



FAIRFIELD-SUISUN SEWER DISTRICT

1010 CHADBOURNE ROAD • FAIRFIELD, CALIFORNIA 94534 • (707) 429-8930 • WWW.FSSD.COM
KATHY HOPKINS, GENERAL MANAGER

September 15, 2010

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

ATTN: Ms. Jolanta Uchman, Water Resources Control Engineer

RE Fairfield-Suisun Urban Runoff Management Program
FY 2009-2010 Annual Report

Dear Mr. Wolfe:

The attached FY2009-2010 Annual Report represents the Fairfield-Suisun Urban Runoff Management Program's responses to the items requested per Provision C.16 of NPDES Permit No. CA S612008 (Permit) as adopted on October 14, 2009 via Order No. R2-2009-0074. This letter also transmits by reference the BASMAA Regional Supplements to the Annual Report for FY 2009-2010.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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,

Kevin A. Cullen, P.E.
Senior Environmental Engineer

Attachment

cc: Dale Bowyer, RWQCB

FY 2009-2010 Annual Report

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

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Section 1 – Permittee Information

Background Information			
Permittee Name:	Fairfield-Suisun Urban Runoff Management Program		
Population:	130,660 (combined)		
NPDES Permit No.:	CAS612008		
Order Number:	R2-2009-0074		
Reporting Time Period (month/year):	July 1, 2009 through June 30, 2010		
Name of the Responsible Authority:	Fairfield-Suisun Urban Runoff Management Program	Title:	Program Manager
Mailing Address:	1010 Chadbourne Road		
City:	Fairfield	Zip Code:	94534
		County:	Solano
Telephone Number:	707-428-9129	Fax Number:	707-429-1280
E-mail Address:	KCullen@fssd.com		
Name of the Designated Stormwater Management Program Contact (if different from above):	Kevin Cullen	Title:	Fairfield-Suisun Urban Runoff Program Manager
Department:	Fairfield-Suisun Sewer District		
Mailing Address:	1010 Chadbourne Rd.		
City:	Fairfield	Zip Code:	94534
		County:	Solano
Telephone Number:	707-428-9129	Fax Number:	707-429-1280
E-mail Address:	KCullen@fssd.com		

Section 2 - Provision C.2 Reporting Municipal Operations

Program Highlights and Evaluation

Highlight/summarize activities for reporting year:

Summary:

The Program developed a Municipal Maintenance BMP Manual to ensure compliance with C.2 of the Municipal Regional Permit. Both cities updated their Corporation Yard stormwater pollution prevention plans.

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

Place an **X** in the boxes next to implemented BMPs to indicate that these BMPs were implemented in applicable instances. If not applicable, type **NA** in the box. If one or more of these BMPs were not adequately implemented during the reporting fiscal year then indicate so and provide explanation in the comments section below.

<input type="checkbox"/>	Control of debris and waste materials during road and parking lot installation, repaving or repair maintenance activities from polluting stormwater
<input type="checkbox"/>	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.
<input type="checkbox"/>	Sweeping and/or vacuuming and other dry methods to remove debris, concrete, or sediment residues from work sites upon completion of work.

Comments:

See individual city reports

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

Place an **X** in the boxes next to implemented BMPs to indicate that these BMPs were implemented in applicable instances. If not applicable, type **NA** in the box. If one or more of these BMPs were not adequately implemented during the reporting fiscal year then indicate so and explain in the comments section below:

<input type="checkbox"/>	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
<input type="checkbox"/>	Implementation of the BASMAA Mobile Surface Cleaner Program BMPs

Comments: See individual city reports.

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

Place an **X** in the boxes next to implemented BMPs to indicate that these BMPs were implemented in applicable instances. If not applicable, type **NA** in the box. If one or more of these BMPs were not adequately implemented during the reporting fiscal year then indicate so and explain in the comments section below:

<input type="checkbox"/>	Control of discharges from bridge and structural maintenance activities directly over water or into storm drains
<input type="checkbox"/>	Control of discharges from graffiti removal activities
<input type="checkbox"/>	Proper disposal for wastes generated from bridge and structure maintenance and graffiti removal activities
<input type="checkbox"/>	Implementation of the BASMAA Mobile Surface Cleaner Program BMPs for graffiti removal

Comments:

See individual city reports

C.2.d. ► Stormwater Pump Stations

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

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

(For FY 10-11 Annual Report only) Complete the following table for dry weather DO monitoring and inspection data for pump stations¹ (add more rows for additional pump stations):

Pump Station Name and Location	First inspection Dry Weather DO Data		Second inspection Dry Weather DO Data	
	Date	mg/L	Date	mg/L

(For FY 10-11 Annual Report only) 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:

¹ Pump stations that pump stormwater into stormwater collection systems or infiltrate into a dry creek immediately downstream are exempt from DO monitoring.

Attachments:

(For FY 10-11 Annual Report only) 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 <i>(2x/year required)</i>	Presence of Trash <i>(Cubic Yards)</i>	Presence of Odor <i>(Yes or No)</i>	Presence of Color <i>(Yes or No)</i>	Presence of Turbidity <i>(Yes or No)</i>	Presence of Floating Hydrocarbons <i>(Yes or No)</i>

C.2.e. ► Rural Public Works Construction and Maintenance	
Does your municipality own/maintain rural ² roads:	<input type="checkbox"/> Yes <input type="checkbox"/> No
If your answer is No then skip to C.2.f.	
Place an X in the boxes next to implemented 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 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: See individual city reports.	

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: Fairfield-Suisun Urban Runoff Management Program

C.2.f. ► Corporation Yard BMP Implementation

Place an **X** in the boxes below that apply to your corporation yard(s):

- We do not have a corporation yard
- Our corporation yard is a filed NOI facility and regulated by the California State Industrial Stormwater NPDES General Permit
- We certify that we have a current **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:

- Control of pollutant discharges to storm drains such as wash waters from cleaning vehicles and equipment
- Routine inspection prior to the rainy seasons of corporation yard(s) to ensure non-stormwater discharges have not entered the storm drain system
- Containment of all vehicle and equipment wash areas through plumbing to sanitary or another collection method
- 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
- Cover and/or berm outdoor storage areas containing waste pollutants

Comments:

See individual city reports.

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

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

C.3.a. ► New Development and Redevelopment Performance Standard Implementation Summary Report

(For FY 10-11 Annual Report only) Provide a brief summary of the methods of implementation of Provisions C.3.a.i.(1)-(8).

Summary:

See individual city reports.

C.3.b. ► 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. [Note: this applies only to agencies planning to implement pilot green streets projects. If you are planning a pilot green streets project, summarize project status.]

Summary:

See individual city reports.

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

Fill in attached table **C.3.b.v.(1)** or attach your own table including the same information

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

(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 individual city report.
(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 individual city report.

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 ³ , Street Address	Name of Developer	Project Phase No. ⁴	Project Type & Description ⁵	Project Watershed ⁶	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New and/or Replaced Impervious Surface Area ⁷ (ft ²)	Total Pre-Project Impervious Surface Area ⁸ (ft ²)	Total Post-Project Impervious Surface Area ⁹ (ft ²)
Private Projects										
Public Projects										

³ Include cross streets.

⁴ If a project is being constructed in phases, use a separate row entry for each phase.

⁵ 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.

⁶ State the watershed(s) that the Regulated Project drains to. Optional but recommended: Also state the downstream watershed(s).

⁷ State both the total new impervious surface area and the total replaced impervious surface area, as applicable.

⁸ For redevelopment projects, state the pre-project impervious surface area.

⁹ 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

Project Name Project No.	Status of Project ¹⁰	Source Control Measures ¹¹	Site Design Measures ¹²	Treatment Systems Approved ¹³	Operation & Maintenance Responsibility Mechanism ¹⁴	Hydraulic Sizing Criteria ¹⁵	Alternative Compliance Measures ^{16/17}	Alternative Certification ¹⁸	HM Controls ^{19/20}
Private Projects									
Public Projects									

¹⁰ For private projects, state project application submittal date; application deemed complete date; and, final discretionary approval date. For public projects, state plans and specifications approval date.

¹¹ 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.

¹² 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.

¹³ 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.).

¹⁴ 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.

¹⁵ See Provision C.3.d. "Numeric Sizing Criteria for Stormwater Treatment Systems" for list of hydraulic sizing design criteria (i.e., 1.a., 1.b., 2.a., 2.b., 2.c., or 3)

¹⁶ 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.

¹⁷ 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.

¹⁸ Note whether a third party was used to certify the project design complies with Provision C.3.d.

¹⁹ If HM control is not required, state why not.

²⁰ 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. ► Installed Stormwater Treatment Systems Operation and Maintenance Verification Inspection Program Reporting

Fill in table **below** or attach your own table including the same information

Facility/Site Inspected and Location	Party Responsible ²¹ For Maintenance	Date of Inspection	Type of Inspection ²²	Type of Treatment/HM Control(s) Inspected ²³	Inspection Findings or Results ²⁴	Enforcement Action Taken ²⁵	Comments

²¹ State the responsible operator for installed stormwater treatment systems and HM controls.

²² State the type of inspection (e.g., annual, follow-up, spot, etc.).

²³ 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.

²⁴ State the inspection findings or results (e.g., proper installation, improper installation, proper O&M, immediate maintenance needed, etc.).

²⁵ State the enforcement action(s) taken, if any, as appropriate and consistent with your municipality's Enforcement Response Plan.

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

C.4.a.ii ► Legal Authority

(For FY 09-10 Annual Report only) Do you have adequate legal authority to obtain effective stormwater pollutant control on industrial sites? Yes No

If **No**, explain:

 The Program has effectively used the Fairfield-Suisun Sewer District's Stormwater Ordinance, as well as Fish and Game Code section 5650 to control stormwater pollution on industrial and commercial sites. The cities have chosen to move forward with adopting their own stormwater ordinances. The city of Fairfield adopted a new stormwater ordinance in August of 2010. It is anticipated that Suisun city will adopt its own stormwater ordinance before the end of the 2010 calendar year.

C.4.c.ii.(5) ► Enforcement Response Plan

(For FY 09-10 Annual Report only) Have you developed and implemented an Enforcement Response Plan by April 1, 2010? Yes No

If **No**, explain:

Program Highlights

Provide background information, highlights, trends, etc. For FY 09-10 Annual Report describe steps taken to revise your program to meet new data tracking and reporting requirements.

Since 1993 the Program and the Solano County Department of Resource Management have conducted stormwater inspections of industrial and commercial businesses within the Program area. The Program contracts with the Solano County Department of Resource Management, Environmental Health Division to ensure that business inspections are properly performed and documented. Solano County Department of Resource Management Hazardous Materials inspectors provide inspection and outreach services to local industrial and commercial businesses. In addition Solano County's Consumer Protection Section inspects and provides outreach services to food handling businesses and restaurants.

Highlights for fiscal year 2009-10 are minimal except for the adoption of the MRP. The MRP requires the development and implementation of an Industrial and Commercial Business Inspection Plan. This document has been developed and is being implemented by the Program. The Inspection Plan categorizes commercial and industrial sites within the Program's jurisdiction based on their potential to pollute. The Inspection Plan also has a total number and list of industrial and commercial facilities requiring inspections.

Trends for fiscal year 2009-10 can be seen from the tables that follow in section C.4 of this Annual Report. Retail trade, finance and real estate is the standard industrial business category which has the highest number of potential or actual discharge violations. The primary source of these violations is automobile fluids. Residual motor oil is found in the parking lots of restaurants, grocery stores or other retail outlets. Potential or actual

FY 2009-2010 Annual Report

C.4 – Industrial and Commercial Site Controls

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

discharges are cited on the inspection form and brought to the site manager's attention as verbal warnings. The site is viewed overall as being compliant. Consequently, violations noted by categories (C.4.c.iii(2)) and business category (C.4.c.iii.(3)) are higher in number than violations noted, excluding verbal warnings (C.4.c.iii(1)).

Due to the more specific reporting requirements in the MRP, the Program has chosen to query specific reporting requirements for FY 09-10. All of the data has been tracked and collected, individual queries have been developed to satisfy the new requirements of the permit. The FSURMP will be revising its inspection forms and database in FY 10-11 to meet the new requirements of the MRP.

C.4.b.i. ► Business Inspection Plan

(For FY 09-10 Annual Report only) 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 attached list.

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 attached list.

C.4.c.iii.(1) ► Facility Inspections

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

	Number	Percent
Number of businesses inspected (if known)	434	

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

No	Facility Name	Address	City	Telephone	SIC No
1	5-Star Car Wash	900 Travis Blvd	Fairfield	425-9274	7542
2	7 Flags Car Wash	2270 N Texas Street	Fairfield	426-2000	7542
3	7-Eleven	4449 Central Pl	Fairfield	864-6223	5411
4	7-Eleven	801 Sunset Ave	Suisun City	428-0311	5411
5	7-Eleven - E. Tabor Ave	206 E Tabor Ave	Fairfield	828-6755	5411
6	7-Eleven - Phoenix Dr	1518 Phoenix Dr	Fairfield	425-2012	5411
7	7-Eleven - Sunset Ave	801 Sunset Ave	Suisun City	399-9028	5921
8	7-Seven Food & Liquor	1500 W Texas Street	Fairfield	428-4020	5921
9	A & G Automotive Sales	631 Railroad Ave, Ste G	Suisun City	422-2323	5541
10	A&J's Pub & Grill	605 Main St	Suisun City	429-8266	5812
11	Aalba Dent	400 Watt Dr	Fairfield	864-3334	3559
12	Abbott Laboratories - Ross Products Division	2302 Courage dr	Fairfield	399-1100	2064
13	ABC Supply Co, Inc.	2000 Walters Ct	Fairfield		1711
14	Abco Laboratories	2450 South Watney Wy	Fairfield	432-2200	2834
15	AC's Pub & Grill	666 Parker Rd	Fairfield	437-6666	5812
16	Adalberto's Mexican Food	2370 N Texas St	Fairfield	428-3604	5812
17	AFC Sushi	270 Sunset Ave	Suisun City	426-1023	5812
18	Afgan Tandour	1586 Gateway C-5	Fairfield		5812
19	Alejandro's Taqueria	936 W Texas St	Fairfield	429-2155	5812
20	All Star Rents	2525 Claybank Rd	Fairfield	422-2270	7299
21	Allan Witt Aquatic Center Concessions	1741 W Texas St	Fairfield	399-1999	5812
22	Allen Simmons Heating & Sheet Metal	1973 West Cordelia Rd	Suisun City	864-0392	1711
23	AM PM Mini Market - Travis	3000 Travis Blvd	Fairfield	425-3425	5411
24	AM PM Mini Mart #5330	299 Marina Blvd	Suisun City	429-0132	5411
25	Amar Grocery	1107 Texas St	Fairfield	399-7100	5411
26	American Auto Body Specialist	1950 Walters Ct	Fairfield	434-9560	7532
27	Amos & Andrews	1801 Walters Ct	Fairfield	422-4844	1794
28	Amy Blanc School	230 Atlantic Ave	Fairfield	421-4100	8211
29	Anheuser Busch	3101 Busch Dr	Fairfield	429-2000	2082
30	Anna Kyle School	1600 Kidder Ave	Fairfield	421-3956	8211
31	Applebee's	1350 Travis Blvd	Fairfield	399-0796	5812
32	Applied Materials	2700 Maxwell Way	Fairfield	423-2100	3559
33	Arby's #5013	4445 Central Pl	Fairfield	864-1158	5812
34	Arco - AM/PM #6095	2339 North Texas St	Fairfield	422-2810	5541
35	Arco - Cordelia	4449 Central Place	Fairfield	864-6223	5541
36	Arco - Marina Blvd.	299 Marina Blvd	Fairfield	429-0122	5541
37	Arco - Travis Blvd.	3000 Travis Bl	Fairfield	425-3425	5541
38	Arco AM PM Mini Mart	105 Lopes Rd	Fairfield	864-3054	5411
39	Arco Basara	3650 Nelson Rd	Fairfield	425-4040	5541
40	Armijo High School	824 Washington St	Fairfield		5812
41	Armour Petroleum	2400 Cement Hill Rd B-3	Fairfield	437-6668	5541
42	Ashland Chemical	2461 Crocker Circle	Fairfield	437-4000	2821
43	AT&T	149 Lopes Rd	Fairfield		4812
44	AT&T Corp - Lopes	2619 Lopes Rd	Fairfield		4812
45	AT&T Corp - Pebble Beach	3001 Pebble Beach	Fairfield		4812
46	AT&T Mobility	1010 Chadbourne Rd	Fairfield	477-0634	4812

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

No	Facility Name	Address	City	Telephone	SIC No
47	AT&T Mobility #40951	606 Parker Rd	Fairfield	468-4951	4812
48	AT&T Mobility #47754	2440 N Texas St	Fairfield		4812
49	AT&T Mobility #68465	2420 Martin Rd	Fairfield	468-4951	4812
50	AT&T Mobility #68597	4135 Abernathy Rd	Fairfield		4812
51	AT&T Mobility (Cordelia)	3600 Ritchie Rd	Fairfield		4812
52	AT&T Mobility at FF	Lynch 2 miles Off	Fairfield	559-8800	4812
53	AT&T Mobility Manuel Compos	Cement Hill/Manuel Compos	Fairfield	580-6000	4812
54	AT&T Mobility Travis AFB	Building #381	Fairfield		4812
55	Athenian Grill	750 Kellogg St	Suisun City	425-0500	5812
56	Auto Zone Corporation	288 Sunset Ave	Suisun City	428-3994	5531
57	Autozone #3033	1706 N Texas Street	Fairfield	428-4256	7538
58	Avalanche Yogurt	321 W Texas, Ste 102	Fairfield	425-4866	5812
59	B.D. Arrington, Inc.	2026 N Texas Street	Fairfield	425-4357	5541
60	Babs Delta Diner	770 Kellogg St	Suisun City	421-1674	5812
61	Baldo's Mexican Food	1730 W Texas St	Fairfield	426-6130	5812
62	Ball Metal Beverage Container Corp.	2400 Huntington Dr	Fairfield	437-5411	3411
63	Bamboo Garden Restaurant	100 E Tabor Ave	Fairfield	428-1818	5812
64	Bangkokian Thai Cuisine	1500 Oliver Rd, Ste L	Fairfield	427-8688	5812
65	Barb's Courthouse Deli	600 Union Ave	Fairfield	425-6034	5812
66	Barnes and Noble Bookstore	1620 Gateway Blvd	Fairfield	435-0484	5812
67	Baskin Robbins	3069 Travis Blvd	Fairfield	428-3131	5812
68	Baskin Robbins	2121 N Texas St	Fairfield	428-9662	5812
69	Basra AM/PM	2329 N Texas St	Fairfield	422-2810	5411
70	Bay Sushi	1305 Gateway Blvd Ste E-5	Fairfield	422-1630	5812
71	Bertha's Restaurant	413 Marina Center	Suisun City	399-8507	5812
72	Bev Mo!	1545 Holiday Ln	Fairfield	427-8182	5921
73	Big Italian Pizzeria	704 W Texas St	Fairfield	421-9000	5812
74	Big O Tires	2349 North Texas St	Fairfield	427-8474	7538
75	Black Bear Diner	111 Sunset Ave	Suisun City	422-4386	5812
76	Bombay Palace	1123 W Texas St	Fairfield	425-8899	5812
77	Bonfare Market #27	890 E Travis Blvd	Fairfield	429-3459	5411
78	Bonfare Market #31	2301 Walters Rd	Fairfield	428-1176	5411
79	Bonfare Market #37	1500 Petersen Rd	Suisun City	428-1212	5812
80	Bonfare Market #37 - Walters Rd.	1500 Walters Rd	Suisun City		5541
81	Bonfare Market No. 27	890 East Travis Blvd	Fairfield	429-3459	5541
82	Bozo's Bandwagon	586 Parker Rd	Fairfield	437-8300	5812
83	Bransford School	900 Travis Blvd	Fairfield	435-2875	8211
84	Bugambilias	739 Texas St	Fairfield	421-8545	5812
85	Burger King	190 Pittman Rd	Fairfield	864-8466	5812
86	Burger King - Anderson Dr	1260 Anderson Dr	Suisun City	428-7185	5812
87	Burger King - Holiday Ln	1475 Holiday Ln	Fairfield	429-4648	5812
88	Burger King - Huntington Dr	2005 Huntington Dr	Fairfield	437-3476	5812
89	Burger King - Texas St	2415 N Texas St	Fairfield	425-3876	5812
90	Calbee America	2600 Maxwell Road	Fairfield	427-2500	2096
91	California Marine Sports	1240 Kellogg St	Suisun City	864-2500	5551
92	California Shingle & Shake	1179 Western St #A	Fairfield	427-0700	2592
93	California Street Machine	96 Railroad Ave	Suisun City	429-1888	7538

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

No	Facility Name	Address	City	Telephone	SIC No
94	Canepa Deli	721 W Texas St	Fairfield	422-3450	5812
95	Carl's Jr - Central Wy	4400 Central Way	Fairfield	864-2122	5812
96	Carl's Jr - Texas St	2380 N Texas St	Fairfield	425-6993	5812
97	Carney, Oriana	1212 Portrero Cir	Suisun City	759-3574	
98	Cassil Freight Inc.	5054 Peabody Rd	Fairfield	437-7354	4231
99	Cast Iron Grill	700 Main St, Ste 104	Suisun City	425-1700	5812
100	Cemex - Cordelia	4132 Cordelia Rd	Fairfield	422-0402	3273
101	Cemex Pacific Holding LLC - Cement Hill	1601 Cement Hill Rd	Fairfield	422-2520	3273
102	Cenario's	364 Pittman Rd #1	Fairfield	864-6400	5812
103	Cenario's Pizza	1955 W Texas St #9	Fairfield	425-1000	5812
104	Chalden Industries	519 Railroad Ave	Suisun City	422-4557	7538
105	Charles Sullivan School	2195 Union Ave	Fairfield	421-3965	8211
106	Chevron - North Texas St.	3350 N Texas St	Fairfield	429-5891	5541
107	Chevron - Sunset Center	113 Sunset Center	Suisun City	421-9323	5541
108	Chevron - Travis	2990 Travis Blvd	Fairfield	452-0801	5541
109	Chevron Mini Mart	113 Sunset Ave	Suisun City	421-9323	5541
110	Chevron Mini Mart/Togo's/Baskin Robbins	1200 Anderson Dr	Suisun City	975-7155	5411
111	Chevron-West Texas	1247 West Texas St	Fairfield	426-6053	5541
112	Chevy's Restaurant	1730 Travis Blvd	Fairfield	425-8374	5812
113	Chez Alexander Bistro	5121 Business Center Dr	Fairfield	864-3364	5812
114	Chez Soul	711 Madison St	Fairfield	427-3338	5812
115	Chicken Express	1240 Anderson Dr, #101	Suisun City	421-1100	5812
116	Chicken Express	2285 N Texas St	Fairfield	422-2310	5812
117	Chick-Fil-A	1350 Travis Blvd, #1516B	Fairfield		5812
118	China Palace	715 Jackson St	Fairfield	422-5019	5812
119	Chinese Gourmet Express	1350 Travis Blvd	Fairfield	434-9528	5812
120	Chipotle	1586 Gateway Blvd	Fairfield	432-0330	5812
121	CHP	3050 Travis Blvd	Fairfield	428-2100	9221
122	Chuck E. Cheese	1027 Oliver Rd	Fairfield	426-4558	5812
123	Cinco De Mayo Taqueria	628 Parker Rd, Ste A	Fairfield	437-0100	5812
124	Cinnabon	1350 Travis Blvd	Fairfield	422-2666	5812
125	Circle K - Parker Rd.	685 Parker Rd	Fairfield	437-3028	5541
126	Circle K #1527	682 Parker Rd	Fairfield	437-3028	5411
127	City of Fairfield - City Hall	1000 Webster St	Fairfield	428-7307	9221
128	City of Fairfield - Police Dept	1000 Webster St	Fairfield	428-7335	9221
129	City of Fairfield Corp Yard	420 Gregory St	Fairfield	428-7414	9621
130	Civic Center Kitchen	1000 Kentucky St	Fairfield	428-7435	8322
131	Clarita's Oriental Store	1799 N Texas St	Fairfield	425-7729	5411
132	Cleo Gordon Elem. School	2030 Dover Ave	Fairfield	435-2902	8211
133	Clocktower Pizza	870 E Travis Blvd, D	Fairfield	429-5700	5812
134	Club Oasis	1626 N Texas St	Fairfield	426-6247	5812
135	Coffee World - Texas St	2270 N Texas St	Fairfield	426-2000	5499
136	Cold Stone Creamery	1586-C Gateway Blvd	Fairfield	399-8871	5812
137	Compu-Tech Lumber Products	1915 Huntington Ct	Fairfield	437-6683	5031
138	Conoco Phillips - Pittman Rd.	134 Pittman Rd	Fairfield	864-1945	5541

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

No	Facility Name	Address	City	Telephone	SIC No
139	Cordelia Deli	4437 Central Pl	Fairfield	864-3354	5812
140	Cordelia Fire Protection District	2155 Cordelia Rd	Fairfield	864-9733	9224
141	Cordelia Hills	4770 Canyon Hills Dr	Fairfield	864-1905	8211
142	Cost Plus	1570 Gateway Blvd	Fairfield	422-9810	5499
143	Costco	5101 Business Center Dr	Fairfield	864-3816	5399
144	Costco Wholesale	5101 Business Center Dr	Fairfield	864-4222	7538
145	Country Corner Liquor	1332 W Texas St	Fairfield	422-8000	5921
146	Courtyard Marriot	1350 Holiday Ln	Fairfield	422-4111	7011
147	Courtyard Suites	200 E Tabor Ave	Fairfield	425-9370	7811
148	Coyote Sam	1955 W Texas St	Fairfield	435-6533	5812
149	Crepes & More	620 Jackson St	Fairfield	428-2210	5812
150	Crescent Elementary school	1101 Anderson Rd	Suisun City	435-2771	8211
151	Cresco Equipment Rentals	5170 Fulton Dr #24	Fairfield	863-7504	7353
152	Crown Auto Repair	360 State St	Fairfield	422-2222	7538
153	Crystal Middle School	400 Whispering Bay	Suisun City	435-5891	8211
154	CVS	3340 N Texas St	Fairfield	423-9467	5912
155	CVS Pharmacy - Travis	300 Travis Blvd	Fairfield	422-3722	5812
156	Da Costa's Tabor Shell	1990 N Texas St	Fairfield	427-8701	5541
157	Da Costa's Tabor Shell	1990 North Texas St	Fairfield	422-5552	5541
158	Daily Republic	1250 Texas St	Fairfield	425-4646	2711
159	Dan O' Root Elem. School	820 Harrier Dr	Suisun City	421-4002	8211
160	Dave's Giant Hamburgers	1055 N Texas St	Fairfield	425-1818	5812
161	Dave's Liquor & Food	1347 Oliver Rd	Fairfield	425-9010	5812
162	David A. Weir Elementary School	1975 Pennsylvania Ave	Fairfield	399-1232	8211
163	David's Spirit	2395 N Texas St	Fairfield	399-7732	5812
164	Denmuller/Conoco Phillips	134 Pittman Rd	Fairfield	864-1945	5541
165	Denny's #1932	2980 Travis Blvd	Fairfield	425-0303	5812
166	Denny's #6855	260 Pittman Rd	Fairfield	864-0436	5812
167	Denny's #7727	1360 Holiday Ln	Fairfield	422-6511	5812
168	Dependable Plastics	4900 Fulton Dr	Fairfield	863-4900	2821
169	Diablo Valley Packaging	2373 N Watney Way	Fairfield	422-4300	1541
170	Dick's Muffler Shop	1654 N Texas St,	Fairfield	422-0988	7538
171	Dollar Center	1772 N Texas St	Fairfield	421-2100	5719
172	Dollar Tree #3973	250 Sunset Ave	Suisun City	422-5122	5331
173	Domino's Pizza	1345 Oliver Rd	Fairfield	426-3030	5812
174	Dover Intermediate School	301 E Alaska Ave	Fairfield	422-1939	8211
175	Downing Paint & Equip	1322 W Texas St	Fairfield	425-0286	5231
176	Dreyer's Ice Cream	3334 N Texas St	Fairfield	425-5803	5812
177	Duracite	2100 Huntington Dr	Fairfield	402-1600	1799
178	DWR - Cordelia Dumping Plant	235 Mangels Blvd	Suisun City	437-5105	4941
179	DWR - North Bay Maintenance Yard	1750 Cement Hill Rd	Fairfield	483-4630	4941
180	DWR - Travis Surge Tank	North Gate Rd	Vacaville	833-2080	4941
181	Dynasty Chinese Restaurant	254 Sunset Ave "B"	Suisun City	426-6222	5812
182	Dynasty II	2401 Waterman Blvd	Fairfield	426-6222	5812
183	East Bay Tire	2200 Huntington Dr, #C	Fairfield	437-4700	7534
184	Econo Lube N' Tune	2035 N Texas St	Fairfield	426-3326	7538
185	Edwards Theatre	1549 Gateway Blvd	Fairfield	432-2140	6512

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

No	Facility Name	Address	City	Telephone	SIC No
186	El Azteca	1731 N Texas St, "C"	Fairfield	422-2108	5812
187	El Pollo Loco	3334 N Texas St	Fairfield	425-7725	5812
188	Elliot Company	2339 Courage Dr	Fairfield	746-5933	3469
189	Entenmann's Bakery	1325 Gateway Blvd, C-2	Fairfield	428-4028	5812
190	EZ Stop	1400 West Texas St	Fairfield	426-3420	5541
191	Fabricated Glass Specialists	2350 S Watney Way #E	Fairfield	429-6161	3231
192	Fairfield 76	134 Pittman Rd	Fairfield	864-1945	5411
193	Fairfield Auto Center	2230 N Texas St	Fairfield	429-0123	7538
194	Fairfield Cemetery District	1707 Union Ave	Fairfield	425-1622	0782
195	Fairfield Center for Creative	1035 W Texas St	Fairfield	428-7666	8322
196	Fairfield Chevrolet	2501 Martin Road	Fairfield	427-7777	5511
197	Fairfield Construction Supply	405 A Railroad Ave	Suisun City	421-8008	5211
198	Fairfield High School	205 E Atlantic Ave	Fairfield	399-5017	8211
199	Fairfield Market & Liquor	1303 W Texas St	Fairfield	425-3105	5411
200	Fairfield Mooselodge #861	623 Taylor St	Fairfield	422-3245	8322
201	Fairfield Nursing and Rehabilitation Center	1255 Travis Blvd	Fairfield	425-0623	8052
202	Fairfield Subaru	2525 Martin Rd	Fairfield	422-7777	7538
203	Fairfield Tire, Inc.	1616 W Texas St	Fairfield	425-6491	7538
204	Fairfield Toyota	2575 Auto Mall Pkwy	Fairfield	399-3115	5511
205	Fairfield Volvo/Infiniti	2855 Auto Mall Pkwy	Fairfield	402-7100	5511
206	Fairfield-Suisun Unified School District	2490 Hilborn Rd	Fairfield	399-5017	8211
207	Family Cookie Co. Outlet Store	304 Spring St	Suisun City	373-5379	5812
208	Favela's Fusion	1500 Oliver Rd	Fairfield	421-8484	5812
209	Favela's Mexican Grill	3334 N Texas St	Fairfield	428-1496	5812
210	Fed Ex	5191 Fermi Dr	Fairfield	207-0703	4731
211	FF/SS USD Bus Yard	2470 Claybank Rd	Fairfield	422-1322	4151
212	Fire Station #1	1633 Union Ave	Fairfield	428-7379	9224
213	Fire Station #35	473-A Edison Court	Fairfield	863-8306	9224
214	Fire Wok Mongolian BBQ	628 Parker Rd #B	Fairfield	437-2439	5812
215	Firestone Company	1340 Travis Blvd	Fairfield	426-1700	5531
216	Five Star Car Wash	900 E Travis Blvd	Fairfield	425-9274	7542
217	Food & Liquor	198 East Pacific Ave	Fairfield	427-0631	5541
218	Food Maxx	1883 N Texas St, #415	Fairfield	434-9895	5411
219	Food Maxx #467	1955 W Texas St	Fairfield	428-1585	5411
220	Ford of Fairfield	3050 Automall Ct	Fairfield	421-3360	5511
221	Fox Auto	1722 N Texas St #C	Fairfield	429-9022	7532
222	Frank and Yuen Lee Chinese	1955 W Texas St	Fairfield	428-3230	5812
223	Fraze Paint	1595 Holiday Lane, Suite A-1	Fairfield	421-1131	5231
224	Freon Free	409 Railroad Ave, "D"	Suisun City	429-9013	4961
225	Fresh & Natural	4000 Suisun Valley Rd	Fairfield	646-2874	5812
226	Fresh Choice	1501 Gateway Blvd	Fairfield	449-2560	5812
227	G.N.C.	1350 Travis Blvd	Fairfield	422-7577	5499
228	Gawfco USA Gasoline	115 Sunset Ave	Suisun City	427-9469	5541
229	Gerardo's Auto	605 Railroad Ave	Suisun City		7538
230	German Car Service	1501 W Texas St	Fairfield	425-9111	7538
231	Gill Spices	716 Jackson St	Fairfield	422-1022	5812

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

No	Facility Name	Address	City	Telephone	SIC No
232	Glass Pak	5000 Fulton Dr	Fairfield	207-0400	7389
233	Gloria Jeans Coffee	1350 Travis Blvd, #1424B	Fairfield	422-6250	5812
234	Glory Fish & Chips	5089 Business Center Dr #105	Fairfield	864-0779	5812
235	Golden Grill Mongolian Bar BBQ	121 Sunset Ave "A"	Suisun City	425-6555	5812
236	Good Guys General Auto	1312 N Texas St	Fairfield	428-6621	7538
237	Gordito's	1025 Oliver Rd	Fairfield	425-9833	5812
238	Grange Middle School	1995 Blossom Ave	Fairfield	399-5017	8211
239	Great Khan's Mongolian	1350 Travis Blvd	Fairfield	425-7433	5812
240	Great Wall Buffet	1795 Pennsylvania Ave	Fairfield	426-6886	5812
241	Green Bamboo Restaurant	4437 Central Pl, C1	Fairfield	864-3601	5812
242	Green Papaya	307 Marina Court	Suisun City	429-1969	5812
243	Green Valley Middle School	1350 Gold Hill Rd	Fairfield	646-7090	8211
244	Green Valley Tractor	4135 Abernathy Rd	Fairfield	425-8933	7538
245	Greenfield Care Center	1260 Travis Blvd	Fairfield	425-0669	8322
246	Grocery Outlet	200 Travis Blvd	Fairfield	428-9721	5411
247	Happy Garden	5055 Business Center Dr	Fairfield	864-8534	5812
248	Hecho En Mexico	672 Parker Rd	Fairfield	437-3514	5812
249	Henry Dominguez's Auto	500 Parker Rd	Fairfield	437-3539	7538
250	Herman Goelitz Candy Co.	2400 N Watney Way	Fairfield	399-2224	4225
251	Herman Goelitz Candy Co.	2385 North Watney Wy	Fairfield	399-2111	2065
252	Hess Microgen	744 N Texas St #B	Fairfield		4226
253	Hi Tech Auto Services	237 Benton Ct	Suisun City	427-5220	7538
254	Hilton Garden Inn	2200 Gateway Ct	Fairfield	426-6900	7011
255	Hiro's Oriental Grocery	1614 W Texas St	Fairfield	422-7266	5411
256	Hollywood Video - N Texas	1845 N Texas St	Fairfield	428-4767	7841
257	Hollywood Video - Sunset	278 Sunset Ave	Suisun City	425-1036	7841
258	Home Depot #637	2121 Cadenasso Dr	Fairfield	426-9600	5251
259	Home Town Car Wash	1634 N Texas St	Fairfield	427-0470	7542
260	Hometown Buffet	1305 Gateway Blvd	Fairfield	428-6000	5812
261	Homewood Suites	4755 Business Center Dr	Fairfield	863-0300	7811
262	Hop Hing's Chinese Restaurant	1343 Oliver Rd	Fairfield	429-1807	5812
263	Hot Dog on a Stick	1350 Travis Blvd	Fairfield	434-1863	5812
264	Huckleberry's	3101 Travis Blvd "B"	Fairfield	427-3800	5812
265	IBRRC	4369 Cordelia Road	Fairfield	207-0380	0752
266	Ichi Maki	2281 N Texas St	Fairfield	425-4433	5812
267	I-Hop	1601 N Texas St	Fairfield	422-5775	5812
268	In & Out Burger	1364 Holiday Lane	Fairfield	425-9136	5812
269	Independent Honda Auto Inc.	311 State St	Fairfield	428-1003	7538
270	Inserve Company	149 Grobric Ct	Fairfield	864-4140	5074
271	ITT Flygt Corp	790 Chadbourne Rd	Fairfield	422-9894	5084
272	Jack & Linda's Country Café	2390 N Texas Street	Fairfield	425-1442	5812
273	Jack In The Box	4490 Central Way	Fairfield	864-3641	5812
274	Jack in the Box - #568	1965 W Texas St	Fairfield	429-2772	5812
275	Jack in the Box - Suisun	499 Grizzly Island Rd "C"	Suisun City	426-6119	5812
276	Jack in the Box #451 - N. Texas St	1980 N Texas St	Fairfield	426-5039	5812
277	Jack-In-The Box #3455	107 Red Top	Fairfield	863-9781	5812
278	Jalapenos	1690 W Texas St	Fairfield	425-5074	5812

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

No	Facility Name	Address	City	Telephone	SIC No
279	Jamba Juice	1450 Travis Blvd, P2	Fairfield	426-1869	5812
280	Jenny Craig Weight Loss	2202 W Texas St	Fairfield	428-1500	7991
281	Jensen Precast	299 Beck Ave	Fairfield	399-4234	3272
282	Jiffy Lube #3245	1330 Holiday Lane	Fairfield	429-9200	7538
283	Jim Boys Tacos	3342 N Texas St	Fairfield	399-8215	
284	Joe's Buffet	834 W Texas St	Fairfield	425-2317	5812
285	Johnny Carino	1640 Gateway Blvd	Fairfield	438-1801	5812
286	Jolly King Liquor & Food	730 Fifth St	Fairfield	425-0451	5411
287	Joy of Eating #2	535 Solano St	Suisun City	426-1147	5812
288	JP's Auto Body	1205 N Texas St	Fairfield	428-0428	7538
289	JSJ Electrical	167 Grobric Ct	Fairfield	747-5595	8063
290	Juvenal Cork	505 Lopes Road, Suite A	Fairfield	863-8855	5085
291	K&S Subway	1513 W Texas St	Fairfield	425-7000	5812
292	K.I. Jones Elementary	2001 Winston Dr	Fairfield	435-2877	8211
293	Kaiser	1550 Gateway Blvd	Fairfield	427-4000	8669
294	Kentucky Fried Chicken/Pizza Hut	173 Sunset Ave	Suisun City	427-2521	5812
295	Kiewit Pacific Co	2898 Vista Grand	Fairfield	399-0409	8741
296	Kim's Oriental Market	590 Parker Rd	Fairfield	437-3334	5411
297	Kinder's Custom Meats & Deli	1363 Oliver Rd, #C	Fairfield	399-7427	5812
298	K-Mart	2525 N Texas St	Fairfield	422-0774	5331
299	Koong Jyun Korean Restaurant	574 Parker Rd	Fairfield	437-4822	5812
300	Kragen Auto Parts	2211 N Texas St	Fairfield	422-0433	5531
301	Kragen Auto Parts #1316	1803 N Texas St	Fairfield	429-3381	5531
302	Kragen Auto Parts #4268	193 Sunset Ave	Suisun City	422-8086	5531
303	L&L Hawaiian Barbeque	5121 Business Cener Dr	Fairfield	864-9873	5812
304	La Cabana	325 Main St	Suisun City	438-1845	5812
305	La Cabana De Fairfield	2190 N Texas St	Fairfield		5812
306	La Charrita Market	1470 W Texas St	Fairfield	434-8344	5812
307	La Charrita Restaurant	1444 W Texas St	Fairfield	434-0100	5812
308	La Costa Azul	1972 N Texas St, Ste A	Fairfield	421-8485	5812
309	La Mariposa Care Center	1244 Travis Blvd	Fairfield	422-7750	8322
310	La Mariposa Nursing & Rehab	1244 Travis Blvd	Fairfield	422-7750	8052
311	La Pena Restaourante Mexicano	1746 N Texas St	Fairfield	434-1909	5812
312	Laurel Creek Elementary School	2900 Gulf Dr	Fairfield	421-4291	8211
313	Laurel Creek Park Snack Bar	Laurel Creek Park	Fairfield	249-2947	
314	Lee Display West	2220 Cordelia Rd	Fairfield	425-7900	2542
315	Legends & Heros @ Rancho Solano	3250 Rancho Solano Pkwy	Fairfield	434-1160	5812
316	Les Schwabb	2160 N Texas St	Fairfield	438-7700	7739
317	Lippenstran Property	1525 Union Ave	Fairfield	435-1804	
318	Liquor Tree	1972 N Texas St, I	Fairfield	428-6639	5921
319	Little Caesars Pizza	100 E Tabor Ave	Fairfield	422-3100	5812
320	Loardes Ice Cream & Candies	2401 Waterman Blvd, A8	Fairfield	421-0800	5812
321	London Fish & Chips	121 Sunset Ave, G	Suisun City	428-3397	5812
322	Lucky Jelly Donuts	760 N Texas St, #75	Fairfield	425-6798	5812
323	Lynn's Entrees	607 Marina Center	Suisun City	438-0515	5812
324	M&L Soul Food	1127 N Texas St	Fairfield	422-0500	5812
325	Macroplastics	2250 Huntington Dr	Fairfield	437-1200	2821

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

No	Facility Name	Address	City	Telephone	SIC No
326	Mandarin Restaurant	219 Texas St	Fairfield	429-1181	5411
327	Manila Seafood	1972 N Texas St, B	Fairfield	421-8777	5812
328	Marie Callender's Restaurant & Bakery	1750 Travis Blvd	Fairfield	428-4745	5812
329	Marina Market & Deli	101 Marina Center	Suisun City	425-6660	5411
330	Mariscos Del Pacifico	1215 N Texas St	Fairfield	422-4920	5812
331	Marriott Fairfield Inn & Suites	315 Pittman Rd	Fairfield	864-6672	5812
332	Mary's Pizza Shack	1500 Oliver Rd, #E	Fairfield	422-2700	5812
333	Master Transmission & Clutch	2035 N Texas St, Ste C	Fairfield	720-9600	7537
334	Maya's Mexican Food	735 W Texas St	Fairfield	399-9696	5812
335	McDonald's - 3080 Travis Blvd	3080 Travis Blvd	Fairfield	451-0300	5812
336	McDonald's - 1350 Travis Blvd	1350 Travis Blvd, 1455B	Fairfield	429-2339	5812
337	McDonald's - Beck Ave	699 Beck Ave	Fairfield	421-9137	5812
338	McDonald's - Central Pl	4400 Central Pl	Fairfield	864-1001	5812
339	McDonald's - N. Texas St	2212 N Texas St	Fairfield	421-2867	5812
340	McDonald's - Sunset Ave	109 Sunset Ave	Suisun City	426-6235	5812
341	Meals on Wheels of Solano	95 Marina Center	Suisun City	426-3079	5812
342	Meals on Wheels/Fairfield	1200 Civic Center Dr	Fairfield	428-7422	8361
343	Mediterranean Food Center	823 Texas St, #7	Fairfield	438-0911	5411
344	Mexico Meat Market	1922 N Texas St	Fairfield	427-8767	5411
345	Meyer Solar Corp.	2240 Cordelia Rd	Fairfield	425-8187	5074
346	Meyer/Farberware	2001 Meyer Wy	Fairfield	399-2176	3429
347	Miko's Japanese Cuisine	900 W Texas St	Fairfield	429-5150	5812
348	Mimi's Café	1650 Gateway Blvd	Fairfield	421-0835	5812
349	Mission Cleaners (Fargo West, Inc.)	2713 N Texas St	Fairfield		2842
350	Monsoon Burgers	321 N Texas St	Fairfield	647-7071	5812
351	Moore Tractor Co.	4088 Russell Rd	Suisun City	425-9545	7538
352	Mosquito Abatement District	2950 Industrial Court	Fairfield	437-1116	9631
353	Mountain Mike's Pizza	1819 N Texas St	Fairfield	422-6000	5812
354	Mrs. Field's Cookies	1350 Travis Blvd	Fairfield	429-4459	5812
355	Munchies	274 Sunset Ave, "G"	Suisun City	427-2673	5812
356	Nelda Mundy Elementary	570 Vintage Valley Dr	Fairfield	863-7915	8211
357	New York Pizza	3027 Travis Blvd	Fairfield	422-8080	5812
358	Nextel of California	4885 Fulton Dr	Fairfield	844-6849	4813
359	Nippon Industries	2430 South Watney Wy	Fairfield	427-3127	2038
360	Noodle House	1305 Gateway Blvd, Ste 7	Fairfield	434-8808	5812
361	North Bay Auto Auction	250 Dittmer Road	Fairfield	864-1040	5012
362	North Bay Medical Center	1200 "B" Gale Wilson Ave	Fairfield	429-7717	8062
363	North Bay Regional Water Treatment Plant	5110 Peabody Rd	Fairfield	428-7680	4971
364	North Bay Truck Center	1245 Illinois St	Fairfield	427-1386	7539
365	North Texas Shell	3345 N Texas St	Fairfield	427-0984	5541
366	Oakbrook Elementary	700 Oakbrook Cir	Fairfield	863-7932	8211
367	Ohana Hawaiian BBQ	1305 Gateway Blvd	Fairfield	428-3883	5812
368	O'Hara Metal Products	4949 Fulton Dr	Fairfield	863-9090	3429
369	Ohkura	594 Parker Rd	Fairfield	437-6671	5812
370	Oil Can Henry's	896 E Travis Blvd	Fairfield	428-9700	7538
371	Oliver De Silva, Inc.	2359 Cordelia Rd	Fairfield		1629

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

No	Facility Name	Address	City	Telephone	SIC No
372	Ortega Meat Market	349 Travis Blvd	Fairfield	421-9512	5812
373	OSH #501	1500 Oliver Rd	Fairfield	427-8665	5251
374	Pacific Power & Systems	4970 Peabody Rd, Ste A	Fairfield	437-2300	1711
375	Pad Thai Thai Cuisine	603 Main St	Suisun City	428-0888	5812
376	Panaderia La Mexicana	1972 N Texas St	Fairfield	421-2856	5812
377	Panda Express	3334 N Texas St, 4	Fairfield	421-0819	5812
378	Panda Express	402 Lawler Center Dr	Suisun City	421-1156	5812
379	Panda Express	1630 Gateway Blvd, #101	Fairfield	399-9881	5812
380	Papa John's Pizza	1731 N Texas St	Fairfield	399-7272	5812
381	Papa Murphy's Pizza	1070 N Texas St, C	Fairfield	425-1200	5812
382	Papa Murphy's Pizza	131 Sunset Ave #D	Suisun City	434-9999	5812
383	Paradise Valley Estates - Kitchen	2600 Estates Dr	Fairfield	432-1120	7992
384	Paradise Valley Estates - Main	2600 Estates Drive	Fairfield	432-1160	6513
385	Paradise Valley Golf Course	4333 Paradise Valley Dr	Fairfield	428-7686	7992
386	Paradise Valley/Quail Creek	2600 Estates Dr	Fairfield	432-1100	5812
387	Park Place Cleaners	2401 Waterman Blvd, #5	Fairfield	422-1425	7216
388	Parkway Lounge	592 Parker Rd	Fairfield	437-5854	5813
389	Party City	1335 Gateway Blvd	Fairfield	425-1713	7359
390	Pauli Systems	1820 Walters Ct	Fairfield	429-2434	3471
391	Paul's Ice Cream Commissary	98 Railroad Ave, E	Suisun City	863-9241	5812
392	Peking restaurant	3073 Travis Blvd	Fairfield	425-0207	5812
393	Pelayo's Mexican Food	5055 Business Center Dr	Fairfield	863-0225	5812
394	Pelayo's Mexican Restaurant	1985 W Texas St	Fairfield	449-9765	5812
395	Penske Truck Leasing	5199 Fulton Dr	Fairfield	863-0710	7359
396	Pepper Belly's	849 W Texas St	Fairfield	425-8800	5541
397	Petromax	1600 North Texas St	Fairfield	425-8800	5812
398	PG&E Information Operations	425 Beck Ave	Fairfield	427-7835	4911
399	PG&E Jameson Substation	403 Watt Court	Fairfield	452-1463	4911
400	PG&E Peabody Substation	3101 Peabody Road	Fairfield	452-1963	4911
401	PG&E Suisun Substation	301 Union Avenue	Fairfield	452-1963	4911
402	Pho Hang Xuan	1303 W Texas St	Fairfield	425-5766	5812
403	Pick-N-Pull	4659 Air Base Pkwy	Fairfield	425-3783	7538
404	Pinoy Kabayan Mini Mart	1308 W Texas St	Fairfield	399-9234	5411
405	Pit Stop Auto Repair	108 F Railroad Ave	Suisun City	426-6400	7538
406	Pizza Guys #124	1914 N Texas St	Fairfield	425-6666	5812
407	Pizza Hut Delivery #283201	598 Parker Rd	Fairfield	399-3600	5541
408	Plaza Oliver Valero	1009 Oliver Rd, A	Fairfield	399-3600	5411
409	Pom Auto Specialties	408 Union Ave Ste G&H	Fairfield	435-8318	5541
410	Popeye's Chicken & Bisquits	1210 Anderson Dr	Suisun City	423-1929	5812
411	Port of Subs	274 Sunset Ave, Ste C	Suisun City	442-7762	5812
412	Prestige Tire and Motorworks, Inc.	307 Travis Blvd	Fairfield	426-3111	5531
413	Prime Time Nutrition	1726 N Texas St	Fairfield	399-8035	5499
414	Priority One Warehouse	2345 Huntington Drive	Fairfield	437-1100	3411
415	Professional Hospital Supplies	2100 Courage Drive	Fairfield	429-2884	5047
416	Puerto Vallarta Restaurant	301 Main St	Suisun City	429-9384	5812
417	Purrfect Auto Service #229	2525 N Texas St	Fairfield	428-5580	3089
418	Quality Tune-up #54	1635 W Texas St	Fairfield	427-1907	5541

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

No	Facility Name	Address	City	Telephone	SIC No
419	Queen Bee Bakeshop	1555 W Texas St #28	Fairfield	421-9707	5812
420	Quickstop	2985 Peabody Rd	Fairfield	437-4701	5541
421	Quizno's	1586 Gateway Blvd	Fairfield	435-8585	5812
422	R&D Bodyworx (Calif. BugWork)	1626 North Texas St, #C	Fairfield	422-9757	7532
423	Railroad Autoworks	605 A Railroad Ave	Fairfield	429-1379	7538
424	Raley's #330	270 Sunset Ave "S:	Suisun City	426-1023	5411
425	Raley's #331	3300 N Texas St	Fairfield	421-9990	5411
426	Raley's #332	3001 Travis Blvd	Fairfield	429-8410	5411
427	Ramirez Towing	1502 Humphrey Dr	Suisun City	422-0974	7538
428	Ramos Oil Company	744 N Texas St	Fairfield	425-5780	5172
429	Rancho Solano Golf Course	3191 Cherry Valley Rd	Fairfield	425-0698	7992
430	Recycling Zone	4989-B Peabody Rd	Fairfield	437-1301	4953
431	Red Lobster	1525 Travis Blvd	Fairfield	421-8292	5812
432	Red Robin	1360 Travis Blvd	Fairfield	429-8003	5812
433	Resident - Monroe St	1513 Monroe St	Fairfield	208-4736	N/A
434	Rexam Beverage Can Co.	2433 Crocker Cir	Fairfield	437-6645	3411
435	RNB Smokehouse	1708 W Texas St	Fairfield	422-3130	5812
436	Rodriquez Automotive	1605 W Texas St	Fairfield	426-4390	5531
437	Rodriquez High Concession	5000 Red top Rd	Fairfield	863-7968	8211
438	Rolling Hills Elementary School	2025 Fieldcrest Ave	Fairfield	399-9566	8211
439	Rosanna's European Delights	1119 W Texas St	Fairfield	422-2253	5812
440	Roto Rooter (Fairfield)	1708 Enterprise	Fairfield	642-9200	1711
441	Round Table Pizza - Business Center	5085 Business Center Dr	Fairfield	207-0378	5812
442	Round Table Pizza - Sunset Ave	288 Sunset Ave, Ste J	Suisun City	421-0155	5812
443	Round Table Pizza - Texas St	3336 N Texas St	Fairfield	426-6202	5812
444	Round Table Pizza - Waterman	2401 Waterman Blvd #9	Fairfield	425-3127	5812
445	Rudy's Auto Body & Frame	1502 Humphrey Dr	Suisun City	422-1072	7538
446	Ryan's Auto	1203 N Texas St	Fairfield	425-2695	7538
447	S&L Thai Restaurant	1767 N Texas St	Fairfield	426-6499	5812
448	S.S. Supplies	2750 Maxwell Way	Fairfield	426-6666	5999
449	Safeway - Waterman #1127	2401 Waterman Blvd	Fairfield	427-5640	5411
450	Saigon No. 1 Vietnamese Restaurant	1972-C N Texas Street	Fairfield	422-4383	5812
451	Sam's Teriyaki	1657 N Texas St	Fairfield	428-4097	5812
452	Saturn	4850 Auto Plaza Court	Fairfield	428-1800	7538
453	SBC - North Watney Way	2525 North Watney Way	Fairfield	435-7123	3661
454	SBC - Parker	534 Parker Rd	Fairfield	666-1857	3661
455	SBC Construction Yard	North Texas	Fairfield		1711
456	Scandia Family Center	4300 Central Pl	Fairfield	864-8558	7993
457	Scott Lamp Co., Inc	355 Watt Dr	Fairfield	864-2066	3645
458	SDP Enenergy	744 N Texas St	Fairfield	410-7001	4226
459	Sears Auto Center #6778	1495 Gateway Blvd	Fairfield	438-0140	7538
460	Sears Dept Store	1420 Travis Blvd	Fairfield	432-2000	5331
461	See's Candies	1350 Travis Blvd, #1369A	Fairfield	427-2488	5499
462	Sepay Groves Olive Oil	370 Chadbourne Rd	Fairfield	434-8222	2079
463	Service Champ, Inc.	1801 Woolner Ave	Fairfield	434-9041	3714
464	Sheldon United Terminal	1900 Cordelia Rd, #2	Fairfield	425-2951	5984
465	Shell - Central Wy.	4450 Central Way	Fairfield	864-1462	5541

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

No	Facility Name	Address	City	Telephone	SIC No
466	Shell - North Texas St.	3345 North Texas St	Fairfield	429-4864	5541
467	Shell - Oliver Rd.	1051 Oliver Rd	Fairfield	426-3236	5541
468	Shell - Sunset Dr.	200 Sunset Dr	Suisun City	421-0384	5541
469	Shell - Travis Blvd.	1300 Travis Blvd	Fairfield	427-1219	5541
470	Sherwin Williams	1448 W Texas St	Fairfield	421-1858	5231
471	Sierra Truck & Van	225 Lopes Rd	Fairfield	864-1064	7538
472	Sizzling Grill	835 W Texas St	Fairfield	434-9621	5812
473	Skaggs Trucking	4958 Peabody Rd	Fairfield	439-9900	4173
474	Slakey Brothers, Inc.	1190 Western St	Fairfield	427-3990	5074
475	Smoke Shop n More	1306 w Texas St	Fairfield	399-9915	5993
476	Solano Acura	2459 Auto Mall Pkwy	Fairfield	427-2200	5511
477	Solano Asphalt Maint., Inc.	2400 Cement Hill Rd	Fairfield	439-9182	1611
478	Solano Bistro	1295 Horizon, "E"	Fairfield	429-1848	5812
479	Solano Community College	4000 Suisun Valley Rd	Fairfield	864-7000	8222
480	Solano County Garage-Fleet Div 1	3255 North Texas St	Fairfield	421-6050	9621
481	Solano County Garage-Fleet Div 2	447 Texas St	Fairfield	421-6764	9621
482	Solano County Government Center	675 Texas St	Fairfield	421-6335	9532
483	Solano County Juvenile Hall	740 Beck Ave	Fairfield	784-6570	9223
484	Solano County Probation-Fairfield	475 Union Ave	Fairfield	421-6335	8744
485	Solano County Sentenced Facility	2500 Claybank Rd	Fairfield	421-7182	7999
486	Solano Food Bank Warehouse	1891 Woolner Ave, "I"	Fairfield	421-9777	5812
487	Solano Garbage Company	2901 Industrial Court	Fairfield	439-2805	4932
488	Solano Garbage Natural Gas Fueling Station	1930 Walters Court	Fairfield	439-2805	4935
489	Solano Irrigation District	1200 Manuel Campos Pkwy	Fairfield	425-4764	4941
490	Song's Auto	538 Parker Rd	Fairfield	437-1313	7538
491	St. Gobain Container	2600 Standard Ct	Fairfield	437-8701	4225
492	Stan's Valero	1740 W Texas St	Fairfield	429-0444	5541
493	Star Airline Catering	1229 Western St	Fairfield	422-1892	5812
494	Star Auto Body Shop	631 Railroad Ave B	Suisun City	427-0220	7532
495	Star Gas & Liquor	1369 North Texas St	Fairfield	422-8366	5541
496	Starbread Bakery	340 Travis Blvd, #6	Fairfield	426-4071	5812
497	Starbucks	1600 N Texas St	Fairfield	425-8800	5812
498	Starbucks	1200 Oliver Rd	Fairfield	428-5043	5812
499	Starbucks - Travis Blvd	1450 Travis Blvd	Fairfield	422-0891	5812
500	Starbucks #506	1500 Oliver Rd #B	Fairfield	399-7389	5812
501	Starbucks #9511- Texas St	700 Texas St	Fairfield	421-8274	5812
502	Starbucks #9792	3151 Business Center dr	Fairfield	864-5092	5812
503	Staybridge Suite	4755 Business Center Dr	Fairfield	863-0900	7811
504	Steve Hopkins Honda	2499 Automall Pkwy	Fairfield	427-1000	5511
505	Sticky Rice	5030 Business Center Dr	Fairfield	863-7500	5812
506	Straw Hat Pizza	251 Pittman Rd	Fairfield	646-6200	5812
507	Strings Italian Café	2401 Waterman Blvd	Fairfield	428-3882	5812
508	Subway	628 Parker Rdl, #F	Fairfield	955-4262	5812
509	Subway - Business Center	5055 Business Center Dr, #104	Fairfield	863-0515	5812
510	Subway - N Texas St	3338 N Texas St "B"	Fairfield	434-9535	5812
511	Subway - Texas St	2147 N Texas St	Fairfield	426-6592	5812

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

No	Facility Name	Address	City	Telephone	SIC No
512	Subway - Travis Blvd	3089 Travis Blvd	Fairfield	427-2000	5812
513	Subway #42620	700 Main St #108	Suisun City	434-0204	5812
514	Subway #44289	2401 Waterman Blvd, Ste 4	Fairfield	436-9650	5812
515	Subway Sandwich	340 Travis Blvd	Fairfield	426-6138	5812
516	Subway Sandwiches - Travis Blvd	1350 Travis Blvd	Fairfield	427-2000	5812
517	Suisun Community Center	611 Village Dr	Suisun City	421-7200	8322
518	Suisun Oriental Store	108 Sunset "D"	Suisun City	421-0555	5411
519	Suisun Seafood Center	303 Lawler Center Dr	Suisun City	399-9229	5812
520	Suisun Union 76	115 Sunset	Suisun City	429-0461	5541
521	Sukho Thai Cuisine	258 Sunset Ave "C"	Suisun City	399-8833	5812
522	Sunpol Resins	2475 Crocker Circle	Fairfield	487-4697	2821
523	Sunset Donuts	100 Sunset Ave "G"	Suisun City	422-5577	5812
524	Sunset Grill	870 E Travis Blvd	Fairfield	399-8400	5812
525	Super Serv Chevron	4490 Central Wy	Fairfield	864-8293	5541
526	Super Store Industries	199 Red Top Rd	Fairfield	864-0502	2026
527	Surf City Squeeze	1350 Travis Blvd, 1468B	Fairfield	428-7210	5812
528	Sushi Tandy	1972 N Texas St, Ste C	Fairfield	427-2434	5812
529	Sushi-King	5089 Business Center Dr	Fairfield	644-5320	5812
530	Sweet Factory	1350 Travis Blvd, #1499C	Fairfield	434-0312	5499
531	Syar Concrete LLC	4969 Vanden Rd	Fairfield	333-4407	3531
532	T.O.E. Performance	211 Driftwood Dr	Suisun City	425-2996	7538
533	Taco Bell - N. Texas St	2334 N Texas St	Fairfield	429-0210	5812
534	Taco Bell - Travis Blvd #2778	3070 Travis Blvd	Fairfield	426-2144	5812
535	Taco Bell #2182	4401 Central Pl	Fairfield	864-8734	5812
536	Taco Bell #2915	109 Sunset Ave	Suisun City	426-5490	5812
537	Taj India Restaourant	740 Texas	Fairfield	435-8880	5812
538	Tapioca Express	5041 Business Center Dr	Fairfield	863-0576	5812
539	Taqueria El Farolito	131 Sunset Ave	Suisun City	422-3390	5812
540	Taqueria Tepa	501 Main St, #D	Suisun City	429-0120	5812
541	Target Store T675	2059 Cadenasso Dr	Fairfield	426-1105	7538
542	Tasuke Restaurant	314 Spring St	Suisun City	427-1221	5812
543	TCBY/Pretzel Time	1350 Travis Blvd	Fairfield	429-5205	5812
544	Texas Petroleum	1530 W Texas St	Fairfield	429-0744	5541
545	Texas Roadhouse	3333 N Texas St	Fairfield	422-7623	5812
546	Thai Market	321 Texas St	Fairfield	425-9711	5411
547	The Cheese Steak Shop	284 Sunset Ave "A"	Suisun City	734-3237	5812
548	The Donut Wheel	2277 N Texas St	Fairfield	429-8911	5812
549	The Jelly Donut	1615 W Texas St	Fairfield	425-1111	5812
550	The Limelight	558 Parker Rd	Fairfield	437-5551	5813
551	The Oil Connection	327 W Texas St	Fairfield	422-5600	7538
552	The Pagoda	2155 N Texas St	Fairfield	425-6817	5411
553	The Smog Shop	1908 North Texas St, F & G	Fairfield	429-4100	7538
554	The Suite	1721 N Texas St	Fairfield	425-8352	5813
555	Tokyo Sushi	3079 Travis Blvd	Fairfield	427-2448	5812
556	Tolenas School	4500 Tolenas Rd	Fairfield	399-5017	8211
557	Tower Mart #090	119 Red Top Rd	Fairfield		5541
558	Tower Mart #86	4720 Gold Hill Rd	Fairfield	864-2506	5541

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

No	Facility Name	Address	City	Telephone	SIC No
559	Trader Joe's	1350 Gateway Blvd	Fairfield	434-0144	5411
560	Trans Bay Steel	2400 Cordelia Rd	Fairfield	430-4619	3441
561	Travis Auto Body	1350 N Texas St	Fairfield	425-8848	7532
562	Travis Chevron	2990 Travis Blvd	Fairfield	427-2990	5541
563	Travis Dairy	140 Travis Blvd	Fairfield	427-2664	5812
564	Travis Unified School District	2751 DeRonde Rd	Fairfield	437-8231	4144
565	Travis Water Treatment Plant	383 Fairchild Dr,Bldg 1207	Fairfield	437-3381	4971
566	Tri-Eagle Beverage	2450 Cordelia Rd	Fairfield	422-5590	5149
567	Tugboat Fish & Chips	1350 Travis Blvd	Fairfield	428-3608	5812
568	Uncle Bongs Pizzeria	201 Main St, "A"	Suisun City	438-7542	5812
569	Union Food & Liquor	400 Union Ave	Fairfield	425-1099	5411
570	United Pacific Elevator Corp (Vertrans)	5045 Fulton Dr #B	Fairfield	864-5622	5084
571	United Parcel Service	5000 W Cordelia Rd	Fairfield	864-8200	4311
572	Universal Plant Services	505 Lopes Rd, Suite D	Fairfield	864-0100	3541
573	U-Save Liquor	1240 Anderson Dr, #104	Suisun City	425-3277	5921
574	Valero	2595 N Texas St	Fairfield	425-2535	5541
575	Valero Flyers #28- Nella Oil	4444 Central Pl	Fairfield	207-0317	5541
576	Valley Café	4171 Suisun Valley Rd #A	Fairfield	853-4871	5812
577	Vanden High School	2951 Markley Ln	Fairfield	437-8269	8211
578	Verizon Business C/O MCI	97 Cordelia Rd	Fairfield		3663
579	Verizon Sites	1010 Chadbourne Rd, #3 (FF,SC,Cordelia)		372-0022	4812
580	Vicinis Pizzeria	3342 N Texas St, C&D	Fairfield	425-2000	5812
581	Vitamin Adventure	3017 Travis Blvd	Fairfield	425-7394	5499
582	Vitamin World	1350 Travis Blvd	Fairfield	435-9299	5499
583	W.J. Datech	1249 Illinois Street	Fairfield	429-5009	7538
584	WalMart #2048	300 Chadbourne Rd	Fairfield	428-4712	5719
585	Wasabi 201	201 Travis Blvd	Fairfield	428-5555	5812
586	Waterman Water Treatment Plant	2900 Vista Grande	Fairfield	428-7594	4971
587	Waterworks Construction	4989-C Noonan Ln	Fairfield	457-0991	1721
588	Wendy's	4447 Central Pl	Fairfield	864-5626	5812
589	Wendy's	2045 N Texas St	Fairfield	429-2199	5812
590	Westfield Shoppingtown Solano	1350 Travis Blvd	Fairfield	425-1164	5311
591	Wetland Construction Inc.	1 Wetland Lane	Fairfield	422-6848	1629
592	Wetzel's Pretzels	1350 Travis Blvd, #9021	Fairfield	422-2888	5821
593	White Cap Industries	1995 W Cordelia Rd	Suisun City	863-8282	5085
594	Wolfskill Energy Ctr.	2425 Cordelia Rd	Fairfield	399-4380	4911
595	Yaquis Taqueria	1661 N Texas St	Fairfield	399-8645	5812

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

Facility Name	Address	City	Telephone	SIC No
Facilities with Stormwater Permit (10)				
5-Star Car Wash	900 Travis Blvd.	Fairfield	425-9274	7542
Abbott Laboratories - Ross Products Div.	2302 Courage dr.	Fairfield	399-1100	2064
Cemex - Cordelia	4132 Cordelia Rd	Fairfield	422-0402	3273
City of Fairfield Corp Yard	420 Gregory St.	Fairfield	428-7414	9621
FF/SS USD Bus Yard	2470 Claybank Rd.	Fairfield	422-1322	4151
Herman Goelitz Candy Co.	2400 North Watney Wy. (& 2385)	Fairfield	399-2111	2065
Ramos Oil Company	744 N. Texas St.	Fairfield	425-5780	5172
Solano Garbage Company	2901 Industrial Court	Fairfield	439-2805	4932
Syar Concrete LLC	4969 Vanden Rd	Fairfield	333-4407	3531
Travis Unified School District	2751 DeRonde Rd.	Fairfield	437-8231	4144
Non-Compliant Facilities with Level 2 Enforcement Action (7)				
Chalden Industries	519 Railroad Ave.	Suisun City	422-4557	7538
AC's Pub & Grill	666 Parker Rd	Fairfield	437-6666	5812
Bombay Palace	1123 W Texas St	Fairfield	425-8899	5812
Crepes & More	620 Jackson St	Fairfield	428-2210	5812
Hecho En Mexico	672 Parker Rd	Fairfield	437-3514	5812
Popeye's Chicken & Bisquits	1210 Anderson Dr	Suisun City	423-1929	5812
Sushi-King	5089 Business Center Dr	Fairfield	644-5320	5812
Non-Compliant Facilities with Level 1 Enforcement Action (42)				
Arco - Marina Blvd.	299 Marina Blvd	Fairfield	429-0122	5541
Adalberto's Mexican Food	2370 N Texas St	Fairfield	428-3604	5812
All Star Rents	2525 Claybank Rd.	Fairfield	422-2270	7299
Arco Basara	3650 Nelson Rd	Fairfield	425-4040	5541
Armijo High School	824 Washington St	Fairfield		5812
Avalanche Yogurt	321 W Texas, Ste 102	Fairfield	425-4866	5812
Bertha's Restaurant	413 Marina Center	Suisun City	399-8507	5812
Bonfare Market #27	890 E Travis Blvd	Fairfield	429-3459	5411
Bonfare Market #37 - Walters	1500 Walters Rd.	Suisun City		5541
Burger King - Anderson Dr	1260 Anderson Dr	Suisun City	428-7185	5812
CHP	3050 Travis Blvd	Fairfield	428-2100	9221
Econo Lube N' Tune	2035 N. Texas St.	Fairfield	426-3326	7538
Fairfield Auto Center	2230 N. Texas St.	Fairfield	429-0123	7538
Fairfield Center for Creative	1035 W Texas St	Fairfield	428-7666	8322
Fairfield Mooselodge #861	623 Taylor St	Fairfield	422-3245	8322
Fairfield Volvo/Infiniti	2855 Auto Mall Pkwy	Fairfield	402-7100	5511
Fire Wok Mongolian BBQ	628 Parker Rd #B	Fairfield	437-2439	5812
Glory Fish & Chips	5089 Business Center Dr #105	Fairfield	864-0779	5812
Green Bamboo Restaurant	4437 Central Pl, C1	Fairfield	864-3601	5812
Henry Dominguez's Auto	500 Parker Rd.	Fairfield	437-3539	7538
Hi Tech Auto Services	237 Benton Ct.	Suisun City	427-5220	7538
L&L Hawaiian Barbeque	5121 Business Cener Dr	Fairfield	864-9873	5812
Laurel Creek Elementary School	2900 Gulf Dr	Fairfield	421-4291	8211
Mandarin Restaurant	219 Texas St	Fairfield	429-1181	5411

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

Facility Name	Address	City	Telephone	SIC No
Master Transmission & Clutch	2035 N Texas St., Ste. C	Fairfield	720-9600	7537
Maya's Mexican Food	735 W Texas St	Fairfield	399-9696	5812
McDonald's - Travis Blvd	1350 Travis Blvd, 1455B	Fairfield	429-2339	5812
McDonald's - Sunset Ave	109 Sunset Ave	Suisun City	426-6235	5812
Monsoon Burgers	321 N Texas St	Fairfield	647-7071	5812
Pacific Power & Systems	4970 Peabody Rd., Ste. A	Fairfield	437-2300	1711
Panda Express	3334 N Texas St, 4	Fairfield	421-0819	5812
Paradise Valley Golf Course	4333 Paradise Valley Dr.	Fairfield	428-7686	7992
Pom Auto Specialties	408 Union Ave. Ste. G&H	Fairfield	435-8318	5541
Prime Time Nutrition	1726 N Texas St	Fairfield	399-8035	5499
Rudy's Auto Body & Frame	1502 Humphrey Dr.	Suisun City	422-1072	7538
Scandia Family Center	4300 Central Pl	Fairfield	864-8558	7993
Skaggs Trucking	4958 Peabody Rd.	Fairfield	439-9900	4173
Star Auto Body Shop	631 Railroad Ave. B	Suisun City	427-0220	7532
Sukho Thai Cuisine	258 Sunset Ave "C"	Suisun City	399-8833	5812
Tapioca Express	5041 Business Center Dr	Fairfield	863-0576	5812
The Oil Connection	327 W. Texas St.	Fairfield	422-5600	7538
Yaquis Taqueria	1661 N Texas St	Fairfield	399-8645	5812

FY 2009-2010 Annual Report

C.4 – Industrial and Commercial Site Controls

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

Total number of inspections conducted	467	
Violations issued (excluding verbal warnings)	35	
Sites inspected in violation	34	7.8
Violations ¹ resolved within 10 working days or otherwise deemed resolved in a longer but still timely manner	2	5.7

¹ Total number of violations equals the number of initial enforcement actions (i.e. one violation issued for several problems during an inspection at a site). It does 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.

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. non-stormwater discharge)	166
Potential discharge (e.g. BMPs not in place or ineffective)	365

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) ¹	Number of Enforcement Actions Taken	% of Enforcement Actions Taken ²
Level 1	Warning Notice	34	97
Level 2	Minor Violation	1	3
Level 3	Major Violation	0	0
Level 4	Legal Action	0	0
Total		35	100

Notes:

¹Agencies to list specific enforcement actions as defined in their ERPs.

²Percentage calculated as number of each type of enforcement action divided by the total number of enforcement actions.

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 Category ¹	Actual Discharge Violations	Potential Discharge Violations
1. Construction	0	5
2. Manufacturing	3	9
3. Transportation, Communication, Electric, Gas and Sewer Services	1	6
4. Retail Trade, Finance and Real Estate	134	272
5. Services	25	62
6. Public Administration	3	11

Notes:

¹ List your Program's standard business categories.

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:

The Rock Source, 4958 Peabody Rd, Unincorporated Solano County, 94533

C.4.d.iii ► Staff Training Summary

Training Name	Training Dates	Topics Covered	No. of Inspectors in Attendance	Percent of Inspectors in Attendance
Stormwater Annual Refresher	January 25, 2010	MRP requirements, levels of enforcement, educational information, problem severity and compliance, signatures and inspection frequencies	3	100% of commercial and industrial inspectors

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

C.5.a.ii ► Legal Authority

(For FY 09-10 Annual Report only) Do you have adequate legal authority to prohibit and control illicit discharges and escalate stricter enforcement to achieve expedient compliance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Program has effectively used the Fairfield-Suisun Sewer District's Stormwater Ordinance, as well as Fish and Game Code section 5650, and Health and Safety Code section 5411 to control illicit discharges. However, the cities have chosen to move forward with adopting their own stormwater ordinances. The city of Fairfield adopted a new stormwater ordinance in August of 2010. It is anticipated that Suisun city will adopt its own stormwater ordinance before the end of the 2010 calendar year.				

C.5.b.ii.(4) ► Enforcement Response Plan

(For FY 09-10 Annual Report only) Have you developed and implemented an Enforcement Response Plan by April 1, 2010?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If No , explain:				

Program Highlights

Provide background information, highlights, trends, etc. For FY 09-10 Annual Report describe steps taken to revise your program to meet new data tracking and reporting requirements.
The Program developed and implemented: an Enforcement Response Plan; an Illicit Discharge Detection and Elimination Manual; a Stormwater Screening Form (for the Bay Area); a Door Hanger For Illicit Discharges; and Spill Response Flowcharts.

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
Don Burwell	Public Works Supervisor, City of Fairfield	(707) 428-7405
Mike Gray	Public Works Manager, City of Fairfield	(707) 428-7404
Dan Kasperson	Building and Public Works Director	(707) 421-7340
Jeff Penrod	Public Works Superintendent	(707) 421-7349

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.

See BASMAA FY 2009/10 report on mobile surface cleaners program.

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 Program developed an Illicit Discharge Detection and Elimination Program (including the regional C.5.e Storm System Screening Form). The screening program will begin in early fall 2010. The Illicit Discharge Detection and Elimination Program outlines procedures to implement the Program's procedures to eliminate illicit discharges. As required in the MRP the screening program utilizes the *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, published by the Center for Watershed Protection, October 2004 (www.cwp.org).

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))	14	
Discharges reaching storm drains and/or receiving waters (C.5.f.iii.(2))	0	
Discharges resolved in a timely manner (C.5.f.iii.(3))	14	100 %

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

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

The most common type of illegal discharge in the Fairfield-Suisun area is automobile related. Oil, transmission fluid or gasoline, were all found as potential pollutants. Car maintenance or lack thereof, result in the discharge of these materials. The second most common material to be discharged is landscaping materials. These materials, when found to be contributing to pollution, are commonly placed in the street gutter which

blocks drainage and potentially contributes pollutants to the storm drain system. Paint, rusty colored water and pool water complete the list of major types of potential or actual discharges to the Fairfield-Suisun storm drain system.

Section 6 – Provision C.6 Construction Site Controls

C.6.a.iii ► Legal Authority

(For FY 09-10 Annual Report only) Is your agency's legal authority adequate for C.6 compliance? Yes No

If **No**, explain:

The Program has effectively used the Fairfield-Suisun Sewer District's Stormwater Ordinance, as well as Fish and Game Code section 5650, Health and Safety Code section 5411 and Building Code Authority to control illicit discharges and construction related pollution. However, the cities have chosen to move forward with adopting their own stormwater ordinances. The city of Fairfield adopted a new stormwater ordinance in August of 2010. It is anticipated that Suisun city will adopt its own stormwater ordinance before the end of the 2010 calendar year.

C.6.b.ii.(3) ► Enforcement Response Plan

(For FY 09-10 Annual Report only) Was your Enforcement Response Plan developed and implemented by April 1, 2010? Yes No

If **No**, explain:

C.6.e.iii.1.a, b, c ► Site/Inspection Totals

Number of sites disturbing < 1 acre of soil requiring storm water runoff quality inspection (i.e. High Priority) (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 (C.6.e.iii.1.c)
0	11	29

C.6.e.iii.1.d ▶ Construction Activities Storm Water Violations		
BMP Category	Number of Violations¹	% of Total Violations²
Erosion Control	4	9%
Run-on and Run-off Control	2	5%
Sediment Control	19	43%
Active Treatment Systems	0	0%
Good Site Management	14	32%
Non Stormwater Management	5	11%
Total	44	100%

Notes:

¹Count one violation in a category for each site and inspection regardless of how many violations/problems occurred in the BMP category.

²Percentage calculated as number of violations in each category divided by total number of violations in all six categories.

C.6.e.iii.1.e ▶ Construction related storm water enforcement actions			
	Enforcement Action (as listed in ERP)¹	Number Enforcement Actions Taken	% Enforcement Actions Taken²
Level 1	Verbal Warning	8	67%
Level 2	Written Warning/Notice of Violation	4	33%
Level 3	Shut Down	0	0%
Level 4	Legal Action	0	0%
Total		12	100%

Notes:

¹Agencies should list the specific enforcement actions as defined in their ERPs.

²Percentage calculated as number of each type of enforcement action divided by the total number of enforcement actions.

C.6.e.iii.1.f, g ▶ Illicit Discharges	
	Number
Number of illicit discharges, actual and those inferred through evidence (C.6.e.iii.1.f)	23
Number of sites with discharges, actual and those inferred through evidence (C.6.e.iii.1.g)	13

C.6.e.iii.1.h, i ► Violation Correction Times		
	Number	Percent
Violations fully corrected within 10 business days after violations are discovered or otherwise considered corrected in a timely period (C.6.e.iii.1.h)	4	33% ²
Violations not fully corrected within 30 days after violations are discovered (C.6.e.iii.1.i)	8	67% ³
Total number of violations for the reporting year¹	12	100%

Notes:

¹Total number of violations equals the number of initial enforcement actions (i.e. one violation issued for several problems during an inspection at a site). It does 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.

²Calculated as number of violations fully corrected in a timely period after the violations are discovered divided by the total number of violations for the reporting year.

³Calculated as number of violations not fully corrected within 30 days after the violations are discovered divided by the total number of violations for the reporting year.

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.).
<p>Description:</p> <p>This year's Annual Report results are a combination of both cities construction site inspections. The Program has modified its construction inspection form to better suit the information requirements of the MRP. Starting at the beginning of fiscal year 2010/2011 the new form has been utilized and results will be reported by the individual cities. A database is being developed to track the various information requirements of the Regional Board. Improvement needs to be made by the Program on ensuring violations are corrected within 10 business days. Written certification by the project owner for correction of construction site deficiencies within the 10 day window is being considered among other things.</p> <p>Sediment control measures made up 43% of all violations issued, while good site management made up 32%. This breakdown makes it clear that contractors need to focus more on inlet protection and solid waste management. The number of violations indicated in C.6.e.iii.1.d indicates that the program had a total of 44 violations from construction sites. These violations are defined as specific construction site infractions against standard BMPs, but with good general site management. The enforcement actions delineated in section C.6.e.iii.1.e are enforcement actions taken when the inspector sees the site as overall noncompliant. The illicit discharges indicated in C.6.e.iii.1.f,g are a subset of the BMP categories from section C.6.e.iii.1.d which resulted in an illicit discharge or are inferred through evidence.</p>

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:

The Program has 11 construction sites that are currently open and require coverage under the General Permit for Construction Activities. With such a small number of open construction sites our inspectors are keeping up with the workload and are familiar with the contractors and construction sites. The Program has modified its construction inspection form and data tracking methods to meet the requirements of the MRP. The Program's desire to protect its local waterways and a strong understanding of site management are among its strengths. The Program is intending to have a majority of its inspectors be certified as Qualified SWPPP Practitioners during FY 2010-11. The Program can improve on tracking follow up to violations given to contractors at construction sites. It has become apparent that additional steps need to be taken to improve on this requirement in the MRP. During FY 2010-11 the Program will be modifying its standard procedures to include verification by the contractor or the city to confirm compliance.

Education and outreach for the fiscal year 2010/2011 will focus on inlet protection and solid waste management. These elements have been chosen due to their high ranking percentages among other categories as delineated by the Water Board.

C.6.f ► Staff Training Summary

Training Name	Training Dates	Topics Covered	No. of Inspectors in Attendance	Percent of Inspectors in Attendance
Stormwater Regulatory Compliance Workshop for North Bay Construction and Development Projects	April 5, 2010	<ul style="list-style-type: none"> Overview of the 2009 construction general permit Risk Determination Best Management Practices On-Site 	5	20% - persons attending workshop were primarily project managers
Stormwater Management Compliance Walnut Creek	3-18-2010	New Stormwater Permit	2	40% of Fairfield inspectors
Construction General Permit Folsom Community Center	3-30-2010	General Permit	2	40% of Fairfield inspectors
See city of Suisun City Annual Report for their training summary.				

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

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:

See BASMAA FY 2009/10 report on the BASMAA Regional Advertising Campaign.

C.7.b.iii.1 ▶ Pre-Campaign Survey

(For the FY 10-11 Annual Report only) 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:

- Summary of how the survey was implemented.
- Analysis of the survey results.
- Discussion of the outreach strategies based on the survey results.
- Discussion of planned or future advertising campaigns to influence awareness and behavior changes regarding trash/litter and pesticides.

Place an **X** in the appropriate box below:

NA	Survey report attached
NA	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:

See BASMAA FY 2009/10 report on the Regional Media Relations effort.

During FY 2009/10 the Program sponsored environmental outreach pieces on radio channel FM 95.3. Outreach pieces were directed toward both

sanitary sewer and storm drain environmental concerns. Radio segments included: using safe household cleaning products; no drugs down the drain; fats, proper oil and grease handling; don't use the toilet as a garbage can; proper disposal of products containing mercury; the direct connection between our streets and creeks; reduction in trash by choosing reusable grocery bags; proper carwash choices; promotion of drought tolerant plants and water conservation;

The Watershed Explorers Program, sponsored in part by the Program occurred during the Spring of 2010 and took place at two locations; Blue Rock Springs Corridor beginning at Hanns Park in Vallejo and Lynch Canyon Open Space Area, just outside of Fairfield. Articles were written highlighting the program in the Benicia Herald on February 28th, 2010, the Times Herald on March 25th and the Daily Times (cover page) on May 25, 2010. A video was made of the program at the Blue Rock Springs Corridor location and can be seen at : <http://vimeo.com/11378913>

C.7.d ► Stormwater Point of Contact

(For FY 09-10 Annual Report only, unless changes made) Provide details of website or phone number used as the point of contact. Report on how the point of contact is publicized and maintained. If any change occurs in this contact, report in a subsequent Annual Report.

Contact Summary:

See BASMAA FY 2009/10 report on the Regional point of contact.

The following names are listed on the city of Fairfield website as points of contact for stormwater issues in the city of Fairfield:

Don Burwell Public Works Supervisor, City of Fairfield (707) 428-7405
Mike Gray Public Works Manager, City of Fairfield (707) 428-7404

the following names are listed on the city of Suisun City website as points of contact for stormwater issues in the city of Suisun City:

Dan Kasperson Building and Public Works Director (707) 421-7340
Jeff Penrod Public Works Superintendent (707) 421-7349

These points of contact are maintained on the website for each city. If any changes occur these contacts are updated.

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 distributed • Results of any spot surveys conducted
Below is a description of the School Water Education Program (SWEP) which the Program is a partner in. The Program has joined with the city of Dixon, Vacaville and Solano irrigation District to form SWEP. All the participating agencies in this program have reasons for encouraging pollution prevention practices and protecting water resources in their communities. Aside from educating children, the program also is involved in community outreach events.		
Stormwater Run –off /Coastal Cleanup Day Kick Off; Dixon Public Library; Dixon , CA; Sept. 16, 2009 (local)	Library after school education program (2-11 th graders). Watershed, water cycle, water conservation, urban run-off presentation. Used watershed diorama to understand non-/& point source pollution and daily conservation actions.	<ul style="list-style-type: none"> • 18 attended • 18 participants • 18 each stormwater activity booklets, bookmarks with tips on water conservation, pencils, stickers, etc. • Eager student participation; adults engaged with questions; librarian invited program back; news article in local newspaper
Coastal Cleanup Day, Valley Glen Pond Site; Dixon, CA; Sept. 19, 2009 (local)	Co-agencies' organized public event to pick up litter at pond site for Coastal Cleanup Days Parents and children of all ages Watershed water quality and water	<ul style="list-style-type: none"> • 25 attended • 25 participants • Leaders want to do it again next year; participants were proud of the amount of trash they collected and the ability

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C.7 – Public Information and Outreach

	conservation	to recycle a goodly portion of it; news article in local newspaper
Dept. Water Resource Water Educators Committee Meeting; Stockton, CA ; Oct. 1, 2009 (statewide)	School Water Education Program (SWEP) presentation on how stormwater pollution and water conservation is taught in the SWEP public & private school classrooms Statewide educators in attendance	<ul style="list-style-type: none"> • ~ 40 educators • ~ 40 participants • ~ 40 each of stormwater activity booklets, SWEP brochure, bookmarks, erasers, pencils, etc. • Stimulated discussion and the sharing of ideas
Fairfield School District Curricula Staff Meetings (3); Fairfield, CA; Oct., 2009; (local)	School Water Education Program (SWEP) presentation on how stormwater pollution and water conservation is taught in the SWEP public & private school classrooms Local school district curricula staffers	<ul style="list-style-type: none"> • 1-3 staffers per presentation having given 3 presentations • 1-3 staffers • 1-6 each of stormwater activity booklets, SWEP brochure, bookmarks, erasers, pencils, etc.
Suisun Valley Family Fun Farm Days; Suisun, Valley, CA; Oct. 25 (local)	SWEP/Solano Irrigation District (SID) booth displaying different water efficient irrigation systems and run-off/water conservation info A few families with youngsters	<ul style="list-style-type: none"> • A few hundred people • Several attendees-poor overall turnout • Several stormwater activity booklets, SWEP brochure, bookmarks, erasers, pencils, etc. handed out • Liked the giveaways
Project WET Teachers Workshop; Vacaville, CA; Nov. 7, 2009 (countywide)	SWEP and the City of Vallejo co-facilitated the 6 hour workshop teaching teachers how to integrate teaching water science and water conservation in their current curricula to meet CA state standards Water cycle diorama, groundwater model, and EnviroScope on display and available for classroom loaning K-12 grade teachers	<ul style="list-style-type: none"> • Several hundred teachers invited • 19 participated (pre-registration required) • Provided various water related posters, education packets, activity booklets, resource materials, giveaways, etc. • Great opportunity for teachers without a science background to develop confidence in teaching science Well received, highly complemented, highly rated evaluation forms, and will recommend to fellow colleagues

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<p>Stormwater and Water Conservation; Cordelia Public Library; Fairfield, CA; Mar. 9, 2010 (local)</p>	<p>School Water Education Program (SWEP) interactive presentation on stormwater pollution and water conservation using a water cycle diorama Mothers with preschool children and K-7th graders</p>	<ul style="list-style-type: none"> • 18 students and 5 adults • Engaged with all activities throughout presentation • Provided various water related posters, education packets, activity booklets, resource materials, giveaways, etc. • Highly complimentary of presenter
<p>Youth Environmental Summit Jam; Vacaville High School; Vacaville, CA; Mar. 27, 2010.</p>	<p>Interactive presentation on stormwater pollution and water conservation using a water cycle diorama</p>	<ul style="list-style-type: none"> • 75 students and 5 adults • Engaged with all activities throughout presentation • Provided various water related posters, education packets, activity booklets, resource materials, giveaways, etc. Students like the presentation and discussion
<p>Solano County Ag Day for Third Graders; Vallejo, CA; Mar. 18, 2010 (countywide)</p>	<p>Annual countywide third graders' opportunity to spend the day at the local fair grounds rotating from one educational booth after another learning what agriculture is, how vitally important it is to each of us, and what it takes to put food on the grocery shelf and their plates. Most booths were very interactive with the students</p>	<ul style="list-style-type: none"> • ~ 2500 third graders • ~ 950 students either attended presentation or received classroom educational packets • Provided various water related posters, education packets, activity booklets, resource materials, giveaways, etc. • Booth was constantly overwhelmed with students who wanted to participate in the water cycle diorama Teachers appreciated the pre-packaged resource material and giveaways for their students
<p>Stormwater and water conservation: Solano County Public Libraries (7) Bookmark Art Contest setups; Dixon, Vacaville, Fairfield, Suisun, Cordelia, CA; Apr. 1, 2010 (regional)</p>	<p>Set up the month long display boards and contest info at each of the 7 county public libraries promoting MAY- CA Water Awareness Month K-12th graders invited to create images promoting water conservation and water quality in their daily lives. The overall</p>	<ul style="list-style-type: none"> • 87 entries • Prizes were tickets to Six Flags, movie theaters, art supplies, teacher gift certificates, aluminum water containers, etc. • Student winners recognized in their classrooms and publicly

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	winner's image is printed on a bookmark with conservation tips and is distributed to ~ 3000 students the following school year	<ul style="list-style-type: none"> Teachers and students thrilled to submit entries and to win prizes Want to participate next year
Stormwater and water conservation; Town Square Public Library; Vacaville, CA; Apr. 1, 2010 (local)	School Water Education Program (SWEP) interactive presentation on stormwater pollution and water conservation using a water cycle diorama Mothers with preschool children and K-3rd graders	<ul style="list-style-type: none"> 8 students and 6 adults Engaged with all activities throughout presentation Provided various water related posters, education packets, activity booklets, resource materials, giveaways, etc. Highly complimentary of presenter
Stormwater and water conservation; Ulatis Public Library; Vacaville, CA; Apr. 7, 2010 (local)	School Water Education Program (SWEP) interactive presentation on stormwater pollution and water conservation using a water cycle diorama K-5 th graders	<ul style="list-style-type: none"> 17 students and 9 adults Engaged with all activities throughout presentation Provided various water related posters, education packets, activity booklets, resource materials, giveaways, etc. Highly complimentary of presenter
Stormwater and water conservation; Dixon Public Library; Dixon, CA; Apr. 14, 2010 (local)	interactive presentation on stormwater pollution and water conservation using the EnviroScope 1-5 th graders	<ul style="list-style-type: none"> 8 students and 2 adults Engaged with all activities throughout presentation Provided various water related posters, education packets, activity booklets, resource materials, giveaways, etc. Highly complimentary of presenter
Below is the Curb to Creek program which the Program contracts with UC Davis for outreach and education to local schools. The goal is to promote stormwater safe practices and a culture of environmental stewardship in a generation that will be defined by its response to ecological challenges and green opportunities.		
Community Service Learning Projects. Three classes (75 students) in the Armijo High School Curb2Creek program. May 4, 2010. Sites are school neighborhoods, downtown Fairfield, Clay Ditch	Program sponsored the three C2C classes at Armijo mapped, noted conditions of, and applied new storm drain decals to 12 storm drain hoods in nearby neighborhoods and downtown Fairfield on May 4 th , 2010, as a service learning project. They also left a collaboratively-written "good neighbor letter" at the homes and businesses near their storm drain decal installations to	Service Learning Projects had positive impacts on environment, peers, and community members s shared by others. 75 students

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	explain the project. These classes also picked up trash at Clay Ditch and removed a shopping cart from the creek while conducting water quality testing and benthic macro-invertebrate biomonitoring.	
Service Learning Projects and Presentations. One class (30 students) in the Fairfield High School Curb2Creek program. Various dates and sites. Laurel Creek Elementary School.	One class at Fairfield High made posters and activities about the importance of recycling instead of littering and made presentations to their peers as well as one 1 st grade and one 5 th grade class at neighboring Laurel Creek Elementary. This class also passed along suggestions for campus-wide efforts at litter reduction to the Environment Club at Fairfield high for future implementation.	30 students
Suisun City 2009 4 th of July Extravaganza, 7-4-09, Suisun City Waterfront, Local event but countywide draw	Community event with all audiences.	Estimated 20,000 attendees. First time to attend event with stormwater information. Approximately 200 brochures, "You Are the Solution to Water Pollution" - Creek and Marsh Watch handed out. No surveys were conducted.
City of Fairfield - Earth Day - Local event Date: Saturday, April 24, 2010 from 9 a.m. – 1p.m. Location: 1000 Webster Street, City Pond behind City Hall.	Below are the agencies that participated in the event along with a description of their messages. <u>Fairfield Suisun Sewer District (FSSD)</u> The FSSD promoted pollution, prevention message through the distribution of reusable grocery bags and flyers to remove fats, oil and grease from the sewer lines. The FSSD promoted less use of pesticides through hand outs and discussions. The FSSD had a demonstration about collection and treatment systems. <u>Solano Resource conservation District SRCD</u> SRCD gave away "welcome to the watershed" totes and directories, district literature and native plants.	Estimated overall attendance: more than 1,000 City Staff designed a game to reinforce the participation of the event attendees. If the attendee gathered all signatures of the booths representatives on the game card, they were given out a prize ticket. The prizes were donated by the community and included restaurant gift cards, gift cards to 7 Flags Car Wash, 2 tickets for a baseball game, t-shirts, etc. The City partnered with Kids Day of Fishing for the Event and the event was great. We were covered by our local newspaper.

	<p><u>Solano Garbage Company (SGC)</u> SGC gave away informational brochures, oil jugs and coloring books.</p> <p><u>Solano Napa Commuter information</u> Offered ride share information, transit schedules, bike maps, bike to work sign ups, train, ferry and BART schedules.</p> <p><u>Solano Community College (SCC) Bio Dept. Environmental Science</u> SCC ran a carbon foot print activity.</p> <p><u>Potrero Hills LandFill</u> Offered landfill information flyer, reusable bags, frisbees, water bottles.</p> <p><u>Fairfield Fire Department</u> Offered fire and life safety educational materials.</p> <p><u>Geranium City garden Club</u> Offered plant and plant related materials, native plants.</p> <p><u>Pat's purple Geranium</u> Offered plants, composting fertilizer.</p> <p><u>Fairfield Police Department</u> Provided families with Operation 10 Fingerprinting service that gives parents a copy of their child's fingerprints.</p> <p><u>Solano County Mosquito abatement district</u> Offered information about West Nile Virus, educational brochures about preventing mosquitoes around the house, mosquito-like insects commonly found in Solano County, and information about Solano County</p>	
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	<p>Mosquito Abatement District. They also had a mosquito informational board.</p> <p><u>Sierra Club Solano Group</u> Sierra Club sold recycled content reusable shopping bags and other environmental items. The group also had information about them.</p> <p><u>PG&E</u> PG&E had brochures with information about energy efficiency and PG&E programs, tree info and seed packs.</p> <p><u>Fairfield conservation water</u> Offered informational brochures about water conservation, water conservation programs in the city and giveaways.</p> <p>UC Davis Master Gardeners Offered information about composting, plants and pollution from pesticides.</p> <p><u>City of Fairfield Recycling Program</u> Offered informational brochures about Household Hazardous Waste facility, Used Oil curbside program, BOPA facility and Used Oil Certified Centers. Also offered informational flyers about recycling materials collected in Fairfield and banned landfill products. Gave out giveaways.</p> <p><u>City of Fairfield Task Force (ATOD)</u> Offered informational brochures about prevention of use of alcohol, tobacco and other drugs for minors.</p>	
<p>Tomato Festival – Local Event Location: Downtown Fairfield Date: August 15-16, 2009</p>	<p>2 day event This is the first time that the City had a "green zone" in the Tomato Festival. The</p>	<p>The people that came to the booth really appreciated the information they were given. Some of them did not know about the</p>

	<p>City partnered with PG&E to have information on energy savings programs, energy programs, etc. The City water conservation program also gave information about water conservation. The city also had an information booth on recycling programs, HHW programs, educational information about banned landfill products, information about used oil programs in the City, and waste reduction information.</p>	<p>existence of some of the city programs. Many residents signed up for an energy audit.</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 Program conducts an array of activities which qualify for watershed stewardship collaborative efforts. These efforts are also mentioned in C.7.e and C.7.g. Program efforts range from funding to active participation. Efforts directed toward Coast and Creek Cleanup result in watershed stewardship collaboration. Presentations were made to Boy Scout Troops, schools in the Fairfield-Suisun Unified School District, the local Rotary Club and to all site Captains. Major accomplishments include: a 21% increase in the number of participants; a reduction in the amount of trash collected (hopefully due to increased public awareness); and an increased number of sites cleaned.

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
Community Service Learning Projects. Three classes (75 students) in the Armijo High School Curb2Creek program. May 4, 2010. Sites are school neighborhoods, downtown Fairfield, Clay Ditch	The Program sponsored three C2C classes at Armijo. The classes mapped, noted conditions of, and applied new storm drain decals to storm drain in nearby neighborhoods and downtown Fairfield on May 4 th , 2010, as a service learning project. They also left a collaboratively-written "good neighbor letter" at the homes and businesses near their storm drain decal installations to explain the project. These classes also picked up trash at Clay Ditch and removed a shopping cart from the creek while conducting water quality testing and benthic macro-invertebrate biomonitoring.	Service Learning Projects had positive impacts on environment, peers, and community members s shared by others. 75 students
Service Learning Projects and Presentations. One class (30 students) in the Fairfield High School Curb2Creek program. Various dates and sites. Laurel Creek Elementary School.	One class at Fairfield High made posters and activities about the importance of recycling instead of littering and made presentations to their peers as well as one 1 st grade and one 5 th grade class at neighboring Laurel Creek Elementary. This class also passed along suggestions for campus-wide efforts at litter reduction to the Environment Club at Fairfield high for future implementation.	30 students
Make a Difference Day – Local Event	City wide clean up day for Make a Difference	More than 100 volunteers participated in the

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C.7 – Public Information and Outreach

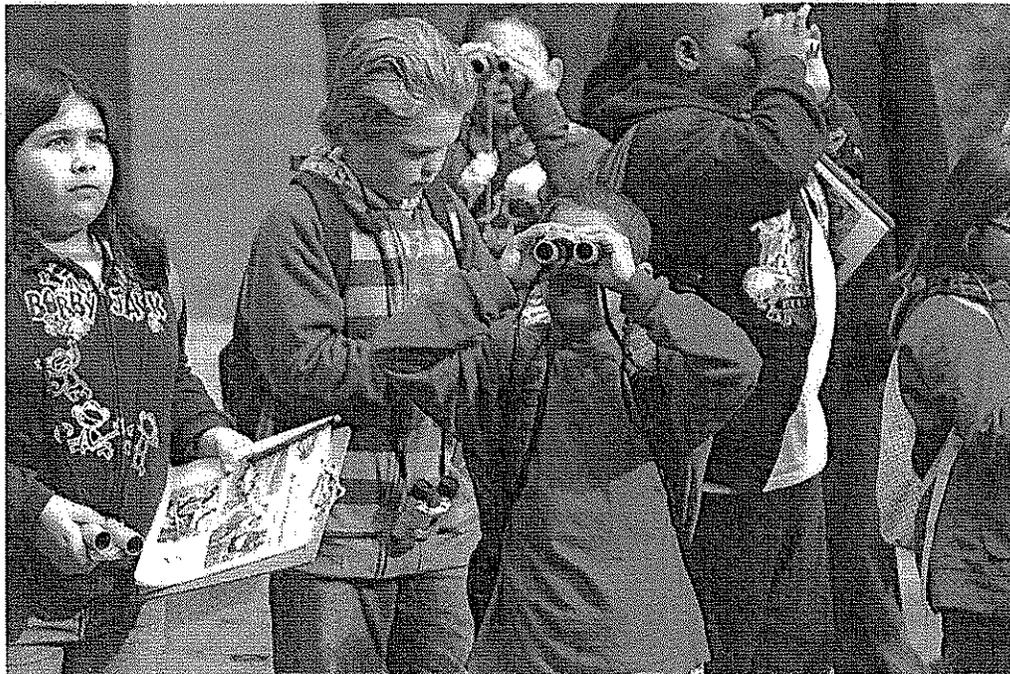
Permittee Name: Fairfield-Suisun Urban Runoff Management Program

<p>Location: City of Fairfield various locations Date: October 24, 2009</p>	<p>Day utilizing the local faith community and volunteers.</p>	<p>event.</p>
<p>Coast and Creek Cleanup Day Location: throughout the cities of Fairfield and Suisun city, as well as unincorporated Solano County. Date: September 14, 2009</p>	<p>The Program led volunteer cleanup of local creeks marsh and open space areas.</p>	<p>584 people participated, this was an increase of 102 people from the previous year.</p> <p>The effort cleaned 21 miles of our local creeks, water bodies and open space areas. 13 sites were cleaned, compared to 12 from the previous year.</p> <p>There was 4,450 pounds of trash collected and 528 pounds of recyclables. During 2008 there was 5,701 pounds of trash and 1,361 pounds of recyclables collected. An increase in the number of participants along with a decrease in the amount of trash found in our local waterways and open space areas, is a clear indication of a successful event.</p>
<p>Solano County Mosquito Abatement District Spill Response Exercise/Drill Location: 2950 Industrial Court Fairfield, CA 94533 Date: May 19, 2010</p>	<p>The Program partnered with Solano County's Mosquito Abatement District to assist in the direction of spill exercises. Small spills of approximately 5 gallons were simulated and then cleaned up and reported. Afterward larger spills of approximately 20 gallons or more were released and controlled and reported by the participants in the drill. Real-life chaos was created to simulate stressful emergency field conditions during a spill for mosquito abatement personnel. The exercise proved to the participants that there is more than one way to handle an accident or release and still be effective in protecting the environment in complying with regulatory requirements.</p>	<p>Approximately 60 mosquito abatement personnel from throughout the Bay Area were in attendance. The drill was well received and an emphasis was placed on protecting the storm drain system in our local waterways.</p>

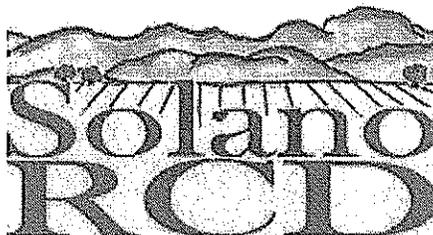
C.7.h. ► School-Age Children Outreach			
Summarize school-age children outreach programs implemented. A detailed report may be included as an attachment. Use the following table for reporting school-age children outreach efforts.			
Program Details	Focus & Short Description	Number of Students/Teachers 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.
See attached Watershed Explorers Program 2010 Program Report. The program is sponsored in part by the Fairfield-Suisun Sewer District, acting as representatives of both the city of Fairfield and Suisun City (the Program). Although no classes were reached in Suisun City, Suisun City is a full participant in this program. Further attempts will be made next year to involve classes from Suisun City. The Program has left schools from Vallejo who have participated in this program on our list to show our integrated watershed approach (ie. environmental benefits of an education do not stop at city lines).			
The following is a description of the Clean Water Outreach Program which the Program contracts with UC Davis for educational services:			
Sewer Science program High school biology students	Sewer Science uses a simulated wastewater treatment lab to: Demonstrate and provide rationale for wastewater treatment, apply science content & skills (chemistry, ecology, biology), and give rationales & examples of sewer-safe behaviors to young adult constituents.	5 teachers and about 360 students at Rodriquez High School participated	<u>Student Quiz</u> : 148 students completed the quiz, none scored lower than 9 of 11 points. <u>Teacher Survey</u> : 3 of 5 teachers completed, with positive feedback related to program content, student learning, hands-on training & CD-ROM of materials. <u>Teacher Feedback</u> : Suggestions to teach Sewer Science as an Ecology Unit or in environmental science classes and adjust content-to-implementation ratio.
Curb2Creek program High school environmental science students	Curb2Creek is a stormwater pollution education and service learning program. Students learn background material about stormwater pollution and its local and global effects; investigate the contributions of their school and community to this pollution; and create service projects aimed at reducing stormwater pollution in their area.	3 teachers and about 225 students combined, from Armijo and Fairfield High Schools participated	ARMIJO HIGH <u>Student Letters</u> : about 50 students wrote letters explaining the class service project and successfully explained the connection between littering, stormwater transport, and marine pollution along with pollution effects. <u>Student Evaluation</u> : 39 students answered, of which 32 reported "learning a lot" and most reported changing their own behavior to "no

*The Watershed Explorers Program
2010 Program Report*

July 2010



*By
Solano Resource Conservation District*



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Overview

The Watershed Explorers program utilizes science and place-based learning to build awareness and understanding of local creeks and watersheds, their unique ecosystems, and the ways in which we care for them. In-the-field discussions and activities provide a sense of understanding about the fragile habitats of birds and other wildlife. Students learn the importance of water quality in their watershed and discover that it is negatively impacted by urban runoff. Concepts are directly linked to the California State Standards and the program offers local children, many of whom have little or no experience being in open space settings, a concrete, experiential introduction to their watershed and creatures that inhabit it.

Audience

We have completed the fourth year of the Watershed Explorers Program. The program was located in Lynch Canyon in 2007 and 2008. Four classes participated (~120 students) in 2007. Eighteen classes participated (~427 students) in 2008. Four classes participated in an abridged program along Blue Rock Springs Corridor (~80 students) in 2009. This year, we expanded the program to encompass both locations. The first location was Blue Rock Springs Corridor beginning at Hanns Park in Vallejo, which is managed by Greater Vallejo Recreation District. The second location was Lynch Canyon Open Space Area, a property owned by Solano Land Trust and managed by Solano County Parks Department. 2010 data includes:

Date	School	Teachers	Site	# Studs	# Adults	Total People
February 12	Federal Terrace, Vallejo	Heather Andrew Louise Bassey	Hanns Park	47	11	58
February 17	Highland, Vallejo	Gayle Brown Donna Young	Hanns Park	47	16	63
February 19	Highland, Vallejo	Deborah Leighton Rosemary Mullane	Hanns Park	37	13	50
February 22	Cooper, Vallejo	Janine Eloff Lynetta Sims	Hanns Park	27	10	37
February 24	Cooper, Vallejo	Genuina Mercado Alice Ira	Hanns Park	30	10	40
March 1	Wardlaw, Vallejo	Alison Egan Connie Johnson	Hanns Park	52	13	65
March 3	Wardlaw, Vallejo	Jim B David Wade	Hanns Park	52	15	67
March 5	Beverly Hills, Vallejo	Wendy Kandel Thais Kaziso	Hanns Park	51	20	71
March 15	Wardlaw, Vallejo	Karen Maliya Carole Hartley	Hanns Park	55	17	72
March 17	Vallejo Charter, Vallejo	Nicole Bandy Tim Hite	Hanns Park	44	17	61
May 5	KI Jones, Fairfield	Ron Berkson Jennifer J	Lynch Canyon	47	14	61
May 7	David A Weir, Fairfield	Shawna Hafner Amy Shively	Lynch Canyon	55	8	63
May 10	Paden, Vacaville	Shelly Capps Nancy Burton	Lynch Canyon	40	11	51
May 14	David A Weir, Fairfield	Nancy Martinez Steve Patton	Lynch Canyon	37	8	45
May 21	Laurel Creek, Fairfield	Caroline Sargent Bruce Rasmussen	Lynch Canyon	50	10	60
May 24	Fairview, Fairfield	Phil Morigin Mary Kaduk Leslie Farwell	Lynch Canyon	49	6	55
May 28	Fairview, Fairfield	Mindy McCuen Barb Neifhoff	Lynch Canyon	45	6	51
June 4	Orchard, Vacaville	Steve Patton Celeste Evans	Lynch Canyon	42	9	51

Total Students	Total Adults Teacher & Parent Volunteers	Total People Educated
807	214 Adults (37 Classes)	1,021

Goals and Objectives

Our main goal was for students to develop an awareness of the outdoor, natural world in their watershed.

As a result they would:

- understand the difference between native and non-native plants;
- know about one pollinator species the study watershed is habitat to;
- understand the impact of storm water on their watershed;
- have a sense of how to be a better steward in their watershed.

Prior to the field trip, teachers were provided with manuals to prepare students for their experience. Students were given journals and participated in various activities including: making their own paper watershed model, learning how water flows, counting the number of gallons of water they use each day and discussing ways to lessen their consumption, drawing the life cycle of a plant, reading about pollinators and discussing phenology and its relevance to the interconnectedness of humans, animals, weather and our environment.

At the end of the four-hour Watershed Explorers Program, it was our hope that these goals and objectives were absorbed by the students. Through the evaluations, we later found out that they were (please see data on page seven).

Method

Marianne Butler with Solano RCD was the program manager. She managed the majority of field trips with help from two paid program assistants, Carla Murphy and Jeremy Del Cid. Martha Rocha from Suisun RCD was the program coordinator on seven field trips at Lynch Canyon.

The program has been developing over the past four years. Previously, the program consisted of a 2 ½ hour guided nature hike taking advantage of impromptu 'teachable moments.' This year we were granted funding to develop a more comprehensive program.

We still worked to capture teachable moments, but the program was more structured and the duration of the field trip was increased to 4 hours. When students arrived for their field trip, they were greeted with an introduction to the Watershed Explorers Program. As young scientists, students were informed of their tasks and were equipped with instruments to assist them with data collection: their journal, clipboard, magnifying lens, and binoculars.

Following the introduction, students were assigned to a research group and headed out into the field to make observations about the natural world around them. Along the way they hiked and explored, learning about native and non-native plants, how seeds are dispersed and the role of pollinators in the wild and how it relates to our food supply. Students completed detailed identifications on several native plants and collected specimens and drew seeds on a 'travelling seed' page in their journal.

In addition to the hike, students learned about storm water runoff and its impacts as they studied natural drainages. An enviroscape presentation was provided which explained the dynamics of a watershed and how it is affected by pollution. This hands-on activity provided students with a three-dimensional visual of the watershed and demonstrated how urban runoff enters nearby storm drains and ends up in the Sacramento River, Suisun March, or San Pablo Bay (depending on the students' residence).

The geographies of Lynch Canyon and Hanns Park offer students slightly different experiences of local watersheds. In Hanns Park, students had the opportunity to plant native grass plugs along Blue Rock Springs

Corridor, while students at Lynch Canyon hiked to Lynch Reservoir. The terrain at Lynch Canyon is rugged compared to Hanns Park, where the corridor along the creek is paved. At Hanns Park, students made native bee nests to hang up in their neighborhood, while teachers at Lynch Canyon used this as a post-field trip culmination lesson. At both locations, the usual favorite experience was viewing wildlife (such as red tailed hawks, eucalyptus tortoise beetles, rabbits, snakes, and ground squirrels). Students reported that their favorite activity at Hanns Park was planting plugs and at Lynch Canyon it was visiting the reservoir and observing the cows.

Challenges

There were minimal challenges this year. Journal revisions will need to be made next year; the student journal will be combined with the teacher manual so that the teachers have an easier time providing the pre-field trip lessons. The picnic area at Hanns Park will be carefully scrutinized before students arrive at the site; there were some items remaining from prior nights that were not appropriate for students to view. It will be necessary next year to order port-o-potties for the Lynch Canyon site. Additionally, there have been several requests for shade. Next year, we will aim to start the field trips earlier in the year so that students will not be exposed to such heat. However, this may be a challenge due to STAR testing in April. We will try to avoid this by scheduling the field trips in December.

Further, several news paper articles were written and very few of them mentioned the funding agencies for this program. We believe this is one of the most important aspects of the program. We plan to put together a fact sheet about the program listing the history, partners and funders so that the reporters can spend their time getting good quotes and still have a written copy of the main facts.

Successes & Future Goals

This year we almost doubled the number of students involved in the program – 807 students went on the Watershed Explorers field trip. Additionally, over 200 adults were exposed to the curriculum. Articles were written in the Benicia Herald, Times Herald and The Daily Times (cover page) and possibly others that escaped our notice. There were unlimited words of gratitude by teaches. Barbara Niehoff, 3rd grade teacher at Fairview Elementary in Fairfield wrote, 'The field trip was fabulous for many reasons. The guides were knowledgeable and PATIENT (without being pushovers). The actual day was SO WELL ORGANIZED (splitting up of the groups, bathroom line, handing out the binoculars, clipboards, even how to clip the workbook on so they didn't have to struggle with it all day, etc.). The pre-lessons were good. The lessons during the actual field trip were really good! It felt like a true outdoor SCHOOL...not just a look and see kind of field trip.'

To add to the success of the program, we had a total of 16 volunteers donate 127 hours of their time. In addition, Birds Unlimited of Concord provided a substantial discount for binoculars enabling us to provide a pair for each student.

Solano RCD will strive to continue this program in the future. We were not awarded funding for the Watershed Explorers Program from the CA State Parks Habitat Conservation Fund. It was very competitive. However, our goal is to include forty 3rd grade classes in Solano County next Spring. If all organizations can continue to support the program and we find some additional funding, we will be able to reach that goal.

Included with this report is a copy of the 2010 student journal, student's writings and newspaper articles.

Evaluation Synopsis

It is not reasonable to expect that a four-hour field trip will fill in the gaps in applied learning created by a curriculum that teaches only to test results. What we believe is a reasonable expectation is that the children participating will leave with a beginning experiential understanding of the watershed system that they are part of, and a curiosity to learn more about what's out there. We also expected that students would leave our program with a heightened sense of stewardship, and some practical means of demonstrating stewardship in their daily lives.

The questions we asked with this evaluation were crafted to measure students' understanding of two watershed systems (the water cycle, focusing on storm water runoff and native plant and pollinator systems), and to assess students' grasp of concrete ways they can interact with those systems to protect and enhance their watershed.

In the pre-assessment, 44% of respondents were able to provide all questions with correct/partially correct answers. By the post-assessment, 82% of the respondents were able to respond to all questions with correct/partially correct answers. That is an increase of 39%, and represents a "grade" movement from an "F" to a "B." Students who participated at the Blue Rock Springs Creek site, demonstrated an increase of 42% in their overall assessment score; students who participated at the Lynch Canyon site demonstrated a 32% increase in their overall assessment score.

The orange columns provide information about the total number of correct and partially correct answers for each question. The delta columns in the post-assessment section demonstrates the percent change in correct answers from the pre-assessment to the post-assessment. A startling (and rewarding) performance increase can be seen for question 5, which provides a measure with real-world connections for students participating in the program. At the Blue Rock Springs Creek site, 93% of respondents responded with correct/partially correct answers in the post-assessment. In the pre-assessment, those same students were scored with just 25% correct/partially correct answers for that question, an improvement in performance of 68%.

The post-assessment improvement scores are better than all past years of the program; though, since we begin with a fresh audience each year, we cannot compare results across program years. We can attribute at least part of this improvement in post-assessment performance with our continual fine tuning of the program and our teaching strategy. As well as with our now established relationships with many of the teachers of participating classes, whom we assume – and in some cases know – incorporate the Watershed Explorers program into their curriculum.

One of Solano RCD's big picture program goals is to expand watershed education efforts so that we are able to see the Watershed Explorer Program alumni again in middle school and then again in high school. When that happens, we will be able to do more sophisticated measurements of long-term retention of concepts and concrete use of the knowledge that students take away from their Watershed Explorers experience.

2010 Solano County Environmental Education
Watershed Explorers Program
Pre and Post Class Assessment Data

#	Assessment Questions	Pre-Assessment								Post-Assessment															
		correct	%	partially correct	%	correct & partially correct	%	wrong/ no answer	%	correct	%	Δ	partially correct	%	Δ	correct & partially correct	%	Δ	wrong/ no answer	%	Δ				
1	Name a native plant that grows in Solano County	120	17%	100	15%	220	32%	470	68%	418	53%	35%	58	7%	-7%	476	60%	28%	319	40%	28%				
2	What makes a native plant "native"?	60	9%	70	10%	130	19%	560	81%	270	34%	25%	294	37%	27%	564	71%	52%	231	29%	52%				
3	Give an example of an insect that pollinates flowers	610	89%	20	3%	630	91%	60	9%	765	96%	8%	20	3%	0%	785	99%	7%	10	1%	7%				
4	Where does rainwater go after it hits the ground?	30	4%	200	29%	230	33%	190	28%	30	4%	-1%	664	84%	54%	694	87%	54%	102	13%	15%				
5	Name two things you can do to make your watershed a healthier place to live	80	12%	210	30%	290	42%	400	58%	419	53%	41%	331	42%	11%	750	94%	52%	45	6%	52%				
Total percentage by category		26%		17%		44%		49%		48%		22%		34%		17%		82%		39%		18%		31%	

Total Program # pre-class assessment participants: 689

post-class assessments: 795

2010 Solano County Environmental Education
Blue Rock Springs Creek Watershed Explorers Program
Pre and Post Class Assessment Data

#	Assessment Questions	Pre-Assessment								Post-Assessment															
		correct	%	partially correct	%	correct & partially correct	%	wrong/ no answer	%	correct	%	Δ	partially correct	%	Δ	correct & partially correct	%	Δ	wrong/ no answer	%	Δ				
1	Name a native plant that grows in Solano County	50	12%	100	23%	150	35%	280	65%	200	47%	35%	0	0%	-23%	200	47%	12%	230	53%	11%				
2	What makes a native plant "native"?	10	2%	30	7%	40	9%	390	90%	150	35%	33%	170	40%	33%	320	74%	65%	110	26%	64%				
3	Give an example of an insect that pollinates flowers	370	85%	20	5%	390	90%	40	9%	410	95%	10%	20	5%	0%	430	100%	10%	0	0%	9%				
4	Where does rainwater go after it hits the ground?	0	0%	120	28%	120	28%	40	9%	20	5%	5%	330	77%	49%	350	81%	54%	80	19%	-9%				
5	Name two things you can do to make your watershed a healthier place to live	20	5%	90	21%	110	25%	320	74%	200	47%	42%	200	47%	26%	400	93%	68%	30	7%	67%				
Total percentage by category		21%		17%		37%		49%		46%		25%		33%		17%		79%		42%		21%		28%	

pre-class assessment participants: 433

post-class assessments: 430

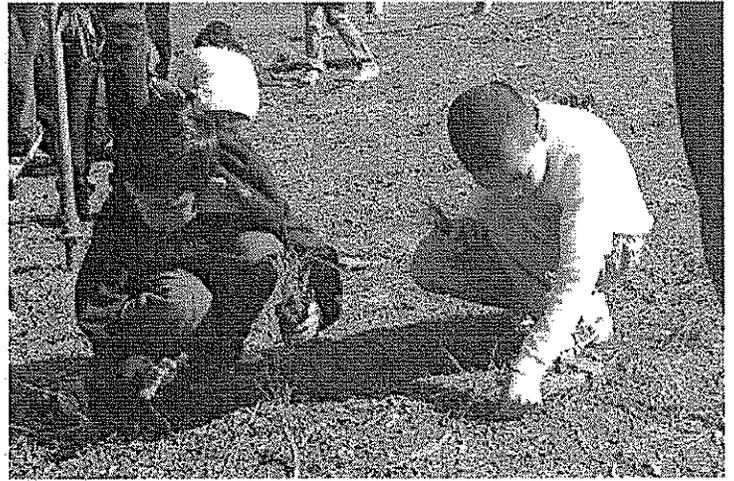
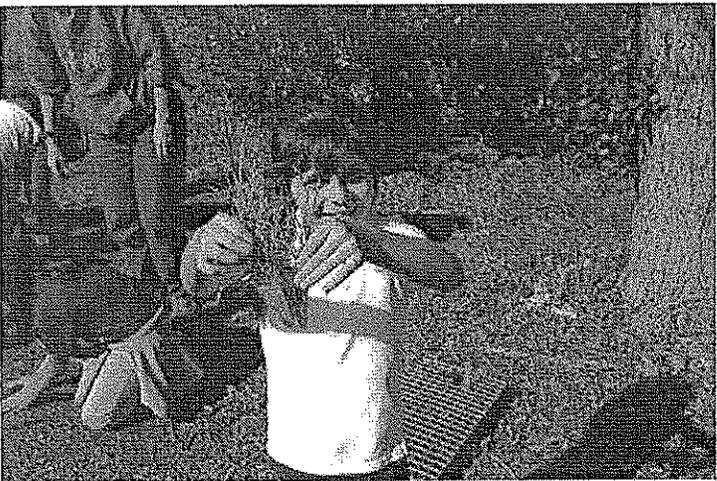
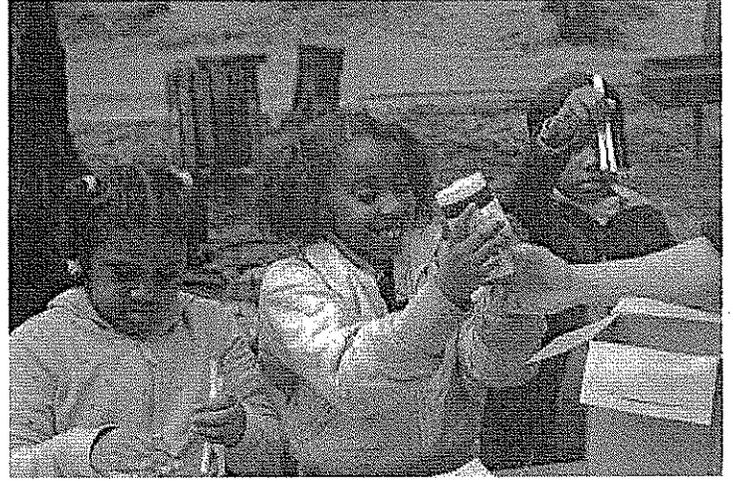
2010 Solano County Environmental Education
Lynch Canyon Watershed Explorers Program
Pre and Post Class Assessment Data

#	Assessment Questions	Pre-Assessment								Post-Assessment											
		correct	%	partially correct	%	correct & partially correct	%	wrong/ no answer	%	correct	%	Δ	partially correct	%	Δ	correct & partially correct	%	Δ	wrong/ no answer	%	Δ
1	Name a native plant that grows in Solano County	70	27%	0	0%	70	27%	190	74%	218	60%	32%	58	16%	16%	276	76%	48%	89	24%	50%
2	What makes a native plant "native"?	50	20%	40	16%	90	35%	170	66%	120	33%	13%	124	34%	18%	244	67%	32%	121	33%	33%
3	Give an example of an insect that pollinates flowers	240	94%	0	0%	240	94%	20	8%	355	97%	4%	0	0%	0%	355	97%	4%	10	3%	6%
4	Where does rainwater go after it hits the ground?	30	12%	80	31%	110	43%	150	59%	10	3%	-9%	334	92%	60%	344	94%	51%	22	8%	53%
5	Name two things you can do to make your watershed a healthier place to live	60	23%	120	47%	180	70%	80	31%	219	60%	37%	131	36%	-11%	350	96%	26%	15	4%	27%
Total percentage by category			35%		19%		54%		48%		51%	15%		35%	17%		86%	32%		14%	34%

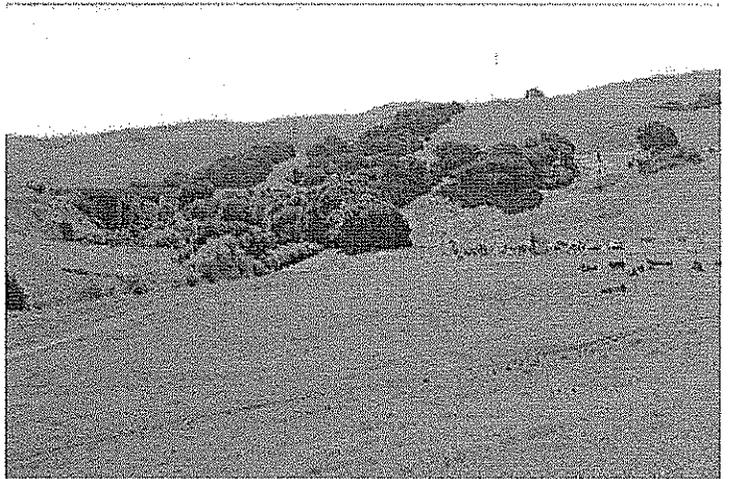
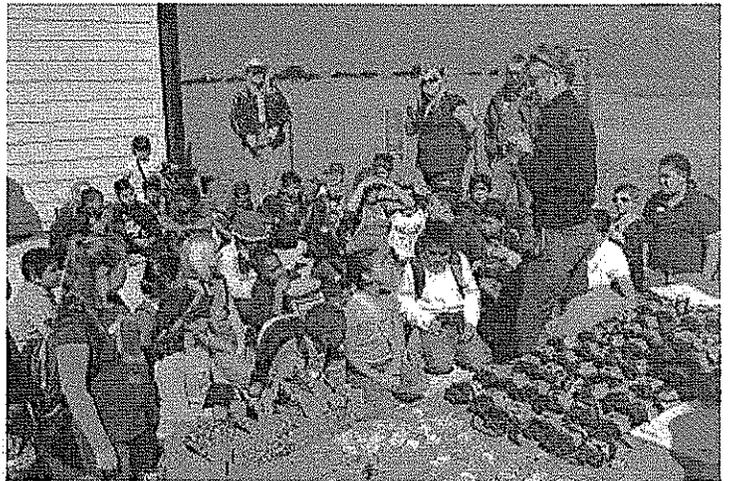
pre-class assessment participants: 256

post-class assessments: 365

Photos from Blue Rock Springs Corridor



Photos from Lynch Canyon Open Space



FY 2009-2010 Annual Report
Permittee Name: Fairfield-Suisun Urban Runoff Management Program

C.7 – Public Information and Outreach

			<p>littering" as a result of the program. <u>Teacher Feedback:</u> very positive, would like to continue program, requests for more extension and research opportunities FAIRFIELD HIGH <u>Student Evaluation:</u> not given by teacher <u>Teacher Feedback:</u> very positive, would like to continue program, wishes to expand research and service opportunities next year.</p>
<p>See attached Year End Report for the Clean Water Outreach Program for 2009 -- 2010</p>			



Clean Water Outreach Program 2009-2010 Year End Report



AHS student applies a storm drain decal to a stormwater drain hood a block from her campus as part of her class' service learning project at the end of the Curb2Creek unit.

Prepared August 2010 by Megan Harns
UC Davis John Muir Institute of the Environment
For more information, contact Joyce Gutstein at jjgutstein@ucdavis.edu

Report to Fairfield Suisun Sewer District
2009-2010 Clean Water Outreach Program
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Report to Fairfield Suisun Sewer District
2009-2010 Clean Water Outreach Program
Summary

Fairfield-Suisun Sewer District (FSSD) personnel and educators from the UC Davis John Muir Institute of the Environment (UCD) have completed the second year of a partnership to develop and implement a clean water outreach program for secondary school-aged youth in the FSSD service area. For details about each program, please see the individual reports.

Sewer Science High School Program

FSSD's Sewer Science is a high school curriculum that introduces students to how Fairfield and Suisun collect, treat, and release wastewater. The unit revolves around a straightforward lab that simulates the wastewater treatment process, accompanied by water quality testing. In 2008, teachers received hands-on training in implementing the lab and testing. In Fall 2009, the same teachers received as a supplement to this training a CD-ROM of step-by-step PowerPoints to guide their classroom implementation. In fall 2009, Sewer Science was conducted entirely by classroom teachers in 12 classes at Rodriguez High School. Evaluations showed that students clearly understood both the science content and the behavior messages of Sewer Science.

Wastewater Science Middle School Program

A short curriculum was assembled to provide middle school students with an introduction to the science of sewage and stormwater systems. Part One of the unit is an introductory activity that explains the sources, paths, and destinations of both the sewer and stormwater systems. Parts Two and Three are lab activities from existing curricula that provide in-depth understanding of sewer and stormwater systems, respectively, and build lab skills. Five 7th and 8th grade classes were used to pilot test the unit's introduction during spring 2010. Formative evaluation led to changes in the format of the introductory activity. Slight modifications were made to the lab activity lesson plans from other curricula to make them more appropriate for middle schoolers.

Curb2Creek High School Program

The Curb2Creek program is a high school environmental science curriculum focused on studying urban runoff from school sites to local streams, followed by student-designed action projects. The goals of the program are to help young adults understand the consequences of stormwater pollution and to support behavior changes in those students and their peers. The full curriculum consists of four phases: Creating Context, School Investigation, Field Trip Investigation, and Designing Solutions. Teachers can use a CD-ROM of supporting materials to conduct the curriculum. C2C was implemented in winter and spring 2010 with eight classes at Armijo and Fairfield High Schools. Four classes completed the full curriculum with their teachers, the UCD educator, and UCD interns. Four classes completed core activities from the curriculum with their teacher only. Evaluations showed that students retained core concepts about stormwater system and the implications of stormwater pollution, and that they were motivated to change their own behavior and that of others to protect stormwater-receiving habitats.

“At a Glance” Facts about the 2009-2010 Clean Water Outreach Program

- ≈ 11 teachers from three high schools and two middle schools
- ≈ about 690 high school students and 100 middle school students
- ≈ 7,485 student-hours (students/class x hours/class added across programs)
- ≈ all students learned the sources, paths, and destinations of sewer water AND stormwater

Report to Fairfield Suisun Sewer District
2009-2010 Clean Water Outreach Program
Curb2Creek

Program Background

“Curb to Creek: An Urban Stormwater Research and Action Program” was originally developed by UC Davis educators in 2004-2005 to provide an environmental science class at Rodriguez High School with a comprehensive study of the sources, paths, destinations, and impacts of urban runoff. In 2008-2009, the Fairfield Suisun Sewer District’s Environmental Outreach Specialist, Margaret Kralovec, collaborated with three high schools in Fairfield (Armijo, Fairfield, and Rodriguez) *to expand the Curb to Creek program in the FSSD service area.* Assisted by Megan Harns, contract educator from UC Davis John Muir Institute of the Environment, the 2005 curriculum was modified, implemented, and evaluated. The majority of students participating showed improvement on pre-post tests in differentiating between stormwater and sewer systems, and participating teachers wished to continue with C2C.

Current Program

Reflecting on the 2008-2009 program, Curb2Creek educators decided that focusing the program more closely on the connection between school littering and environmental impacts would be beneficial. Water testing had shown that high school campuses had few dissolved pollutants delivered to storm drains but a high trash load, which has serious implications for creek and marine ecosystems, as well as an impact on school aesthetics. The high visibility of trash on school grounds and in neighboring water bodies interested and motivated students to “do something.” Secondly, Bay Area cities, including Fairfield and Suisun, will be required to “reduce storm-water garbage context by 40% within four years, and eliminate it completely in 12 years.”¹ Education will be an important component of meeting these mandates, so Curb2Creek was retooled for 2009-2010 to deliver trash-reduction messages more strongly.

The 2009-2010 Curb2Creek program was conducted by Megan Harns, UCD lead educator, with 3 teachers and 8 environmental science classes at Armijo and Fairfield High Schools in Fairfield. In four classes, the curriculum was co-presented by the teacher, the UCD educator, and 2 to 4 trained undergraduate UCD interns per class. In addition, the Fairfield High School teacher presented strategic components of the curriculum to her remaining four environmental science classes without direct classroom support from UCD educators. Table 1 summarizes participation information as well as time spent on the curriculum by students.

Table 1. Curb2Creek participation summary

High School	# teachers	# classes	# hours/ class	# students total	total student hours
Armijo HS	2	3	20	66	1320
Fairfield HS	1	1	20	35	700
Fairfield HS	-	4	11	140	1540
Totals	3	8	51	241	3,560

¹ Bowyer, Dale. “Trash Crackdown.” Estuary News. 18.6 (2009): 1-2.

Curb2Creek Curriculum

The Curb2Creek curriculum has a basic framework consisting of four phases: Creating Context, School Investigation, Field Trip Investigation, and Designing Solutions (Table 2 & Appendix A). The Field Trip Investigation is highly recommended, given school resources, and can be done at any time. Implementation of the curriculum varied somewhat between classes due to teacher preference, student capabilities, timing, and other factors. However, all classes in 2009-2010 successfully completed the required components, as described in more detail below.

Table 2. Phases and Components of Curb2Creek Curriculum

	Creating Context	School Investigation	Field Trip Investigation	Designing Solutions
Required	≈ PowerPoints ≈ map tracing	≈ campus tour ≈ annotated map	≈ highly suggested	≈ brainstorming
Additional	≈ Chutes n' Golf balls ≈ Enviroscape	≈ student-led investigations ≈ presentations	≈ macroinvertebrates ≈ water testing ≈ habitat assessment	≈ student-made service projects ≈ presentations

Curb2Creek Implementation

Curb2Creek was conducted at Armijo and Fairfield High Schools in Fairfield in 2009-2010. UCD educators partnered with teachers in environmental science classes composed on mostly 11th and 12th grade students. Eight classes with approximately 241 students were reached.

Armijo HS

Teachers Jessica Conover and Rick McKinney presented the Creating Context PowerPoints and accompanying videos to their students. UCD educators and interns conducted the “hands on” activities to conclude the Creating Context phase of the curriculum. The School Investigation was co-conducted by AHS teachers and UCD educators. UCD educators led the first campus tour and facilitated the annotated map activity, while teachers primarily conducted the campus research, in which students explored their campus in groups and collected and analyzed data. All educators attended and graded the campus research presentations that concluded that phase of the curriculum. The Designing Solutions phase, consisting of a student-chosen service learning project, was conducted next. UCD educators helped student groups plan and organize their particular solution, with teachers supporting group work. All educators attended and graded the presentations at the end of the phase. Due to school scheduling, the Field Trip Investigation was conducted last. UCD educators led each class on three one-hour field trips, over three days, to the creek across the street from the school. One final class session was held to reflect on the learning and community service that the class accomplished during the unit. Retrospective student evaluations were completed and returned during that final class session.

Fairfield HS

One environmental science class under teacher Jill Rithmire received the entire C2C curriculum. With this class, Rithmire presented the Creating Context PowerPoints and videos, and assisted UCD educators in facilitating the hands-on activities in that phase. This class completed the School Investigation and Designing Solutions phases in the same manner as at AHS, with leadership shared by the teacher and the UCD educators. This class conducted the Field Trip Investigation as their final C2C activity for the year. There was no time for a reflection session.

Rithmire presented the Creating Context and School Investigation phases with her remaining four classes on her own. These four classes did not complete the Designing Solutions phase, in part because the AP classes had to devote time to test preparation, but they did participate in the Field Trip Investigation. The teacher was furnished with the student evaluations by email, but was unable to administer them to any of the five classes before the end of the school year.

Evaluation of Student Gains

Students had many opportunities to demonstrate their evolving understanding, and through these, the educators were able to catch and correct misconceptions before the end of the unit. Several activities served as authentic assessment throughout the unit, and the student presentations at the end of the campus research and designing solutions phases were important assessment points.

In particular, the “good neighbor letters” written by students at AHS before implementing their service learning project (storm drain decal application) showed their understanding of the connection between littering on land and pollution in creek and marine environments, as well as their belief that the cumulative effect of individual education and action, both on and off campus, could have specific beneficial impacts on the health of the planet.

In the classroom, teachers administered a retrospective survey containing open-ended questions to measure the affective impact and content learning of Curb2Creek. The evaluation is included in Appendix B, and a selection of student quotes is included in Appendix C.

Students said that, overall, they learned “a lot” from doing the C2C program. The majority of students indicated that they moved from “some” understanding of stormwater systems, and the connection between land and marine pollution, to “a lot” of understanding. 24 of the 39 students surveyed said that participating in Curb2Creek caused them to reduce their own littering behavior. In short answers, students overwhelmingly reported that “yes,” they thought they made a difference in their community as a result of the service learning projects they completed. A majority of students reported that they learned about the consequences of stormwater pollution and littering on the environment, the ocean in particular.

These results are promising, because increased awareness and a commitment to personal behavior changes are the outcomes needed to meet stormwater trash reduction goals. The students who were positively influenced by the Curb2Creek program are more likely to be part of the pollution solution, and to encourage others in their families and communities to protect ecosystem health by avoiding stormwater pollution, too.

Besides gains in content knowledge and environmental awareness, students developed “real world skills” which the educators agree will be of primary importance in higher education and workplace settings. Students showed gains in project process skills: working as a team, setting goals, creating work plans, monitoring progress, and evaluating outcomes and effectiveness. Repeating this process within and between phases of the curriculum enhanced these changes.

Curb2Creek likely changed students’ perceptions of their abilities in science. Applying the scientific method, as well as learning to conduct lab and field testing, engaged students in science as an active and interactive investigation, instead of presenting science as a body of known facts. The mastery of authentic investigations develops strong science self-efficacy beliefs, which strongly predict interest in science courses and careers in the future.²

² Britner, S.L and Pajares, F. “Sources of science self-efficacy beliefs of middle school students.” *Journal of Research in Science Teaching*. 43.5 (2006): 485-499.

Program Evaluation

Teachers and UCD educators made observations and reflections on the implementation of the program to determine both its strengths and opportunities for improvement. Co-presentation by UCD educators did have several challenges, such as timely communication, schedule problems, and coordination. However, there were benefits as well. Multiple educators decreased the teacher to student ratio, resulting in higher rates of activity completion and higher quality. Also, novelty in leadership, especially from college interns, was perceived to increase high school students' attention. It is recommended that future implementations of Curb2Creek rely on the classroom teacher as the central educator, but that strategic support is obtained from college interns or knowledgeable members of the school or community to promote cooperative learning, authenticity, and mentorship modeling.

Programmatically, the most effective strategies observed were:

- ≈ Once a week sessions from January to May on the same day of the week (teachers observed that for some students, this was the only day they attended class!)
- ≈ Integrating C2C material with previously covered material, or, using C2C to preview science content material that would be covered later
- ≈ Progressively building skills and knowledge within and between the three “action” phases of the curriculum (school investigations, field trip investigations, and designing solutions)
- ≈ Asking students to write their initial beliefs/understanding, then make observations, and then write reflections to track how their understanding changed as a result of the unit
- ≈ Flexibility in scheduling to allow students more or less time, or to deal with weather.

Looking Forward

To maintain student learning outcomes, it is recommended that Curb2Creek continue to be taught in high school environmental science classrooms. Environmental Science classes in FSUSD have more program flexibility and a stronger predisposition to interdisciplinary content standard coverage than single-subject classes like Biology. Additionally, Curb2Creek should be paired with FSSD's Sewer Science program in those Environmental Science classes to promote a comprehensive water systems education. This pairing would provide the added benefit of multiple opportunities to conduct “real world science” and build a suite of transferable academic and workplace skills.

To improve program sustainability and teacher ownership, it is recommended that in 2010-2011, Curb2Creek be transmitted to teachers through a “train the teacher” workshop. At this workshop, the UCD educator would introduce teachers to Sewer Science and Curb2Creek; guide teachers through the curricula; support teachers in incorporating units into their existing scope and sequence; and assist teachers in reserving materials from FSSD. The UCD educator would be available throughout the school year by phone and email to assist teachers. The UCD educator would collect student evaluations and teacher feedback to create the year-end report.

Prior to 2010-2011 implementation, permission for teacher outreach and training, as well as classroom implementation, must be obtained from the Fairfield Suisun School District's Director of Secondary Education. To obtain this, standards-correlated lesson plans will be submitted. If FSUSD denies access to in-school student audiences in FSSD's service area, then steps can be taken to secure participation with secondary school-aged audiences through alternative venues and partners, such as community colleges or the Solano County Office of Education and after-school and out-of-school youth organizations that serve secondary school-aged youth.

Report to Fairfield Suisun Sewer District
2009-2010 Clean Water Outreach Program
Wastewater Science Middle School Program

Program Background

In meetings with area teachers in 2008-2009, the Fairfield Suisun Sewer District’s Environmental Outreach Specialist, Margaret Kralovec, noted that middle school teachers were interested in increasing student exposure to lab work and authentic applications of science. FSSD’s high school programs, Sewer Science and Curb2Creek, provide such exposure to “real world science” while simultaneously delivering messages about protecting sewer and stormwater quality. It was proposed that a short unit be created for middle school students that would cover the same main concepts as the high school programs, but with grade-appropriate lab activities taken from FSSD’s well-tested curricula and other regional water science programs. A middle school wastewater science unit was subsequently designed and pilot tested in spring 2010.

Program Structure

The structure of the middle school wastewater science unit begins with an introductory activity to explain the sources, paths, and destinations of sewer and stormwater. This is followed by two hands-on activities to explore an important aspect of each system (Table 1). Each grade requires its own set of hands-on activities because science standards vary by grade, but each grade can use the identical Wastewater System Introduction activity in Part One.

Table 1. Components of the 7th and 8th grade wastewater science curriculum

	7th Grade	8th Grade
Part One	Wastewater systems introduction	Wastewater systems introduction
Part Two	Sewer system activity: activated sludge microscope lab (from PARWCCP “Microbes”)	Sewer system activity: density and gravity demonstration (from Sewer Science “Primary Treatment”)
Part Three	Stormwater activity: storm-water mapping and water testing (from Curb2Creek “School Investigation”)	Stormwater activity: Chutes n’ Golf Balls velocity lab (from WaterWays “Canals”)

Pilot testing Part One: Wastewater Systems Introduction

The activity for Part One is the same for 7th and 8th grade classes to ensure that consistent information about sewer and stormwater systems is delivered. In spring 2010, two activities covering the same content were tested and evaluated with three 7th and two 8th grade classes.

One pilot activity that was developed and tested was a “water story puzzle.” Each student received a 12” x 12” color-coded square depicting one step in the story of their community’s drinking water, sewer water, or stormwater. Students had to find others with pieces of their story, put the story in order, and read aloud their story to their classmates. The story ordering process was successful, and prompted critical thinking and connection to everyday life as students solved the puzzles. The main challenge encountered was student reluctance to present their newly constructed stories to the class, as well as passivity on the part of students during the subsequent discussion. A second pilot activity that was tested was a PowerPoint presentation, modeled in part on PowerPoints from the Sewer Science and Curb2Creek high school curricula.

This activity was effective at conveying facts, but did not activate prior knowledge nor stimulate critical thinking as much as did the puzzle activity.

Final Version of Wastewater Systems Introduction activity

The final version of the Wastewater Systems Introduction activity combines the successful attributes of the two pilot activities. Students will work in small groups to organize the three “water story puzzles” (drinking, sewer, and storm water systems) and answer critical thinking questions on an accompanying worksheet. The teacher then presents a short, visually powerful PowerPoint to the class to review the main concepts about the sewer and stormwater systems and to preview the follow-up lab activities.

Looking Forward

In 2010-2011, pending approval from the Fairfield Suisun Unified School District’s Director of Secondary Curriculum, middle school teachers will be trained during a short workshop in the implementation of the complete middle school wastewater science unit (consisting of the introductory activity and the lab activities that correspond to the teacher’s grade level).



Middle school students consider the text and pictures on each story puzzle piece to put in order the steps of the drinking water, sewer, and stormwater systems.

Report to Fairfield Suisun Sewer District
2009-2010 Clean Water Outreach Program
Sewer Science

Review of 2008-2009 Program

- ≈ FSSD's environmental outreach specialist Margaret Kralovec and Megan Harns, contract educator from UC Davis John Muir Institute of the Environment, modified the Bay Area's Sewer Science, then implemented and evaluated it
- ≈ FSSD's version of Sewer Science ran at Rodriguez High between August 22 and September 4, 2008 with 6 teachers who collectively taught 16 classes of Biology
- ≈ Individual students spent 6 class periods totaling 8.5 hours doing Sewer Science
- ≈ An estimated 450 students participated totaling about 3,825 student hours overall
- ≈ In August 2009, Sewer Science was approved by FSUSD for a second pilot year, pending a shorter time frame and stronger Biology Standards correlations

2009-2010 Sewer Science Program

The Fall 2009 implementation of FSSD's Sewer Science was a collaborative effort between contract educator Megan Harns of UCD JMIE, Erin Gordon as Biology Department Chair of Rodriguez High School in Fairfield, and Jenny Bailey, Kevin Cullen, and Meg Herston of the Fairfield Suisun Sewer District.

FSSD's Sewer Science is a focused curriculum unit with the following features:

1. CA Science Standards: Ecology 6b, d, & e; Cell Biology 1c and 1j; and Chemistry 5d
2. Straightforward wastewater treatment simulation lab requiring 4 to 6 sessions
 - a. all materials (excluding microscopes) are provided by FSSD
 - b. student and teacher support materials are provided on CD, including annotated step-by-step Power Points for each session
3. Unit Test for students, tracking achievement for teachers and FSSD
4. Teacher Feedback survey to gather formative and summative data

The implementation of Sewer Science in 2009-2010 required coordination with teachers, securing durable and consumable supplies, delivery and return of materials, on-call teacher support, and evaluation. These tasks were completed as detailed below:

August 2009

Harns and RHS teachers Gordon and Clinger met on August 13, 2009 to finalize a schedule and lesson plans for a more compact 4 day curriculum. Changes included:

- ≈ presenting the Sewer Science Unit after the RHS Cell Biology Unit
- ≈ meeting 4 specific Ecology, Cell Biology, and Chemistry standards
- ≈ teacher-developed and delivered cell bio content on "microscope day"
- ≈ a student test to demonstrate science learning to FSUSD Curriculum Committee

Following this August teacher meeting, Harns worked with FSSD Senior Office Assistant Jenny Bailey to prepare for the 2009 implementation of Sewer Science:

- ≈ Harns provided Bailey with expected class counts and materials lists
- ≈ Bailey reserved 14 tank sets and 2 filters from other sewer districts, and with the help of an FSSD intern, transported them to Fairfield
- ≈ with assistance from FSSD Lab Manager Giti Heravian and her staff, Bailey ordered durable and consumable lab supplies from Harns' lists.

September 2009

Preparation for Sewer Science implementation from Sept. 23-30 continued:

- ≈ Harns drafted and finalized teacher support materials and student worksheets
- ≈ On September 15th Harns discovered that an additional 5 classes of Biology had been added—materials for all classes could not be obtained on such short notice, so Gordon arranged for several classes to postpone Sewer Science to Spring 2010 if materials could be made available at that time
- ≈ Bailey and Harns worked together at FSSD on September 15th and 16th to organize lab materials and to print teacher and student support materials
- ≈ Bailey, Harns, and an FSSD intern delivered supplies to RHS on September 16th
- ≈ Sept. 16th after-school, teachers checked out 13 sets of materials and consulted with Harns as needed regarding new materials and this year's implementation.

Sewer Science was implemented between September 23 and September 30, 2009:

- ≈ Each participating class spent 4 class periods on the unit
- ≈ 12 classes completed Sewer Science with about 360 students participating
- ≈ At 4.8 hours instruction per student, about 1,740 student-hours were achieved.

October 2009

Sewer Science wrap-up commenced:

- ≈ October 1st, Bailey and 2 UC Davis interns collected, cleaned, & packed supplies
- ≈ Bailey and FSSD intern returned borrowed supplies to other sewer districts
- ≈ Harns discussed with Gordon by email potential ways to gather teacher feedback.

November and December 2009

Harns continued student and program evaluation:

- ≈ Gordon mailed to Harns the completed Unit Tests for review
- ≈ Harns sent a teacher survey to Gordon for distribution to participating teachers
- ≈ Harns completed report with recommendations for future implementation.

Challenges

Thursday September 24th and Friday September 25th exemplified both the challenge and the strength of the school-agency partnership. On these dates, each participating class needed fresh activated sludge delivered from the sewer district's facilities to the school. Due to an outdated Biology Department schedule printout, Harns ordered too little sludge for the 24th, and ordered too much for the 25th. Harns modified instructions to teachers to cope with the supply of sludge available on the first day, with no detriment to the completion of the lab. Delivery of the sludge was also problematic—highway closures on the 24th pushed back the delivery time from FSSD (though no classes went without sludge) and impending staff shortages at FSSD meant that Bailey and Harns had to find an RHS teacher willing to come to the facility before school on the 25th to pick up sludge and deliver it to colleagues. RHS teacher Matt Love made this extra trip, to the benefit of all participating teachers. The resourcefulness of the FSSD staff and RHS teachers, and a strong mutual commitment to providing students with the complete Sewer Science experience, ensured that these challenges were overcome through real partnership.

Evaluation

A Unit Test was developed for Sewer Science that included: 5 multiple-choice science questions adapted from CA State STAR tests, 3 multiple-choice questions on wastewater, and 3 open-ended questions on student experience. A copy of the Unit Test is provided in Appendix A. Only 2 teachers gave the test to their 5 classes. Of the 148 students who took the test, 60% scored 11 of 11 points, 26% scored 10 points, and 14% scored 9 points. No student scored lower than 9 of 11 points. Student quotes from the open-ended questions are provided in Appendix B.

Three of the five participating teachers provided answers in an anonymous Teacher Survey. Harns emailed this Survey to Gordon, who distributed it to staff and emailed the completed surveys back to Harns in January 2010. Main ideas that teachers felt their students “got” clearly included the multi-step nature of wastewater treatment, the use of microorganisms in biological treatment, and the ability to turn polluted water into environmentally safe water. Teachers overwhelmingly felt that the strongest standards correlations were to those in Ecology (6b, d, and e). Since this section is taught later in the school year, when students have had more lab experience, teachers felt that if they decided to participate in Sewer Science again, they would run the program in spring. All three teachers commented that students were confused as to why they were studying Sewer Science in the middle of Cell Biology. One teacher commented that the Cell Bio Unit is predominantly focused on teaching the structures of cells. In light of this, the focus of Sewer Science on classification and life styles of microorganisms seems a mismatch.

Timing was the most often mentioned barrier to future participation. All teachers reported being satisfied with the availability of resources, though one wished her supplies were available more in advance so that she would not be rushed to set up the lab. Two teachers used and appreciated the daily step-by-step PowerPoints that were provided, though they commented that the resource CD was more appropriate for second year participating teachers, while a demonstration training was more useful during their first year of participation.

Recommendations

The Fairfield Suisun Sewer District can continue to implement Sewer Science in the future in an even more cost-effective and efficient manner. The recommendations that follow will increase program flexibility and productivity. Compartmentalizing roles and tasks among partners is essential. Roles include that of Educator (either in-house or contract), FSSD, and Teacher. Tasks include teacher training, materials coordination, classroom implementation, and evaluation. However, the program is contingent upon FSSD obtaining and maintaining at least 4 sets of tanks, 1 filter apparatus, 1 colorimeter, and the lab support materials detailed in Appendix C. Each 2 week reservation would allow 1 teacher to run up to 4 classes of Sewer Science simultaneously, with time at the beginning and end of the reservation for materials coordination.

Proposal for FSSD's Sewer Science

Curriculum

FSSD's Sewer Science is a high school curriculum unit that introduces students to how Fairfield and Suisun collect, treat, and release wastewater. Curriculum materials from 2009 are available in the accompanying binder and CD-ROM. More hands-on instruction is provided at trainings.

FSSD's Sewer Science curriculum has the following features:

1. CA Science Standards (Ecology 6b, d, & e; Cell Biology 1c and 1j; and Chemistry 5d)
2. Straightforward wastewater treatment simulation lab requiring 4 to 6 sessions
 - a. all materials (excluding microscopes) are provided by FSSD, including tank sets, a charcoal/sand filter, colorimeter, and lab supplies
 - b. student and teacher support materials are provided on CD-ROM, including annotated step-by-step Power Points for each session
3. Unit Test for students, tracking achievement for teachers and FSSD
4. Teacher Feedback Report to gather formative and summative data

Audience

With approval of the Fairfield Suisun Unified School District's Director of Secondary Curriculum, advertise Sewer Science as an optional enrichment curriculum for all traditional and alternative high school science teachers in the Fairfield Suisun area:

1. Teachers who elect to participate will have better experiences and student outcomes
2. **Though it meets standards in three science subject areas, Sewer Science would be a best fit with Environmental Science classes, or with ecology units within Biology**
 - a. **Sewer Science is a natural complement to Curb2Creek, creating a comprehensive water education unit especially suited for use in Environmental Science classes.**
3. Environmental Science teachers at Armijo High School have expressed interest in conducting Sewer Science with their environmental science classes, and the Solano County Office of Education is looking for water-related curricula to use with students in alternative high schools.

How To Run a Streamlined Sewer Science Program

1. The Educator conducts a limited number of workshops each year to train teachers in the implementation of Sewer Science
 - a. Teachers leave with curriculum materials and background information
 - b. Teachers sign up in advance for Sewer Science kit reservations with dates for materials pick up, sludge drop off, and materials drop off
2. FSSD manages Sewer Science scheduling and kit reservations throughout the year
 - a. FSSD keeps 4 tank sets, 1 filter, 1 colorimeter, and lab supplies in-house to serve 1 participating teacher with up to 4 classes at a time
 - b. Based on the number of reservations, FSSD orders consumable lab supplies for the year and divides them into class sets in advance
 - c. FSSD does pre-loan and post-loan checks to assess for damage to kits
 - d. Teachers come to the FSSD Office to pick up/drop off kits
 - e. FSSD delivers activated sludge to school site on designated days
3. Teachers implement Sewer Science in their classroom with the Educator “on-call” by phone or email in case of questions
 - a. Teachers would be responsible for collecting parent waivers if there is not one already for labs in the class, and would be responsible for damages
4. Teachers fill out short report for FSSD with # of class periods/students, dates of program, measures of student achievement, and teacher feedback
 - a. If kits are returned in good condition with feedback complete, teacher could get “goody kits” of FSSD promotional materials to distribute to their students
5. FSSD arranges career outreach with teachers at their request
6. Educator produces an annual report using information from the workshops, reservation records, and teacher feedback forms

Expected Results

The implementation model proposed for FSSD’s Sewer Science is based on the structure of other successful state and regional education programs like Project WET, Discover the Flyway, and the original Sewer Science program as implemented in the Bay Area. The partitioning of responsibilities for this model takes into account the strengths and needs of each partner (Educator, Teachers, FSSD) with the goal of creating a streamlined and user-friendly program.

By maintaining control of the loan schedule and all materials associated with Sewer Science, FSSD can avoid several challenges seen in the pilot years of Sewer Science. The biggest benefits will be: 1) needing only small amounts of FSSD staff time for materials coordination spread out over a known yearly schedule, and 2) the expansion of Sewer Science to more teachers through sequential rather than simultaneous loans.

Curb2Creek Four Phase Curriculum

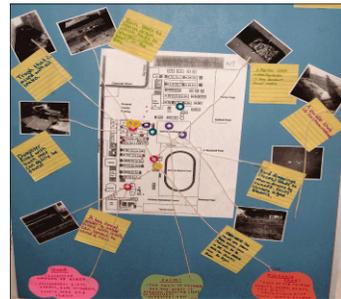
Creating Context/Background

- Garbage Patch PowerPoint
- Sewers vs Stormwater PP
- Watershed Maps



School Campus Investigation

- campus tours & photos
- annotated map activity
- research & presentations



Field Trip Investigation

- observations
- water quality testing
- macroinvertebrate survey



Designing Solutions

- student choice for service learning projects



Curb2Creek Final Evaluation

Please answer as completely as you can. This is anonymous, so please don't write your name!

For this section, please put a check mark in the box that matches the answer you want to give:

Question	A Lot	Some	None
How much did you know about the outside stormwater system BEFORE you did the C2C Unit?			
How much do you know about the outside stormwater system AFTER you have completed the C2C Unit?			
How much did you know about the connection between land pollution and ocean pollution BEFORE you did the C2C Unit?			
How much do you know about the connections between land and ocean pollution AFTER you have completed the C2C Unit?			
How much littering do you think you did BEFORE the C2C Unit?			
How much littering do you do AFTER the C2C Unit?			
How much do you think you learned OVERALL by the end of the C2C Unit?			

For this section, please write in a short answer:

1. What do you think the most important things were that you learned during Curb2Creek?
2. Do you think you or your class had a positive impact on the community as a result of the different service projects you did throughout the C2C Unit? How?
3. What changes in your life or future career goals have you experienced because of C2C?
4. What research or service projects would you encourage next year's Environmental Science students to do during Curb2Creek?

Appendix C
Curb2Creek 2009-2010
Student Quotes from Final Evaluations

What do you think are the most important things that you learned during C2C?

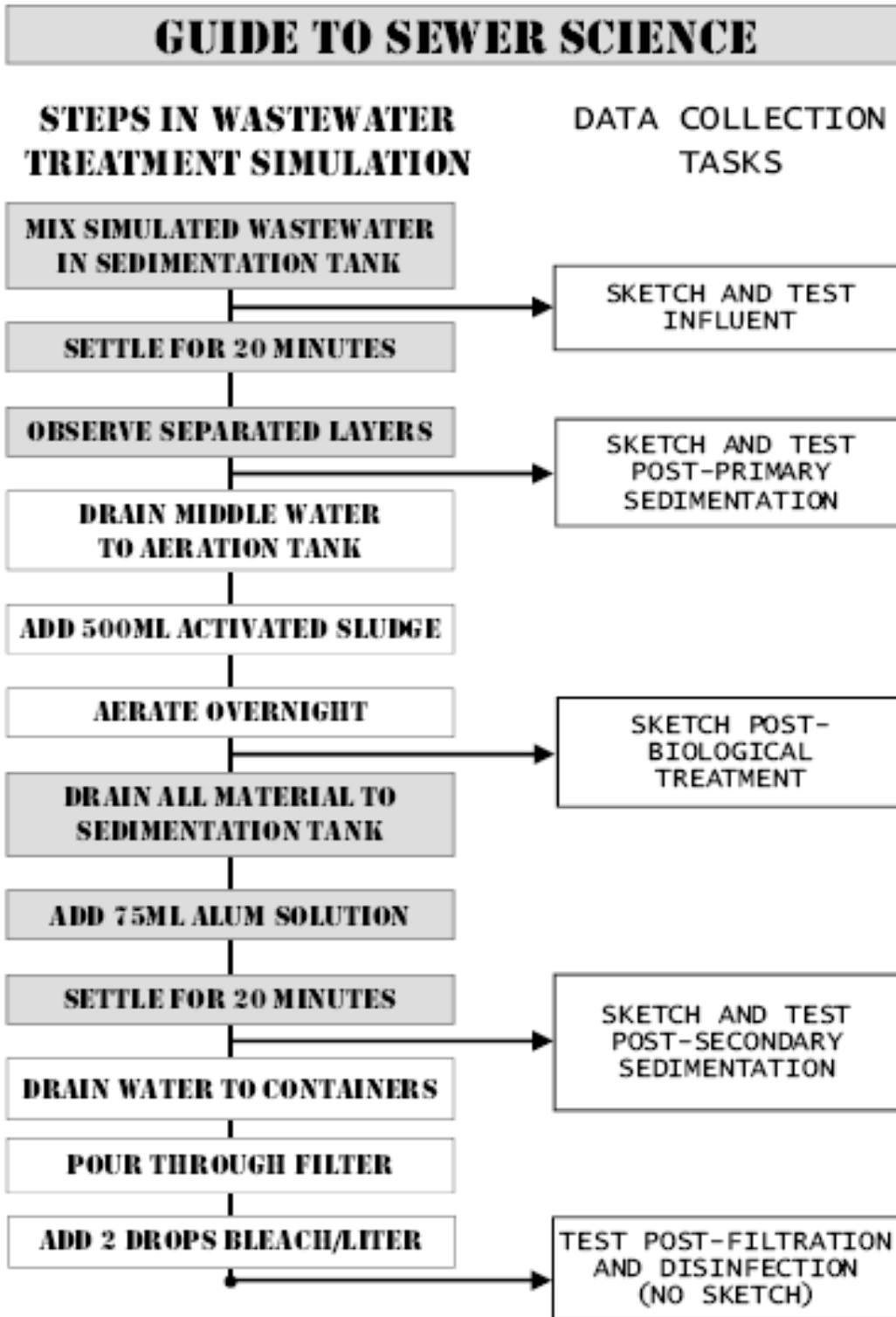
- ≈ “Storm drains flow to the ocean.”
- ≈ “How harmful plastics can be on the environment.”
- ≈ “If we pollute, we kill the fishes and damage oceans and creeks. It’s not only bad for the fishes but bad for us because we eat them!”
- ≈ “That all of our actions effect the environment eventually and we should make a conscious effort to fix the negative ones.”
- ≈ “About how I can prevent myself from polluting is the most important thing I learned.”

Do you think you or your class had a positive impact on the community as a result of the different service projects you did throughout the Curb2Creek unit? How?

- ≈ “Yes, we wrote letters, put decals on storm drains and cleaned up trash, helping to bring awareness to our community.”
- ≈ “Yes, because everyone ... checked chemicals to see if the water was polluted.”
- ≈ “Yes, because we used some trash and turned it into art and we helped clean up the mess.”
- ≈ “Yes, we learned a lot of new things and had fun doing it.”
- ≈ “I think we did, I’m sure most of us has changed for the better.”

What changes in your life or future career goals have you experienced because of C2C?

- ≈ “I’ve become more aware of my surrounding. I know what could happen and what shouldn’t happen, and I feel as if I am in control of what could happen.”
- ≈ “I will make sure my family is aware of pollution and the effects it has on Earth.”
- ≈ “It stopped me from littering.”
- ≈ “(I will) try helping the community.”
- ≈ “I would like to become more involve[d] in this work.”
- ≈ “It opened my eyes to the environment.”
- ≈ “To be honest, this C2C impacted a lot to my future. I possibly want to get into something like this when I grow up. It was a good program.”



SEWER SCIENCE UNIT TEST

Circle the *best* answer to each question below:

- 1) Which of the following *lacks* a nucleus?
 - a) a plant cell
 - b) an animal cell
 - c) an amoeba
 - d) a virus

- 2) Which of these organisms are the *most* helpful in preventing Earth from being covered with dead organisms?
 - a) herbivores
 - b) producers
 - c) parasites and viruses
 - d) fungi and bacteria

- 3) Of four different laboratory solutions, the solution with the *highest* acidity has a pH of:
 - a) 11
 - b) 7
 - c) 5
 - d) 3

- 4) Euglena and Amobae are single-cell eukaryotes. They consume other organisms by surrounding their prey and engulfing them. Which cell structure do Euglena and Amobae *not* possess?
 - a) a nucleus
 - b) a cell wall
 - c) a cell membrane
 - d) a cytoskeleton

- 5) Which bacterial process is used in sewage treatment to change ~~toxic ammonia~~ into fertilizer for algae and other producers?
 - a) nitrification
 - b) denitrification
 - c) nitrogen fixation
 - d) decomposition

Circle the *best* answer to each question below:

- 6) Wastewater treatment plants clean sewage water because:
- a) sewage water can make people sick
 - b) sewage water can harm aquatic ecosystems
 - c) laws require cities to clean their sewage water
 - d) all of the above
- 7) Sewage water is *not* water that was used to:
- a) wash dishes
 - b) hose off sidewalks
 - c) take baths
 - d) flush toilets
- 8) Sewage water that has been cleaned at the Fairfield Suisun Wastewater Treatment Plant goes where *next*?
- a) the water cycle
 - b) the Fairfield Suisun Drinking Water Treatment Plant
 - c) to water crops on farms
 - d) the Suisun Marsh

Please write a short answer to answer each of the following questions.
Please use complete sentences and give examples to help explain your answer.

9) What are some of the most important *ideas* you have learned in Sewer Science?

10) What are some *skills* you have learned in Sewer Science?

11) What did you *like best* about the Sewer Science Unit?

Appendix F
Sewer Science 2009-2010
Student Quotes from Unit Test

What are some of the most important ideas you have learned in Sewer Science?

Reasons for sewage systems

- ≈ “As seen in the experiment, sewage water is both dangerous and disgusting. To maintain a healthy ecosystem and community, wastewater must be dealt with.”
- ≈ “That water should be cleaned because it can harm humans and wildlife and it is the law.”
- ≈ “That everything you put down the drain matters because sooner or later it goes back out into the environment.”

Water treatment is a process

- ≈ “I have learned that water is treated with bugs, disinfected, and then released in the Suisun Marsh.”
- ≈ “I learned the whole process of cleaning sewer water, what happens in each step, and why it is important.”
- ≈ “I have learned about all the steps the sewer company must go [through] to purify water.”
- ≈ “We learned that water can be cleaned through sludge eating bacteria.”

Words of advice

- ≈ “To use water more wisely because it’s a long process to clean it all the way.”
- ≈ “Certain things like feminine products don’t belong in the toilet.”
- ≈ “I learned ...to not dump oils and food down the sink or garbage disposal.”

Perceptions

- ≈ “When you hear the word sewer, you think it is a dirty job. But actually it seems to be fun and it is very important to our world today.”
- ≈ “We don’t drink recycled water.”

What are some skills you have learned in Sewer Science?

- ≈ “I have learned what the pH scale is.”
- ≈ “I learned to test water on different things, such as pH, nitrate, and turbidity.”
- ≈ “How to make a slide and focus a microscope.”
- ≈ “How to determine a [fungus] from bacteria.”
- ≈ “Wear gloves while handling substances, take careful notes, and be mindful to others.”
- ≈ “To observe changes.”

What did you like best about Sewer Science? (Emphases supplied by students.)

- ≈ “It’s better than book work. ☺”
- ≈ “I absolutely loved getting to look at the little creatures under the microscope. I found it fascinating that life could exist that way and getting to see it up close was great.”
- ≈ “I loved doing the hands-on lab, especially when being the tester.”
- ≈ “I liked watching the water change colors from day 1 to the last day. It was cool to note the progress that took place.”
- ≈ “I liked being able to do the tests that real scientists do.”

Appendix G

2009-2010 Sewer Science

Materials necessary to run FSSD's Sewer Science in the future

Fairfield Suisun Sewer District should maintain the following supplies to conduct Sewer Science in the recommended manner. Specifications for tank and filter designs can be obtained from Bay Area sewer districts. Senior Officer Assistant Jenny Bailey has past purchase orders detailing suppliers. Note: durable materials with asterisks were purchased in 2009 and can be reused.

Core Lab Supplies

To be borrowed by one teacher at a time to run Sewer Science with up to 4 classes:

- ≈ 4 tank sets, each set to be composed of 1 sedimentation tank with lid, 1 aeration tank with lid, 1 aquarium aerator, 1 length of aquarium tubing bisected by a flow check valve, and 1 flexible foam air curtain at least 12' long
- ≈ 1 charcoal and sand filter with stopper
- ≈ 1 no-scratch cellulose sponge for tank cleaning (replace as needed)
- ≈ 1 HACH DR/820 or DR/850 colorimeter with operator manual
- ≈ 6 colorimeter vials (1" round glass vials, 25 mL capacity, with screw-on lids)
- ≈ *1 CD-ROM "RTW Common Activated Sludge Microorganism Screensaver"
- ≈ *2 "medicine dropper" pipettes, 5mL capacity (for oil and ammonia transfer)
- ≈ 1 plastic graduated cylinder, 100mL capacity (for measuring alum solution)
- ≈ *4 sets of 5 plastic jars, 1 oz. capacity with lids, to retain water samples for each class

Durable Lab Station Supplies

Teachers will set up 10 lab stations in their classroom, the materials of which can be cleaned in-between classes for reuse. One item per station unless otherwise indicated:

- ≈ *10 pairs of durable "dishwashing" gloves for the student performing water quality tests
- ≈ *10 plastic vials (10mL capacity, graduated)
- ≈ *10 polypropylene beakers (25mL capacity, graduated)
- ≈ 10 disposable plastic pipettes (about 4mL capacity, non-sterile, for reuse)
- ≈ 50 flat glass microscope slides with cover-slips (5 per station for microscope day)

Simulation Ingredients

These are required for each class—multiply by the number of participating classes taught by the teacher receiving the kit on loan. Materials can be bought in bulk and subdivided.

- ≈ 8 grams used coffee grounds (after coffee has been made, fresh will not work)
- ≈ 4 grams crumbled dry cereal
- ≈ 4 grams crumbled dry pet food
- ≈ 4 grams baking soda
- ≈ 3 grams toilet paper (torn into smaller pieces)
- ≈ 1 gram of plastic straw pieces
- ≈ 10 mL ammonia (caution, dangerous fumes!)
- ≈ 10 mL vegetable oil

Appendix G continued: Materials necessary to run FSSD's Sewer Science in the future

Additional Consumable Supplies

These are required for each class—multiply by the number of participating classes taught by the teacher receiving the kit on loan. Materials can be bought in bulk and subdivided.

- ≈ 40 pairs of disposable nitrile gloves (1 pair per student for microscope day)
- ≈ 35 pH test strips
- ≈ 35 NH₃ test strips
- ≈ 75mL alum Al₂(SO₄)₃ solution
(prepare 10g crystals per 1L deionized water, then measure required volume)
- ≈ 3" x 3" square of oil-absorbing padding
- ≈ ½ cup of SuperKleen granulated cleaner
- ≈ ¼ cup of Dawn dishwashing detergent

Materials Teachers Receive at Training

- ≈ 1 CD-ROM with Sewer Science Curriculum
- ≈ select print-outs from Sewer Science Curriculum
- ≈ classroom posters: Treatment Plant, Lab Flowchart, and Lab Processes (set of 4)
- ≈ print-out of Teacher Feedback Report

Materials Provided by Teachers

- ≈ workspace sufficient for 10 lab groups to work simultaneously
- ≈ access to at least 10 lighted compound or stereoscopic microscopes for microscope day
- ≈ additional beakers for transporting and holding liquids
- ≈ at least 1 triple beam or electronic balance, preferably 6, for measuring ingredients
- ≈ at least one sink with running tap water
- ≈ deionized water (for dilution and rinsing labware)
- ≈ LCD data projector, screen, and connected computer capable of opening MS 2003 Power Point files and PDF files (from CD-ROM)
- ≈ copies of student worksheets and Unit Test (from CD-ROM)
- ≈ copies of instructional lab signs and micro-organism guide (from CD-ROM)
- ≈ colored pencils, if available, for student drawings

Materials Delivered by FSSD

500mL activated sludge per class on microscope day (multiply by # of participating classes)
plus an addition 500mL for use with microscopes by all class periods on microscope day

Note: activated sludge contains live organisms, some of which may be pathogens. Because of this, and the perishable nature of the organisms, it is recommended that FSSD delivers the activated sludge directly to the teacher at the school site each day that sludge is required. If this is not practicable, then the teacher must pick up the sludge from FSSD before school on each day that aeration tanks/microscopes will be in use. To minimize risks, student access to sludge should always be under the supervision of the participating teacher.

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:

See BASMAA MRP Regional Supplement for POCs and Monitoring Annual Reporting for FY 2009/2010.

Water quality monitoring was also performed through our local high school's Curb to Creek Program. Water quality testing was performed by local high school students from Fairfield and Armijo high schools. Analyses were run for: pH; dissolved oxygen; nitrate; phosphate; copper; iron; chlorine; turbidity; temperature; and bacteria. Analyses were performed on The Union Ave., and Laurel Creeks.

Section 9 – Provision C.9 Pesticides Toxicity Controls

C.9.a ▶ Adopt an Integrated Pest Management (IPM) Policy or Ordinance

<i>(For FY 09-10 Annual Report only)</i> Attach a copy of your individual IPM ordinance or policy.		Attached	<input checked="" type="checkbox"/>	Not attached , explain below
<p>If Not attached, explain:</p> <p>See individual city report and attachments.</p>				

C.9.b ▶ Implement IPM Policy or Ordinance

<p>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 organophosphorous pesticides, pyrethroids, carbaryl, and fipronil. A separate report can be attached as evidence of your implementation.</p>
<p>Summary:</p> <p>See individual city reports.</p>

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.	
Enter the number of these employees who received training on your IPM policy and IPM standard operating procedures within the last 3 years.	
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.	

C.9.d ▶ Require Contractors to Implement IPM

Did your municipality contract with any pesticide service provider in the reporting year? Yes No

If yes, attach one of the following:

- Contract specifications that require adherence to your IPM policy and standard operating procedures, OR
- Copy(ies) of the contractors' IPM certification(s) or equivalent, OR
- Equivalent documentation.

If not attached, explain:

See individual city reports.

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:

See BASMAA MRP Regional Supplement for POCs and Monitoring Annual Reporting for FY 2009/2010.

C.9.f ▶ Interface with County Agricultural Commissioners

Provide a summary of improper pesticide usage reported to County Agricultural Commissioners and follow-up actions to correct violations, if any. A separate report can be attached as your summary.

Summary:

See individual city reports.

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.

Point-of-purchase outreach occurred at the following stores in the Fairfield-Suisun area:

Orchard Supply Hardware
1500 Oliver Road
Fairfield Ca. 94534
707-427-8665

Home Depot Fairfield
2121 Cadeneasso Drive
Fairfield, Ca. 94533
707-426-9600

Ace Hardware Suisun
252 Sunset Ave.
Suisun City Ca 94585
707-428-4223

See attached Program report from consultant Annie Joseph regarding Our Water Our World, including other outreach efforts regarding pesticide reduction or the use of less toxic products to pesticides.

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.

See attached Program report from consultant Annie Joseph regarding Our Water Our World and other outreach efforts toward pesticide reduction and the use of less toxic products other than pesticides.

Fairfield Suisun Urban Runoff Management Program OWOW Report 2009/2010

Annie Joseph Activities:

Solano County Master Gardener Outreach: I trained the new class of Master Gardeners on Water Quality and Pesticides on **April 2, 2010**. There were 20 new class members and I concentrated on the runoff from pyrethroid pesticides and the residues that can end up in wastewater in addition to our creeks. I also discussed proper disposal of pesticides.

In addition to the new class of Master Gardeners in attendance were key seasoned Master Gardeners who attended the class. I also discussed the concerns with nutrient runoff from customers fertilizing lawns with synthetic fertilizers.

When the Master Gardeners were at the Master Gardener booth at the Fairfield Farmers Market in summer and fall of 2009 they were handing out our fact sheets along with the UCIPM materials. I have sent Kevin photos of our fact sheets at the farmers market. They have not had a booth at the market this summer as they have additional venues they want to attend.

I set up the new Orchard Supply Hardware store in the fall. The store manager Craig Loot is very supportive of OWOW and is happy to schedule trainings for garden staff. I set up a literature rack and shelf talkers for the store. I also attended their **grand opening October 11th** and contacted over a hundred new shoppers to the area. I also conducted a summer outreach tabling at **Osh on June 27th**. I contacted 111 customers and gave away 65 samples of Sluggo and helped local home gardeners with ants and gophers. I have also talked to Craig about letting the Master Gardeners participate in an info table at his store. He said he would be happy to have them come to help customers with local problems. After our discussion the Master Gardeners are now a regular feature at his store on Saturday mornings in the spring.

I conducted a training of the store staff that works in garden on **May 11th**. Five staff members were trained and were very happy to receive the information. Most were new to gardening. All are part time as the store is trying to conserve on labor costs. They were happy to have the shelf talkers and Fact Sheets to guide them if they did not know the questions.

I visited and restocked the three local OWOW stores 6 times this year. The stores are Suisun Valley Ace, Orchard Supply Hardware and Home Depot. The stores have had a rough year with the economy and this has translated to a flow of new employees through the stores especially Osh and Home Depot. Ace has trimmed down staff hours but not hired new staff. When I visit the stores I try to contact the garden staff and touch bases about the latest pest and disease in addition to refreshing shelf talkers and fact sheet replenishment.

Osh has had an 8.5% increase in the sales of the less toxic products over last years sales. This is really exciting considering it has been a tough economy.

The Home Depot staff training was April 30th I trained seven staff and sent photos to Kevin. They had a lot of questions and it was a very enthusiastic group. They received folders plus good bug bad bug charts. I concentrated on their less toxic products and how they work, advantages of using baits for ants rather than spraying

I conducted an **outreach at Home Depot on June 20, 2010** and sent photos to Kevin. I contacted about 100 customers over the four hour 10-2pm outreach. Customers are very receptive and really want to be more green and are interested in less toxic options. I was also able to mentor staff during the outreach.

I gave away 35 pests bugging you guides, 16 grow it guides, 38 Don't Plant a Pest brochures on invasive species, 50 of the 10 most wanted bug guides along with OWOW fact sheets.

Depot has done well with the fact sheets this year and the key garden employee Linda has held classes for customers on Green Gardening and uses all of our materials.

Home Depot has added 21 new less toxic products in 2010, that is a 17.5% increase over last years offering of less toxic products for the public.

When I requested that the manager Angela Basher allow me to move our literature rack back inside the store she was happy to comply. I showed her a photo of another depot literature rack and how this made sense to have hers' been moved back into a prominent position near the pesticides.

The costs for Bay Friendly Landscaping has held back our participation so I have solicited gardeners in our area to join in the training that was offered in Napa. I told the Master Gardeners about the training and I have been in touch with Tom Mendenhall of Mendenhall Landscape regarding the training. I also have talked to Tom about getting a group of landscapers in our area to begin a discussion of better management practices with pesticides, fertilizers and plant choices. Tom heard about me from Ken Williams a landscape contractor who heads the horticulture department at Solano Junior College. Ken invited me to speak to the newly formed **Solano Garden Club on January 8th**. This is a group of local home gardeners and professional landscapers who meet monthly at the college. Tom Mendenhall missed my talk but wanted to contact me regarding setting up outreach to the local landscape community. We are currently working to gather them this fall when their business slows down and they have more time to meet.

The Ecowise Certified program for pest control operators has had issues due to funding freeze and one of the key participants Tanya Drlik has had to leave for employment opportunities elsewhere. I am in touch with Ted Shappas to get the status of Ecowise and to get some outreach going again in Solano County for PCO 'S.

Section 10 - Provision C.10 Trash Load Reduction

C.10.a.i ▶ Short-Term Trash Loading Reduction Plan

(For FY 10-11 Annual Report only) Provide description of actions/tasks initiated/conducted/completed in developing a Short-Term Trash Loading Reduction Plan (due February 1, 2012).

Description:

C.10.a.ii ▶ Baseline Trash Load and Trash Load Reduction Tracking Method

(For FY 10-11 Annual Report only) Provide description of actions/tasks initiated/conducted/completed to gather trash loading data and develop a Baseline Trash Load and Trash Load Reduction Tracking Method (due February 1, 2012).

Description:

C.10.a.iii ▶ Minimum Full Trash Capture

(For FY 10-11 Annual Report and Each Annual Report Thereafter) Provide a description of actions/tasks initiated/conducted/completed in implementing Minimum Full Trash Capture Devices (due July 1, 2014) within individual jurisdictions. Include information on Full Trash Capture Devices installed under Bay-area Wide Trash Capture Demonstration Project administered by San Francisco Estuary Partnership.

Description:

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

(For FY 10-11 Annual Report and Each Annual Report Thereafter) Provide 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. Provide required photo documentation.

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

Trash Hot Spot	Cleanup Date	Volume of Material Removed	Dominant Type of Trash	Trash Sources (where possible)

C.10.d ► Summary of Trash Load Reduction Actions

Provide summary of new trash load reduction actions or increased levels of implementation of existing actions that were implemented after adoption of the MRP (control measures and best management practices) including the types of actions and levels of implementation, and the total trash loads and dominant types of trash removed from each type of action.

Suggested trash load reduction actions to track and report may include:

- Anti-litter Campaigns
- Anti-litter/Dumping Enforcement Activities
- Curbside Recycling Programs
- Education and Outreach Efforts
- Free Trash Pickup/Dropoff Days
- County HHW Program Activities
- Improved Trash Bin Management
- Inspection/Maintenance of Storm Drain Outfalls
- Litter Pickup and Control
- Removal of Homeless Encampments
- Solid Waste Recycling Efforts
- Source Controls/Bans/Prohibitions
- Storm Drain Operation and Maintenance
- Storm Drain Signage/Marking
- Street Sweeping Activities
- Trash Removal from Receptacles
- Volunteer Creek Cleanups

Type of Trash Load Reduction Action	Date of First Implementation	Level of Implementation (specify if level was increased after MRP adoption)	Total Trash Load Removed by Action	Dominant Types of Trash Removed by Action

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).

Quarterly, Suisun City publishes their *Discovery* newsletter. This newsletter that is mailed to all households in Suisun City, informs residents about the proper methods for disposal of all Household Hazardous Waste, including items containing mercury. In June 2010, the newsletter specifically addressed stormwater concerns and how residents can reduce pollutants in the stormwater and urban runoff.

The city of Fairfield has a flyer with information about household hazardous waste materials and disposal. The flyer contains information about where Fairfield residents can take household hazardous waste materials without cost. The city also has a flyer with information about Universal Waste. The informational flier includes The Definition of Universal Waste and why these items are banned from normal solid waste disposal. Flyers such as these are given out at city sponsored events such as Earth Day.

The city of Fairfield also works with Solano Garbage Company (HHW Contractor) on radio announcements. Solano Garbage Company did two commercials at a local radio station, KUIC FM 95.3, reminding residents to do the right thing with household hazardous waste and universal waste. Fairfield's website also has information on household hazardous and universal waste and the proper way to dispose of these waste materials.

The Program also sponsored additional environmental awareness messages on radio station KUIC FM 95.3. Included in those messages is the proper disposal of products containing mercury and other metals: *Fluorescent bulbs are preferred for their energy savings, but because they contain mercury they require special disposal, and when you upgrade to electronic thermostats and thermometers safely dispose of your old ones that contain mercury.*

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.

Amount collected:

Each city has on file a: Lead Agency Form CalRecycle 303a Household Hazardous Waste Collection Information for Fiscal Year 2009-10, which is filled out by Solano Garbage Company, and reported to CalRecycle (aka California Integrated Waste Management Board).

During fiscal year 2009 2010 Suisun City collected 60 pounds of lamps, classified as Universal Waste. Assuming there is .000012 pounds of mercury per pound of lamp collected, Suisun city collected .00072 pounds of mercury.

During fiscal year 2009 2010 the city of Fairfield collected 2,826 pounds of lamps, classified as Universal Waste. Assuming there is .000012 pounds of mercury per pound of lamp collected, Fairfield collected .034 pounds of mercury. In addition 15 pounds of mercury containing waste were collected resulting in an additional 4 pounds of mercury diverted, for a total diversion of 4.034 pounds of mercury.

Neither city reported collection of any mercury containing switches, thermostats or novelties materials at their household hazardous waste collection center.

- 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:

See BASMAA MRP Regional Supplement for POCs and Monitoring Annual Reporting for FY 2009/2010.

Section 12 - Provision C.12 PCBs Controls

C.12.a.i.iii ► Municipal Inspectors Training

(For FY 09-10 Annual Report only) List below or attach description of results of training municipal industrial inspectors to identify, in the course of their existing inspections, PCBs or PCB-containing equipment.

Description:

On August 18, 2010 the Program met and trained three Solano County Environmental Health inspectors utilizing the presentation which was prepared by BASMAA for recognition of POCs during industrial inspections. All three inspectors left the training with a better understanding of how to recognize PCB, copper and mercury containing equipment and discharges. Please see attached sign in sheet and first page of the presentation. There was no post survey taken.

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:

- 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.

See BASMAA MRP Regional Supplement for POCs and Monitoring Annual Reporting for FY 2009/2010.

Section 13 - Provision C.13 Copper Controls

C.13.a.i and iii ► Legal Authority: Architectural Copper

(For FY 10-11 Annual Report only) Do you have adequate legal authority to prohibit discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of the surface of copper architectural features, including copper roofs to storm drains?

	Yes		No
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If **No**, explain and provide schedule for obtaining authority within 1 year:

C.13.b.i and iii ► Legal Authority: Pools, Spas, and Fountains

(For FY10-11 Annual Report only) Do you have adequate legal authority to prohibit discharges to storm drains from pools, spas, and fountains that contain copper-based chemicals?

	Yes		No
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If **No**, explain and provide schedule for obtaining authority within 1 year:

C.13.c ► Vehicle Brake Pads

See BASMAA MRP Regional Supplement for POCs and Monitoring Annual Reporting for FY 2009/2010.

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

List below or attach annotated lists or tables from your Industrial and Commercial Site Controls portion of this report, that highlight copper reduction results among the facilities identified as potential users or sources of copper, facilities inspected, and BMPs addressed. For FY09-10 describe below or highlight in the C.4 Evaluation portion (if provided) of this report the steps taken to revise your program to meet new data tracking and reporting requirements for implementation levels described in C.13.d.ii.

Due to the more specific reporting requirements in the MRP, the Program has chosen to query specific reporting requirements for FY 09-10 Annual Report. All necessary data has been tracked and collected. Individual queries have been developed to satisfy the new requirements of the permit. The FSURMP will be revising its inspection forms and database in FY 10-11.

The prioritized list of commercial facilities in section C.4 include facilities with a higher potential for discharging copper. These facilities include

commercial car washes, corporation yards and automotive facilities. Training was provided to industrial and commercial inspectors, from Solano County's Department of Resource Management, to recognize and act accordingly to sources and discharges of copper during their inspections.

Also at higher risk for discharge of copper in stormwater runoff are metal finishing facilities, electroplating and semi conductor manufacturing. Processes at these facilities include copper chloride etchers, ammonia etchers and acid plating baths. The inspectors were shown that metal finishing and electroplating processes contributed, through roof deposition, greater amounts of copper and nickel to stormwater runoff. Inspectors were told to look for chemical deposition around vents and other roof surfaces to determine if there is a potential source of copper. If discoloration or deposits are seen, the implementation of appropriate BMPs shall be required.

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

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

Summary: See BASMAA MRP Regional Supplement for POCs and Monitoring Annual Reporting for FY 2009/2010.

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

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

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

Summary: See BASMA - MRP Regional Supplement for POCs and Monitoring Annual Reporting for FY 2009/2010.

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 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. Describe program highlights below. For FY 09-10 only, describe steps taken to revise your program to meet new monitoring, data tracking and reporting requirements.				
See City of Fairfield's Annual report.				

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>See Program's annual report supplement for section C.9. This portion of the annual report shows the Program's efforts towards the promotion of less toxic pest control and landscape management.</p> <p>Quarterly, Suisun City publishes their <i>Discovery</i> newsletter. This newsletter is mailed to all households in Suisun City, informs residents about the proper methods for disposal of all Household Hazardous Waste, including items containing mercury. In June 2010, the newsletter specifically addressed stormwater concerns and how residents can reduce pollutants in the stormwater and urban runoff.</p> <p>In addition, on January 5, 2010, the City Council adopted a new water efficient landscaping ordinance. The goal of this ordinance is to promote the conservation and efficient use of water and to prevent the waste of this valuable resource and use water efficiently without waste</p>

by setting a maximum applied water allowance as an upper limit for water use and reduce water use to the lowest practical amount. This ordinance, effective January 1, 2010 applied to all new construction and rehabilitated landscapes for public agency projects and private development projects with a landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check or design review.

The City of Fairfield also put the State Water Efficient Landscape Ordinance into effect in January 2010. The ordinance focuses on new development design to be highly water efficient and minimize run-off. It applies to large developments and large re-landscaping in the city.

Fairfield also has an aggressive program to visit and correct high water use homes. Running a county-wide single family audit program, we have marketed to the top water users in Solano County. We completed 1,248 site visits. Approximately 56% of these visits were overwatering their landscaping, resulting in run-off from the properties. Another 25% had irrigation leaks. We estimate that we have saved 44,000 gallons per day in Fairfield and Suisun. County wide efforts have saved 140,000 gallons per day; mostly from excessive irrigation and leaks that affect storm drain discharges.

