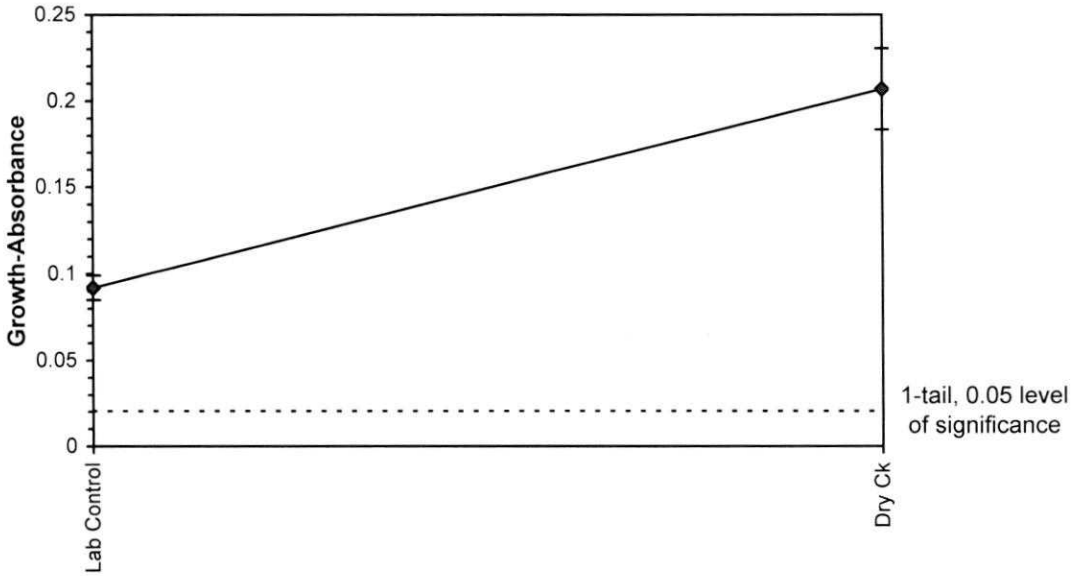
Conc-%	1	2
Lab Control	0.0990	0.0850
Dry Ck	0.1830	0.2300

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Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Lab Control	0.0920	1.0000	0.0920	0.0850	0.0990	10.760	2			
Dry Ck	0.2065	2.2446	0.2065	0.1830	0.2300	16.094	2	-4.670	2.920	0.0716

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
F-Test indicates equal variances (p = 0.37)	11.2704	16210.7		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences	0.0716	0.77825	0.01311	0.0006	0.04293	1, 2

Dose-Response Plot



Administrative Record
Page 13200

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Phytoplankton Test-Growth-Absorbance

Start Date:	2/2/2008	Test ID:	a1320801Td	Sample ID:	DRY CREEK
End Date:	2/6/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	EDTA
Sample Date:	1/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-01 TIE: Algae Bioassay				

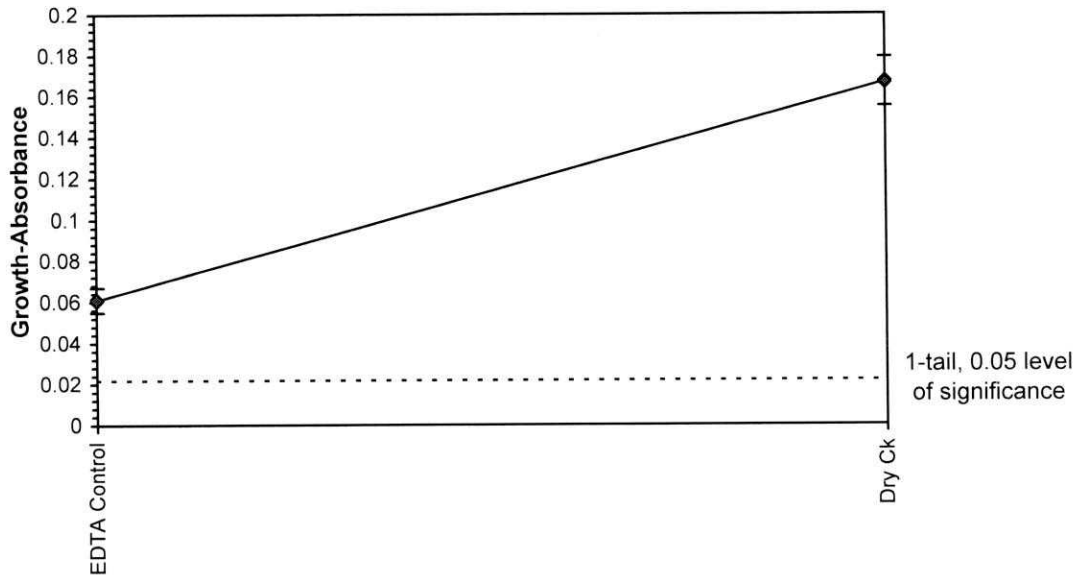
Conc-%	1	2
EDTA Control	0.0670	0.0550
Dry Ck	0.1550	0.1790

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
EDTA Control	0.0610	1.0000	0.0610	0.0550	0.0670	13.910	2			
Dry Ck	0.1670	2.7377	0.1670	0.1550	0.1790	10.162	2	-7.901	2.920	0.0392

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
F-Test indicates equal variances (p = 0.59)	4	16210.7		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences	0.03918	0.64222	0.01124	0.00018	0.01564	1, 2

Dose-Response Plot



Administrative Record
Page 13201

Reviewed by:

Phytoplankton Test-Growth-Absorbance

Start Date:	2/2/2008	Test ID:	a1320801Te	Sample ID:	DRY CREEK
End Date:	2/6/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	C-8 SPE
Sample Date:	1/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-01 TIE: Algae Bioassay				

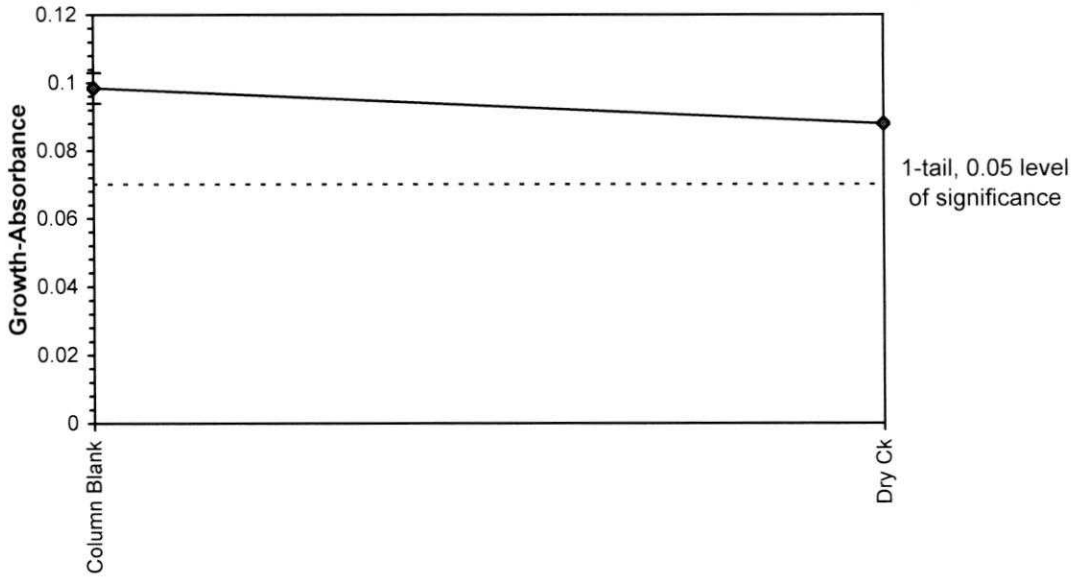
Conc-%	1	2
Column Blank	0.0940	0.1030
Dry Ck	0.0880	0.0880

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Column Blank	0.0985	1.0000	0.0985	0.0940	0.1030	6.461	2			
Dry Ck	0.0880	0.8934	0.0880	0.0880	0.0880	0.000	2	2.333	6.314	0.0284

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates no significant differences	0.02841	0.28845	0.00011	2E-05	0.14481	1, 2

Dose-Response Plot



Administrative Record
Page 13202
Reviewed by:

Phytoplankton Test-Growth-Absorbance

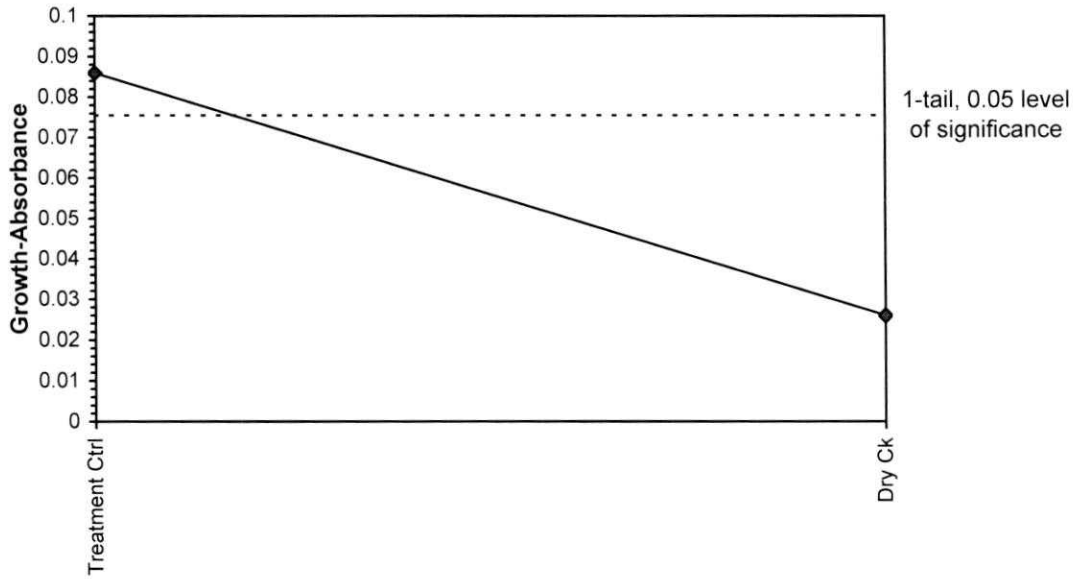
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End Date:	2/6/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	4X ADD-BACK
Sample Date:	1/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-01 TIE: Algae Bioassay				

Conc-%	1
Treatment Ctrl	0.0860
Dry Ck	0.0260

			Transform: Untransformed				
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N
Treatment Ctrl	0.0860	1.0000	0.0860	0.0860	0.0860	0.000	1
Dry Ck	0.0260	0.3023	0.0260	0.0260	0.0260	0.000	1

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Dose-Response Plot



ToxCalc v5.0.23
Administrative Record
Page 13203
Reviewed by:

Phytoplankton Test-Growth-Absorbance

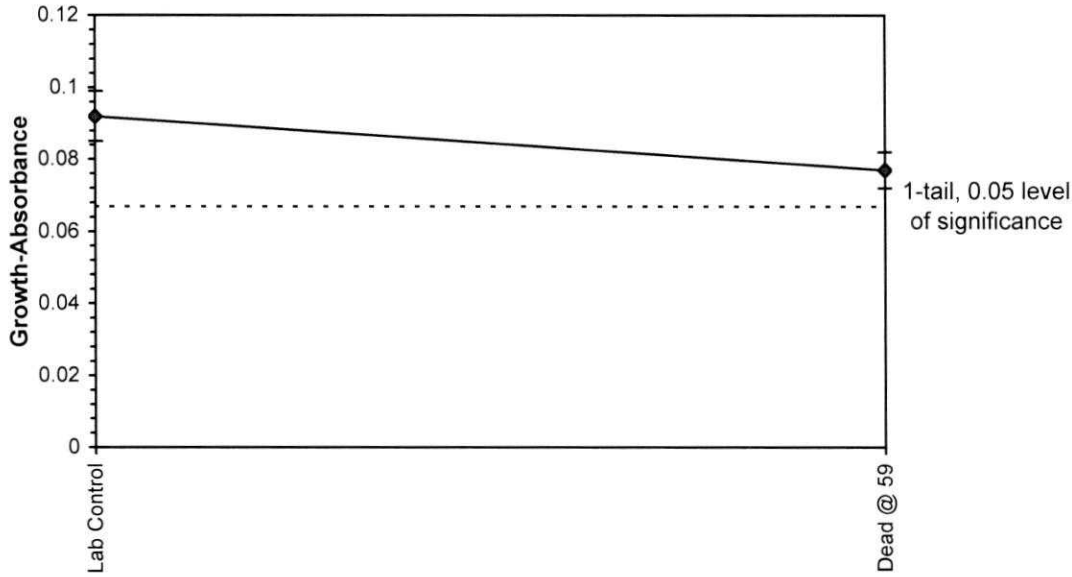
Start Date:	2/2/2008	Test ID:	a1320801Tb	Sample ID:	DEADMAN'S CREEK @ 59
End Date:	2/6/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-01 TIE: Algae Bioassay				

Conc-%	1	2
Lab Control	0.0990	0.0850
Dead @ 59	0.0720	0.0820

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Lab Control	0.0920	1.0000	0.0920	0.0850	0.0990	10.760	2			
Dead @ 59	0.0770	0.8370	0.0770	0.0720	0.0820	9.183	2	1.744	2.920	0.0251

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Normality of the data set cannot be confirmed						
F-Test indicates equal variances (p = 0.79)	1.96		16210.7			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	0.02512	0.27303	0.00023	7.4E-05	0.22333	1, 2

Dose-Response Plot



Administrative Record
Page 13204
Reviewed by:

Phytoplankton Test-Growth-Absorbance

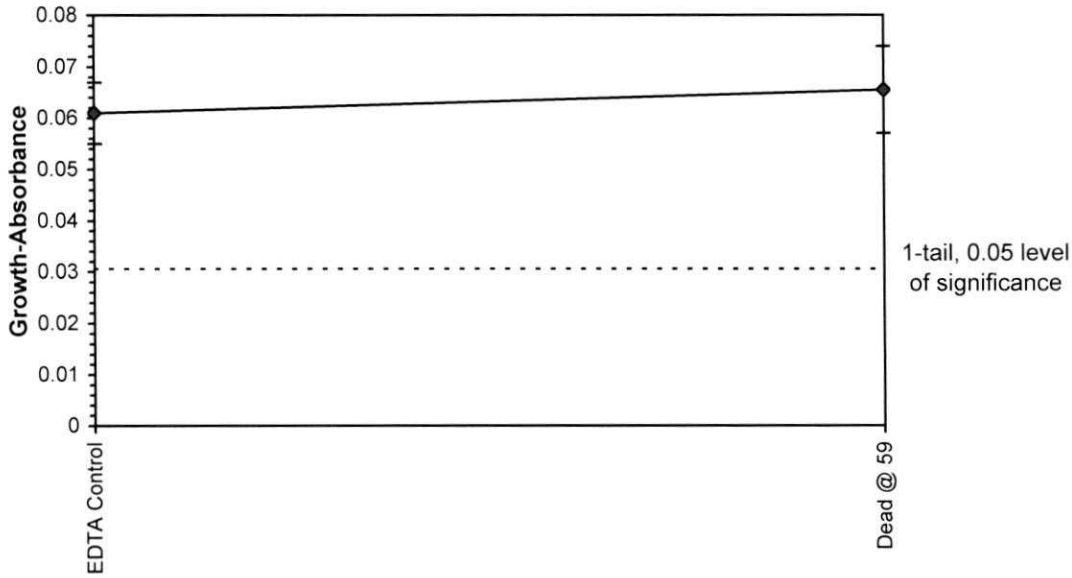
Start Date:	2/2/2008	Test ID:	a1320801Tc	Sample ID:	DEADMAN'S CREEK @ 59
End Date:	2/6/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	EDTA
Sample Date:	1/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-01 TIE: Algae Bioassay				

Conc-%	1	2
EDTA Control	0.0670	0.0550
Dead @ 59	0.0740	0.0570

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
EDTA Control	0.0610	1.0000	0.0610	0.0550	0.0670	13.910	2			
Dead @ 59	0.0655	1.0738	0.0655	0.0570	0.0740	18.352	2	-0.433	2.920	0.0304

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Normality of the data set cannot be confirmed						
F-Test indicates equal variances (p = 0.78)	2.00694		16210.7			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	0.03038	0.49804	2E-05	0.00011	0.70754	1, 2

Dose-Response Plot



CETIS v3.0.23

Administrative Record
Page 13205

Reviewed by:

Phytoplankton Test-Growth-Absorbance

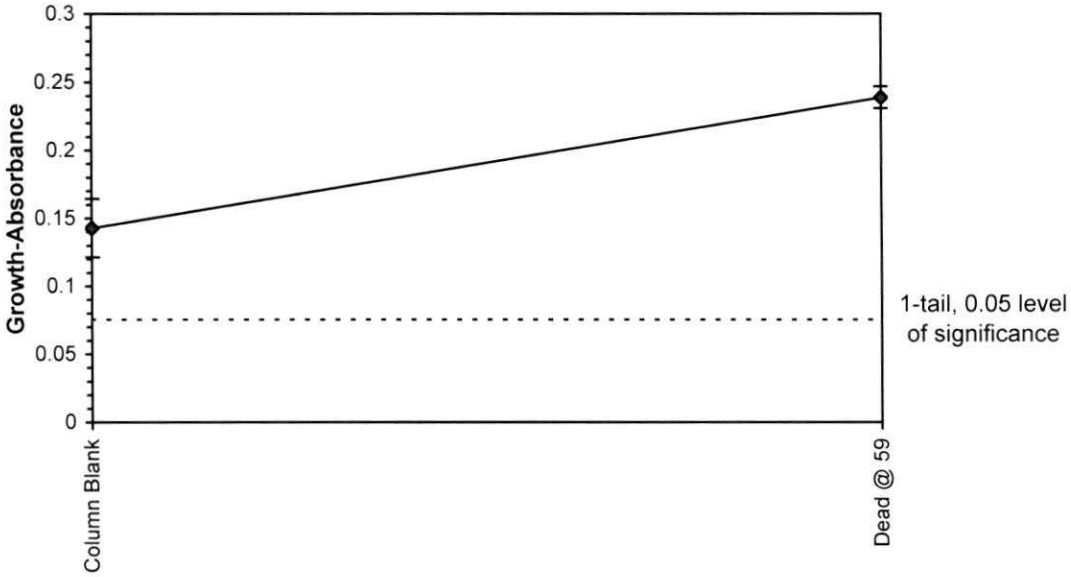
Start Date:	2/2/2008	Test ID:	a1320801Tf	Sample ID:	DEADMAN'S CREEK @ 59
End Date:	2/6/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	C-8 SPE
Sample Date:	1/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-01 TIE: Algae Bioassay				

Conc-%	1	2
Column Blank	0.1210	0.1640
Dead @ 59	0.2310	0.2470

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Column Blank	0.1425	1.0000	0.1425	0.1210	0.1640	21.337	2			
Dead @ 59	0.2390	1.6772	0.2390	0.2310	0.2470	4.734	2	-4.207	2.920	0.0670

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Normality of the data set cannot be confirmed						
F-Test indicates equal variances (p = 0.45)	7.22266		16210.7			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	0.06698	0.47007	0.00931	0.00053	0.05213	1, 2

Dose-Response Plot



Administrative Record
Page 13206

Reviewed by:

Phytoplankton Test-Growth-Absorbance

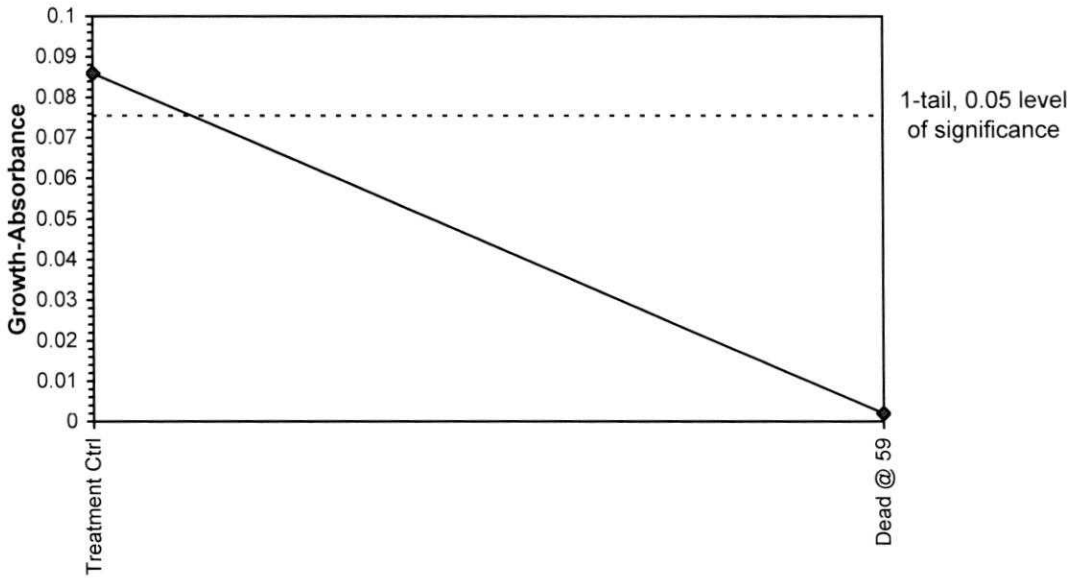
Start Date:	2/2/2008	Test ID:	a1320801Tg	Sample ID:	DEADMAN'S CREEK @ 59
End Date:	2/6/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	4X ADD-BACK
Sample Date:	1/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-01 TIE: Algae Bioassay				

Conc-%	1
Treatment Ctrl	0.0860
Dead @ 59	0.0020

			Transform: Untransformed				
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N
Treatment Ctrl	0.0860	1.0000	0.0860	0.0860	0.0860	0.000	1
Dead @ 59	0.0020	0.0233	0.0020	0.0020	0.0020	0.000	1

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Dose-Response Plot



Administrative Record
Page 13207
Reviewed by:

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-01B TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) without EDTA **BASELINE**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer					
Conc. (%)	Replicate	1	2	3	Mean
Control #1	A	~~0.0580.100~~	~~0.0580.099~~	~~0.0590.099~~	~~0.058~~ 0.099
	B	0.085	0.085	0.086	0.085
Dry Creek	A	0.184	0.183	0.181	0.183
	B	0.230	0.229	0.230	0.230
Deadman's Creek @ 59	A	0.073	0.072	0.071	0.072
	B	0.082	0.083	0.082	0.082
	A				
	B				
	A				
	B				
	A				
	B				
Ctrl #1 w/o	A	0.002	0.003	0.001	0.002
Dry Creek w/o	A	0.009	0.008	0.008	0.008
Dead @ 59 w/o	A	0.009	0.009	0.010	0.009
	A				
	A				
	A				

Technician: _____ Date: 02/06/08

Statistics File No.

ADMIN Error INC 02/06/08

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Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-01B TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) + **1 mg/L EDTA (AAM - EDTA)**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer					
Conc. (%)	Replicate	1	2	3	Mean
EDTA Control	A	0.067	0.067	0.067	0.067
	B	0.055	0.055	0.055	0.055
Dry Creek EDTA	A	0.152	0.155	0.156	0.155
	B	0.179	0.180	0.178	0.179
Deadman's Creek @ Hwy 59 EDTA	A	0.079	0.073	0.071	0.074
	B	0.057	0.058	0.057	0.057
EDTA Ctrl w/o	A	0.002	0.003	0.003	0.003
Dry Creek w/o	A	0.007	0.007	0.007	0.007
Dead @ 59 w/o	A	0.009	0.009	0.008	0.009

Technician: _____ Date: 02/04/08

Statistics File No.

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Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-01B TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer					
Conc. (%)	Replicate	1	2	3	Mean
Dry Creek Column Blank	A	0.094	0.093	0.094	0.094
	B	0.103	0.102	0.105	0.103
Dry Creek TC	A	0.087	0.088	0.091	0.088
	B	0.088	0.089	0.088	0.088
Dry Creek 4X Add-Back	A	0.027	0.027	0.024	0.026
	B				
Tx Control	A	0.087	0.085	0.086	0.086
	B				
Deadman's Creek @ 59 Column Blank	A	0.121	0.121	0.120	0.121
	B	0.164	0.164	0.164	0.164
Deadman's Creek @ Hwy 59 TC	A	0.231	0.231	0.231	0.231
	B	0.244	0.248	0.248	0.247
Deadman's Creek @ 59 4X Add-back	A	0.004	0.002	0.002	0.002
	B				

Technician: _____ Date: 02/04/08

Statistics File No.

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-01B TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer					
Conc. (%)	Replicate	1	2	3	Mean
Dry Creek Column Blank w/o	A	0.002	0.002	0.003	0.002
Dry Creek w/o	A	0.017	0.018	0.015	0.016
Dry Creek 4X Add-Back w/o	A	0.013	0.013	0.014	0.013
Tx Control w/o	A	0.005	0.004	0.004	0.004
Dead @ 59 Column Blank w/o	A	0.005	0.004	0.004	0.004
Deadman's Cr @ 59 w/o	A	0.008	0.008	0.009	0.008
Dead @ 59 4X Add-Back w/o	A	0.015	0.014	0.015	0.015

Technician: _____ Date: 02/06/08

Statistics File No.

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ALGAL BIOASSAY DATA SHEETS

1.0 TEST AND CLIENT INFORMATION

Test Number:	ESJ 08-01B TIE	Study Director:	J. L. Miller
Protocol No.:	EPA 821-R-02-013	Technician(s):	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) without EDTA		
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

2.0 TEST CONDITIONS & TEST SPECIES INFORMATION

Species	*Selenastrum capricornutum*	Temperature	25.0°C ± 1.0°C
Source	University of Texas (UTEX)	Agitation	100 RPM continuous
Media	EPA Algal Assay Media (AAM)	Lighting	400 ft candles
Innoculation	10,000 cells/mL		

Comments

3.0 DILUTION WATER INFORMATION

Dilution Water Source	D.O. (mg/L)	pH (units)	E. C. (µmhos)	Other	COMMENTS
R/O EPAMH	8.0	6.79	413		0.22 µm Metrigard vacuum filtered
Dry Creek @ Rd. 18	8.2	7.34	208		0.22 µm Metrigard vacuum filtered
Deadman's Creek @ Hwy 59	9.9/8.2	6.91	265		0.22 µm Metrigard vacuum filtered

4.0 PREPARATION OF EXPOSURE SOLUTIONS

Test Solution Conc.	Control	100							Comments
Sample (mL)	0	220							TECH: CY/NP
Dilution Water (mL)	220	0							TIME: 1100
TOTAL	220	220							

								Comments

Technician: _____ Date: 2/2/08

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ALGAL BIOASSAY DATA SHEETS

5.0 TEST INITIAITON

WITHOUT EDTA

	Sample	Counts		
	Isoton	21	22	22
Coulter Counter	Control	63	66	55
Background Check	Dry Creek @ Rd. 18	48	54	49
	Deadman's Creek @ Hwy 59	55	51	59

6.0 ALGAE COUNT

Replicate	Dilution Factor				Cell Counts			Mean
	Dil 1	Dil 2	Count	Factor	1	2	3	
1	0.25 mL	20 mL	0.5 mL	160:1	34255	33905	34078	34079
2	QS to							

Calculations:

Time of Inoculation: 1200

Target: 10,000 cells/mL test solution

Algal Stock Concentration:

34079 x 160 = 5.4526 x 10^6

Average cell count x Dilution Factor = cells/mL algal stock

Inoculation: 10,000 cells/mL solution x 250 mL test solution/concentration

5.4526 x 10^6 cells/mL algal stock

= 0.275 mL algal stock/conc. = 275 µL algal stock/conc.

Final Algal Density Check:

Time: 1310

	ID	Count 1	Count 2	Count 3	Dilution	Adj. Avg.
Flask #1	Ø-1 B	346	350	327	40:1	11200
Flask #2	Ø-2 A	344	320	318	40:1	10640
Flask #3	Dry B	317	294	341	40:1	10680
Flask #4	~~Dry~~ Dead A	339	289	294	40:1	10080
Flask #5						
Flask #6						
Flask #7						

② Entry error CM 2/2/08

Technician: [signature] Date: 2/2/08

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ALGAL BIOASSAY DATA SHEETS

6.0 Lab Notes

2/2/08

ESJ 08-01B TIE

96 Hr. Static Growth

Selenastrum capricornutum

Ambient Samples (012508)

Dry Creek @ Rd. 18 (545XDCARE)
Deadman's Creek @ Hwy 59 (535DMCAHF)

1.0 Stock Preparation

0.22 liters of Ambient Sample filtered through 0.22 µm Metrigard filter.
0.22 liters R/O EPAMH filtered through 0.22 µm Metrigard filter

2.0 Water Quality Measurement

Water quality of dilution and effluent measured after addition of EPA Algal Assay Media (AAM). Section 3.0, page 1

EPA Algal Assay Media Addition (Without EDTA)

Algal Assay Media prepared as per EPA 821-R-02-013; Section 14-Tables 1 and 2
Added 0.22 mL each of #1-5 EPA AAM to 0.22 L **Ambient Sample**
Added 0.22 mL each of #1-5 EPA AAM to 0.22 L R/O EPAMH; **Control Water**

Added 0.22 mL each of #1-5 EPA AAM to 0.22 L **C8 SPE Column Blank**
Added 0.22 mL each of #1-5 EPA AAM to 0.22 L **C8 SPE Through Column**
Added 0.1 mL each of #1-5 EPA AAM to 0.1 L **C8 SPE 2.5X Addback**

Added 0.22 mL each of #1-5 EPA AAM to 0.22 L **EDTA Column Blank**
Added 0.22 mL each of #1-5 EPA AAM to 0.22 L **Ambient Sample + 1 mg/L EDTA**

Stirred samples on magnetic stir plates for apprx. 15 minutes.

4.0 Background Counts

Particle background counts measured with electronic particle counter - Coulter Counter, model ZBI.
Counts recorded on section 2.0, page 2.

5.0 Exposure Series Preparation and Algal Inoculation

All concentrations prepared as described in secton 4.0, page 1, and held in 125 mL solution beakers .
All solutions were inoculated with pure culture algal stock in log phase growth to achieve a concentration of 10,000 cells/mL, calculations in secton 6.0 page 2. All solutions thoroughly stirred. Divided the 150 mL solution beaker into 3-50 mL aliquots and distributed into flasks A, B and C. Placed all flasks randomly on a shaker table with 100 rpm continous rotation in environmental chamber (continuous light at 25 °C ± 1 °C)
All flasks randomly rotated twice daily.

Technician: _____ Date: 2/2/08

LABORATORY NOTES

1/31/08 S. capricornutum
Init: 1/31/08 from 3x
Init: 8/9/07 from UTEX1007 Stock ~~+x~~

Day 0 1/31/08 BES

Background: 18, 18, 18	$\bar{x}$	Dil	cell/ml
1X: 4486, 4723, 4747	4752	160:1	07.6032×10^6
2X: 7856, 7869, 7574	7766	↓	1.2426×10^6
3X: 11734, 11597, 11753	11,695	↓	1.8711×10^6

Day 1 2/1/08 CY

Background: 9, 13, 18	$\bar{x}$	dil	cells/ml	% Improvement
1x 6316, 6540, 6386	6414	160:1	1.0262×10^6	35%
2x 11707, 13676, 11629	12337	↓	1.9739×10^6	59%
3x 15220, 14872, 14943	15012	↓	2.4019×10^6	28%

Day 2 2/2/08 CY

Background 18, 9, 13	$\bar{x}$	dil:	cells/mL	% Improvement
1x 26214, 25657, 27267	26379	160:1	4.2197×10^6	311%
2x 34255, 33905, 34078	34079	↓	5.4526×10^6	176%
3x 35976, 35804, 36463	36081	↓	5.7730×10^6	140%

Used 2x P.C. to start EST TIE Algae tests

Technician: _____ Date: _____

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) without EDTA C-8 SPE + Add-Back		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

	OBSERVATIONS Day (0) Date: 2/2/08					96 Hour Obsv.			
Test Conc (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Dry Creek Column Blank	25	9.9	①~~6.10~~ 7.09		410	24	8.2	7.94	432
Dry Creek	25	8.2	7.37		208	24	8.1	8.18	226
Dry Creek 4X Add-back	25	8.1	7.29		204	—	—	—	—
Tx Control	25	8.5	7.24		399	—	—	—	—
Dead @ 59 Column Blank w/o	25	7.9	6.10		408	24	8.2	8.05	422
Deadman's @ 59 w/o	25	8.2	6.99		263	24	8.2	8.19	278
Dead @ 59 4X Add-Back w/o	25	8.1	①~~6.99~~ 7.20		①~~263~~ 260	—	—	—	—
						02/06/08 MC			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① Entry error NP 2/2/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Control water ID =

All surface waters filtered through a 60 µm screen daily

Technician: Norm Ponferrada Date: 2/2/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) without EDTA **BASELINE**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

	OBSERVATIONS Day (0) Date: 2/2/08					96 Hour Obsv.			
Test Conc (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Control #1	25	8.0	6.79		413	24	8.3	777	437
Dry Creek	25	8.2	7.34		208	24	8.3	7.49	225
Deadman's @ 59	25	9.9/8.2	6.91		263	24	8.2	7.84	274
						02/06/08 mc			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① Desaturated @ 1/2/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Control water ID = R/O EPA MH #033

All surface waters filtered through a 60 µm screen daily

Technician: Jonny Ponferrada Date: 2/2/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) + 1 mg/L EDTA (AAM - EDTA)		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

	OBSERVATIONS Day (0) Date: 2/2/08					96 Hour Obsv.			
Test Conc (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
EDTA Control	25	8.2	6.98		400	24	8.3	8.09	438
Dry Creek	25	8.1	7.29		202	24	8.3	8.26	218
Deadman's @ 59	25	10.0/8.2	6.55		261	24	8.1	7.99	439
						02/06/08 MC			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ODesaturated before use NP 2/2/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Control water ID = RO EPAMH#073

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 2/2/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

	Day 1				Day 2				Day 3			
Samples Conc.	Temp.	D.O.*	pH^^	Cond.^	Temp	D.O.*	pH^^	Cond.^	Temp.	D.O.*	pH^^	Cond.^
Dry Creek Column Blank	24	8.6	7.55	402	24	8.8	~~8.36~~ 8.26 ©	423	24	8.7	8.63	435
Dry Creek	24	8.2	7.64	214	24	8.0	8.24	223	24	8.1	8.66	226
Dry Creek 4X Add-back	—	—	—	—	—	—	—	—	—	—	—	—
Tx Control	© ~~8.5~~	© ~~7.1~~	© ~~7.69~~	© ~~374~~	—	—	—	—	—	—	—	—
Dead @ 59 Column Blank w/o	24	8.6	7.73	379	24	8.9	8.16	422	24	8.5	8.45	429
Deadman's @ 59 w/o	24	8.4	7.69	396	24	8.3	8.24	272	24	8.2	8.48	280
Dead @ 59 4X Add-Back w/o	—	—	—	—	—	—	—	—	—	—	—	—
	NP 2/3/08				BES 2/4/08				BES 2/5/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: © ENTRY ERROR NP 2/3/08
© entry error BES 2/4/08

Water Quality taken in "C" replicate

EPA Algal Assay Media (AAM) Without EDTA

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) + **1 mg/L EDTA (AAM - EDTA)**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

	Day 1				Day 2				Day 3			
Samples Conc.	Temp.	D.O.*	pH^^	Cond.^	Temp	D.O.*	pH^^	Cond.^	Temp.	D.O.*	pH^^	Cond.^
EDTA Control	24	8.5	7.74	386	24	~~8.6~~ 8.4	8.18	412	24	8.2	8.41	436
Dry Creek	24	8.1	7.90	202	24	~~8.3~~ 8.3	8.27	~~217~~	24	8.1	8.36	214
Deadman's @ 59	24	8.2	7.65	296	24	~~8.5~~ 8.3	8.17	~~278~~	24	8.0	8.23	278
	NP 2/3/08				BES 2/4/08				BES 2/5/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: Dentry error BES 2/4/08

Water Quality taken in "C" replicate

EPA Algal Assay Media (AAM) Without EDTA

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (012508) without EDTA **BASELINE**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	February 2, 2008	Termination Date:	February 6, 2008

	Day 1				Day 2				Day 3			
Samples Conc.	Temp.	D.O.*	pH^^	Cond.^	Temp	D.O.*	pH^^	Cond.^	Temp.	D.O.*	pH^^	Cond.^
Control	24	8.1	6.81	409	25	8.3	8.18	411	24	8.0	8.22	415
Dry Creek	25	8.2	7.39	200	24	8.2	8.30	215	24	7.9	8.36	215
Deadmans @ 59	25	8.2	6.81	261	25	~~8.4~~ 8.4	8.13	274	24	7.9	8.19	272
	NP 2/3/08				BES 2/4/08				BES 2/5/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① entry error BES 2/4/08

Water Quality taken in "C" replicate

EPA Algal Assay Media (AAM) Without EDTA

APPENDIX II

ALGAE PHASE I TIEs

ESJ 08-02 TIE
(2/25-26/08 Sample Date)

Hatch Drain @ Tuolomne Rd
Dry Creek @ Wellsford Rd
Deadman's Creek @ Gurr
Black Rascal Creek @ Yosemite Rd
Prairie Flower Drain @ Crows Landing Rd
Mustang Creek @ East Ave
Westport Drain @ Vivian Rd

Summary of Chronic Phase I Algae TIE on ESJ Hatch Drain 2/26/08 Sample (535XHDATR)

Treatment	*Conc. (%)*	*Absorbance @ 750 nm*	*Cells/mL (x 10^6) [a]*	*Comment*
Baseline	Lab Control 100	0.0240 0.0170	0.2798 0.1886	Test sample reduced algal growth by 30% compared with the lab control
Baseline + 1 mg/L EDTA	EDTA Control 100	0.0955 0.0335*	1.2112 0.4036	EDTA slightly improved cell growth
C-8 SPE Through-Column	Column Blank 100 2X add-back	0.0660 0.0715 0.1485	0.8269 0.8986 1.9016	SPE column treatment greatly improved algal cell growth compared with the untreated effluent sample; toxicity was not recovered from the 2X add-back
C-8 SPE + EDTA	Column Blank 100	0.0660 0.0550	0.8269 0.6836	The combined SPE/EDTA treatment also improved algal cell growth.

Sample Date: 2/26/08
Test Date: 3/11/08
a Cell number x 10^6 = 13.026 x absorbance @ 750 nm - 0.0328
* significantly different from control ($p<0.05$)

Conclusion:

The sample toxicity was caused by one or more non-polar organics and cationic metals.

Summary of Chronic Phase I Algae TIE on ESJ Dry Creek @ Wellsford 2/26/08 Sample (535XDCAWR)

Treatment	*Conc. (%)*	*Absorbance @ 750 nm*	*Cells/mL (x 10^6) [a]*	*Comment*
Baseline	Lab Control 100	0.0240 0.0100*	0.2798 0.0975	The test sample reduced algal growth by 58% compared with the lab control
Baseline + 1 mg/L EDTA	EDTA Control 100	0.0955 0.0830	1.2112 1.0484	EDTA improved algal growth compared with the test sample
C-8 SPE Through-Column	Column Blank 100 2X add-back	0.0480 0.1300 0.0120	0.5924 1.6606 0.1235	SPE treatment markedly improved algal growth compared with the untreated effluent sample; some toxicity was recovered in the 2X add-back
C-8 SPE + EDTA	Column Blank 100	0.0480 0.1170	0.5924 1.4912	The combined SPE and EDTA treatment markedly improved algal growth

Sample Date: 2/26/08
Test Date: 3/11/08
a Cell number x 10^6 = 13.026 x absorbance @ 750 nm - 0.0328
* significantly different from control ($p<0.05$)

Conclusion:

The sample toxicity was caused by one or more non-polar organic chemicals and cationic metals.

Summary of Chronic Phase I Algae TIE
on ESJ Deadman's Creek @ Gurr 2/25/08 Sample
(535XDCAGR)

Treatment	*Conc. (%)*	*Absorbance @ 750 nm*	*Cells/mL (x 10^6) [a]*	*Comment*
Baseline	Lab Control	0.0240	0.2798	No toxicity detected in TIE
	100	0.0500	0.6185	
Baseline + 1 mg/L EDTA	EDTA Control	0.0955	1.2112	
	100	0.1300	1.6606	
C-8 SPE Through-Column	Column Blank	0.0320	0.3840	
	100	0.0905	1.1461	
	2X add-back	0.0475	0.5859	
C-8 SPE + EDTA	Column Blank	0.0320	0.3840	
	100	0.1375	1.7583	

Sample Date: 2/25/08
Test Date: 3/11/08
a Cell number x 10^6 = 13.026 x absorbance @ 750 nm - 0.0328
* significantly different from control ($p<0.05$)

Conclusion:

Sample toxicity was lost prior to or during the TIE, therefore none of the treatments provided any useful information regarding the cause(s) of toxicity detected in the initial toxicity test.

Summary of Chronic Phase I Algae TIE on ESJ Black Rascal Creek 2/25/08 Sample (535BRCAYR)

Treatment	*Conc. (%)*	*Absorbance @ 750 nm*	*Cells/mL (x 10^6) [a]*	*Comment*
Baseline	Lab Control	0.0240	0.2798	No toxicity detected in TIE
	100	0.1870	2.4031	
Baseline + 1 mg/L EDTA	EDTA Control	0.0955	1.2112	
	100	0.2085	2.6831	
C-8 SPE Through-Column	Column Blank	0.0225	0.2603	
	100	0.0460	0.5664	
	2X add-back	0.1470	1.8820	
C-8 SPE + EDTA	Column Blank	0.0225	0.2603	
	100	0.1175	1.4978	

Sample Date: 2/25/08
Test Date: 3/11/08
a Cell number x 10^6 = 13.026 x absorbance @ 750 nm - 0.0328
* significantly different from control ($p<0.05$)

Conclusion:

Sample toxicity was lost prior to or during the TIE, therefore none of the treatments provided any useful information regarding the cause(s) of toxicity detected in the initial toxicity test.

Summary of Chronic Phase I Algae TIE on ESJ Prairie Flower Drain 2/26/08 Sample (535XPFDCL)

Treatment	*Conc. (%)*	*Absorbance @ 750 nm*	*Cells/mL (x 10^6) [a]*	*Comment*
Baseline	Lab Control 100	0.0240 0.0810	0.2798 1.0223	No toxicity detected in TIE
Baseline + 1 mg/L EDTA	EDTA Control 100	0.0955 0.0875	1.2112 1.1070	
C-8 SPE Through-Column	Column Blank 100 2X add-back	0.0290 0.0590 0.0175	0.3450 0.7357 0.1952	
C-8 SPE + EDTA	Column Blank 100	0.0290 0.0695	0.3450 0.8725	

Sample Date: 2/26/08
Test Date: 3/11/08
a Cell number x 10^6 = 13.026 x absorbance @ 750 nm - 0.0328
* significantly different from control ($p<0.05$)

Conclusion:

Sample toxicity was lost prior to or during the TIE, therefore none of the treatments provided any useful information regarding the cause(s) of toxicity detected in the initial toxicity test.

Summary of Chronic Phase I Algae TIE on ESJ Mustang Creek 2/26/08 Sample (535XMCAEA)

Treatment	*Conc. (%)*	*Absorbance @ 750 nm*	*Cells/mL (x 10^6) [a]*	*Comment*
Baseline	Lab Control	0.0240	0.2798	No toxicity detected in TIE
	100	0.0950	1.2047	
Baseline + 1 mg/L EDTA	EDTA Control	0.0955	1.2112	
	100	0.1295	1.6541	
C-8 SPE Through-Column	Column Blank	0.0740	0.9311	
	100	0.1885	2.4226	
	2X add-back	0.0320	0.3840	
C-8 SPE + EDTA	Column Blank	0.0740	0.9311	
	100	0.0625	0.7813	

Sample Date: 2/26/08
Test Date: 3/11/08

a Cell number x 10^6 = 13.026 x absorbance @ 750 nm - 0.0328

* significantly different from control ($p<0.05$)

Conclusion:

Sample toxicity was lost prior to or during the TIE, therefore none of the treatments provided any useful information regarding the cause(s) of toxicity detected in the initial toxicity test.

Summary of Chronic Phase I Algae TIE on ESJ Westport Drain 2/26/08 Sample (535XWDAVR)

Treatment	*Conc. (%)*	*Absorbance @ 750 nm*	*Cells/mL (x 10^6)* [a]	*Comment*
Baseline	Lab Control 100	0.0240 0.0225	0.2798 0.2603	The sample reduced algal growth by 6%, which was not significantly different than the lab control
Baseline + 1 mg/L EDTA	EDTA Control 100	0.0955 0.0325*	1.2112 0.3905	No toxicity detected in TIE
C-8 SPE Through-Column	Column Blank 100 2X add-back	0.0810 0.0240* 0.0715	1.0223 0.2798 0.8986	
C-8 SPE + EDTA	Column Blank 100	0.0810 0.0295	1.0223 0.3515	

Sample Date: 2/26/08
Test Date: 3/11/08

a Cell number x 10^6 = 13.026 x absorbance @ 750 nm - 0.0328

* significantly different from control ($p<0.05$)

Conclusion:

Sample toxicity was lost prior to or during the TIE, therefore none of the treatments provided any useful information regarding the cause(s) of toxicity detected in the initial toxicity test.

08-02 TIE

Sample	Rep	Absorbance	Mean	Cell Number (13.026*abs-0.0328)	Mean	Cell Number x 10^6	Mean
Baseline	A	0.021		0.2407		240746	
	D	0.027	0.0240	0.3189	0.2798	318902	279824
Deadmans Cr @ Gurr	A	0.058		0.7227		722708	
	D	0.042	0.0500	0.5143	0.6185	514292	618500
EDTA Control	A	0.092		1.1656		1165592	
	D	0.099	0.0955	1.2568	1.2112	1256774	1211183
EDTA	A	0.142		1.8169		1816892	
	D	0.118	0.1300	1.5043	1.6606	1504268	1660580
Column blank	A	0.026		0.3059		305876	
	D	0.038	0.0320	0.4622	0.3840	462188	384032
C-8	A	0.071		0.8920		892046	
	D	0.110	0.0905	1.4001	1.1461	1400060	1146053
2X Add-back	A	0.040		0.4882		488240	
	D	0.055	0.0475	0.6836	0.5859	683630	585935
C8 + EDTA	A	0.150		1.9211		1921100	
	D	0.125	0.1375	1.5955	1.7583	1595450	1758275
Baseline	A	0.021		0.2407		240746	
	D	0.027	0.0240	0.3189	0.2798	318902	279824
Black Rascal Cr	A	0.205		2.6375		2637530	
	D	0.169	0.1870	2.1686	2.4031	2168594	2403062
EDTA Control	A	0.092		1.1656		1165592	
	D	0.099	0.0955	1.2568	1.2112	1256774	1211183
EDTA	A	0.201		2.5854		2585426	
	D	0.216	0.2085	2.7808	2.6831	2780816	2683121
Column blank	A	0.023		0.2668		266798	
	D	0.022	0.0225	0.2538	0.2603	253772	260285
C-8	A	0.034		0.4101		410084	
	D	0.058	0.0460	0.7227	0.5664	722708	566396
2X Add-back	A	0.136		1.7387		1738736	
	D	0.158	0.1470	2.0253	1.8820	2025308	1882022
C8 + EDTA	A	0.140		1.7908		1790840	
	D	0.095	0.1175	1.2047	1.4978	1204670	1497755
Baseline	A	0.021		0.2407		240746	
	D	0.027	0.0240	0.3189	0.2798	318902	279824
Prairie Flower Dr	A	0.097		1.2307		1230722	
	D	0.065	0.0810	0.8139	1.0223	813890	1022306
EDTA Control	A	0.092		1.1656		1165592	
	D	0.099	0.0955	1.2568	1.2112	1256774	1211183
EDTA	A	0.087		1.1005		1100462	
	D	0.088	0.0875	1.1135	1.1070	1113488	1106975
Column blank	A	0.037		0.4492		449162	
	D	0.021	0.0290	0.2407	0.3450	240746	344954
C-8	A	0.067		0.8399		839942	
	D	0.051	0.0590	0.6315	0.7357	631526	735734
2X Add-back	A	0.018		0.2017		201668	
	D	0.017	0.0175	0.1886	0.1952	188642	195155
C8 + EDTA	A	0.059		0.7357		735734	
	D	0.080	0.0695	1.0093	0.8725	1009280	872507

6/2/08

Baseline	A	0.021		0.2407		240746	
	D	0.027	0.0240	0.3189	0.2798	318902	279824
Mustang Cr	A	0.098		1.2437		1243748	
	D	0.092	0.0950	1.1656	1.2047	1165592	1204670
EDTA Control	A	0.092		1.1656		1165592	
	D	0.099	0.0955	1.2568	1.2112	1256774	1211183
EDTA	A	0.119		1.5173		1517294	
	D	0.140	0.1295	1.7908	1.6541	1790840	1654067
Column blank	A	0.063		0.7878		787838	
	D	0.085	0.0740	1.0744	0.9311	1074410	931124
C-8	A	0.201		2.5854		2585426	
	D	0.176	0.1885	2.2598	2.4226	2259776	2422601
2X Add-back	A	0.032		0.3840		384032	
	D	0.032	0.0320	0.3840	0.3840	384032	384032
C8 + EDTA	A	0.068		0.8530		852968	
	D	0.057	0.0625	0.7097	0.7813	709682	781325
Baseline	A	0.021		0.2407		240746	
	D	0.027	0.0240	0.3189	0.2798	318902	279824
Hatch Dr	A	0.023		0.2668		266798	
	D	0.011	0.0170	0.1105	0.1886	110486	188642
EDTA Control	A	0.092		1.1656		1165592	
	D	0.099	0.0955	1.2568	1.2112	1256774	1211183
EDTA	A	0.033		0.3971		397058	
	D	0.034	0.0335	0.4101	0.4036	410084	403571
Column blank	A	0.074		0.9311		931124	
	D	0.058	0.0660	0.7227	0.8269	722708	826916
C-8	A	0.078		0.9832		983228	
	D	0.065	0.0715	0.8139	0.8986	813890	898559
2X Add-back	A	0.150		1.9211		1921100	
	D	0.147	0.1485	1.8820	1.9016	1882022	1901561
C8 + EDTA	A	0.053		0.6576		657578	
	D	0.057	0.0550	0.7097	0.6836	709682	683630
Baseline	A	0.021		0.2407		240746	
	D	0.027	0.0240	0.3189	0.2798	318902	279824
Westport Dr	A	0.018		0.2017		201668	
	D	0.027	0.0225	0.3189	0.2603	318902	260285
EDTA Control	A	0.092		1.1656		1165592	
	D	0.099	0.0955	1.2568	1.2112	1256774	1211183
EDTA	A	0.036		0.4361		436136	
	D	0.029	0.0325	0.3450	0.3905	344954	390545
Column blank	A	0.074		0.9311		931124	
	D	0.088	0.0810	1.1135	1.0223	1113488	1022306
C-8	A	0.023		0.2668		266798	
	D	0.025	0.0240	0.2929	0.2798	292850	279824
2X Add-back	A	0.076		0.9572		957176	
	D	0.067	0.0715	0.8399	0.8986	839942	898559
C8 + EDTA	A	0.029		0.3450		344954	
	D	0.030	0.0295	0.3580	0.3515	357980	351467

6/2/08

Baseline	A	0.021		0.2407		240746	
	D	0.027	0.0240	0.3189	0.2798	318902	279824
Dry Cr @ Wellsford	A	0.013		0.1365		136538	
	D	0.007	0.0100	0.0584	0.0975	58382	97460
EDTA Control	A	0.092		1.1656		1165592	
	D	0.099	0.0955	1.2568	1.2112	1256774	1211183
EDTA	A	0.096		1.2177		1217696	
	D	0.070	0.0830	0.8790	1.0484	879020	1048358
Column blank	A	0.043		0.5273		527318	
	D	0.053	0.0480	0.6576	0.5924	657578	592448
C-8	A	0.123		1.5694		1569398	
	D	0.137	0.1300	1.7518	1.6606	1751762	1660580
2X Add-back	A	0.016		0.1756		175616	
	D	0.008	0.0120	0.0714	0.1235	71408	123512
C8 + EDTA	A	0.116		1.4782		1478216	
	D	0.118	0.1170	1.5043	1.4912	1504268	1491242

kkm 6/2/08

Phytoplankton Test-Growth-Absorbance

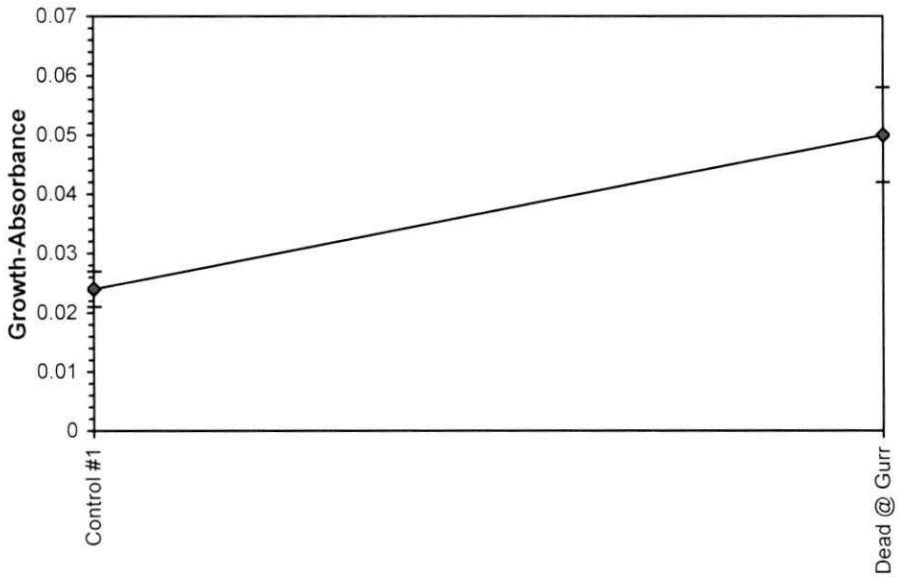
Start Date:	3/11/2008	Test ID:	a1320802Ta	Sample ID:	DEADMAN'S CREEK @ GURR
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	2/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

Conc-%	1	2
Control #1	0.0210	0.0270
Dead @ Gurr	0.0580	0.0420

			Transform: Untransformed						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control #1	0.0240	1.0000	0.0240	0.0210	0.0270	17.678	2			
Dead @ Gurr	0.0500	2.0833	0.0500	0.0420	0.0580	22.627	2	-3.043	2.920	0.0249

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Normality of the data set cannot be confirmed						
F-Test indicates equal variances (p = 0.46)	7.11111		16210.7			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	0.02495	1.03952	0.00068	7.3E-05	0.09315	1, 2

Dose-Response Plot



Administrative Record
Page 13233
Reviewed by:

Phytoplankton Test-Growth-Absorbance

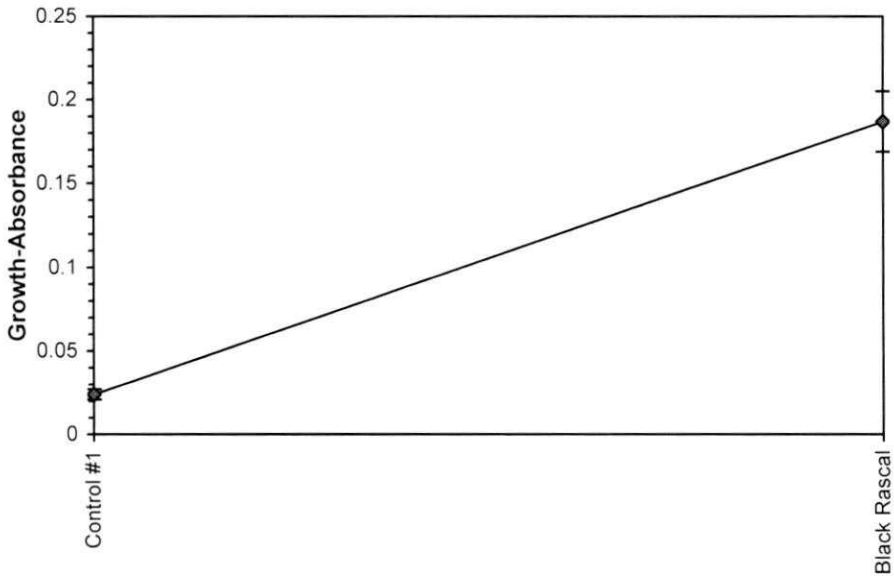
Start Date:	3/11/2008	Test ID:	a1320802Tb	Sample ID:	BLACK RASCAL CREEK
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	2/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

Conc-%	1	2
Control #1	0.0210	0.0270
Black Rascal	0.2050	0.1690

			Transform: Untransformed						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control #1	0.0240	1.0000	0.0240	0.0210	0.0270	17.678	2			
Black Rascal	0.1870	7.7917	0.1870	0.1690	0.2050	13.613	2	-8.932	2.920	0.0533

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Normality of the data set cannot be confirmed						
F-Test indicates equal variances (p = 0.21)	36		16210.7			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	0.05328	2.2202	0.02657	0.00033	0.0123	1, 2

Dose-Response Plot



Administrative Record
Page 13234

Phytoplankton Test-Growth-Absorbance

Start Date:	3/11/2008	Test ID:	a1320802Tc	Sample ID:	PRAIRIE FLOWER
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	2/26/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

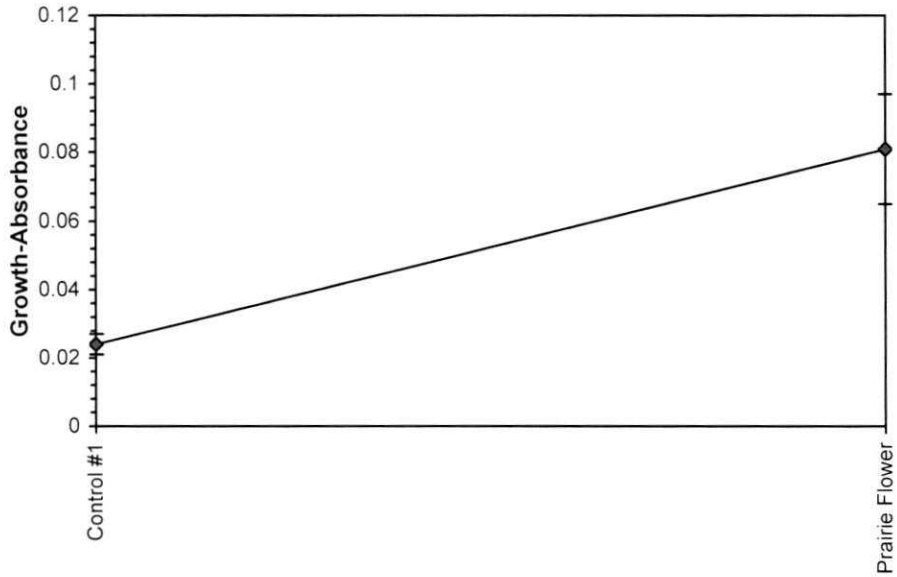
Conc-%	1	2
Control #1	0.0210	0.0270
Prairie Flower	0.0970	0.0650

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control #1	0.0240	1.0000	0.0240	0.0210	0.0270	17.678	2			
Prairie Flower	0.0810	3.3750	0.0810	0.0650	0.0970	27.935	2	-3.501	2.920	0.0475

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
F-Test indicates equal variances (p = 0.24)	28.4444	16210.7		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences	0.04753	1.98058	0.00325	0.00027	0.07277	1, 2

Dose-Response Plot



Administrative Record
Page 13235

Phytoplankton Test-Growth-Absorbance

Start Date:	3/11/2008	Test ID:	a1320802Td	Sample ID:	MUSTANG CREEK
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	2/26/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

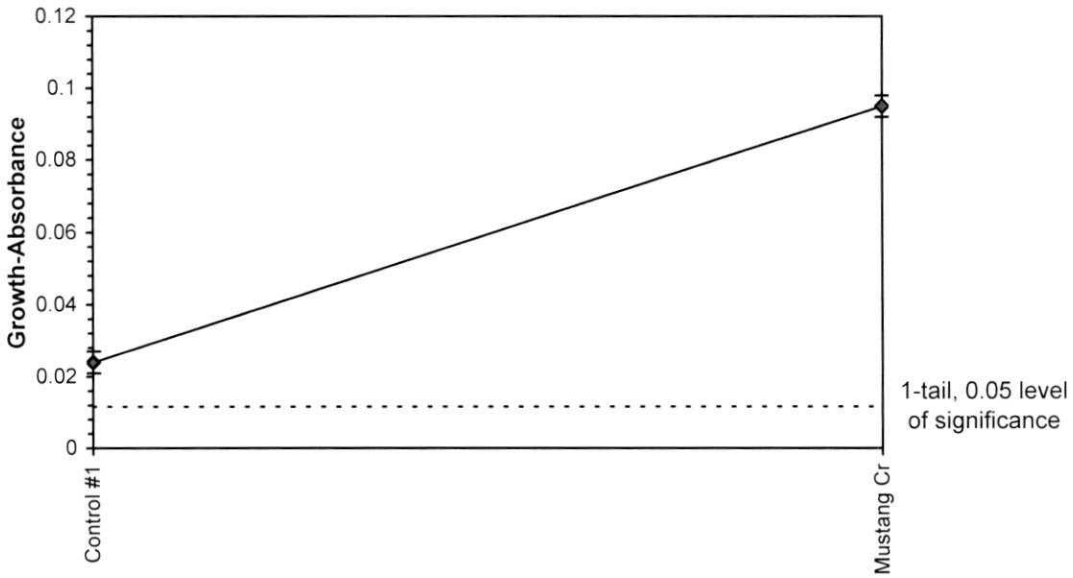
Conc-%	1	2
Control #1	0.0210	0.0270
Mustang Cr	0.0980	0.0920

			Transform: Untransformed						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control #1	0.0240	1.0000	0.0240	0.0210	0.0270	17.678	2			
Mustang Cr	0.0950	3.9583	0.0950	0.0920	0.0980	4.466	2	-16.735	2.920	0.0124

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
F-Test indicates equal variances (p = 1.00)	1	16210.7		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences	0.01239	0.51619	0.00504	1.8E-05	0.00355	1, 2

Dose-Response Plot



Administrative Record
Page 13236

Reviewed by:

Phytoplankton Test-Growth-Absorbance

Start Date:	3/11/2008	Test ID:	a1320802Te	Sample ID:	HATCH DRAIN
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	2/26/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

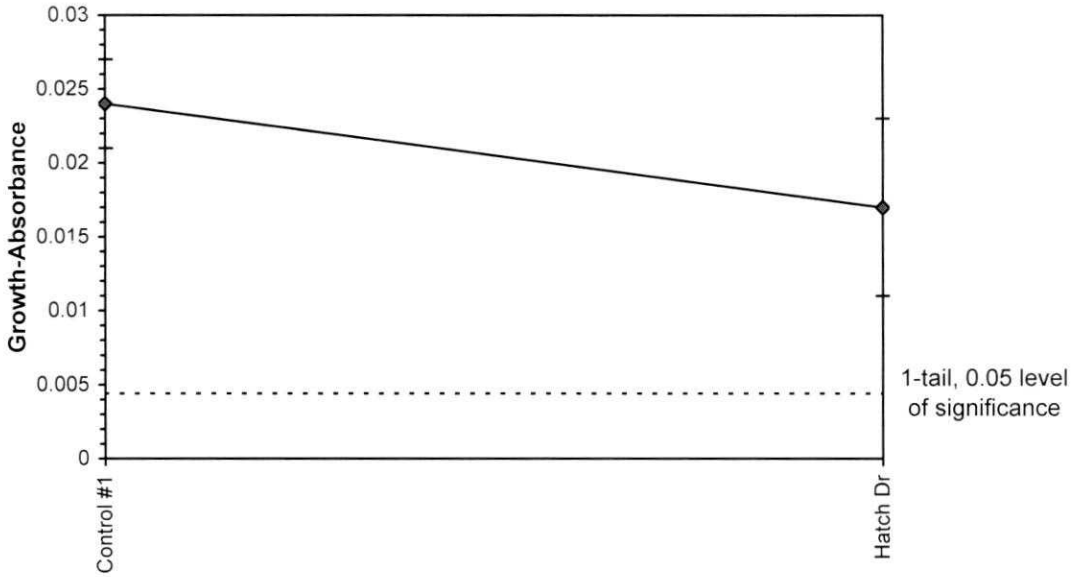
Conc-%	1	2
Control #1	0.0210	0.0270
Hatch Dr	0.0230	0.0110

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control #1	0.0240	1.0000	0.0240	0.0210	0.0270	17.678	2			
Hatch Dr	0.0170	0.7083	0.0170	0.0110	0.0230	49.913	2	1.043	2.920	0.0196

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
F-Test indicates equal variances (p = 0.59)	4	16210.7		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences	0.01959	0.81616	4.9E-05	4.5E-05	0.40627	1, 2

Dose-Response Plot



Administrative Record
Page 13237
Reviewed by: MJM

Phytoplankton Test-Growth-Absorbance

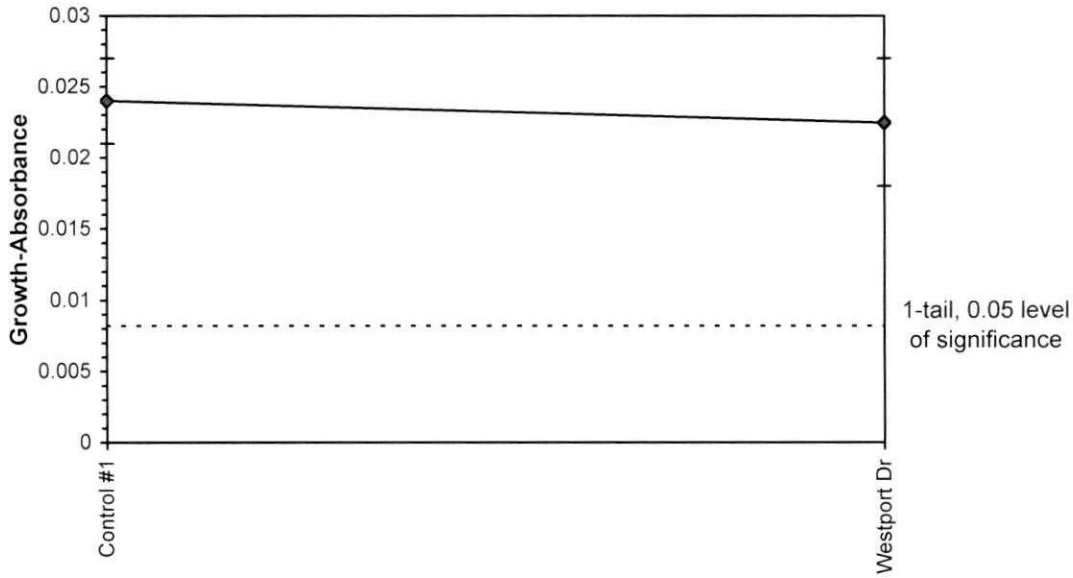
Start Date:	3/11/2008	Test ID:	a1320802Tf	Sample ID:	WESTPORT DRAIN
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	2/26/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

Conc-%	1	2
Control #1	0.0210	0.0270
Westport Dr	0.0180	0.0270

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control #1	0.0240	1.0000	0.0240	0.0210	0.0270	17.678	2			
Westport Dr	0.0225	0.9375	0.0225	0.0180	0.0270	28.284	2	0.277	2.920	0.0158

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Normality of the data set cannot be confirmed						
F-Test indicates equal variances (p = 0.75)	2.25		16210.7			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	0.01579	0.65801	2.2E-06	2.9E-05	0.80755	1, 2

Dose-Response Plot



Administrative Record
Page 13238
Reviewed by: MW

Phytoplankton Test-Growth-Absorbance

Start Date:	3/11/2008	Test ID:	a1320802Tg	Sample ID:	DRY CREEK @ WELLSFORD
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	2/26/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

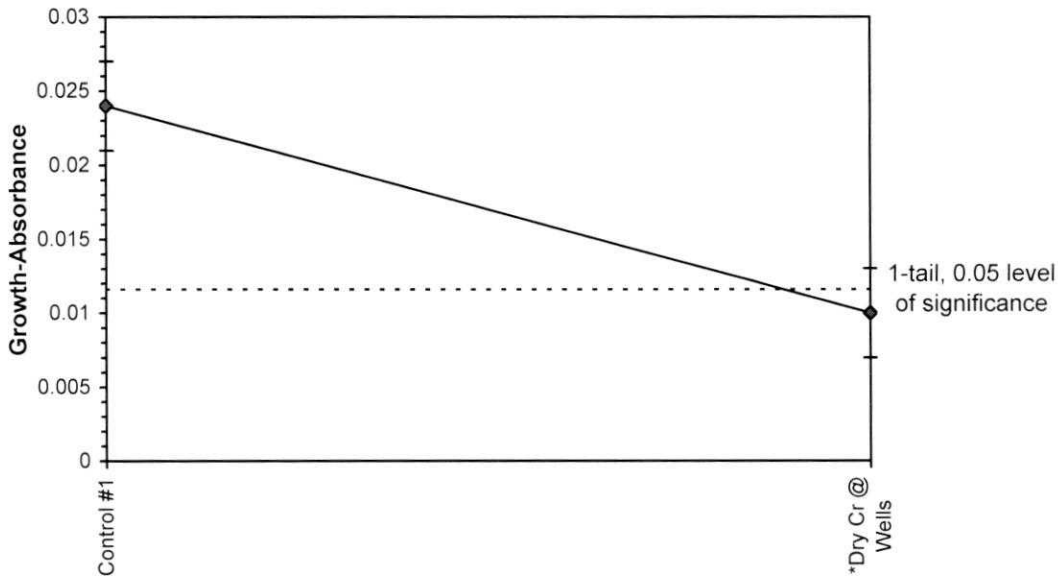
Conc-%	1	2
Control #1	0.0210	0.0270
Dry Cr @ Wells	0.0130	0.0070

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control #1	0.0240	1.0000	0.0240	0.0210	0.0270	17.678	2			
*Dry Cr @ Wells	0.0100	0.4167	0.0100	0.0070	0.0130	42.426	2	3.300	2.920	0.0124

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
F-Test indicates equal variances (p = 1.00)	1	16210.7		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences	0.01239	0.51619	0.0002	1.8E-05	0.08085	1, 2

Dose-Response Plot



ToxCalc v5.0.23
Administrative Record
Page 13239
Reviewed by:

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **BASELINE**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

		Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer			
Conc. (%)	Replicate	1	2	3	Mean
Control #1	A	0.021	0.022	0.021	0.021
	B	0.027	0.026	0.027	0.027
Deadman's Creek @ Gurr (2/25/08)	A	0.059	0.057	0.058	0.058
	B	0.041	0.042	0.042	0.042
Black Rascal Creek (2/25/08)	A	0.202	0.205	0.207	0205
	B	0.169	0.170	0.169	0.169
Prairie Flower Drain (2/26/08)	A	0.097	0.097	0.096	0.097
	B	0.069	0.064	0.062	0.065
Mustang Creek (2/26/08)	A	0.098	0.098	0.098	0.098
	B	0.093	0.092	0.092	0.092
Hatch Drain (2/26/08)	A	0.023	0.023	0.023	0.023
	B	0.011	0.011	0.011	0.011
Ctrl #1 w/o	A	0.001	0.000	0.001	0.001
Dead @ Gurr w/o	A	0.002	0.001	0.001	0.001
Black Rascal w/o	A	0.008	0.008	0.008	0.008
Prairie Flower w/o	A	0.019	0.011	0.010	0.013
Mustang w/o	A	0.004	0.005	0.005	0.005
Hatch w/o	A	0.001	0.001	0.001	0.001

Technician: CA Y Date: 3/15/08

Statistics File No.

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **BASELINE**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

		Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer			
Conc. (%)	Replicate	1	2	3	Mean
Westport Drain (2/26/08)	A	0.018	0.019	0.018	0.018
	B	0.028	0.027	0.027	0.027
Dry Creek @ Wellsford (2/26/08)	A	0.019	0.010	0.010	0.013
	B	0.006	0.009	0.007	0007

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **BASELINE**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

	OBSERVATIONS Day (0) Date: 03/11/08					96 Hour Obsv.			
Test Conc (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~ ①	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Control #1	24	7.9	8.35	80/100	411	24	8.7	8.68	①~~2~~448
Deadman's @ Gurr	24	8.4	8.40	230/160	584	24	8.7	8.71	581
Black Rascal Creek	24	7.4	8.02	40/50	163	24	8.7	8.82	168
Prairie Flower Drain	24	8.3	8.54	550/560	2690	24	8.6	8.83	2310
Mustang Creek	24	8.3	8.16	90/80	324	24	8.7	8.79	342
Hatch Drain	24	8.4	8.43	360/300	1298	24	8.6	885	1168
Westport Drain	24	8.2	8.39	290/350	1114	24	8.6	8.92	1085
Dry Creek @ Wells	24	8.1	8.21	50/50	189	24	8.7	8.90	209
						CM 3/15/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①measurements taken in 10 ml sample WJ MC 3/11/08
② Entry error CM 3/15/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Control water ID = R10 EPAMH #094

All surface waters ~~filtered through~~ a 60 µm screen daily

Technician: _____ Date: 3/11/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **BASELINE**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

	Day 1				Day 2				Day 3			
Samples Conc.	Temp.	D.O.*	pH^^	Cond.^	Temp	D.O.*	pH^^	Cond.^	Temp.	D.O.*	pH^^	Cond.^
Control #1	24	8.5	8.15	396	24	8.3	8.27	423	24	8.5	8.43	423
Deadman's @ Gurr	24	8.4	7.92	561	24	8.2	8.08	588	24	8.4	8.59	586
Black Rascal Cr	24	8.3	8.41	159	24	~~8.3~~ 8.5	8.53	170	24	8.5	8.60	168
Prairie Flower Dr	24	8.3	8.11	2540	24	8.1	7.99	2510	24	8.5	8.70	2400
Mustang Creek	24	8.4	8.78	317	24	8.0	8.57	339	24	8.4	8.64	338
Hatch Drain	24	8.3	8.19	1215	24	8.0	8.28	1260	24	8.3	8.74	1248
Westport Drain	24	8.3	8.37	1047	24	8.1	8.50	1104	24	8.3	8.80	1097
Dry Cr @ Wellsford	24	8.4	8.87	186	24	8.1	9.21	207	24	8.4	8.73	206
	BES 3/12/08				BES 3/13/08							
									CH 7/14/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① Entry error BES 3/13/08

Water Quality taken in "C" replicate

EPA Algal Assay Media (AAM) Without EDTA

Phytoplankton Test-Growth-Absorbance

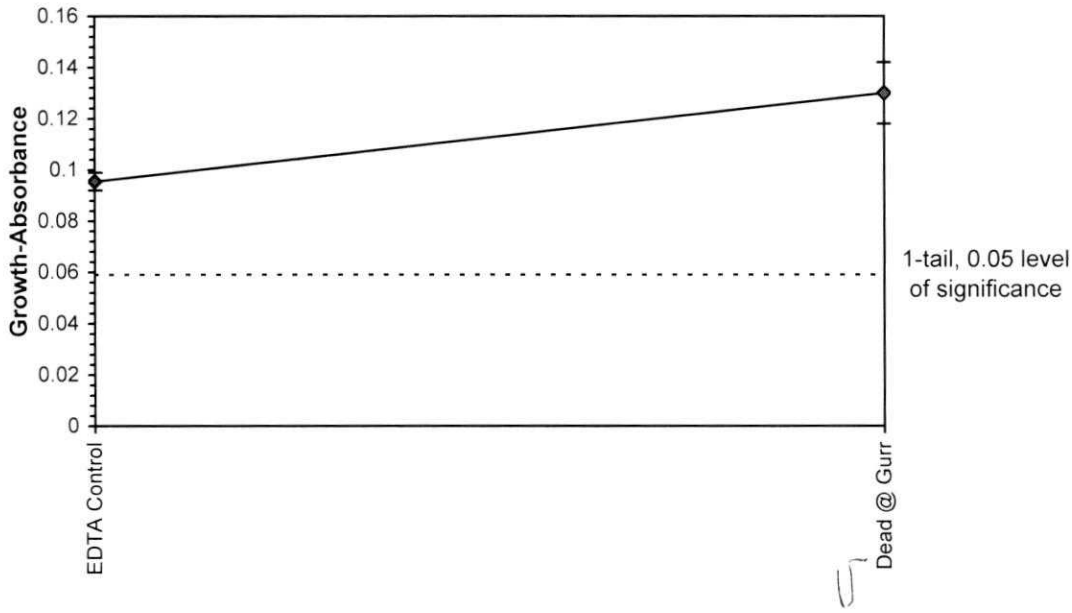
Start Date:	3/11/2008	Test ID:	a1320802Th	Sample ID:	DEADMAN'S CREEK @ GURR
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	EDTA
Sample Date:	2/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

Conc-%	1	2
EDTA Control	0.0920	0.0990
Dead @ Gurr	0.1420	0.1180

			Transform: Untransformed						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
EDTA Control	0.0955	1.0000	0.0955	0.0920	0.0990	5.183	2			
Dead @ Gurr	0.1300	1.3613	0.1300	0.1180	0.1420	13.054	2	-2.760	2.920	0.0365

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Normality of the data set cannot be confirmed						
F-Test indicates equal variances (p = 0.36)	11.7551		16210.7			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	0.0365	0.3822	0.00119	0.00016	0.11003	1, 2

Dose-Response Plot



Administrative Record
Page 13244
Reviewed by: hmm

Phytoplankton Test-Growth-Absorbance

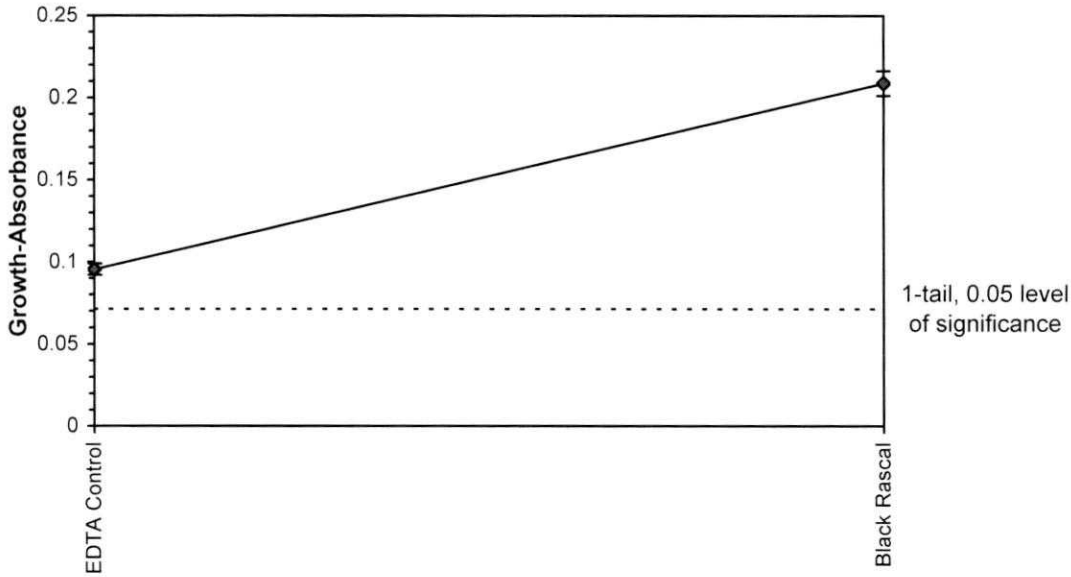
Start Date:	3/11/2008	Test ID:	a1320802Ti	Sample ID:	BLACK RASCAL CREEK
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	EDTA
Sample Date:	2/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

Conc-%	1	2
EDTA Control	0.0920	0.0990
Black Rascal	0.2010	0.2160

			Transform: Untransformed						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
EDTA Control	0.0955	1.0000	0.0955	0.0920	0.0990	5.183	2			
Black Rascal	0.2085	2.1832	0.2085	0.2010	0.2160	5.087	2	-13.653	2.920	0.0242

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Normality of the data set cannot be confirmed						
F-Test indicates equal variances (p = 0.56)	4.59184		16210.7			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	0.02417	0.25306	0.01277	6.8E-05	0.00532	1, 2

Dose-Response Plot



ToxCalc v5.0.23

Administrative Record
Page 13245

Reviewed by: hmm

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) + **1 mg/L EDTA (AAM - EDTA)**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer					
Conc. (%)	Replicate	1	2	3	Mean
EDTA Control	A	0.092	0.092	0.092	0.092
	B	0.100	0.098	0.098	0.099
Deadman's Creek @ Gurr	A	0.142	0.142	0.141	0.142
	B	0.118	0.117	0.118	0.118
Black Rascal Creek	A	0.201	0.202	0.199	0.201
	B	0.215	0.216	0.217	0.216
Prairie Flower Drain	A	0.088	0.087	0.087	0.087
	B	0.089	0.087	0.088	0.088
Mustang Creek	A	0.119	0.118	0.119	0.119
	B	0.142	0.139	0.138	0.140
Hatch Drain	A	0.038	0.033	0.027	0.033
	B	0.038	0.033	0.032	0.034
EDTA Ctrl w/o	A	0.013	0.010	0.010	0.011
Dead @ Gurr w/o	A	0.012	0.012	0.012	0.012
Black Rascal w/o	A	0.010	0.009	0.010	0.010
Prairie Flower w/o	A	0.018	0.016	0.012	0.015
Mustang w/o	A	0.010	0.011	0.011	0.011
Hatch w/o	A	0.001	0.000	0.000	0.000

Technician: _____ Date: 3/15/08

Statistics File No.

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) + **1 mg/L EDTA (AAM - EDTA)**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer					
Conc. (%)	Replicate	1	2	3	Mean
Westport Drain	A	0.036	0.036	0.036	0.036
	B	0.030	0.029	0.028	0.029
Dry Creek @ Wellsford	A	0.097	0.095	0.095	0.096
	B	0.071	0.070	0.069	0.070

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) + 1 mg/L EDTA (AAM - EDTA)		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

	OBSERVATIONS Day (0) Date: 03/11/08					96 Hour Obsv.			
Test Conc (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
EDTA Control	24	7.9	8.05	—	410	24	8.6	8.80	415
Deadman's @ Gurr	24	8.4	8.36	—	590	24	8.7	8.81	582
Black Rascal	25	7.4	7.80	—	165	24	8.7	8.85	177
Prairie Flower	25	8.2	8.53	—	2700	24	8.6	8.78	2340
Mustang	25	8.3	8.03	—	328	24	8.6	8.96	341
Hatch	25	8.3	8.45	—	1311	24	8.6	8.81	① ~~3~~ 998
Westport	24	8.2	8.40	—	1102	24	8.7	8.73	1060
Dry @ Wells	25	8.0	8.10	—	190	24	8.6	8.98	706
						CM 3/15/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① Entry error CM 3/15/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Control water ID = R10 EPAMH #094

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 3/11/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) + **1 mg/L EDTA (AAM - EDTA)**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

	Day 1				Day 2				Day 3			
Samples Conc.	Temp.	D.O.*	pH^^	Cond.^	Temp	D.O.*	pH^^	Cond.^	Temp.	D.O.*	pH^^	Cond.^
EDTA Control	24	8.5	8.20	390	24	8.4	8.52	427	24	8.5	8.63	423
Deadman's @ Gurr	24	8.3	8.38	560	24	8.1	8.55	598	24	8.4	8.61	596
Black Rascal	24	8.2	8.91	162	24	8.1	9.06	178	24	8.4	8.70	178
Prairie Flower	24	8.2	8.25	2540	24	8.0	8.24	2570	24	8.3	8.58	2490
Mustang Cr	24	8.2	8.99	319	24	8.0	8.91	337	24	8.2	8.84	335
Hatch Dr	24	8.3	8.41	1088	24	8.1	8.51	1049	24	8.3	8.72	1053
Westport Dr	24	8.2	8.47	1025	24	7.9	8.49	1073	24	8.4	8.64	1070
Dry @ Wellsford	24	8.2	9.10	184	24	8.0	9.16	208	24	8.4	8.81	210
	BES 3/12/08				BES 3/13/08				CM 3/14/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Water Quality taken in "C" replicate

EPA Algal Assay Media (AAM) Without EDTA

Phytoplankton Test-Growth-Absorbance

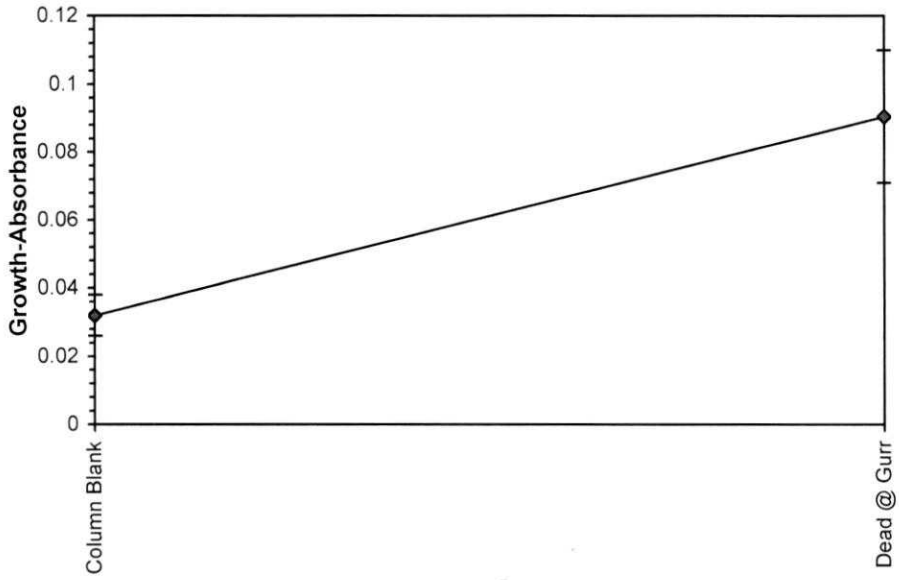
Start Date:	3/11/2008	Test ID:	a1320802To	Sample ID:	DEADMAN'S CREEK @ GURR
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	C-8 TC
Sample Date:	2/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

Conc-%	1	2
Column Blank	0.0260	0.0380
Dead @ Gurr	0.0710	0.1100

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Column Blank	0.0320	1.0000	0.0320	0.0260	0.0380	26.517	2			
Dead @ Gurr	0.0905	2.8281	0.0905	0.0710	0.1100	30.472	2	-2.867	2.920	0.0596

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Normality of the data set cannot be confirmed						
F-Test indicates equal variances (p = 0.38)	10.5625		16210.7			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	0.05957	1.86169	0.00342	0.00042	0.10315	1, 2

Dose-Response Plot



Administrative Record
Page 13250

Phytoplankton Test-Growth-Absorbance

Start Date:	3/11/2008	Test ID:	a1320802Tp	Sample ID:	BLACK RASCAL CREEK
End Date:	3/15/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	C-8 TC
Sample Date:	2/25/2008	Protocol:	EPA CF4-EPA 821-R-02-013	Test Species:	SC-Selenastrum capricornutum
Comments:	ESJ 08-02 TIE: Algae Bioassay				

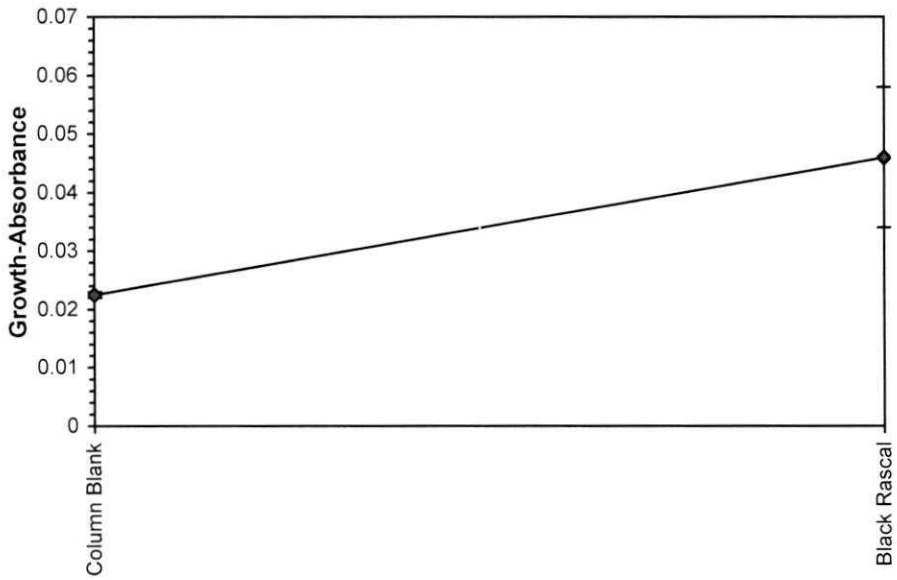
Conc-%	1	2
Column Blank	0.0230	0.0220
Black Rascal	0.0340	0.0580

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Column Blank	0.0225	1.0000	0.0225	0.0220	0.0230	3.143	2			
Black Rascal	0.0460	2.0444	0.0460	0.0340	0.0580	36.893	2	-1.957	2.920	0.0351

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
F-Test indicates equal variances (p = 0.05)	576	16210.7		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences	0.03507	1.55868	0.00055	0.00014	0.18953	1, 2

Dose-Response Plot



Administrative Record
Page 13251

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer						
Conc. (%)	Replicate	1	2	3	Mean	
Deadman's Creek @ Gurr Column Blank	A	0.025 ~~0.009~~ ①	0.026 ~~0.009~~ ①	0.026	0.026	
	B	0.038	0.038	0.038	0.038	
Deadman's Creek @ Gurr TC	A	0.070	0.071	0.071	0.071	
	B	0.110	0.111	0.110	0.110	
Deadman's Creek @ Gurr 2X Add-Back	A	0.040	0.040	0.040	0.040	
	B	0.055	0.053	0.057	0.055	0.0475
Deadman's Creek @ Gurr TC + EDTA	A	0.150	0.150	0.150	0.150	
	B	0.125	0.124	0.126	0.125	0.1375
Black Rascal Creek Column Blank	A	0.023	0.023	0.023	0.023	
	B	0.022	0.022	0.022	0.022	
Black Rascal Creek TC	A	0.035	0.036	0.032	0.034	
	B	0.059	0.057	0.057	0.057	
Black Rascal Creek 2X Add-back	A	0.137	0.135	0.136	0.136	
	B	0.158	0.159	0.157	0.158	0.147
Black Rascal Creek TC + EDTA	A	0.139	0.139	0.141	0.140	
	B	0.095	0.094	0.095	0.095	0.1175

① Entry error CH 3/15/08

Technician: RSH Date: 3/15/08

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 10, 2008	Termination Date:	March 14, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer					
Conc. (%)	Replicate	1	2	3	Mean
Prairie Flower Column Blank	A	0.037	0.037	0.037	0.037
	B	0.021	0.021	0.021	0.021
Prairie Flower TC	A	0.068	0.066	0.066	0.067
	B	0.054	0.050	0.050	0.051
Prairie Flower 2X Add-Back	A	0.019	0.017	0.017	0.018
	B	0.017	0.018	0.017	0.017
Prairie Flower TC + EDTA	A	0.065	0.057	0.056	0.059
	B	0.078	0.085	0.078	0.080
Mustang Creek Column Blank	A	0.063	0.063	0.063	0.063
	B	0.086	0.085	0.085	0.085
Mustang Creek TC	A	0.201	0.200	0.201	0.201
	B	0.178	0.177	0.174	0.176
Mustang Creek 2X Add-back	A	0.031	0.032	0.032	0.032
	B	0.032	0.032	0.031	0.032
Mustang Creek TC + EDTA	A	0.068	0.067	0.068	0.068
	B	0.057	0.057	0.057	0.057

0.0175

0.0695

Technician: _____ Date: 3/15/08

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 10, 2008	Termination Date:	March 14, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer					
Conc. (%)	Replicate	1	2	3	Mean
Hatch Drain Column Blank	A	0.074	0.074	0.073	0.074
	B	0.059	0.058	0.057	0.058
Hatch Drain TC	A	0.087	0.076	0.072	0.078
	B	0.068	0.066	0.065	0.065
Hatch Drain 2X Add-Back	A	0.150	0.150	0.151	0.150
	B	0.149	0.147	0.147	0.147
Hatch Drain TC + EDTA	A	0.058	0.052	0.050	0.053
	B	0.068	0.060	0.043	0.057
Westport Drain Column Blank	A	0.073	0.074	0.074	0.074
	B	0.088	0.088	0.088	0.088
Westport Drain TC	A	0.024	0.022	0.023	0.023
	B	0.025	0.026	0.025	0.025
Westport Drain 2X Add-back	A	0.077	0.075	0.075	0.076
	B	0.068	0.067	0.067	0.067
Westport Drain TC + EDTA	A	0.030	0.029	0.029	0.029
	B	0.032	0.029	0.028	0.030

Technician: CAY Date: 3/15/08

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 10, 2008	Termination Date:	March 14, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer					
Conc. (%)	Replicate	1	2	3	Mean
Dry Creek @ Wells Column Blank	A	0.043	0.043	0.042	0.043
	B	0.053	0.052	0.053	0.053
Dry Creek @ Wells TC	A	0.124	0.120	0.124	0.123
	B	0.137	0.138	0.137	0.137
Dry Creek @ Wells 2X Add-Back	A	0.016	0.015	0.016	0.016
	B	0.008	0.006	0.010	0.008
Dry Creek @ Wells TC + EDTA	A	0.115	0.116	0.117	0.116
	B	0.115	0.119	0.120	0.118

Technician: _____ Date: 3/15/08

Statistics File No.

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-02B TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer

WITHOUT ALGAE

Conc. (%)	Replicate	1	2	3	Mean
Deadman's Cr @ Gurr Column Blank	A	0.009	0.009	0.009	0.009
Deadman's Cr @ Gurr TC	A	0.011	0.011	0.011	0.011
Deadman's Cr @ Gurr 2X add-back	A	—	—	—	—
Deadman's Cr @ Gurr TC + EDTA	A	0.008	0.008	0.008	0.008
Black Rascal Cr Column Blank	A	0.000	0.000	0.000	0.000
Black Rascal Cr TC	A	0.013	0.013	0.014	0.013
Black Rascal Cr 2X add-back	A	—	—	—	—
Black Rascal Cr TC + EDTA	A	0.013	0.013	0.013	0.013
Prairie Flower Dr Column Blank	A	0.007	0.007	0.007	0.007
Prairie Flower Dr TC	A	0.033	0.033	0.023	0.030
Prairie Flower Dr 2X add-back	A	—	—	—	—
Prairie Flower Dr TC + EDTA	A	0.028	0.024	0.022	0.025
Mustang Cr Column Blank	A	0.007	0.007	0.007	0.007
Mustang Cr TC	A	0.010	0.009	0.009	0.009
Mustang Cr 2X add-back	A	—	—	—	—
Mustang Cr TC + EDTA	A	0.010	0.011	0.011	0.011
Hatch Dr Column Blank	A	0.007	0.007	0.007	0.007
Hatch Dr TC	A	0.034	0.029	0.025	0.029
Hatch Dr 2X add-back	A	—	—	—	—
Hatch Dr TC + EDTA	A	0.020	0.019	0.016	0.018

Technician: _____ Date: 3/15/08

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY - CELL DETERMINATION

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

Absorbance @ 750 nm with Hach DR 2800 Spectrophotometer

WITHOUT ALGAE

Conc. (%)	Replicate	1	2	3	Mean
Westport Dr Column Blank	A	0.005	0.005	0.005	0.005
Westport Dr TC	A	0.007	0.008	0.009	0.008
Westport Dr 2X add-back	A	—	—	—	—
Westport Dr TC + EDTA	A	0.006	0.005	0.008	0.006
Dry Cr @ Wells Column Blank	A	0.004	0.004	0.004	0.004
Dry Cr @ Wellsford TC	A	0.008	0.010	0.011	0.010
Dry Cr @ Wells 2X add-back	A	—	—	—	—
Dry Cr @ Wells TC + EDTA	A	0.009	0.009	0.010	0.009

Technician: [signature] Date: 3/15/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 14, 2008

	OBSERVATIONS Day (0) Date: 03/11/08					96 Hour Obsv.			
Test Conc (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Dead @ Gurr Column Blank	24	8.9/8.3 (1)	7.85	—	338	24	8.6	8.93	350
Deadman's @ Gurr TC	24	7.2	8.23	210/160 (2)	579	24	8.7	8.81	571
Deadman's @ Gurr 2X Add-back	—	—	—	—	—	—	—	—	—
Deadman's @ Gurr TC + EDTA	24	7.3	8.25	—	585	24	8.6	8.78	578
Black Rascal Cr Column Blank	24	9.1/8.3 (1)	7.96	—	337	24	8.6	8.75	353
Black Rascal Cr TC	24	6.2	7.70	50/50 (2)	161	24	8.7	8.91	169
Black Rascal Cr 2X Add-Back	—	—	—	—	—	—	—	—	—
Black Rascal Cr TC + EDTA	25	6.0	7.85	—	160	24	8.7	9.02	162
Prairie Flower Dr Column Blank	24	9.4/8.2 (1)	7.74	—	336	24	8.6	8.99	343
Prairie Flower Dr TC	24	7.6	8.51	670/530 (2)	2640	24	8.6	8.91	2330
Prairie Flower Dr 2X Add-Back	—	—	—	—	—	—	—	—	—
Prairie Flower Dr TC + EDTA	25	7.7	8.52	—	2670	24	8.6	8.64	2350
Mustang Creek Column Blank	24	9.3/8.3 (1)	8.00	—	336	24	8.6	8.92	360
Mustang Creek TC	25	5.8	7.76	70/80 (2)	334	24	8.6	9.03	338
Mustang Creek 2X Add-Back	—	—	—	—	—	—	—	—	—
Mustang Creek TC + EDTA	25	5.7	7.63	—	330	24	8.6	9.05	332
						24 3/15/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: (1) degassed before use MC 3/11/08

(2) measurements taken in 10 ml sample vol MC 3/11/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.

Control water ID = RO EPAMH #094

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 3/11/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

	Day 1				Day 2				Day 3			
Samples Conc.	Temp.	D.O.*	pH^^	Cond.^	Temp	D.O.*	pH^^	Cond.^	Temp.	D.O.*	pH^^	Cond.^
Dead @ Gurr Column Blank	24	8.4	8.68	322	24	8.3	8.81	360	24	8.5	8.80	360
Deadman's @ Gurr TC	24	8.3	8.62	541	24	8.2	8.55	596	24	8.5	8.71	592
Deadman's @ Gurr 2X Add-back	—	—	—	—	—	—	—	—	—	—	—	—
Deadman's @ Gurr TC + EDTA	24	8.3	8.56	550	24	8.2	8.52	597	24	8.5	8.60	590
Black Rascal Cr Column Blank	24	8.4	8.71	326	24	8.5	8.83	⑤368	24	8.4	8.77	360
Black Rascal Cr TC	24	8.4	9.01	151	24	8.2	8.99	172	24	8.5	8.89	174
Black Rascal Cr 2X Add-Back	—	—	—	—	—	—	—	—	—	—	—	—
Black Rascal Cr TC + EDTA	24	8.3	8.91	152	24	8.2	9.03	176	24	8.5	8.92	174
Prairie Flower Dr Column Blank	24	8.4	8.60	320	24	8.4	8.68	350	24	8.4	8.81	354
Prairie Flower Dr TC	24	8.3	8.39	2450	24	8.2	8.53	2650	24	8.4	8.78	2630
Prairie Flower Dr 2X Add-Back	—	—	—	—	—	—	—	—	—	—	—	—
Prairie Flower Dr TC + EDTA	24	8.3	8.51	2490	24	8.2	8.58	2680	24	8.4	8.63	2650
Mustang Creek Column Blank	24	8.5	9.21	319	24	8.4	9.13	365	24	8.5	8.95	362
Mustang Creek TC	24	8.3	8.90	312	24	8.2	9.20	347	24	8.5	9.13	347
Mustang Creek 2X Add-Back	—	—	—	—	—	—	—	—	—	—	—	—
Mustang Creek TC + EDTA	24	8.4	8.98	312	24	8.1	9.07	341	24	8.5	9.02	338
	BES 3/12/08				BES 3/13/08				CM 3/14/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: Overlay error BES 3/13/08

Water Quality taken in "C" replicate

EPA Algal Assay Media (AAM) Without EDTA

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 14, 2008

	OBSERVATIONS Day (0) Date: 03/11/08					96 Hour Obsv.			
Test Conc (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Hatch Drain Column Blank	24	9.2/8.2②	7.58	—	336	24	8.7	9.01	350
Hatch Drain TC	①~~6~~.24	6.3	8.40	460/320③	1289	24	8.7	8.93	1008
Hatch Drain 2X Add-Back	—	—	—	—	—	—	—	—	—
Hatch Drain TC + EDTA	24	6.3	8.43	—	1305	24	8.7	8.74	1065
Westport Drain Column Blank	24	9.9/8.3②	8.20	—	336	24	8.6	8.72	350
Westport Drain TC	25	6.7	8.36	380/370③	1123	24	8.6	8.95	1090
Westport Drain 2X Add-Back	—	—	—	—	—	—	—	—	—
Westport Drain TC + EDTA	25	6.8	8.38	—	1109	24	8.6	9.03	1079
Dry @ Wellsford Column Blank	24	9.3/8.2②	7.86	—	336	24	8.7	8.97	340
Dry @ Wellsford TC	24	6.6	7.68	50/40③	201	24	8.6	8.83	204
Dry @ Wellsford 2X Add-Back	—	—	—	—	—	—	—	—	—
Dry @ Wellsford TC + EDTA	24	6.6	7.79	—	198	24	8.7	8.73	204
						on 3/15/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①entry error MC 3/11/08

②deaerated before use MC 3/11/08

③measurements taken in 10 ml sample vol 3/11/08 MC

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.

Control water ID = R/O EPAMH #094

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 3/11/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-02 TIE	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/013	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (022508 and 022608) without EDTA **C-8 SPE + Add-Back**		
Test Species:	*Selenastrum capricornutum*	Animal Lot No.:	UTEX: 011007
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

	Day 1				Day 2				Day 3			
Samples Conc.	Temp.	D.O.*	pH^^	Cond.^	Temp	D.O.*	pH^^	Cond.^	Temp.	D.O.*	pH^^	Cond.^
Hatch Drain Column Blank	24	8.4	8.71	316	24	8.3	8.97	358	24	8.5	9.01	352
Hatch Drain TC	24	8.4	8.34	1008	24	8.1	8.51	1063	24	8.6	8.72	1067
Hatch Drain 2X Add-Back	—	—	—	—	—	—	—	—	—	—	—	—
Hatch Drain TC + EDTA	24	8.3	8.41	1004	24	8.1	8.62	1067	24	8.6	8.74	1068
Westport Drain Column Blank	24	8.4	8.90	314	24	8.2	8.97	367	24	8.5	8.81	371
Westport Drain TC	24	8.4	8.35	1024	24	8.0	8.46	1101	24	8.4	8.59	1105
Westport Drain 2X Add-Back	—	—	—	—	—	—	—	—	—	—	—	—
Westport Drain TC + EDTA	24	8.4	8.41	1010	24	8.0	8.54	1097	24	8.4	8.63	1101
Dry @ Wellsford Column Blank	24	8.4	9.07	316	24	8.2	9.07	361	24	8.4	8.96	367
Dry @ Wellsford TC	24	8.3	8.75	187	24	8.1	7.69	212	24	8.5	8.98	214
Dry @ Wellsford 2X Add-Back	—	—	—	—	—	—	—	—	—	—	—	—
Dry @ Wellsford TC + EDTA	24	8.3	8.83	187	24	8.1	8.96	211	24	8.4	8.77	211
	BER 3/12/08				BES 3/13/08				CM 3/14/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Water Quality taken in "C" replicate

EPA Algal Assay Media (AAM) Without EDTA

AQUA-Science

Environmental Toxicology Consultants

ALGAL BIOASSAY DATA SHEETS

1.0 TEST AND CLIENT INFORMATION

Test Number:	ESJ 08-02 TIE	Study Director:	J. L. Miller
Protocol No.:	EPA 821-R-02-013	Technician(s):	Miller/Walker/Yip/Concepcion/Ponferrada/Stanford
Test Material:	ESJ Ag Waiver Samples (02/25/08 and 02/26/08) without EDTA		
Initiation Date:	March 11, 2008	Termination Date:	March 15, 2008

2.0 TEST CONDITIONS & TEST SPECIES INFORMATION

Species	*Selenastrum capricornutum*	Temperature	25.0°C ± 1.0°C
Source	University of Texas (UTEX)	Agitation	100 RPM continuous
Media	EPA Algal Assay Media (AAM)	Lighting	400 ft candles
Innoculation	10,000 cells/mL		
Comments			

3.0 DILUTION WATER INFORMATION

Dilution Water Source	D.O. (mg/L)	pH (units)	E. C. (µmhos)	Other	COMMENTS
R/O EPAMH	7.9	8.35	411		0.22 µm Metrigard vacuum filtered
Deadman's Creek @ Gurr	8.4	8.40	584		0.22 µm Metrigard vacuum filtered
Black Rascal Creek	7.4	8.02	163		0.22 µm Metrigard vacuum filtered
Prairie Flower Drain	8.3	8.54	2690		0.22 µm Metrigard vacuum filtered
Mustang Creek	8.3	8.16	324		0.22 µm Metrigard vacuum filtered
Hatch Drain	8.4	8.43	1298		0.22 µm Metrigard vacuum filtered
Westport Drain	8.2	8.39	1114		0.22 µm Metrigard vacuum filtered
Dry Creek @ Wellsford	8.1	8.21	189		0.22 µm Metrigard vacuum filtered

4.0 PREPARATION OF EXPOSURE SOLUTIONS

Test Solution Conc.	Control	100							Comments
Sample (mL)	0	120							TECH: MC
Dilution Water (mL)	120	0							TIME: 1000
TOTAL	120 mL	120 mL							

									Comments

Technician: _____ Date: 3/11/08

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ALGAL BIOASSAY DATA SHEETS

5.0 TEST INITIAITON

WITHOUT EDTA

	Sample	Counts		
	Isoton	20	30	26
Coulter Counter	Control	90	91	83
Background Check	Deadman's Creek @ Gurr	190	197	213
	Black Rascal Creek	279	267	265
	Prairie Flower Drain	94	109	94
	Mustang Creek	149	153	168
	Hatch Drain	131	113	128
	Westport Drain	118	124	113
	Dry Creek @ Wellford	252	247	293

6.0 ALGAE COUNT

Replicate	Dilution Factor				Cell Counts			Mean
	Dil 1	Dil 2	Count	Factor	1	2	3	
1	0.25mL	Q5 to 20mL	0.5mL	160:1	37784	37916	38265	37988
2								

Calculations:

Time of Inoculation: 1630

Target: 10,000 cells/mL test solution

Algal Stock Concentration:

37988 x 160 = 6.0781 x 10^6

Average cell count x Dilution Factor = cells/mL algal stock

Inoculation:

$$\frac{\text{10,000 cells/mL solution}}{6.0781 \times 10^6} \times \frac{\cancel{250}\ 150 \text{ mL test solution/concentration}}{\text{cells/mL algal stock}}$$

= 0.247 mL algal stock/conc. = 247 µL algal stock/conc.

Final Algal Density Check:

Time: 1650

	ID	Count 1	Count 2	Count 3	Dilution	Adj. Avg.
Flask #1	Ø-A	348	375	304	40:1	10160
Flask #2	Dead-B	492	460	424	40:1	10360
Flask #3	Black-B	513	544	527	40:1	10320
Flask #4	Prairie-B	372	342	359	40:1	10360
Flask #5	Mustang-B	401	417	415	40:1	10160
Flask #6	Hatch A	388	360	370	40:1	9960
Flask #7	Westport-B	371	389	391	40:1	10640
flask #8	Dry-A	529	518	516	40:1	10280

Technician: _____ Date: 5/14/08

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ALGAL BIOASSAY DATA SHEETS

6.0 Lab Notes

3/11/08

ESJ 08-02 TIE

96 Hr. Static Growth

Selenastrum capricornutum

Ambient Samples (022508 and 022608)

Deadmans's Creek @ Gurr (535XDCAGR)
Black Rascal Creek (535BRCAYR)
Prairie Flower Drain (535XPFDCL)
Mustang Creek (535XMCAEA)
Hatch Drain (535XDHATR)
Westport Drain (535XWDAVR)
Dry Creek @ Wellsford (535XDCAWR)

1.0 Stock Preparation

0.22 liters of Ambient Sample filtered through 0.22 µm Metrigard filter.
0.22 liters R/O EPAMH filtered through 0.22 µm Metrigard filter

2.0 Water Quality Measurement

Water quality of dilution and effluent measured after addition of EPA Algal Assay Media (AAM). Section 3.0, page 1

EPA Algal Assay Media Addition (Without EDTA)

Algal Assay Media prepared as per EPA 821-R-02-013; Section 14-Tables 1 and 2
Added 0.22 mL each of #1-5 EPA AAM to 0.22 L **Ambient Sample**
Added 0.22 mL each of #1-5 EPA AAM to 0.22 L R/O EPAMH; **Control Water**

Added 0.22 mL each of #1-5 EPA AAM to 0.22 L **C8 SPE Column Blank**
Added 0.22 mL each of #1-5 EPA AAM to 0.22 L **C8 SPE Through Column**
Added 0.1 mL each of #1-5 EPA AAM to 0.1 L **C8 SPE 2.5X Addback**

Added 0.22 mL each of #1-5 EPA AAM to 0.22 L **EDTA Column Blank**
Added 0.22 mL each of #1-5 EPA AAM to 0.22 L **Ambient Sample + 1 mg/L EDTA**

Stirred samples on magnetic stir plates for apprx. 15 minutes.

4.0 Background Counts

Particle background counts measured with electronic particle counter - Coulter Counter, model ZBI.
Counts recorded on section 2.0, page 2.

5.0 Exposure Series Preparation and Algal Inoculation

All concentrations prepared as described in secton 4.0, page 1, and held in 125 mL solution beakers .
All solutions were inoculated with pure culture algal stock in log phase growth to achieve a concentration of 10,000 cells/mL, calculations in secton 6.0 page 2. All solutions thoroughly stirred. Divided the 150 mL solution beaker into 3-50 mL aliquots and distributed into flasks A, B and C. Placed all flasks randomly on a shaker table with 100 rpm continous rotation in environmental chamber (continuous light at 25 °C ± 1 °C)
All flasks randomly rotated twice daily.

Technician: _____ Date: 3/11/08

LABORATORY NOTES

3/8/08 S. Capricornutum
Init: 3/8/08 from 1x PC
Init: 8/9/07 from UTEX 011007 slant

Day Ø 3/8/08 CM

Background: 14, 16, 15	$\bar{x}$	Dil:	cells/mL
1x 4155, 3948, 4010	4037	160:1	0.6459×10^6
2x 6398, 6454, 6312	6387	↓	1.0219×10^6
3x 8703, 8679, 8675	8686	↓	1.3898×10^6

Day 1 3/9/08 BES

Background: 28, 27, 22	$\bar{x}$	Dil	cells/mL	% Improvement
1X: 959, 1017, 957	977	160:1	0.1564×10^6	-76%
2X: 3392, 3334, 3411	3381	↓	0.5410×10^6	-47%
3X: 4568, 4614, 4804	4662	↓	0.7459×10^6	-46%

Day 2 3/10/08 BES

Background: 29, 35, 36	$\bar{x}$	DIL	cells/mL	% Improvement
1X: 6931, 7145, 7112	7063	160:1	1.1301×10^6	623%
2X: 14751, 15151, 15295	15066	↓	2.4106×10^6	346%
3X: 17083, 17032, 17312	17152	↓	2.7444×10^6	268%

Day 3 3/11/08 CM

Background: 14, 27, 19	$\bar{x}$	Dil	cells/mL	% Improvement
1x: 23206, 25394, 23668	24087	160:1	3.8539×10^6	241%
2x: 37784, 37916, 38265	37988	↓	6.0781×10^6	152%
3x 34096, 34019, 34315	34143	↓	5.4629×10^6	99%

Used 2x P.C. to start ESS 08-02 TIE, and COD 08-02 R2 Algae tests

Technician: See above Date: _____

Meter Calibration Log for Ag Waiver

Meters calibrated on 3/11/08
Sample field date: 2/25/08 and 2/26/08
Test initiation date: 3/11/2008
Technician's initials: BES

NOTE: Please enter initial calibration values into calibration logbook.

Initial Calibration

	Temp	EC (µS/cm) Meter-02			DO (mg/L) Meter -02		pH Meter-02		
Calibration specifics	NAP	internal[1]	1000 µS/cm	100.2 µS/cm	internal[2]	water	4 buffer	10 buffer	7 buffer check
Calibration readings	NAP	0.468	999	103.2	N/A	7.8	4.00	10.03	7.00

1. Internal cell constant for the below listed sites 0.468
2. Internal cell constant for the below listed sites N/A /water calibrated at 28 °C and 100% saturation (7.8 mg/L)

Sample ID:	Sample ID:
ESJ 08-02TIE: Initial Water Quality - Day 0	
Baseline	**Column Blank, C8TC, C8TC + EDTA**
Control #1	Deadman's Creek @ Gurr (535XDCAGR)
Deadman's Creek @ Gurr (535XDCAGR)	Black Rascal Creek (535BRCAYR)
Black Rascal Creek (535BRCAYR)	Prairie Flower Drain (535XPFDCL)
Prairie Flower Drain (535XPFDCL)	Mustang Creek (535XMCAEA)
Mustang Creek (535XMCAEA)	Hatch Drain (535XDHATR)
Hatch Drain (535XDHATR)	Westport Drain (535XWDAVR)
Westport Drain (535XWDAVR)	Dry Creek @ Wellsford (535XDCAWR)
Dry Creek @ Wellsford (535XDCAWR)	
+1 mg/L EDTA	
EDTA Control	
Deadman's Creek @ Gurr (535XDCAGR)	
Black Rascal Creek (535BRCAYR)	
Prairie Flower Drain (535XPFDCL)	
Mustang Creek (535XMCAEA)	
Hatch Drain (535XDHATR)	
Westport Drain (535XWDAVR)	
Dry Creek @ Wellsford (535XDCAWR)	

Calibration Verification

	Temp	EC (µS/cm)			DO (mg/L)		pH		
Calibration specifics	NAP	internal[1]	1000 µS/cm	100.2 µS/cm	internal[2]	water	4 buffer	10 buffer	7 buffer check
Calibration readings	NAP	NAP	1006	105.2	NAP	7.5	4.04	10.01	7.00

1. Internal cell constant N/A
2. Internal cell constant N/A /water calibrated at 31 °C and 100% saturation (7.5 mg/L)

Administrative Record
Page 13266

Meter Calibration Log for Ag Waiver

Meters calibrated on 3/12/08
Sample field date: 2/25/08 and 2/26/08
Test initiation date: 3/11/2008
Technician's initials: BES

NOTE: Please enter initial calibration values into calibration logbook.

Initial Calibration

	Temp	EC (µS/cm) Meter-03			DO (mg/L) Meter -01		pH Meter-01		
Calibration specifics	NAP	internal[1]	1000 µS/cm	100.2 µS/cm	internal[2]	water	4 buffer	10 buffer	7 buffer check
Calibration readings	NAP	0.461	1000	104.1	N/A	7.5	4.00	10.03	7.01

1. Internal cell constant for the below listed sites 0.461
2. Internal cell constant for the below listed sites N/A/water calibrated at 31 °C and 100% saturation (7.5 mg/L)

Sample ID:	Sample ID:
ESJ 08-02TIE: 24-Hr Water Quality - Day 1	
Baseline	**Column Blank, C8TC, C8TC + EDTA**
Control #1	Deadman's Creek @ Gurr (535XDCAGR)
Deadman's Creek @ Gurr (535XDCAGR)	Black Rascal Creek (535BRCAYR)
Black Rascal Creek (535BRCAYR)	Prairie Flower Drain (535XPFDCL)
Prairie Flower Drain (535XPFDCL)	Mustang Creek (535XMCAEA)
Mustang Creek (535XMCAEA)	Hatch Drain (535XDHATR)
Hatch Drain (535XDHATR)	Westport Drain (535XWDAVR)
Westport Drain (535XWDAVR)	Dry Creek @ Wellsford (535XDCAWR)
Dry Creek @ Wellsford (535XDCAWR)	
+1 mg/L EDTA	
EDTA Control	
Deadman's Creek @ Gurr (535XDCAGR)	
Black Rascal Creek (535BRCAYR)	
Prairie Flower Drain (535XPFDCL)	
Mustang Creek (535XMCAEA)	
Hatch Drain (535XDHATR)	
Westport Drain (535XWDAVR)	
Dry Creek @ Wellsford (535XDCAWR)	

Calibration Verification

	Temp	EC (µS/cm)			DO (mg/L)		pH		
Calibration specifics	NAP	internal[1]	1000 µS/cm	100.2 µS/cm	internal[2]	water	4 buffer	10 buffer	7 buffer check
Calibration readings	NAP	NAP	1002	111.3	NAP	7.6	4.02	10.01	702

1. Internal cell constant N/A
2. Internal cell constant N/A/water calibrated at 31 °C and 100% saturation (7.6 mg/L)

Administrative Record
Page 13267

Meter Calibration Log for Ag Waiver

Meters calibrated on 3/13/08
Sample field date: 2/25/08 and 2/26/08
Test initiation date: 3/11/2008
Technician's initials: BES/CM

NOTE: Please enter initial calibration values into calibration logbook.

Initial Calibration

	Temp	EC (µS/cm) Meter-03			DO (mg/L) Meter -01		pH Meter-01		
Calibration specifics	NAP	internal[1]	1000 µS/cm	100.2 µS/cm	internal[2]	water	4 buffer	10 buffer	7 buffer check
Calibration readings	NAP	0.461	1000	105.3	N/A	7.5	4.00	10.03	7.01

1. Internal cell constant for the below listed sites 0.461
2. Internal cell constant for the below listed sites N/A /water calibrated at 31 °C and 100% saturation (7.5 mg/L)

Sample ID:	Sample ID:
ESJ 08-02TIE: 48-Hr Water Quality - Day 2	
Baseline	**Column Blank, C8TC, C8TC + EDTA**
Control #1	Deadman's Creek @ Gurr (535XDCAGR)
Deadman's Creek @ Gurr (535XDCAGR)	Black Rascal Creek (535BRCAYR)
Black Rascal Creek (535BRCAYR)	Prairie Flower Drain (535XPFDCL)
Prairie Flower Drain (535XPFDCL)	Mustang Creek (535XMCAEA)
Mustang Creek (535XMCAEA)	Hatch Drain (535XDHATR)
Hatch Drain (535XDHATR)	Westport Drain (535XWDAVR)
Westport Drain (535XWDAVR)	Dry Creek @ Wellsford (535XDCAWR)
Dry Creek @ Wellsford (535XDCAWR)	
+1 mg/L EDTA	
EDTA Control	
Deadman's Creek @ Gurr (535XDCAGR)	
Black Rascal Creek (535BRCAYR)	
Prairie Flower Drain (535XPFDCL)	
Mustang Creek (535XMCAEA)	
Hatch Drain (535XDHATR)	
Westport Drain (535XWDAVR)	
Dry Creek @ Wellsford (535XDCAWR)	

Calibration Verification

	Temp	EC (µS/cm)			DO (mg/L)		pH		
Calibration specifics	NAP	internal[1]	1000 µS/cm	100.2 µS/cm	internal[2]	water	4 buffer	10 buffer	7 buffer check
Calibration readings	NAP	NAP	1000	115.1	NAP	7.8	3.99	9.95	6.91

1. Internal cell constant N/A
2. Internal cell constant N/A /water calibrated at 28 °C and 100% saturation (7.8 mg/L)

Administrative Record
Page 13268

Meter Calibration Log for Ag Waiver

Meters calibrated on 3/14/08
Sample field date: 2/25/08 and 2/26/08
Test initiation date: 3/11/2008
Technician's initials: CM

NOTE: Please enter initial calibration values into calibration logbook.

Initial Calibration

	Temp	EC (µS/cm) Meter-03			DO (mg/L) Meter -01		pH Meter-01		
Calibration specifics	NAP	internal[1]	1000 µS/cm	100.2 µS/cm	internal[2]	water	4 buffer	10 buffer	7 buffer check
Calibration readings	NAP	0461	1000	105.1	N/A	7.8	4.00	10.04	7.00

1. Internal cell constant for the below listed sites 0461
2. Internal cell constant for the below listed sites N/A /water calibrated at 28 °C and 100% saturation (7.8 mg/L)

Sample ID:	Sample ID:
ESJ 08-02TIE: 72-Hr Water Quality - Day 3	
Baseline	**Column Blank, C8TC, C8TC + EDTA**
Control #1	Deadman's Creek @ Gurr (535XDCAGR)
Deadman's Creek @ Gurr (535XDCAGR)	Black Rascal Creek (535BRCAYR)
Black Rascal Creek (535BRCAYR)	Prairie Flower Drain (535XPFDCL)
Prairie Flower Drain (535XPFDCL)	Mustang Creek (535XMCAEA)
Mustang Creek (535XMCAEA)	Hatch Drain (535XDHATR)
Hatch Drain (535XDHATR)	Westport Drain (535XWDAVR)
Westport Drain (535XWDAVR)	Dry Creek @ Wellsford (535XDCAWR)
Dry Creek @ Wellsford (535XDCAWR)	
+1 mg/L EDTA	
EDTA Control	
Deadman's Creek @ Gurr (535XDCAGR)	
Black Rascal Creek (535BRCAYR)	
Prairie Flower Drain (535XPFDCL)	
Mustang Creek (535XMCAEA)	
Hatch Drain (535XDHATR)	
Westport Drain (535XWDAVR)	
Dry Creek @ Wellsford (535XDCAWR)	

Calibration Verification

	Temp	EC (µS/cm)			DO (mg/L)		pH		
Calibration specifics	NAP	internal[1]	1000 µS/cm	100.2 µS/cm	internal[2]	water	4 buffer	10 buffer	7 buffer check
Calibration readings	NAP	NAP	1000	115.3	NAP	7.8	3.97	9.98	6.93

1. Internal cell constant N/A
2. Internal cell constant N/A /water calibrated at 28 °C and 100% saturation (7.8 mg/L)

Administrative Record
Page 13269

Meter Calibration Log for Ag Waiver

Meters calibrated on 3/15/08
Sample field date: 2/25/08 and 2/26/08
Test initiation date: 3/11/2008
Technician's initials: CM

NOTE: Please enter initial calibration values into calibration logbook.

Initial Calibration

	Temp	EC (µS/cm) Meter-03			DO (mg/L) Meter -01		pH Meter-01		
Calibration specifics	NAP	internal[1]	1000 µS/cm	100.2 µS/cm	internal[2]	water	4 buffer	10 buffer	7 buffer check
Calibration readings	NAP	0.455	1000	107.6	N/A	8.0	4.00	10.07	7.00

1. Internal cell constant for the below listed sites 0.455
2. Internal cell constant for the below listed sites N/A /water calibrated at 27 °C and 100% saturation (8.0 mg/L)

Sample ID:	Sample ID:
ESJ 08-02TIE: 96-Hr Water Quality - Day 4	
Baseline	**Column Blank, C8TC, C8TC + EDTA**
Control #1	Deadman's Creek @ Gurr (535XDCAGR)
Deadman's Creek @ Gurr (535XDCAGR)	Black Rascal Creek (535BRCAYR)
Black Rascal Creek (535BRCAYR)	Prairie Flower Drain (535XPFDCL)
Prairie Flower Drain (535XPFDCL)	Mustang Creek (535XMCAEA)
Mustang Creek (535XMCAEA)	Hatch Drain (535XDHATR)
Hatch Drain (535XDHATR)	Westport Drain (535XWDAVR)
Westport Drain (535XWDAVR)	Dry Creek @ Wellsford (535XDCAWR)
Dry Creek @ Wellsford (535XDCAWR)	
+1 mg/L EDTA	
EDTA Control	
Deadman's Creek @ Gurr (535XDCAGR)	
Black Rascal Creek (535BRCAYR)	
Prairie Flower Drain (535XPFDCL)	
Mustang Creek (535XMCAEA)	
Hatch Drain (535XDHATR)	
Westport Drain (535XWDAVR)	
Dry Creek @ Wellsford (535XDCAWR)	

Calibration Verification

	Temp	EC (µS/cm)			DO (mg/L)		pH		
Calibration specifics	NAP	internal[1]	1000 µS/cm	100.2 µS/cm	internal[2]	water	4 buffer	10 buffer	7 buffer check
Calibration readings	NAP	NAP	988	107.8	NAP	7.8	4.03	9.92	6.98

1. Internal cell constant N/A
2. Internal cell constant N/A /water calibrated at 27 °C and 100% saturation (7.8 mg/L)

Administrative Record
Page 13270

APPENDIX III

ACUTE *C. DUBIA* TIEs

ESJ 08-01 TIE
(1/24-25/08 Sample Date)

Merced River @ Santa Fe Drive

Summary of Acute Phase I *Ceriodaphnia dubia* TIE on ESJ Merced River 1/24/08 Sample (535XMRSFD)

Treatment	*Conc. (%)*	*96-hr Survival (%)*	*Toxic Units (TUa)*[a]	*Comment*
Baseline	Lab Control 6.25 12.5 25 50 100	100 90 0* 0* 0* 0*	NOEC 6.25% **(16 TUa)** EC_{50} = 9.0% **(11.1 TUa)**	Based on the EC_{50}, the sample contained 11.1 TUa
Baseline + 100 ppb PBO	PBO Control 6.25 12.5 25 50 100	100 100 100 95 95 0*	NOEC = 50% **(2 TUa)** EC_{50} = 73.7% **(1.4 TUa)**	PBO prevented toxicity at ≥50% sample conc. Note: PBO can only protect against 6-10 TUa of OP-caused toxicity. Metabolically-activated OPs-caused toxicity strongly suspected.
C-8 SPE Through-Column	Column Blank 100	100 95	--	Toxicity removed by SPE extraction. Non-polar organic (NPO) toxicant(s) present – consistent with OP-caused toxicity
C-8 SPE Column 2X Add-Back	MeOH Ctrl 2X add-back	100 0*	--	Toxicity recovered in methanol eluate
Baseline + EDTA	EDTA Control 100	100 0*	--	Treatment ineffective; toxicity not due to cationic metal(s)

Sample Date: 1/24/08
Test Date: 1/27/08
a TUa = 100/NOEC; TUa = $100/EC_{50}$
* significantly different from control ($p<0.05$)

Conclusion:

The majority of the sample toxicity (~10 TUa) was prevented by PBO, and the toxicity was removed by SPE and recovered in the SPE eluate. These results are consistent with OP insecticide toxicity. Enzyme-linked immunosorbant assay (ELISA) analysis of sample at A-S detected 0.722 µg/L (9 TUa) of chlorpyrifos.

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Te	Sample ID:	MERCED RIVER
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Conc-%	1	2	3	4
Control	1.0000	1.0000	1.0000	1.0000
6.25	0.8000	1.0000	1.0000	0.8000
12.5	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

			Transform: Arcsin Square Root					Rank	1-Tailed		Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical		Mean	N-Mean
Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4				1.0000	1.0000
6.25	0.9000	0.9000	1.2262	1.1071	1.3453	11.212	4	14.00	10.00	0.16178	0.9000	0.9000
*12.5	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	10.00	10.00		0.0000	0.0000
*25	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	10.00	10.00		0.0000	0.0000
*50	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	10.00	10.00		0.0000	0.0000
*100	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	10.00	10.00		0.0000	0.0000

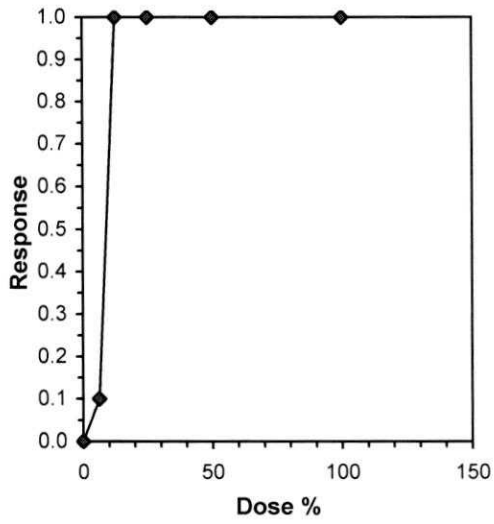
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.57623	0.884	6.6E-15	4.03247
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	6.25	12.5	8.83883	16

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL(Exp)		Skew
IC05*	3.1250	1.8425	0.6250	8.6250	0.4871
IC10	6.2500	1.2135	1.2500	7.2500	-0.8122
IC15	6.5972	0.5702	3.5417	7.5417	-2.0632
IC20	6.9444	0.3220	5.8333	7.8333	-0.2800
IC25	7.2917	0.3019	6.2500	8.1250	-0.2800
IC40	8.3333	0.2415	7.5000	9.0000	-0.2800
IC50	9.0278	0.2012	8.3333	9.5833	-0.2800

* indicates IC estimate less than the lowest concentration



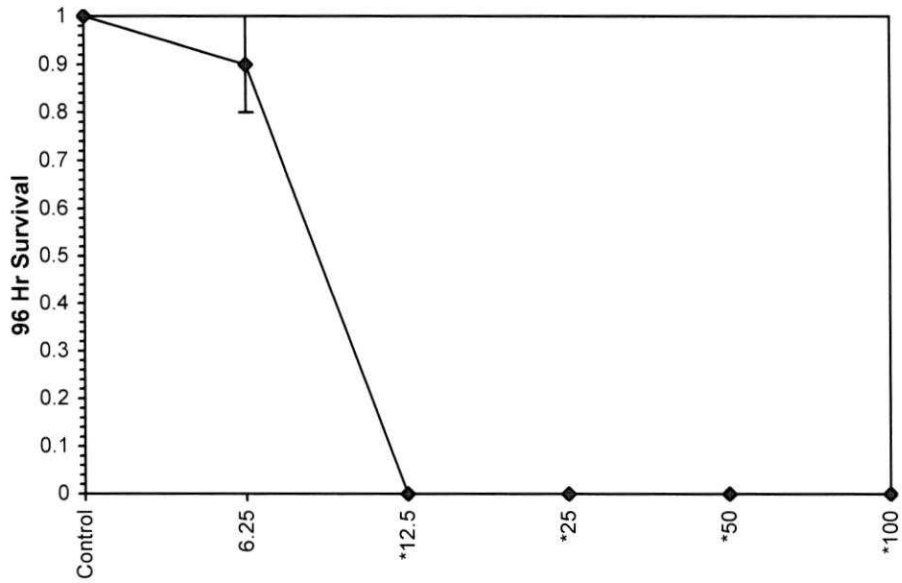
Administrative Record
Page 13273

Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Te	Sample ID:	MERCED RIVER
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Dose-Response Plot



Administrative Record
Page 13274

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Te	Sample ID:	MERCED RIVER
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Conc-%	1	2	3	4
Control	1.0000	1.0000	1.0000	1.0000
6.25	0.8000	1.0000	1.0000	0.8000
12.5	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

			Transform: Arcsin Square Root					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			
*6.25	0.9000	0.9000	1.2262	1.1071	1.3453	11.212	4	3.000	2.410	0.0957
*12.5	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	28.214	2.410	0.0957
*25	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	28.214	2.410	0.0957
*50	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	28.214	2.410	0.0957
*100	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	28.214	2.410	0.0957

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.57623	0.884	6.6E-15	4.03247
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	<6.25	6.25			0.04965	0.05226	1.20471	0.00315	1.3E-17	5, 18

Administrative Record
Page 13275

Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Tf	Sample ID:	MERCED RIVER
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	PBO
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Conc-%	1	2	3	4
PBO Control	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	0.8000
50	0.8000	1.0000	1.0000	1.0000
100	0.0000	0.0000	0.0000	0.0000

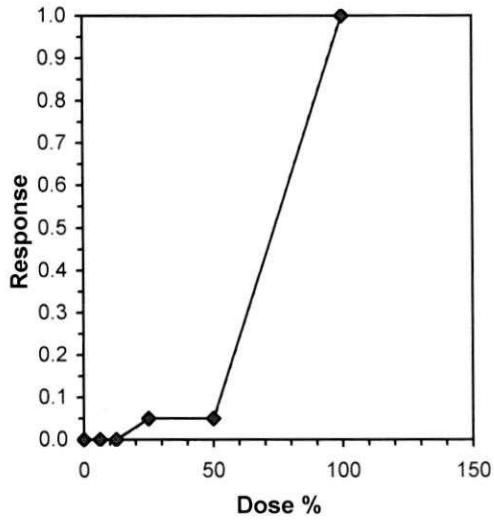
			Transform: Arcsin Square Root					Rank	1-Tailed	Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Mean	N-Mean
PBO Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			1.0000	1.0000
6.25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00	1.0000	1.0000
12.5	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00	1.0000	1.0000
25	0.9500	0.9500	1.2857	1.1071	1.3453	9.261	4	16.00	10.00	0.9500	0.9500
50	0.9500	0.9500	1.2857	1.1071	1.3453	9.261	4	16.00	10.00	0.9500	0.9500
*100	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	10.00	10.00	0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.61382	0.884	-2.1359	5.27706
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	50	100	70.7107	2

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL(Exp)		Skew
IC05	50.000	13.299	0.000	54.000	-0.6094
IC10	52.632	6.749	8.421	56.421	-2.8594
IC15	55.263	1.934	46.842	58.842	-0.7518
IC20	57.895	1.821	49.969	61.263	-0.7518
IC25	60.526	1.707	53.096	63.684	-0.7518
IC40	68.421	1.365	62.477	70.947	-0.7518
IC50	73.684	1.138	68.731	75.789	-0.7518

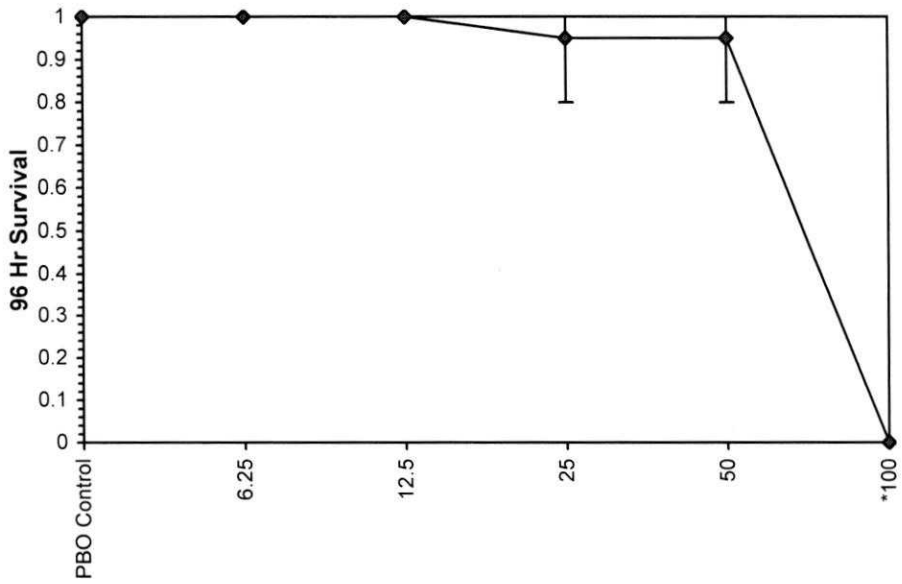


Administrative Record
Page 13276

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Tf	Sample ID:	MERCED RIVER
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	PBO
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Dose-Response Plot



Administrative Record
Page 13277

Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Tf	Sample ID:	MERCED RIVER
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	PBO
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Conc-%	1	2	3	4
PBO Control	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	0.8000
50	0.8000	1.0000	1.0000	1.0000
100	0.0000	0.0000	0.0000	0.0000

			Transform: Arcsin Square Root					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
PBO Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			
6.25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	0.000	2.410	0.1171
12.5	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	0.000	2.410	0.1171
25	0.9500	0.9500	1.2857	1.1071	1.3453	9.261	4	1.225	2.410	0.1171
50	0.9500	0.9500	1.2857	1.1071	1.3453	9.261	4	1.225	2.410	0.1171
*100	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	23.036	2.410	0.1171

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.61382	0.884	-2.1359	5.27706
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	50	100	70.7107	2	0.06289	0.0662	0.80415	0.00473	1.7E-14	5, 18

Administrative Record
Page 13278

Reviewed by:

AQUA-Science

Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4
Control	A	0	0	0	0 ②
	B	0	0	0	0 ②
	C	0	0	0	0 ②
	D	0	0	0	0 ②
6.25	A	0	0	1	1 ②
	B	0	0	0 ①	0 ②
	C	0	0	0	0 ②
	D	0	0	0	1 ②
12.5	A	0	5		
	B	0	5		
	C	0	5		
	D	0	5		
25	A	5			
	B	5			
	C	5			
	D	5			
50	A	5			
	B	5			
	C	5			
	D	5			
100	A	5			
	B	5			
	C	5			
	D	5			
Technician Initials		MJM	MM	MM	MM
Observation Time		1410	1459	1455	1430
Observation Date		1/28/08	1/29/08	1/30/08	1/31/08

Comments
n=5 animals/rep
Test Initiation Info:
Time: 1420
Tech: MJM
Test Termination Info:
Time: 1420
Tech: MM
① NEONATES present 1/30/08 MM
② NEONATES present 1/31/08 MM

AQUA-Science

Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01 A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD **+PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 012808
Initiation Date:	January 28, 2008	Termination Date:	February 1, 2008

Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
PBO Ctrl.	A	0	0	0	0	n=5 animals/rep
	B	0	0	0	0	
	C	0	0	0	0	Test Initiation Info:
	D	0	0	0	0	Time: 1355
6.25	A	0	0	0	0	Tech: MM
	B	0	0	0	0	
	C	0	0	0	0	Test Termination Info:
	D	0	0	0	0	Time: 1229
12.5	A	0	0	0	0	Tech: MM
	B	0	0	0	0	
	C	0	0	0	0	① NEONATES present 2/1/08 MM
	D	0	0	0	0	
25	A	0	0	0	0	
	B	0	0	0	0	
	C	0	0	0	0	
	D	1	1	1	1	
50	A	0	0	1	1	
	B	0	0	0	0	
	C	0	0	0	0	
	D	0	0	0	0	
100	A	4	5			
	B	3	5			
	C	3	5			
	D	4	5			
Technician Initials		MM	MM	JM	MM	
Observation Time		1519	1508	1700	1229	
Observation Date		1/29/08	1/30/08	1/31/08	2/1/08	

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Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Merced River (012408) 535XMRSFD **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

Tx. Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
Column Blank	A	0	0	0 ①	0 ②	n=5 animals/rep
	B	0	0	0	0 ④	
	C	0	0	0	0 ③	Test Initiation Info:
	D	0	0	0	0 ⑤	Time: 1442
100 C8TC	A	0	0	0 ①	0 ②	Tech:
	B	0	0	0 ①	0 ②	
	C	0	0	0 ①	0 ②	Test Termination Info:
	D	1	1	1 ①	1 ②	Time: 1432
MeOH Ctrl	A	0	0	0	0	Tech:
	B	0	0	0	0 ③	
						① Neonates present 1/30/08
2X Addback	A	5				
	B	5				
EDTA Ctrl	A	0	0	0	0 ③	
	B	0	0	0	0 ④	
	C	0	0	0	0	
	D	0	0	0	0 ⑤	
100 +	A	5				
8 mg/L EDTA	B	5				
	C	5				
	D	5				

Technician Initials				
Observation Time	1402	1521	1505	1432
Observation Date	1/28/08	1/29/08	1/30/08	1/31/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (3) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	25	8.2	7.74		325				
6.25	24	8.2	7.85		310				
12.5	—	—	—		—				
25	—	—	—		—				
50	—	—	—		—				
100	—	—	—		—				

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAM #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/30/08

AQUA-Science

Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/27/08

ESJ 08-01A TIE Merced River

96 hr. Static Acute bioassay w/ 24 hr. Changeout

Ceriodaphnia dubia

Baseline

Test Concentrations: Control, 6.25, 12.5, 25, 50, 100

East San Joaquin Ambient Sample Merced River (012408) 535XXMRSFD

Control water = Reverse Osmosis water amended with EPA salts to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*
Control	0	100	100
6. 25	6.25	QS to 100	100
12.5	12.5	QS to 100	100
25	25	QS to 100	100
50	50	QS to 100	100
100	100	0	100

* 20 mL used to measure pH, 80 mL inoculated for test

	Day 0	Day 1	Day 2	Day 3
Tech	CW	CW	CW	CW/MC
Time	1305	1200	1140	1000
Date	01/27/08	01/28/08	01/29/08	1/30/08

n = 5 animals/replicate - 4 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (0) Date: 1/27/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.3	8.08	66/94	319	24	7.7	7.90	334
6.25	24	8.4	8.09	—	305	24	7.8	7.93	320
12.5	24	8.3	8.09	—	291	24	7.9	7.95	306
25	24	8.3	8.08	—	263	24	8.2	7.98	276
50	24	8.2	8.03	—	204	24	7.9	8.03	213
100	25	9.7/8.0@	7.76	23/38	93	24	7.2	8.12	108
						CM 1/28/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @desaturated before use CM 01/27/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R10 EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 01/27/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (1) Date: 1/28/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.4	8.02	66/94	316	24	6.8	8.01	336
6.25	24	8.4	8.06	—	305	25	6.9	8.03	324
12.5	24	8.3	8.09	—	290	25	6.7	8.00	311
25	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—	—
						MC 01/29/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R/O EPA MH #030

All surface waters filtered through a 60 µm screen daily

Technician: C. Walker Date: 01/28/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (2) Date: 1/29/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	7.8	7.99	66/94	318	25	7.10	7.65	340
6.25	24	7.8	8.01	—	305	25	7.61	7.70	324
12.5	—	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—
100	—	8.7/7.8①	—	—	—	—	—	—	—
						Jm 1/30/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①desaturated before use @ 01/29/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 01/29/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012808
Initiation Date:	January 28, 2008	Termination Date:	February 1, 2008

	OBSERVATIONS Day (3) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.3	8.01	—	313	25	7.00	7.93	345
6.25	24	8.3	8.03	-	305	25	6.73	7.94	330
12.5	24	8.2	8.04	-	293	25	6.69	7.91	330
25	24	8.2	8.06	-	296	25	6.23	7.86	316
50	24	8.2	8.11	-	272	25	7.74	7.80	288
100	24	10.1/8.1①	8.25	—	94	25	2.64	7.64	228
							km 2/1/08		

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①desaturated before use CW 01/31/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: CWalker Date: 01/31/08

AQUA-Science

Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/28/08

ESJ 08-01A TIE Merced River

96 hr. Static Acute bioassay w/ 24 hr. Changeout

Ceriodaphnia dubia

+ PBO @ 100 µg/L

Test Concentrations: Control, 6.25, 12.5, 25, 50, 100 + PBO

PBO Standard: 0.1 mg/mL Pipernoyl butoxide (PBO)

East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD

Control water = Reverse Osmosis water amended with EPA salts to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt PBO (mL)
Control	0	100	100	0.1
6.25	6.25	QS to 100	100	0.1
12.5	12.5	QS to 100	100	0.1
25	25	QS to 100	100	0.1
50	50	QS to 100	100	0.1
100	100	0	100	0.1

* 20 mL used to measure pH, 80 mL inoculated for test

	Day 0	Day 1	Day 2	Day 3
Tech	[illegible]	[illegible]	[illegible]	
Time	1210	1150	1000	
Date	01/28/08	01/29/08	1/30/08	

n = 5 animals/replicate - 4 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012808
Initiation Date:	January 28, 2008	Termination Date:	February 1, 2008

	OBSERVATIONS Day (0) Date: 1/28/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.4	8.09	—	317	25	5.2	7.77	333
6.25	24	8.3	8.08	-	305	25	4.3	7.70	322
12.5	24	8.3	8.06	-	293	24	3.6	7.62	304
25	24	8.2	8.04	-	266	25	3.3	7.58	287
50	24	8.2	7.98	-	211	25	3.0	7.51	225
100	24	8.1	7.96	—	93	25	3.0	7.37	107
						MC 01/29/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPA #030

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/28/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012808
Initiation Date:	January 28, 2008	Termination Date:	February 1, 2008

	OBSERVATIONS Day (1) Date: 1/29/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	7.8	8.01	—	318	25	6.44	7.72	337
6.25	25	7.8	8.02	-	307	25	5.48	7.70	323
12.5	25	7.7	8.01	-	293	25	4.75	7.67	307
25	25	7.7	7.99	-	266	25	3.23	7.67	268
50	25	7.7	7.95	-	210	25	3.45	7.67	226
100	25	8.1 | 7.6①	7.80	—	92	25	2.48	7.82	94
						dm 1/30/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① desaturated before use CW 01/29/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R10 EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: C Walker Date: 01/29/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012808
Initiation Date:	January 28, 2008	Termination Date:	February 1, 2008

	OBSERVATIONS Day (2) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.2	7.81	—	323	25	7.13	7.83	328
6.25	24	8.3	7.88	-	310	25	7.21	7.91	325
12.5	24	8.3	7.88	-	297	25	7.17	7.90	307
25	25	8.3	7.88	-	268	25	7.19	7.91	273
50	25	8.3	7.83	-	211	25	7.21	7.90	218
100	—	11.6/8.4@	—	—	—	—	—	—	—

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @ deaerated before use

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R/O EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/30/08

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Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (3) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	11.1/8.5	7.82	—	327	25	7.10	7.81	335
100 C8TC	24	09.6/8.5	7.81	—	91	25	7.15	7.84	98
EDTA Ctrl.	26	8.0	7.81	—	328	25	7.13	7.91	338
100 + 8 mg/L EDTA	—	—	—	—	—	—	—	—	—
						1/31/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @ desaturated before use MC 01/30/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R/O EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/30/08

AQUA-Science

Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/27/08

ESJ 08-01 A TIE Merced River

96 hr. Static Acute bioassay w/ 24 hr. Changeout

Ceriodaphnia dubia

C8 Through Column

Test Concetrations: Column Blank, 100% C8TC, MeOH Control, 2X Addback

C8 Eluate: 250xx

East San Joaquin Ag Waiver Sample Merced River (012408) 535XMRSFD

Control water = Reverse Osmosis water amended with EPA salts to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt. MeOH/ Eluate (mL)
Column Blank	0	100	100	0
100	100	0	100	0
MeOH Ctrl.	0	40	40	0.345
2X Addback	0	40	40	0.345

+ 8 mg/L EDTA

Test Concentrations: Control, 100 + 8 mg/L EDTA

EDTA Standard: 10 mg/mL EDTA

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt EDTA (mL)
EDTA Ctrl.	0	100	100	0.08
100 + 8 mg/L EDTA	100	0	100	0.08

* 20 mL used to measure pH

	Day 0	Day 1	Day 2	Day 3
Tech	CW	CW	CW	CW/mc
Time	1325	1220	1200	1030
Date	01/27/08	01/28/08	01/28/08	1/29/08

n = 5 animals/replicate - 4 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (0) Date: 1/27/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	8.3	7.63	—	328	24	6.2	7.72	345
100 C8TC	24	8.2	7.54	—	92	24	7.4	8.01	112
EDTA Ctrl.	24	8.2	7.75	—	320	24	6.9	7.75	331
100 + 8 mg/L EDTA	25	8.9/8.0 ①	7.46	—	95	24	7.5	8.00	113
						24 1/28/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① desaturated DO 01/27/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R10 EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: A. Walker Date: 01/27/08

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WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (1) Date: 1/28/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	8.5 (101%)	7.68	—	331	24	6.5	7.85	348
100 C8TC	24	8.0	7.55	—	94	24	6.7	7.91	112
EDTA Ctrl.	25	8.3	7.82	—	319	24	7.0	7.76	339
100 + 8 mg/L EDTA	—	—	—	—	—	—	—	—	—
						MC 01/29/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: Alex Walker Date: 01/28/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Merced River	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Merced River (012408) 535XMRSFD **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (2) Date: 1/29/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	26	9.0/7.9 ①	7.65	—	335	25	6.89	7.58	348
100 C8TC	26	7.8	7.52	—	93	25	7.14	7.89	105
EDTA Ctrl.	26	7.7	7.83	—	321	25	7.01	7.62	340
100 + 8 mg/L EDTA	—	—	—	—	—	—	—	—	—
						Jm 1/30/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①desaturated DO 01/29/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH#030

All surface waters filtered through a 60 µm screen daily

Technician: CeWalker Date: 01/29/08

AQUA-Science

Environmental Toxicology Consultants

Enzyme-Linked Immunosorbant Assay (ELISA) Results

Client: ***SJCD & ESJ***

Project: ***020208 MLJ***

Type of ELISA: ***Chlorpyrifos***

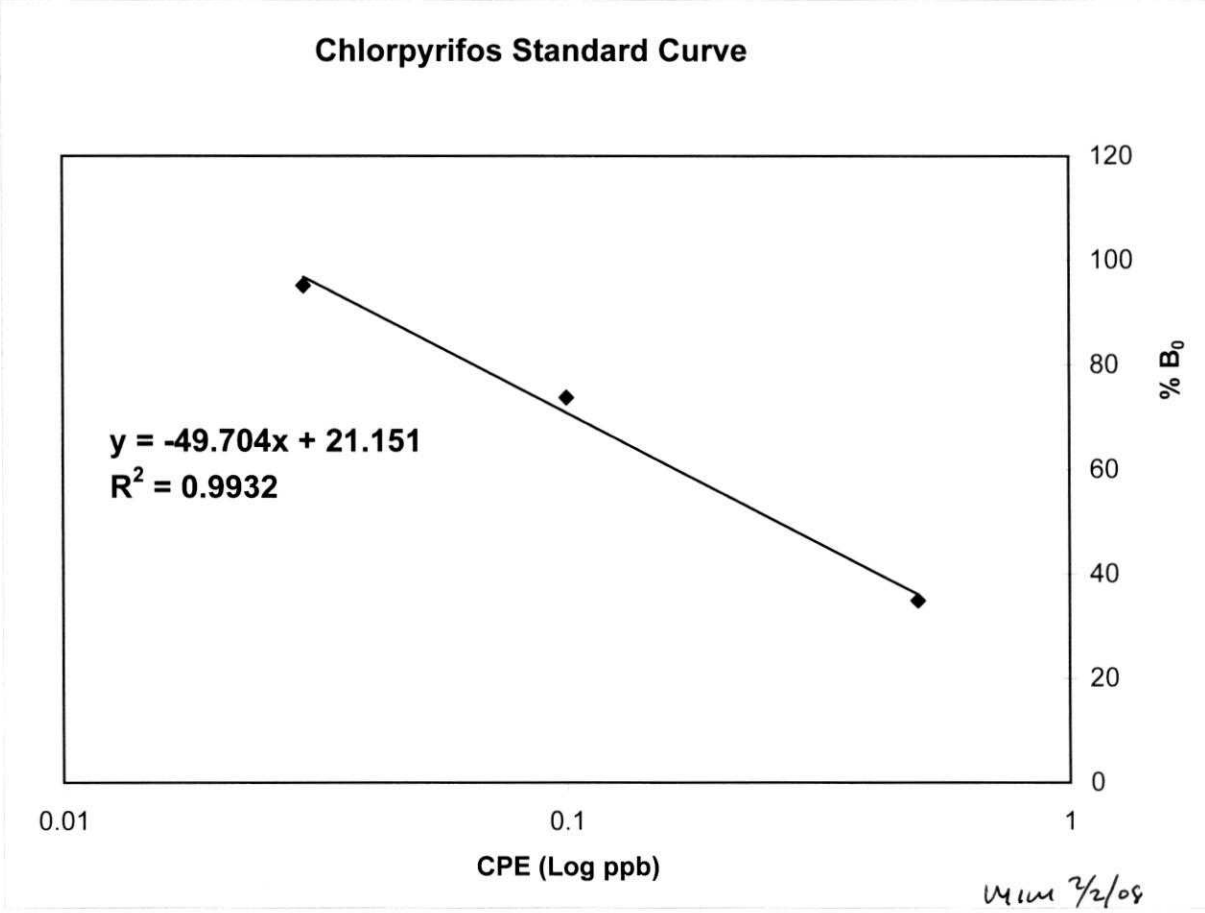
Source: ***Beacon Analytical***

Model: ***Insite™ Plate Kit***

Lot No.: ***10747***

Date: ***2/2/2008***

STANDARD CURVE	Avg.%Bo	Log ppb	Chlorpyrifos (ppb)
0.03 ppb	**95.18**	-1.5229	0.0324
0.10 ppb	**73.76**	-1.0000	0.0874
0.50 ppb	**34.87**	-0.3010	0.5296



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Enzyme-Linked Immunosorbant Assay (ELISA) Results

SAMPLE ID	Avg.%Bo	Log ppb	Chlorpyrifos (ppb)
E-STD	58.1	-0.7429	0.1807
Merced River (012408) 1X	28.2	-0.1412	0.7224
Merced River (012408) 0.5X	47.0	-0.5207	0.3015
Merced River (012408) 0.5X	46.2	-0.5037	0.3135
Merced River (012408) 0.25X	60.3	-0.7879	0.1630
			mm 2/2/08

AQUA-*Science*

Environmental Toxicology Consultants

Enzyme-Linked Immunosorbant Assay Record

Date:	2/2/2008	Beacon Analytical Chlorpyrifos	
Client:	SJCD & ESJ	Lot #	10747
Project:	020208 MLJ	Exp.	03/09

Type of ELISA: Chlorpyrifos (CPE)

A1/A2	0.00 ppb Chlorpyrifos calibrator
A3/A4	0.03 ppb Chlorpyrifos calibrator
A5/A6	0.10 ppb Chlorpyrifos calibrator
A7/A8	0.50 ppb Chlorpyrifos calibrator
A9/A10	E-STD
A11/A12	Merced River (012408) 1X

	O.D.	Avg. O.D.	% CV	%Bo
A1	1.230	1.246	1.82	100.00
A2	1.262			
A3	1.186	1.186	0.00	95.18
A4	1.186			
A5	0.924	0.919	0.77	73.76
A6	0.914			
A7	0.417	0.435	5.70	34.87
A8	0.452			
A9	0.704	0.724	3.84	58.08
A10	0.743			
A11	0.351	0.351	0.00	28.17
A12	0.351			

Technician: _____ Date: 2/2/08

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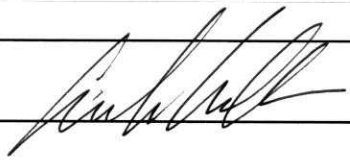
Enzyme-Linked Immunosorbant Assay Record

Date:	2/2/2008	Beacon Analytical Chlorpyrifos	
Client:	SJCD & ESJ	Lot #	10747
Project:	020208MLJ	Exp.	03/09

Type of ELISA: Chlorpyrifos (CPE)

B1/B2	Merced River (012408) 0.5X
B3/B4	Merced River (012408) 0.5X
B5/B6	Merced River (012408) 0.25X

	O.D.	Avg. O.D.	% CV	%Bo
B1	0.590	0.586	0.97	47.03
B2	0.582			
B3	0.582	0.576	1.60	46.19
B4	0.569			
B5	0.705	0.752	8.75	60.31
B6	0.798			

Technician:  Date: 2/2/08

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Enzyme-Linked Immunosorbant Assay (ELISA) Results

Client: ***SJCD & ESJ***

Project: ***020208 MLJ***

Type of ELISA: ***Diazinon***

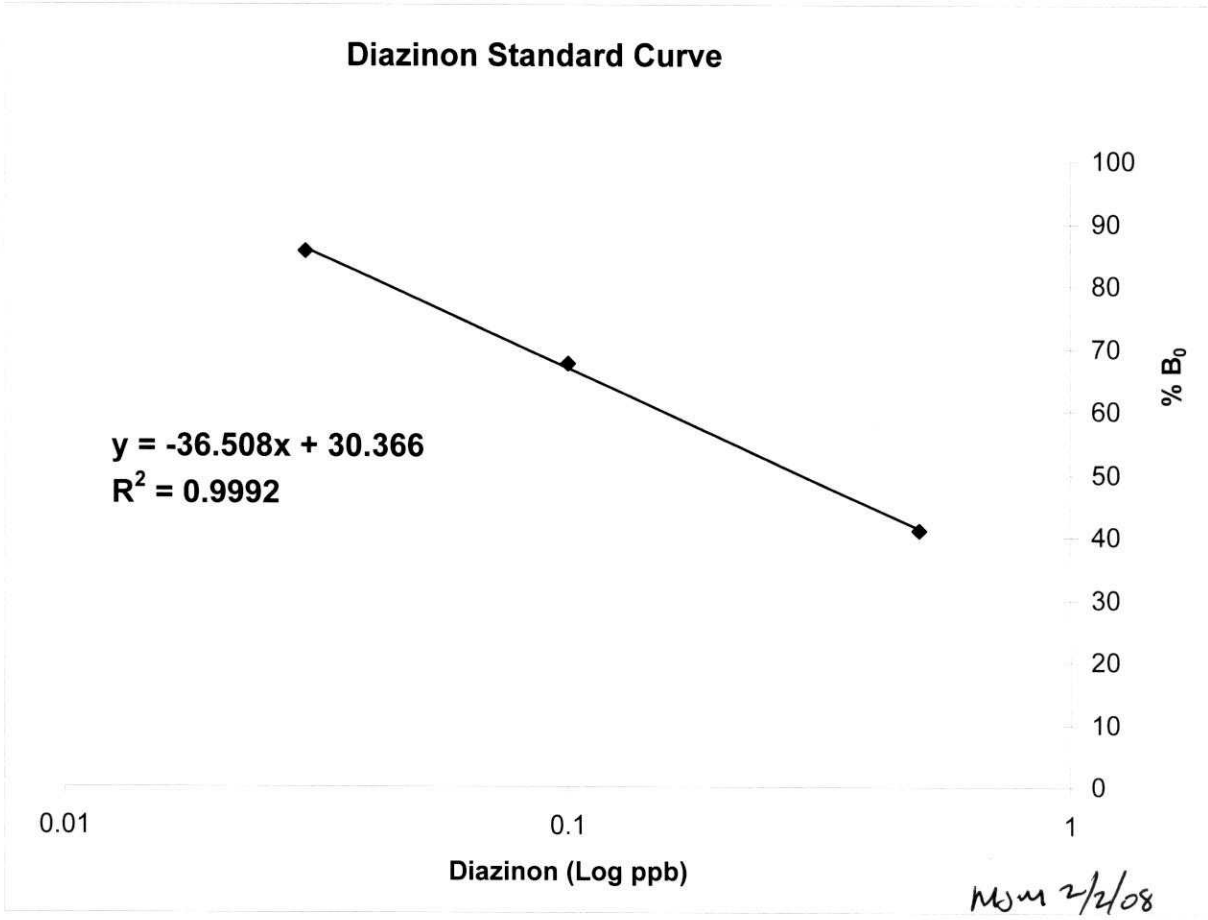
Source: ***Beacon Analytical***

Model: ***Insite™ Plate Kit***

Lot No.: ***20747***

Date: ***2/2/2008***

STANDARD CURVE	Avg.%Bo	Log ppb	Diazinon (ppb)
0.03 ppb	**85.54**	-1.5229	0.0308
0.10 ppb	**67.62**	-1.0000	0.0954
0.50 ppb	**41.04**	-0.3010	0.5101



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Enzyme-Linked Immunosorbant Assay (ELISA) Results

SAMPLE ID	Avg.%Bo	Log ppb	Diazinon (ppb)
E-Standard	55.9	-0.7007	0.1992
Merced 1X	73.3	-1.1748	0.0669
Merced 1X	74.1	-1.1993	0.0632
Merced 0.5X	84.7	-1.4883	0.0325
Merced 0.5X	83.8	-1.4638	0.0344
Merced 0.25X	96.6	-1.8141	0.0153
Merced 0.25X	89.2	-1.6122	0.0244
			Mm 2/2/08

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Enzyme-Linked Immunosorbant Assay Record

Date:	2/2/2008	Beacon Analytical Diazinon	
Client:	SJCD & ESJ	Lot #	20747
Project:	020208 MLJ	Exp.	03/09

Type of ELISA: Diazinon (Dia)

A1/A2	0.00 ppb Diazinon calibrator
A3/A4	0.03 ppb Diazinon calibrator
A5/A6	0.10 ppb Diazinon calibrator
A7/A8	0.50 ppb Diazinon calibrator
B1/B2	E-Standard
B3/B4	Merced 1X
B5/B6	Merced 1X
B7/B8	Merced 0.5X

	O.D.	Avg. O.D.	% CV	%Bo
A1	0.892	0.896	0.55	100.00
A2	0.899			
A3	0.769	0.766	0.55	85.54
A4	0.763			
A5	0.598	0.606	1.75	67.62
A6	0.613			
A7	0.359	0.368	3.27	41.04
A8	0.376			
B1	0.459	0.501	11.86	55.95
B2	0.543			
B3	0.660	0.656	0.86	73.26
B4	0.652			
B5	0.664	0.664	0.00	74.15
B6	0.664			
B7	0.748	0.759	1.96	84.70
B8	0.769			

Technician: _____ Date: 2/2/08

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Environmental Toxicology Consultants

Enzyme-Linked Immunosorbant Assay Record

Date:	2/2/2008	Beacon Analytical Diazinon	
Client:	SJCD & ESJ	Lot #	20747
Project:	020208 MLJ	Exp.	03/09

Type of ELISA: Diazinon (Dia)

C1/C2	Merced 0.5X
C3/C4	Merced 0.25X
C5/C6	Merced 0.25X

	O.D.	Avg. O.D.	% CV	%Bo
C1	0.743	0.751	1.41	83.81
C2	0.758			
C3	0.885	0.865	3.27	96.59
C4	0.845			
C5	0.802	0.799	0.53	89.22
C6	0.796			

Technician: _____ Date: 2/2/08

APPENDIX IV

ACUTE *C. DUBIA* TIEs

ESJ 08-01 TIE
(1/24-25/08 Sample Date)

Mustang Creek @ East Ave

Summary of Acute Phase I *Ceriodaphnia dubia* TIE on ESJ Mustang Creek 1/24/08 Sample (535XMCAEA)

Treatment	*Conc. (%)*	*96-hr Survival (%)*	*Toxic Units (TUa)*[a]	*Comment*
Baseline	Lab Control 6.25 12.5 25 50 100	100 100 100 100 60* 0*	NOEC = 25% **(4 TUa)** EC_{50} = 58.3 **(1.7 TUa)**	Based on the EC_{50}, the sample contained 1.7 TUa
Baseline + 100 ppb PBO	PBO Control 6.25 12.5 25 50 100	100 100 100 95 0* 0*	NOEC = 25% **(4 TUa)** EC_{50} = 36.8 **(2.7 TUa)**	PBO slightly increase in toxicity in the 50% concentration - pyrethroid toxicity suspected
C-8 SPE Through-Column	Column Blank 100	100 100	--	Toxicity removed by SPE extraction. Non-polar organic (NPO) toxicity indicated
C-8 SPE Column 2X Add-Back	MeOH Ctrl 2X add-back	100 0*	--	Toxicity recovered in methanol eluate
Baseline + EDTA	EDTA Control 100	100 0*	--	EDTA treatment ineffective - cationic metals not responsible for sample toxicity

Sample Date: 1/24/08
Test Date: 1/27/08
a TUa = 100/NOEC; TUa = $100/EC_{50}$
* significantly different from control ($p<0.05$)

Conclusion:

PBO addition caused a slight decrease in survival – pyrethroid insecticide toxicity suspected. SPE removed all toxicity, which was recovered in the SPE add-back, indicating that the majority of the toxicity was caused by NPOs.

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Ta	Sample ID:	MUSTANG CREEK
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia

Comments: ESJ 08-01 TIE : Ceriodaphnia Bioassay

Conc-%	1	2	3	4
Control	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000
50	0.6000	0.6000	0.6000	0.6000
100	0.0000	0.0000	0.0000	0.0000

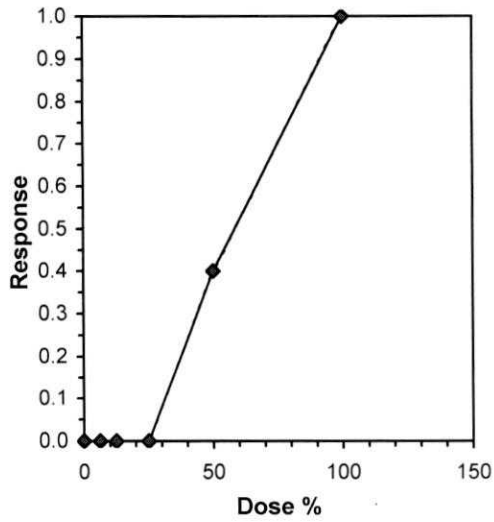
			Transform: Arcsin Square Root					Rank	1-Tailed	Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Mean	N-Mean
Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			1.0000	1.0000
6.25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00	1.0000	1.0000
12.5	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00	1.0000	1.0000
25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00	1.0000	1.0000
*50	0.6000	0.6000	0.8861	0.8861	0.8861	0.000	4	10.00	10.00	0.6000	0.6000
*100	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	10.00	10.00	0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	1	0.884		
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	25	50	35.3553	4

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL(Exp)		Skew
IC05	28.125	0.000	28.125	28.125	#DIV/0!
IC10	31.250	0.000	31.250	31.250	#DIV/0!
IC15	34.375	0.000	34.375	34.375	#DIV/0!
IC20	37.500	0.000	37.500	37.500	#DIV/0!
IC25	40.625	0.000	40.625	40.625	#DIV/0!
IC40	50.000	0.000	50.000	50.000	#DIV/0!
IC50	58.333	0.000	58.333	58.333	-1.0076



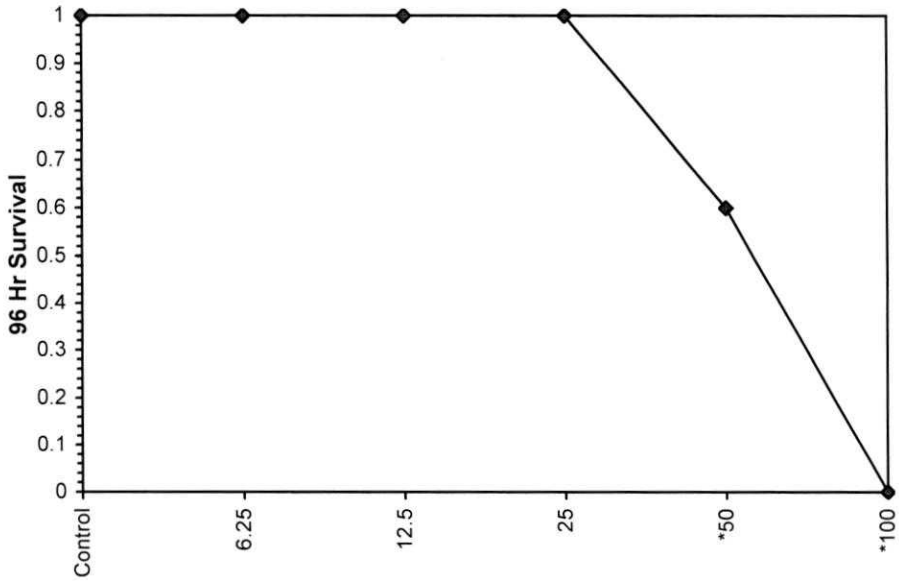
Administrative Record
Page 13307

Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Ta	Sample ID:	MUSTANG CREEK
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Dose-Response Plot



Administrative Record
Page 13308

Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Ta	Sample ID:	MUSTANG CREEK
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Conc-%	1	2	3	4
Control	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000
50	0.6000	0.6000	0.6000	0.6000
100	0.0000	0.0000	0.0000	0.0000

			Transform: Arcsin Square Root					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			
6.25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	0.000	2.410	0.0539
12.5	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	0.000	2.410	0.0539
25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	0.000	2.410	0.0539
*50	0.6000	0.6000	0.8861	0.8861	0.8861	0.000	4	20.536	2.410	0.0539
*100	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	50.078	2.410	0.0539

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	1	0.884		
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	25	50	35.3553	4	0.02606	0.02743	0.83938	0.001	1.2E-20	5, 18

Administrative Record
Page 13309

Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Tb	Sample ID:	MUSTANG CREEK
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	PBO
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Conc-%	1	2	3	4
PBO Control	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000
25	1.0000	0.8000	1.0000	1.0000
50	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

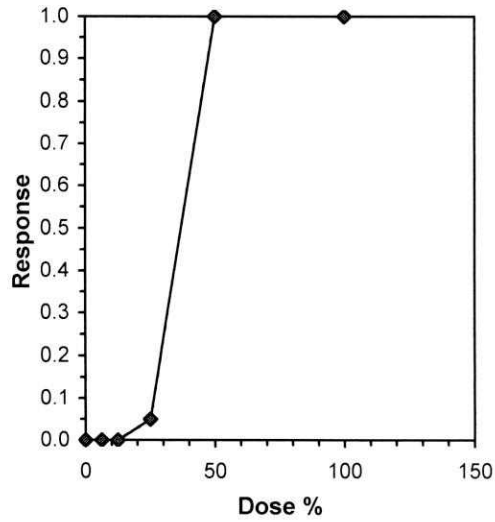
			Transform: Arcsin Square Root					Rank	1-Tailed	Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Mean	N-Mean
PBO Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			1.0000	1.0000
6.25	1.0000	1.0000	1.3503	1.3453	1.3652	0.739	4	20.00	10.00	1.0000	1.0000
12.5	1.0000	1.0000	1.3385	1.3181	1.3453	1.015	4	16.00	10.00	1.0000	1.0000
25	0.9500	0.9500	1.2857	1.1071	1.3453	9.261	4	16.00	10.00	0.9500	0.9500
*50	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	10.00	10.00	0.0000	0.0000
*100	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	10.00	10.00	0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.56461	0.884	-2.9347	13.3153
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	25	50	35.3553	4

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL(Exp)		Skew
IC05	25.000	3.082	11.667	27.000	-1.2159
IC10	26.316	1.400	17.544	28.211	-2.3835
IC15	27.632	1.034	23.421	29.421	-1.2946
IC20	28.947	0.937	24.985	30.632	-0.8758
IC25	30.263	0.878	26.548	31.842	-0.8758
IC40	34.211	0.703	31.238	35.474	-0.8758
IC50	36.842	0.586	34.365	37.895	-0.8758

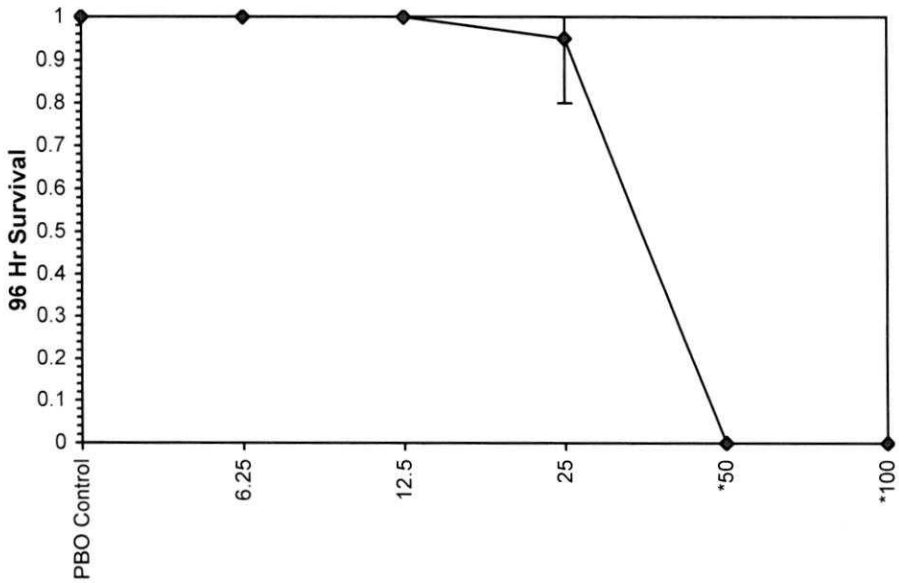


Administrative Record
Page 13310
Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Tb	Sample ID:	MUSTANG CREEK
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	PBO
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Dose-Response Plot



Administrative Record
Page 13311

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/27/2008	Test ID:	a1310801Tb	Sample ID:	MUSTANG CREEK
End Date:	1/31/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	PBO
Sample Date:	1/24/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia

Comments: ESJ 08-01 TIE : Ceriodaphnia Bioassay

Conc-%	1	2	3	4
PBO Control	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000
25	1.0000	0.8000	1.0000	1.0000
50	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

			Transform: Arcsin Square Root					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
PBO Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			
6.25	1.0000	1.0000	1.3503	1.3453	1.3652	0.739	4	-0.144	2.410	0.0837
12.5	1.0000	1.0000	1.3385	1.3181	1.3453	1.015	4	0.196	2.410	0.0837
25	0.9500	0.9500	1.2857	1.1071	1.3453	9.261	4	1.715	2.410	0.0837
*50	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	32.257	2.410	0.0837
*100	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	32.257	2.410	0.0837

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.56461	0.884	-2.9347	13.3153
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	25	50	35.3553	4	0.04258	0.04482	1.30323	0.00241	5.9E-19	5, 18

Administrative Record
Page 13312

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Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
Control	A	0	0	0	0	n=5 animals/rep
	B	0	0	0	0	
	C	0	0	0	0	Test Initiation Info:
	D	0	0	0	0	Time: 1254
6.25	A	0	0	0	0	Tech: mm
	B	0	0	0	0	
	C	0	0	0	0	Test Termination Info:
	D	0	0	0	0	Time: 1422
12.5	A	0	0	0	0	Tech: mm
	B	0	0	0	0	
	C	0	0	0	0	① NEONATES present 1/30/08 mm
	D	0	0	0	0	② Neonates present 1/31/08 mm
25	A	0	0	0	0	
	B	0	0	0	0	
	C	0	0	0	0	
	D	0	0	0	0	
50	A	0	0	0	2	
	B	0	0	1	2	
	C	0	1	2	2	
	D	0	0	1	2	
100	A	0	5			
	B	0	5			
	C	0	5			
	D	0	5			
Technician Initials		mm	QW	mm	mm	
Observation Time		1423	1505	1536	1422	
Observation Date		1/28/08	01/29/08	1/30/08	1/31/08	

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Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Mustang Creek (012408) 535XMCAEA **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

Tx. Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
Column Blank	A	0	0	0 (1)	0 (2)	n=5 animals/rep
	B	0	0	0	0 (2)	
	C	0	0	0	0 (2)	Test Initiation Info:
	D	0	0	0 (1)	0 (2)	Time: 1310
100 C8TC	A	0	0	0 (1)	0 (2)	Tech: mm
	B	0	0	0 (1)	0 (2)	
	C	0	0	0 (1)	0 (2)	Test Termination Info:
	D	0	0	0 (1)	0 (2)	Time: 1428
MeOH Ctrl	A n=6	0	0	0	0 (2)	Tech: mm
	B	0	0	0	0 (2)	
						(1) NEONATES present 4/30/08 mm
2X Addback	A	5				
	B	5				
EDTA Ctrl	A	0	0	0	0 (2)	
	B	0	0	0	0 (2)	
	C	0	0	0	0 (2)	
	D	0	0	0 (1)	0 (2)	
100 +	A	1	5			
8 mg/L EDTA	B	0	5			
	C	0	5			
	D	0	5			
Technician Initials		MJM	MJM	mm	mm	
Observation Time		1432	1520	1542	1428	
Observation Date		1/28/08	01/29/08	1/30/08	1/31/08	

AQUA-Science

Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01 A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA **+PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 012808
Initiation Date:	January 28, 2008	Termination Date:	February 1, 2008

Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
PBO Ctrl.	A	0	0	0	0 ①	n=5 animals/rep
	B	0	0	0	0	
	C	0	0	0	0 ②	Test Initiation Info:
	D	0	0	0	0 ③	Time: 1322
6.25	A n=6	0	0	0	0 ④	Tech: MM
	B	0	0	0	0 ⑤	
	C	0	0	0	0 ⑥	Test Termination Info:
	D	0	0	0	0 ⑦	Time: 1218
12.5	A	0	0	0	0	Tech: MM
	B	0	0	0	0	
	C n=4	0	0	0	0 ⑧	① Aliquots pulled 2/1/08 MM
	D	0	0	0	0 ⑨	
25	A	0	0	0	0	
	B	0	0	1	1	
	C	0	0	0	0	
	D	0	0	0	0	
50	A	1	4	5	/	
	B	0	2	5	/	
	C	0	4	5	/	
	D	0	2	5	/	
100	A	1	5	/	/	
	B	2	5	/	/	
	C	1	5	/	/	
	D	1	5	/	/	
Technician Initials		CW	MM	JM	MM	
Observation Time		1545	1550	1610	1218	
Observation Date		01/29/08	1/30/08	1/31/08	2/1/08	

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (3) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.1	8.03		322	25	7.53	8.11	344
6.25	24	8.1	8.00	—	317	25	7.74	8.10	334
12.5	24	8.1	7.99	—	310	25	7.56	8.10	326
25	24	8.1	7.94	—	294	25	7.71	8.10	310
50	24	8.0	7.86	—	264	25	7.35	8.08	279
100	24	11.5/8.2	7.73	—	201	—	—	—	—
						Jm 1/31/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R/O EPA MH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/30/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (0) Date: 1/27/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.3	8.05	66/94	320	24	8.0	8.29	351
6.25	24	8.3	8.08	—	312	24	8.2	8.24	330
12.5	24	8.3	8.06	—	305	24	8.0	8.16	322
25	24	8.3	8.03	—	291	24	7.9	8.12	②230309
50	24	8.4	7.94	—	261	24	7.7	8.05	269
100	25	8.9/8.2②	7.66	48/76	202	24	7.5	7.99	217
						CM 1/28/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①desaturated DO 01/27/08

②Entry error CM 1/28/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 01/27/08

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Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (1) Date: 1/28/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.4	8.07	66/94	318	24	6.9	7.77	338
6.25	24	8.3	8.08	—	311	24	7.0	7.94	328
12.5	24	8.3	8.09	—	304	24	7.0	7.98	322
25	24	8.2	8.08	—	288	24	7.1	7.97	306
50	24	8.0	8.04	—	257	24	7.0	7.96	274
100	24	10.7/7.8@	7.94	54/66	202	24	7.0	7.93	213
						MC 01/29/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @desaturated before use CW 01/28/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH#030

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 01/28/08

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WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (2) Date: 1/29/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.0	7.99	106/94	318	25	6.95	7.65	340
6.25	24	8.0	8.02	—	311	25	7.12	7.69	330
12.5	24	7.9	8.01	—	306	25	6.98	7.72	288
25	24	7.9	8.00	—	290	25	7.71	7.74	301
50	24	7.9	7.96	—	259	25	7.71	7.74	301
100	—	9.4/8.0@	—	—	—	25	—	—	—
						Jm 1/30/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @desaturated before use CW 01/29/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: Walker Date: 01/29/08

AQUA-Science

Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/27/08

ESJ 08-01A TIE Mustang Creek

96 hr. Static Acute bioassay w/ 24 hr. Changeout

Ceriodaphnia dubia

Baseline

Test Concentrations: Control, 6.25, 12.5, 25, 50, 100

East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA

Control water = Reverse Osmosis water amended with EPA salts to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*
Control	0	100	100
6. 25	6.25	QS to 100	100
12.5	12.5	QS to 100	100
25	25	QS to 100	100
50	50	QS to 100	100
100	100	0	100

* 20 mL used to measure pH, 80 mL inoculated for test

	Day 0	Day 1	Day 2	Day 3
Tech	CW	CW	CW	CM/MC
Time	1140	1120	1105	1015
Date	01/27/08	01/28/08	01/29/08	1/30/08

n = 5 animals/replicate - 4 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012808
Initiation Date:	January 28, 2008	Termination Date:	February 1, 2008

	OBSERVATIONS Day (3) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	7.9	7.76	—	~~3033~~ ②	~~25~~	6.97	8.06	351
6.25	24	7.9	7.80	-	316	25	4.31	7.81	336
12.5	24	7.9	7.82	-	311	25	2.39	7.69	328
25	24	8.0	7.84	-	296	25	2.33	7.55	311
50	24		7.86	-	264	—	—	—	—
100	—	9.5/8.0①	—	—	—	—	—	—	—
						2/1/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①desaturated before use CW 01/31/08
②entry error CW 01/31/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #032

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 01/31/08

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WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012808
Initiation Date:	January 28, 2008	Termination Date:	February 1, 2008

	OBSERVATIONS Day (0) Date: 1/28/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.4	8.04	—	318	24	5.5	7.84	335
6.25	24	8.3	8.07	-	312	24	3.0	7.78	326
12.5	24	8.2	8.07	-	305	24	2.1	7.71	319
25	24	8.1	8.05	-	290	24	1.8	7.65	303
50	24	8.1	8.03	-	261	24	1.1	7.61	272
100	24	10.7/7.8	7.91	—	202	24	2.0	7.55	212

MC 01/29/08

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① desaturated before use CW 01/28/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: CWalker Date: 01/28/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012808
Initiation Date:	January 28, 2008	Termination Date:	February 1, 2008

	OBSERVATIONS Day (1) Date: 1/29/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.0	8.04	—	318	~~25~~ 25	~~5.74~~ 6.95	~~7.65~~ 7.65	~~333~~ 318
6.25	24	8.0	8.01	-	312	~~25~~ 25	~~3.37~~ 7.12	~~7.45~~ 7.64	~~324~~ 320
12.5	24	7.9	8.02	-	305	~~25~~ 25	~~1.25~~ 6.98	~~7.45~~ 7.72	~~318~~ 288
25	24	7.9	7.99	-	291	~~25~~ 25	~~1.97~~ 7.11	~~7.43~~ 7.74	~~307~~ 301
50	24	7.8	7.95	-	261	~~25~~ 25	~~1.50~~ 6.86	~~7.42~~ 7.73	~~270~~ 286
100	24	9.4/7.8①	7.88	—	202	25	1.10	7.42	205
						1/30/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① desaturated before use CW 01/29/08

② data entered on wrong data sheet (Baseline) JM 1/30/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R/O EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: Walker Date: 01/29/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012808
Initiation Date:	January 28, 2008	Termination Date:	February 1, 2008

	OBSERVATIONS Day (2) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.2	7.71	→	323	24	7.4	8.05	336
6.25	24	8.2	7.85	-	316	24	5.1	7.83	328
12.5	24	8.1	7.92	-	309	24	2.7	7.67	311
25	24	8.1	7.88	-	291	24	4.1	7.65	309
50	24	8.1	7.82	-	263	24	2.1	7.47	269
100	—	11.5/8.2	—	—	—	-	—	—	—
						CW 01/31/07			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R/O EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/30/08

AQUA-Science

Page ____

Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/28/08

ESJ 08-01A TIE Mustang Creek

96 hr. Static Acute bioassay w/ 24 hr. Changeout

Ceriodaphnia dubia

+ PBO @ 100 µg/L

Test Concentrations: Control, 6.25, 12.5, 25, 50, 100 + PBO

PBO Standard: 0.1 mg/mL Pipernoyl butoxide (PBO)

East San Joaquin Ambient Sample Mustang Creek (012408) 535XMCAEA

Control water = Reverse Osmosis water amended with EPA salts to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt PBO (mL)
Control	0	100	100	0.1
6.25	6.25	QS to 100	100	0.1
12.5	12.5	QS to 100	100	0.1
25	25	QS to 100	100	0.1
50	50	QS to 100	100	0.1
100	100	0	100	0.1

* 20 mL used to measure pH, 80 mL inoculated for test

	Day 0	Day 1	Day 2	Day 3
Tech	[illegible]	[illegible]	MAM	
Time	1130	1125	1015	
Date	01/28/08	01/29/08	1/30/08	

n = 5 animals/replicate - 4 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Mustang Creek (012408) 535XMCAEA **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (3) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	11.2/8.3	7.58	—	324	25	7.57	8.05	338
100 C8TC	25	9.3/8.3	7.50	—	203	25	7.49	8.12	209
EDTA Ctrl.	26	8.0	7.81	—	328	25	7.46	8.06	345
100 + 8 mg/L EDTA	~~25~~	@ ~~11.5/8.2~~	~~7.43~~	—	~~201~~	—	—	—	—
						1/31/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RIO EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 1/30/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Mustang Creek (012408) 535XMCAEA **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (0) Date: 1/27/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	8.7/8.3 ①	7.95	—	329	24	7.0	7.89	343
100 C8TC	24	8.0	7.63	~	205	24	7.8	7.95	222
EDTA Ctrl.	24	8.3	7.82	—	323	24	7.8	7.94	339
100 + 8 mg/L EDTA	24	8.8/8.2 ①	7.62	~	203	24	7.7	8.03	217
						CM	1/28/08		

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① desaturated DO 01/27/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: Cleo Walker Date: 01/27/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Mustang Creek (012408) 535XMCAEA **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (1) Date: 1/28/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	11.0/8.3 ①	7.92	—	329	24	7.2	7.75	346
100 C8TC	24	8.9/8.1 ①	7.58	—	205	24	7.0	7.80	220
EDTA Ctrl.	25	8.3	7.82	—	318	24	7.0	7.84	333
100 + 8 mg/L EDTA	26	8.0	7.65	—	201	24	7.3	7.89	211
						MC 01/29/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①desaturated DO 01/28/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO RAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: Lee Walker Date: 01/28/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Mustang Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Mustang Creek (012408) 535XMCAEA **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 012708
Initiation Date:	January 27, 2008	Termination Date:	January 31, 2008

	OBSERVATIONS Day (2) Date: 1/29/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	25	9.1/8.1@	7.92	—	331	25	6.29	7.43	348
100 C8TC	25	8.0	7.76	—	207	25	6.98	7.55	220
EDTA Ctrl.	26	7.7	7.83	—	317	25	6.98	7.58	333
100 + 8 mg/L EDTA	—	—	—	—	—	—	—	—	—
						jm 1/30/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @desaturated $CaCO_3$ 01/29/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R10 EPAMH #030

All surface waters filtered through a 60 µm screen daily

Technician: Walker Date: 01/29/08

AQUA-Science

Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/27/08

ESJ 08-01 A TIE Mustang Creek
96 hr. Static Acute bioassay w/ 24 hr. Changeout
Ceriodaphnia dubia

C8 Through Column

Test Concetrations: Column Blank, 100% C8TC, MeOH Control, 2X Addback
C8 Eluate: 250xx

East San Joaquin Ag Waiver Sample Mustang Creek (012408) 535XMCAEA

Control water = Reverse Osmosis water amended with EPA salts
to achieve EPAMH specifications (R/O EPAMH)
All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt. MeOH/ Eluate (mL)
Column Blank	0	100	100	0
100	100	0	100	0
MeOH Ctrl.	0	40	40	0.345
2X Addback	0	40	40	0.345

+ 8 mg/L EDTA

Test Concentrations: Control, 100 + 8 mg/L EDTA
EDTA Standard: 10 mg/mL EDTA

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt EDTA (mL)
EDTA Ctrl.	0	100	100	0.08
100 + 8 mg/L EDTA	100	0	100	0.08

* 20 mL used to measure pH

	Day 0	Day 1	Day 2	Day 3
Tech	CW	CW	CW	cy/mk
Time	1200	1140	1115	1015
Date	01/27/08	01/28/08	01/29/08	1/30/08

n = 5 animals/replicate - 4 replicates/concentration

APPENDIX V

ACUTE *C. DUBIA* TIEs

ESJ 08-01 TIE
(1/24-25/08 Sample Date)

Highline Canal @ Lombardy Ave

Summary of Acute Phase I *Ceriodaphnia dubia* TIE on ESJ Highline Canal @ Lombardy 1/24/08 Sample (535XHCALR)

Treatment	*Conc. (%)*	*96-hr Survival (%)*	*Toxic Units (TUa)*[a]	*Comment*
Baseline	Lab Control 100	100 100	NOEC > 100% **(< 1 TUa)** EC_{50} > 100% **(< 1 TUa)**	Sample lost toxicity prior to or during TIE
Baseline + 100 ppb PBO	PBO Control 100	100 0*	---	PBO markedly enhanced toxicity; subtoxic concentrations of pyrethroid insecticide(s) suspected
C-8 SPE Through-Column	Column Blank 100	100 100	--	No toxicity in baseline
C-8 SPE Column 2X Add-Back	MeOH Ctrl 2X add-back	100 0*	--	Toxicity recovered in methanol eluate; non-polar organic toxicant(s) (NPOs) may be present
Baseline + EDTA	EDTA Control 100	100 100	--	No toxicity in baseline

Sample Date: 1/24/08
Test Date: 1/30/08
a TUa = 100/NOEC; TUa = $100/EC_{50}$
* significantly different from control ($p<0.05$)

Conclusion:

Sample lost all detectable toxicity. However, markedly enhanced toxicity with PBO is consistent with pyrethroid insecticide(s) present at subtoxic concentrations. Toxicity was recovered in the SPE column 2X add-back, indicating the presence of NPO(s) at subtoxic concentrations.

AQUA-Science

Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4
Control	A	0	0	0 ①	0 ②
	B	0	0	0 ①	0 ②
	C	0	0	0 ①	0 ②
	D	0	0	0 ①	0 ②
100	A	0	0	0 ①	0 ②
	B	0	0	0 ①	0 ②
	C	0	0	0 ①	0 ②
	D	0	0	0 ①	0 ②
	A				
	B				
	C				
	D				
	A				
	B				
	C				
	D				
	A				
	B				
	C				
	D				
	A				
	B				
	C				
	D				
Technician Initials		CW	CW	CW	CW
Observation Time		1500	1419	1429	1212
Observation Date		01/31/08	02/01/08	02/02/08	02/03/08

Comments
n=5 animals/rep
Test Initiation Info:
Time: 1520
Tech: CW
Test Termination Info:
Time: 1212
Tech: CW
① neonates present CW 02/02/08
② neonates present CW 02/03/08

AQUA-Science

Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01 A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **+PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
PBO Ctrl.	A	0	0	0	0 ②	n=5 animals/rep
	B	0	0	0 ①	0 ②	
	C	0	0	0	0 ②	Test Initiation Info:
	D	0	0	0	0 ②	Time: 1570
100	A	3	5			Tech: CM
	B	2	5			
	C	2	5			Test Termination Info:
	D	4	5			Time: 1214
	A					Tech: CW
	B					①neonates present CW 02/02/08
	C					②neonates present CW 02/03/08
	D					
	A					
	B					
	C					
	D					
	A					
	B					
	C					
	D					
	A					
	B					
	C					
	D					
Technician Initials		CW	CW	CW	CW	
Observation Time		1505	1422	1434	1214	
Observation Date		01/31/08	02/01/08	02/02/08	02/03/08	

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MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

Tx. Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
Column Blank	A	Ø	Ø	Ø	Ø	n=5 animals/rep
	B	Ø	Ø	Ø	Ø	
	C	Ø	Ø	Ø	Ø	Test Initiation Info:
	D	Ø	Ø	Ø	Ø	Time: 1500
100 C8TC	A	Ø	Ø	Ø	Ø	Tech: CY
	B n=4	Ø	Ø	Ø	Ø	
	C	1	1	1	1	Test Termination Info:
	D	Ø	Ø	Ø	Ø	Time:
MeOH Ctrl	A	Ø	Ø	Ø	Ø	Tech:
	B	Ø	Ø	Ø	Ø	①entry error CW 01/31/08
						②neonates present CW 02/02/08
						③neonates present CW 02/03/08
2X Addback	A	Ø	2	3	5	
	B	Ø	2	2	5	
EDTA Ctrl	A	Ø	Ø	Ø	Ø	
	B	Ø	Ø	Ø	Ø	
	C	Ø	Ø	Ø	Ø	
	D	Ø	Ø	Ø	Ø	
100 +	A	Ø	Ø	Ø	Ø	
8 mg/L EDTA	B	Ø	Ø	Ø	Ø	
	C	Ø	Ø	Ø	Ø	
	D	Ø	Ø	Ø	Ø	
Technician Initials		CW	CW	CW	CW	
Observation Time		1517 ~~1017~~	1431	1440	1216	
Observation Date		01/31/08	02/01/08	02/02/08	02/03/08	

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DOSE PREPARATION SHEET

1/30/08

ESJ 08-01A TIE Highline @ Lombardy
96 hr. Static Acute bioassay w/ 24 hr. Changeout
Ceriodaphnia dubia

+ PBO @ 100 µg/L
Test Concentrations: Control and 100% + PBO
PBO Standard: 0.1 mg/mL Pipernoyl butoxide (PBO)

ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR

Control water = Reverse Osmosis water amended with EPA salts
to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt PBO (mL)
Control	0	100	100	0.1
100	100	0	100	0.1

* 20 mL used to measure pH, 80 mL inoculated for test

	Day 0	Day 1	Day 2	Day 3
Tech	CM	CW	CW	CW
Time	1345	1015	0950	1330
Date	1/30/08	01/31/08	02/01/08	02/02/08

n = 5 animals/replicate - 4 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highine @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **+ PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (0) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.1	7.94	—	324	24	5.5	7.74	340
100	24	7.8	7.66	—	298	24	0.8	7.54	300
						MC 01/31/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 1/30/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highine @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **+ PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (1) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.1	7.72	—	303	25	4.60	7.78	346
100	24	8.7/7.80	7.71	—	289	25	0.51	7.45	299
							Jm 2/1/08		

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @desaturated O2 01/31/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 01/31/08

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WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highine @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **+ PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (2) Date: 2/1/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.4	7.93	—	330	25	4.9	7.78	351
100	—	—	—	—	—	—	—	—	—
						CO 02/02/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 02/01/08

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WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highine @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **+ PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (3) Date: 2/2/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.3	8.17	—	341	24	7.1	8.04	358
100	—	—	—	—	—	—	—	—	—
						BBS 2/3/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RIOEPAMH#032

All surface waters filtered through a 60 µm screen daily

Technician: Walker Date: 02/02/08

AQUA-Science

Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/30/08

ESJ 08-01 A TIE Highline @ Lombardy
96 hr. Static Acute bioassay w/ 24 hr. Changeout
Ceriodaphnia dubia

C8 Through Column

Test Concetrations: Column Blank, 100% C8TC, MeOH Control, 2X Addback
C8 Eluate: 250xx

ESJ Ag Waiver Sample Highline @ Lombardy (012408) 535XHCALR

Control water = Reverse Osmosis water amended with EPA salts
to achieve EPAMH specifications (R/O EPAMH)
All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt. MeOH/ Eluate (mL)
Column Blank	0	100	100	0
100	100	0	100	0
MeOH Ctrl.	0	40	40	~~0.345~~ 0.224
2X Addback	0	40	40	~~0.345~~ 0.224

+ 8 mg/L EDTA

Test Concentrations: Control, 100 + 8 mg/L EDTA
EDTA Standard: 10 mg/mL EDTA

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt EDTA (mL)
EDTA Ctrl.	0	100	100	0.08
100 + 8 mg/L EDTA	100	0	100	0.08

* 20 mL used to measure pH

	Day 0	Day 1	Day 2	Day 3
Tech	CY	CW	CW	CW
Time	1345	1025	0945	1335
Date	1/30/08	01/31/08	02/01/08	02/02/08

n = 5 animals/replicate - 4 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (0) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	8.0	7.93	—	323	24	6.5	7.84	342
100 C8TC	24	8.0	7.54	—	297	24	6.6	7.83	314
EDTA Ctrl.	25	7.9	7.76	—	328	24	6.4	7.91	344
100 + 8 mg/L EDTA	25	7.5	7.62	—	304	24	6.9	7.86	319
						MC 01/31/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPA/MH #013

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 1/30/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (1) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	9.0/8.1	7.69	—	303	25	6.66	7.85	347
100 C8TC	24	8.0	7.63	—	293	25	6.81	7.85	208
EDTA Ctrl.	24	8.2	7.65	—	320	25	6.40	7.89	349
100 + 8 mg/L EDTA	24	8.1	7.60	—	300	25	6.70	7.85	327
						Jm 2/1/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @desaturated cw 01/31/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RIO EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: CWalker Date: 01/31/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (2) Date: 2/1/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	25	10.5/8.4@	7.39	—	324	24	7.1	7.98	345
100 C8TC	25	9.7/8.2@	7.59	—	304	25	7.1	7.94	323
EDTA Ctrl.	24	8.3	7.69	—	336	24	7.1	8.02	357
100 + 8 mg/L EDTA	25	7.9	7.49	—	303	24	7.2	7.93	321
						CW 02/02/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @desaturated CW 02/01/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: CWalker Date: 02/01/08

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WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (3) Date: 2/2/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	10.8/8.4	7.52	—	325	24	8.4	7.96	343
100 C8TC	24	10.5/8.2	7.67	—	302	24	8.3	8.09	314
EDTA Ctrl.	24	8.4	7.90	—	336	24	8.4	8.16	354
100 + 8 mg/L EDTA	24	8.4	7.72	—	306	24	8.1	8.12	316
						BES 2/3/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @desaturated DO 02/02/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = LO EPAMH #032

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 02/02/08

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DOSE PREPARATION SHEET

1/30/08

ESJ 08-01A TIE Highline Canal @ Lombardy
96 hr. Static Acute bioassay w/ 24 hr. Changeout
Ceriodaphnia dubia

Baseline

Test Concentrations: Control and 100%

East San Joaquin Ambient Sample Highline Canal @ Lombardy (012408) 535XHCALR

Control water = Reverse Osmosis water amended with EPA salts
to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*
Control	0	100	100
100	100	0	100

* 20 mL used to measure pH, 80 mL inoculated for test

	Day 0	Day 1	Day 2	Day 3
Tech	CM	CW	CW	CW
Time	1345	1005	0940	1325
Date	1/30/08	01/31/08	02/01/08	02/02/08

n = 5 animals/replicate - 4 replicates/concentration

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WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (0) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.1	8.12	69/98	323	24	6.5	7.82	342
100	24	7.8	7.66	74/84	299	24	6.6	7.82	318

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPA MH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 2/30/08

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WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (1) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.0	7.74	68/98	302	25	6.71	7.91	353
100	24	8.7/7.9 ①	7.70	—	293	25	6.40	7.85	327
							2/1/08		

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①desaturated DO 01/31/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: Walker Date: 01/31/08

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Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (2) Date: 2/1/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.4	7.94	67/97	335	25	7.1	8.04	360
100	24	8.6/8.3①	7.67	-	305	25	6.8	7.91	324
						CW 02/02/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① desaturated CW 02/01/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: Cee Walker Date: 02/01/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01A TIE Highline @ Lombardy	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Highline @ Lombardy (012408) 535XHCALR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (3) Date: 2/2/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.4	8.01	69/98	342	24	~~8.2~~ 8.4	8.19	358
100	25	10.0/8.5①	7.83	—	306	24	8.1	8.15	317
						BES 2/3/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① desaturated DO 2/2/08
② entry error DO: 8.4 2/3/08 BES

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RIO EPAMH #032

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 02/02/08

APPENDIX VI

ACUTE *C. DUBIA* TIEs

ESJ 08-01 TIE
(1/24-25/08 Sample Date)

Miles Creek @ Reilly Rd

Summary of Acute Phase I *Ceriodaphnia dubia* TIE on ESJ Miles Creek 1/25/08 Sample (535XMCARR)

Treatment	*Conc. (%)*	*96-hr Survival (%)*	*Toxic Units (TUa)*[a]	*Comment*
Baseline	Lab Control 6.25 12.5 25 50 100	100 100 100 100 100 85	NOEC = 100% **(1 TUa)** EC_{50} > 100% **(< 1 TUa)**	Sample lost toxicity prior to or during TIE
Baseline + 100 ppb PBO	PBO Control 6.25 12.5 25 50 100	100 70 80 20* 0* 0*	NOEC = 12.5 **(8 TUa)** EC_{50} = 18.2% **(5.5 TUa)**	PBO enhanced toxicity Pyrethroid insecticide suspected
C-8 SPE Through-Column	Column Blank 100	100 100	--	No toxicity in baseline
C-8 SPE Column 2X Add-Back	MeOH Ctrl 2X add-back	100 100	--	Toxicity not recovered in methanol eluate
Baseline + EDTA	EDTA Control 100	95 85	--	No toxicity in baseline

Sample Date: 1/25/08
Test Date: 1/30/08
a TUa = 100/NOEC; TUa = 100/EC_{50}
* significantly different from control ($p<0.05$)

Conclusion:

Sample lost all detectable toxicity. However, markedly enhanced toxicity with PBO is consistent with pyrethroid insecticide(s) present at subtoxic concentrations.

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/30/2008	Test ID:	a1310801Tc	Sample ID:	MILES CREEK
End Date:	2/3/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/25/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Conc-%	1	2	3	4
Control	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000
50	1.0000	1.0000	1.0000	1.0000
100	1.0000	0.6000	1.0000	0.8000

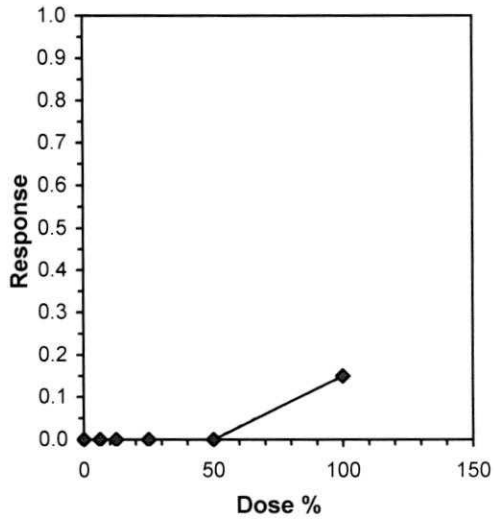
			Transform: Arcsin Square Root					Rank	1-Tailed	Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Mean	N-Mean
Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			1.0000	1.0000
6.25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00	1.0000	1.0000
12.5	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00	1.0000	1.0000
25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00	1.0000	1.0000
50	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	18.00	10.00	1.0000	1.0000
100	0.8500	0.8500	1.1709	0.8861	1.3453	18.840	4	14.00	10.00	0.8500	0.8500

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.53733	0.884	-1.1985	8.40414
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	100	>100		1

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL(Exp)	Skew
IC05	66.667			
IC10	83.333			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			

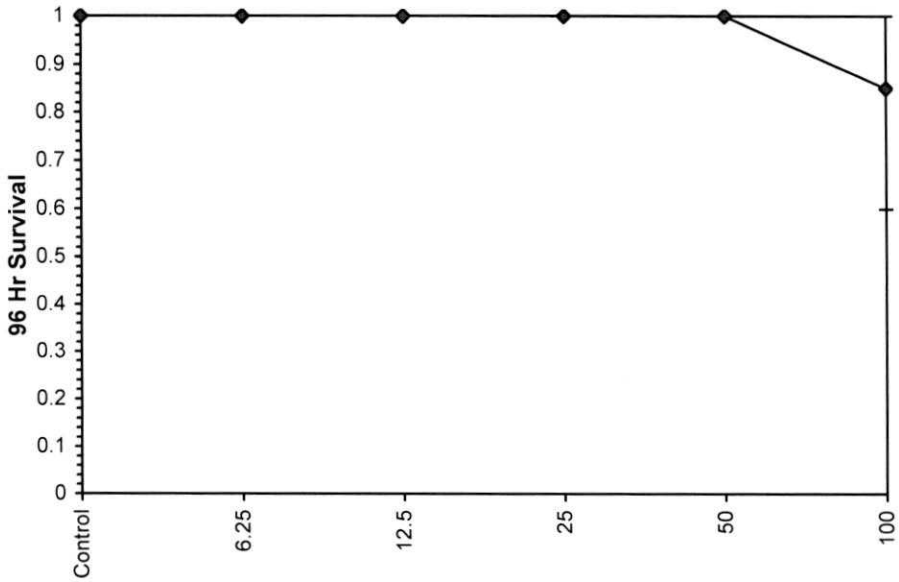


Administrative Record
Page 13353
Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/30/2008	Test ID:	a1310801Tc	Sample ID:	MILES CREEK
End Date:	2/3/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/25/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Dose-Response Plot



Administrative Record
Page 13354

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/30/2008	Test ID:	a1310801Tc	Sample ID:	MILES CREEK
End Date:	2/3/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	BASELINE
Sample Date:	1/25/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Conc-%	1	2	3	4
Control	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000
50	1.0000	1.0000	1.0000	1.0000
100	1.0000	0.6000	1.0000	0.8000

			Transform: Arcsin Square Root					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			
6.25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	0.000	2.410	0.1535
12.5	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	0.000	2.410	0.1535
25	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	0.000	2.410	0.1535
50	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4	0.000	2.410	0.1535
*100	0.8500	0.8500	1.1709	0.8861	1.3453	18.840	4	2.737	2.410	0.1535

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.53733	0.884	-1.1985	8.40414
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	50	100	70.7107	2	0.08689	0.09146	0.02026	0.00811	0.06928	5, 18

Administrative Record
Page 13355

Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/30/2008	Test ID:	a1310801Td	Sample ID:	MILES CREEK
End Date:	2/3/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	PBO
Sample Date:	1/25/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Conc-%	1	2	3	4
PBO Control	1.0000	1.0000	1.0000	1.0000
6.25	0.8000	0.6000	0.8000	0.6000
12.5	0.6000	0.8000	1.0000	0.8000
25	0.4000	0.0000	0.0000	0.4000
50	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

			Transform: Arcsin Square Root					Rank	1-Tailed	Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Mean	N-Mean
PBO Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			1.0000	1.0000
*6.25	0.7000	0.7000	0.9966	0.8861	1.1071	12.807	4	10.00	10.00	0.7500	0.7500
12.5	0.8000	0.8000	1.1114	0.8861	1.3453	16.874	4	12.00	10.00	0.7500	0.7500
*25	0.2000	0.2000	0.4551	0.2255	0.6847	58.254	4	10.00	10.00	0.2000	0.2000
*50	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	10.00	10.00	0.0000	0.0000
*100	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	10.00	10.00	0.0000	0.0000

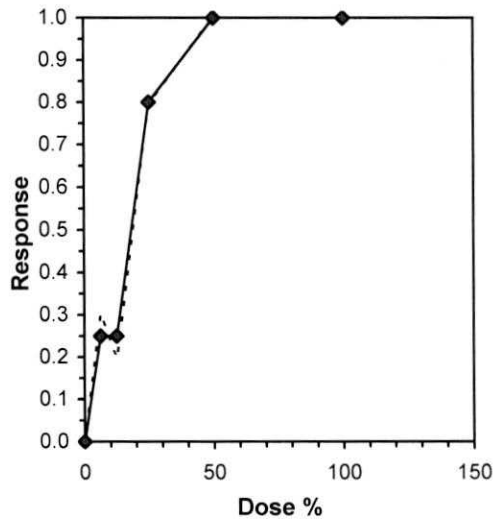
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.84404	0.884	0.03198	0.43471
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	12.5	25	17.6777	8

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL(Exp)		Skew
IC05*	1.250	0.251	0.786	2.583	1.0885
IC10*	2.500	0.502	1.571	5.167	1.0885
IC15*	3.750	1.610	2.357	17.750	4.2935
IC20*	5.000	3.003	3.143	18.538	1.7324
IC25	12.500	3.833	0.179	15.577	-0.2518
IC40	15.909	1.141	12.273	19.788	0.1384
IC50	18.182	1.399	14.545	23.758	0.3626

* indicates IC estimate less than the lowest concentration



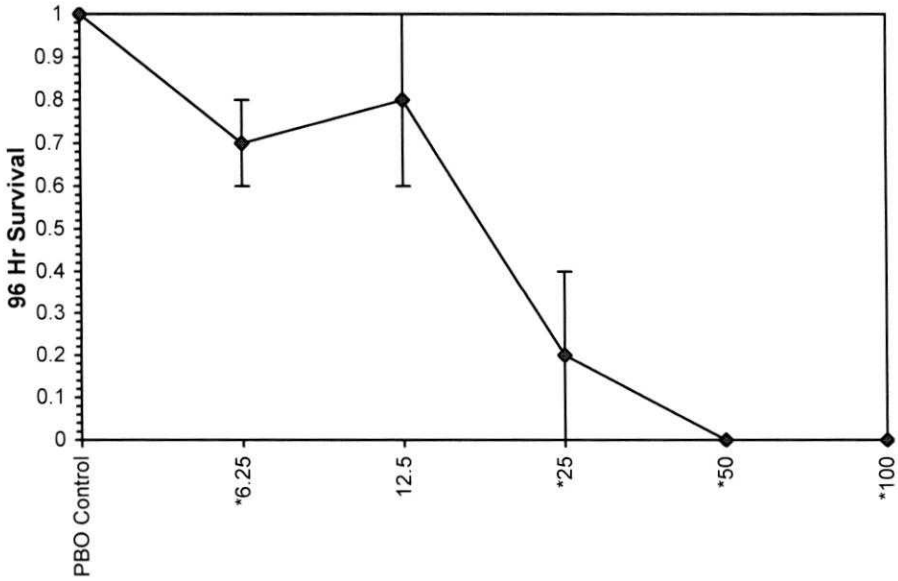
Administrative Record
Page 13356

Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/30/2008	Test ID:	a1310801Td	Sample ID:	MILES CREEK
End Date:	2/3/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	PBO
Sample Date:	1/25/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Dose-Response Plot



Administrative Record
Page 13357
Reviewed by:

Acute Ceriodaphnia Test-96 Hr Survival

Start Date:	1/30/2008	Test ID:	a1310801Td	Sample ID:	MILES CREEK
End Date:	2/3/2008	Lab ID:	CAAS-Aqua-Science 946160	Sample Type:	PBO
Sample Date:	1/25/2008	Protocol:	EPA A5-EPA 821-R-02-012	Test Species:	CD-Ceriodaphnia dubia
Comments:	ESJ 08-01 TIE : Ceriodaphnia Bioassay				

Conc-%	1	2	3	4
PBO Control	1.0000	1.0000	1.0000	1.0000
6.25	0.8000	0.6000	0.8000	0.6000
12.5	0.6000	0.8000	1.0000	0.8000
25	0.4000	0.0000	0.0000	0.4000
50	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

			Transform: Arcsin Square Root					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
PBO Control	1.0000	1.0000	1.3453	1.3453	1.3453	0.000	4			
*6.25	0.7000	0.7000	0.9966	0.8861	1.1071	12.807	4	3.462	2.410	0.2428
12.5	0.8000	0.8000	1.1114	0.8861	1.3453	16.874	4	2.322	2.410	0.2428
*25	0.2000	0.2000	0.4551	0.2255	0.6847	58.254	4	8.837	2.410	0.2428
*50	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	11.117	2.410	0.2428
*100	0.0000	0.0000	0.2255	0.2255	0.2255	0.000	4	11.117	2.410	0.2428

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.84404	0.884	0.03198	0.43471
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	12.5	25	17.6777	8	0.15371	0.1618	0.94371	0.02029	1.1E-09	5, 18

Administrative Record
Page 13358

Reviewed by:

AQUA-Science

Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
Control	A	0	0	0	0	n=5 animals/rep
	B	0	0	0	0	
	C	0	0	0	0	Test Initiation Info:
	D	0	0	0	0	Time:
6.25	A	0	0	0	0	Tech:
	B	0	0	0	0	
	C	0	0	0	0	Test Termination Info:
	D	0	0	0	0	Time: 1221
12.5	A	0	0	0	0	Tech: CW
	B	0	0	0	0	①neonates present CW 02/02/08
	C	0	0	0	0	②neonates present CW 02/03/08
	D	0	0	0	0	
25	A n=6	0	0	0	0	
	B n=6	0	0	0	0	
	C	0	0	0	0	
	D	0	0	0	0	
50	A	0	0	0	0	
	B	0	0	0	0	
	C	0	0	0	0	
	D	0	0	0	0	
100	A	0	0	0	0	
	B	0	0	0	1	
	C	0	0	0	0	
	D	0	0	0	1	
Technician Initials		CW	CW	CW	CW	
Observation Time		1625	1443	1548	1221	
Observation Date		01/31/08	02/01/08	02/02/08	02/03/08	

AQUA-Science

Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01 B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **+PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
PBO Ctrl.	A	0	0	0	0	n=5 animals/rep
	B	0	0	0	0 ④	
	C	0	0	0	0 ④	Test Initiation Info:
	D	0	0	0	0	Time:
6.25	A	1	1	1 ①	1 ④	Tech:
	B	2	2	2	2 ④	
	C	0	0	0	1 ④	Test Termination Info:
	D	0	1	1 ①	2	Time: 1227
12.5	A	1	2	2	2 ④	Tech: CW
	B	0	0	1	1 ④	①neonates present CW 02/02/08
	C	0	0	0	0 ④	②neonates present CW 02/03/08
	D	1	1	1	1 ④	
25	A	1	3	3	3	
	B	5				
	C	3	5			
	D	1	1	2	3 ④	
50	A	5				
	B	5				
	C	4	5			
	D	3	5			
100	A	5				
	B	5				
	C	5				
	D	5				
Technician Initials		CW	CW	CW	CW	
Observation Time		1605	1508	1618	1227	
Observation Date		01/31/08	02/01/08	02/02/08	02/03/08	

AQUA-Science

Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO: 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

Tx. Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
Column Blank	A	0	0	0	0	n=5 animals/rep
	B	0	0	0	0	
	C n=4	0	0	0	0	Test Initiation Info:
	D	0	0	0	0	Time:
100 C8TC	A	0	0	0	0	Tech:
	B	0	0	0	0	
	C	0	0	0	0	Test Termination Info:
	D	0	0	0	0	Time: 1231
MeOH Ctrl	A	0	0	0	0	Tech: CW
	B	0	0	0	1	0neonates present CW 02/02/08
						0neonates present CW 02/03/08
2X Addback	A	0	0	0	0	
	B	0	0	0	0	
EDTA Ctrl	A	0	0	0	0	
	B	0	0	1	1	
	C	0	0	0	0	
	D	0	0	0	0	
100 +	A	0	0	0	1	
8 mg/L EDTA	B	0	0	0	2	
	C	0	0	0	0	
	D	0	0	0	0	
Technician Initials		CW	CW	CW	CW	
Observation Time		1619	1456	1607	1231	
Observation Date		01/31/08	02/01/08	02/02/08	02/03/08	

AQUA-Science

Page ____

Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/30/08 ESJ 08-01B TIE Miles Creek

96 hr. Static Acute bioassay w/ 24 hr. Changeout

Ceriodaphnia dubia

+ PBO @ 100 µg/L

Test Concentrations: Control and 100% + PBO

PBO Standard: 0.1 mg/mL Pipernoyl butoxide (PBO)

ESJ Ambient Sample Miles Creek (012508) 535XMCARR

Control water = Reverse Osmosis water amended with EPA salts to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt PBO (mL)
Control	0	100	100	0.1
6.25	6.25	QS to 100	100	0.1
12.5	12.5	QS to 100	100	0.1
25	25	QS to 100	100	0.1
50	50	QS to 100	100	0.1
100	100	QS to 100	100	0.1

* 20 mL used to measure pH, 80 mL inoculated for test

	Day 0	Day 1	Day 2	Day 3
Tech	MC	CW	CW	CM
Time	1330	1140	1015	1350
Date	01/30/08	01/31/08	02/01/08	2/2/08

n = 5 animals/replicate - 4 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **+ PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (0) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.3	7.59	69/98	327	25	4.61	7.80	345
6.25	24	8.3	7.64	—	313	25	3.99	7.80	337
12.5	24	8.3	7.66	—	307	25	2.60	7.77	329
25	24	8.3	7.68	—	290	25	2.39	7.75	310
50	24	8.2	7.68	—	254	25	1.83	7.75	272
100	24	7.7	7.70	—	182	25	1.58	7.75	198
							Jm 1/31/08		

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R/O EPA MH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/30/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR + **PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (1) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.2	7.96	—	312	24	5.6	7.73	346
6.25	24	8.2	7.97	—	307	24	5.4	7.76	337
12.5	24	8.3	8.00	—	296	24	4.7	7.71	325
25	24	8.2	8.02	—	272	24	5.1	7.68	297
50	24	8.2	8.06	—	222	24	6.0	7.70	240
100	—	—	—	—	—	—	—	—	—
						QC 02/01/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: Cecilia Walker Date: 01/31/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **+ PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (2) Date: 2/1/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.4	7.98	—	334	24	3.8	7.67	352
6.25	24	8.4	7.99	—	326	24	2.6	7.64	344
12.5	24	8.4	8.00	—	319	25	2.4	7.62	336
25	24	8.3	7.99	—	301	25	3.2	7.63	318
50	—	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—	—
						QW 02/02/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO CPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: Ole Walker Date: 02/01/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **+ PBO**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (3) Date: 2/2/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.5	7.98	—	341	24	6.3	8.05	357
6.25	24	8.5	8.08	—	328	24	5.3	7.99	341
12.5	24	8.6	8.12	—	315	24	5.5	7.95	328
25	24	8.5	8.12	—	287	24	7.4	7.94	299
50	—	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—	—
						BES 2/3/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #032

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 2/2/08

AQUA-Science

Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/30/08

ESJ 08-01B TIE Miles Creek

96 hr. Static Acute bioassay w/ 24 hr. Changeout

Ceriodaphnia dubia

Baseline

Test Concentrations: Control and 100%

East San Joaquin Ambient Sample Miles Creek (012508) 535XMCARR

Control water = Reverse Osmosis water amended with EPA salts to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*
Control	0	100	100
6.25	6.25	QS to 100	100
12.5	12.5	QS to 100	100
25	25	QS to 100	100
50	50	QS to 100	100
100	100	QS to 100	100

* 20 mL used to measure pH, 80 mL inoculated for test

	Day 0	Day 1	Day 2	Day 3
Tech	MC	CW	CW	CM
Time	1330	1100	1005	1350
Date	01/30/08	01/30/08	02/01/08	2/2/08

n = 5 animals/replicate - 4 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (0) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.3	7.60		327	25	6.32	8.02	358
6.25 ~~100~~	24	8.3	7.67		315	25	6.49	8.00	338
12.5	24	8.3	7.68		307	25	6.75	7.99	351
25	24	8.2	7.69		292	25	6.83	7.98	320
50	24	8.2	7.68		254	25	6.47	7.97	277
100	24	7.4	7.66		182	25	6.22	7.98	205
						jm 1/31/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R10 EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/30/08

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Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (0) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.3	7.60	69/98	327				
6.25	24	8.3	7.67	—	315				
12.5	24	8.3	7.68	—	307				
25	24	8.2	7.69	—	292				
50	24	8.2	7.68	—	254				
100	24	7.4	7.66	23/47	182				

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RIOEPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/30/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (1) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.2	7.89	69/98	312	24	7.7	8.03	347
6.25	24	8.1	7.94	—	302	24	7.4	8.01	334
12.5	24	8.1	7.96	—	293	24	7.2	7.96	320
25	24	8.1	7.99	—	268	24	7.2	7.91	294
50	24	8.1	8.01	—	216	24	7.1	7.80	239
100	25	8.8/8.0①	8.12	43/47	117	24	7.3	7.58	136
						(2e) 02/01/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①desaturated before use CW 01/31/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = #10 EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: Cee Walker Date: 01/31/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (2) Date: 2/1/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.4	7.90	67/97	335	24	7.0	7.97	356
6.25	24	8.3	7.97	—	326	24	6.9	7.99	347
12.5	24	8.3	7.98	—	320	24	6.7	7.93	339
25	24	8.2	8.00	—	295	24	7.0	7.93	313
50	24	8.2	7.95	—	261	24	6.9	7.88	277
100	24	9.0/8.1①	7.87	23/47	185	24	6.6	7.74	197
						CW 02/02/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① desaturated before use CW 02/01/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: Alee Walker Date: 02/01/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **Baseline**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (3) Date: 2/2/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	25	8.3	7.95	—	343	24	8.2	8.11	362
6.25	24	8.5	8.09	—	329	24	8.3	8.22	343
12.5	24	8.5	8.12	—	315	24	8.4	8.25	342
25	24	8.5	8.12	—	288	24	8.3	8.25	300
50	24	8.5	8.09	—	235	24	8.2	8.16	245
100	24	8.6	8.03	—	116	24	8.1	8.11	126
						BEP 2/3/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMR #032

All surface waters filtered through a 60 µm screen daily

Technician: CA Y Date: 2/2/08

AQUA-Science

Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/30/08

ESJ 08-01 B TIE Miles Creek

96 hr. Static Acute bioassay w/ 24 hr. Changeout

Ceriodaphnia dubia

C8 Through Column

Test Concetrations: Column Blank, 100% C8TC, MeOH Control, 2X Addback

C8 Eluate: 250xx

ESJ Ag Waiver Sample Miles Creek (012508) 535XMCARR

Control water = Reverse Osmosis water amended with EPA salts to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt. MeOH/ Eluate (mL)
Column Blank	0	100	100	0
100	100	0	100	0
MeOH Ctrl.	0	40	40	0.345
2X Addback	0	40	40	0.345

+ 8 mg/L EDTA

Test Concentrations: Control, 100 + 8 mg/L EDTA

EDTA Standard: 10 mg/mL EDTA

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt EDTA (mL)
EDTA Ctrl.	0	100	100	0.08
100 + 8 mg/L EDTA	100	0	100	0.08

* 20 mL used to measure pH

	Day 0	Day 1	Day 2	Day 3
Tech	MO	CW	CW	CM
Time	1330	1130	1025	1350
Date	01/30/08	02/01/08	02/01/08	2/2/08

n = 5 animals/replicate - 4 replicates/concentration

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Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (0) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	8.3	7.50	—	315	25	6.44	7.71	337
100 C8TC	24	8.3	7.56	—	181	25	6.29	7.84	204
EDTA Ctrl.	25	7.8	7.85	—	328	25	6.45	7.75	352
100 + 8 mg/L EDTA	25	7.0	7.70	—	185	25	6.39	7.86	206
						jm 1/31/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R/O EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/30/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (1) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	9.5 | 8.2①	7.69	—	316	25	7.2	7.01	340
100 C8TC	25	8.3	7.77	—	185	24	7.2	7.11	206
EDTA Ctrl.	24	8.2	7.65	—	314	24	7.5	7.24	342
100 + 8 mg/L EDTA	24	8.2	7.81	—	116	24	7.3	7.56	137.1
									02/01/08

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① desaturated DO 01/31/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R10EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 01/31/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (2) Date: 2/1/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	10.5/8.5@	7.54	—	319	24	6.9	7.91	335
100 C8TC	24	9.0/8.0@	7.58	—	186	24	6.7	7.78	206
EDTA Ctrl.	24	8.3	7.71	—	337	24	6.9	7.95	353
100 + 8 mg/L EDTA	25	8.0	7.45	—	186	24	6.5	7.71	199
						QC 02/02/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @desaturated DO 02/01/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: CeeWalker Date: 02/01/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Miles Creek	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Miles Creek (012508) 535XMCARR **C8TC and EDTA**		
Test Species:	*Ceriodaphnia dubia*	Animal Lot No.:	A/S RO 013008
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (23) Date: 2/2/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	8.5	7.61	—	319	24	8.4	7.99	336
100 C8TC	24	①9.8/8.3	7.67	—	185	24	8.3	806	198
EDTA Ctrl.	24	8.5	7.97	—	342	24	8.2	7.92	~~35~~ 7 ~~207~~ ②
100 + 8 mg/L EDTA	24	8.3	7.87	—	192	24	8.0	7.92	201 ~~357~~ ②
						BES	2/3/08		

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① Desatwated 0Y 2/2/08
② entry error BES 2/3/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #82

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 2/2/08

APPENDIX VII

ACUTE FATHEAD MINNOW TIE

ESJ 08-01 TIE
(1/24-25/08 Sample Date)

Cottonwood Creek @ Rd 20

Summary of Acute Phase I Fathead Minnow TIE on ESJ Cottonwood Creek 1/25/08 Sample (545XCCART)

Treatment	*Conc. (%)*	*96-hr Survival (%)*	*Comment*
Baseline	Lab Control 100	100 100	Sample lost toxicity prior to or during TIE (NOEC > 100%)
Baseline + 100 ppb PBO	PBO Control 100	100 90	No toxicity in baseline
C-8 SPE Through-Column	Column Blank 100	95 100	No toxicity in baseline
C-8 SPE Column 2X Add-Back	MeOH Ctrl 2X add-back	100 40*	Toxicity recovered in methanol eluate; toxicity amplified by add-back – non-polar organic toxicant(s) may be present at subtoxic concentrations
Baseline + EDTA	EDTA Control 100	100 95	No toxicity in baseline

Sample Date: 1/25/08
Test Date: 1/30/08
a TUa = 100/NOEC; TUa = $100/EC_{50}$
* significantly different from control ($p<0.05$)

Conclusion:

Sample lost toxicity. However, SPE add-back results indicate that non-polar organic toxicant(s) may be present at subtoxic concentrations.

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Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01B TIE Cottonwood	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **Baseline**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
Control	A	0	0	0	0	n=10 animals/rep
	B	0	0	0	0	
						Test Initiation Info:
						Time: 1230
100	A	0	0	0	0	Tech: MC
	B	0	0	0	0	
						Test Termination Info:
						Time:
						Tech:
Technician Initials		MC	MC	NP	BC JNP	
Observation Time		1459	1437	1439	1143	
Observation Date		01/31/08	02/01/08	02/02/08	2/3/08	

AQUA-Science

Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **PBO**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
PBO Ctrl.	A	0	0	0	0	n=10 animals/rep
	B	0	0	0	0	
						Test Initiation Info:
						Time: 1240
100	A	1	1	1	1	Tech: MC
	B	0	0	0	1	
						Test Termination Info:
						Time:
						Tech:
Technician Initials		MC	MC	NP	BEL/NP	
Observation Time		1508	1440	1444	1146	
Observation Date		01/31/08	02/01/08	02/02/08	2/3/08	

AQUA-Science

Environmental Toxicology Consultants

MORTALITY AND BEHAVIOR OBSERVATIONS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **C8TC and EDTA**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

Tx. Ambient (%)	Vessel No.	Cumulative Mortality Day 1	Day 2	Day 3	Day 4	Comments
Column Blank	A	0	0	1	1	n=10 animals/rep
	B	0	0	0	0	
						Test Initiation Info:
						Time: 1248
100 C8TC	A	0	0	0	0	Tech: MC
	B	0	0	0	0	
						Test Termination Info:
						Time:
MeOH Ctrl	A	①+0	0	0	0	Tech:
2X Addback	A	0	1	3	4	① pinkeye observed MC 01/31/08
						② animal missing MC 02/01/08
EDTA Ctrl	A	0	0	0	0	
	B	0	0	0	0	
100 +	A	0	0	0	0	
8 mg/L EDTA	B	0	1②	1	1	

Technician Initials	MC	MC	NP	[illegible]
Observation Time	1520	1450	1449	1156
Observation Date	01/31/08	02/01/08	02/02/08	2/3/08

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DOSE PREPARATION SHEET

1/30/08

ESJ 08-01B TIE Cottonwood Creek
96 hr. Static Acute bioassay w/ 24 hr. Changeout
Pimephales promelas

Baseline

Test Concentrations: Control and 100%

East San Joaquin Ambient Sample Cottonwood Creek (012508) 545XCCART

Control water = Reverse Osmosis water amended with EPA salts
to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*
Control	0	500	500
100	500	0	500

	Day 0	Day 1	Day 2	Day 3
Tech	CM	MC	CW	CW
Time	1035	1400	1040	1245
Date	1/30/08	01/31/08	02/01/08	02/02/08

n = 10 animals/replicate - 2 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **Baseline**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (0) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	25	8.2	8.04	86/99	323	24	7.5	8.06	351
100	25	@10.2/8.2	7.75	20/20	64	24	7.1	7.81	89
						MC 01/31/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @ Desaturated @ 1/30/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 1/30/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **Baseline**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (1) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.0	8.13	67/97	334	24	7.6	7.79	367
100	26	9.5/7.7	7.60	20/20	64	24	7.6	8.18	83
						MC 02/01/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: Odeaerated MC 01/31/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RIO EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/31/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **Baseline**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (2) Date: 2/1/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.4	8.07	67/97	335	25	8.4	7.90	366
100	24	9.4/8.3	7.09	20/20	64	24	8.1	8.23	79
						NP 2/2/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①desaturated ce 2/10/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO2PAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: [signature] Date: 02/01/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **Baseline**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (3) Date: 2/2/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Lab Control	24	8.3	8.18	69/98	344	25	7.6	7.32	360
100	24	10.9/8.4	7.48	—	63	25	7.9	7.83	67
						RBS 2/3/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @ desaturated DO 02/02/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R/O EPAMH #032

All surface waters filtered through a 60 µm screen daily

Technician: CWalker Date: 02/02/08

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Environmental Toxicology Consultants

DOSE PREPARATION SHEET

1/30/08

ESJ 08-01B TIE Cottonwood Creek

96 hr. Static Acute bioassay w/ 24 hr. Changeout

Pimephales promelas

+ PBO @ 100 µg/L

Test Concentrations: Control and 100% + PBO

PBO Standard: 0.1 mg/mL Pipernoyl butoxide (PBO)

East San Joaquin Ambient Sample Cottonwood Creek (012508) 545XCCART

Control water = Reverse Osmosis water amended with EPA salts to achieve EPAMH specifications (R/O EPAMH)

All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt PBO (mL)
Control	0	500	500	0.5
100	500	0	500	0.5

	Day 0	Day 1	Day 2	Day 3
Tech	CM	MC	CM	CM
Time	1035	1400	1050	1250
Date	1/30/08	01/31/08	02/01/08	02/02/08

n = 10 animals/replicate - 2 replicates/concentration

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **PBO**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (0) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	25	8.2	8.04	② ~~50~~/80	823	24	6.1	7.85	351
100	25	①11.2/8.3	7.67	② 20/20	62	24	4.4	7.71	78
						MC 01/31/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① Desaturated @ 1/30/08
② Measurements taken in 10ml vol. samples @ 1/30/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #033

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 1/30/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **PBO**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (1) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.1	8.11	67/97	332	24	5.3	7.69	358
100	26	8.9/7.6	7.57	20/20	64	24	4.5	8.19	77
						MC 02/01/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS:

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R/O EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/31/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **PBO**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (2) Date: 2/1/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.4	8.01	—	334	25	4.9	7.77	365
100	24	9.8/8.8	7.31	—	64	24	2.9	8.13	68
						NP 2/2/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ①desaturated DO 02/01/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = K10 EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: Dee Walker Date: 02/01/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **PBO**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (3) Date: 2/2/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
PBO Control	24	8.3	8.12	—	337	25	5.3	7.38	360
100	24	10.8 | 8.4	7.63	—	63	25	2.0	7.82	64
						2/3/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① deaerated DO 02/02/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPA MH #032

All surface waters filtered through a 60 µm screen daily

Technician: Alex Walker Date: 02/02/08

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DOSE PREPARATION SHEET

1/30/08

ESJ 08-01B TIE Cottonwood Creek
96 hr. Static Acute bioassay w/ 24 hr. Changeout
Pimephales promelas

C8 Through Column

Test Concetrations: Column Blank, 100% C8TC, MeOH Control, 2X Addback
C8 Eluate: 357X and 321X

East San Joaquin Ambient Sample Cottonwood Creek (012508) 545XCCART

Control water = Reverse Osmosis water amended with EPA salts
to achieve EPAMH specifications (R/O EPAMH)
All surface waters filtered through 60 µm screen

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt. MeOH/ Eluate (mL)
Column Blank	0	500	500	0
100	500	0	500	0
MeOH Ctrl.	0	250	250	357X: 1.4 321X: 1.6
2X Addback	0	250	250	357X: 1.4 321X: 1.6

+ 8 mg/L EDTA

Test Concentrations: Control, 100 + 8 mg/L EDTA
EDTA Standard: 10 mg/mL EDTA

Sample	Amount Sample (mL)	Dilution Water (mL)	Total (mL)*	Amt EDTA (mL)
EDTA Ctrl.	0	500	500	0.4
100 + 8 mg/L EDTA	500	0	500	0.4

	Day 0	Day 1	Day 2	Day 3
Tech	CM	MC		
Time	1035	1410	1100	1255
Date	1/30/08	01/31/08	02/01/08	02/02/08

Column Blank and 100%: 10 animals/replicate - 2 replicates/concentration
MeOH Ctrl and 2X add-back: 10 animals/replicate - 1 replicate/concentration

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Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **C8TC and EDTA**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (0) Date: 1/30/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	25	②7.7/8.3	7.56	②70/100	325	24	7.2	7.85	358
100 C8TC	25	②10.1/8.2	7.89	②30/20	63	24	6.4	7.69	86
EDTA Ctrl.	25	8.2	8.04	②90/100	323	24	6.6	7.89	369
100 + 8 mg/L EDTA	25	②10.2/	7.58	②30/20	63	24	6.7	7.68	82
						CY/MC 01/31/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① Desaturated CM 1/30/08

② Measurements taken in 10mL vol samples CM 1/30/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO EPAMH #C33

All surface waters filtered through a 60 µm screen daily

Technician: CM Date: 1/30/08

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Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **C8TC and EDTA**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (1) Date: 1/31/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	25	10.3②/8.1	7.83	—	320	24	7.0	7.77	353
100 C8TC	25	10.3②/8.1	7.70	—	63	24	6.1	8.12	81
EDTA Ctrl.	24	8.1	7.85	—	331	24	6.0	7.68	371
100 + 8 mg/L EDTA	24	9.9①/8.5	7.56	—	62	24	6.8	8.13	80
						MC 02/~~01~~/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ① desaturated MC 01/31/08
② thermometer error MC 02/01/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R10 EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: _____ Date: 01/31/08

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Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **C8TC and EDTA**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (2) Date: 2/1/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	24	9.5/8.4 ②	7.78	—	321	24	7.1	7.74	356
100 C8TC	25	9.3/8.2 ②	7.31	—	65	24	7.3	8.13	77
EDTA Ctrl.	24	8.4	7.75	—	335	24	7.8	7.76	375
100 + 8 mg/L EDTA	25	9.5/8.3 ②	7.01	—	64	24	7.8	8.17	77
						NP 2/2/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: ②desaturated DO 2/01/08

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = R10 EPAMH #035

All surface waters filtered through a 60 µm screen daily

Technician: CWalker Date: 02/01/08

AQUA-Science

Environmental Toxicology Consultants

WATER QUALITY REPORT FOR AQUATIC BIOASSAYS

Test Number:	ESJ 08-01B TIE Cottonwood Ck	Study Director:	J.L. Miller
Protocol No.:	EPA 821/R-02/012	Technicians:	Miller/Walker/Yip/Concepcion/Ponferrada/Sanford
Test Material:	ESJ Ambient Sample Cottonwood Ck (012508) 545XCCART **C8TC and EDTA**		
Test Species:	*Pimephales promelas*	Animal Lot No.:	AQTX: 011708
Initiation Date:	January 30, 2008	Termination Date:	February 3, 2008

	OBSERVATIONS Day (3) Date: 2/2/08					24 Hour Obsv.			
Ambient (%)	Temperature (°C)	Dissolved Oxygen*	pH^^	Alkalinity **/ Hardness~	Conductivity ^	Temp	D.O.*	pH^^	Cond. ^
Column Blk.	26	10.2/84 @	7.94	—	322	25	7.0	7.34	346
100 C8TC	26	9.8/82 @	7.50	—	64	25	7.5	7.71	71
EDTA Ctrl.	24	8.3	7.82	—	335	25	6.9	7.31	363
100 + 8 mg/L EDTA	24	9.9/84 @	7.41	—	64	25	7.5	7.78	70
						BEJ 2/3/08			

UNIT INSTRUMENTATION LEGEND

*=Dissolved oxygen (mg/L) YSI 550A meter

**Alkalinity (mg/L $CaCO_3$); HACH Test Kit

~=Water Hardness (mg/L $CaCO_3$); HACH Test Kit

^=Conductivity/Salinity (µmohs); Orion 135/115, WTW 330i meter

^^=Beckman Model 240 pH meter

ADDITIONAL COMMENTS: @ desaturated DO readings

Lab Control = 2x carbon filtered reverse osmosis water at EPA moderately hard level using EPA salts.
Dilution water ID = RO CARB #032

All surface waters filtered through a 60 µm screen daily

Technician: Lee Walker Date: 02/02/08