



VALLEJO SANITATION &
FLOOD CONTROL DISTRICT

450 Ryder Street
Vallejo, California 94590
phone 707-644-8949
www.VSFCD.com

*Protecting public health
and the San Francisco Bay
since 1952.*

BOARD OF TRUSTEES

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DISTRICT MANAGER

Ronald J. Matheson

September 15, 2013

Bruce H. Wolfe, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Dear Mr. Wolfe:

Attached is the FY 2012-2013 Annual Report for Vallejo Sanitation and Flood Control District as required by provision C.16 of the NPDES permit NO. CAS612008, as adopted on October 14, 2009 via order NO.R2-2009-0074.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Tafolla".

Dan Tafolla
Environmental Services Director

FY 2012-2013 Annual Report

Permittee Name: Vallejo Sanitation and Flood Control District

ATTACHMENT B

Table of Contents

Section	Page
Section 1 – Permittee Information.....	1-1
Section 2 – Provision C.2 Municipal Operations	2-1
Section 3 – Provision C.3 New Development and Redevelopment.....	3-1
Section 4 – Provision C.4 Industrial and Commercial Site Controls.....	4-1
Section 5 – Provision C.5 Illicit Discharge Detection and Elimination	5-1
Section 6 – Provision C.6 Construction Site Controls.....	6-1
Section 7 – Provision C.7 Public Information and Outreach	7-1
Section 8 – Provision C.8 Water Quality Monitoring.....	8-1
Section 9 – Provision C.9 Pesticides Toxicity Controls	9-1
Section 10 – Provision C.10 Trash Load Reduction.....	10-1
Section 11 – Provision C.11 Mercury Controls	11-1
Section 12 – Provision C.12 PCBs Controls	12-1
Section 13 – Provision C.13 Copper Controls.....	13-1
Section 14 – Provision C.14 PBDE, Legacy Pesticides and Selenium Controls.....	14-1
Section 15 – Provision C.15 Exempted and Conditionally Exempted Discharges	15-1

Permittee Name: Vallejo Sanitation and Flood Control District

Section 1 – Permittee Information

Background Information			
Permittee Name:	Vallejo Sanitation and Flood Control District		
Population:	116,000		
NPDES Permit No.:	CAS612008		
Order Number:	R2-2009-0074R		
Reporting Time Period (month/year):	July 2012 through June 2013		
Name of the Responsible Authority:	Ron Matheson	Title:	District Manager
Mailing Address:	450 Ryder Street		
City:	Vallejo	Zip Code:	94590
		County:	Solano
Telephone Number:	707 644 8949	Fax Number:	707 644 8974
E-mail Address:	rmatheson@vsfcd.com		
Name of the Designated Stormwater Management Program Contact (if different from above):	Daniel Tafolla	Title:	Environmental Services Manager
Department:	Environmental Services		
Mailing Address:	450 Ryder Street		
City:	Vallejo	Zip Code:	94590
		County:	Solano
Telephone Number:	707 644 8949	Fax Number:	707 644 8975
E-mail Address:	dtafolla@vsfcd.com		

Section 2 - Provision C.2 Reporting Municipal Operations

Program Highlights and Evaluation

Highlight/summarize activities for reporting year:

Summary:

Continued participation in BASMAA and CASQA. The District has installed and is maintaining four large trash capture devices as part of the Bay Area-Wide Trash Capture Demonstration Project. We are also scheduling another large device for installation in an inlet to Lake Dalwigk. This project should be completed by the end of 2013. Continued involvement in a group effort between the District, City of Vallejo, and Fairfield-Suisun Urban Runoff Management Program to develop a PCB pilot study site for C.12.compliance. The site design has been completed and installation should be complete by the end of this year.

C.2.a. ► Street and Road Repair and Maintenance

Place a **Y** in the boxes next to activities where applicable BMPs were implemented. If not applicable, type **NA** in the box and provide an explanation in the comments section below. Place an **N** in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.

Y	Control of debris and waste materials during road and parking lot installation, repaving or repair maintenance activities from polluting stormwater
Y	Control of concrete slurry and wastewater, asphalt, pavement cutting, and other street and road maintenance materials and wastewater from discharging to storm drains from work sites.
Y	Sweeping and/or vacuuming and other dry methods to remove debris, concrete, or sediment residues from work sites upon completion of work.

Comments:

Permittee Name: Vallejo Sanitation and Flood Control District

C.2.b. ► Sidewalk/Plaza Maintenance and Pavement Washing

Place a **Y** in the boxes next to activities where applicable BMPs were implemented. If not applicable, type **NA** in the box and provide an explanation in the comments section below. Place an **N** in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.

Y	Control of wash water from pavement washing, mobile cleaning, pressure wash operations at parking lots, garages, trash areas, gas station fueling areas, and sidewalk and plaza cleaning activities from polluting stormwater
Y	Implementation of the BASMAA Mobile Surface Cleaner Program BMPs
Comments:	

C.2.c. ► Bridge and Structure Maintenance and Graffiti Removal

Place a **Y** in the boxes next to activities where applicable BMPs were implemented. If not applicable, type **NA** in the box and provide an explanation in the comments section below. Place an **N** in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.

NA	Control of discharges from bridge and structural maintenance activities directly over water or into storm drains
NA	Control of discharges from graffiti removal activities
NA	Proper disposal for wastes generated from bridge and structure maintenance and graffiti removal activities
NA	Implementation of the BASMAA Mobile Surface Cleaner Program BMPs for graffiti removal
NA	Employee training on proper capture and disposal methods for wastes generated from bridge and structural maintenance and graffiti removal activities.
NA	Contract specifications requiring proper capture and disposal methods for wastes generated from bridge and structural maintenance and graffiti removal activities.
Comments: See the City of Vallejo Annual Report for C.2.c implementation	

Permittee Name: Vallejo Sanitation and Flood Control District

C.2.d. ► Stormwater Pump Stations

Does your municipality own stormwater pump stations: **Yes** **No**

If your answer is **No** then skip to **C.2.e.**

Complete the following table for dry weather DO monitoring and inspection data for pump stations¹ (add more rows for additional pump stations). If a pump station is exempt from DO monitoring, explain why it is exempt.

Pump Station Name and Location	First inspection Dry Weather DO Data		Second inspection Dry Weather DO Data	
	Date	mg/L	Date	mg/L
Austin Creek 2515 Sacramento St	7/3/12	3.36	10/9/12	3.31
Siri 2855 Benicia Rd	7/3/12	3.74	10/9/12	3.19
Solano 1095 Solano Ave	7/3/12	5.51	10/9/12	5.54
Sonoma 1103 Sonoma Blvd	7/3/12	6.90	10/9/12	6.69
Storm 15 Mare Island	7/3/12	4.82	10/9/12	4.78

Summarize corrective actions as needed for DO monitoring at or below 3 mg/L. Attach inspection records of additional DO monitoring for corrective actions:

Summary:
 As described in 2011-2012 annual report the Siri pump station is a very small pump station servicing an area of less than five acres with marginal or no flow in the summer months, so the water in the system stagnates. Although both D.O. measurements for the Siri station are above the required 3mg/l, because the readings are in the lower range the pump station was cleaned and vacuumed out before the rainy season on 11/1/12. The Austin Creek pump station also was above the required 3mg/l but is tending towards lower readings. This pump station has a large vegetated channel that leads into it; the lower D.O. readings may be due to the low flow levels and stagnation during the summer months. The District will continue to monitor this area.

¹ DO monitoring is exempted where all discharge from a pump station remains in a stormwater collection system or infiltrates into a dry creek immediately downstream.

Permittee Name: Vallejo Sanitation and Flood Control District

Complete the following table for wet weather inspection data for pump stations (add more rows for additional pump stations):

Pump Station Name and Location		Date (2x/year required)	Presence of Trash (Cubic Yards)	Presence of Odor (Yes or No)	Presence of Color (Yes or No)	Presence of Turbidity (Yes or No)	Presence of Floating Hydrocarbons (Yes or No)
Austin Creek	2515 Sacramento St	1/24/13	<1	No	Yes	Yes	No
Siri	2855 Benicia Rd	1/24/13	0	No	No	No	No
Solano	1095 Solano Ave	1/24/13	<1	No	Yes	Yes	No
Sonoma	1103 Sonoma Blvd	1/24/13	<1	No	Yes	Yes	No
Storm 15	Mare Island	1/24/13	0	No	No	No	No
Austin Creek	2515 Sacramento St	2/21/13	<1	No	yes	No	No
Siri	2855 Benicia Rd	2/21/13	0	No	No	No	No
Solano	1095 Solano Ave	2/21/13	<1	No	No	No	No
Sonoma	1103 Sonoma Blvd	2/21/13	0	No	Yes	No	No
Storm 15	Mare Island	2/21/13	0	No	No	No	No

Permittee Name: Vallejo Sanitation and Flood Control District

C.2.e. ► Rural Public Works Construction and Maintenance			
Does your municipality own/maintain rural ² roads:		<input type="checkbox"/>	Yes
		<input checked="" type="checkbox"/>	No
If your answer is No then skip to C.2.f.			
Place a Y in the boxes next to activities where applicable BMPs were implemented. If not applicable, type NA in the box and provide an explanation in the comments section below. Place an N in the boxes next to activities where applicable BMPs were not implemented for one or more of these activities during the reporting fiscal year, then in the comments section below provide an explanation of when BMPs were not implemented and the corrective actions taken.			
<input type="checkbox"/>	Control of road-related erosion and sediment transport from road design, construction, maintenance, and repairs in rural areas		
<input type="checkbox"/>	Identification and prioritization of rural road maintenance based on soil erosion potential, slope steepness, and stream habitat resources		
<input type="checkbox"/>	No impact to creek functions including migratory fish passage during construction of roads and culverts		
<input type="checkbox"/>	Inspection of rural roads for structural integrity and prevention of impact on water quality		
<input type="checkbox"/>	Maintenance of rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts and excessive erosion		
<input type="checkbox"/>	Re-grading of unpaved rural roads to slope outward where consistent with road engineering safety standards, and installation of water bars as appropriate		
<input type="checkbox"/>	Inclusion of measures to reduce erosion, provide fish passage, and maintain natural stream geomorphology when replacing culverts or design of new culverts or bridge crossings		
Comments including listing increased maintenance in priority areas:			

² Rural means any watershed or portion thereof that is developed with large lot home-sites, such as one acre or larger, or with primarily agricultural, grazing or open space uses.

Permittee Name: Vallejo Sanitation and Flood Control District

C.2.f. ► Corporation Yard BMP Implementation			
Place an X in the boxes below that apply to your corporations yard(s):			
<input type="checkbox"/>	We do not have a corporation yard		
<input type="checkbox"/>	Our corporation yard is a filed NOI facility and regulated by the California State Industrial Stormwater NPDES General Permit		
<input checked="" type="checkbox"/>	We have a Stormwater Pollution Prevention Plan (SWPPP) for the Corporation Yard(s)		
Place an X in the boxes below next to implemented SWPPP BMPs to indicate that these BMPs were implemented in applicable instances. If not applicable, type NA in the box. If one or more of the BMPs were not adequately implemented during the reporting fiscal year then indicate so and explain in the comments section below:			
<input checked="" type="checkbox"/>	Control of pollutant discharges to storm drains such as wash waters from cleaning vehicles and equipment		
<input checked="" type="checkbox"/>	Routine inspection prior to the rainy seasons of corporation yard(s) to ensure non-stormwater discharges have not entered the storm drain system		
<input checked="" type="checkbox"/>	Containment of all vehicle and equipment wash areas through plumbing to sanitary or another collection method		
<input checked="" type="checkbox"/>	Use of dry cleanup methods when cleaning debris and spills from corporation yard(s) or collection of all wash water and disposing of wash water to sanitary or other location where it does not impact surface or groundwater when wet cleanup methods are used		
<input checked="" type="checkbox"/>	Cover and/or berm outdoor storage areas containing waste pollutants		
Comments:			
All of the storm drains at this facility are plumbed back into the treatment plant. The facility has no stormwater runoff. However, as required by the MRP VSFCD does have a SWPPP on file. In addition our facility has an operational staff that does an overall facility inspection of the plant twice per shift year round. During these rounds the general condition of the plant is inspected, equipment is checked for leaks, etc. Any problems found are relayed back to the shift supervisor and addressed immediately or as appropriate.			
If you have a corporation yard(s) that is not an NOI facility, complete the following table for inspection results for your corporation yard(s) or attach a summary including the following information:			
Corporation Yard Name	Inspection Date (1x/year required)	Inspection Findings/Results	Follow-up Actions
VSFCD	Daily	Typically minor housekeeping issues	Usually addressed immediately, see comments.

Section 3 - Provision C.3 Reporting New Development and Redevelopment

C.3.b.v.(2)(a) ► Green Streets Status Report

(All projects to be completed by December 1, 2014)

On an annual basis (if applicable), report on the status of any pilot green street projects within your jurisdiction. For each completed project, report the capital costs, operation and maintenance costs, legal and procedural arrangements in place to address operation and maintenance and its associated costs, and the sustainable landscape measures incorporated in the project including, if relevant, the score from the Bay-Friendly Landscape Scorecard.

Summary:

See City of Vallejo Annual Report for activities related to C.3.

C.3.b.v.(2)(c) ► Summary of Green Street Projects Completed by January 1, 2013

(For FY 12-13 Annual Report only) Provide a summary of all green street projects completed by January 1, 2013.

Summary:

BASMAA has prepared a regional summary of all green street pilot projects. The Green Street Pilot Project Summary Report is being submitted by BASMAA, on behalf of the MRP permittees, in BASMAA’s MRP FY 12-13 Regional Supplement – New Development and Redevelopment. The Green Streets Pilot Project Summary Report contains all of the required elements listed in Provision C.3.b.v.(2)(c) for all green street projects completed by January 1, 2013, as well as information on projects not yet completed.

C.3.b.v.(1) ► Regulated Projects Reporting

Fill in attached table **C.3.b.v.(1)** or attach your own table including the same information. See City of Vallejo Annual Report for activities related to C.3.

Permittee Name: Vallejo Sanitation and Flood Control District

C.3.e.v. ► Alternative or In-Lieu Compliance with Provision C.3.c.			
	<input type="checkbox"/>		<input type="checkbox"/>
<i>(For FY 11-12 Annual Report and each Annual Report thereafter)</i>			
Is your agency choosing to require 100% LID treatment onsite for all Regulated Projects and not allow alternative compliance under Provision C.3.e.?	<input type="checkbox"/>	Yes	<input type="checkbox"/> No
Comments (optional): See City of Vallejo Annual Report for activities related to C.3.			

C.3.e.vi ► Special Projects Reporting			
1. Has your agency received, but not yet granted final discretionary approval of, a development permit application for a project that has been identified as a potential Special Project based on criteria listed in MRP Provision C.3.e.ii(2) for any of the three categories of Special Projects (Categories A, B or C)?	<input type="checkbox"/>	Yes	<input type="checkbox"/> No
2. Has your agency granted final discretionary approval of a project identified as a Special Project in the March 15, 2013 report? If yes, include the project in both the C.3.b.v.(1) Table, and the C.3.e.vi. Table.	<input type="checkbox"/>	Yes	<input type="checkbox"/> No
<p>If you answered "Yes" to either question,</p> <ul style="list-style-type: none"> 1) Complete Table C.3.e.vi . below. 2) Attach narrative discussion of 100% LID Feasibility or Infeasibility for each project. <p>See City of Vallejo Annual Report for activities related to C.3.</p>			

C.3.h.iv. ► Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting			
(1) Fill in attached table C.3.h.iv.(1) or attach your own table including the same information. See City of Vallejo Annual Report for activities related to C.3.			

Permittee Name: Vallejo Sanitation and Flood Control District

(2) On an annual basis, provide a discussion of the inspection findings for the year and any common problems encountered with various types of treatment systems and/or HM controls. This discussion should include a general comparison to the inspection findings from the previous year.						
Summary: See City of Vallejo Annual Report for activities related to C.3.						
(3) On an annual basis, provide a discussion of the effectiveness of the O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness program).						
Summary: See City of Vallejo Annual Report for activities related to C.3.						
(4) During the reporting year, did your agency: See City of Vallejo Annual Report for activities related to C.3.						
• Inspect all newly installed stormwater treatment systems and HM controls within 45 days of installation?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not applicable. No new facilities were installed.
• Inspect at least 20 percent of the total number of installed stormwater treatment systems or HM controls? ³	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not applicable. No treatment measures
• Inspect at least 20 percent of the total number of installed vault-based systems?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not applicable. No vault systems.
If you answered "No" to any of the questions above, please explain:						

³ If there is only 1 treatment measure in the jurisdiction, the agency must inspect it every year.

C.3.i. ► Required Site Design Measures for Small Projects and Detached Single Family Home Projects

On an annual basis, discuss the implementation of the requirements of Provision C.3.i, including ordinance revisions, permit conditions, development of standard specifications and/or guidance materials, and staff training.

Summary:

See City of Vallejo Annual Report for activities related to C.3.

C.3.b.v.(1) ► Regulated Projects Reporting Table (part 1) – Projects Approved During the Fiscal Year Reporting Period

Project Name Project No.	Project Location ¹⁰ , Street Address	Name of Developer	Project Phase No. ¹¹	Project Type & Description ¹²	Project Watershed ¹³	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ft ²) ¹⁴	Total Replaced Impervious Surface Area (ft ²) ¹⁵	Total Pre- Project Impervious Surface Area ¹⁶ (ft ²)	Total Post- Project Impervious Surface Area ¹⁷ (ft ²)
Private Projects											
Public Projects											

Comments: See City of Vallejo Annual Report for activities related to C.3.

¹⁰ Include cross streets
¹¹ If a project is being constructed in phases, indicate the phase number and use a separate row entry for each phase. If not, enter "NA".
¹² Project Type is the type of development (i.e., new and/or redevelopment). Example descriptions of development are: 5-story office building, residential with 160 single-family homes with five 4-story buildings to contain 200 condominiums, 100 unit 2-story shopping mall, mixed use retail and residential development (apartments), industrial warehouse.
¹³ State the watershed(s) in which the Regulated Project is located. Downstream watershed(s) may be included, but this is optional.
¹⁴ All impervious surfaces added to any area of the site that was previously existing pervious surface.
¹⁵ All impervious surfaces added to any area of the site that was previously existing impervious surface.
¹⁶ For redevelopment projects, state the pre-project impervious surface area.
¹⁷ For redevelopment projects, state the post-project impervious surface area.

C.3.b.v.(1) ► Regulated Projects Reporting Table (part 2) – Projects Approved During the Fiscal Year Reporting Period (private projects)

Project Name Project No.	Application Deemed Complete Date ¹⁸	Application Final Approval Date ¹⁹	Source Control Measures ²⁰	Site Design Measures ²¹	Treatment Systems Approved ²²	Type of Operation & Maintenance Responsibility Mechanism ²³	Hydraulic Sizing Criteria ²⁴	Alternative Compliance Measures ^{25/26}	Alternative Certification ²⁷	HM Controls ^{28/29}
Private Projects										

Comments: See City of Vallejo Annual Report for activities related to C.3.

¹⁸ For private projects, state project application deemed complete date. If the project did not go through discretionary review, report the building permit issuance date.

¹⁹ For private projects, state project application final discretionary approval date. If the project did not go through discretionary review, report the building permit issuance date.

²⁰ List source control measures approved for the project. Examples include: properly designed trash storage areas; storm drain stenciling or signage; efficient landscape irrigation systems; etc.

²¹ List site design measures approved for the project. Examples include: minimize impervious surfaces; conserve natural areas, including existing trees or other vegetation, and soils; construct sidewalks, walkways, and/or patios with permeable surfaces, etc.

²² List all approved stormwater treatment system(s) to be installed onsite or at a joint stormwater treatment facility (e.g., flow through planter, bioretention facility, infiltration basin, etc.).

²³ List the legal mechanism(s) (e.g., O&M agreement with private landowner; O&M agreement with homeowners' association; O&M by public entity, etc...) that have been or will be used to assign responsibility for the maintenance of the post-construction stormwater treatment systems.

²⁴ See Provision C.3.d.i. "Numeric Sizing Criteria for Stormwater Treatment Systems" for list of hydraulic sizing design criteria. Enter the corresponding provision number of the appropriate criterion (i.e., 1.a., 1.b., 2.a., 2.b., 2.c., or 3).

²⁵ For Alternative Compliance at an offsite location in accordance with Provision C.3.e.i.(1), on a separate page, give a discussion of the alternative compliance site including the information specified in Provision C.3.b.v.(1)(m)(i) for the offsite project.

²⁶ For Alternative Compliance by paying in-lieu fees in accordance with Provision C.3.e.i.(2), on a separate page, provide the information specified in Provision C.3.b.v.(1)(m)(ii) for the Regional Project.

²⁷ Note whether a third party was used to certify the project design complies with Provision C.3.d.

²⁸ If HM control is not required, state why not.

²⁹ If HM control is required, state control method used (e.g., method to design and size device(s) or method(s) used to meet the HM Standard, and description of device(s) or method(s) used, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control).

C.3.b.v.(1) ► Regulated Projects Reporting Table (part 2) – Projects Approved During the Fiscal Year Reporting Period (public projects)

Project Name Project No.	Approval Date ³⁰	Date Construction Scheduled to Begin	Source Control Measures ³¹	Site Design Measures ³²	Treatment Systems Approved ³³	Operation & Maintenance Responsibility Mechanism ³⁴	Hydraulic Sizing Criteria ³⁵	Alternative Compliance Measures ^{36/37}	Alternative Certification ³⁸	HM Controls ^{39/40}
Public Projects										

Comments: See City of Vallejo Annual Report for activities related to C.3.

³⁰ For public projects, enter the plans and specifications approval date.

³¹ List source control measures approved for the project. Examples include: properly designed trash storage areas; storm drain stenciling or signage; efficient landscape irrigation systems; etc.

³² List site design measures approved for the project. Examples include: minimize impervious surfaces; conserve natural areas, including existing trees or other vegetation, and soils; construct sidewalks, walkways, and/or patios with permeable surfaces, etc.

³³ List all approved stormwater treatment system(s) to be installed onsite or at a joint stormwater treatment facility (e.g., flow through planter, bioretention facility, infiltration basin, etc.).

³⁴ List the legal mechanism(s) (e.g., maintenance plan for O&M by public entity, etc...) that have been or will be used to assign responsibility for the maintenance of the post-construction stormwater treatment systems.

³⁵ See Provision C.3.d.i. "Numeric Sizing Criteria for Stormwater Treatment Systems" for list of hydraulic sizing design criteria. Enter the corresponding provision number of the appropriate criterion (i.e., 1.a., 1.b., 2.a., 2.b., 2.c., or 3).

³⁶ For Alternative Compliance at an offsite location in accordance with Provision C.3.e.i.(1), on a separate page, give a discussion of the alternative compliance site including the information specified in Provision C.3.b.v.(1)(m)(i) for the offsite project.

³⁷ For Alternative Compliance by paying in-lieu fees in accordance with Provision C.3.e.i.(2), on a separate page, provide the information specified in Provision C.3.b.v.(1)(m)(ii) for the Regional Project.

³⁸ Note whether a third party was used to certify the project design complies with Provision C.3.d.

³⁹ If HM control is not required, state why not.

⁴⁰ If HM control is required, state control method used (e.g., method to design and size device(s) or method(s) used to meet the HM Standard, and description of device(s) or method(s) used, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control).

C.3.h.iv. ► Table of Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting

Fill in table below or attach your own table including the same information
 See City of Vallejo Annual Report for activities related to C.3.

Name of Facility/Site Inspected	Address of Facility/Site Inspected	Newly Installed? (YES/NO) ⁴¹	Party Responsible ⁴² For Maintenance	Date of Inspection	Type of Inspection ⁴³	Type of Treatment/HM Control(s) Inspected ⁴⁴	Inspection Findings or Results ⁴⁵	Enforcement Action Taken ⁴⁶	Comments/Follow-up

⁴¹ Indicate "YES" if the facility was installed within the reporting period, or "NO" if installed during a previous fiscal year.

⁴² State the responsible operator for installed stormwater treatment systems and HM controls.

⁴³ State the type of inspection (e.g., 45-day, routine or scheduled, follow-up, etc.).

⁴⁴ State the type(s) of treatment systems inspected (e.g., bioretention facility, flow-through planter, infiltration basin, etc...) and the type(s) of HM controls inspected, and indicate whether the treatment system is an onsite, joint, or offsite system.

⁴⁵ State the inspection findings or results (e.g., proper installation, improper installation, proper O&M, immediate maintenance needed, etc.).

⁴⁶ State the enforcement action(s) taken, if any.

C.3.e.vi.Special Projects Reporting Table

Reporting Period – January 1 – June 30, 2013

Project Name & No.	Permittee	Address	Application Submittal Date ⁴⁷	Status ⁴⁸	Description ⁴⁹	Site Total Acreage	Density DU/Acre	Density FAR	Special Project Category ⁵⁰	LID Treatment Reduction Credit Available ⁵¹	List of LID Stormwater Treatment Systems ⁵²	List of Non-LID Stormwater Treatment Systems ⁵³
									Category A: Category B: Category C: Location: Density: Parking:	Category A: Category B: Category C: Location: Density: Parking:	Indicate each type of LID treatment system and the percentage of total runoff treated	Indicate each type of non-LID treatment system and the percentage of total runoff treated. Indicate whether minimum design criteria met or certification received

⁴⁷ Date that a planning application for the Special Project was submitted.

⁴⁸ Indicate whether final discretionary approval is still pending or has been granted, and provide the date or version of the project plans upon which reporting is based.

⁴⁹ Type of project (commercial, mixed-use, residential), number of floors, number of units, type of parking, and other relevant information.

⁵⁰ For each applicable Special Project Category, list the specific criteria applied to determine applicability. For each non-applicable Special Project Category, indicate n/a.

⁵¹ For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit available. For Category C Special Projects also list the individual Location, Density, and Minimized Surface Parking Credits available.

⁵² List all LID stormwater treatment systems proposed. For each type, indicate the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area.

⁵³ List all non-LID stormwater treatment systems proposed. For each type of non-LID treatment system, indicate: (1) the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, and (2) whether the treatment system either meets minimum design criteria published by a government agency or received certification issued by a government agency, and reference the applicable criteria or certification.

Section 4 – Provision C.4 Industrial and Commercial Site Controls

Program Highlights

Provide background information, highlights, trends, etc.
 The District continued to implement its industrial and commercial site controls alongside its pretreatment program. In addition to inspections conducted at sites that are specifically stormwater related, inspections conducted as part of the District's pretreatment program include elements to be checked for stormwater concerns. For example the District has a FOG program that inspects local restaurants annually. District personnel conducting these inspections also check the dumpster areas to ensure trash is not leaving the containment area.

C.4.b.i. ► Business Inspection Plan

Do you have a Business Inspection Plan? **Yes** **No**
 If No, explain:

C.4.b.iii.(1) ► Potential Facilities List

List below or attach your list of industrial and commercial facilities in your Inspection Plan to inspect that could reasonably be considered to cause or contribute to pollution of stormwater runoff.
 See attachment.

C.4.b.iii.(2) ► Facilities Scheduled for Inspection

List below or attach your list of facilities scheduled for inspection during the current fiscal year.
 See attachment.

Permittee Name: Vallejo Sanitation and Flood Control District

C.4.c.iii.(1) ► Facility Inspections

Fill out the following table or attach a summary of the following information. Indicate your violation reporting methodology below.

	x	Permittee reports multiple discrete violations on a site as one violation.
		Permittee reports the total number of discrete violations on each site.

	Number	Percent
Number of businesses inspected	385	
Total number of inspections conducted	399	
Number of violations (excluding verbal warnings)	3	
Sites inspected in violation	3	100
Violations resolved within 10 working days or otherwise deemed resolved in a longer but still timely manner	2	66

Comments:
 During the report period the District had one violation that took 65 days to resolve. This violation was an ambulance company that was washing their fleet vehicles to the storm system. The owner of the company claimed that during the permitting process he had been given permission to do this. We could find no records of his claim and so upon explanation of the District's ordinances and receipt of an NOV they have stopped this practice and are planning on installing a wash pad plumbed to the sanitary sewer.

C.4.c.iii.(2) ► Frequency and Types/Categories of Violations Observed

Fill out the following table or attach a summary of the following information.

Type/Category of Violations Observed	Number of Violations
Actual discharge (e.g. active non-stormwater discharge or clear evidence of a recent discharge)	1
Potential discharge and other	2

Comments: The District counts discharge streams as one discharge per inspection per site.

Permittee Name: Vallejo Sanitation and Flood Control District

C.4.c.iii.(2) ► Frequency and Type of Enforcement Conducted

Fill out the following table or attach a summary of the following information

	Enforcement Action (as listed in ERP) ⁴⁸	Number of Enforcement Actions Taken	% of Enforcement Actions Taken⁴⁹
Level 1	Advisory letter/notice to clean	0	0
Level 2	Notice of violation	3	100
Level 3	Administrative complaint	0	0
Level 4	Administrative order	0	0
Total		3	100

C.4.c.iii.(3) ► Types of Violations Noted by Business Category

Fill out the following table or attach a summary of the following information.

Business Category⁵⁰	Number of Actual Discharge Violations	Number of Potential/Other Discharge Violations
Commercial		1
Gov agency	1	
Restaurant		1

C.4.c.iii.(4) ► Non-Filers

List below or attach a list of the facilities required to have coverage under the Industrial General Permit but have not filed for coverage:

There were no industries identified as non-filers during scheduled inspections during this fiscal year.

⁴⁸ Agencies to list specific enforcement actions as defined in their ERPs.

⁴⁹ Percentage calculated as number of each type of enforcement action divided by the total number of enforcement actions.

⁵⁰ List your Program's standard business categories.

Permittee Name: Vallejo Sanitation and Flood Control District

C.4.d.iii ► Staff Training Summary				
Training Name	Training Dates	Topics Covered	No. of Inspectors in Attendance	Percent of Inspectors in Attendance
Pollution control weekly meetings	Recurring	Illicit discharge detection, elimination and followup. Urban runoff pollution prevention and inspection procedures	5	100
CWEA P3S	2/25/12-2/28/12	Watersheds as the Key to Sustainability, Enforcement of Stormwater Related Law, Illegal Dumping Prevention and Enforcement	2	40
CASQA annual conference	11/5/12-11/7/12	Solving the Stormwater Compliance Puzzle	2	40
IPM	5/23/13	Integrated pest management procedures and techniques	1	20
IPM	5/30/13	Integrated pest management procedures and techniques	1	20

Section 5 – Provision C.5 Illicit Discharge Detection and Elimination

Program Highlights

Provide background information, highlights, trends, etc.

66 reports of potential illicit discharges were received during this report period. The District works collaboratively with Solano County Resource Management, the City of Vallejo Code Enforcement and various other agencies when additional assistance is needed to address an illicit discharge. The District continues to implement our collection system screening and cleaning program.

C.5.c.iii ► Complaint and Spill Response Phone Number and Spill Contact List

List below or attach your complaint and spill response phone number and spill contact list.

Contact	Description	Phone Number
Dan Tafolla	Environmental Services Director	707 644 8949 x261
Andy Jannings	Director of Field Operations	707 644 8949 x271
Lance Barnett	Stormwater Program Coordinator	707 644 8949 x269

C.5.d.iii ► Evaluation of Mobile Business Program

Describe implementation of minimum standards and BMPs for mobile businesses and your enforcement strategy. This may include participation in the BASMAA Mobile Surface Cleaners regional program or local activities.

Description:

Participation in BASMAA’s mobile surface cleaners program where applicable. The City of Vallejo is largely responsible for this section. However, the District does respond to calls about improper surface cleaning and will take enforcement action or assist the City when needed.

Permittee Name: Vallejo Sanitation and Flood Control District

C.5.e.iii ► Evaluation of Collection System Screening Program

Provide a summary or attach a summary of your collection screening program, a summary of problems found during collection system screening and any changes to the screening program this FY.

Description:
 The District’s field operations department conducts catch basin inspections continually throughout the year. We maintain a database of all District facilities; work orders are generated monthly for inspections with the goal of inspecting every facility at least once within two calendar years. If debris or other problems are found a separate crew is sent out to clean the facility. If an illicit discharge is suspected this information is passed on to our Environmental Services Department for investigation and possible enforcement. We have approximately 6000 catch basins in our service area. Typically around 10% of the catch basins inspected need some kind of cleaning or maintenance. Problems are usually leaves, sediment or trash impeding the stormwater flow. When catch basins are found that need cleaning, the surrounding storm lines are line jetted, cleaned and inspected. The Districts database was updated this year and as a result all catch basins in our service area were inspected in the report period.

C.5.f.iii.(1), (2), (3) ► Spill and Discharge Complaint Tracking

Spill and Discharge Complaint Tracking (fill out the following table or include an attachment of the following information)

	Number	Percentage
Discharges reported (C.5.f.iii.(1))	66	
Discharges reaching storm drains and/or receiving waters (C.5.f.iii.(2))	6	9
Discharges resolved in a timely manner (C.5.f.iii.(3))	65	98

Comments:
 During the report period the District received 66 reports of illicit discharges. Out of the 66 reports 6 were found to enter the storm system. Those 6 sites were remediated quickly or within a reasonable time frame. Each complaint is usually investigated the day it is received. Typically the complaint is of a potential discharge that is easily remediated or no evidence of a discharge is found. If no evidence of a discharge is found the reporting party is contacted to verify location. The one unresolved violation is currently under review by our legal counsel. We have a mobile automotive detailing business operating out of an older Ford panel truck at various locations throughout the City. The individual operating this business is unlicensed by the City and currently uses no BMPs while washing and detailing vehicles. District staff have spoken to this individual on several occasions and explained that is a violation of District code to commercially wash vehicles to the storm system. This individual continues to ignore our staff requests and refuses to give his correct name. We obtained the address of the registered owner of the Ford truck who is not the individual operating the business. We have sent a Notice of Violation to the registered owner with no response and have had a process server unsuccessfully try and deliver an Administrative Complaint to the same person. Our legal counsel is weighing various options including forwarding this to the District Attorney.

C.5.f.iii.(4) ► Summary of major types of discharges and complaints

Provide a narrative or attach a table and/or graph.

Typical complaints continue to be parked vehicles leaking automotive fluids, residential garbage dumping and commercial vehicle washing outside of an approved wash pad. Commercial washing facilities are required to direct wash water to the sanitary sewer system after pretreatment to remove solids and hydrocarbons. During the report period a total of seven enforcement actions were taken based on our Illicit Discharge Detection and Elimination program. An advisory letter was sent for an improperly plumbed washing machine, a stockpile of paint cans, and a leaking vehicle. Two NOVs were sent for problems with a sanitary sewer clean out. One NOV was sent to a resident for washing paint rinsate in the gutter. A NOV and an Administrative Complaint were sent related to the automotive detailing business referred to in the Spill and Discharge Complaint Tracking comment section above.

Section 6 – Provision C.6 Construction Site Controls

C.6.e.iii.1.a, b, c ▶ Site/Inspection Totals		
Number of High Priority Sites (sites disturbing < 1 acre of soil requiring storm water runoff quality inspection) (C.6.e.iii.1.a)	Number of sites disturbing ≥ 1 acre of soil (C.6.e.iii.1.b)	Total number of storm water runoff quality inspections conducted (include only High Priority Site and sites disturbing 1 acre or more) (C.6.e.iii.1.c)
NA	NA	NA
Comments: NA, the City of Vallejo is responsible for of C.6 implementation.		

C.6.e.iii.1.d ▶ Construction Activities Storm Water Violations		
BMP Category	Number of Violations⁵¹ excluding Verbal Warnings	% of Total Violations⁵²
Erosion Control	NA	NA
Run-on and Run-off Control	NA	NA
Sediment Control	NA	NA
Active Treatment Systems	NA	NA
Good Site Management	NA	NA
Non Stormwater Management	NA	NA
Total⁵³	NA	100%

⁵¹ Count one violation in a category for each site and inspection regardless of how many violations/problems occurred in the BMP category. For example, if during one inspection at a site, there are 2 erosion control violations, only 1 violation would be counted for this table.

⁵² Percentage calculated as number of violations in each category divided by total number of violations in all six categories.

⁵³ The total number of violations may count more than one violation per inspection, since some inspections may result in violations in more than one category. For example, during one inspection of a site, there may have been both an erosion control violation and a sediment control violation. For this reason, the total number of violations in this table may not match the total number of enforcement actions reported in Table C6.e.iii.1.e.

Permittee Name: Vallejo Sanitation and Flood Control District

C.6.e.iii.1.e ► Construction Related Storm Water Enforcement Actions

	Enforcement Action (as listed in ERP) ⁵⁴	Number Enforcement Actions Issued	% Enforcement Actions Issued ⁵⁵
Level 1 ⁵⁶	NA		
Level 2	NA		
Level 3	NA		
Level 4	NA		
Total	NA		100%

C.6.e.iii.1.f, g ► Illicit Discharges

	Number
Number of illicit discharges, actual and those inferred through evidence at high priority sites and sites that disturb 1 acre or more of land (C.6.e.iii.1.f)	NA
Number of sites with discharges, actual and those inferred through evidence at high priority sites and sites that disturb 1 acre or more of land (C.6.e.iii.1.g)	NA

⁵⁴ Agencies should list the specific enforcement actions as defined in their ERPs.

⁵⁵ Percentage calculated as number of each type of enforcement action divided by the total number of enforcement actions.

⁵⁶ For example, Enforcement Level 1 may be Verbal Warning.

Permittee Name: Vallejo Sanitation and Flood Control District

C.6.e.iii.1.h, i ► Violation Correction Times		
	Number	Percent
Violations (excluding verbal warnings) fully corrected within 10 business days after violations are discovered or otherwise considered corrected in a timely period (C.6.e.iii.1.h)	NA	NA
Violations (excluding verbal warnings) not fully corrected within 30 days after violations are discovered (C.6.e.iii.1.i)	NA	NA
Total number of violations (excluding verbal warnings) for the reporting year⁵⁷	NA	NA
Comments:		

C.6.e.iii.(2) ► Evaluation of Inspection Data
Describe your evaluation of the tracking data and data summaries and provide information on the evaluation results (e.g., data trends, typical BMP performance issues, comparisons to previous years, etc.).
Description: NA

C.6.e.iii.(2) ► Evaluation of Inspection Program Effectiveness
Describe what appear to be your program’s strengths and weaknesses, and identify needed improvements, including education and outreach.
Description: NA

C.6.f ► Staff Training Summary				
Training Name	Training Dates	Topics Covered	No. of Inspectors in Attendance	Percent of Inspectors in Attendance
NA				
NA				

⁵⁷ The total number of violations reported in the table of Violation Correction Times equals the number of initial enforcement actions. I.e., This assumes one violation is issued for several problems during an inspection at a site. The total number of violations in the table of Violation Correction Times may not equal the total number of enforcement actions because one violation issued at a site may have a second enforcement action for the same violation at the next inspection if it is not corrected.

Permittee Name: Vallejo Sanitation and Flood Control District

NA				
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Section 7 – Provision C.7. Public Information and Outreach

C.7.a ▶ Storm Drain Inlet Marking (existing storm drains)

(For FY 12-13 Annual Report only) Report prior years' estimated annual percentages of municipality maintained storm drain inlet markings inspected and maintained as legible with a no dumping message or equivalent. At least 80% of municipality-maintained storm drain inlet markings shall be inspected and maintained at least once per 5-year permit term.

Summary:
Estimated annual percentage of stenciled municipality storm drain inlets that were inspected and maintained as legible:
2009-10: 0%
2010-11: 0%
2011-12: 27%
2012-13: 27%

C.7.a ▶ Storm Drain Inlet Marking (newly-constructed, privately-maintained streets)

(For FY 12-13 Annual Report only) Report prior years' annual number of projects accepted after inlet markings were verified. For newly-approved, privately-maintained streets, permittees shall require inlet marking by the project developer upon construction and maintenance of markings through the development maintenance entity. Markings shall be verified prior to acceptance of the project.

Summary:
 NA, See the City of Vallejo's annual report for this data.

C.7.b.ii.1 ▶ Advertising Campaign

Summarize advertising efforts. Include details such as messages, creative developed, and outreach media used. The detailed advertising report may be included as an attachment. If advertising is being done by participation in a countywide or regional program, refer to the separate countywide or regional Annual Report.

Summary:
 The following separate report developed by BASMAA summarizes the activities of the Regional Youth Litter Campaign

- BASMAA Be the Street Campaign Report

C.7.b.iii.1 ▶ Pre-Campaign Survey

(For the Annual Report following the pre-campaign survey) Summarize survey information such as sample size, type of survey (telephone survey, interviews etc.). Attach a survey report that includes the following information. If survey was done regionally, refer to a regional submittal that contains the following information:

Information on the pre-campaign survey for the BASMAA Regional Youth Litter Campaign was provided in the FY 11-12 Annual Report.

<input type="checkbox"/>	Survey report attached
<input checked="" type="checkbox"/>	Reference to regional submittal:

C.7.c ▶ Media Relations

Summarize the media relations effort. Include the following details for each media pitch in the space below, AND/OR refer to a regional report that includes these details:

- Topic and content of pitch
- Medium (TV, radio, print, online)
- Date of publication/broadcast

Summary:

The following separate report developed by BASMAA summarizes media relations efforts conducted during FY 12-13:

- BASMAA Media Relations Final Report FY 12-13

In addition to participation in regional efforts, VSFCDC also promoted stormwater pollution prevention messages in the following ways:

7/13/12: Vallejo Times-Herald. Topic: Vallejo rescues ducks in storm drain

8/2/12: Vallejo News. Topic: Lake Dalwigk Improvements

Fall 2012: The Lay of the Land. Topic: Aquatic Organisms/biomonitoring

8/12/12: Press release. Topic: Coastal Cleanup Day

9/2/12: Vallejo Times-Herald. Topic: Coastal Cleanup Day

9/9/12: Vallejo Times-Herald. Topic: Coastal Cleanup Day (2nd article)

9/15/12: Vallejo Times-Herald. Topic: Coastal Cleanup Day (3rd advance article)

9/16/12: Vallejo Times-Herald. Topic: Coastal Cleanup Day results

9/19/12: Benicia Herald. Topic: Coast is clearer thanks to CCD

9/19/12: Vallejo News. Topic: Volunteers help clean Vallejo shoreline

10/4/13: Vallejo Times-Herald. Topic: Letter to Editor: thanks for CCD volunteers

10/25/12: Vallejo Times-Herald. Topic: Vallejo wastewater plant open today for tours to celebrate District's 60th anniversary

10/26/12: Vallejo Times-Herald. Topic: Home-school students, others take tour of Vallejo's wastewater treatment plant

10/31/12: Vallejo Times-Herald. Topic: VSFCDC celebrates 60 years

Permittee Name: Vallejo Sanitation and Flood Control District

11/4,7/12: Vallejo Times-Herald. Topic: Ads promoting free sandbag day
 11/21/12: Vallejo News. Topic: Collaborative workshop helps residents avoid scams
 11/28/12: Vallejo Times-Herald. Topic: Residents advised to prep for storm
 12/4/12: Vallejo Times-Herald. Topic: Clean up mode follows Sunday deluge
 1/18/13: Vallejo News. Topic: Vallejo Watershed Alliance at work in Hanns Park
 2/1/13: Vallejo Times-Herald. Topic: Green bins responsible for contaminated groundwater
 Spring 2013: The Lay of the Land. Topic: Working with local partners to meet water quality objectives
 4/18/13: Vallejo Times-Herald. Topic: Earth Day events set for Vallejo

C.7.d ► Stormwater Point of Contact

Summary of any changes made during FY 12-13:
 No changes.

C.7.e ► Public Outreach Events

Describe general approach to event selection. Provide a list of outreach materials and giveaways distributed.
 Use the following table for reporting and evaluating public outreach events

Event Details	Description (messages, audience)	Evaluation of Effectiveness
Provide event name, date, and location. Indicate if event is local, countywide or regional.	Identify type of event (e.g., school fair, farmers market etc.), type of audience (school children, gardeners, homeowners etc.) and outreach messages (e.g., Enviroscene presentation, pesticides, stormwater awareness)	Provide general staff feedback on the event (e.g., success at reaching a broad spectrum of the community, well attended, good opportunity to talk to gardeners etc.). Provide other details such as: <ul style="list-style-type: none"> • Estimated overall attendance at the event. • Number of people that visited the booth, comparison with previous years • Number of brochures and giveaways

		<p>distributed</p> <ul style="list-style-type: none"> Results of any spot surveys conducted
<p>Cub Scout Camp July 31, 2012 Hanns Park</p>	<p>VSFCD outreach representative taught groups of Cub Scouts (elementary school age) about Blue Rock Springs Creek. Each of the six classes learned about the history and flow of the creek, Native American and immigrant uses of tules and cattails, and did two exercises (a Sound Map and a non-collecting scavenger hunt) in the Vallejo Watershed Alliance’s habitat enhancement area.</p>	<p>Approx. 60 Cub Scouts participated in the event. The boys asked interesting questions, and seemed eager to know more about the creek.</p>
<p>Vallejo Watershed Alliance Annual Planning Meeting August 18, 2012 Dan Foley Community Center at Lake Chabot</p>	<p>Annual planning workshop to brainstorm and prioritize workday focus for the coming year. Our focus this year was how best to work with the Solano Resource Conservancy District on their 4-year Coastal Conservancy grant for habitat restoration in the Blue Rock Springs Creek Corridor.</p>	<p>7 people in attendance; VWA workdays for the coming year were scheduled.</p>
<p>Health & Safety Fair August 23, 2012 Kaiser Permanente</p>	<p>KP call center employees learned about less-toxic alternatives to pesticide use, proper disposal of pharmaceuticals, cooking oil and used motor oil, the Vallejo Watershed Alliance, and the watershed map.</p>	<p>More than 75 KP employees participated; all stopped by the VSFCD table and discussed materials with staff.</p>
<p>Health & Safety Fair September 19, 2012 VSFCD</p>	<p>Employees learned about less-toxic alternatives to pesticide use, proper disposal of cooking oil and used motor oil; the Vallejo Watershed Alliance, and the watershed map.</p>	<p>More than 60 employees participated: 100% stopped by the table and discussed materials with staff.</p>
<p>San Francisco Bay Flyway Festival February 9-10, 2013</p>	<p>This is a very well-attended event designed to show birders and nature lovers the wonders of the flyway. The District is an</p>	<p>Many people stopped by the table for information and free wildflower seeds; 27 signed up for the Alliance mailing list.</p>

Permittee Name: Vallejo Sanitation and Flood Control District

	<p>event sponsor; the table is geared toward informing visitors about the work of the Vallejo Watershed Alliance.</p>	
<p>Earth Day April 20, 2013 Vallejo Farmers Market</p>	<p>VSFCD co-sponsored the Earth Day activities at Vallejo Farmers' Market, offering information about less-toxic alternatives to home and garden products. We also held a mercury thermometer exchange at the market, part of a BAPPG effort to reduce mercury region-wide. We distributed free digital fever thermometers in exchange. District sponsorship of the event included:</p> <ul style="list-style-type: none"> • Financial support; • Designing and producing the official Earth Day t-shirt, worn by all Earth Day volunteers. The shirts were also used as raffle prizes in drawings during the event; • Designing and producing the posters, flyers and mailers used to promote the event; • Press release for the Times-Herald and online outlets. 	<p>Many of the hundreds who attended the event stopped by the VSFCD booth for information on less-toxic gardening. We collected 25 fever and 3 outdoor thermometers, which were disposed of through our universal waste hauler. Vallejo Watershed Alliance volunteers demonstrated how watersheds are polluted using the District's enviroscape model.</p>

C.7.f. ► Watershed Stewardship Collaborative Efforts

Summarize watershed stewardship collaborative efforts and/or refer to a regional report that provides details. Describe the level of effort and support given (e.g., funding only, active participation etc.). State efforts undertaken and the results of these efforts. If this activity is done regionally refer to a regional report.

Evaluate effectiveness by describing the following:

- Efforts undertaken
- Major accomplishments

Summary:

The District is the lead agency in the Vallejo Watershed Alliance, a community-based group formed to improve the quality of local waterways

Permittee Name: Vallejo Sanitation and Flood Control District

throughout the Vallejo watershed, providing support and resources for citizen and group involvement. Establishing and supporting this group helps the District fulfill its mission and adhere to regulations, and provides a forum for dealing with long-standing urban water problems. The Alliance is made up of public agencies, nonprofits and interested individuals. In this report period, the Alliance has:

- Partnered with key local agencies and groups including the Greater Vallejo Recreation District, Solano Resource Conservation District (RCD), City of Vallejo, and more;
- Hosted outreach activities: tables at Earth Day, Garden Fair, and the SF Bay Flyway Festival,
- Distributed meeting minutes to field representatives for politicians,
- Held monthly planning meetings open to the public;
- Expanded habitat enhancement efforts at Blue Rock Springs Creek;
- Hosted cleanups and restoration efforts at Rindler Creek, Blue Rock Springs Creek and Lake Chabot,
- Participated in and promoted Coastal Cleanup Day;
- Hosted an annual planning workshop to brainstorm and prioritize workday focus for the upcoming year;
- The Solano Resource Conservation District partner with us to determine how to make the most out of the 4-year habitat conservation grant they were awarded by the Coastal Conservancy to work with the VWA in the Blue Rock Springs Creek corridor;
- We also worked with staff from the Green Academy at Jesse Bethel High School to determine how best to support the students;
- Worked with first and fourth graders at Hanns Park to plant native vegetation along the creek;
- Worked with District and RCD staff to support high school creek biomonitoring assessments.

Photographs and further details about the Vallejo Watershed Alliance can be found in the *P2 Annual Report FY 12-13*.

C.7.g. ► Citizen Involvement Events

List the types of events conducted (e.g., creek clean up, storm drain inlet marking, native gardening etc.). Use the following table for reporting and evaluating citizen involvement events.

Event Details	Description	Evaluation of effectiveness
Provide event name, date, and location. Indicate if event is local, countywide or regional	Describe activity (e.g., creek clean-up, storm drain marking etc.)	Provide general staff feedback on the event. Provide other evaluation details such as: <ul style="list-style-type: none"> • Number of participants. Any change in participation from previous years. • Distance of creek or water body cleaned • Quantity of trash/recyclables collected (weight or volume). • Number of inlets marked. • Data trends
Coastal Cleanup Day September 15, 2012 19 sites throughout Vallejo	VSFCDD is the lead sponsor for Coastal Cleanup Day in Vallejo. We co-organize the event, recruit site captains and volunteers, and coordinate with private partners and other sponsors. Vallejo’s Coastal Cleanup Day benefits from newspaper and radio advertising, as well as direct mail pieces to prior participants and citizens interested in the watershed, door hangers in specific neighborhoods, posters in storefronts and libraries, stacks of flyers in public places, homeowner’s association meetings and more. The <i>Vallejo Times-Herald</i> covered the event, with one article prior to the cleanup and one on Sunday following the event.	940 volunteers(up from 744 in 2011) gathered to collect garbage and recyclables from 22 miles of Vallejo’s waterways. There were a total of nineteen cleanup sites. In total approximately 67,000 pounds of trash and recyclables were collected.
Habitat Restoration October 20, 2012 Hanns Park	The Vallejo Watershed Alliance gathered to weed and mulch their native plant meadow in Hanns Park.	10 participants
Habitat Restoration & Acorn Collecting November 17, 2012	See above for restoration description; also volunteers collected coast live oak and valley oak acorns for propagation for future planting	4 participants

Permittee Name: Vallejo Sanitation and Flood Control District

Hanns Park	projects.	
Habitat Restoration & Bird Box Cleaning January 12, 2013 Hanns Park	Volunteers weeded, mulched and cleaned the Alliance-built bird boxes in the park. Collected cottonwood cuttings.	4 participants (extremely cold day)
Habitat Restoration & Bird Box Cleaning February 9, 2013 Hanns Park	Volunteers weeded, mulched and cleaned the Alliance-built bird boxes in the park. Collected cottonwood cuttings.	10 participants
Habitat Restoration March 16, 2013 Hanns Park	Volunteers planted acorns (harvested the prior November)	10 participants
Rindler Creek Cleanup May 18, 2013 Fairgrounds Drive at Coach Lane	Creek cleanup along Rindler Creek-- VWA with help from MIT Charter School students.	Approx. 60 participants. 380 lbs of trash was removed from the creek and banks.
Habitat Restoration June 22, 2013 Hanns Park	Volunteers weeded, watered and mulched the newly planted areas.	8 participants

C.7.h. ► School-Age Children Outreach

Summarize school-age children outreach programs implemented. A detailed report may be included as an attachment. Use the following table for reporting school-age children outreach efforts.

Program Details	Focus & Short Description	Number of Students/Teachers reached	Evaluation of Effectiveness
Provide the following information: Name Grade or level (elementary/ middle/ high)	Brief description, messages, methods of outreach used	Provide number or participants	Provide agency staff feedback. Report any other evaluation methods used (quiz, teacher feedback etc.). Attach evaluation summary if applicable.
STRAW Partnership Grades 1 & 4	Students and Teachers Restoring a Watershed partnership brings students from Lincoln Elementary to Hanns Park	Approx. 50 students, 3 teachers, 11	STRAW does not do pre or post evaluations on their projects.

Permittee Name: Vallejo Sanitation and Flood Control District

	for habitat restoration and watershed education.	parents	
Watershed Explorers Grade 3	The District supported the Solano Resource Conservation District's Watershed Explorers program, which emphasizes science and place-based learning to build awareness and understanding of local creeks and watersheds. Each field trip ended with students planting native grass plugs in Hanns Park near the creek.	Six schools: 17 classes, 531 students, 115 adults	In the pre-assessment, 61% of the respondents were able to provide all questions with correct or partially correct answers. By the post-assessment, the number rose to 83%. A copy of program results is available upon request.
Elementary School tours: grades 4 and 5.	Wastewater treatment plant tour, plus watershed/stormwater pollution class and optional tour of local recycling nonprofit.	814 students plus teachers and chaperones	Students are quizzed at the end of the tour; most of the children score 90% or higher on quiz.
Elementary School visits: grades 4 and 5.	In-class presentations on how wastewater is treated, how stormwater becomes polluted and Vallejo area watershed map, and how students can help.	33 students, 2 teachers	Students are quizzed at the end of the tour; most of the children score 90% or higher on quiz.
Middle School: grade 7	As part of the school district's STEAM-E curriculum development and implementation, District staff taught each 7 th grade class in Vallejo about wastewater and stormwater.	Three schools: 15 classes, 525 students, approx. 25 adults	The District was honored at a school board meeting in February 2013 for helping to develop the program.
High School and Community College Biomonitoring	VSFCD-funded program for high school and community college biology students to perform a bioassessment and learning program at Blue Rock Springs Creek	219 high school students, 25 community college students	Participants score for all questions (post-assessment) was 70%. A 38% improvement in performance over the pre-assessment results. A complete copy of program results is available upon request.

C.7.i. ► Outreach to Municipal Officials

(For FY 12-13 Annual Report only) Summarize outreach conducted to increase the overall awareness of stormwater and/or watershed messages among municipal officials.

Summary:

Beginning in 2010 and continuing with this report period the District distributes a monthly newsletter to our Board of Trustees (consisting of the

Vallejo City Council and one Solano County Supervisor). The Newsletter provides information about important stormwater issues and watershed related events.

Permittee Name: Vallejo Sanitation and Flood Control District

Section 8 - Provision C.8 Water Quality Monitoring

C.8 ► Water Quality Monitoring

State below if information is reported in a separate regional report. Municipalities can also describe below any Water Quality Monitoring activities in which they participate directly, e.g. participation in RMP workgroups, fieldwork within their jurisdictions, etc.

Summary

During the report period the District began the sampling requirements outlined in table 8.1 of the MRP. The electronic reporting required in section C.8.g and the Urban Creeks Monitoring Report will be submitted to the Board on the required schedule.

During FY 12-13, we contributed to the BASMAA Regional Monitoring Coalition (RMC). In addition, we contributed financially to the Regional Monitoring Program for Water Quality in the San Francisco Estuary (RMP) and were represented at RMP committees and work groups. Monitoring efforts and results are documented in a separate report submitted March 15 of each year, as required in Provision C.8. For additional information on monitoring activities conducted by the Program, BASMAA RMC and the RMP, see the C.8 Water Quality Monitoring section of the Program's FY 12-13 Annual Report.

Section 9 – Provision C.9 Pesticides Toxicity Controls

C.9.b ► Implement IPM Policy or Ordinance

Report implementation of IPM BMPs by showing trends in quantities and types of pesticides used, and suggest reasons for increases in use of pesticides that threaten water quality, specifically organophosphates, pyrethroids, carbaryl, and fipronil. A separate report can be attached as evidence of your implementation.

Trends in Quantities and Types of Pesticides Used⁵⁸

Pesticide Category and Specific Pesticide Used	Amount ⁵⁹				
	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14
Organophosphates	NA	0	0	0	
Pyrethroids	NA	0	0	0	
Carbaryl	NA	0	0	0	
Fipronil	NA	0	0	0	

C.9.c ► Train Municipal Employees

Enter the number of employees that applied or used pesticides (including herbicides) within the scope of their duties this reporting year.	9
Enter the number of these employees who received training on your IPM policy and IPM standard operating procedures within the last 3 years.	9
Enter the percentage of municipal employees who apply pesticides who have received training in the IPM policy and IPM standard operating procedures within the last three years.	100

⁵⁸ Includes all municipal structural and landscape pesticide usage by employees and contractors.

⁵⁹ Weight or volume of the product or preferably its active ingredient, using same units for the product each year. The active ingredients in any pesticide are listed on the label. The list of active ingredients that need to be reported in the pyrethroids class includes: allethrin, bifenthrin, beta-cyfluthrin, bioallethrin, cyfluthrin, cypermethrin, cyphenothrin, deltamethrin, esfenvalerate, etofenprox, fenpropathrin, gamma-cyhalothrin, imiprothrin, lambda-cyhalothrin, metofluthrin, permethrin, phenothrin, prallethrin, resmethrin, sumithrin (d-phenothrin), tau-fluvalinate, tefluthrin, tetramethrin, tralomethrin, cis-permethrin, and zeta-cypermethrin.

Permittee Name: Vallejo Sanitation and Flood Control District

C.9.d ▶ Require Contractors to Implement IPM						
Did your municipality contract with any pesticide service provider in the reporting year?			x	Yes	<input type="checkbox"/>	No
If yes, attach one of the following:						
x	Contract specifications that require adherence to your IPM policy and standard operating procedures, OR					
<input type="checkbox"/>	Copy(ies) of the contractors' IPM certification(s) or equivalent, OR					
<input type="checkbox"/>	Equivalent documentation.					
If Not attached , explain:						

C.9.e ▶ Track and Participate in Relevant Regulatory Processes	
Summarize participation efforts, information submitted, and how regulatory actions were affected OR reference a regional report that summarizes regional participation efforts, information submitted, and how regulatory actions were affected.	
Summary: During FY 12-13, we participated in regulatory processes related to pesticides through contributions to BASMAA and CASQA. For additional information, see the Regional Pollutants of Concern Report submitted by BASMAA on behalf of all MRP Permittees.	

C.9.f ▶ Interface with County Agricultural Commissioners						
Did your municipal staff observe any improper pesticide usage or evidence of improper usage (e.g., pesticides in storm drain systems, along street curbs, or in receiving waters) during this fiscal year?			<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
If yes, provide a summary of improper pesticide usage reported to the County Agricultural Commissioner and follow-up actions taken to correct any violations. A separate report can be attached as your summary.						

C.9.g. ► Evaluate Implementation of Source Control Actions Relating to pesticides

(For FY 12-13 Annual Report only) Submit a report that evaluates; 1) the effectiveness of control measures implemented, and 2) attainment of pesticide concentration and toxicity targets for water and sediment from monitoring data (Provision C.8.). If needed, the report should include the following:

- Improvements to existing control measures and/or additional control measures required.
- A plan to implement improved and/or new control measures.

Summary:

The District sampled Blue Rock Springs Creek (Site 207R0064) for chronic toxicity on March 20, 2013. There were no significant reductions in the survival of the species used in the analysis. The summertime toxicity and sediment samples were also completed at Blue Rock Springs Creek. Toxicity was sampled at Site 207R0064 and sediment at Site 207R5524 on July 18, 2013. The results of both events are attached to the end of this report.

As discussed in the previous year Annual Report in the Water Board Staff Comments on Section 9, Provision C.9, of FY 10-11 Annual Report; *The District met with and hired a new PCO during the report period. The contractor is both GreenPro and QualityPro certified, and presented us with a description of their commitment to IPM and discussions of an IPM plan of action. Unfortunately the commitment to IPM seemed to be full of description and lacking in action. We had several employees observe that the first line of action was to use pesticides without consideration of a less toxic solution. The amounts and types of chemicals applied and other requested documentation have been difficult to get from the current PCO. In order to maintain an effective IPM program, the District has deemed it necessary to rewrite our contract specifications to ensure adherence to IPM practices. The District is terminating the contract with our current PCO and interviewing a different company that will be hired under the new contract language. The new contract language will be completed by Oct 2012.*

During the 12-13 report period the District terminated the contract with the PCO discussed above and hired a new contractor that is effectively following IPM procedures. The District also as discussed has rewritten our contract language to disallow any use of the listed pesticides at our facility and actively tracks any other pesticide usage. See attachments for copy of the new contract language.

Permittee Name: Vallejo Sanitation and Flood Control District

C.9.h.ii ► Public Outreach: Point of Purchase

Provide a summary of public outreach at point of purchase, and any measurable awareness and behavior changes resulting from outreach (here or in a separate report); **OR** reference a report of a regional effort for public outreach in which your agency participates.

Summary:

VSFCD is an active participant in the *Our Water, Our World* program, and a District employee serves as the ongoing OWOW project manager to BAPPG. The relationship with our local Home Depot is much improved because of the ongoing IPM Advocate program. OWOW accomplishments during this reporting period include training Home Depot store staff in IPM methods and products, keeping the shelf labels up to date, coordinating master runs of fact sheets, shelf talkers and other related materials, updating product lists, materials and website, providing Ask the Expert service, providing and staffing exhibitor booths, and having two table events at Home Depot. Additionally, VSFCD distributes OWOW fact sheets through its lobby display racks, promotes the IPM information and fact sheets through the bimonthly newsletter, and talks one-to-one during Earth Day and Garden Fair table events.

IPM information is available on our updated, easy-to-navigate website. The new site allows us to promote messages seasonally. Garden messages connected to Our Water Our World and IPM messages are promoted throughout the spring and summer.

C.9.h.iv ► Pest Control Contracting Outreach

(For FY 12-13 Annual Report only) Document effectiveness of outreach to residents who use or contract for structural or landscape pest control **OR** reference a regional that summarizes these actions.

See the C.9 Pesticides Toxicity Control section of BASMAA's FY 12-13 Regional Pollutants of Concern Report for a summary of the District's participation in and contributions towards regional public outreach to pest control operators and landscapers to reduce pesticide use. Also, Residents are provided with the Our Water Our World fact sheet about how to select a PCO at Home Depot and in the District offices.

C.9.h.vi ► Public Outreach: Pest Control Operators

Provide a summary of public outreach to pest control operators and landscapers and reduced pesticide use (here or in a separate report); **OR** reference a report of a regional effort for outreach to pest control operators and landscapers in which your agency participates.

Summary:

33 flyers were sent to PCOs who serve the Vallejo area. The flyers promoted the IPM Seminar for Landscapes and Rights of Way co-sponsored by the UC Statewide IPM Program, SF Water Quality Control Board, Professional Association of Pesticide Applicators (PAPA).

Response to Water Board Staff Comments on Section 9, Provision C.9, of FY 11-12 Annual Report

Based on comments received by the Water Board on April 3, 2012 the District revised their IPM to focus on an IPM hierarchy. The District has also rewritten its contract specifications to make IPM procedures mandatory for any contract work done at our facility. See attachments for updated IPM policy and contract specifications.

Section 10 - Provision C.10 Trash Load Reduction

C.10.a.iii ► Minimum Full Trash Capture (Summary of Actions)

Provide the following:

- 1) Descriptions of actions/tasks initiated, conducted or completed in implementing Minimum Full Trash Capture Devices (due July 1, 2014), including numbers of devices, device types and total land area treated to-date by full capture devices;
- 2) Descriptions of planned actions/tasks and time schedules for completion;
- 3) A map that includes locations of all full capture devices installed (private and public) to-date and associated treatment areas, trash generation rates/areas, creek/shoreline trash hot spots, and trash management areas defined to-date.
- 4) A summary of maintenance activities implemented for each device or groups of devices, including descriptions of typical maintenance frequencies and issues associated with maintaining these devices.

Descriptions of Actions/Tasks (Conducted or Planned):

To date the District has installed four large full trash capture devices treating a total area of 1622 acres. These four devices are installed in a trash hotspot area and also an area that is 303d listed as impaired for trash. An additional device is scheduled for purchase and installation by the end of 2013. This device will be installed at Lake Dalwigk and will encompass a treatment area of 48 acres. See attached map for location of trash capture devices and trash management areas.

Descriptions of Maintenance Activities:

The Kristar Nettechs have been cleaned twice since their installation. During one of the large storms this winter, Vallejo received an unusual amount of rain and the Nettech devices released properly and prevented flooding. We have had some minor cases of vandalism, once someone had released the nets and another time some bolts were removed. This doesn't seem to be a continuing problem. The District hires a contractor to clean and maintain the devices. Currently these records are maintained as hard copies. For better tracking and easier reporting this coming report period the District will be switching to a database to maintain records of our trash capture devices.

Permittee Name: Vallejo Sanitation and Flood Control District

C.10.a.iii ► Minimum Full Trash Capture (List of Devices)

Provide a list of trash full capture devices installed to-date or planned for installation by July 1, 2014 and the land area treated by each device or group of devices.

Applicable Trash Management Area (Preliminary Map ID)	Device Type	Planned or Installed	Maintenance Frequency	Total Number Installed	Total Area Treated (acres)
1	Kristar Nettech large trash capture system	Installed	Approximately quarterly	4	1633
16	Kristar Nettech large trash capture system	Planned	NA	NA	48
Totals					

Permittee Name: Vallejo Sanitation and Flood Control District

C.10.b.iii ► Trash Hot Spot Assessment

Provide the volume of material removed from each Trash Hot Spot cleanup, and the dominant types of trash (e.g., glass, plastics, paper) removed and their sources to the extent possible. Additionally, include a map that identifies the location(s) of trash hot spots.

Trash Hot Spot	Cleanup Date	FY 2012-13 Volume of Trash Removed (cubic yards)	FY 2011-12 Volume of Trash Removed (cubic yards)	FY 2010-11 Volume of Trash Removed (cubic yards)	Dominant Type(s) of Trash	Trash Sources (where possible)
Central Rindler Creek	11/12/12	.30	.29	.99	Foam cups, wrappers, plastic bottles	NA
South Rindler Creek	11/12/12	.90	.39	.99	Construction debris, foam cups, plastic bottles	NA
Austin Creek	11/9/12 11/12/12	1.0	.20	.10	Foam cups, plastic bottles, wrappers	NA
Blue Rock Springs Creek	11/12/12	.29	.10	.10	Foam cups, plastic bottles, wrappers	NA
Coral Street Ditch	11/13/12 11/29/12 12/3/12	1.5	.39	1.0	Foam cups, plastic bottles, wrappers	NA
Lemon Street	11/29/12	.30	1.1	.29	Foam cups, plastic bottles, wrappers	NA

C.10.c ► Long-Term Trash Load Reduction Plan

Provide descriptions of the progress made to-date on the development of Long-term Trash Load Reduction Plans due to the Water Board by February 1, 2014.

The District is finalizing the attached PDF copy of the trash generation rate map of Vallejo. This map will be used to set up trash management areas and focus efforts which will be reported in the Long Term Trash Load Reduction Plan. In addition to the four full trash capture devices installed last year the District is planning on an additional installation by the end of 2013.

Long-Term Plan Task	Summary of Progress
1. Identifying and mapping trash generating areas	High, medium and low trash generation areas have been identified and mapped. The map was verified and mostly ground-truthed by physical inspection of select areas. The Visual On-land Trash Assessment Protocol for Stormwater ver 1.0 was followed for these inspections. An On-land Visual Assessment Data Collection Form was filled out for each site and photographs were taken. During the assessments a few adjustments were made to the map based on the actual condition of the areas.
2. Identifying trash sources (as necessary or feasible) to assist in selecting trash management actions	Trash source identification currently is not being pursued as a predominant way to select trash management actions. The District is looking at installing more full capture devices which may obviate that need.
3. Prioritizing trash generating areas and associated types of trash problems	Trash generation area prioritization was based on the trash generation maps developed by EOA. The areas selected were largely focused on trying to group high generation areas with similar areas or flow patterns.
4. Identifying and selecting trash management actions for specific management areas	Where applicable and cost effective the District will be pursuing full capture device installation.

Permittee Name: Vallejo Sanitation and Flood Control District

5. Defining the type of assessment(s) that will be used to demonstrate progress towards goals	On land visual surveys and trash volume assessment combined with creek cleanups will be the main methods used to demonstrate progress towards trash reduction requirements.
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C.10.d Summary of Trash Reduction Actions

For each trash reduction action (i.e., control measures and best management practices) implemented by your municipality during the reporting period include a full description of the action. Describe actions initiated prior to and continued after the MRP effective date (December 2009), actions initiated after the MRP effective date, and actions planned for future implementation. If a planned action, also include the planned date of implementation. Add rows for actions not listed below as needed. Also identify the dominant source of trash and dominant types of trash removed for each action. To the extent possible, identify the applicable management areas identified on the map created under reporting section C.10.a.iii.

Action	Description	Trash Management Area(s) (Preliminary Map ID)	Dominant Sources	Dominant Types
Trash Management Area Specific Actions				
Full-Capture Treatment Devices	Continued Pre-MRP Actions: See description in section C.10.a.iii	1	NA	NA
	New/Enhanced Post-MRP Actions Initiated/Planned:	16		
Street Sweeping	Continued Pre-MRP Actions: See City of Vallejo's annual report for street sweeping data.	NA	NA	NA
	New/Enhanced Post-MRP Actions Initiated/Planned: See City of Vallejo's annual report for street sweeping data	NA		
On-land Trash Cleanups	Continued Pre-MRP Actions: Coastal Cleanup day and some volunteer lead clean ups.	11, 12	Litter, homeless encampments	NA
	New/Enhanced Post-MRP Actions Initiated/Planned: Increased efforts focused on encampment cleanups.	2,11,12		
	New/Enhanced Post-MRP Actions Initiated/Planned: NA	NA		

Permittee Name: Vallejo Sanitation and Flood Control District

C.10.d Summary of Trash Reduction Actions

For each trash reduction action (i.e., control measures and best management practices) implemented by your municipality during the reporting period include a full description of the action. Describe actions initiated prior to and continued after the MRP effective date (December 2009), actions initiated after the MRP effective date, and actions planned for future implementation. If a planned action, also include the planned date of implementation. Add rows for actions not listed below as needed. Also identify the dominant source of trash and dominant types of trash removed for each action. To the extent possible, identify the applicable management areas identified on the map created under reporting section C.10.a.iii.

Action	Description	Trash Management Area(s) (Preliminary Map ID)	Dominant Sources	Dominant Types
Activities to Reduce Trash from Uncovered Loads	Continued Pre-MRP Actions: See City of Vallejo for this information	NA	NA	NA
	New/Enhanced Post-MRP Actions Initiated/Planned: See City of Vallejo for this information	NA		
Anti-littering and Illegal Dumping Enforcement Activities	Continued Pre-MRP Actions: See City of Vallejo for this information	NA	NA	NA
	New/Enhanced Post-MRP Actions Initiated/Planned: See City of Vallejo for this information	NA		
Improved Trash Bins/Container Management	Continued Pre-MRP Actions Enforcement of clean trash bin areas through pretreatment inspection program.	All	Restaurants	NA
	New/Enhanced Post-MRP Actions Initiated/Planned: Increase focus and awareness of these areas by our inspectors.	All		
Creek, Channel, Shoreline Cleanups	Continued Pre-MRP Actions: Various volunteer led and other cleanups.	6,11,12	Litter	
	New/Enhanced Post-MRP Actions Initiated/Planned: Increased cleanups, both volunteer led and agency funded.	6,11,21		
Area/Jurisdictional-wide Actions				
Public Education and Outreach Programs	Continued Pre-MRP Actions: See details in C.7	Jurisdiction-wide	NA	NA
	New/Enhanced Post-MRP Actions Initiated/Planned: See details in C.7			

Section 11 - Provision C.11 Mercury Controls

C.11.a.i ► Mercury Recycling Efforts

List below or attach lists of efforts to promote, facilitate, and/or participate in collection and recycling of mercury containing devices and equipment at the consumer level (e.g., thermometers, thermostats, switches, bulbs).

The District is the lead sponsor for Vallejo’s Earth Day activities, which take place at the Vallejo Farmers Market. In addition to sponsorship and offering information about less-toxic alternatives to home and garden products, the District held a mercury thermometer exchange at the market, part of a BAPPG effort to reduce mercury region-wide. We received 25 fever and 3 outdoor mercury thermometers at the event, which were disposed of through our universal waste hauler. We distributed free digital fever thermometers in exchange.

C.11.a.ii ► Mercury Collection

Provide an estimate of the mass of mercury collected through these efforts, or provide a reference to a report containing this estimate.

Mercury Containing Device/Equipment	Total Amount of Devices Collected	Estimated Mass of Mercury Collected
Fluorescent Lamps ⁶⁰ (linear feet)	560	.00168Kg
CFLs ⁶¹ (each)	40	.00016Kg
Thermostats ⁶² (each)		
Thermostats (lbs)		
Thermometers (each)	28	.042Kg
Switches (lbs)	1	.00005Kg
Total Mass of Mercury Collected During FY 2012-2013:		.04533 Kg

⁶⁰ Only linear fluorescent lamps should be included

⁶¹ Only compact fluorescent lamps should be included

⁶² Thermostats can be reported by quantity or by pounds. Whichever unit is used, please avoid double-counting.

- C.11.b ▶ Monitor Methylmercury**
- C.11.c ▶ Pilot Projects to Investigate and Abate Mercury Sources in Drainages**
- C.11.d ▶ Pilot Projects to Evaluate and Enhance Municipal Sediment Removal and Management Practices**
- C.11.e ▶ Conduct Pilot Projects to Evaluate On-Site Stormwater Treatment via Retrofit**
- C.11.f ▶ Diversion of Dry Weather and First Flush Flows to POTWs**
- C.11.g ▶ Monitor Stormwater Mercury Pollutant Loads and Loads Reduced**
- C.11.h ▶ Fate and Transport Study of Mercury In Urban Runoff**
- C.11.i ▶ Development of a Risk Reduction Program Implemented Throughout the Region**
- C.11.j ▶ Develop Allocation Sharing Scheme with Caltrans**

State below if information is reported in a separate regional report. Municipalities that participate directly in regional activities to can provide descriptions below.

Summary

A summary of District's and regional accomplishments for these sub-provisions are included within the C.12 PCB Controls section of the BASMAA Regional POC Report.

Permittee Name: Vallejo Sanitation and Flood Control District

Section 12 - Provision C.12 PCBs Controls

C.12.a.ii,iii ▶ Ongoing Training

(For FY 10-11 Annual Report and Each Annual Report Thereafter) List below or attach description of ongoing training development and inspections for PCB identification, including documentation and referral to appropriate regulatory agencies (e.g. county health departments, Department of Toxic Substances Control, California Department of Public Health, and the Water Board) as necessary.

Description:

As part of ongoing training weekly staff meetings discuss POCs, their identification and proper BMP's. The Solano County Resource management Department also inspects industries in Vallejo and is available to us for assistance. BASMAA's POC presentation on inspecting industrial/commercial facilities for pollutants of concern was the topic of discussion in one of our weekly department meetings.

C.12.b ▶ Conduct Pilot Projects to Evaluate Managing PCB-Containing Materials and Wastes during Building Demolition and Renovation Activities

C.12.c ▶ Pilot Projects to Investigate and Abate On-land Locations with Elevated PCB Concentrations

C.12.d ▶ Conduct Pilot Projects to Evaluate and Enhance Municipal Sediment Removal and Management Practices

C.12.e ▶ Conduct Pilot Projects to Evaluate On-Site Stormwater Treatment via Retrofit

C.12.f ▶ Diversion of Dry Weather and First Flush Flows to POTWs

C.12.g ▶ Monitor Stormwater PCB Pollutant Loads and Loads Reduced

C.12.h ▶ Fate and Transport Study of PCBs In Urban Runoff

C.12.i ▶ Development of a Risk Reduction Program Implemented Throughout the Region

State below if information is reported in a separate regional report. Municipalities that participate directly in regional activities to can provide descriptions below.

Summary

A summary of District's and regional accomplishments for these sub-provisions are included within the C.12 PCB Controls section of the BASMAA Regional POC Report.

Section 13 - Provision C.13 Copper Controls

C.13.a.iii.(2) ▶ Training, Permitting and Enforcement Activities

(FY 11-12 Annual Report and each Annual Report thereafter) Provide summaries of activities implemented to manage waste generated from cleaning and treating of copper architectural features, including copper roofs, during construction and post-construction including. :

- Development of BMPs on how to manage the water during and post construction
- Requiring the use of appropriate BMPs when issuing building permits
- Educating installers and operators on appropriate BMPs
- Enforcement actions taken again noncompliance

See City of Vallejo Annual Report for copper control activities related to C.13.a.iii (2)

C.13.a.iii.(3) ▶ Evaluation of Effectiveness

(FY 12-13 Annual Report) Evaluate the effectiveness of measures the agency has undertaken to prevent discharge of wastewater to storm drains during the installation, cleaning, treating, and washing of the surface of copper architectural features. The discussion of the effectiveness of these measures should include BMP implementation and may propose additional measures to address this source of pollutants.

See City of Vallejo Annual Report for copper control activities related to C.13.a.iii (2)

C.13.c ▶ Vehicle Brake Pads

Reported in a separate regional report.
 A summary of the District’s participation with the Brake Pad Partnership (BPP) is included within the C.13 Copper Controls section of the BASMAA Regional POC Report.

C.13.c.iii ▶ Water Quality Issues Associated with Automobile

Permittee Name: Vallejo Sanitation and Flood Control District

Brake Pads

(FY 12-13 Annual Report Only) – Assess status of copper water quality issues associated with automobile brake pads and recommend brake-pad related actions for inclusion in subsequent permits if needed.

An assessment of copper water quality issues associated with automobile brake pads and recommend brake-pad related actions for inclusion in subsequent permits is included within the C.13 Copper Controls section of the BASMAA Regional POC Report.

C.13.d.iii ► Industrial Sources Copper Reduction Results

Based upon inspection activities conducted under Provision C.4, highlight copper reduction results achieved among the facilities identified as potential users or sources of copper, facilities inspected, and BMPs addressed.

Summary

During the report period there were no facilities identified as potential sources of copper due to their industrial activities. The District during the course of industrial inspections will continue to attempt to identify industrial facilities with a higher potential to discharge copper to the storm drain system.

C.13.e ► Studies to Reduce Copper Pollutant Impact Uncertainties

Report on progress of studies being conducted countywide or regionally to reduce copper pollutant impact uncertainties. State below if information is reported in a separate regional report.

Summary

A summary of the countywide Program and/or regional efforts to develop regional studies to reduce copper pollutant impact uncertainties is included within the C.13 Copper Controls section of the BASMAA Regional POC Report.

Section 14 - Provision C.14 PBDE, Legacy Pesticides and Selenium Controls

C.14.a ► Control Programs for PBDEs, Legacy Pesticides and Selenium Controls

Report on progress of studies being conducted countywide or regionally to characterize the distribution and pathways of PBDEs, legacy pesticides, and selenium. State below if information is reported in a separate regional report.

Summary

A summary of the Districts and regional efforts related to the Control Program for PBDEs, Legacy Pesticides and Selenium is included within the C.14 PBDE, Legacy Pesticides and Selenium section of the BASMAA Regional POC Report.

C.14.a.v. ► Control Programs for PBDEs, Legacy Pesticides and Selenium Controls – Load Computation

(For FY 12-13 Annual Report only) Submit a report with information required to compute loading estimates of PBDEs, legacy pesticides and selenium from urban runoff to the Bay.

Summary

Information required to compute loading estimates of PBDEs, legacy pesticides and selenium from urban runoff to the Bay is included within the C.14 PBDE, Legacy Pesticides and Selenium section of the BASMAA Regional POC Report.

C.14.a.vi. ► Control Programs for PBDEs, Legacy Pesticides and Selenium Controls – Control Measures

(For FY 12-13 Annual Report only) Submit a report identifying control measures and/or management practices to reduce impacts from discharges of PBDEs, legacy pesticides or selenium in urban runoff.

Summary

A report identifying control measures and/or management practices to reduce impacts from discharges of PBDEs, legacy pesticides or selenium in urban runoff is included within the C.14 PBDE, Legacy Pesticides and Selenium section of the BASMAA Regional POC Report.

Permittee Name: Vallejo Sanitation and Flood Control District

Section 15 - Provision C.15 Exempted and Conditionally Exempted Discharges

C.15.b.iii.(1), C.15.b.iii.(2) ► Planned and Unplanned Discharges of Potable Water

Is your agency a water purveyor?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
If No , skip to C.15.b.vi.(2):				
If Yes , Complete the attached reporting tables or attach your own table with the same information. Provide any clarifying comments below.				
Comments:				

C.15.b.vi.(2) ► Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering

<p>Provide implementation summaries of the required BMPs to promote measures that minimize runoff and pollutant loading from excess irrigation. Generally the categories are:</p> <ul style="list-style-type: none"> • Promote conservation programs • Promote outreach for less toxic pest control and landscape management • Promote use of drought tolerant and native vegetation • Promote outreach messages to encourage appropriate watering/irrigation practices • Implement Illicit Discharge Enforcement Response Plan for ongoing, large volume landscape irrigation runoff.
<p>Summary:</p> <p>The District maintains a less toxic information kiosk at a local retailer. Excess irrigation that may cause erosion or sedimentation are addressed through our enforcement response plan. The District promotes the use of native vegetation by partnership with the California Native Plant Society. A native plant nursery using reclaimed water is maintained at the District’s facility. The City of Vallejo is largely responsible for water conservation efforts throughout the City and is responsible for the implementation of these requirements.</p>

POTENTIAL FACILITIES LIST

Business Name	NO#	Street(Phys Location)
37 Auto Repair	1645	Marine World Parkway
7 Flags Car Wash	135	Valle Vista Avenue
7 Flags Car Wash	2020	Springs Road
7-UP Bottling Company	425	Chestnut Street
A-1 Collision	970	Broadway
Admiral Callaghan Shell Station	708	Admiral Callaghan Lane
Advanced Smog	3215	Sonoma Blvd.
Al Ale Auto	451	Ryder Street
Alfeta Motors	1329	Virginia Street
All American Car Wash & Auto Detail	1	Admiral Callaghan Lane
AM/PM	333	Curtola Parkway
Autoelektrik Repair & Body Shop	1375	Lemon Street
Automatic Transmission Plus	1511	Sonoma Blvd.
Autosport	600	Broadway
Autozone	730	Admiral Callaghan Lane
Avery Greene Motors	800	Admiral Callaghan Lane
Avis Rent-A-Car	786	Admiral Callaghan Lane
B & G Tires	301	Couch Street
Balbin Auto Sales	1515	Sonoma Blvd.
Balbin Auto Sales and Smog Shop	1201	Tennessee Street
Barber Dealer Group	4325	Sonoma Blvd.
Bay Automotive Collision Repairs	515	Tennessee Street
Bayshore Materials, Inc.	512	Solano Avenue
Beacon - UST - Semi Report	1401	Springs Road
Beacon Gas Station (UST)Semi-rep	2500	Sonoma Blvd.
Benicia & Starr Smog Shop	400	Benicia Road
Bert Motor Works	1601	Springs Road
Bert Williams and Sons	3032	Sonoma Blvd.
Big O Tire Stores	3200	Sonoma Blvd.

Bill Lang Pontiac, Cadillac, Mazda	4301	Sonoma Blvd.
Bill Pendergast's Auto Center	850	Broadway
Blue Rock Springs Golf Course	660	Columbus Parkway
Bob's Mobil Repair	1081	Sonoma Blvd.
Bob's Tow Service	289	5th Street
Bob's Towing Service	1112	Beach Street
Brinkman's Marine, Inc.	1	Curtola Parkway
Broadway Auto Body & Frame Shop	610	Broadway
Brooks Automotive	2601	Springs Road
Budget Car Rental	641	Tennessee Street
Cal State Olympic	2707	Sonoma Blvd.
California Highway Patrol	1551	Benicia Road
California Maritime Academy	200	Maritime Academy Drive
California National Guard	200	Bennett Avenue
California Performance Iron, Inc.	1639	Marine World Parkway
California's Body Shop	187	Mahogany Drive
CALTRANS, Vallejo Maintenance Station	1700	Marine World Parkway
Cemmco	1630	Marine World Parkway
Central Auto Repair	2224	Sonoma Blvd.
Chico's Auto Repair	322	Lemon Street
Cook's Radiator Service	1984	Broadway
Copart Insurance Pool	282	Fifth Street
Customized Services	4345	Sonoma Blvd.
D & A Minor Repair	112	Couch Street
D & F Auto Body	426	Mississippi Street
Danny's Auto Repair	2030	Sacramento Street
David's Union 76	3603	Sonoma Blvd.
E Auto Body	189	Couch Street
Eagle Auto Sales	311	Tennessee Street
Earl Scheib Paint & Body	115	Couch Street
Enterprise Rent-A-Car	1601	Marine World Parkway

Enterprise Rent-A-Car	1225	Sonoma Blvd.
Enzo Autosport	2229	Sonoma Blvd.
EPR Auto Center	416	Maine Street
Espinoza General Repairs	1725	El Dorado Street
Express Tire Service	300	Benicia Road
Fairgrounds Chevron	10	Sage Street
Fairgrounds Union 76 Service Station	223	Fairgrounds Drive
Fern's Muffler Shop	1513	Sonoma Blvd.
Finishing Technology	1281	Waterfront Avenue
FM Machines	1018	Alabama Street
Foreign Car Center	3021	Sonoma Blvd.
Fred & Son's Automobile Repair	1975	Broadway
G & M Foreign Car Repair	1921	Sonoma Blvd.
G.V.R.D.	395	Amador Street
Gene's Auto Repair	37	Tennessee Street
George Beavis Machine Shop	405	Sutter Street
Gibb's Tow Service	1832	Broadway
Glen Cove Marina	2000	Glen Cove Road
Golden Piston Auto Center	208	Commercial Street
Grand Prix Motors	1416	Sonoma Blvd.
Harley Davidson	1600	Sonoma Blvd.
Harry's H.D. Cycle Repair	420	Marin Street
Henry's Transmission & Automotive Repair	2040	Broadway
Hernandez Sales & Service	36	California Street
Hertz Car Rental	480	Redwood Street
Hiddenbrooke Golf Club	1095	Hiddenbrooke Parkway
Ideal Body Shop	503	Maine Street
J & J Motors	1920	Broadway
J & N Auto Body	1933	Broadway
J N Autobahn Car Repair	1110	Colusa Street
Jiffy Lube	4300	Sonoma Blvd.

Joe's Motors	1500	Solano Avenue
K & M Auto Body	212	Lemon Street
Kash-N-Save	1861	Solano Avenue
Kay's Auto Sales	540	Tennessee Street
Klimisch's Inc. Collision Repair	1833	Solano Avenue
Klimisch's. Inc.	285	Couch Street
Kragen Auto Parts	2035	Springs Road
Kragen Auto Parts	3580	Sonoma Blvd.
L & L Automotive	1719	Broadway
Lam's Auto Repair	300	Tennessee Street
Legacy Motors	1212	Springs Road
L'S Automotive Service	700	Broadway
LT Smog & Auto Repair	2707	Sonoma Blvd.
M F Maher - Corp Yard	490	Ryder Street
Mach 1 Motor Sports	510	Couch Street
Manila Auto Sales	29	California Street
Mantrade Automotive	3580	Sonoma Blvd.
Manuel's Auto Body & Paint	11	Cypress Avenue
Marin Auto	301	Pennsylvania Street,
Marine World Shell & Car Wash	1604	Marine World Parkway
Mathews & Sons	37	Sheridan Street
Melsons Auto Service	2040	Ohio Street
Mendoza Motors	1260	Georgia Street
Midas Auto Service Experts	3211	Sonoma Blvd.
Mike Curran Lincoln-Mercury Kia	3275	Sonoma Blvd.
Milt's Service Garage	515	Tuolumne Street
Monarch Auto Detail	2030	Sonoma Blvd.
Morri's Union 76	1300	Sonoma Blvd.
Moto A Go Go	226	Curtola Parkway
Napa Auto Parts	2999	Sonoma Blvd.
National Auto & Truck Dismantlers	38	California Street

Nawabi's Tire & Auto Service	1412	Sonoma Blvd.
Neely's Car Clinic	825	Redwood Street
Nino Motors	3268	Sonoma Blvd.
Ogden Imports	1401	Sonoma Blvd.
Oil Changers	794	Admiral Callaghan Lane
Olympic Auto Repair & Muffler	225	Broadway
Pacific Bell	730	Carolina Street
Pacific Gas & Electric	303	Carlson Street
Pep Boys	128	Plaza Drive
Performance Motors - Junk car lot	433	Maine Street
Platinum Quality Motors	145	Valle Vista Avenue
Powersports of Vallejo	33	Tennessee Street
Preventative Maint. Service	1701	Springs Road
Pro Auto Care	1500	Sonoma Blvd.
Quality Auto Outlet	320	Nebraska Street
Quality Tune Up Shops	3291	Sonoma Blvd.
R & B Auto Body & Paint	33	Tennessee Street
R & R Automobile	610	Tennessee Street
R & R Maher Const Inc. Corp. Yard	1324	Lemon Street
R & R Tire & Brake	1	Alameda Street
Regal Collision Repair	529	Tuolumne Street
Rent-A-Wreck Of Vallejo	1433	Springs Road
Rod's Professional Furniture Service	229	Hampshire Street
Rose Import Motors	1605	Solano Avenue
Rose Imports	3273	Sonoma Blvd.
Rose's Collision Repair Center	3424	Sonoma Blvd.
Save More Tires	948	Georgia Street
Select Auto Repair	850	Redwood Street
Solano Auto Body & Paint	407	Lemon Street
Solano Auto Body Shop II	4345	Sonoma Blvd.
Solano Auto Painters	327	Maine Street

Solano Collision	3267	Sonoma Blvd.
Solano County Fairgrounds	900	Fairgrounds Drive
Sonoma Collision	3330	Sonoma Blvd.
Sonoma Auto Electric	1518	Sonoma Blvd.
Speedee Lube	1675	Tuolumne Street
Springs Road Wash O M		Springs Road @ Oakwood
Stage Coach Atuo Wholesale	710	Tuolumne Street
Star Tech European	320	Couch Street
Steve O's Vallejo Detail	200	Tennessee Street
Superior Automotive	1903	Broadway
Team Chevy\Buick\Hyundai	850	Redwood Street
Tommy's Auto Repair	1799	Solano Avenue
Tony's Furniture Refinishing	345	Tennessee Street
Toscalito Tire & Automotive	3301	Sonoma Blvd.
Toyota Vallejo	1001	Admiral Callaghan Lane
Triton Truck Repair	757	Bldg. 757 MI
Tucker Tire Sales	1507	Sonoma Blvd.
Tuolumne Auto Repair	625	Tuolumne Street
U-Haul	2050	Solano Avenue
US Army Reserves 63rd RSC	120	Mini Drive
US Coast Guard	1	Harbor Way
V & G Body Shop	210	Commercial Street
Vallejo Car Care Center	320	Mississippi Street
Vallejo City Taxi	289	Fifth Street
Vallejo Fire Department	1220	Marin Street
Vallejo Fire Extinguisher	617	Solano Avenue
Vallejo German Car Clinic	614	Tuolumne Street
Vallejo Municipal Marina	42	Harbor Way
Vallejo Nissan	3287	Sonoma Blvd.
Vallejo Salvage Company	437	Pennsylvania Street
Vallejo Times Herald	440	Curtola Parkway

Vallejo Unified School District	211	Valle Vista Avenue
Vallejo, City of, Maintenance yard	111	Amador Street
Vallejo, City of, Maintenance yard, MI	535	Bldg. 535, MI
Valrey Auto Repair	440	Arkansas Street
Wal-Mart	5180	Sonoma Blvd.
West Coast Auto Repair	1696	Broadway
Wiler's Towing Inc.	1340	Lemon Street
Wilson Cornelius Ford	1301	Georgia Street
Zees Quality Motors	1101	Tennessee Street
3 J's Oriental Store	17	Rancho Square
Alex's Fine Catering Company	300	Virginia Street
Andrea Foods	1109	Maple Street
Angelo's	8308	Bennington Court
Annie's Panda Garden	320	Fairgrounds Drive
Ano Lao Thai Cuisine	907	Tennessee Street
Applebee's Grill & Bar	1041	Admiral Callaghan Lane
Arby's Restaurant	3201	Sonoma Blvd.
B & W Café	2632	Sonoma Blvd.
Banquet, The	3505	Sonoma Blvd Ste 40
Baskin Robbins	5182	Sonoma Blvd.
Baskin Robbins	1658	Tennessee Street
Bingo Millenium	777	Sereno Drive
Black Angus	104	Plaza Drive
Bud's Burgers	3849	Sonoma Blvd.
Burger King	1	Mariposa Street
Burger King	3606	Sonoma Blvd.
Buttercup Kitchen	3288	Sonoma Blvd.
Café Rock	655	Columbus Parkway
Carl's Jr. Restaurant	3897	Sonoma Blvd.
Carl's Jr. Restaurant	10	Sage Street
Casa Ensenada	2037	Springs Road

Century Theatres	109	Plaza Drive
Cha-Am Thai Restaurant	153	Plaza Drive
Characters Saloon	315	Tennessee Street
Chevy's Fresh Mex	157	Plaza Drive
Chicken Express	1075	Redwood Street
China Barn	320	Tuolumne Street
China Café	414	Georgia Street
China Wok	512	Sacramento Street
Chris Club	656	Benicia Road
Church's Fried Chicken	1920	Solano Avenue
City Lights Cafe & Catering	415	Virginia Street
Coconut Grove	905	Lincoln Road, East
Combo Express	42	Springstowne Center
Costco Wholesale and Gas Station	198	Plaza Drive
Dairy Queen Freeze	2120	Springs Road
Danny's Kitchen	38	Admiral Callaghan Lane
Darcy's Coffee House	1045	Rollingwood
Denny's Restaurant	250	Fairgrounds Drive
Denny's Restaurant	4355	Sonoma Blvd.
Dillon Bread Company	451	Ryder Street
DJ	3495	Sonoma Blvd.
Domino's Pizza	1833	Springs Road
Domino's Pizza	2820	Sonoma Blvd.
Dragon Express	3335	Sonoma Blvd.
D's Bar-B-Que	2909	Sonoma Blvd.
El Emperador Restaurant	541	Benicia Road
El Nopal	406	Virginia Street
El Rey Restaurant	2065	Solano Avenue
El Tucan Bar & Grill	2272	Sacramento Street
Elks Lodge	2850	Redwood Parkway
Empire Buffet	3585	Sonoma Blvd.

Filipino Community Center	820	Sonoma Blvd.
Florence Douglas Senior Center	333	Amador Street
Food 4 Less	5184	Sonoma Blvd.
Food Basket	1694	Broadway
Fresh & Natural Café	975	Sereno Drive
Front Room	295	Mare Island Way
Giant New York Pizza	2564	Springs Road
Golden City Buffet	5201	Sonoma Blvd.
Goldilocks Bake Shop	3885	Sonoma Blvd.
Gonzalez' Mexican Restaurant	2164	Springs Road
Gracie's Family Bar B Que	1801	Sonoma Blvd.
Gumbah's Restaurant	138	Tennessee Street
Hiddenbrooke Club House	1095	Hiddenbrooke Parkway
Hao's Chinese Kitchen	818	Tennessee Street
Holiday Inn	1000	Fairgrounds Drive
Hop Hings	3748	Sonoma Blvd.
House of Soul	1526	Solano Avenue
Ihaw Ihaw	40	Springstowne Center
India Garden Restaurant & Banquet	910	Lincoln Road, East
International House of Pancakes	114	Plaza Drive
International House of Pancakes	1400	Tennessee Street
Island Pacific Supermarket	24	Springstowne Center
Jack In The Box	400	Broadway
Jack In The Box	1610	Marine World Parkway
Jack In The Box	35	Admiral Callaghan Lane
Jalos Restaurant	5201	Sonoma Blvd.
Java Jax	1700	Sonoma Blvd.
Joana Restaurant	320	Mini Drive
Jollibee	4300	Sonoma Blvd.
Joy of Eating	1828	Springs Road
J'S Garden Restaurant	134	Robles Way

JJ's Fish & Chicken	515	Fairgrounds Drive
Kaigan Sushi	2138	Springs Road
Kalbee	3730	Sonoma Blvd.
Ken's BBQ Restaurant	1801	Sonoma Blvd.
Kentucky Fried Chicken	991	Redwood Street
Kentucky Fried Chicken	1300	Georgia Street
King Alberts BBQ	26	Tennessee Street
King's Meat & Fish	1624	Fairgrounds Drive
Kwongnan Restaurant	405	York Street
L & L Hawaiian Barbecue	165	Plaza Drive
La Cabanita	3335	Sonoma Blvd.
La Huasteca Restaurant	901	Redwood Street
La Iguana Restaurante	5201	Sonoma Blvd.
La Rosa Taqueria	1530	Sonoma Blvd.
Las Palmitas 2	301	Nebraska Street
Liled's Candy Kitchen	1318	Tennessee Street
Little Caesar's Pizza	2813	Redwood Parkway
Little Maya Bakery	985	Broadway
Living Center	1527	Springs Road
Long John Silver's	1015	Redwood Street
Los Amigos Taqueria	5184	Sonoma Blvd.
Los Arquitos	630	Broadway
Los Gallitos Taqueria	480	Redwood Street
Los Primos Restaurant	249	Benicia Road
Louisiana Fish & Chips	601	Tennessee Street
Lucky Garden	860	Tuolumne Street
Lucky Supermarket	1740	Tuolumne Street
Luigi's Pizzeria	310	Mini Drive
Lyons of Vallejo	980	Admiral Callaghan Lane
Maggie's Hamburgers	700	Benicia Road
Manila Sunrise	2110	Springs Road

Mama Ruth's Place	1601	Marine World Parkway
Mare Island - Golf Course	1800	Club Drive
Margaritas Restaurant	901	Redwood Street
Mariscos Autlan	1900	Broadway
Market Town Deli	1653	Tennessee Street
Matsuri Sushi	480	Redwood Street
Max's of Manila	3555	Sonoma Blvd.
McDonald's Restaurant	416	Lincoln Road, East
McDonald's Restaurant	902	Admiral Callaghan Lane
McDonald's Restaurant	3289	Sonoma Blvd.
McDonald's Restaurant	170	Lincoln Road, East
McDonald's Restaurant	2565	Springs Road
McDonald's Restaurant	5200	Sonoma Blvd.
Merrill Gardens	2261	Tuolumne Street
Mi Jacalito	105	Couch Street
Michael's Southern Delights	1601	Marine World Parkway
Midori Japanese Cuisine	3440	Sonoma Blvd.
Momo's American Cuisine	2621	Springs Road
Moose Lodge	337	Nebraska Street
Mountain Mike's Pizza	972	Admiral Callaghan Lane
My Café	415	Santa Clara Street
My Homestyle Café	523	Marin Street
Napoli Pizzeria	124	Tennessee Street
Nations Giant Burger	2525	Sonoma Blvd.
Neneng's Kakanin Catering Service	1030	Tennessee Street
Nezumi Sushi	524	Tuolumne Street
Nujo's	170	Robles Way
Nujo's Italian Restaurant & Pizza	1201	Georgia Street
Olive Garden	1176	Plaza Drive
Oriental Store of Vallejo	956	Admiral Callaghan Lane
Oriental Store of Vallejo	1800	Springs Road

Original Red Onion, The	1321	Springs Road
Original Scotty's Restaurant	1645	Tennessee Street
Pacifica Pizza	1332	Lincoln Road, East
Panda Express	972	Admiral Callaghan Lane
Panguena Pam	1601	Marine World Parkway
Pasta Pomodoro	163	Plaza Drive
Peking Express	1774	Tuolumne Street
Pho 1 Noodle House	3624	Sonoma Blvd.
Pho Lee Hoa Phat II	3495	Sonoma Blvd.
Pho Lee Hoa Phat 3	102	Springstowne Center
Pink Dawn Chinese Restaurant	1601	Marine World Parkway
Pinoy Pinay	24A	Springstowne Center
Pizza Guys	2255	Tennessee Street
Pizza Hut	2305	Springs Road
Pizza Hut	905	Broadway
Popeye's Chicken	1601	Marine World Parkway
Princess Garden	960	Admiral Callaghan Lane
Pupuseria El Salvador	1220	Monterey Street
Pupuseria Y Taqueria Mercy	333	Tennessee Street
Rafael's Bar & Grill	301	Nebraska Street
Rafael's Catering	616	Nebraska Street
Raley's Food Store	4300	Sonoma Blvd.
Real Thai Restaurant	907	Tennessee Street
Red Lobster	1180	Admiral Callaghan Lane
Red Ribbon Bakeshop	3595	Sonoma Blvd.
Reena's Garden Restaurant	3611	Sonoma Blvd.
Renegade Pizza & Deli	658	Benicia Road
Rickshaw Chinese Food	4300	Sonoma Blvd.
Round Table Pizza	4300	Sonoma Blvd.
Round Table Pizza	2633	Springs Road
Royal Jelly Donuts	762	Admiral Callaghan Lane

Royal Jelly Doughnut	2180	Springs Road
Royal Jelly Doughnuts	1794	Tuolumne Street
Rubio's Bajo Grill	173	Plaza Drive
Safeway Stores	122	Robles Way
Safeway Stores	709	Lincoln Road, West
Safeway Stores	774	Admiral Callaghan Lane
Saint Basil's School	1230	Nebraska Street
Salvation Army	630	Tuolumne Street
Sardine Can	0	Harbor Way
Seafood City	3495	Sonoma Blvd.
Selecta Market & Restaurant	58	Springstowne Center
Serranos Bakery & Restaurant	2120	Sonoma Blvd.
Sonoma Meat Market	2723	Sonoma Blvd.
Speedy Foods	5184	Sonoma Blvd.
Stara Indian Cuisine	742	Admiral Callaghan Lane
Straw Hat Pizza	3780	Sonoma Blvd.
Sunny BBQ	3730	Sonoma Blvd.
Sunset Pizza	623	Tennessee Street
Sunshine Bakery	3570	Sonoma Blvd.
Szechuan Chinese Cuisine	2079	Solano Avenue
Taco Bell	3600	Sonoma Blvd.
Taco Bell	2021	Solano Avenue
Taco Bell	974	Admiral Callaghan Lane
Taco's Jalisco	3420	Sonoma Blvd.
Tapioca Express	3720	Sonoma Blvd.
Taqueria Las Maria's	402	Georgia Street
Taqueria Los Amigos	5184	Sonoma Blvd.
Teeter's Sportsbar & Grill	905	Lincoln Road, East
Togo's Eatery	3455	Sonoma Blvd.
Trans Seafood	651	Broadway
Uncle Sam's American Chinese Food	785	Sereno Drive

Valerio's Tropical Bakeshop	3495	Sonoma Blvd.
Vallejo Great Donuts	630	Tennessee Street
Vallejo Grocery Outlet	920	Tuolumne Street
Vallejo Jelly Doughnut	2300	Sonoma Blvd.
Vallejo Yacht Club	485	Mare Island Way
Vero's	2907	Sonoma Blvd.
Waterhouse Café	145	Plaza Drive
Wendy's	1001	Redwood Street
Wendy's	118	Plaza Drive
Wing Stop	972	Admiral Callaghan Lane
Wok In Wok Out	1339	Springs Road
Yummy Sushi	2200	Redwood Street
Zio Fredo's	23	Habor way
Vallejo Garbage Service	2021	Broadway
Syar Industries, Lake Herman Quarry		Lake Herman Road
Vallejo Building Materials,	909	Sonoma Blvd.
THT Dba TIMET	403	Ryder St.
Vallejo Boat Works	1	Harbor Way
Tomra Recycling	1973	Broadway St.
Valcore Recycling Center	38	Sheridan St.
Cordeiro Vault Company	495	Ryder St.
Cordeiro Vault Company	281	Fifth St.
Vallejo Transit Authority	1850	Broadway
Norcal Building Materials	945	Maine St.
Jeffco	1260	Railroad Avenue
FBC	678	Railroad Avenue
Michael's Transportation	140	Yolano Dr.
Yellow Cab Company	95	Alameda St.

SCHEDULED INSPECTIONS: JULY 2013-JUNE 2014

Business Name	NO#	Street(Phys Location)
Powersports of Vallejo	33	Tennessee Street
Preventative Maint. Service	1701	Springs Road
Pro Auto Care	1500	Sonoma Blvd.
Quality Tune Up Shops	3291	Sonoma Blvd.
R & R Automobile	610	Tennessee Street
R & R Maher Const Inc. Corp. Yard	1324	Lemon Street
Regal Collision Repair	529	Tuolumne Street
Rose Imports	3273	Sonoma Blvd.
Rose's Collision Repair Center	3424	Sonoma Blvd.
Save More Tires	948	Georgia Street
Select Auto Repair	850	Redwood Street
Solano Auto Body Shop II	4345	Sonoma Blvd.
Solano Auto Painters	327	Maine Street
Solano County Fairgrounds	900	Fairgrounds Drive
Sonoma Collision	3330	Sonoma Blvd.
Sonoma Auto Electric	1518	Sonoma Blvd.
Speedee Lube	1675	Tuolumne Street
Stage Coach Atuo Wholesale	710	Tuolumne Street
Star Tech European	320	Couch Street
Superior Automotive	1903	Broadway
Team Chevy\Buick\Hyundai	301	Auto Mall Pkwy
Tommy's Auto Repair	1799	Solano Avenue
Tony's Furniture Refinishing	345	Tennessee Street
Toscalito Tire & Automotive	3301	Sonoma Blvd.
Toyota Vallejo	201	Auto Club Way
Triton Truck Repair	757	Bldg. 757 MI
Tucker Tire Sales	1507	Sonoma Blvd.
Tuolumne Auto Repair	625	Tuolumne Street
U-Haul	2050	Solano Avenue

US Army Reserves 63rd RSC	120	Mini Drive
US Coast Guard	1	Harbor Way
V & G Body Shop	210	Commercial Street
Vallejo Car Care Center	320	Mississippi Street
Vallejo City Taxi	289	Fifth Street
Vallejo Fire Extinguisher	617	Solano Avenue
Vallejo German Car Clinic	614	Tuolumne Street
Vallejo Municipal Marina	42	Harbor Way
Vallejo Nissan	3287	Sonoma Blvd.
Vallejo Salvage Company	437	Pennsylvania Street
Vallejo Unified School District	211	Valle Vista Avenue
Vallejo, City of, Maintenance yard	111	Amador Street
Vallejo, City of, Maintenance yard, MI	535	Bldg. 535, MI
THT DbA TIMET	403	Ryder St.
Valrey Auto Repair	440	Arkansas Street
West Coast Auto Repair	1696	Broadway
Wiler's Towing Inc.	1340	Lemon Street
Zees Quality Motors	711	Tennessee Street
37 Auto Repair	1645	Marine World Parkway
7 Flags Car Wash	135	Valle Vista Avenue
7 Flags Car Wash	2020	Springs Road
7-UP Bottling Company	425	Chestnut Street
A-1 Collision	970	Broadway
Admiral Callaghan Shell Station	708	Admiral Callaghan Lane
Alfeta Motors	1329	Virginia Street
All American Car Wash & Auto Detail	1	Admiral Callaghan Lane
Vallejo Garbage Service	2021	Broadway
Vallejo Transit Authority	1850	Broadway
AM/PM	333	Curtola Parkway
Autoelektrik Repair & Body Shop	1375	Lemon Street
Automatic Transmission Plus	1511	Sonoma Blvd.

Autosport	600	Broadway
Autozone	730	Admiral Callaghan Lane
Syar Industries, Lake Herman Quarry		Lake Herman Road
Norcal Building Materials	945	Maine St.
Avery Greene Motors	800	Admiral Callaghan Lane
Avis Rent-A-Car	786	Admiral Callaghan Lane
B & G Tires	301	Couch Street
Balbin Auto Sales	1515	Sonoma Blvd.
Balbin Auto Sales and Smog Shop	1201	Tennessee Street
Barber Dealer Group	4325	Sonoma Blvd.
Bay Automotive Collision Repairs	515	Tennessee Street
Bayshore Materials, Inc.	512	Solano Avenue
Vallejo Building Materials,	909	Sonoma Blvd.
Jeffco	1260	Railroad Avenue
Benicia & Starr Smog Shop	400	Benicia Road
Bert Motor Works	1601	Springs Road
Bert Williams and Sons	3032	Sonoma Blvd.
Big O Tire Stores	3200	Sonoma Blvd.
Bill Pendergast's Auto Center	850	Broadway
Blue Rock Springs Golf Course	660	Columbus Parkway
Bob's Mobil Repair	1081	Sonoma Blvd.
Bob's Tow Service	289	5th Street
Bob's Towing Service	1112	Beach Street
Brinkman's Marine, Inc.	1	Curtola Parkway
Broadway Auto Body & Frame Shop	610	Broadway
Budget Car Rental	641	Tennessee Street
Cal State Olympic	2707	Sonoma Blvd.
Michael's Transportation	140	Yolano Dr.
Advanced Smog	3215	Sonoma Blvd.
California Highway Patrol	1551	Benicia Road
California Maritime Academy	200	Maritime Academy Drive

California National Guard	200	Bennett Avenue
California's Body Shop	187	Mahogany Drive
Cemmco	1630	Marine World Parkway
Central Auto Repair	2224	Sonoma Blvd.
Yellow Cab Company	95	Alameda St.
Baskin Robbins	5182	Sonoma Blvd.
Blanca's Bakery & Taqueria	5201	Sonoma Blvd.
Bud's Burgers	3849	Sonoma Blvd.
Burger King	3606	Sonoma Blvd.
Buttercup Kitchen	3288	Sonoma Blvd.
Carl's Jr. Restaurant	3897	Sonoma Blvd.
Denny's Restaurant	4355	Sonoma Blvd.
DJ	3495	Sonoma Blvd.
Domino's Pizza	2820	Sonoma Blvd.
Dragon Express	3335	Sonoma Blvd.
Empire Buffet	3585	Sonoma Blvd.
Filipino Community Center	820	Sonoma Blvd.
Food 4 Less	5184	Sonoma Blvd.
Golden City Buffet	5201	Sonoma Blvd.
Goldilocks Bake Shop	3885	Sonoma Blvd.
Gracie's Family Bar B Que	1801	Sonoma Blvd.
Hop Hings	3748	Sonoma Blvd.
Jalos Restaurant	5201	Sonoma Blvd.
Java Jax	1700	Sonoma Blvd.
Jollibee	4300	Sonoma Blvd.
Kalbee	3730	Sonoma Blvd.
La Cabanita	3335	Sonoma Blvd.
La Iguana Restaurante	5201	Sonoma Blvd.
La Rosa Taqueria	1530	Sonoma Blvd.
Los Amigos Taqueria	5184	Sonoma Blvd.
Max's of Manila	3555	Sonoma Blvd.

McDonald's Restaurant	3289	Sonoma Blvd.
McDonald's Restaurant	5200	Sonoma Blvd.
Midori Japanese Cuisine	3440	Sonoma Blvd.
Nations Giant Burger	2525	Sonoma Blvd.
Pho 1 Noodle House	3624	Sonoma Blvd.
Pho Lee Hoa Phat II	3495	Sonoma Blvd.
Reena's Garden Restaurant	3611	Sonoma Blvd.
Raley's Food Store	4300	Sonoma Blvd.
Red Ribbon Bakeshop	3595	Sonoma Blvd.
Rickshaw Chinese Food	4300	Sonoma Blvd.
Round Table Pizza	4300	Sonoma Blvd.
Seafood City	3495	Sonoma Blvd.
Sonoma Meat Market	2723	Sonoma Blvd.
Speedy Foods	5184	Sonoma Blvd.
Straw Hat Pizza	3780	Sonoma Blvd.
Sunny BBQ	3730	Sonoma Blvd.
Sunshine Bakery	3570	Sonoma Blvd.
Taco Bell	3600	Sonoma Blvd.
Taco's Jalisco	3420	Sonoma Blvd.
Tapioca Express	3720	Sonoma Blvd.
Taqueria Los Amigos	5184	Sonoma Blvd.
Togo's Eatery	3455	Sonoma Blvd.
Valerio's Tropical Bakeshop	3495	Sonoma Blvd.
Vallejo Jelly Doughnut	2300	Sonoma Blvd.
Vero's	2907	Sonoma Blvd.
Casa Ensenada	2037	Springs Road
Dairy Queen Freeze	2120	Springs Road
Domino's Pizza	1833	Springs Road
Giant New York Pizza	2564	Springs Road
Gonzalez' Mexican Restaurant	2164	Springs Road
Joy of Eating	1828	Springs Road

Kaigan Sushi	2138	Springs Road
Living Center	1527	Springs Road
Manila Sunrise	2110	Springs Road
McDonald's Restaurant	2565	Springs Road
Momo's American Cuisine	2621	Springs Road
Original Red Onion, The	1321	Springs Road
Oriental Store of Vallejo	1800	Springs Road
Pizza Hut	2305	Springs Road
Round Table Pizza	2633	Springs Road
Royal Jelly Doughnut	2180	Springs Road
Subway Sandwiches	2045	Springs Road
Wok In Wok Out	1339	Springs Road
Combo Express	42	Springstowne Center
Ihaw Ihaw	40	Springstowne Center
Island Pacific Supermarket	24	Springstowne Center
Pho Lee Hoa Phat 3	102	Springstowne Center
Pinoy Pinay	24A	Springstowne Center
Selecta Market & Restaurant	58	Springstowne Center
Ana Lao Thai Cuisine	907	Tennessee Street
Baskin Robbins	1658	Tennessee Street
Characters Saloon	315	Tennessee Street
Gumbah's Restaurant	138	Tennessee Street
Hao's Chinese Kitchen	818	Tennessee Street
International House of Pancakes	1400	Tennessee Street
King Alberts BBQ	26	Tennessee Street
Liled's Candy Kitchen	1318	Tennessee Street
Louisiana Fish & Chips	601	Tennessee Street
Market Town Deli	1653	Tennessee Street
Napoli Pizzeria	124	Tennessee Street
Neneng's Kakanin Catering Service	1030	Tennessee Street
Original Scotty's Restaurant	1645	Tennessee Street

Pizza Guys	2255	Tennessee Street
Pupuseria Y Taqueria Mercy	333	Tennessee Street
Sunset Pizza	623	Tennessee Street
Vallejo Great Donuts	630	Tennessee Street
Lucky Supermarket	1740	Tuolumne Street
China Barn	320	Tuolumne Street
Lucky Garden	860	Tuolumne Street
Merrill Gardens	2261	Tuolumne Street
Nezumi Sushi	524	Tuolumne Street
Peking Express	1774	Tuolumne Street
Royal Jelly Doughnuts	1794	Tuolumne Street
Salvation Army	630	Tuolumne Street
Subway Sandwiches	1780	Tuolumne Street
Vallejo Grocery Outlet	920	Tuolumne Street
Alex's Fine Catering Company	300	Virginia Street
City Lights Cafe & Catering	415	Virginia Street
El Nopal	406	Virginia Street
Kwongnan Restaurant	405	York Street
Applebee's Grill & Bar	1041	Admiral Callaghan Lane
Danny's Kitchen	38	Admiral Callaghan Lane
Jack In The Box	35	Admiral Callaghan Lane
Lyons of Vallejo	980	Admiral Callaghan Lane
McDonald's Restaurant	902	Admiral Callaghan Lane
Mountain Mike's Pizza	972	Admiral Callaghan Lane
Oriental Store of Vallejo	956	Admiral Callaghan Lane
Panda Express	972	Admiral Callaghan Lane
Princess Garden	960	Admiral Callaghan Lane
Red Lobster	1180	Admiral Callaghan Lane
Royal Jelly Donuts	762	Admiral Callaghan Lane
Safeway Stores	774	Admiral Callaghan Lane
Stara Indian Cuisine	742	Admiral Callaghan Lane

Subway Sandwiches	968	Admiral Callaghan Lane
Taco Bell	974	Admiral Callaghan Lane
Wing Stop	972	Admiral Callaghan Lane
First Presbyterian Church	1350	Amador Street
Florence Douglas Senior Center	333	Amador Street
Chris Club	656	Benicia Road
El Emperador Restaurant	541	Benicia Road
Maggie's Hamburgers	700	Benicia Road
Los Primos Restaurant	249	Benicia Road
Angelo's	8308	Bennington Court
Food Basket	1694	Broadway
Jack In The Box	400	Broadway
Los Arquitos	630	Broadway
Little Maya Bakery	985	Broadway
Mariscos Autlan	1900	Broadway
Pizza Hut	905	Broadway
Trans Seafood	651	Broadway
Farragut Inn	1750	Club Drive
Mare Island - Golf Course	1800	Club Drive
Café Rock	655	Columbus Parkway
Mi Jacalito	105	Couch Street
Annie's Panda Garden	320	Fairgrounds Drive
Courtyard Marriott	1000	Fairgrounds Drive
Denny's Restaurant	250	Fairgrounds Drive
JJ's Fish & Chicken	515	Fairgrounds Drive
King's Meat & Fish	1624	Fairgrounds Drive
China Café	414	Georgia Street
Deli at Georgia St. Plaza, The	301	Georgia Street
Eladio's Restaurant	402	Georgia Street
Good Day Café	314	Georgia Street
Kentucky Fried Chicken	1300	Georgia Street

Montana Eddie's	301	Georgia Street
Nujo's Italian Restaurant & Pizza	1201	Georgia Street
Taqueria Las Maria's	402	Georgia Street
Zio Fredo's	23	Harbor Way
Sardine Can	0	Harbor Way
Hiddenbrooke Club House	1095	Hiddenbrooke Parkway
India Garden Restaurant & Banquet	910	Lincoln Road, East
Coconut Grove	905	Lincoln Road, East
McDonald's Restaurant	170	Lincoln Road, East
McDonald's Restaurant	416	Lincoln Road, East
Pacifica Pizza	1332	Lincoln Road, East
Safeway Stores	709	Lincoln Road, West
Andrea Foods	1109	Maple Street
Front Room	295	Mare Island Way
Vallejo Yacht Club	485	Mare Island Way
My Homestyle Café	523	Marin Street
Dough Boy Donuts	1601	Marine World Parkway
Jack In The Box	1610	Marine World Parkway
Mama Ruth's Place	1601	Marine World Parkway
Michael's Southern Delights	1601	Marine World Parkway
Panguena Pam	1601	Marine World Parkway
Pink Dawn Chinese Restaurant	1601	Marine World Parkway
Popeye's Chicken	1601	Marine World Parkway
Subway Sandwiches	1601	Marine World Parkway
Burger King	1	Mariposa Street
Joana Restaurant	320	Mini Drive
Luigi's Pizzeria	310	Mini Drive
Las Palmitas #2	301	Nebraska Street
Moose Lodge	337	Nebraska Street
Rafael's Bar & Grill	301	Nebraska Street
Rafael's Catering	616	Nebraska Street

Saint Basil's School	1230	Nebraska Street
Black Angus Restaurant	124	Plaza Drive
Century Theatres	109	Plaza Drive
Cha-Am Thai Restaurant	153	Plaza Drive
Chevy's Fresh Mex	157	Plaza Drive
Costco Wholesale and Gas Station	198	Plaza Drive
International House of Pancakes	114	Plaza Drive
L & L Hawaiian Barbecue	165	Plaza Drive
Olive Garden	1176	Plaza Drive
Pasta Pomodoro	163	Plaza Drive
Rubio's Baja Grill	173	Plaza Drive
Little Caesar's Pizza	2813	Redwood Parkway
Chicken Express	1075	Redwood Street
Kentucky Fried Chicken	991	Redwood Street
Long John Silver's	1015	Redwood Street
Los Gallitos Taqueria	480	Redwood Street
Margaritas Mexican Restaurant	901	Redwood Street
Matsuri Sushi	480	Redwood Street
Wendy's	1001	Redwood Street
Yo Sushi	100	Robles Way
J'S Garden Restaurant	134	Robles Way
Safeway Stores	122	Robles Way
Subway Sandwiches	170	Robles Way
Dillon Bread Company	451	Ryder Street
China Wok	512	Sacramento Street
El Tucan Bar & Grill	2272	Sacramento Street
Carl's Jr. Restaurant	10	Sage Street
My Café	415	Santa Clara Street
Bingo Millenium	777	Sereno Drive
Fresh & Natural Café	975	Sereno Drive
Uncle Sam's American Chinese Food	785	Sereno Drive

Church's Fried Chicken	1920	Solano Avenue
House of Soul	1526	Solano Avenue
Szechuan Chinese Cuisine	2079	Solano Avenue
Taco Bell	2021	Solano Avenue
3J's Oriental Market	5201	Sonoma Blvd.
Arby's Restaurant	3201	Sonoma Blvd.
B & W Café	2632	Sonoma Blvd.
Caoli, Elizabeth	1601	Marine World Parkway
Caro, Janet/Manuel	1660	Broadway
Castillo, Eduardo	1207	Tennessee Street
Chaney, Victor	1524	Tennessee Street
Clift, Suzanne	21	Rotary Way
Comyns, John	1915	Springs Road
Cruz, Francis	1915	Springs Road
Dacasin, Steve	96	Springstowne Center
De Joya, Ruth	2121	Redwood Street
Edziak, Michael	150	Hospital Drive
Escobar, Portia	3772	Sonoma Blvd.
Esguerra, Carolina	2001	Springs Road Ste. A
Fernandez, Noel	2629	Springs Road
Galvan, Felipe	2809	Redwood Parkway
Idora, Eden	3315	Sonoma Blvd. #50
Jackson, Andrew	1832	Capitol Street
Kashirad, Kamran	5201	Sonoma Blvd.
Largoza, Eva	1782	Tuolumne Street
Lim, Vincent	41	Admiral Callaghan Ln. #E
Lim, Larry	140	Robles Way
Louie, Artmond	200	Fairgrounds Drive
Mark, Wah	195	Glen Cove Marina Road
Mejia, Jose	3400	Sonoma Blvd.
Mosley II, Julius	2121	Redwood Street Ste. E

EXHIBIT B

VALLEJO SANITATION AND FLOOD CONTROL DISTRICT INTEGRATED PEST MANAGEMENT STANDARDS

It is the policy of the District to ensure that Integrated Pest Management (IPM) practices are employed during pest control activities to minimize human exposure to pesticides, avoid secondary poisoning to non-target animals and prevent pesticide-related pollution of local waterways and the San Francisco Bay. IPM is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices to eliminate or substantially reduce the use of chemical pesticides. Contractors performing pest control services for the District shall comply with the following IPM standards:

1. The following products shall not be used for insect control:
 - i. Organophosphate products (e.g., diazinon or chlorpyrifos)
 - ii. Carbamate products (e.g., carbaryl)
 - iii. Pyrethroid products, containerized pyrethroid products or pyrethroid products whose application method prevents pyrethroid release to the environment may be used.

2. Contractors shall use containerized baits for ant control, unless conditions require a different form of bait to be employed.

3. Spray pesticides are discouraged except insecticidal soaps and plant based products (e.g., pyrethrins, mint oil, rosemary oil, etc.). When a spray pesticide is required it shall be applied precisely in the smallest amount to achieve control.

4. Pesticides shall be applied only as follows:

Directed treatments to a void or other inaccessible area or to other areas humans would not normally contact; spot treatment of outdoor areas where IPM practices have failed; crack and crevice treatment; or, as a self-contained bait station.

5. Trapping and exclusion shall be the primary rodent control methods. To prevent bait resistance and secondary poisoning, rodent baits shall only be used when trapping and exclusion are unsuccessful.

6. No pesticides of any kind shall be applied outdoors on impervious surfaces when a 40% chance or greater chance of rain is forecast within three days unless the pesticides are containerized baits that will not contribute to runoff pollution.

7. Contractors must notify the manager or supervisor(s) overseeing the employees in working areas that are to be treated with any pest control product other than containerized baits.

8. Contractors shall submit all MSDS's for products that will be used prior to the commencement of work.

Vallejo Sanitation and Flood Control District

Integrated Pest Management Policy

Introduction

Pesticides, herbicides and fertilizers have been shown to be significant sources of pollutants in urban runoff that enters the San Francisco Bay. Toxicity related to pesticides has been observed in urban creeks and runoff throughout the Bay Area. Improper use of herbicides promotes soil erosion which impacts local streams and contributes pollutants to the Bay. The purpose of this policy is to reduce or eliminate the discharge of pesticides, herbicides and fertilizers in urban runoff by implementing best management practices (BMP's).

In an effort to address this problem the San Francisco Bay Regional Water Quality Control Board (Water Board) has implemented region-wide Water Quality Attainment Strategy and Total Maximum Daily Load (TMDL) Plan to reduce pesticide toxicity in urban creeks. The strategy and TMDL require municipalities and operators of storm drainage systems to implement controls to reduce pesticide toxicity; this requirement is contained in the Municipal Regional Stormwater Permit issued by the Water Board. The purpose of this Integrated Pest Management Policy is to demonstrate compliance with the Water Board's requirements to reduce or eliminate the discharge of pesticides, herbicides and fertilizers in urban runoff by implementing best management practices (BMP's).

IPM Defined

Integrated Pest Management (IPM) is a pest management strategy that focuses on long-term prevention or suppression of pests with minimum impact on human health, the environment and non-target organisms. Preferred pest management techniques include using plant species that resist pests and diseases, changing the habitat to make it incompatible with pest development, and selecting pesticides with the least toxicity to humans and non-target organisms when pesticide use is warranted.

VSFCD IPM Policy

The District has implemented this policy to ensure that pest control practices associated with District operations focus on long-term pest prevention through a combination of techniques, such as biological control, habitat manipulation, and modification of cultural practices rather than the use of toxic pesticides and herbicides. Pursuant to this policy pesticides are to be used only after monitoring and/or failed IPM efforts indicate that they are needed; pesticide shall be applied appropriately with the goal of removing only the target pest; and pesticides shall be selected to minimize risks to human health, beneficial and non-target organisms, and the environment, including risks to aquatic habitats.

Accordingly, the District and/or contractors employed by the District will use IPM practices and incorporate them into all landscape maintenance, drainage maintenance, building maintenance and construction work. This policy will apply to all contractors (both present and future) employed by the District as well as District employees.

Pests Defined

For the purposes of this Policy, "pest" means any of the following that is, or is liable to become, dangerous or detrimental to the environment:

- (a) Any insect, rodent, nematode, or weed.
- (b) Any form of terrestrial, aquatic, or aerial plant or animal, virus, fungus or bacteria.
- (c) Anything that is declared to be a "pest" by the Director of the California Department of Food and Agriculture.

Pesticides Defined

For the purposes of this Policy, “pesticide” means any of the following:

- (a) Any substance or mixture of substances which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest.
- (b) Any spray adjuvant.

Usage BMP's

The District will use the following alternative methods in lieu of pesticides whenever possible:

- a) Pestproofing through physical or mechanical changes to the structure eliminates harborage and denies the pest access to the structure. This is accomplished, in part, by caulking and sealing cracks and openings around pipes, use of screens and door sweeps.
- b) The use of good sanitation practices is critical for an effective pest control program. Proper sanitation can prevent infestations from occurring by denying the pest food and water that it needs to survive. Proper storage of supplies and food in conjunction with the elimination of clutter is important.
- c) Weed control/abatement through mechanical methods, mowing, Weed Eating, etc. Using native species plantings in areas that may encourage less noxious species growth.

If it is determined that alternative methods are not viable, the following BMP's shall be followed:

- a) Ensure that pesticides are applied at proper rates and concentrations as recommended by the Federal government.
- b) The District will hire only IPM certified contractors.
- c) Personnel will not mix or load pesticides in an area that would allow ready access of the chemical to any storm drain, culvert or watercourse in the event of a spill.
- d) Recycle tank rinse water for use as make-up water.
- e) Proper storage of all pesticides providing secondary containment for all liquid containers greater than five gallons.
- f) Maintain spill kits and train employees to use them.

Regional efforts

The District will continue to support the efforts of BASMAAA as they relate to pesticide, herbicide and fertilizer issues. Support of these activities includes funding and active participation in all committees or work groups whose objectives are to address proper pesticide, herbicide and fertilizer usage.

Tracking

The attached form will be used to track quantities of any pesticide and specifically organophosphates, pyrethroids, carbaryl and fipronil that are used in a manner that threatens water quality (i.e., are used outdoors and may come in contact with stormwater) .

1. Solano RCD: Vallejo Sanitation and Flood Control District

Toxicity summary for VSFCD ambient water samples.								
Sample Station	Toxicity relative to the Lab Control treatment?							
	<i>Selenastrum capricornutum</i>	<i>Ceriodaphnia dubia</i>		<i>Hyalella azteca</i>	Fathead Minnow		<i>Hyalella Azteca (Sediment)</i>	
	Algal Cell Density (cells/mL x 10 ⁶)	% Survival	Reproduction (# neonates/female)	10-Day Mean % Survival	% Survival	Growth (mg)	% Survival	Weight (mg)
Control	2.86	100	36.3	100	95	0.59	98.8	0.21
207R0064	5.07	100	24.0*	100	100	0.72		
207R5524							97.5	0.16*

* Significantly less than the Lab Control treatment response at p < 0.05.



Lance Barnett
Vallejo Sanitation & Flood Control District
450 Ryder Street
Vallejo, CA 94590

April 30, 2013

Lance:

I have enclosed our report "Evaluation of the Chronic Toxicity of Vallejo Sanitation & Flood Control District Stormwater" for the sample that was collected March 20, 2013. The results of this testing are summarized below.

Table with 7 columns: Sample Station, Selenastrum capricornutum (Growth), Ceriodaphnia dubia (Survival, Reproduction), Hyalella azteca (Survival), and Fathead Minnow (Survival, Growth). Row 1: 207R0064, no, no, no, no, no, no.

Chronic Toxicity of VSFC D Stormwater to Selenastrum capricornutum

There was no significant reduction in algal growth in the VSFC D stormwater sample.

Chronic Toxicity of VSFC D Stormwater to Ceriodaphnia dubia

There was no significant reduction in Ceriodaphnia dubia survival or reproduction in the VSFC D stormwater sample.

Chronic Toxicity of VSFC D Stormwater to Hyalella azteca

There was no significant reduction in H. azteca survival in the VSFC D stormwater sample.

Chronic Toxicity of VSFC D Stormwater to Fathead Minnows

There was no significant reduction in fathead minnow survival or growth in the VSFC D stormwater sample.

If you have any questions regarding the performance and interpretation of these tests, feel free to contact my colleague Dr. Scott Ogle or myself at (707) 207-7760.

Sincerely,

Stephen L. Clark
Vice President/Special Projects Director

This testing was performed under Lab Order 20703. The test results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report, and only relate to the sample(s) tested. This report shall not be reproduced, except in full, without the written consent of Pacific EcoRisk.



Evaluation of the Chronic Toxicity of Vallejo Sanitation & Flood Control District Stormwater

Sample collected March 20, 2013

Prepared For:

Vallejo Sanitation & Flood Control District
450 Ryder Street
Vallejo, CA 94590

Prepared By:

Pacific EcoRisk
2250 Cordelia Road
Fairfield, CA 94534

April 2013



PACIFIC ECORISK
ENVIRONMENTAL CONSULTING & TESTING

Evaluation of the Chronic Toxicity of Vallejo Sanitation & Flood Control District Stormwater

Sample collected March 20, 2013

Table of Contents

	Page
1. INTRODUCTION	1
2. CHRONIC TOXICITY TEST PROCEDURES	1
2.1 Sample Receipt and Handling.....	1
2.2 Algal Growth Toxicity Testing with <i>Selenastrum capricornutum</i>	2
2.2.1 Reference Toxicant Testing of the <i>Selenastrum capricornutum</i>	2
2.3 Survival and Reproduction Toxicity Testing with <i>Ceriodaphnia dubia</i>	3
2.3.1 Reference Toxicant Testing of the <i>Ceriodaphnia dubia</i>	4
2.4 Survival Toxicity Testing of Stormwater Samples with <i>Hyalella azteca</i>	4
2.4.1 Reference Toxicant Testing of the <i>Hyalella azteca</i>	5
2.5 Survival and Growth Toxicity Testing with Larval Fathead Minnows	5
2.5.1 Reference Toxicant Testing of the Fathead Minnows.....	6
3. RESULTS	7
3.1 Effects of the VSFCDD Stormwater on <i>Selenastrum capricornutum</i>	7
3.2 Effects of the VSFCDD Stormwater on <i>Ceriodaphnia dubia</i>	7
3.3 Effects of the VSFCDD Stormwater on <i>Hyalella azteca</i>	7
3.4 Effects of the VSFCDD Stormwater on Fathead Minnows.....	8
4. AQUATIC TOXICITY DATA QUALITY CONTROL	9
4.1 Maintenance of Acceptable Test Conditions	9
4.2 Negative Control Testing.....	9
4.3 Positive Control Testing	9
4.3.1 Reference Toxicant Toxicity to <i>Selenastrum capricornutum</i>	9
4.3.2 Reference Toxicant Toxicity to <i>Ceriodaphnia dubia</i>	10
4.3.3 Reference Toxicant Toxicity to <i>Hyalella azteca</i>	11
4.3.4 Reference Toxicant Toxicity to Fathead Minnows	11
4.4 Concentration Response Relationships.....	12
4. SUMMARY & CONCLUSIONS	13



Appendices

- Appendix A Chain-of-Custody Record for the Collection and Delivery of the VSFCO Stormwater Sample
- Appendix B Test Data and Summary of Statistics for the Evaluation of the Chronic Toxicity of VSFCO Stormwater to *Selenastrum capricornutum*
- Appendix C Test Data and Summary of Statistics for the Evaluation of the Chronic Toxicity of VSFCO Stormwater to *Ceriodaphnia dubia*
- Appendix D Test Data and Summary of Statistics for the Evaluation of the Chronic Toxicity of VSFCO Stormwater to *Hyalella azteca*
- Appendix E Test Data and Summary of Statistics for the Evaluation of the Chronic Toxicity of VSFCO Stormwater to Fathead Minnows
- Appendix F Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the *Selenastrum capricornutum*
- Appendix G Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the *Ceriodaphnia dubia*
- Appendix H Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the *Hyalella azteca*
- Appendix I Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Fathead Minnow



1. INTRODUCTION

In support of the Bay Area Stormwater Management Agencies Association (BASMAA) Regional Monitoring Coalition ongoing monitoring efforts, Pacific EcoRisk (PER) has been contracted to evaluate the chronic toxicity of stormwater samples collected for the Vallejo Sanitation & Flood Control District (VSFCD). This evaluation consist of performing the following US EPA and modified-EPA short-term chronic toxicity tests:

- 96-hour algal growth test with the green alga *Selenastrum capricornutum*;
- 3-brood (6-8 day) survival and reproduction test with the crustacean *Ceriodaphnia dubia*;
- 10-day survival test with the freshwater amphipod *Hyaella azteca*; and
- 7-day survival and growth test with larval fathead minnows (*Pimephales promelas*).

These toxicity tests were conducted on a stormwater sample collected on March 20, 2013. In order to assess the sensitivity of the test organisms to toxic stress, reference toxicant tests were also performed. This report describes the performance and results of these tests.

2. CHRONIC TOXICITY TEST PROCEDURES

The methods used in conducting the tests with *S. capricornutum*, *C. dubia*, and fathead minnows followed the guidelines established by the EPA manual "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013). The test with *H. azteca* followed a test protocol that is based on a modification of the US EPA guidelines, "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates" (EPA/600/R-99/064).

2.1 Sample Receipt and Handling

On March 20, VSFCD staff collected a stormwater sample into appropriately-cleaned containers, which were transported, on ice and under chain-of-custody, to the PER testing laboratory in Fairfield, CA. Upon receipt at the testing laboratory, an aliquots of the sample was collected for analysis of initial water quality characteristics (Table 1), with the remainder of the sample being stored at 0-6°C except when being used to prepare test solutions.

The chain-of-custody record for the collection and delivery of the stormwater sample is provided as Appendix A.

Table 1. Initial water quality characteristics of the VSFCO stormwater samples.

Date Sample Received	Sample ID	Temp (°C)	pH	D.O. (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Conductivity (µS/cm)	Total Ammonia (mg/L N)
3/20/13	207R0064	11.6 ^a	8.08	9.2	359	591	1458	<1.0

a - This sample was transported and delivered on the day of sample collection; the temperature inside of the sample transport ice chest was also >6°C. The client has been notified to transport future samples with sufficient ice to assure that the cooler temperature is ≤6°C.

2.2 Algal Growth Toxicity Testing with *Selenastrum capricornutum*

The short-term chronic toxicity algal test consists of exposing *Selenastrum capricornutum* to the stormwater samples for ~ 96-hrs, after which the effects on cell growth are evaluated. The specific procedures used in this test are described below.

The Lab Control water for this test consisted of Type 1 Lab Water (reverse-osmosis, de-ionized water). The stormwater sample was tested at the 100% concentration only. The Lab Control water and the stormwater sample were filtered (using sterile 0.45 µm filters) and then spiked with nutrients (without any added EDTA) before use in this test, as per testing guidelines. “New” water quality characteristics (pH, dissolved oxygen [D.O.], and conductivity) were measured on the resulting test solutions prior to use in the test.

There were 4 replicates at each test treatment, each replicate consisting of a 250-mL glass Erlenmeyer flask containing 100 mL of test solution. Each flask was inoculated to an initial algal cell density of 10,000 cells/mL from a laboratory culture of *S. capricornutum* that is maintained in log growth phase. These flasks were loosely-capped and randomly positioned within a temperature-controlled room at 25°C, under continuous cool-white fluorescent illumination.

Each day of the test, the temperature and pH were measured and recorded from one randomly-selected replicate at each treatment; each replicate flask was gently shaken in the three times daily and re-positioned within the temperature-controlled room.

After 96 (+2) hrs exposure, the flasks were removed from the temperature-controlled room and the algal cell density in each was determined by spectrophotometric analysis. The resulting cell density data were analyzed to evaluate any growth impairment, or toxicity, caused by the stormwater sample; all statistical analyses were performed using CETIS[®] statistical software (TidePool Scientific, McKinleyville, CA).

2.2.1 Reference Toxicant Testing of the *Selenastrum capricornutum*

In order to assess the sensitivity of the *S. capricornutum* to toxic stress, a monthly reference toxicant test was performed. The reference toxicant test was performed similarly to the

stormwater test except that test solutions consisted of Lab Control water spiked with NaCl at concentrations of 0.125, 0.25, 0.5, 1 and 2 g/L. The resulting test response data were statistically analyzed to determine key dose-response point estimates (e.g., IC₅₀); all statistical analyses were made using the CETIS[®] software. These response endpoints were then compared to the typical response range established by the mean \pm 2 SD of the point estimates generated by the most recent previous reference toxicant tests performed by this lab.

2.3 Survival and Reproduction Toxicity Testing with *Ceriodaphnia dubia*

The short-term chronic *C. dubia* test consists of exposing individual females to the stormwater samples for the length of time it takes for the Lab Control treatment females to produce 3 broods (typically 6-8 days), after which effects on survival and reproduction are evaluated. The specific procedures used in this test are described below.

The Lab Control water for this test consisted of modified EPA synthetic moderately-hard water. The stormwater sample was tested at the 100% concentration only. For each treatment, a 200 mL aliquot of test solution was amended with the alga *Selenastrum capricornutum* and YCT to provide food for the test organisms. “New” water quality characteristics (pH, D.O., and conductivity) were measured on these food-amended test solutions prior to use in this test.

There were 10 replicates at each test treatment, each replicate consisting of 15 mL of test solution in a 30-mL plastic cup. These “3-brood” tests were initiated by allocating one neonate (<24 hours old, and within 8 hours of age) *C. dubia*, obtained from in-house laboratory cultures, into each replicate cup. The replicate cups were placed into a temperature-controlled room at 25°C, under cool-white fluorescent lighting on a 16L:8D photoperiod.

Each day of the test, fresh test solutions and a “new” set of replicate cups were prepared, as before. “New” water quality characteristics (pH, D.O., and conductivity) were measured on these solutions prior to use in the tests. The test replicate cups were removed from the temperature-controlled room and then each replicate was examined, with surviving “original” individual organisms being transferred to the corresponding new replicate cup; the new replicate cups, now carrying *C. dubia* in fresh media, were then returned to the temperature-controlled room. Each old replicate cup was carefully examined to determine the number of neonate offspring produced by each original organism, after which the “old” water quality characteristics (pH, D.O., and conductivity) were measured for the old test solution from one randomly-selected replicate at each treatment.

After it was determined that $\geq 60\%$ of the *C. dubia* in the Lab Control treatments had produced their third brood of offspring, the accompanying stormwater sample test was terminated. The resulting survival and reproduction (number of offspring) data were analyzed to evaluate any

impairments caused by the stormwater sample; all statistical analyses were performed using the CETIS[®] statistical software.

2.3.1 Reference Toxicant Testing of the *Ceriodaphnia dubia*

In order to assess the sensitivity of the *C. dubia* test organisms to toxic stress, a monthly reference toxicant test was performed. The reference toxicant test was performed similarly to the stormwater test, except that test solutions consisted of the Lab Control water spiked with NaCl at concentrations of 500, 1000, 1500, 2000, and 2500 mg/L. The resulting test response data were statistically analyzed to determine key dose-response point estimates (e.g., IC₅₀); all statistical analyses were made using the CETIS[®] software. These response endpoints were then compared to the typical response range established by the mean \pm 2 SD of the point estimates generated by the most recent previous reference toxicant tests performed by this lab.

2.4 Survival Toxicity Testing of Stormwater Samples with *Hyaella azteca*

This test consists of exposing the amphipods to the stormwater samples for 10 days, after which effects on survival are evaluated. The specific procedures used in this testing are described below.

The *H. azteca* used in this testing were obtained from a commercial supplier (Chesapeake Cultures, VA). Upon receipt at the PER laboratory, the organisms were maintained at 23°C in aerated aquaria containing Standard Artificial Medium (SAM-5S) water (Borgmann 1996) prior to their use in this test. During this pre-test period, the organisms were fed the alga *Selenastrum capricornutum* and Yeast-Cerophyll[®]-Trout (YCT) food amended with *Spirulina*.

The Lab Control water for this test consisted of SAM-5S water. The stormwater sample was tested at the 100% concentration only. “New” water quality characteristics (pH, D.O., and conductivity) were measured on the test solutions prior to use in the test.

There were 5 replicates for each test treatment, each replicate consisting a 250-mL glass beaker containing 100 mL of test solution. The test was initiated by allocating 10 *H. azteca*, into each replicate, followed by the addition of 1.5 mL of *Spirulina* amended YCT. The replicate beakers were placed into a temperature-controlled room at 23°C, under cool-white fluorescent lighting on a 16L:8D photoperiod.

Each day of the test, each replicate beaker was examined and the number of surviving organisms determined; ‘old’ water quality characteristics were measured in one randomly-selected beaker at each test treatment at this time. On Days 2, 4, 6, and 8 of the test, the organisms were fed 1.5 mL of *Spirulina* amended YCT in each test chamber.

On Day 5 of the 10-day test, fresh test solutions were prepared and characterized, as before. Each replicate was examined, with any dead animals, uneaten food, wastes, and other detritus being removed. The number of live organisms in each replicate was determined and then approximately 80% of the test media in each beaker was carefully poured out and replaced with fresh test solution. "Old" water quality characteristics (pH, D.O., and conductivity) were measured on the old test solution that had been discarded from one randomly-selected replicate at each treatment.

After 10 days of exposure, the test was terminated and the number of live organisms in each replicate was recorded. The resulting survival data were analyzed to evaluate any impairment due to the stormwater sample; all statistical analyses were performed using CETIS® statistical software.

2.4.1 Reference Toxicant Testing of the *Hyalella azteca*

In order to assess the sensitivity of the *H. azteca* test organisms to toxic stress, a reference toxicant test was performed. The reference toxicant test was performed as a 96-hr waterborne exposure to Control water spiked with KCl at test concentrations of 0, 0.1, 0.2, 0.4, 0.8 and 1.6 g/L. The resulting survival data were statistically analyzed to determine key dose-response point estimates (e.g., EC50); all statistical analyses were made using the CETIS® software. This response endpoint was then compared to the 'typical response' range established by the mean \pm 2 SD of the point estimates generated by the 20 most recent previous reference toxicant tests performed by this lab.

2.5 Survival and Growth Toxicity Testing with Larval Fathead Minnows

The short-term chronic fathead minnow test consists of exposing larval fish to the stormwater for 7 days, after which effects on survival and growth are evaluated. The specific procedures used in this testing are described below.

The larval fathead minnows used in this test were obtained from a commercial supplier (Aquatox, Hot Springs, AR). Upon receipt at the testing lab, the larval fish were maintained in aerated tanks of EPA moderately-hard water at 25°C, and were fed brine shrimp nauplii *ad libitum*.

The Lab Water Control/dilution water for this test consisted of EPA synthetic moderately-hard water. The stormwater sample was tested at the 100% concentration only. "New" water quality characteristics (pH, D.O., and conductivity) were measured on these test solutions prior to use in the tests.

There were 4 replicates for each test treatment, each replicate consisting of 400 mL of test solution in a 600-mL glass beaker. The test was initiated by randomly allocating 10 larval

fathead minnows (<48 hrs old) into each replicate. These replicate beakers were placed in a temperature-controlled room at 25°C, under cool-white fluorescent lighting on a 16L:8D photoperiod. The test fish were fed brine shrimp nauplii twice daily.

Each day of the test, fresh test solutions were prepared for each treatment, and water quality characteristics were determined as before. The beakers containing the fathead minnows were examined, with any dead animals, uneaten food, wastes, and other detritus being removed. The number of live fish in each replicate was determined and then approximately 80% of the old test media in each beaker was carefully poured out and replaced with fresh test solution. “Old” water quality characteristics (pH, D.O., and conductivity) were measured on the old test water that had been discarded from one randomly selected replicate at each treatment.

After 7 days exposure, the test was terminated and the number of live fish in each replicate beaker was recorded. The fish from each replicate were then carefully euthanized in methanol, rinsed in de-ionized water, and transferred to a pre-dried and pre-tared weighing pan. These fish were then dried at 100°C for >24 hrs and re-weighed to determine the total weight of fish in each replicate. The total weight was then divided by the initial number of fish per replicate (n=10) to determine the “biomass value”. The resulting survival and growth data were analyzed to evaluate any impairment(s) caused by the stormwater sample; all statistical analyses were performed using the CETIS[®] statistical software.

2.5.1 Reference Toxicant Testing of the Fathead Minnows

In order to assess the sensitivity of the fish to toxic stress, a reference toxicant test was performed. The reference toxicant test was performed similarly to the stormwater test, except that test solutions consisted of “Lab Control” media spiked with NaCl at test concentrations of 0.75, 1.5, 3, 6, and 9 g/L. The resulting test response data were analyzed to determine key dose-response point estimates (e.g., EC₅₀); all statistical analyses were made using the CETIS[®] software. These response endpoints were then compared to the ‘typical response’ range established by the mean ± 2 SD of the point estimates generated by the 20 most recent previous reference toxicant tests performed by this lab.

3. RESULTS

3.1 Effects of the VSFC D Stormwater on *Selenastrum capricornutum*

The results for this test are summarized below in Table 2. There was **no** significant reduction in algal growth in the VSFC D stormwater sample. The test data and summary of statistical analyses for this test are presented in Appendix B.

Table 2. Effects of VSFC D stormwater on <i>Selenastrum capricornutum</i> .		
Test Initiation Date (Time)	Treatment/Sample ID	Mean Algal Cell Density (cells/mL x 10 ⁶)
3/21/13 (1210)	Lab Control	3.31
	207R0064	5.80

3.2 Effects of the VSFC D Stormwater on *Ceriodaphnia dubia*

The results for this test are summarized below in Table 3. There was **no** significant reduction in *Ceriodaphnia dubia* survival or reproduction in the VSFC D stormwater sample. The test data and summary of statistical analyses for this test are presented in Appendix C.

Table 3. Effects of VSFC D stormwater on <i>Ceriodaphnia dubia</i> .			
Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival	Mean Reproduction (# neonates/female)
3/21/13 (1300)	Lab Control	100	31.7
	207R0064	100	32.4

3.3 Effects of the VSFC D Stormwater on *Hyalella azteca*

The results for this test are summarized below in Table 4. There was **no** significant reduction in *H. azteca* survival in the VSFC D stormwater sample. The test data and summary of statistical analyses for this test are presented in Appendix D.

Table 4. Effects of VSFC D stormwater on <i>Hyalella azteca</i> .		
Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival
3/21/13 (1340)	Lab Control	98
	207R0064	98

3.4 Effects of the VSFCD Stormwater on Fathead Minnows

The results for this test are summarized below in Table 5. There was ***no*** significant reduction in fathead minnow survival or growth in the VSFCD stormwater sample. The test data and summary of statistical analyses for this test are presented in Appendix E.

Test Initiation Date (Time)	Treatment/Sample ID	Mean % Survival	Mean Biomass Value (mg)
3/21/13 (1530)	Lab Control	100	0.90
	207R0064	100	1.01

4. AQUATIC TOXICITY DATA QUALITY CONTROL

Four QC measures were assessed during the toxicity testing:

- Maintenance of acceptable test conditions;
- Negative Control testing;
- Positive Control (reference toxicant) testing; and
- Concentration Response Relationship assessment.

4.1 Maintenance of Acceptable Test Conditions

All test conditions (pH, D.O., temperature, etc.) were within acceptable limits for these tests. All analyses were performed according to laboratory Standard Operating Procedures.

4.2 Negative Control Testing

The responses at the Lab Control treatments were acceptable.

4.3 Positive Control Testing

4.3.1 Reference Toxicant Toxicity to *Selenastrum capricornutum*

The results of this test are summarized below in Table 6. The results of the *Selenastrum* reference toxicant test indicated that the IC₅₀ was 1.1 g/L is slightly outside of the lower threshold value of 1.2 g/L NaCl of the “typical response” established by the mean \pm 2 SD from the last 20 reference toxicant tests previously performed with NaCl. However, it is important to note that the coefficient of variation (CV) from the Pacific EcoRisk reference toxicant database for this species is 20.6%, while the EPA 75th percentile (recommended EPA CV limit) for this method is 30%. As per Section 4.16.5 of the EPA freshwater manual, “highly proficient laboratories which develop very narrow control limits may be unfairly penalized if a test result which falls just outside of the control limits is rejected de facto”. Normalizing the Pacific EcoRisk database “20 test” mean of 1.8 g/L to the national 75th percentile CV would result in an acceptable reference toxicant range of 0.72 – 2.88 g/L; the test result of 1.1 g/L falls well within an acceptable range when compared to the EPA 75th percentile. Given this assessment, the reference toxicant results presented in Table 6 are deemed acceptable. The test data and summary of statistical analyses for this test are presented in Appendix F.

Table 6. Reference toxicant testing: Effects of NaCl on <i>Selenastrum capricornutum</i> growth.	
NaCl Treatment (g/L)	Mean Algal Cell Density (cells/mL x 10 ⁶)
Lab Control	3.52
0.125	3.26
0.25	3.07*
0.5	2.73*
1	1.93*
2	0.102*
Summary of Statistics	
IC50 =	1.1 g/L NaCl
“Typical response” range (mean ± 2 SD)	1.2 – 2.6 g/L NaCl

* Significantly less than the Lab Control treatment response at p < 0.05.

4.3.2 Reference Toxicant Toxicity to *Ceriodaphnia dubia*

The results of this test are summarized below in Table 7. The EC50 and IC50 for this test were both consistent with the “typical response” ranges established by reference toxicant test database for this species, indicating that these organisms were responding to toxic stress in a typical fashion. The test data and the summary of statistical analyses for this test are presented in Appendix G.

Table 7. Reference toxicant testing: Effects of NaCl on <i>Ceriodaphnia dubia</i> .		
NaCl Treatment (mg/L)	Mean % Survival	Reproduction (# neonates/female)
Lab Water Control	100	35.6
500	100	32.3
1000	100	25.4*
1500	100	12.5*
2000	100	4.7*
2500	0*	-
Summary of Key Statistics		
Survival EC50 or Reproduction IC50 =	2240 mg/L NaCl	1290 mg/L NaCl
“Typical response” range (mean ± 2 SD)	1694 – 2293 mg/L NaCl	848 – 1532 mg/L NaCl

* The response at this test treatment was significantly less than the Lab Control treatment response at p < 0.05.

4.3.3 Reference Toxicant Toxicity to *Hyalella azteca*

The results of this test are presented in Table 8. The EC₅₀ for this test was consistent with the “typical response” range established by the reference toxicant test database for this species, indicating that these organisms were responding to toxic stress in a typical fashion. The test data and summary of statistical analyses for this test are presented in Appendix H.

KCl Treatment (g/L)	Mean% Survival
Control	100
0.1	100
0.2	100
0.4	50*
0.8	0*
1.6	0*
Summary of Statistics	
EC ₅₀ =	0.40 g/L KCl
“Typical response” range (mean ±2 SD)	0.28 – 0.70 g/L KCl

* The response at this test treatment was significantly less than the Lab Control treatment response at p < 0.05.

4.3.4 Reference Toxicant Toxicity to Fathead Minnows

The results of this test are summarized below in Table 9. The EC₅₀ and IC₅₀ for this test were both consistent with the “typical response” ranges established by the reference toxicant test database for this species, indicating that these organisms were responding to toxic stress in a typical fashion. The test data and summary of statistical analyses for this test are presented in Appendix I.

NaCl Treatment (g/L)	Mean % Survival	Mean Biomass Value (mg)
Lab Control	92.5	0.75
0.75	90	0.88
1.5	80	0.83
3	67.5*	0.40
6	55*	0.20
9	0*	-
Summary of Statistics		
Survival EC ₅₀ or Growth IC ₅₀ =	4.5 g/L NaCl	3.0 g/L NaCl
“Typical response” range (mean ±2 SD)	2.7 – 5.8 g/L NaCl	2.1 – 4.7 g/L NaCl

* The response at this test treatment was significantly less than the Lab Control treatment response at p < 0.05.

4.4 Concentration Response Relationships

The concentration-response relationships for the reference toxicant tests were evaluated as per EPA guidelines (EPA-821-B-00-004), and were determined to be acceptable.



5. SUMMARY & CONCLUSIONS

Chronic Toxicity of VSFCO Stormwater to *Selenastrum capricornutum*

There was ***no*** significant reduction in algal growth in the VSFCO stormwater sample.

Chronic Toxicity of VSFCO Stormwater to *Ceriodaphnia dubia*

There was ***no*** significant reduction in *Ceriodaphnia dubia* survival or reproduction in the VSFCO stormwater sample.

Chronic Toxicity of VSFCO Stormwater to *Hyaella azteca*

There was ***no*** significant reduction in *H. azteca* survival in the VSFCO stormwater sample.

Chronic Toxicity of VSFCO Stormwater to Fathead Minnows

There was ***no*** significant reduction in fathead minnow survival or growth in the VSFCO stormwater sample.

Appendix A

Chain-of-Custody Record for the Collection and Delivery of the VSFCO Stormwater Sample



CHAIN OF CUSTODY RECORD

PACIFIC ECORISK

 2250 Cordelia Rd
 Fairfield, CA 94534
 Ph: (707) 207-7760
 Fax: (707) 207-7916
 www.pacificecorisk.com

RESULTS TO:
VSFCD

 Attn: Lance Barnett
 Phone: 707-644-8949 x269
 Email: lbarnett@vsfcd.com
BILL TO:
VSFCD

 Attn: Lance Barnett
 Phone: 707-644-8949 x269
 Email: lbarnett@vsfcd.com
PROJECT:
BASMAA RMC
Water tox sample
ANALYSES REQUESTED
RMC
Water tox
REMARKS
SAMPLE IDENTIFICATION
DATE
TIME
SAMPLE MATRIX
GRAB/COMP.
CONTAINERS/TYPE

SAMPLE IDENTIFICATION	DATE	TIME	SAMPLE MATRIX	GRAB/COMP.	# CONTAINERS/TYPE
<u>water tox</u> <u>207R0064</u>	<u>3-20-13</u>	<u>1445</u>	<u>water</u>	<u>grab</u>	<u>10 / 4 L amber</u>
					<u>/</u>

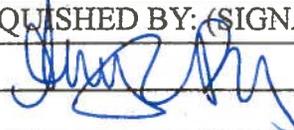
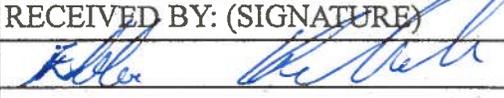
METHOD OF SHIPMENT:

FedEx: _____

UPS: _____

 HAND:

OTHER: _____

COMMENTS:
CODES:
RELINQUISHED BY: (SIGNATURE)

DATE
TIME
RECEIVED BY: (SIGNATURE)

DATE
TIME
PAGE #
3/20/13 1609
3/20/13 1609

OF

WHITE - RETURN W/ SAMPLE

YELLOW - KEEP FOR YOUR RECORDS

Appendix B

Test Data and Summary of Statistics for the Evaluation of the Chronic Toxicity of the VSFCO Stormwater to *Selenastrum capricornutum*



CETIS Summary Report

Report Date: 03 Apr-13 15:54 (p 1 of 1)
 Test Code: 51009 | 00-2649-9253

Algal Growth Test	Pacific EcoRisk
--------------------------	------------------------

Batch ID: 04-5531-3961	Test Type: Cell Growth	Analyst: Padrick Anderson
Start Date: 21 Mar-13 12:10	Protocol: EPA-821-R-02-013 (2002)	Diluent: Not Applicable
Ending Date: 25 Mar-13 10:10	Species: Selenastrum capricornutum	Brine: Not Applicable
Duration: 94h	Source: In-House Culture	Age: 6

Sample ID: 15-4642-7577	Code: Stormwater	Client: Vallejo/VSFCD
Sample Date: 20 Mar-13 14:45	Material: Stormwater	Project: 20703
Receive Date: 20 Mar-13 16:09	Source: Vallejo/VSFCD	
Sample Age: 21h (11.6 °C)	Station: 207R0064	

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
10-8571-0514	96h Cell Density-without E	100	>100	NA	9.35%	1	Equal Variance t Two-Sample Test

96h Cell Density-without EDTA Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	4	3.31E+6	3.25E+6	3.36E+6	3.12E+6	3.46E+6	7.50E+4	1.50E+5	4.53%	0.0%
100		4	5.80E+6	5.69E+6	5.90E+6	5.59E+6	6.21E+6	1.40E+5	2.81E+5	4.84%	-75.2%

96h Cell Density-without EDTA Detail						
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Contr	3.39E+6	3.12E+6	3.46E+6	3.26E+6	
100		5.69E+6	6.21E+6	5.69E+6	5.59E+6	

CETIS Analytical Report

Report Date: 03 Apr-13 15:54 (p 1 of 1)
 Test Code: 51009 | 00-2649-9253

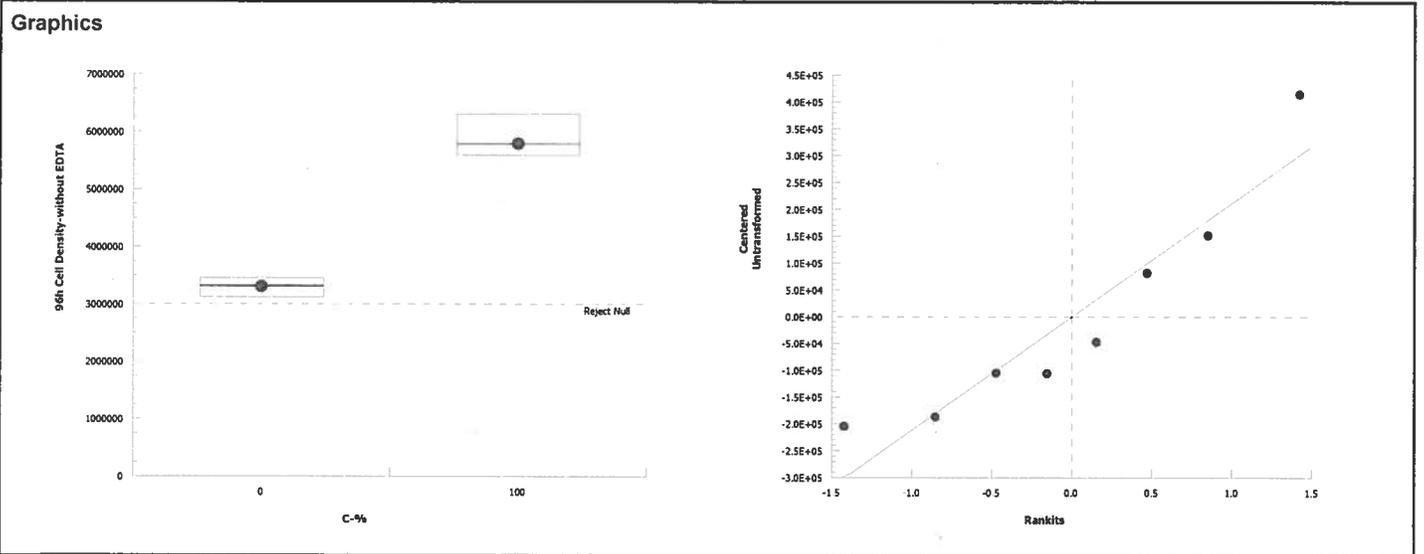
Algal Growth Test						Pacific EcoRisk	
Analysis ID: 10-8571-0514		Endpoint: 96h Cell Density-without EDTA		CETIS Version: CETISv1.8.5			
Analyzed: 03 Apr-13 15:54		Analysis: Parametric-Two Sample		Official Results: Yes			
Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result	
Untransformed	NA	C > T	NA	NA	9.35%	Passes 96h cell density-without edta	

Equal Variance t Two-Sample Test									
Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Lab Water Control		100	-15.6	1.94	3E+05	6	1.0000	CDF	Non-Significant Effect

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1.237531E+13	1.237531E+13	1	244	<0.0001	Significant Effect
Error	3.03775E+11	50629170000	6			
Total	1.267909E+13		7			

Distributional Tests					
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	3.5	47.5	0.3307	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.886	0.645	0.2142	Normal Distribution

96h Cell Density-without EDTA Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Lab Water Contr	4	3.31E+6	3.07E+6	3.55E+6	3330000	3.12E+6	3.46E+6	7.50E+4	4.53%	0.0%
100		4	5.80E+6	5.35E+6	6.24E+6	5690000	5.59E+6	6.21E+6	1.40E+5	4.84%	-75.2%



Selenastrum capricornutum Algal Toxicity Test Data Sheet

Client: Vallejo / VSFC

Material: 207R0064

Test Start Date: 3/21/13

Test ID #: 51099 Project #: 20703

Test End Date: 3.25.13

Control/Diluent: Lab water w/o EDTA Location: TR6/R4/S1

Test Treatment	Temp (°C)	pH	D.O. (mg/L)	Conductivity (µS/cm)	Sign-Off
Lab Water Control	25.3	7.53	9.0	91.1	Date: 3/21/13
100%	25.3	8.16	10.2	1515	Sample ID #: 31316
					Test Solution Prep: <i>SP</i>
					New WQ: <i>PH</i>
					Inoculation Time: 1210
Meter ID	R451	PH18	RD04	EC04	Inoculation Signoff: <i>SP</i>
Lab Water Control	25.3	7.77			Date: 3/22/13
100%	25.3	8.65			WQ Time: 0915
Meter ID	62A	PH10			WQ Signoff: <i>NA</i>
Lab Water Control	25.4	8.60			Date: 3.23.13
100%	25.4	8.76			WQ Time: 1000
Meter ID	62A	PH15			WQ Signoff: <i>DL</i>
Lab Water Control	25.4	9.46			Date: 3/24/13
100%	25.4	8.87			WQ Time: 0845
Meter ID	62A	PH16			WQ Signoff: <i>A</i>
Lab Water Control	25.4	10.00	12.5	102.4	Date: 03-25-13
100%	25.4	9.77	14.6	1190	WQ Time: 09.00
Meter ID	62A	PH16	RD04	EC07	WQ Signoff: <i>ML</i>

Initial Count: 10,000 cells/mL

Termination Time: 1010

Enumerating Scientist: *PA*

Treatment	Cell Density (cells/mL x 10 ⁶)				Mean Cell Density (cells/mL x 10 ⁶)		
	Rep A	Rep B	Rep C	Rep D			
Lab Water Control	3.39	3.12	3.46	3.26	3.08		
100%	5.69	6.21	5.69	5.59	5.80		
This datasheet has been reviewed for completeness and consistency with Test Acceptability Criteria and/or other issues of concern.		Control Mean Density (cells/mL x 10 ⁶)		% CV	Date:	Time:	Signoff:
		3.08		4.53	3/27/13	1130	<i>PA</i>

Initial Test Conditions	Alkalinity	Hardness	Light Intensity (ftc)
	380	597	397

Appendix C

Test Data and Summary of Statistics for the Evaluation of the Chronic Toxicity of the VSFCO Stormwater to *Ceriodaphnia dubia*

CETIS Summary Report

Report Date: 03 Apr-13 15:57 (p 1 of 1)
 Test Code: 51100 | 18-2977-5968

Ceriodaphnia Survival and Reproduction Test **Pacific EcoRisk**

Batch ID: 11-7732-7422	Test Type: Reproduction-Survival (7d)	Analyst: Padrick Anderson
Start Date: 21 Mar-13 13:00	Protocol: EPA-821-R-02-013 (2002)	Diluent: Not Applicable
Ending Date: 27 Mar-13 16:10	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 3h	Source: In-House Culture	Age: 1

Sample ID: 07-3900-7138	Code: Stormwater	Client: Vallejo/VSFCD
Sample Date: 20 Mar-13 14:45	Material: Stormwater	Project: 20703
Receive Date: 21 Mar-13 13:00	Source: Vallejo/VSFCD	
Sample Age: 22h (11.6 °C)	Station: 207R0064	

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
09-5507-3915	Reproduction	100	>100	NA	6.43%	1	Equal Variance t Two-Sample Test
02-3975-5539	Survival	100	>100	NA	NA	1	Fisher Exact Test

Reproduction Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	9	31.7	30.7	32.7	27	35	0.882	2.65	8.36%	0.0%
100		10	32.4	31.5	33.3	27	36	0.777	2.46	7.59%	-2.32%

Survival Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	9	1	1	1	1	1	0	0	0.0%	0.0%
100		10	1	1	1	1	1	0	0	0.0%	0.0%

Reproduction Detail											
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Lab Water Contr	32	33	33	28	31	32	35	34	27	
100		34	27	34	31	32	33	32	34	36	31

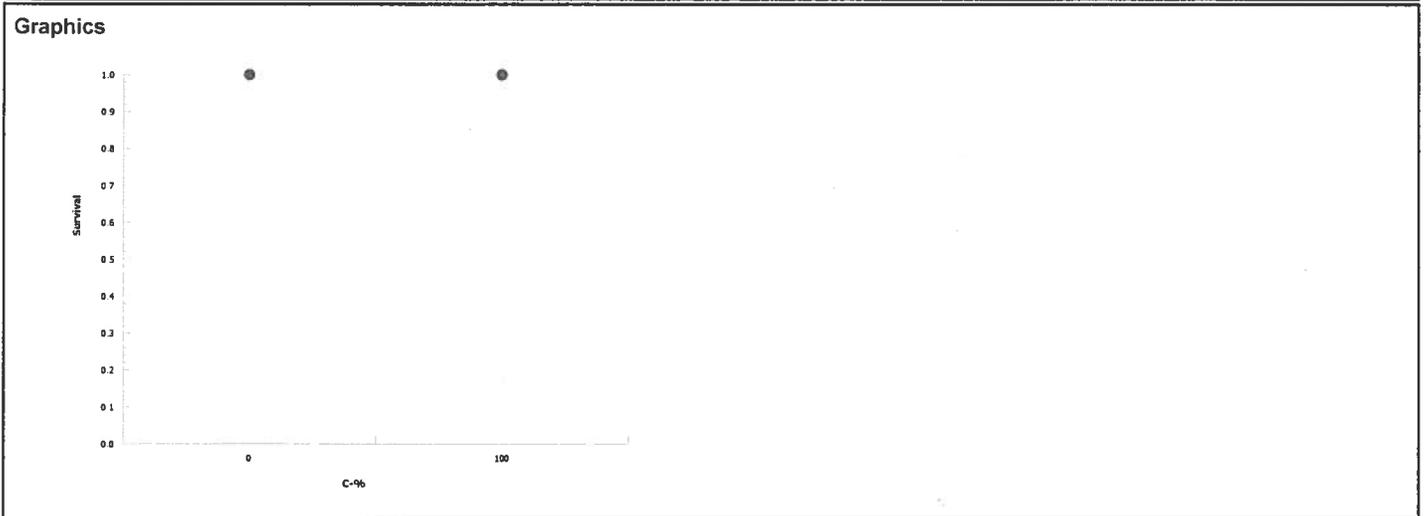
Survival Detail											
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Lab Water Contr	1	1	1	1	1	1	1	1	1	
100		1	1	1	1	1	1	1	1	1	1

Survival Binomials											
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Lab Water Contr	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

CETIS Analytical Report

Report Date: 03 Apr-13 15:57 (p 1 of 1)
 Test Code: 51100 | 18-2977-5968

Ceriodaphnia Survival and Reproduction Test					Pacific EcoRisk		
Analysis ID: 02-3975-5539	Endpoint: Survival		CETIS Version: CETISv1.8.5				
Analyzed: 03 Apr-13 15:57	Analysis: Single 2x2 Contingency Table		Official Results: Yes				
Data Transform	Zeta	Alt Hyp	Trials	Seed	Test Result		
Untransformed		C > T	NA	NA	Passes survival		
Fisher Exact Test							
Control	vs	C-%	Test Stat	P-Value	P-Type	Decision(α:5%)	
Lab Water Control		100	1	1.0000	Exact	Non-Significant Effect	
Data Summary							
C-%	Control Type	NR	R	NR + R	Prop NR	Prop R	%Effect
0	Lab Water Cont	9	0	9	1	0	0.0%
100		10	0	10	1	0	0.0%



CETIS Analytical Report

Report Date: 03 Apr-13 15:57 (p 1 of 1)
 Test Code: 51100 | 18-2977-5968

Ceriodaphnia Survival and Reproduction Test Pacific EcoRisk

Analysis ID: 09-5507-3915 Endpoint: Reproduction CETIS Version: CETISv1.8.5
 Analyzed: 03 Apr-13 15:57 Analysis: Parametric-Two Sample Official Results: Yes

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	6.43%	Passes reproduction

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Lab Water Control		100	-0.626	1.74	2.04	17	0.7303	CDF	Non-Significant Effect

ANOVA Table

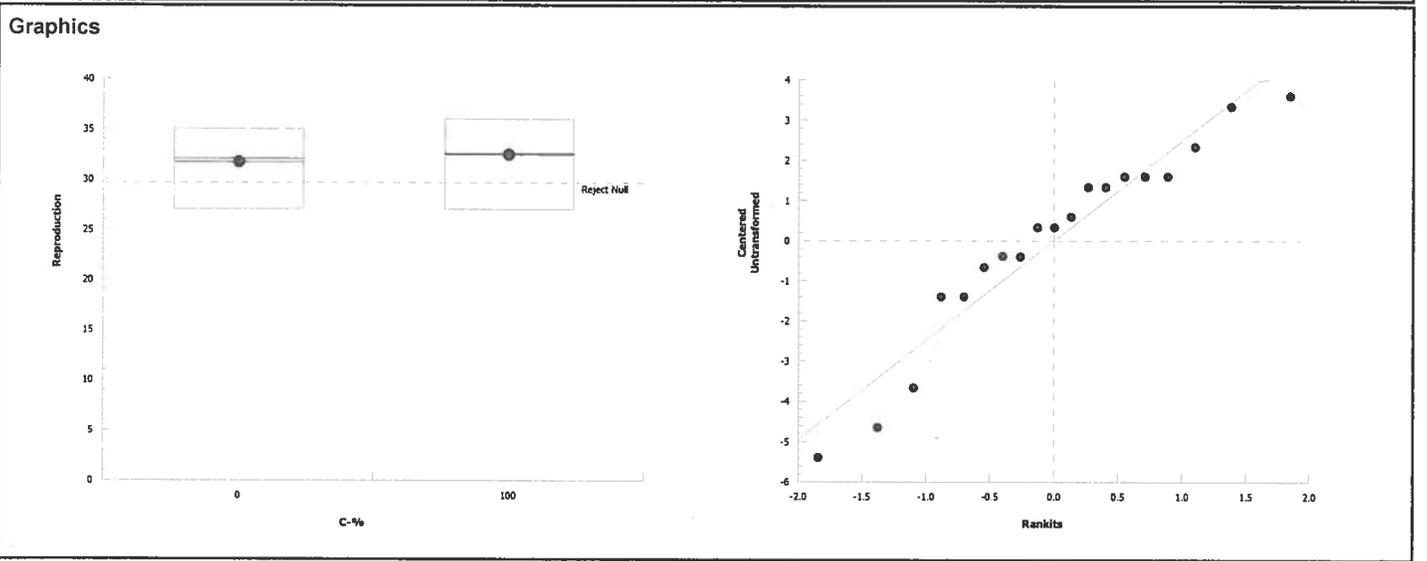
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	2.547369	2.547369	1	0.392	0.5394	Non-Significant Effect
Error	110.4	6.494118	17			
Total	112.9474		18			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.16	6.69	0.8249	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.928	0.861	0.1607	Normal Distribution

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Lab Water Contr	9	31.7	29.6	33.7	32	27	35	0.882	8.36%	0.0%
100		10	32.4	30.6	34.2	32.5	27	36	0.777	7.59%	-2.32%



Short-Term Chronic 3-Brood *Ceriodaphnia dubia* Survival & Reproduction Test Data

Client: Vallejo / VSFC Material: 207R0064 Test Date: 3.21.13
 Project #: 20703 Test ID: 51100 Randomization: 10.4.4 Control Water: Modified EPAMH

	Day	pH		D.O.		Cond. (µS/cm)	Temp (°C)	Survival / Reproduction										SIGN-OFF					
		New	Old	New	Old			A	B	C	D	E	F	G	H	I	J	Date	New WQ	Test Init			
Lab Water Control	0	7.75		8.4		355	25.6	0	0	0	0	0	0	0	0	0	0	0	0	0	Date: 3-21-13	New WQ:	Test Init
	1	7.89	8.12	7.7	7.8	333	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	Date: 3/22/13	New WQ: CE	Counts
	2	7.87	7.94	8.5	7.9	345	25.1	0	0	0	0	0	0	0	0	10	0	0	0	0	Date: 3/23/13	New WQ: CE	Counts
	3	7.87	8.03	8.1	7.1	332	25.7	4	5	6	4	6	5	7	-	6	5				Date: 3/24/13	New WQ: CE	Counts
	4	7.95	8.13	8.4	8.6	341	25.7	0	12	0	10	0	12	0	-	12	9				Date: 3/25/13	New WQ: MO	Counts
	5	7.93	8.21	7.9	8.5	341	25.4	10	0	10	0	11	0	15	-	0	0				Date: 3/26/13	New WQ: CE	Counts
	6	-	8.01	-	7.6	351	25.9	18	16	17	14	14	15	13	-	16	13				Date: 3-27-13	New WQ: -	Counts
	7																				Date:	New WQ:	Counts
8																				Date:	New WQ:	Counts	
Total=								32	33	33	28	31	32	35	10	34	27	Mean Neonates/Female = 31.7					
	Day	pH		D.O.		Cond. (µS/cm)		Survival / Reproduction										SAMPLE ID					
		New	Old	New	Old			A	B	C	D	E	F	G	H	I	J	Date	New WQ	Counts			
100%	0	8.10		9.1		1423		0	0	0	0	0	0	0	0	0	0	0	0	0			31316
	1	8.28	8.44	8.7	8.0	1390		0	0	0	0	0	0	0	0	0	0	0	0	0			31316
	2	8.13	8.46	10.0	8.2	1431		0	0	0	0	0	0	0	0	0	0	0	0	0			31316
	3	8.14	8.61	11.9	7.6	1388		4	4	5	5	5	4	3	6	4	5						31316
	4	8.21	8.55	10.2	8.6	1412		12	7	12	10	9	13	0	11	15	10						31316
	5	8.14	8.42	11.0	6.1	1409		0	0	0	0	0	0	13	0	0	0						31316
	6	-	8.42	-	7.2	1326		18	16	17	16	18	16	14	17	17	16						-
	7																						
8																							
Total=								34	27	34	31	32	33	32	34	36	31	Mean Neonates/Female = 32.4					

Appendix D

Test Data and Summary of Statistics for the Evaluation of the Chronic Toxicity of the VSFCO Stormwater to *Hyalella azteca*



CETIS Summary Report

Report Date: 03 Apr-13 16:03 (p 1 of 1)
 Test Code: 51102 | 09-1013-7362

Hyalella Survival and Growth Test							Pacific EcoRisk					
Batch ID:	18-5796-1572	Test Type:	Survival	Analyst:	Padrick Anderson							
Start Date:	21 Mar-13 13:40	Protocol:	GCML	Diluent:	Not Applicable							
Ending Date:	31 Mar-13 09:35	Species:	Hyalella azteca	Brine:	Not Applicable							
Duration:	9d 20h	Source:	Chesapeake Cultures, Inc.	Age:	10							
Sample ID:	10-0802-6347	Code:	Stormwater	Client:	Vallejo/VSFCD							
Sample Date:	20 Mar-13 14:45	Material:	Stormwater	Project:	20703							
Receive Date:	20 Mar-13 16:09	Source:	Vallejo/VSFCD									
Sample Age:	23h (11.6 °C)	Station:	207R0064									
Comparison Summary												
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method					
09-9204-3413	Survival Rate	100	>100	NA	5.6%	1	Wilcoxon Rank Sum Two-Sample Test					
Survival Rate Summary												
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect	
0	Lab Water Contr	5	0.98	0.963	0.997	0.9	1	0.02	0.0447	4.56%	0.0%	
100		5	0.98	0.963	0.997	0.9	1	0.02	0.0447	4.56%	0.0%	
Survival Rate Detail												
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5						
0	Lab Water Contr	1	0.9	1	1	1						
100		1	1	1	1	0.9						
Survival Rate Binomials												
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5						
0	Lab Water Contr	10/10	9/10	10/10	10/10	10/10						
100		10/10	10/10	10/10	10/10	9/10						

CETIS Analytical Report

Report Date: 03 Apr-13 16:03 (p 1 of 1)
 Test Code: 51102 | 09-1013-7362

Hyalella Survival and Growth Test						Pacific EcoRisk	
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Analysis ID: 09-9204-3413	Endpoint: Survival Rate	CETIS Version: CETISv1.8.5
Analyzed: 03 Apr-13 16:03	Analysis: Nonparametric-Two Sample	Official Results: Yes

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Angular (Corrected)	NA	C > T	NA	NA	5.6%	Passes survival rate

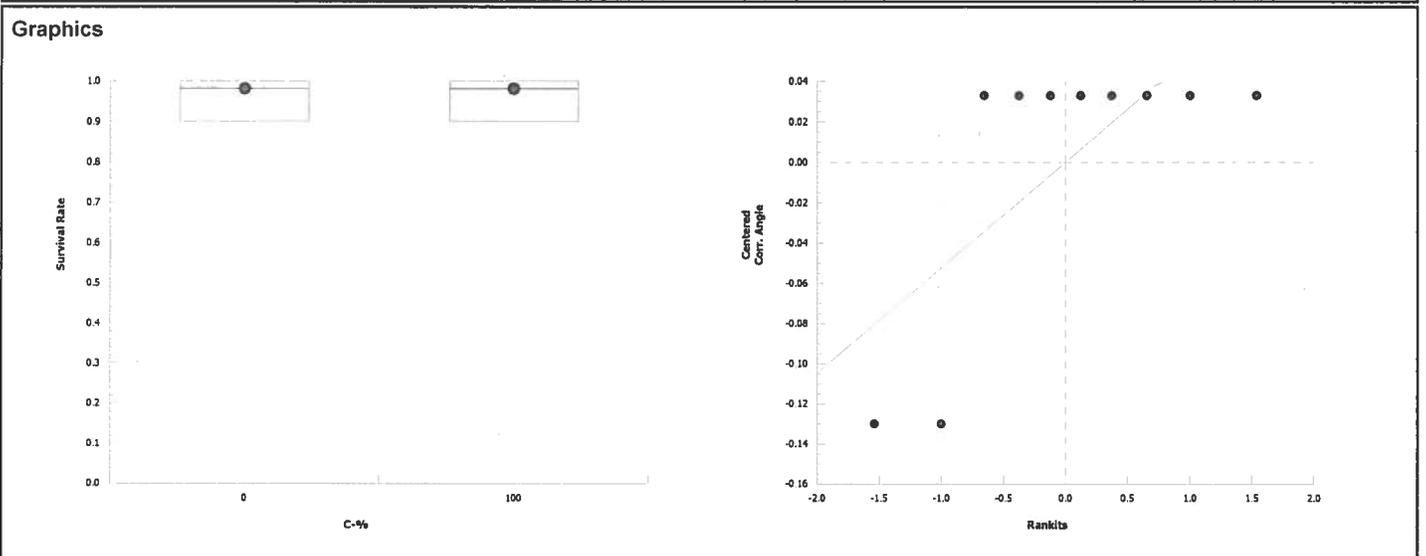
Wilcoxon Rank Sum Two-Sample Test									
Control	vs	C-%	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Lab Water Control		100	27.5	NA	2	8	0.7778	Exact	Non-Significant Effect

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1	0	1.0000	Non-Significant Effect
Error	0.04249493	0.005311866	8			
Total	0.04249493		9			

Distributional Tests					
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1	23.2	1.0000	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.509	0.741	<0.0001	Non-normal Distribution

Survival Rate Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Lab Water Contr	5	0.98	0.924	1	1	0.9	1	0.02	4.56%	0.0%
100		5	0.98	0.924	1	1	0.9	1	0.02	4.56%	0.0%

Angular (Corrected) Transformed Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Lab Water Cont	5	1.38	1.29	1.47	1.41	1.25	1.41	0.0326	5.28%	0.0%
100		5	1.38	1.29	1.47	1.41	1.25	1.41	0.0326	5.28%	0.0%



10 Day Acute *Hyalella azteca* Toxicity Test Data

Client: Vallejo / VSFC
 Test Material: 207R0064
 Test ID#: 51102 Project #: 20703
 Test Date: 3/21/13

Organism Log#: 7146 Age: 10-11 days
 Organism Supplier: Chesapeake Cultures
 Control/Diluent: SAM-5 Hyalella Water
 Control Water Batch: 144

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)	# Live Organisms					SIGN-OFF
		new	old	new	old		A	B	C	D	E	
Lab Control	23.6	7.86		8.5		405	10	10	10	10	10	Date: 3-21-13 Sample ID: 31316 Test Solution Prep: New WQ: CE Initiation Time: 1340 Initiation Signoff: SVV
100%	23.6	8.32		9.2		1460	10	10	10	10	10	
Meter ID	43A	PH16		R2006		EC07						
Lab Control	23.4				8.1		10	9	10	10	10	Date: 3/22/13 Count Time: 1000 Count Signoff: SVV Old WQ: CE
100%	23.4				7.7		10	10	10	10	10	
Meter ID	43A				R2004							
Lab Control	23.5				8.5		10	9	10	10	10	Date: 3/23/13 Count Time: 0945 Count Signoff: SVV Old WQ: CE
100%	23.5				8.6		10	10	10	10	9	
Meter ID	43A				R2004							
Lab Control	23.5				7.1		10	9	10	10	10	Date: 3/24/13 Count Time: 1125 Count Signoff: SVV Old WQ: CE
100%	23.5				6.9		10	10	10	10	9	
Meter ID	43A				R2004							
Lab Control	23.5				7.5		10	9	10	10	10	Date: 3/25/13 Count Time: 1005 Count Signoff: MF Old WQ: CE Feed: MF
100%	23.5				7.5		10	10	10	10	9	
Meter ID	43A				R2004							
Lab Control	23.6	8.07	8.21	8.4	5.2	427	10	9	10	10	10	Date: 3/26/13 Sample ID: 31316 Test Solution Prep: SVV New WQ: FOLB Renewal: 12270 Renewal Signoff: SVV Old WQ: DS
100%	23.6	8.12	8.17	10.4	4.1	1449	10	10	10	10	9	
Meter ID	43A	PH15	PH16	R2007	R2006	EC07						
Lab Control	23.4				5.2		10	9	10	10	10	Date: 3-27-13 Count Time: 0900 Count Signoff: DS Old WQ: DS Feed: <0
100%	23.4				5.5		10	10	10	10	9	
Meter ID	43A				R2004							
Lab Control	23.6				6.0		10	9	10	10	10	Date: 3/28/13 Count Time: 0940 Count Signoff: MF Old WQ: JLA
100%	23.6				6.3		10	10	10	10	9	
Meter ID	43A				R2007							
Lab Control	23.3				6.1		10	9	10	10	10	Date: 3/29/13 Count Time: 0945 Count Signoff: SVV Old WQ: 1/2 Feed: SS
100%	23.3				6.6		10	10	10	10	9	
Meter ID	43A				R2002							
Lab Control	23.4				5.9		10	9	10	10	10	Date: 3-30-13 Count Time: 830 Count Signoff: MF Old WQ: L20
100%	23.4				5.8		10	10	10	10	9	
Meter ID	43A				R2005							
Lab Control	23.3		7.49		6.5	454	10	9	10	10	10	Date: 3/31/13 Termination Time: 0935 Termination Signoff: SVV Old WQ: L20
100%	23.3		8.46		6.8	1469	10	10	10	10	9	
Meter ID	43A		PH15		R2006	EC07						

Appendix E

Test Data and Summary of Statistics for the Evaluation of the Chronic Toxicity of the VSFCO Stormwater to Fathead Minnows



CETIS Summary Report

Report Date: 03 Apr-13 16:00 (p 1 of 1)
 Test Code: 51101 | 00-3854-4164

Chronic Larval Fish Survival and Growth Test **Pacific EcoRisk**

Batch ID: 08-9569-1633	Test Type: Growth-Survival (7d)	Analyst: Padrick Anderson
Start Date: 21 Mar-13 15:30	Protocol: EPA-821-R-02-013 (2002)	Diluent: Not Applicable
Ending Date: 28 Mar-13 09:00	Species: Pimephales promelas	Brine: Not Applicable
Duration: 6d 17h	Source: Aquatox, AR	Age: 1

Sample ID: 14-1797-8982	Code: Stormwater	Client: Fairfield-Suisun Sewer District
Sample Date: 20 Mar-13 14:45	Material: Stormwater	Project: 20703
Receive Date: 20 Mar-13 16:09	Source: Fairfield-Suisun Sewer District	
Sample Age: 25h (11.6 °C)	Station: 207R00236	

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
12-9493-4945	7d Survival Rate	100	>100	NA	NA	1	Wilcoxon Rank Sum Two-Sample Test
11-2624-2683	Mean Dry Biomass-mg	100	>100	NA	10.8%	1	Equal Variance t Two-Sample Test

7d Survival Rate Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	4	1	1	1	1	1	0	0	0.0%	0.0%
100		4	1	1	1	1	1	0	0	0.0%	0.0%

Mean Dry Biomass-mg Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	4	0.9	0.865	0.936	0.783	1.01	0.0474	0.0948	10.5%	0.0%
100		4	1.01	0.994	1.02	0.961	1.03	0.0154	0.0308	3.06%	-11.7%

7d Survival Rate Detail					
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Contr	1	1	1	1
100		1	1	1	1

Mean Dry Biomass-mg Detail					
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Contr	0.914	1.01	0.89	0.783
100		0.961	1.02	1.03	1.01

7d Survival Rate Binomials					
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Contr	10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

CETIS Analytical Report

Report Date: 03 Apr-13 16:00 (p 1 of 2)
 Test Code: 51101 | 00-3854-4164

Chronic Larval Fish Survival and Growth Test			Pacific EcoRisk		
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Analysis ID: 12-9493-4945	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.8.5
Analyzed: 03 Apr-13 16:00	Analysis: Nonparametric-Two Sample	Official Results: Yes

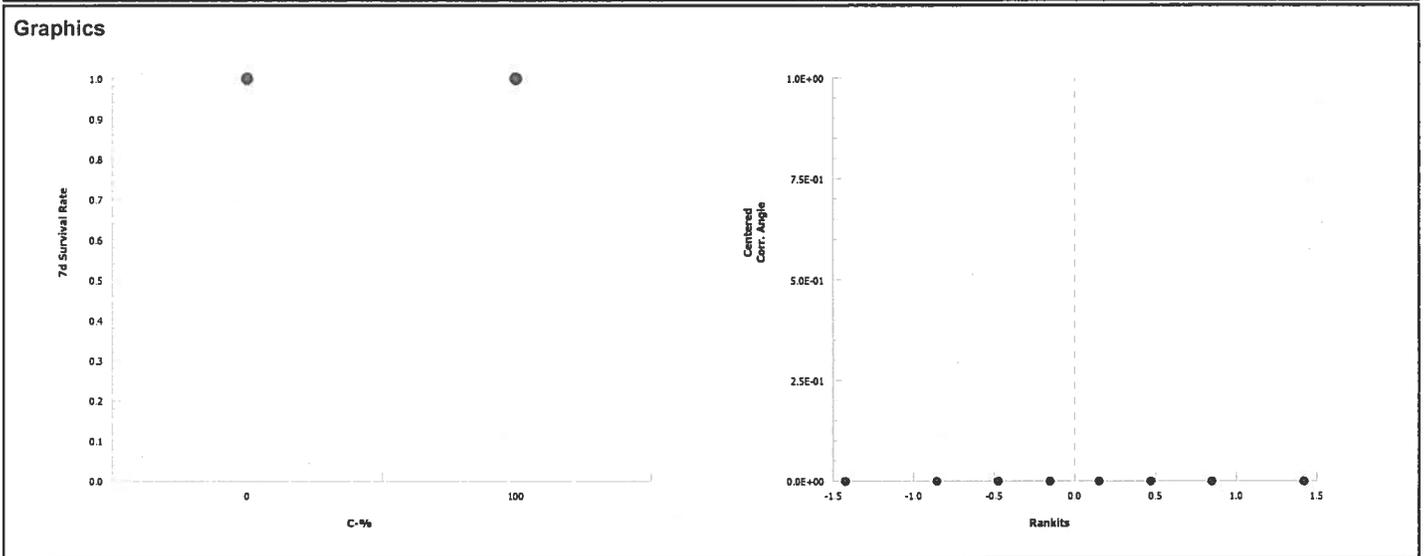
Data Transform	Zeta	Alt Hyp	Trials	Seed	Test Result
Angular (Corrected)	NA	C > T	NA	NA	Passes 7d survival rate

Wilcoxon Rank Sum Two-Sample Test									
Control	vs	C-%	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Lab Water Control		100	18	NA	1	6	1.0000	Exact	Non-Significant Effect

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1	65500	<0.0001	Significant Effect
Error	0	0	6			
Total	0		7			

7d Survival Rate Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Lab Water Contr	4	1	1	1	1	1	1	0	0.0%	0.0%
100		4	1	1	1	1	1	1	0	0.0%	0.0%

Angular (Corrected) Transformed Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Lab Water Cont	4	1.41	1.41	1.41	1.41	1.41	1.41	0	0.0%	0.0%
100		4	1.41	1.41	1.41	1.41	1.41	1.41	0	0.0%	0.0%



CETIS Analytical Report

Report Date: 03 Apr-13 16:00 (p 2 of 2)
 Test Code: 51101 | 00-3854-4164

Chronic Larval Fish Survival and Growth Test						Pacific EcoRisk
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Analysis ID: 11-2624-2683	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.8.5
Analyzed: 03 Apr-13 16:00	Analysis: Parametric-Two Sample	Official Results: Yes

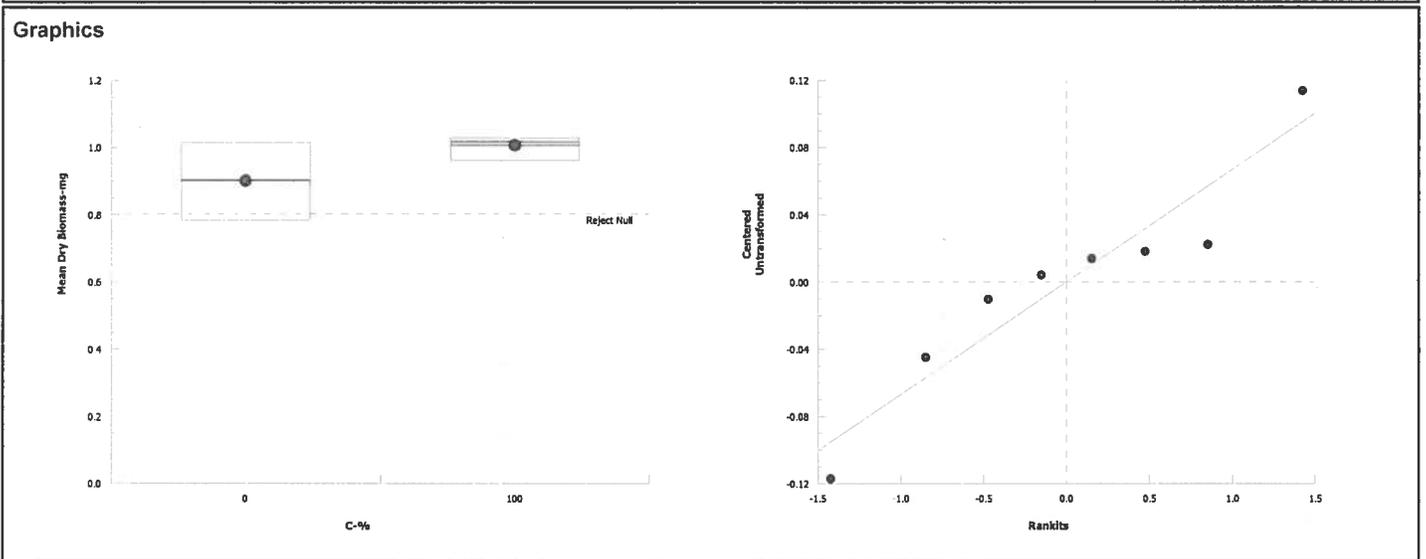
Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	10.8%	Passes mean dry biomass-mg

Equal Variance t Two-Sample Test									
Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Lab Water Control		100	-2.12	1.94	0.097	6	0.9606	CDF	Non-Significant Effect

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.02226067	0.02226067	1	4.48	0.0787	Non-Significant Effect
Error	0.02982957	0.004971595	6			
Total	0.05209024		7			

Distributional Tests					
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	9.47	47.5	0.0973	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.929	0.645	0.5091	Normal Distribution

Mean Dry Biomass-mg Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Lab Water Contr	4	0.9	0.749	1.05	0.902	0.783	1.01	0.0474	10.5%	0.0%
100		4	1.01	0.957	1.05	1.02	0.961	1.03	0.0154	3.06%	-11.7%



7 Day Chronic Fathead Minnow Toxicity Test Data

Client: Vallejo / VSFC
 Test Material: 207R0064
 Test ID#: 51101 Project #: 20703
 Test Date: 3/21/13 Randomization: 4.3.6

Organism Log#: 7149 Age: 48hrs
 Organism Supplier: Aquatox
 Control/Diluent: _____ EPAMH
 Control Water Batch: 1579

Test Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)	# Live Organisms				SIGN-OFF
		new	old	new	old		A	B	C	D	
Control	25.3	8.10		8.7		295	10	10	10	10	Date: 3-21-13 Test Solution Prep: ✓
100%	25.3	8.19		9.5		1437	10	10	10	10	Sample ID: 31316 Initiation Time: 1530
Meter ID	30A	PH18		R007		ECO4	New WQ: 0H				Initiation Signoff: ✓
Lab Control	25.5	8.16	7.82	8.8	7.1	295	10	10	10	10	Date: 3/22/13 Test Solution Prep: ✓
100%	25.5	8.13	8.47	10.3	6.4	1457	10	10	10	10	Sample ID: 31316 Renewal Time: 1000
Meter ID	30A	PH15	PH18	R007		ECO4	New WQ: 10	Old WQ: 08			Renewal Signoff: ✓
Lab Control	25.0	8.15	7.82	8.5	6.3	298	10	10	10	10	Date: 3/23/13 Test Solution Prep: ✓
100%	25.0	8.20	8.47	9.7	6.2	1458	10	10	10	10	Sample ID: 31316 Renewal Time: 1455
Meter ID	30A	PH18	PH16	R004	R007	ECO4	New WQ: 08	Old WQ: 07			Renewal Signoff: ✓
Lab Control	25.5	8.22	7.76	8.4	7.0	303	10	10	10	10	Date: 3/24/13 Test Solution Prep: ✓
100%	25.5	8.26	8.48	11.7	6.6	1457	10	10	10	10	Sample ID: 31316 Renewal Time: 1055
Meter ID	30A	PH15	PH15	R007	R007	ECO7	New WQ: 08	Old WQ: 08			Renewal Signoff: ✓
Lab Control	25.7	8.18	7.66	8.9	6.4	305	10	10	10	10	Date: 3/25/13 Test Solution Prep: ✓
100%	25.7	8.13	8.35	11.6	6.5	1470	10	10	10	10	Sample ID: 31316 Renewal Time: 1020
Meter ID	30A	PH16	PH18	R004	R004	ECO7	New WQ: 10	Old WQ: 09			Renewal Signoff: ✓
Lab Control	25.6	8.33	7.80	8.1	6.9	313	10	10	10	10	Date: 3/26/13 Test Solution Prep: ✓
100%	25.6	8.18	8.39	10.8	6.9	1452	10	10	10	10	Sample ID: 31316 Renewal Time: 0940
Meter ID	30A	PH15	PH16	R007	R004	ECO7	New WQ: 08	Old WQ: 08			Renewal Signoff: ✓
Lab Control	25.4	8.34	7.76	8.7	6.4	295	10	10	10	10	Date: 3/27/13 Test Solution Prep: ✓
100%	25.4	8.20	8.43	11.6	6.2	1407	10	10	10	10	Sample ID: 31316 Renewal Time: 1105
Meter ID	30A	PH16	PH16	R004	R004	ECO6	New WQ: 0A	Old WQ: 08			Renewal Signoff: ✓
Lab Control	25.5		7.74		8.0	312	10	10	10	10	Date: 3-28-13 Termination Time: 0900
100%	25.5		8.39		8.0	1479	10	10	10	10	Termination Signoff: ✓
Meter ID	30A		PH15		R004	ECO8		Old WQ: 0A			

Fathead Minnow Dry Weight Data Sheet

Client: Vallejo / VSFC Test ID #: 51101 Project # 20703
 Sample ID: 207R0064 Tare Weight Date: 3/25/13 Sign-off: FOUB
 Test Date: 3/21/13 Final Weight Date: 3/31/13 Sign-off: CA

Pan ID	Concentration	Replicate	Initial Pan Weight (mg)	Final Pan Weight (mg)	Initial # of Organisms	Biomass Value (mg)
1	Lab Control	A	124.37	133.51	10	0.914
2		B	132.08	142.22	10	1.014
3		C	150.96	159.86	10	0.890
4		D	166.70	174.53	10	0.783
5	100%	A	125.79	158.42 135.40	10	0.961
6		B	158.08	168.32	10	1.024
7		C	157.04	167.32	10	1.023
8		D	145.77	155.87	10	1.010
QA1			179.50	179.50		

Appendix F

Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the *Selenastrum capricornutum*



CETIS Summary Report

Report Date: 11 Mar-13 14:58 (p 1 of 1)
 Test Code: 51103 | 18-8696-2927

Algal Growth Test Pacific EcoRisk

Batch ID: 18-4096-4558	Test Type: Cell Growth	Analyst: Padrick Anderson
Start Date: 06 Mar-13 17:00	Protocol: EPA-821-R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 10 Mar-13 16:30	Species: Selenastrum capricornutum	Brine: Not Applicable
Duration: 95h	Source: In-House Culture	Age: 7

Sample ID: 17-6677-2976	Code: NaCl	Client: Reference Toxicant
Sample Date: 06 Mar-13 17:00	Material: Sodium chloride	Project: 20704
Receive Date: 06 Mar-13 17:00	Source: Reference Toxicant	
Sample Age: NA (25.8 °C)	Station: In House	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
17-8116-7294	96h Cell Density-without ED	0.125	0.25	0.1768	7.06%		Steel Many-One Rank Sum Test

Point Estimate Summary

Analysis ID	Endpoint	Level	g/L	95% LCL	95% UCL	TU	Method
19-9405-0991	96h Cell Density-without E	IC5	0.087	0.0235	0.234		Linear Interpolation (ICPIN)
		IC10	0.19	0.0374	0.293		
		IC15	0.312	0.207	0.418		
		IC20	0.442	0.333	0.542		
		IC25	0.56	0.475	0.656		
		IC40	0.89	0.753	1.12		
		IC50	1.1	0.922	1.27		

96h Cell Density-without EDTA Summary

C-g/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	4	3.52E+6	3.47E+6	3.56E+6	3.36E+6	3.65E+6	6.51E+4	1.30E+5	3.71%	0.0%
0.125		4	3.26E+6	3.19E+6	3.34E+6	3.09E+6	3.52E+6	1.03E+5	2.07E+5	6.34%	7.18%
0.25		4	3.07E+6	3.06E+6	3.09E+6	3.03E+6	3.13E+6	2.17E+4	4.35E+4	1.42%	12.6%
0.5		4	2.73E+6	2.72E+6	2.75E+6	2.68E+6	2.77E+6	2.06E+4	4.11E+4	1.51%	22.3%
1		4	1.93E+6	1.84E+6	2.03E+6	1.68E+6	2.26E+6	1.26E+5	2.53E+5	13.1%	45.0%
2		4	1.02E+5	9.77E+4	1.06E+5	8.60E+4	1.12E+5	5.72E+3	1.14E+4	11.2%	97.1%

96h Cell Density-without EDTA Detail

C-g/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Contr	3.46E+6	3.65E+6	3.36E+6	3.59E+6
0.125		3.09E+6	3.34E+6	3.52E+6	3.10E+6
0.25		3.05E+6	3.08E+6	3.13E+6	3.03E+6
0.5		2.68E+6	2.76E+6	2.77E+6	2.72E+6
1		2.26E+6	1.99E+6	1.80E+6	1.68E+6
2		1.08E+5	1.02E+5	8.60E+4	1.12E+5

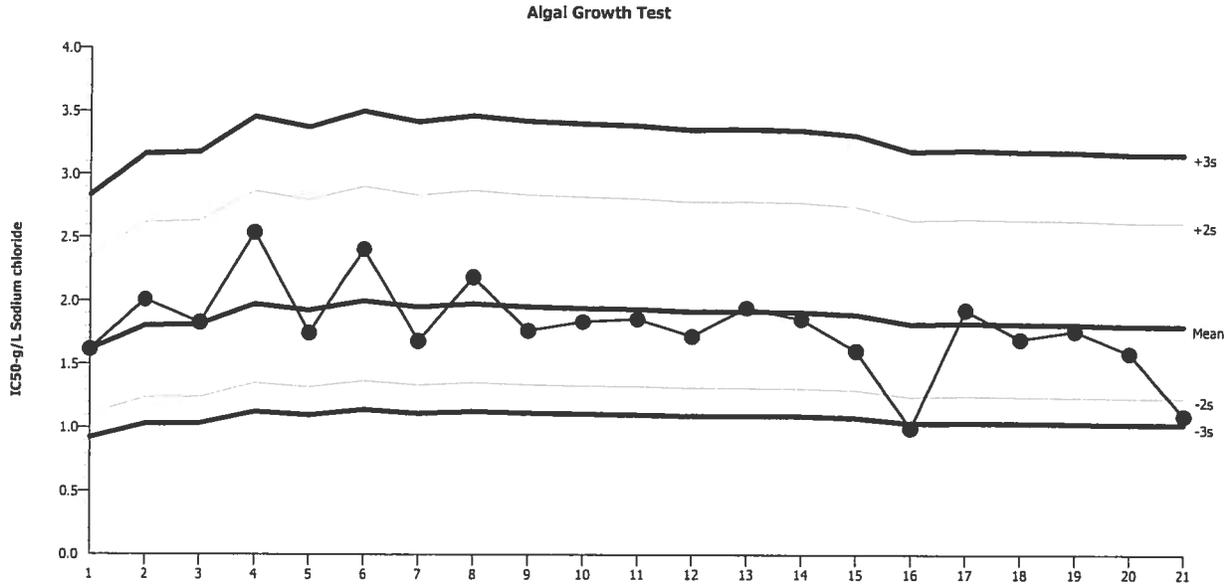
Algal Growth Test

All Matching Labs

Test Type: Cell Growth
Protocol: All Protocols

Organism: Selenastrum capricornutum (Green A)
Endpoint: 96h Cell Density-without EDTA

Material: Sodium chloride
Source: Reference Toxicant-REF



Mean: 1.801 Count: 20 -2s Warning Limit: 1.239 -3s Action Limit: 1.028
Sigma: NA CV: 20.60% +2s Warning Limit: 2.618 +3s Action Limit: 3.156

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2011	Jun	22	14:45	1.619	-0.1818	-0.5692			14-6853-8475	00-8724-0227	Pacific EcoRisk
2		Jul	13	15:30	2.011	0.2106	0.5915			08-3605-7829	08-9599-8647	Pacific EcoRisk
3		Aug	10	16:30	1.828	0.02699	0.07955			12-4266-8072	00-6242-9774	Pacific EcoRisk
4		Sep	14	14:50	2.541	0.74	1.841			13-9864-0803	02-2536-4682	Pacific EcoRisk
5		Oct	12	14:40	1.746	-0.0546	-0.1647			16-8408-4796	05-3617-8578	Pacific EcoRisk
6		Nov	9	14:35	2.408	0.6076	1.555			07-6777-8726	05-3245-3661	Pacific EcoRisk
7		Dec	14	15:10	1.681	-0.1195	-0.3673			05-9445-7321	02-8359-3933	Pacific EcoRisk
8	2012	Jan	11	14:05	2.186	0.3857	1.038			12-6055-8740	04-6046-4514	Pacific EcoRisk
9		Feb	15	16:40	1.764	-0.03695	-0.1109			19-4363-1363	11-6054-7063	Pacific EcoRisk
10		Mar	14	14:07	1.835	0.03474	0.1022			12-7942-6244	06-7717-5070	Pacific EcoRisk
11		Apr	11	12:15	1.855	0.05438	0.1591			00-8818-5913	17-8213-8859	Pacific EcoRisk
12		Jun	13	14:25	1.721	-0.07972	-0.2421			01-0408-0859	14-7175-3771	Pacific EcoRisk
13		Jul	11	14:05	1.947	0.1463	0.4178			04-6184-5914	01-7092-3726	Pacific EcoRisk
14		Aug	15	17:00	1.855	0.05452	0.1595			16-2549-7244	20-6203-9290	Pacific EcoRisk
15		Sep	19	15:30	1.607	-0.194	-0.6096			08-6994-9346	07-8321-6070	Pacific EcoRisk
16		Nov	14	11:35	1	-0.8007	-3.145	(-)	(-)	19-3651-9449	02-4093-7643	Pacific EcoRisk
17			30	11:45	1.928	0.1275	0.3659			06-8774-9598	00-2376-6641	Pacific EcoRisk
18		Dec	12	14:00	1.698	-0.1024	-0.3132			21-1404-8287	09-6532-2652	Pacific EcoRisk
19	2013	Jan	9	14:50	1.764	-0.0371	-0.1113			20-3540-5103	02-4694-0562	Pacific EcoRisk
20		Feb	20	14:25	1.589	-0.2121	-0.6703			19-4816-2041	19-1093-3601	Pacific EcoRisk
21		Mar	6	17:00	1.096	-0.7051	-2.657	(-)		18-8696-2927	19-9405-0991	Pacific EcoRisk

***Selenastrum capricornutum* Cell Density Enumeration Data**

Client: Reference Toxicant Initial Count: 10,000 cells/mL
 Test Material: NaCl Enumerating Scientist: PO
 Test Start Date: 3.6.13 Start Time: 1700 Project #: 20704
 Test End Date: 3.6 3.10.13 End Time: 1630 Test ID #: 51103

Treatment	Rep A	Rep B	Rep C	Rep D	Mean
Lab Water Control (No EDTA)	3.46	3.65	3.36	3.59	3.52
0.125	3.09	3.34	3.52	3.10	3.26
0.25	3.05	3.08	3.13	3.03	3.07
0.5	2.68	2.76	2.77	2.72	2.73
1	2.26	1.99	1.80	1.68	1.93
2	0.108	0.102	0.086	0.112	0.102
This datasheet has been reviewed for completeness and consistency with Test Acceptability Criteria and/or other issues of concern.	Control Mean Density (cells/mL x 10 ⁶)	% CV	Date:	Time:	Signoff:
	3.52	3.17	3.10.13	1645	PO

Selenastrum capricornutum Algal Toxicity Test Water Quality Data

Client: Reference Toxicant

Test ID #: 51103

Test Date: 3/6/13

Test Material: NaCl

Project #: 20704

Control/Diluent: Algal Medium - No EDTA

Reference Toxicant Test Treatment (g/L NaCl)	Temp (°C)	pH	D.O. (mg/L)	Conductivity (µS/cm)	Sign-Off
Lab Water Control	25.8	7.56	9.1	92	Date: 3/6/13
0.125	25.8	7.71	9.2	339	Test Solution Prep: KP
0.25	25.8	7.78	9.2	599	New WQ: NA
0.5	25.8	7.60	9.2	1055	Innoculation Time: 1700
1	25.8	7.52	9.2	1978	Innoculation Signoff: 1700 KP
2	25.8	7.50	9.1	3820	Shelf ID: FR4/R2/S1
Meter ID:	60A	PH15	RDO4	EC06	
Lab Water Control	25.7	7.34			Date: 3/7/13
0.125	25.7	7.31			WQ Time: 0917
0.25	25.7	7.30			WQ Signoff: CO
0.5	25.7	7.27			
1	25.7	7.19			
2	25.7	6.08			
Meter ID:	60A	PH18			
Lab Water Control	25.6	7.71			Date: 3/8/13
0.125	25.6	7.68			WQ Time: 0900
0.25	25.6	7.62			WQ Signoff: DH
0.5	25.6	7.47			
1	25.6	7.22			
2	25.6	6.54			
Meter ID:	60A	PH15			
Lab Water Control	25.6	9.61			Date: 3/9/13
0.125	25.6	9.49			WQ Time: 0845
0.25	25.6	9.49			WQ Signoff: DH
0.5	25.6	9.30			
1	25.6	8.83			
2	25.6	6.82			
Meter ID:	60A	PH15			
Lab Water Control	25.5	9.99	11.8	104	Date: 3/10/13
0.125	25.5	9.72	11.4	351	Termination Time: 1630
0.25	25.5	10.10	10.7	623	Termination Signoff: PD
0.5	25.5	9.64	11.2	1048	WQ Time: 0900
1	25.5	9.23	10.2	1981	WQ Signoff: RA
2	25.5	8.62	8.4	3850	
Meter ID:	60A	PH19	RDO7	EC06	

Initial Test Conditions			
Target: 4.000 g NaCl in 2 L	Alkalinity	Hardness	Light Intensity (ftc)
Actual:	3	7	408.2

Appendix G

Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the *Ceriodaphnia dubia*



CETIS Summary Report

Report Date: 02 Apr-13 13:39 (p 1 of 2)
 Test Code: 51197 | 04-9828-2202

Ceriodaphnia Survival and Reproduction Test **Pacific EcoRisk**

Batch ID: 13-8591-8719	Test Type: Reproduction-Survival (7d)	Analyst: Michelle Kawaguchi
Start Date: 19 Mar-13 13:30	Protocol: EPA-821-R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 25 Mar-13 15:15	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 2h	Source: In-House Culture	Age: 1

Sample ID: 10-6668-7435	Code: NaCl	Client: Pacific Ecorisk
Sample Date: 19 Mar-13 13:30	Material: Sodium chloride	Project: 20722
Receive Date: 19 Mar-13 13:30	Source: Reference Toxicant	
Sample Age: NA (25.4 °C)	Station: In House	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
00-1600-3090	Reproduction	500	1000	707.1	11.5%		Dunnett Multiple Comparison Test
18-5716-6183	Survival	2000	2500	2236	NA		Fisher Exact/Bonferroni-Holm Test

Point Estimate Summary

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
00-2995-4800	Reproduction	IC5	270	155	544		Linear Interpolation (ICPIN)
		IC10	519	309	674		
		IC15	648	464	819		
		IC20	777	618	988		
		IC25	906	745	1060		
		IC40	1160	1010	1250		
01-0846-3049	Survival	EC50	2240	2080	2400		Binomial/Graphical

Reproduction Summary

C-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	10	35.6	34.5	36.7	31	41	0.909	2.88	8.08%	0.0%
500		10	32.3	31.1	33.5	27	37	1	3.16	9.8%	9.27%
1000		10	25.4	23.5	27.3	14	31	1.58	4.99	19.7%	28.7%
1500		10	12.5	10.3	14.7	2	19	1.87	5.91	47.3%	64.9%
2000		10	4.7	3.78	5.62	2	10	0.775	2.45	52.2%	86.8%
2500		10	0	0	0	0	0	0	0		100.0%

Survival Summary

C-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	10	1	1	1	1	1	0	0	0.0%	0.0%
500		10	1	1	1	1	1	0	0	0.0%	0.0%
1000		10	1	1	1	1	1	0	0	0.0%	0.0%
1500		10	1	1	1	1	1	0	0	0.0%	0.0%
2000		10	1	1	1	1	1	0	0	0.0%	0.0%
2500		10	0	0	0	0	0	0	0		100.0%

CETIS Summary Report

Report Date:

02 Apr-13 13:39 (p 2 of 2)

Test Code:

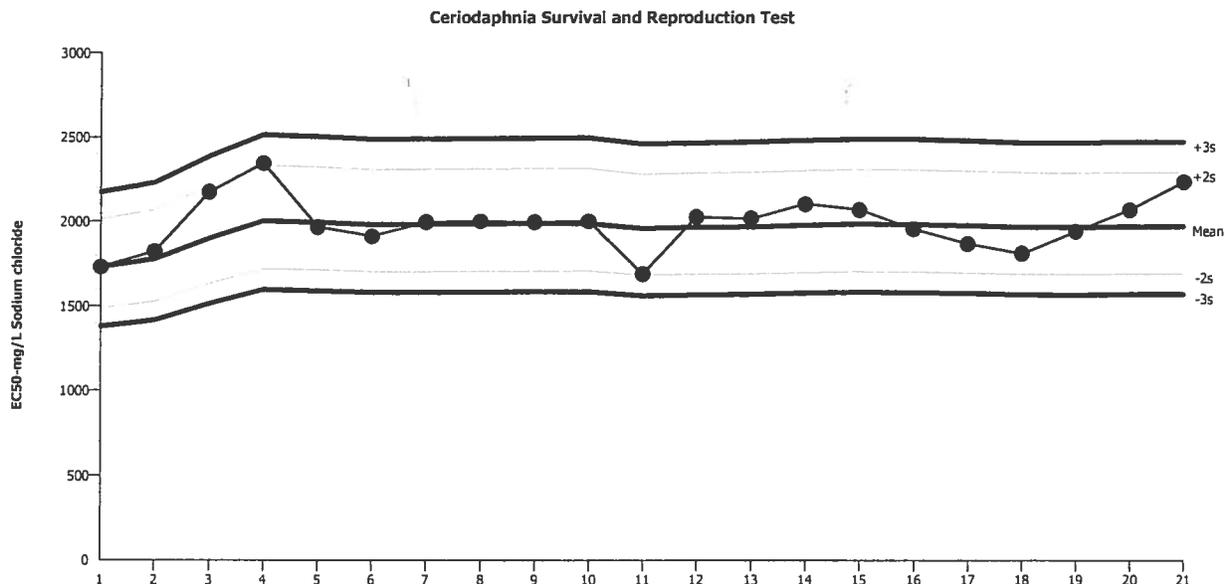
51197 | 04-9828-2202

Ceriodaphnia Survival and Reproduction Test											Pacific EcoRisk
Reproduction Detail											
C-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Lab Water Contr	37	35	41	36	33	35	34	31	35	39
500		29	27	29	32	35	33	37	32	35	34
1000		14	22	29	26	31	31	26	24	24	27
1500		7	18	19	12	18	11	15	6	2	17
2000		3	5	10	8	4	3	4	4	4	2
2500		0	0	0	0	0	0	0	0	0	0
Survival Detail											
C-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Lab Water Contr	1	1	1	1	1	1	1	1	1	1
500		1	1	1	1	1	1	1	1	1	1
1000		1	1	1	1	1	1	1	1	1	1
1500		1	1	1	1	1	1	1	1	1	1
2000		1	1	1	1	1	1	1	1	1	1
2500		0	0	0	0	0	0	0	0	0	0
Survival Binomials											
C-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Lab Water Contr	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
500		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
1000		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
1500		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
2000		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
2500		0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1

Ceriodaphnia Survival and Reproduction Test

Pacific EcoRisk

Test Type: Reproduction-Survival (7d) Organism: Ceriodaphnia dubia (Water Flea) Material: Sodium chloride
 Protocol: EPA-821-R-02-013 (2002) Endpoint: Survival Source: Reference Toxicant-REF



Mean: 1970 Count: 20 -2s Warning Limit: 1694 -3s Action Limit: 1570
 Sigma: NA CV: 7.87% +2s Warning Limit: 2293 +3s Action Limit: 2473

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2012	Nov	13	13:35	1732	-238.4	-1.703			03-9633-6678	06-7941-1581
2			13	15:00	1825	-145.5	-1.013			04-6379-9430	02-1586-7783
3			21	15:30	2175	204.8	1.306			16-1636-2487	17-1207-4863
4		Dec	4	15:30	2346	375.2	2.301	(+)		15-1781-0501	08-2997-2394
5			11	14:00	1968	-2.426	-0.01627			10-1738-2443	08-4676-2043
6			18	14:15	1913	-57.7	-0.3925			03-5952-6156	01-2144-0634
7	2013	Jan	8	13:00	1997	26.43	0.1759			20-1200-1216	11-0260-9774
8			9	14:45	2003	32.68	0.2172			14-9745-0187	19-7775-8810
9			15	10:50	1997	26.43	0.1759			07-7488-1743	14-9365-8269
10			22	15:15	2003	32.68	0.2172			15-7654-1739	15-4987-6495
11			26	14:10	1689	-281.3	-2.034	(-)		00-7568-3917	10-2163-6026
12			31	15:15	2027	56.43	0.3729			18-7973-8464	12-7801-4032
13		Feb	5	10:15	2019	48.49	0.321			01-4667-2275	21-0247-5235
14			6	14:30	2105	135	0.8752			19-1583-2157	11-4763-7938
15			12	12:00	2071	100.7	0.6583			04-7498-7624	15-7655-1951
16			12	15:40	1957	-12.99	-0.08736			19-7721-6115	18-1461-9609
17			19	14:10	1870	-100.4	-0.6908			13-1943-1556	13-8810-1909
18			26	12:15	1811	-159.2	-1.112			10-1167-0551	12-6808-7114
19		Mar	5	15:15	1943	-27.89	-0.1882			09-3837-5563	03-3559-8495
20			12	14:05	2071	100.4	0.6563			04-4727-7668	10-2736-0550
21			19	13:30	2236	265.7	1.67			04-9828-2202	01-0846-3049

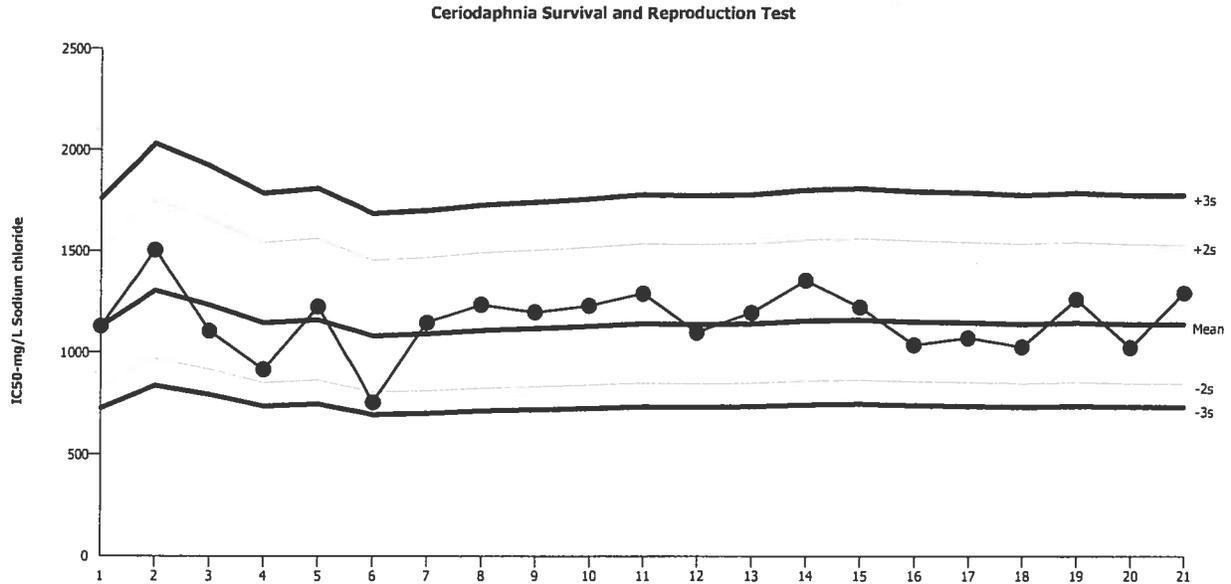
Ceriodaphnia Survival and Reproduction Test

Pacific EcoRisk

Test Type: Reproduction-Survival (7d)
 Protocol: EPA-821-R-02-013 (2002)

Organism: Ceriodaphnia dubia (Water Flea)
 Endpoint: Reproduction

Material: Sodium chloride
 Source: Reference Toxicant-REF



Mean: 1140 Count: 20 -2s Warning Limit: 848.4 -3s Action Limit: 731.9
 Sigma: NA CV: 15.90% +2s Warning Limit: 1532 +3s Action Limit: 1776

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2012	Nov	13	13:35	1129	-11.4	-0.06803			03-9633-6678	16-8662-9300
2			13	15:00	1505	365.1	1.881			04-6379-9430	19-0091-2117
3			21	15:30	1104	-35.85	-0.2163			16-1636-2487	05-1770-2010
4		Dec	4	15:30	915.6	-224.7	-1.486			15-1781-0501	18-7366-9308
5			11	14:00	1226	85.42	0.4891			10-1738-2443	18-7017-9470
6			18	14:15	755.4	-384.9	-2.788	(-)		03-5952-6156	13-7426-8041
7	2013	Jan	8	13:00	1147	6.658	0.03942			20-1200-1216	16-8537-2679
8			9	14:45	1234	93.84	0.5355			14-9745-0187	00-5993-9655
9			15	10:50	1197	56.81	0.3292			07-7488-1743	15-5344-5440
10			22	15:15	1229	88.75	0.5074			15-7654-1739	11-7332-0241
11			26	14:10	1289	149.2	0.8327			00-7568-3917	07-2578-2163
12			31	15:15	1098	-42.15	-0.255			18-7973-8464	06-0639-2727
13		Feb	5	10:15	1196	55.56	0.3221			01-4667-2275	04-0830-0522
14			6	14:30	1354	214.1	1.165			19-1583-2157	14-6779-9918
15			12	12:00	1224	83.75	0.4799			04-7498-7624	16-8536-7121
16			12	15:40	1038	-102.3	-0.6364			19-7721-6115	19-3278-2413
17			19	14:10	1071	-68.82	-0.4215			13-1943-1556	04-3383-1924
18			26	12:15	1028	-112.5	-0.7031			10-1167-0551	21-0104-4993
19		Mar	5	15:15	1262	121.8	0.6869			09-3837-5563	07-4826-7068
20			12	14:05	1024	-116.2	-0.7274			04-4727-7668	09-8763-3855
21			19	13:30	1295	154.3	0.8594			04-9828-2202	00-2995-4800

Short-Term Chronic 3-Brood *Ceriodaphnia dubia* Survival & Reproduction Test Data

Client: Reference Toxicant Material: Sodium Chloride Test Date: 3/19/13
 Project #: 20722 Test ID: 51197 Randomization: 6-7-3 Control Water: Modified EPAMH

Day	pH		D.O.		Conductivity (µS/cm)		Temp (°C)	Survival / Reproduction										SIGN-OFF	
	New	Old	New	Old	New	Old		A	B	C	D	E	F	G	H	I	J		
0	7.93		7.9		337		25.4	0	0	0	0	0	0	0	0	0	0	0	Date: 3/19/13 New WQ: AF Test Init: 1330 Sol'n Prep: KB
1	8.19	8.25	8.3	6.5	362	441	25.7	0	0	0	0	0	0	0	0	0	0	0	Date: 3/20/13 New WQ: AF Counts: 24 Sol'n Prep: SS Old WQ: AF Time: 1330
2	7.92	7.97	8.1	6.5	352	378	25.4	0	0	0	0	0	0	0	0	0	0	0	Date: 3/21/13 New WQ: CE Counts: 55 Sol'n Prep: SW Old WQ: AF Time: 1430
3	7.94	8.11	8.4	6.5	340	394	25.8	5	5	7	4	5	3	5	6	5	6	5	Date: 3/22/13 New WQ: SW Counts: 55 Sol'n Prep: SS Old WQ: AF Time: 1455
4	7.95	8.03	8.4	7.5	346	374	25.0	0	0	16	12	14	14	14	0	0	14	14	Date: 3/23/13 New WQ: AF Counts: 20 Sol'n Prep: SW Old WQ: AF Time: 1415
5	7.80	8.17	8.2	7.0	337	388	25.7	14	11	0	0	0	0	0	11	14	0	0	Date: 3/24/13 New WQ: CE Counts: 40 Sol'n Prep: SW Old WQ: CE Time: 1355
6	-	7.86	-	7.0	-	376	25.9	18	19	18	20	14	18	15	14	16	19	19	Date: 3/25/13 New WQ: SW Counts: 20 Sol'n Prep: SW Old WQ: SW Time: 1515
7																			Date: New WQ: Counts Sol'n Prep: Old WQ: Time
8																			Date: Old WQ: Counts Time
Total=								37	35	41	36	33	35	34	31	35	39	Mean Neonates/Female = 35.6	
Day	pH		D.O.		Conductivity (µS/cm)		Temp (°C)	Survival / Reproduction										RT BATCH NUMBER	
	New	Old	New	Old	New	Old		A	B	C	D	E	F	G	H	I	J		
0	7.85		8.1		1308			0	0	0	0	0	0	0	0	0	0	0	92
1	8.03	8.11	8.7	6.6	1311	1572		0	0	0	0	0	0	0	0	0	0	0	92
2	7.84	7.98	8.3	6.6	1312	1449		0	0	0	0	0	0	0	0	0	0	0	92
3	7.81	8.07	8.3	6.5	1301	1476		4	4	6	4	5	6	6	5	6	5	5	92
4	7.89	7.99	8.6	7.4	1361	1503		0	0	0	12	0	12	0	0	0	0	0	92
5	7.82	8.14	8.6	7.5	1246	1412		10	11	12	0	14	0	13	12	13	12	12	92
6	-	7.98	-	6.6	-	1351		15	12	11	16	16	15	18	15	16	17	17	
7																			
8																			
Total=								29	27	29	32	35	33	37	32	35	34	Mean Neonates/Female = 32.3	

Short-Term Chronic 3-Brood *Ceriodaphnia dubia* Survival & Reproduction Test Data

Client: _____ Reference Toxicant: _____ Material: Sodium Chloride Test Date: 3/19/13
 Project #: 20722 Test ID: 51197 Randomization: 10.7.3 Control Water: Modified EPAMH

	Day	pH		D.O.		Conductivity (µS/cm)		Temp (°C)	Survival / Reproduction												
		New	Old	New	Old	New	Old		A	B	C	D	E	F	G	H	I	J			
1000 mg/L	0	7.83		8.1		2242			0	0	0	0	0	0	0	0	0	0	0		
	1	7.93	8.10	8.9	5.7	2272	2606		0	0	0	0	0	0	0	0	0	0	0		
	2	7.79	7.98	8.5	6.3	2258	2510		0	0	0	0	0	0	0	0	0	0	0		
	3	7.77	8.05	8.6	6.6	2295	2607		3	3	4	5	5	5	4	3	5	4			
	4	7.86	7.96	8.7	7.6	2230	2517		0	0	12	12	0	12	0	0	0	0			
	5	7.79	8.12	8.9	7.7	2147	2471		4	9	0	0	12	0	9	9	9	13			
	6	-	7.95	-	6.9	-	2317		7	10	13	9	14	14	13	12	10	10			
	7																				
	8																				
Total=									14	22	29	26	31	31	26	24	24	27	Mean Neonates/Female = 25.4		
1500 mg/L	0	7.82		8.9		3210			0	0	0	0	0	0	0	0	0	0	0		
	1	7.90	8.07	8.7	6.4	3130	3880		0	0	0	0	0	0	0	0	0	0	0		
	2	7.76	7.97	8.8	6.4	3200	3500		0	0	0	0	0	0	0	0	0	0	0		
	3	7.78	8.01	8.9	6.6	3140	3660		0	5	3	4	3	4	2	0	0	5			
	4	7.82	7.94	9.2	7.6	3180	3490		0	0	0	0	0	0	0	0	0	0	0		
	5	7.76	8.11	9.5	6.8	3120	3750		2	7	8	0	6	5	7	3	2	6			
	6	-	7.95	-	7.0	-	3410		5	6	8	8	9	2	6	3	0	6			
	7																				
	8																				
Total=									7	18	19	12	18	11	15	6	2	17	Mean Neonates/Female = 12.5		

Short-Term Chronic 3-Brood *Ceriodaphnia dubia* Survival & Reproduction Test Data

Client: Reference Toxicant Material: Sodium Chloride Test Date: 3/19/13
 Project #: 20722 Test ID: 51197 Randomization: 10.7.3 Control Water: Modified EPAMH

	Day	pH		D.O.		Conductivity (µS/cm)		Temp (°C)	Survival / Reproduction											
		New	Old	New	Old	New	Old		A	B	C	D	E	F	G	H	I	J		
2000 mg/L	0	7.77		9.0		4070			0	0	0	0	0	0	0	0	0	0	0	
	1	7.86	8.06	8.8	5.9	4070	4660		0	0	0	0	0	0	0	0	0	0	0	
	2	7.74	7.96	9.1	6.4	4080	4490		0	0	0	0	0	0	0	0	0	0	0	
	3	7.73	7.98	9.1	6.6	4090	4510		0	0	3	0	0	0	0	0	0	0	0	
	4	7.80	7.91	9.5	7.7	4080	4560		0	0	0	0	0	0	0	0	0	0	0	
	5	7.73	8.09	9.7	7.1	4080	4520		0	3	3	4	4	1	4	2	2	0		
	6	-	7.93	-	6.6	-	4360		3	2	4	4	0	2	0	2	2	2		
	7																			
8																				
Total=								3	5	10	8	4	3	4	4	4	4	2	Mean Neonates/Female = 4.7	
2500 mg/L	0	7.76		9.2		4990			0	0	0	0	0	0	0	0	0	0	0	
	1	7.84	8.03	8.9	6.1	4950	5640		0	0	0	0	0	0	0	0	0	0	0	
	2	7.71	7.93	9.5	6.2	5000	5450		0	0	0	0	0	0	0	0	0	0	0	
	3	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	
	4	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	
	5	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	
	6	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	
	7	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	
	8	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	
Total=								0	0	0	0	0	0	0	0	0	0	0	Mean Neonates/Female = 0	

Appendix H

Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the *Hyaella azteca*



CETIS Summary Report

Report Date: 17 Apr-13 10:23 (p 1 of 1)
 Test Code: 51238 | 10-2733-2307

Hyalella 96-h Acute Survival Test							Pacific EcoRisk				
Batch ID:	08-5648-3566	Test Type:	Survival (96h)	Analyst:	Jill Miller						
Start Date:	21 Mar-13 14:45	Protocol:	GCML	Diluent:	SAM-5S						
Ending Date:	25 Mar-13 13:30	Species:	Hyalella azteca	Brine:	Not Applicable						
Duration:	95h	Source:	Chesapeake Cultures, Inc.	Age:	10						
Sample ID:	09-5539-3249	Code:	KCL	Client:	Reference Toxicant						
Sample Date:	21 Mar-13 14:45	Material:	Potassium chloride	Project:	20779						
Receive Date:	21 Mar-13 14:45	Source:	Reference Toxicant								
Sample Age:	NA (23.6 °C)	Station:	In House								
Comparison Summary											
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method				
18-5005-9895	96h Survival Rate	0.2	0.4	0.2828	NA		Fisher Exact/Bonferroni-Holm Test				
Point Estimate Summary											
Analysis ID	Endpoint	Level	g/L	95% LCL	95% UCL	TU	Method				
07-5518-7014	96h Survival Rate	EC50	0.4	0.321	0.498		Spearman-Kärber				
96h Survival Rate Summary											
C-g/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	10	1	1	1	1	1	0	0	0.0%	0.0%
0.1		10	1	1	1	1	1	0	0	0.0%	0.0%
0.2		10	1	1	1	1	1	0	0	0.0%	0.0%
0.4		10	0.5	0.303	0.697	0	1	0.167	0.527	105.0%	50.0%
0.8		10	0	0	0	0	0	0	0		100.0%
1.6		10	0	0	0	0	0	0	0		100.0%
96h Survival Rate Detail											
C-g/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Lab Water Contr	1	1	1	1	1	1	1	1	1	1
0.1		1	1	1	1	1	1	1	1	1	1
0.2		1	1	1	1	1	1	1	1	1	1
0.4		0	0	1	0	1	0	1	1	1	0
0.8		0	0	0	0	0	0	0	0	0	0
1.6		0	0	0	0	0	0	0	0	0	0
96h Survival Rate Binomials											
C-g/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Lab Water Contr	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
0.1		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
0.2		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
0.4		0/1	0/1	1/1	0/1	1/1	0/1	1/1	1/1	1/1	0/1
0.8		0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
1.6		0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1

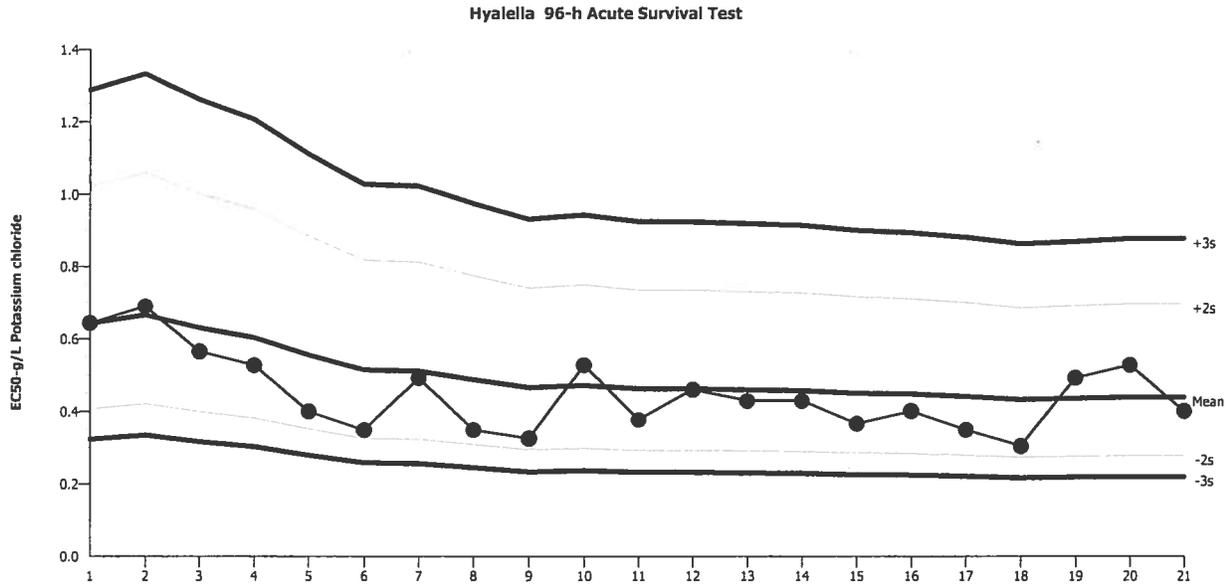
Hyalella 96-h Acute Survival Test

Pacific EcoRisk

Test Type: Survival (96h)
Protocol: GCML

Organism: Hyalella azteca (Freshwater Amphipo)
Endpoint: 96h Survival Rate

Material: Potassium chloride
Source: Reference Toxicant-REF



Mean: 0.4386 Count: 20 -2s Warning Limit: 0.2765 -3s Action Limit: 0.2195
Sigma: NA CV: 25.90% +2s Warning Limit: 0.6957 +3s Action Limit: 0.8762

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2012	Aug	29	17:30	0.6443	0.2057	1.667			02-4517-3779	00-6797-4390
2		Sep	5	16:20	0.6905	0.252	1.968			02-5537-4055	06-7697-6829
3			10	16:50	0.5657	0.1271	1.103			01-0322-5447	01-3121-7564
4			15	17:00	0.5278	0.08922	0.8026			20-8930-5803	20-1486-5380
5			24	17:00	0.4	-0.03859	-0.3992			06-7243-0311	19-7074-0004
6		Oct	1	14:50	0.3482	-0.09037	-1			13-5493-3751	03-3787-8066
7			8	15:20	0.4925	0.05387	0.5022			17-9863-7009	13-9275-7281
8			15	14:45	0.3482	-0.09037	-1			19-6387-5950	12-3302-5717
9			22	15:00	0.3249	-0.1137	-1.301			01-6277-3313	10-7412-5627
10		Nov	8	16:40	0.5278	0.08922	0.8026			03-4929-5256	16-1673-6358
11			21	14:00	0.3768	-0.06179	-0.6582			09-9953-5870	16-8000-4467
12			30	15:40	0.4595	0.02089	0.2017			11-5206-8410	12-2766-5331
13		Dec	1	16:20	0.4287	-0.009876	-0.09873			05-4371-0343	03-5226-5028
14			11	15:20	0.4287	-0.009876	-0.09873			06-8255-4240	09-7757-9218
15			23	16:15	0.3651	-0.07345	-0.7945			01-7471-3845	03-0326-8601
16	2013	Jan	26	14:30	0.4	-0.03859	-0.3992			12-4366-1537	08-0630-0748
17		Feb	6	16:10	0.3482	-0.09037	-1			08-2550-7353	20-4845-9431
18			11	16:00	0.3031	-0.1354	-1.601			10-1800-3331	17-6979-4440
19		Mar	7	13:20	0.4925	0.05387	0.5022			04-1588-9441	14-4479-8222
20			16	16:30	0.5272	0.08864	0.7979			10-2101-8156	13-0138-9882
21			21	14:45	0.4	-0.03859	-0.3992			10-2733-2307	07-5518-7014

96 Hour *Hyaella azteca* Reference Toxicant Test Data

Client: Reference Toxicant
 Test Material: Potassium Chloride
 Test ID#: 51238 Project # 20779
 Test Date: 3/21/13 Randomization: 10.6.11
 Feeding T0 Time: 0945 Initials: SNV

Organism Log #: 7146 Age: 10-11 days
 Organism Supplier: Chesapeake
 Control/Diluent: SAM-5 *Hyaella* Water
 Control Water Batch: 144
 Feeding T46 Time: 1000 Initials: ZC

Treatment (g/L)	Temp (°C)	pH	D.O. (mg/L)	Conductivity (µS/cm)	# Live Animals										Sign-Off
					A	B	C	D	E	F	G	H	I	J	
Control	23.6	7.96	8.6	412											Test Solution Prep: <u>SNV</u>
0.1	23.6	7.98	8.8	608											New WQ: <u>✓</u>
0.2	23.6	7.99	8.9	804											Initiation Date: <u>3/21/13</u>
0.4	23.6	7.99	9.0	1172											Initiation Time: <u>1445</u>
0.8	23.6	7.94	9.8	1919											Initiation Signoff: <u>ZC</u>
1.6	23.6	7.82	11.2	3360											RT Batch #: <u>10</u>
Meter ID	43A	PH18	R007	E604											
Control	23.4														Count Date: <u>3/22/13</u>
0.1	23.4														Count Time: <u>1005</u>
0.2	23.4														Count Signoff: <u>ZC</u>
0.4	23.4														
0.8	23.4						0	0	0	0	0	0	0	0	
1.6	23.4				0	0	0	0	0	0	0	0	0	0	
Meter ID	43A														
Control	23.5														Count Date: <u>3/23/13</u>
0.1	23.5														Count Time: <u>1000</u>
0.2	23.5														Count Signoff: <u>ZC</u>
0.4	23.5														
0.8	23.5				0	1	-	-	-	-	-	-	0	0	
1.6	-				-	-	-	-	-	-	-	-	-	-	
Meter ID	43A														
Control	23.4														Count Date: <u>3/24/13</u>
0.1	23.4														Count Time: <u>1025</u>
0.2	23.4														Count Signoff: <u>ZC</u>
0.4	23.4				0	0	1	0	1	0	1	1	1	0	
0.8	23.4				-	0	-	-	-	-	-	-	-	-	
1.6	-				-	-	-	-	-	-	-	-	-	-	
Meter ID	43A														
Control	23.6	7.71	8.3	421											Termination Date: <u>3/25/13</u>
0.1	23.6	7.67	8.1	630											Termination Time: <u>1330</u>
0.2	23.6	7.68	8.1	838											Termination Signoff: <u>ZC</u>
0.4	23.6	7.64	8.2	1215	-	-	1	-	1	-	1	1	1	-	Old WQ: <u>A</u>
0.8	23.6	7.69	7.9	1947	-	-	-	-	-	-	-	-	-	-	
1.6	-	7.68	7.9	3420	-	-	-	-	-	-	-	-	-	-	
Meter ID	43A	PH18	R004	E607											

Appendix I

Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Fathead Minnow



CETIS Summary Report

Report Date: 17 Apr-13 10:08 (p 1 of 2)
 Test Code: 51237 | 01-1756-1842

Chronic Larval Fish Survival and Growth Test **Pacific EcoRisk**

Batch ID: 13-0171-4874	Test Type: Growth-Survival (7d)	Analyst: Jill Miller
Start Date: 21 Mar-13 15:35	Protocol: EPA-821-R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 28 Mar-13 09:45	Species: Pimephales promelas	Brine: Not Applicable
Duration: 6d 18h	Source: Aquatox, AR	Age: 1

Sample ID: 13-5968-3000	Code: NaCl	Client: Pacific Ecorisk
Sample Date: 21 Mar-13 15:35	Material: Sodium chloride	Project: 20778
Receive Date: 21 Mar-13 15:35	Source: Reference Toxicant	
Sample Age: NA (25.3 °C)	Station: In House	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
19-6408-2388	7d Survival Rate	1.5	3	2.121	17.3%		Dunnett Multiple Comparison Test
17-1600-5174	Mean Dry Biomass-mg	1.5	>1.5	NA	19.1%		Dunnett Multiple Comparison Test
19-5118-4091	Mean Dry Weight-mg	1.5	>1.5	NA	20.0%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	g/L	95% LCL	95% UCL	TU	Method
09-7218-0153	7d Survival Rate	EC50	4.53	3.87	5.32		Trimmed Spearman-Kärber
11-0455-8006	Mean Dry Biomass-mg	IC5	1.64	1.11	1.67		Linear Interpolation (ICPIN)
		IC10	1.79	1.5	1.85		
		IC15	1.93	1.67	2.02		
		IC20	2.08	1.84	2.2		
		IC25	2.22	1.99	2.37		
		IC40	2.66	2.43	2.89		
		IC50	2.95	2.68	3.77		

7d Survival Rate Summary

C-g/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	4	0.925	0.869	0.981	0.7	1	0.075	0.15	16.2%	0.0%
0.75		4	0.9	0.87	0.93	0.8	1	0.0408	0.0816	9.07%	2.7%
1.5		4	0.8	0.77	0.83	0.7	0.9	0.0408	0.0816	10.2%	13.5%
3		4	0.675	0.656	0.694	0.6	0.7	0.025	0.05	7.41%	27.0%
6		4	0.55	0.485	0.615	0.3	0.7	0.0866	0.173	31.5%	40.5%
9		4	0	0	0	0	0	0	0		100.0%

Mean Dry Biomass-mg Summary

C-g/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water Contr	4	0.749	0.702	0.796	0.571	0.867	0.0629	0.126	16.8%	0.0%
0.75		4	0.883	0.852	0.914	0.809	0.97	0.0414	0.0828	9.38%	-17.9%
1.5		4	0.827	0.807	0.848	0.769	0.879	0.0278	0.0557	6.73%	-10.5%
3		4	0.395	0.371	0.419	0.333	0.45	0.032	0.064	16.2%	47.3%
6		4	0.203	0.165	0.242	0.088	0.34	0.0521	0.104	51.2%	72.8%
9		4	0	0	0	0	0	0	0		100.0%

CETIS Summary Report

Report Date: 17 Apr-13 10:08 (p 2 of 2)
 Test Code: 51237 | 01-1756-1842

Chronic Larval Fish Survival and Growth Test						Pacific EcoRisk
7d Survival Rate Detail						
C-g/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Contr	1	0.7	1	1	
0.75		0.9	0.8	0.9	1	
1.5		0.8	0.8	0.9	0.7	
3		0.7	0.7	0.7	0.6	
6		0.6	0.3	0.7	0.6	
9		0	0	0	0	
Mean Dry Biomass-mg Detail						
C-g/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Contr	0.783	0.571	0.867	0.775	
0.75		0.809	0.937	0.97	0.815	
1.5		0.879	0.791	0.871	0.769	
3		0.346	0.45	0.45	0.333	
6		0.34	0.088	0.206	0.18	
9		0	0	0	0	
7d Survival Rate Binomials						
C-g/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Contr	10/10	7/10	10/10	10/10	
0.75		9/10	8/10	9/10	10/10	
1.5		8/10	8/10	9/10	7/10	
3		7/10	7/10	7/10	6/10	
6		6/10	3/10	7/10	6/10	
9		0/10	0/10	0/10	0/10	

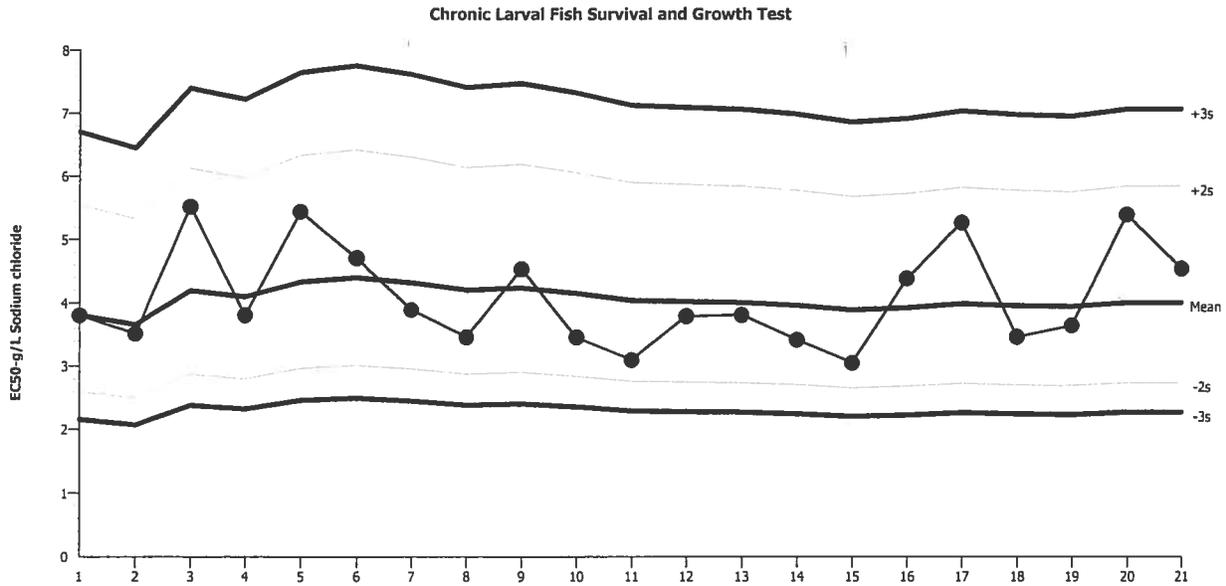
Chronic Larval Fish Survival and Growth Test

All Matching Labs

Test Type: Growth-Survival (7d)
Protocol: All Protocols

Organism: Pimephales promelas (Fathead Minn)
Endpoint: 7d Survival Rate

Material: Sodium chloride
Source: Reference Toxicant-REF



Mean: 3.999 Count: 20 -2s Warning Limit: 2.741 -3s Action Limit: 2.268
Sigma: NA CV: 20.80% +2s Warning Limit: 5.839 +3s Action Limit: 7.055

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2012	Oct	20	16:45	3.801	-0.1973	-0.2676			19-3973-2531	07-2771-4927	Pacific EcoRisk
2			26	16:40	3.517	-0.482	-0.6792			02-1421-5926	21-0329-5327	Pacific EcoRisk
3		Nov	6	15:00	5.523	1.524	1.708			08-8386-1484	15-1326-0940	Pacific EcoRisk
4			21	14:20	3.805	-0.1941	-0.2632			14-5064-0951	17-8868-4523	Pacific EcoRisk
5			28	16:00	5.443	1.444	1.631			00-6319-5142	17-0763-3639	Pacific EcoRisk
6		Dec	4	14:50	4.707	0.7087	0.8628			00-6406-0629	05-4089-6432	Pacific EcoRisk
7			11	16:15	3.888	-0.1113	-0.1493			03-5232-1815	08-4713-1943	Pacific EcoRisk
8	2013	Jan	3	14:45	3.455	-0.5441	-0.7734			10-5299-0893	17-1092-4822	Pacific EcoRisk
9			5	16:10	4.531	0.5324	0.6609			21-2657-3398	19-1219-7003	Pacific EcoRisk
10			8	15:00	3.453	-0.5456	-0.7757			15-7871-4848	05-6299-2184	Pacific EcoRisk
11			15	16:20	3.096	-0.903	-1.354			20-8476-2545	11-7633-6017	Pacific EcoRisk
12			17	16:50	3.785	-0.214	-0.2908			10-5550-1840	14-0048-6084	Pacific EcoRisk
13			22	16:15	3.808	-0.1911	-0.2589			06-8612-5279	13-0734-1179	Pacific EcoRisk
14		Feb	5	14:10	3.413	-0.5856	-0.8374			17-1491-1284	01-1442-0752	Pacific EcoRisk
15			12	14:30	3.051	-0.948	-1.431			01-6356-7312	08-3319-7756	Pacific EcoRisk
16			26	16:30	4.385	0.3857	0.4869			08-7628-4268	07-6670-6949	Pacific EcoRisk
17		Mar	5	14:15	5.268	1.269	1.457			06-1729-3880	07-6343-0859	Pacific EcoRisk
18			12	16:30	3.458	-0.5404	-0.7679			05-5242-9647	15-5916-0190	Pacific EcoRisk
19			15	16:20	3.641	-0.3574	-0.4952			18-6918-4054	01-1476-6508	Pacific EcoRisk
20			19	14:40	5.39	1.391	1.579			16-0681-5909	21-3871-5608	Pacific EcoRisk
21			21	15:35	4.535	0.536	0.6652			01-1756-1842	09-7218-0153	Pacific EcoRisk

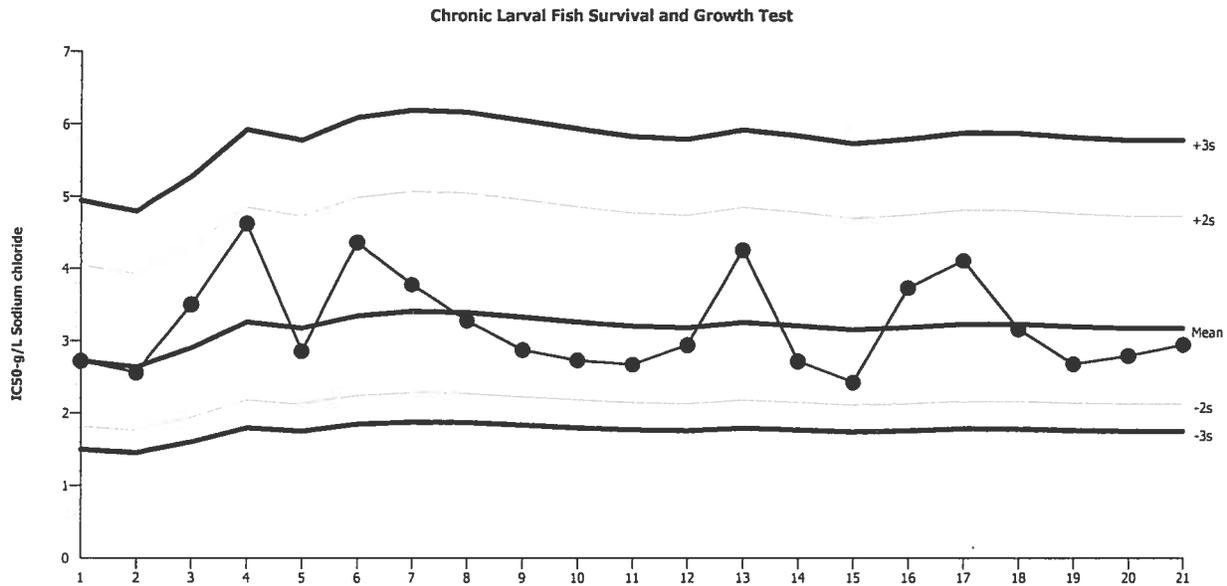
Chronic Larval Fish Survival and Growth Test

All Matching Labs

Test Type: Growth-Survival (7d)
Protocol: All Protocols

Organism: Pimephales promelas (Fathead Minn)
Endpoint: Mean Dry Biomass-mg

Material: Sodium chloride
Source: Reference Toxicant-REF



Mean: 3.174 Count: 20 -2s Warning Limit: 2.132 -3s Action Limit: 1.747
Sigma: NA CV: 22.00% +2s Warning Limit: 4.729 +3s Action Limit: 5.771

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2012	Oct	18	16:55	2.72	-0.4536	-0.7742			12-2678-4793	01-2033-6208	Pacific EcoRisk
2			20	16:45	2.56	-0.6139	-1.079			19-3973-2531	10-2107-9972	Pacific EcoRisk
3			26	16:40	3.5	0.3257	0.4904			02-1421-5926	03-9941-4591	Pacific EcoRisk
4		Nov	6	15:00	4.62	1.446	1.885			08-8386-1484	11-7692-3355	Pacific EcoRisk
5			21	14:20	2.856	-0.3178	-0.5296			14-5064-0951	07-7804-4882	Pacific EcoRisk
6			28	16:00	4.363	1.189	1.598			00-6319-5142	18-1834-6198	Pacific EcoRisk
7		Dec	4	14:50	3.779	0.6045	0.8751			00-6406-0629	15-0408-8854	Pacific EcoRisk
8			11	16:15	3.279	0.1045	0.1627			03-5232-1815	13-6109-7092	Pacific EcoRisk
9	2013	Jan	3	14:45	2.87	-0.3042	-0.5058			10-5299-0893	05-8688-4488	Pacific EcoRisk
10			8	15:00	2.73	-0.444	-0.7565			15-7871-4848	03-3619-1173	Pacific EcoRisk
11			15	16:20	2.67	-0.5036	-0.8672			20-8476-2545	10-5708-8737	Pacific EcoRisk
12			17	16:50	2.936	-0.2377	-0.3907			10-5550-1840	03-0930-3918	Pacific EcoRisk
13			22	16:15	4.251	1.077	1.467			06-8612-5279	09-5587-7133	Pacific EcoRisk
14		Feb	5	14:10	2.715	-0.4587	-0.7835			17-1491-1284	19-2180-6599	Pacific EcoRisk
15			12	14:30	2.424	-0.7497	-1.353			01-6356-7312	20-0395-8186	Pacific EcoRisk
16			26	16:30	3.733	0.5586	0.8138			08-7628-4268	00-2068-0318	Pacific EcoRisk
17		Mar	5	14:15	4.11	0.9363	1.298			06-1729-3880	14-9227-3036	Pacific EcoRisk
18			12	16:30	3.155	-0.01898	-0.0301			05-5242-9647	13-6095-3744	Pacific EcoRisk
19			15	16:20	2.678	-0.4963	-0.8536			18-6918-4054	07-9276-3319	Pacific EcoRisk
20			19	14:40	2.793	-0.381	-0.6419			16-0681-5909	06-3936-9007	Pacific EcoRisk
21			21	15:35	2.947	-0.2274	-0.3732			01-1756-1842	11-0455-8006	Pacific EcoRisk

7 Day Chronic Fathead Minnow Reference Toxicant Test Data

Client: Reference Toxicant
 Test Material: Sodium Chloride
 Test ID#: 51237 Project #: 20778
 Test Date: 3/21/13 Randomization: 4.6.1

Organism Log#: 7149 Age: 48 hrs
 Organism Supplier: Aquatox
 Control/Diluent: EPAMH
 Control Water Batch: 1579

Treatment (g/L)	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µs/cm)		# Live Organisms				SIGN-OFF
		New	Old	New	Old	New	Old	A	B	C	D	
Control	25.3	8.16		4.0		298		10	10	10	10	Date: 3/21/13
0.75	25.3	8.12		8.9		1876		10	10	10	10	Test Solution Prep: MK
1.5	25.3	8.09		9.9		3100		10	10	10	10	New WQ: N/A
3	25.3	8.05		8.9		6020		10	10	10	10	Initiation Time: 1535
6	25.3	7.98		9.1		11100		10	10	10	10	Initiation Signoff: SS
9	25.3	7.89		9.5		16130		10	10	10	10	RT Stock Batch #: 151
Meter ID	30A	PH18		R007		E004						
Control	25.9	8.03	7.99	7.9	7.3	289	359	10	9	10	10	Date: 3/22/13
0.75	25.9	8.01	7.94	7.9	7.9	1912	1866	10	10	9	10	Test Solution Prep: SS
1.5	25.9	7.99	7.86	8.0	7.5	3180	3110	10	8	10	9	New WQ: VU
3	25.9	7.95	7.81	8.2	7.9	6060	6030	10	10	10	10	Renewal Time: 1025
6	25.9	7.88	7.78	8.4	7.9	11190	11080	10	10	10	10	Renewal Signoff: CS
9	25.9	7.83	7.73	8.8	8.0	16030	16100	0	0	0	0	Old WQ: N/A
Meter ID	30A	PH18	PH16	R006	R007	E004	E007					RT Stock Batch #: 151
Control	25.5	7.97	7.66	8.8	6.7	292	306	10	7	10	10	Date: 3-23-13
0.75	25.5	7.99	7.65	8.8	6.9	1780	2000	10	10	9	10	Test Solution Prep: DS
1.5	25.5	7.98	7.61	8.7	6.8	3220	3250	10	8	10	9	New WQ: DS
3	25.5	7.92	7.59	8.8	7.1	5960	6170	10	10	10	10	Renewal Time: 1115
6	25.5	7.86	7.55	8.8	7.1	11190	11290	7	7	9	8	Renewal Signoff: PL
9	-	-	-	-	-	-	-	-	-	-	-	Old WQ: N/A
Meter ID	30A	PH18	PH16	R004	R007	E004	E007					RT Stock Batch #: 152
Control	25.7	8.22	7.82	8.6	7.2	292	295	10	7	10	10	Date: 3/24/13
0.75	25.7	8.15	7.75	8.7	7.5	1888	1763	10	8	9	10	Test Solution Prep: SVV
1.5	25.7	8.11	7.68	8.8	7.2	3270	3200	10	8	10	9	New WQ: CE
3	25.7	8.06	7.43	8.9	7.3	5960	5960	10	8	10	10	Renewal Time: 1010
6	25.7	7.99	7.58	9.1	7.2	11060	11220	7	6	9	8	Renewal Signoff: SVV
9	-	-	-	-	-	-	-	-	-	-	-	Old WQ: CE
Meter ID	30A	PH18	PH18	R004	R004	E006	E006					RT Stock Batch #: 152

7 Day Chronic Fathead Minnow Reference Toxicant Test Data

Client: Reference Toxicant
 Test Material: Sodium Chloride
 Test ID#: 51237 Project #: 20778
 Test Date: 3/21/13 Randomization: 4-6-1

Organism Log#: 749 Age: <48 hrs
 Organism Supplier: Aquatox
 Control/Diluent: EPAMH
 Control Water Batch: 1579

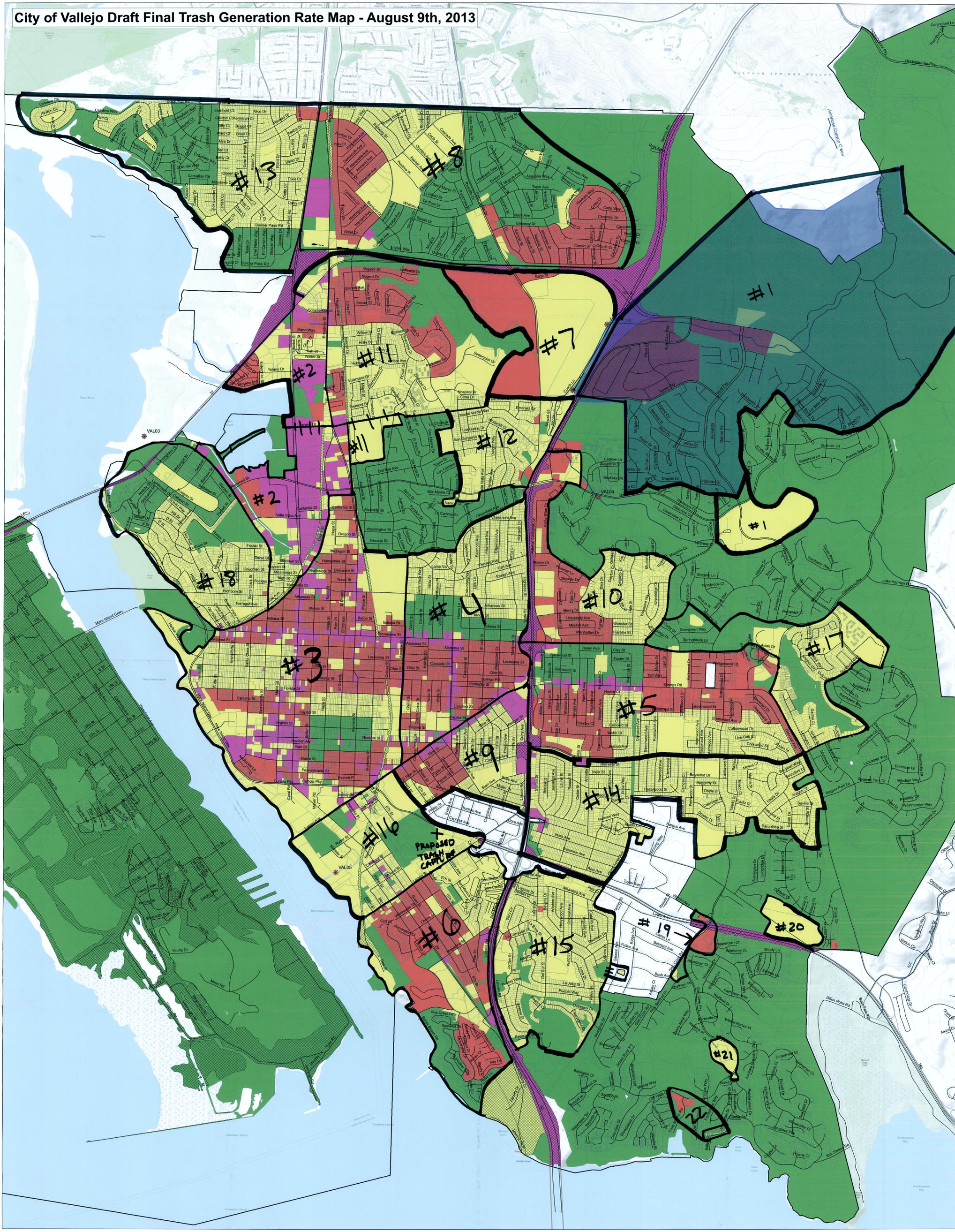
Treatment (g/L)	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µs/cm)		# Live Organisms				SIGN OFF
		new	old	new	old	New	Old	A	B	C	D	
Control	25.7	8.26	7.103	8.7	6.8	294	311	10	7	10	10	Date: 3-25-13
0.75	25.7	8.15	7.59	8.6	7.1	1699	1951	10	8	9	10	Test Solution Prep: Jm
1.5	25.7	8.09	7.58	8.6	7.0	3290	3300	10	8	10	8	New WQ: LW
3	25.7	8.02	7.50	8.7	7.0	5990	6120	9	7	10	8	Renewal Time: 1055
6	25.7	7.92	7.50	8.9	6.7	11170	11180	6	4	7	8	Renewal Signoff: Jm
9	-	-	-	-	-	-	-	-	-	-	-	Old WQ: CE
Meter ID	30A	pH16	pH18	R007	R004	E004	E007					RT Stock Batch #: 152
Control	25.3	8.29	7.70	8.2	7.5	3041	306	10	7	10	10	Date: 3/26/13
0.75	25.3	8.13	7.69	8.3	7.6	1810	1751	10	8	9	10	Test Solution Prep: KB
1.5	25.3	8.09	7.65	8.5	7.8	3270	3290	9	8	10	7	New WQ: FOLB
3	25.3	8.02	7.64	8.6	7.9	5900	6040	9	7	10	8	Renewal Time: 1000
6	25.3	7.91	7.58	9.3	7.8	11020	11230	6	4	7	6	Renewal Signoff: AS
9	-	-	-	-	-	-	-	-	-	-	-	Old WQ: a/l
Meter ID	30A	pH15	pH16	R007	R004	E007	E007					RT Stock Batch #: 152
Control	25.9	8.38	7.80	8.8	7.1	292	308	10	7	10	10	Date: 3-27-13
0.75	25.9	8.24	7.69	8.9	7.1	1873	1757	9	8	9	10	Test Solution Prep: Jm
1.5	25.9	8.20	7.63	9.0	6.9	3350	3260	8	8	9	7	New WQ: RA
3	25.9	8.14	7.61	9.2	7.3	6040	5980	8	7	7	7	Renewal Time: 1050
6	25.9	8.05	7.56	9.7	7.5	10930	11150	6	4	7	6	Renewal Signoff: Jm
9	-	-	-	-	-	-	-	-	-	-	-	Old WQ: DH
Meter ID	30A	pH16	pH16	R004	R004	E006	E006					RT Stock Batch #: 152
Control	25.9		7.83		8.0		314	10	7	10	10	Date: 3/28/13
0.75	25.9		7.75		7.9		1969	9	8	9	10	Termination Time: 0945
1.5	25.9		7.69		8.0		3440	8	8	9	7	Termination Signoff: KP
3	25.9		7.64		8.1		41260 ⁶¹⁷⁰	7	7	7	6	Old WQ: A
6	25.9		7.59		7.9		11260	6	3	7	6	
9	-		-		-		-	-	-	-	-	
Meter ID	30A		pH15		R004		E008					

Fathead Minnow Dry Weight Data Sheet

Client: Reference Toxicant Test ID #: 51237 Project #: 20778
 Sample: Sodium Chloride Tare Weight Date: 3/28/13 Sign-off: JLA
 Test Date: 3/21/13 Final Weight Date: 3/31/13 Sign-off: CA

Pan ID	Concentration	Replicate	Initial Pan Weight (mg)	Final Pan Weight (mg)	Initial # of Organisms	Biomass Value (mg)
1	Control	A	165.76	173.59	10	0.783
2		B	118.54	124.25	10	0.571
3		C	195.77	204.44	10	0.861
4		D	179.99	187.74	10	0.775
5	0.75	A	178.20	186.29	10	0.809
6		B	137.42	146.79	10	0.937
7		C	125.83	135.53	10	0.970
8		D	123.87	132.02	10	0.815
9	1.5	A	148.71	157.50	10	0.879
10		B	117.54	125.45	10	0.791
11		C	171.72	180.43	10	0.871
12		D	131.40	139.09	10	0.769
13	3	A	128.50	131.96	10	0.346
14		B	135.54	140.04	10	0.450
15		C	154.10	158.60	10	0.450
16		D	164.91	168.24	10	0.333
17	6	A	175.32	178.22	10	0.340
18		B	177.77	178.65	10	0.088
19		C	116.88	118.94	10	0.206
20		D	189.75	191.55	10	0.180
21	9	A	182.75	—	10	—
22		B	135.86	—	10	—
23		C	150.24	—	10	—
24		D	129.70	—	10	—
QA1			134.47	134.51		
QA2			154.10	154.10		
QA3			133.01	132.95		
Balance ID:			BAL01	BAL01		

City of Vallejo Draft Final Trash Generation Rate Map - August 9th, 2013

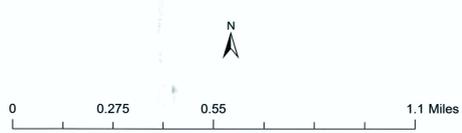


Legend

Generation Rate (gal/acre/year)

- Low (< 5)
- Medium (5 - < 10)
- Medium/High
- High (10 - < 50)
- High/Very High
- Very High (> 50)

- Non-Jurisdictional
- Full Trash Capture
- Trash Hot Spot
- Streets
- Agency Boundary
- Creeks



Data Sources:
 Roads: Tele Atlas
 City Boundaries: Solano County
 Background: ESRI World Topographic Map

Map Created By:
 EOA, Inc.

Date:
 August 9th, 2013