



## FAIRFIELD-SUISUN SEWER DISTRICT

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

September 15, 2015

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

Attention: Ms. Selina Louie, Water Resources Control Engineer

Reference: Fairfield-Suisun Urban Runoff Management Program - FY 2014-2015 Annual Report

Dear Mr. Wolfe:

The attached FY 2014-2015 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 2014-2015.

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

**FY 2014-2015 Annual Report**

**Permittee Name: Fairfield-Suisun Urban Runoff Management Program**

**ATTACHMENT B**

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Permittee Name: Fairfield-Suisun Urban Runoff Management Program

Section 1 – Permittee Information

Background Information					
<b>Permittee Name:</b>	Fairfield-Suisun Urban Runoff Management Program				
<b>Population:</b>	140,779 (combined)				
<b>NPDES Permit No.:</b>	CAS612008 (San Francisco Bay RWQCB Permit)				
<b>Order Number:</b>	R2-2009-0074 (San Francisco Bay RWQCB Permit)				
<b>Reporting Time Period (month/year):</b>	July 1, 2014 through June 30, 2015				
<b>Name of the Responsible Authority:</b>	Fairfield-Suisun Urban Runoff Management Program	<b>Title:</b>	Program Manager		
<b>Mailing Address:</b>	1010 Chadbourne Road				
<b>City:</b>	Fairfield	<b>Zip Code:</b>	94534	<b>County:</b>	Solano
<b>Telephone Number:</b>	707-428-9129	<b>Fax Number:</b>	707-429-1280		
<b>E-mail Address:</b>	<a href="mailto:KCullen@fssd.com">KCullen@fssd.com</a>				
<b>Name of the Designated Stormwater Management Program Contact (if different from above):</b>	Kevin Cullen	<b>Title:</b>	Fairfield Suisun Urban Runoff Program Manager		
<b>Department:</b>	Fairfield-Suisun Sewer District				
<b>Mailing Address:</b>	1010 Chadbourne Road				
<b>City:</b>	Fairfield	<b>Zip Code:</b>	94534	<b>County:</b>	Solano
<b>Telephone Number:</b>	707-428-9129	<b>Fax Number:</b>	707-429-1280		
<b>E-mail Address:</b>	KCullen@fssd.com				

**Section 2 - Provision C.2 Reporting Municipal Operations**

**Program Highlights and Evaluation**

Highlight/summarize activities for reporting year:

Summary:

Program members participated in monthly Program Management meetings. Program Manager partook regularly in BASMAA's monthly committee meetings for the BASMAA Board of Directors. The cities participated in the CalRecycle Used Oil Grant Project in an effort to provide as much full trash capture treatment area as will be allowed by that grant program. Fairfield has already been awarded grant monies through that program, while the city of Suisun is still waiting to hear the results of their application.

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

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

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

Comments:

Please see individual city reports, as these activities are implemented at the city level.

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

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

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

<b>NA</b>	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
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<b>NA</b>	Implementation of the BASMAA Mobile Surface Cleaner Program BMPs
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Comments:

Please see individual city reports as these activities are implemented at the city level.

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

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

<b>NA</b>	Control of discharges from bridge and structural maintenance activities directly over water or into storm drains
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<b>NA</b>	Control of discharges from graffiti removal activities
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<b>NA</b>	Proper disposal for wastes generated from bridge and structure maintenance and graffiti removal activities
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<b>NA</b>	Implementation of the BASMAA Mobile Surface Cleaner Program BMPs for graffiti removal
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<b>NA</b>	Employee training on proper capture and disposal methods for wastes generated from bridge and structural maintenance and graffiti removal activities.
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<b>NA</b>	Contract specifications requiring proper capture and disposal methods for wastes generated from bridge and structural maintenance and graffiti removal activities.
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Comments:

Please see individual city reports as these activities are implemented at the city level.

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

**C.2.d. ► Stormwater Pump Stations**

Does your municipality own stormwater pump stations:  Yes  No

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

Complete the following table for dry weather DO monitoring and inspection data for pump stations<sup>1</sup> (add more rows for additional pump stations). If a pump station is exempt from DO monitoring, explain why it is exempt .

Pump Station Name and Location	First inspection Dry Weather DO Data		Second inspection Dry Weather DO Data	
	Date	mg/L	Date	mg/L
Kellogg Street Pump Station, 1155 Kellogg St., Suisun City, CA	7/30/2014	4.47	8/27/2014	3.31
Mulberry Pump Station, 650 Marina Cir., Suisun City, CA	7/30/2014	7.88	8/27/2014	7.70
Chipman Lane Pump Station, 79 1/2 Chipman Lane, Suisun City, CA	7/30/2014	5.63	8/27/2014	4.95
Main Street Pump Station, 550 Sacramento St., Suisun City, CA	7/30/2014	5.32	8/27/2014	5.03
State Street Pump Station, 358 State Street, Fairfield CA	NA	NA	NA	NA
Air Base Parkway Pump Station, 2398 N. Texas St., Fairfield, CA	NA	NA	NA	NA
James Street Pump Station, 1433 James St., Fairfield, CA	NA	NA	NA	NA

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

Air Base Parkway Pump Station discharges into the storm drain system; this pump station is therefore exempt from DO monitoring.

James Street Pump Station discharges into a dry channel which then flows into the storm drain system; this pump station is therefore exempt from DO monitoring.

The State Street Pumps Station was found to have low DO in previous dry season tests, this pump station was turned off in June of 2013 in anticipation of these findings. The water in the wet well was pumped out and deposited at the Fairfield-Suisun Sewer District Regional Wastewater Treatment Plant. The pump station was turned back on in late September of 2014. This pump station is also part of the C.11.f and C.12.f stormwater diversion project.

Summary:

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

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

Stormwater pump stations are owned by the cities of Fairfield and Suisun City and are operated, maintained and monitored by the Fairfield-Suisun Sewer District. See section C.11 and C.12 for a summary of the stormwater diversion activities at the State Street pump station.

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

Pump Station Name and Location	Date (2x/year required)	Presence of Trash (Cubic Yards)	Presence of Odor (Yes or No)	Presence of Color (Yes or No)	Presence of Turbidity (Yes or No)	Presence of Floating Hydrocarbons (Yes or No)
Kellogg Street Pump Station, 1155 Kellogg St., Suisun City, CA	9/29/2014 & 2/9/2015	0/0	N/N	N/N	Y/N	N/N
Mulberry Pump Station, 650 Marina Cir., Suisun City, CA	9/29/2014 & 2/9/2015	0/0	N/N	Y/N	Y/N	N/N
Chipman Lane Pump Station, 79 1/2 Chipman Lane, Suisun City, CA	9/29/2014 & 2/9/2015	.1/.08	N/N	Y/N	Y/N	N/N
Main Street Pump Station, 550 Sacramento St., Suisun City, CA	9/29/2014 & 2/9/2015	.13/.08	N/N	Y/N	N/N	N/N
State Street Pump Station, 358 State Street, Fairfield CA	9/29/2014 & 2/9/2015	.05/0	N/N	Y/N	Y/Y	Y/N
Air Base Parkway Pump Station, 2398 N. Texas St., Fairfield, CA	9/29/2014 & 2/9/2015	0/0	N/N	N/N	N/N	N/N
James Street Pump Station, 1433 James St., Fairfield, CA	9/29/2014 & 2/9/2015	.08/.05	N/N	N/N	Y/N	N/N

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

**C.2.e. ► Rural Public Works Construction and Maintenance**

Does your municipality own/maintain rural<sup>2</sup> roads:  Yes  No

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

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

<b>NA</b>	Control of road-related erosion and sediment transport from road design, construction, maintenance, and repairs in rural areas
<b>NA</b>	Identification and prioritization of rural road maintenance based on soil erosion potential, slope steepness, and stream habitat resources
<b>NA</b>	No impact to creek functions including migratory fish passage during construction of roads and culverts
<b>NA</b>	Inspection of rural roads for structural integrity and prevention of impact on water quality
<b>NA</b>	Maintenance of rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts and excessive erosion
<b>NA</b>	Re-grading of unpaved rural roads to slope outward where consistent with road engineering safety standards, and installation of water bars as appropriate
<b>NA</b>	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:  
  
This type of maintenance work is handled at the city level. However, neither city in the Program has rural roads within its jurisdiction.

<sup>2</sup>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.

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**C.2.f. ► Corporation Yard BMP Implementation**

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

<input checked="" type="checkbox"/>	We do not have a corporation yard
<input type="checkbox"/>	Our corporation yard is a filed NOI facility and regulated by the California State Industrial Stormwater NPDES General Permit
<input type="checkbox"/>	We have a <b>Stormwater Pollution Prevention Plan (SWPPP)</b> 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:

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

Comments:

Please see individual city reports as these activities are implemented at the city level.

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
NA	NA	NA	NA

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

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

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

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

Summary:

Program representatives regularly participated in BASMAA's New and Redevelopment subcommittee meetings. Green Streets projects are discussed at that monthly meeting. The opportunity for Green Streets projects is also discussed at the Program's monthly Management meetings. The cities continue to explore opportunities to incorporate Green Streets into rehabilitation projects.

The Green Street Pilot Project Summary Report submitted by BASMAA, on behalf of the MRP permittees, in BASMAA's MRP FY 13-14 Regional Supplement – New Development and Redevelopment includes information on the green street project constructed throughout the Bay Area, including capital costs, O&M costs, legal and procedural arrangements to address O&M and its associated costs, and sustainable landscape measures.

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

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

Please see individual city reports as these activities are implemented at the city level. The Program has recreated its New Development Guidance Document to include the regionally developed LID Infeasibility/Feasibility Worksheets, Biotreatment Soil Specifications and Green Roof Specifications. The Program utilized Contra Costa Clean Water Programs C3 Guidance Document as a model for the Fairfield Suisun Urban Runoff Program New Development Guidance Document.

Please see each cities' table C.3.b.v. (1) for specific information on regulated projects approved during FY 14-15.

**C.3.e.v. ► Alternative or In-Lieu Compliance with Provision C.3.c.**

<i>(For FY 11-12 Annual Report and each Annual Report thereafter)</i> Is your agency choosing to require 100% LID treatment onsite for all Regulated Projects and not allow alternative compliance under Provision C.3.e.?	x	<b>Yes</b>		<b>No</b>
Comments (optional):				

**C.3.e.vi ► Special Projects Reporting**

1. Has your agency received, but not yet granted final discretionary approval of, a development permit application for a project that has been identified as a potential Special Project based on criteria listed in MRP Provision C.3.e.ii(2) for any of the three categories of Special Projects (Categories A, B or C)?		<b>Yes</b>	x	<b>No</b>
2. Has your agency granted final discretionary approval of a project identified as a Special Project in the March 15, 2015 report? If yes, include the project in both the C.3.b.v.(1) Table, and the C.3.e.vi. Table.		<b>Yes</b>	x	<b>No</b>
If you answered "Yes" to either question, 1) Complete Table C.3.e.vi .below. 2) Attach narrative discussion of 100% LID Feasibility or Infeasibility for each project. NA				

**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.

Please see individual city reports as these activities are implemented at the city level.

(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:

Please see individual city reports as these activities are implemented at the city level.

(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:

Please see individual city reports as these activities are implemented at the city level.

(4) During the reporting year, did your agency:

<ul style="list-style-type: none"> <li>Inspect all newly installed stormwater treatment systems and HM controls within 45 days of installation?</li> </ul>	<input type="checkbox"/>	<b>Yes</b>	<input type="checkbox"/>	<b>No</b>	<input type="checkbox"/>	<b>Not applicable. No new facilities were installed.</b>
<ul style="list-style-type: none"> <li>Inspect at least 20 percent of the total number of installed stormwater treatment systems or HM controls?<sup>3</sup></li> </ul>	<input type="checkbox"/>	<b>Yes</b>	<input type="checkbox"/>	<b>No</b>	<input type="checkbox"/>	<b>Not applicable. No treatment measures</b>
<ul style="list-style-type: none"> <li>Inspect at least 20 percent of the total number of installed vault-based systems?</li> </ul>	<input type="checkbox"/>	<b>Yes</b>	<input type="checkbox"/>	<b>No</b>	<input type="checkbox"/>	<b>Not applicable. No vault systems.</b>

If you answered "No" to any of the questions above, please explain:

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

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

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

Summary:

BASMAA prepared standard specifications in four fact sheets regarding the site design measures listed in Provision C.3.i, as a resource for Co-permittees. We have modified local procedures and forms/checklists to require all applicable projects approved after December 1, 2012 to implement at least one of the site design measures listed in Provision C.3.i. The Program cities are using BASMAA's site design fact sheets for compliance with this requirement.

- BASMAA's site design fact sheets

**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 <sup>10</sup> , Street Address	Name of Developer	Project Phase No. <sup>11</sup>	Project Type & Description <sup>12</sup>	Project Watershed <sup>13</sup>	Total Site Area (Acres)	Total Area of Land Disturbed (Acres)	Total New Impervious Surface Area (ff <sup>2</sup> ) <sup>14</sup>	Total Replaced Impervious Surface Area (ff <sup>2</sup> ) <sup>15</sup>	Total Pre- Project Impervious Surface Area <sup>16</sup> (ff <sup>2</sup> )	Total Post- Project Impervious Surface Area <sup>17</sup> (ff <sup>2</sup> )
<b>Private Projects</b>											
Please see individual city reports as these activities are implemented at the city level.											
<b>Public Projects</b>											
Please see individual city reports as these activities are implemented at the city level.											
Comments:											
Please see individual city reports as these activities are implemented at the city level.											

<sup>10</sup>Include cross streets

<sup>11</sup>If a project is being constructed in phases, indicate the phase number and use a separate row entry for each phase. If not, enter "NA".

<sup>12</sup>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.

<sup>13</sup>State the watershed(s) in which the Regulated Project is located. Downstream watershed(s) may be included, but this is optional.

<sup>14</sup>All impervious surfaces added to any area of the site that was previously existing pervious surface.

<sup>15</sup>All impervious surfaces added to any area of the site that was previously existing impervious surface.

<sup>16</sup>For redevelopment projects, state the pre-project impervious surface area.

<sup>17</sup>For redevelopment projects, state the post-project impervious surface area.

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

Project Name Project No.	Application Deemed Complete Date <sup>18</sup>	Application Final Approval Date <sup>19</sup>	Source Control Measures <sup>20</sup>	Site Design Measures <sup>21</sup>	Treatment Systems Approved <sup>22</sup>	Type of Operation & Maintenance Responsibility Mechanism <sup>23</sup>	Hydraulic Sizing Criteria <sup>24</sup>	Alternative Compliance Measures <sup>25/26</sup>	Alternative Certification <sup>27</sup>	HM Controls <sup>28/29</sup>
<b>Private Projects</b>										
<p>Comments:</p> <p>Please see individual city reports as these activities are implemented at the city level.</p>										

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

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

<sup>20</sup>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.

<sup>21</sup>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.

<sup>22</sup>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.).

<sup>23</sup>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.

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

<sup>25</sup>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.

<sup>26</sup>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.

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

<sup>28</sup>If HM control is not required, state why not.

<sup>29</sup>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).

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

Project Name Project No.	Approval Date <sup>30</sup>	Date Construction Scheduled to Begin	Source Control Measures <sup>31</sup>	Site Design Measures <sup>32</sup>	Treatment Systems Approved <sup>33</sup>	Operation & Maintenance Responsibility Mechanism <sup>34</sup>	Hydraulic Sizing Criteria <sup>35</sup>	Alternative Compliance Measures <sup>36/37</sup>	Alternative Certification <sup>38</sup>	HM Controls <sup>39/40</sup>
<b>Public Projects</b>										
Comments:  Please see individual city reports as these activities are implemented at the city level.										

<sup>30</sup>For public projects, enter the plans and specifications approval date.

<sup>31</sup>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.

<sup>32</sup>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.

<sup>33</sup>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.).

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

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

<sup>36</sup>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.

<sup>37</sup>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.

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

<sup>39</sup>If HM control is not required, state why not.

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

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

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

Name of Facility/Site Inspected	Address of Facility/Site Inspected	Newly Installed? (YES/NO) <sup>41</sup>	Party Responsible <sup>42</sup> For Maintenance	Date of Inspection	Type of Inspection <sup>43</sup>	Type of Treatment/HM Control(s) Inspected <sup>44</sup>	Inspection Findings or Results <sup>45</sup>	Enforcement Action Taken <sup>46</sup>	Comments/Follow-up
Please see individual city reports as these activities are implemented at the city level.									

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

<sup>42</sup>State the responsible operator for installed stormwater treatment systems and HM controls.

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

<sup>44</sup>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.

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

<sup>46</sup>State the enforcement action(s) taken, if any.

C.3.e.vi.Special Projects Reporting Table												
Reporting Period –January1 – June 30, 2015												
Project Name & No.	Permittee	Address	Application Submittal Date <sup>47</sup>	Status <sup>48</sup>	Description <sup>49</sup>	Site Total Acreage	Density DU/Acre	Density FAR	Special Project Category <sup>50</sup>	LID Treatment Reduction Credit Available <sup>51</sup>	List of LID Stormwater Treatment Systems <sup>52</sup>	List of Non-LID Stormwater Treatment Systems <sup>53</sup>
Please see individual city reports as these activities are implemented at the city level.												

<sup>47</sup>Date that a planning application for the Special Project was submitted.

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

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

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

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

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

<sup>53</sup>List all non-LID stormwater treatment systems proposed. For each type of non-LID treatment system, indicate: (1) the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, and (2) whether the treatment system either meets minimum design criteria published by a government agency or received certification issued by a government agency, and reference the applicable criteria or certification. (Contra Costa's criteria were adopted March 20, 2013.)

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

**Program Highlights**

Provide background information, highlights, trends, etc.

The Program contracts with the Solano County Department of Resource Management to conduct stormwater inspections of industrial, commercial and food handling businesses within the Program area. The Program updates the Business Inspection Plan as necessary to keep the document current. Changes are made to facilities lists upon observations of facilities closing or a change in compliance status resulting in a reduction or increase in inspection frequency. Specific information on the number of facilities inspected, types of violations incurred and resolution of violations within reasonable time periods is included in each city's 2014-2015 Annual Report as required by the Water Board.

Training of Health Inspectors was performed on October 21, 2014. The focus of the training was consistency in enforcement levels, enforcement authority; trash hot spots and outreach; city stormwater ordinances; high-priority facilities needed to be inspected during the fiscal year and enforcement levels associated with illegal discharges.

The Program Management team meets on a monthly basis to discuss important Program issues including commercial, industrial and restaurant inspections. The Program also participates in the Municipal Operations Committee meeting on a regional level, which was originally intended to discuss Industrial and Commercial Site Controls.

**C.4.b.i. ► Business Inspection Plan**

Do you have a Business Inspection Plan?	<input checked="" type="checkbox"/>	<b>Yes</b>	<input type="checkbox"/>	<b>No</b>
If No, explain:				
NA				

**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.

The Potential Facilities List was generated at the Program level and distributed to the cities for submittal in their Annual Report. See individual city reports for this list.

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

**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.

The Facilities Scheduled for Inspection was generated at the Program level and distributed to the cities for submittal in their Annual Report. See individual city reports for this list.

**C.4.c.iii.(1) ► Facility Inspections**

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

<input checked="" type="checkbox"/>	Permittee reports multiple discrete violations on a site as one violation.
<input type="checkbox"/>	Permittee reports the total number of discrete violations on each site.

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

Comments:

1. Violation Explanation:

The Program industrial-commercial and restaurant inspection forms have been designed so that when a facility is seen as being free of violations and without threat to the environment, all of the inspection form line items are checked "yes" and the "In Compliance With Pollution Control Requirements?" box is also checked "yes".

Inspection reports where the "no" box is marked in the checklist area and the facility is seen as not being "In Compliance With Pollution Control Requirements?" are incorporated into the "Number of violations" totaled above. The level of enforcement of the offense is delineated in an annual training given to the inspectors and as described in the Program ERP.

2. Violations not resolved within 10 days or otherwise deemed resolved in a longer but still timely manner:

This data is different for each city, see individual city reports for this information.

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

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

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

Type/Category of Violations Observed	Number of Violations
Actual discharge (e.g. active non-stormwater discharge or clear evidence of a recent discharge)	
Potential discharge and other	
Comments:  The Program counts one discharge per source of discharge per inspection per site. This data is different for each city, see individual city reports for this information.	

**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) <sup>48</sup>	Number of Enforcement Actions Taken	% of Enforcement Actions Taken <sup>49</sup>
Level 1			
Level 2			
Level 3			
Level 4			
<b>Total</b>	See individual city reports for this information.		

**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 <sup>50</sup>	Number of Actual Discharge Violations	Number of Potential/Other Discharge Violations

<sup>48</sup>Agencies to list specific enforcement actions as defined in their ERPs.

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

<sup>50</sup>List your Program's standard business categories.

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

See individual city reports for this information.		

**C.4.c.iii.(4) ▶ Non-Fileers**

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

See individual city reports for this information.

**C.4.d.iii ▶ Staff Training Summary**

Training Name	Training Dates	Topics Covered	No. of Inspectors in Attendance	Percent of Inspectors in Attendance
Fairfield Suisun Urban Runoff Program Commercial, Industrial, and Food Handling Annual Refresher Training	October 21, 2014	Enforcement authority; city stormwater ordinances; high-priority facilities needed to be inspected this fiscal year; enforcement levels associated with illegal discharges, High Priority Areas for Trash (see attached training sign-in sheet).	10	83 %
Fairfield Suisun Urban Runoff Program Commercial, Industrial, POC Refresher Training	June 25, 2014	Guidance to industrial stormwater inspectors on inspecting industrial and commercial facilities for three pollutants of concern: copper, mercury and Polychlorinated Biphenyls	4	100 %



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

**Program Highlights**

Provide background information, highlights, trends, etc.

The Program Manager participates in BASMAA's Municipal Maintenance and Commercial/ Industrial Controls meetings. Additionally, monthly Stormwater Management meetings are held at the Program level to discuss illicit discharge detection and elimination and screening protocol. Both cities utilize the Program's Illicit Discharge Detection and Elimination Program Manual to assist them in identification, detection and elimination of illicit discharges throughout both cities.

On January 29, 2015 the Program performed training with 3 Code Enforcement officers from Suisun City. The training covered Enforcement authority; city stormwater ordinances; enforcement levels associated with illegal discharges, High Priority Areas for Trash.

**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
Gary Sponsler	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.

Description:

The Program promoted the BASAMAA Mobile Cleaners Certification Program. Forty local mobile cleaners of various types were sent a promotional piece for BASMAA's Mobile Cleaners Certification Program. Please see attached flyer and distribution list for a description of Program efforts.

The Program also participated in BASMAA's monthly Municipal Maintenance and Commercial Industrial Controls meeting. Additionally, monthly

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

meetings are held at the Program level to discuss illicit discharge detection and elimination. See BASMAA's FY 2014/2015 MRP Regional Supplement for Training and Outreach Annual Report on mobile surface cleaners updates. There have been no direct needs by the Program to hire Mobile Surface Cleaners.

**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:  
  
This provision is handled at the city level. Please see individual city reports for this information.

**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))	NA	
Discharges reaching storm drains and/or receiving waters (C.5.f.iii.(2))	NA	
Discharges resolved in a timely manner (C.5.f.iii.(3))	NA	

Comments:  
  
This provision is handled at the city level. Please see individual city reports for this information.

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

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

This provision is handled at the city level. Please see individual city reports for this information.

Owner/Manager  
Heaven's Best Carpet Cleaning  
190 Deerglen Circle  
Vacaville, Ca 95687

Owner/Manager  
Heaven's Best Carpet Cleaning  
2796 Hillview Drive  
Fairfield, Ca 94534

Owner/Manager  
Carpet Cleaning  
607 Elmira Road  
Vacaville, CA 95687

Owner/Manager  
Clean America Carpet Cleaning  
2546 Huber Drive  
Vallejo, CA 94590

Owner/Manager  
Love's Dry Carpet Cleaning  
172 Saybrook Avenue  
Vacaville, CA 95687

Owner/Manager  
Bay Area Cleaning Solutions  
520 Parker Road  
Fairfield, CA 94533

Owner/Manager  
Usery's Blue Ribbon Carpet  
754 Calico Trail  
Vacaville, CA 95687

Owner/Manager  
Rainbow International  
738 Webster Street  
Fairfield, CA 94533

Owner/Manager  
The Carpet Cleaner  
8501 Kenneth Ridge Court  
Fair Oaks, CA 95628

Owner/Manager  
Bay Area Cleaning  
704 Missouri Street  
Fairfield, CA 94533

Owner/Manager  
Quality Pressure Washing  
1953 Cardinal Way  
Fairfield, CA 94533

Owner/Manager  
New Look Power Wash  
5118 Tawny Lake Place  
Fairfield, CA 94534

Owner/Manager  
Precision Power Washing  
464 Richards Blvd.  
Sacramento, CA 95811

Owner/Manager  
Blue Kings Power Washing  
925 Civic Center Drive,  
Rohnert Park, CA 94928

Owner/Manager  
Pressure Washer  
10821 Airport Drive  
El Cajon, CA 92020

Owner/Manager  
Adobe Power Washing  
12 Birnam Wood Ct. #B  
Petaluma, CA 94954

Owner/Manager  
Randy's Power Washing  
780 Beaver Lane  
Discovery Bay, CA 94505

Owner/Manager  
Steamies Pressure Washing  
418 N Buchanan Circle #11  
Pleasant Hill, CA 94523

Owner/Manager  
Welcome Pressure Washing  
150 Mason Circle, Suite L  
Concord, CA 94520

Owner/Manager  
Action Pressure Washing  
1509 Rampart Way  
Brentwood, CA 94513

Owner/Manager  
Big Al's Auto Detailing  
340 Industrial Way, Suite F  
Dixon, CA 95620

Owner/Manager  
Vacaville Hand Car Wash Detail  
1337 E Monte Vista Avenue  
Vacaville, CA 95688

Owner/Manager  
D Mos Auto Detail  
311 State Street  
Fairfield, CA 94533

Owner/Manager  
American Auto Detail  
1 Admiral Callaghan Lane  
Vallejo, CA 94591

Owner/Manager  
Detail Shop  
988 Adams Street  
Benicia, CA 94510

Owner/Manager  
Extreme Steam Carpet Cleaning  
1195 La Homa Drive  
Napa, CA 94558

Owner/Manager  
Fast Dry Carpet Steam Cleaning  
3623 Sugarberry Lane  
Walnut Creek, CA 94598

Owner/Manager  
National Multi Steam Cleaning  
3631 Norfolk Street  
Napa, CA 94558

Owner/Manager  
Power Steam Carpet & Upholstery  
P.O. Box 2502  
Vacaville, CA 95696

Owner/Manager  
Superlative Steam Cleaning  
999 S Novato Blvd  
Novato, CA 94947

Owner/Manager  
Professional Steam Services  
2705 Delta Road  
Brentwood, CA 94513

Owner/Manager  
Steam Bright  
919 Third Street, Suite B  
Davis, CA 95616

Owner/Manager  
Nu Concept Products  
122 Lemon Tree Circle  
Vacaville, CA 95687

Owner/Manager  
O'Connell Jetting Systems  
3195 Park Road, Suite H  
Benicia, CA 94510

Owner/Manager  
Performance Cleaning Co.  
336 Bon Air Center #150  
Greenbrae, CA 94904

Owner/Manager  
See Through Window Cleaning  
2010 Parsons Lane  
Antioch, CA 94509

Owner/Manager  
AK Chem Plus  
1879 Granada Drive  
Concord, CA 94519

## ATTENTION MOBILE WASHING BUSINESS OWNERS / MANAGERS

Preventing water pollution is easy! Simply follow the recommendations in a short online presentation ([www.BASMAA.org](http://www.BASMAA.org)) and receive your free Pollution Prevention Training Certificate.

The Training Certificate lets your customers know that you are doing your part to keep pollution out of storm drains and the San Francisco Bay. Storm drains are direct pathways for pollution, traveling from streets, gutters, and other paved surfaces to local creeks and lakes, and from there to the Bay, ocean, or Delta.

Allowing pollution into storm drains is prohibited in California. Both the person who pollutes and the owner of the property where the pollution is generated are liable.

The Bay Area Stormwater Management Agencies Association provides guidance and certification for mobile cleaners to prevent water pollution when cleaning surfaces such as carpets, sidewalks, plazas, building exteriors, parking areas and drive-throughs.

Green business practices attract customers and are good for business. Visit [www.BASMAA.org](http://www.BASMAA.org) today and sign up for your free certificate!

For more information about your local stormwater program, contact Kevin Cullen at the Fairfield-Suisun Urban Runoff Management Program (707-428-9129), Lance Barnett at Vallejo Sanitation & Flood Control District (707-644-8949 ext. 269), or Derek Crutchfield at the City of Vallejo (707-644-5346).



Section 6 – Provision C.6 Construction Site Controls

<b>C.6.e.iii.1.a, b, c ▶ Site/Inspection Totals</b>		
<b>Number of High Priority Sites (sites disturbing &lt; 1 acre of soil requiring storm water runoff quality inspection) (C.6.e.iii.1.a)</b>	<b>Number of sites disturbing ≥ 1 acre of soil (C.6.e.iii.1.b)</b>	<b>Total number of storm water runoff quality inspections conducted (include only High Priority Site and sites disturbing 1 acre or more) (C.6.e.iii.1.c)</b>
# NA	# NA	# NA
Comments:  This provision is handled at the city level. Please see individual city reports for this information.		

<b>C.6.e.iii.1.d ▶ Construction Activities Storm Water Violations</b>		
<b>BMP Category</b>	<b>Number of Violations<sup>51</sup> excluding Verbal Warnings</b>	<b>% of Total Violations<sup>52</sup></b>
Erosion Control	NA	NA
Run-on and Run-off Control	NA	NA
Sediment Control	NA	NA
Active Treatment Systems	NA	NA
Good Site Management	NA	NA
Non Stormwater Management	NA	NA
<b>Total<sup>53</sup></b>		NA

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

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

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

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

This provision is handled at the city level. Please see individual city reports for this information.

	<b>Enforcement Action</b> (as listed in ERP) <sup>54</sup>	<b>Number Enforcement Actions Issued</b>	<b>% Enforcement Actions Issued<sup>55</sup></b>
Level 1 <sup>56</sup>	NA	NA	NA
Level 2	NA	NA	NA
Level 3	NA	NA	NA
Level 4	NA	NA	NA
<b>Total</b>	NA	NA	<b>NA</b>

**C.6.e.iii.1.f, g ► Illicit Discharges**

This provision is handled at the city level. Please see individual city reports for this information.

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

<sup>54</sup>Agencies should list the specific enforcement actions as defined in their ERPs.

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

<sup>56</sup>For example, Enforcement Level 1 may be Verbal Warning.

<b>C.6.e.iii.1.h,i ► Violation Correction Times</b>		
	<b>Number</b>	<b>Percent</b>
<b>Violations (excluding verbal warnings) fully corrected within 10 business days after violations are discovered or otherwise considered corrected in a timely period (C.6.e.iii.1.h)</b>	NA	% <sup>57</sup>
<b>Violations (excluding verbal warnings) not fully corrected within 30 days after violations are discovered (C.6.e.iii.1.i)</b>	NA	% <sup>58</sup>
<b>Total number of violations (excluding verbal warnings) for the reporting year<sup>59</sup></b>	NA	100%
<b>Comments:</b> This provision is handled and reported at the city level. Please see individual city reports for this information.		

<b>C.6.e.iii.(2) ► Evaluation of Inspection Data</b>
Describe your evaluation of the tracking data and data summaries and provide information on the evaluation results (e.g., data trends, typical BMP performance issues, comparisons to previous years, etc.).
Description:  This provision is handled and reported at the city level. Please see individual city reports for this information.

<b>C.6.e.iii.(2) ► Evaluation of Inspection Program Effectiveness</b>
Describe what appear to be your program's strengths and weaknesses, and identify needed improvements, including education and outreach.
Description:  The Program revised its inspection forms to correlate with the data collection requirements in the MRP. Inspections are made and data is collected in the field and brought back to the office for compilation into an Excel database. Training has been provided to inspectors at both cities. In addition, several inspectors and engineers from both cities have been trained and/or certified by the State as QSP or QSDs depending on their background and experience level.

<sup>57</sup>Calculated 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.

<sup>58</sup>Calculated 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.

<sup>59</sup>The total number of violations reported in the table of Violation Correction Times equals the number of initial enforcement actions. This assumes one violation is issued for several problems during an inspection at a site. The total number of violations in the table of Violation Correction Times may not equal the total number of enforcement actions because one violation issued at a site may have a second enforcement action for the same violation at the next inspection if it is not corrected.

<b>C.6.f ▶ Staff Training Summary</b>				
<b>Training Name</b>	<b>Training Dates</b>	<b>Topics Covered</b>	<b>No. of Inspectors in Attendance</b>	<b>Percent of Inspectors in Attendance</b>
2014 Construction and Stormwater Pollution Refresher Training	June 5, 2014	Allowable discharges to the storm drain, MRP vs. GCP, site inspection frequencies, Erosion Control Measures, Sediment Control Measures, Run-On and Runoff Controls, Good Site Management, Non-Stormwater Management and levels of enforcement associated with polluting activities.	12	90%

**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:

BASMAA's separate report summarizing regional activities entitled: Regional Supplement for Training and Outreach.

In addition to participating with the events the program has also participated in the 95.3 KUIC Hometown Green Environmental Campaign. Program members on a regular basis have recorded segments which are played daily on KUIC and focus on environmental messages. Messages include: the connectedness of our streets to our local creeks; recycling mercury containing products; trash and litter; proper car washing; recycling; and the reduction of waste by reusing items.

In addition to the program has also participated in an array of local school education programs, public outreach activities, public involvement activities, trash and pesticide reduction actions. Please see below and report attachments for further explanations.

**C.7.b.iii.1 ▶ Pre-Campaign Survey**

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

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

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

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

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

**C.7.b.iii.2 ► Post-Campaign Survey**

*(For the Annual Report following the post-campaign survey)* Discuss the campaigns and the measureable changes in awareness and behavior achieved. Provide an update of outreach strategies based on the survey results. If survey was done regionally, refer to a regional submittal that contains the following information:

Information on the post-campaign survey for the BASMAA Regional Youth Litter Campaign is provided in the BASMAA FY 13-14 Annual Report.

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

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

**C.7.c ► Media Relations**

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

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

Summary:

The following separate report developed by BASMAA summarizes media relations efforts conducted during FY 14-15:

- BASMAA Media Relations Final Report FY 14-15

Please see BASMAA FY 2014/2015 MRP Regional Supplement for Training and Outreach, Annual Report for more details relating to these outreach efforts conducted during FY 2014/2015.

In FY 14-15 the Program has also participated in the 95.3 KUIC Hometown Green Environmental Campaign. Program members on a regular basis have recorded segments which are played daily on KUIC and focus on environmental messages. Messages include: the connectedness of our streets to our local creeks; recycling mercury containing products; trash and litter; proper car washing; recycling; and the reduction of waste by reusing items.

**C.7.d ► Stormwater Point of Contact**

Summary of any changes made during FY 14-15:

The Program promoted its Point of Contacts through the distribution of outreach materials: *You Are the Solution to Water Pollution / Creek and Marsh Watch*. This catchy trifold piece provides contact information to report illegal discharges and spills. These materials are given out at nearly every public event that the Program participates in. Contact information is also provided on each of the cities websites.

No other changes.

**C.7.e ► Public Outreach Events**

Describe general approach to event selection. Provide a list of outreach materials and giveaways distributed.

Use the following table for reporting and evaluating public outreach events

Event Details	Description (messages, audience)	Evaluation of Effectiveness
Provide event name, date, and location. Indicate if event is local, countywide or regional.	Identify type of event (e.g., school fair, farmers market etc.), type of audience (school children, gardeners, homeowners etc.) and outreach messages (e.g., Enviroscene presentation, pesticides, stormwater awareness)	Provide general staff feedback on the event (e.g., success at reaching a broad spectrum of the community, well attended, good opportunity to talk to gardeners etc.). Provide other details such as: <ul style="list-style-type: none"> <li>• Estimated overall attendance at the event.</li> <li>• Number of people that visited the booth, comparison with previous years</li> <li>• Number of brochures and giveaways distributed</li> <li>• Results of any spot surveys conducted</li> </ul>
Coast and Creek Cleanup; September 20, 2014; 16 cleanup sites throughout Fairfield and Suisun City; this is a Program event.	The Program lead volunteer cleanup of local creeks, marsh and open space areas.	617 volunteers picked up 6,570 pounds of trash and recyclables along 28 miles of waterway. This was an increase of 40% in people and pounds from the previous year. This was a very successful event.
Back to School Event; August 16, 2014; 1600	The Program shared information with	Event held at parking lot of St. Mark's Lutheran

**FY 2014-2015 Annual Report**

**C.7 – Public Information and Outreach**

**Permittee Name: Fairfield-Suisun Urban Runoff Management Program**

<p>Union Avenue; Fairfield CA; this is a Program event.</p>	<p>approximately 350 people of all ages and nationalities in attendance at the event.</p>	<p>Church. Our booth gave away reusable bags, brochures, and plate scrapers. Booth stayed busy throughout the event and the children receiving the scrapers were engaging while receiving our message. Audience was primarily Spanish speaking.</p>
<p>Home Depot Events; April 18, 2015, May 7, 2015 and June 28, 2015; 2121 Cadenasso Dr. Fairfield, CA; this is a Program event.</p>	<p>IPM Consultant Annie Joseph and IPM advocate Theresa Travers provided IPM training for Home Depot customers on safe gardening practices at the local Home Depot store.</p>	<p>Discussions were held with many Home Depot customers regarding alternatives to toxic pesticides. Customers were very engaged. See attached OWOW and BASMAA's Regional Supplement for Training and Outreach. There was a 24% increase in less toxic product sales through the fall of 2014 over the prior year.</p>
<p>Operation Green Tomato, Fairfield- Suisun Farmers Market; Thursdays from May 3 through October 4; the event is held in downtown Fairfield at the intersection of W. Texas St. and Jefferson Street; this is a Program event.</p>	<p>The Program contracts with Fairfield Main St. Association to attend the weekly farmers market and man the Operation Green Tomato booth. Messages include the connectedness of our streets to our local creeks; less toxic alternatives to pesticides and only clean stormwater should be flowing to our local storm drain system. The booth also features information about pesticide free pest control, reporting illegal discharges and free grease scrapers to avoid sanitary sewer overflows.</p>	<p>Starting in May and ending October an average of 80 visitors per week stop at the Operation Green Tomato booth. Green Tomato crewmembers also quiz guests and give out prizes went questions are answered correctly.</p>
<p>Earth Day - April 27, 2015; Fairfield Civic Center This is a Program event.</p>	<p>The Program shared information with approximately 300 people of all ages and nationalities in attendance at the event. Quilt squares were drawn and decorated by those who stopped by the booth.</p>	<p>Our booth gave away reusable bags, brochures, and plate scrapers. Booth stayed busy throughout the event and the children receiving the scrapers were engaging while receiving our message.</p>
<p>Earth Day Cleanup of Ledgewood Creek- April 25, 2015; Ledgewood Creek at Highway 80 behind Home Depot. This is a Program event.</p>	<p>The Program led the cleanup of Ledgewood Creek with approximately 36 people of all ages.</p>	<p>36 volunteers picked up 2,000 pounds of trash along 2 miles of waterway. This was a new and very successful event.</p>
<p>Cleanup of Lower Union Ave., Creek -March 28, 2015; Union Ave. Creek near the dead-end of Railroad Avenue in Suisun City. This is a Program event.</p>	<p>The Program led the cleanup of Lower Union Ave., Creek with approximately 7 people of all ages.</p>	<p>Seven volunteers removed 200 pounds of trash. All participants were engaged and understood the connection between our streets and the local creeks.</p>

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

<p>Solano County Master Gardener Training; January 9, 2015; 501 Texas Street, Fairfield, CA; this is a Program activity.</p>	<p>IPM Consultant Annie Joseph and Program Manager, provided IPM training for Solano County Master Gardeners, who in turn instruct the general public on safe gardening practices at local farmers' markets and events throughout the county. Also described was the connectivity of the streets to our local creeks; the difference between stormwater and wastewater; the wastewater treatment process; how pesticides can impact the process.</p>	<p>35 Master Gardeners were in attendance, based on the interaction between the presenters and speakers, the audience was highly engaged. These Master Gardeners will carry this message to tablings they do at libraries, and the local Farmers Markets in the area. Many of the Master Gardeners have their own gardening businesses so these messages will go also into the communities they service with their business and as volunteers in the communities</p>
<p>Solano Community College Earth Day - April 22, 2015; The Program participated in this event located at Solano Community College. The event included earth friendly vendors. This is a Program event.</p>	<p>The Program shared information with participants of all ages and nationalities in attendance at the festival.</p>	<p>About 150 people of all ages visited our booth, including college students interested in: careers in environmental fields; and our environmental messages regarding the difference between waste and storm waters. Students were asked to fill out a 4x4 quilt piece with an environmental message. Students generally had a good understanding of the difference between storm water and wastewater</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 other portions of this Annual Report. Efforts directed toward Coast and Creek Cleanup result in watershed stewardship collaboration. Presentations were made to schools and clubs in the Fairfield Suisun Unified School District which resulted in an increased number of participants in our creek cleanup events. Creek Captains meetings are also used to encourage public involvement in watershed volunteer efforts.

**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"> <li>• Number of participants. Any change in participation from previous years.</li> <li>• Distance of creek or water body cleaned</li> <li>• Quantity of trash/recyclables collected (weight or volume).</li> <li>• Number of inlets marked.</li> <li>• Data trends</li> </ul>
Coast and Creek Cleanup; September 20, 2014; 16 cleanup sites throughout Fairfield and Suisun City; this is a Program event.	The Program lead volunteer cleanup of local creeks, marsh and open space areas.	617 volunteers picked up 6,570 pounds of trash and recyclables along 28 miles of waterway. This was an increase of 40% in people and pounds from the previous year. This was a very successful event.
Earth Day Cleanup of Ledgewood Creek- April 25, 2015; Ledgewood Creek at Highway 80 behind Home Depot. This is a Program event.	The Program led the cleanup of Ledgewood Creek with approximately 36 people of all ages.	36 volunteers picked up 2,000 pounds of trash and along 2 miles of waterway. This was a new and very successful event.
Cleanup of Lower Union Ave., Creek -March 28, 2015; Union Ave. Creek near the dead-end of Railroad Avenue in Suisun City. This is a Program event.	The Program led the cleanup of Lower Union Ave., Creek with approximately 7 people of all ages.	Seven volunteers removed 200 pounds of trash. All participants were engaged and understood the connection between our streets and the local creeks.
Community Service Days; on the last Saturday of every month (weather permitting); this is a local event in Fairfield	These are volunteer events that involve picking up litter in various locations throughout the city of Fairfield.	Numbers were not kept, only approximations. Throughout the year, at five different locations throughout the city, there were over 100 people that participated and collected over 240 yards of trash throughout the streets of Fairfield.

**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.
School Water Education Program (SWEP); this Program is available for Kindergarten through 12 <sup>th</sup> grade, and is a Program element.	SWEP provides free water education resources to teach water awareness and conservation to students, teachers and parents in our service areas of Dixon, Vacaville, Fairfield, Suisun City and Travis Air Force Base. The in-class education Programs as well as the resource materials and assembly Programs are multi-discipline and aligned to the content standards for California public schools. The Programs encourage students and adults to develop a healthy attitude of personal responsibility towards our environment and develop skills needed to contribute meaningfully to decision-making process on issues involving our resources and particularly conserving our most precious resource, water.	2,100 K-12 students were reached throughout the Cities of Fairfield and Suisun City.	See attached Annual Summary Report from SWEP.
The Watershed Explorers Program; Solano County third-graders. This is a Program element.	This Program is held at Rockville Hills Park, Hanns Park and Lagoon Lake Park. The Program utilizes science and placed base learning to build awareness and understanding of	A total of 19 classes, with 541 students, and 143 chaperones; five schools comprising	See attached Annual Summary Report from The Watershed Explorers Program.

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

	<p>local creeks and watersheds, their unique ecosystems and ways in which we care for them. In the field discussions and activities teach children about the fragile habitats of birds and other wildlife. Students learn the importance of water quality in a watershed and discover that can be negatively impacted by urban runoff and its complements: trash, oil, household chemicals and other human and domestic animal waste and discards. Please go to : <a href="http://www.solanorcd.org/">http://www.solanorcd.org/</a> for videos of the Program.</p>	<p>19 classes and 563 students with 1 records are 21 adults coming from the Fairfield Suisun Unified School District Area.</p>	
<p>Suisun Marsh Watershed and Wetland Education Program; the classes available to middle schools throughout Solano County.</p>	<p>The Program provides place-based environmental education for underserved middle school students in Solano County. The central Program themes include: watersheds, wetlands, marsh functions, native and non-native plants, storm runoff, endangered and threatened species, and watershed connections between their residential communities, Suisun marsh, the San Francisco Bay, and the Pacific Ocean.</p>	<p>23 classes of approximately 736 students from schools throughout Fairfield and Suisun City participated in the Program.</p>	<p>See attached Suisun Marsh Watershed and Wetland Education Program 2014 Year End Report</p>
<p>Solano County Biomonitoring Program</p>	<p>The Program included classroom instruction, mapping activities, a watershed walk, field sampling, and analysis of The Union Ave., Creek and sulfur Springs Creek. The objectives of the program are to: raise knowledge and awareness of student efforts to improve surface water quality; develop student's problem solving and critical thinking skills; promote stewardship of local water resources.</p>	<p>33 students from Fairfield High and 28 students from Benicia High participated in this program.</p>	<p>See attached Solano County Biomonitoring Program 2015 Year End Report for details.</p>

# Home Depot and *Our Water Our World* Regional Pilot Program



## Project Final Report

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March 30, 2015

Our Water Our World  
Home Depot  
Bay Area Stormwater Management Agencies Association



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Appendix A: Home Depot Monthly Pest At-A-Glance Calendar

Appendix B: *Home Depot Pests Bugging You Pocket Guide*

Appendix C: Home Depot On-Line Ordering Information for Beneficial Insects



*Our Water - Our World*



## **The Home Depot and *Our Water Our World* Regional Pilot Program**

### **INTRODUCTION**

The Our Water Our World Program is a collaboration among regional and local water agencies in California designed to provide information to consumers about pest management strategies and less-toxic alternatives that help protect water quality. Since 2003, Home Depot and Our Water Our World (OWOW) have partnered to reduce toxic runoff from fertilizers and pesticides into local waterways. The OWOW program currently works with 56 Home Depot stores in California.

This project grew out of this successful partnership and the ever-increasing needs of consumers seeking less-toxic products. With Home Depot's continually expanding stock of less-toxic products, OWOW works to help expand these choices and to respond to each store's needs for assistance with customer questions, product information, displays and Associate trainings.

The goal of this project was to improve delivery of Integrated Pest Management (IPM) information at Home Depot stores through education of employees and customers. In addressing this goal, this project has helped to improve Associates' knowledge of less-toxic products and pest management strategies, increase visibility of these products, and promote stores as environmentally-friendly businesses while maintaining or helping to increase the sales of less-toxic pest control products.

This enhanced program brought a two-level training format for Home Depot Associates: a standard training for all Associates, and an advanced training for one Associate per store who was designated as the Green Garden Specialist.

### **SCOPE OF WORK**

#### **PROJECT DELIVERABLES**

To meet these goals, several program components were developed including:

- Development of two levels of training curriculum, including extensive training binders and packets, supplemental handouts, and powerpoint presentations.
- Identification of a Green Garden Specialist at each store. Specialists were provided with specialized training, a set of resource materials and continuing education/information.

- Training for all Associates on how to explain/provide customers with solutions to seasonal pest problems
- Development of resource materials specific to Home Depot stores including a seasonal pest management calendar and *Pests Bugging You Pocket Guide*.
- Creation and promotion of large end-cap displays and smaller seasonal wing-stack displays of less-toxic products

Outline of the enhanced resources for the 10 stores:

- Identified a Green Garden Specialist (HD Associate) who became the expert at each store. This specialist mentored other Associates. (OWOW worked with Store Managers to identify ideal candidates).
- Provided resources so that Associates had confidence when helping customers. These included access to websites and support agencies, and support from OWOW Advocates, IPM consultants trained to work with Associates and customers. (See The Role of IPM Advocates below.)
- Provided tools for pest management including books, Pest ID cards, pest samples, and hand lenses with lanyards.
- Provided monthly store visits from an OWOW Advocate. Many Advocates visited stores weekly during the busy Spring and Summer season.
- Provided a Seasonal Pest Calendar to address pest problems ahead of the pest problems that will focus on the products Home Depot carries.
- Provided an enhanced training for Associates.
- Provided an advanced training for Green Garden Specialists.
- Provided one year of mentoring for each Green Garden Specialist by Advocates.
- Provided access to an entomologist for OWOW Advocates to help identify pests and diseases and to answer customer questions.
- Provided one outreach event for customers during the year focusing on current pest problems and customer questions (One 4-hour event per store.) During this time, we actually provided 2 outreach events at each store.
- Added seasonal display with ideas for pest management (wing stacks and end caps) and provide signage.

## **THE ROLE OF IPM ADVOCATES**

OWOW Advocates are IPM consultants working for the OWOW program and local agencies. Advocates work closely with store managers and staff to implement OWOW in stores in their service areas. During the full year of the program (January to December, 2014), six IPM Advocates were assigned to 10 project stores. During monthly store visits, they maintained tags labeling less-toxic products called shelf talkers (see page 10) and racks of pest management fact sheets (see page 11), mentored the Green

Garden Specialists by answering questions on products and pests, and kept them up to date on invasive pests coming to the area. They scheduled and conducted Associate trainings and customer outreach events. During the store visits and outreach events many customers were guided to less toxic solutions for their pest problems. In addition, the IPM Advocates assisted Associates and vendors with end cap implementation and signage.



IPM Advocates receiving an IPM Innovators Award from the California State Dept of Pesticide Regulation

## PARTICIPATING STORES

Here is a list of the 10 Home Depot stores included in this project:

COUNTY	CITY & STORE #	IPM Advocate
Alameda	Emeryville 627	Suzanne Bontempo
Marin	San Rafael 657	Anne Rogers
Napa	Napa 6652	Teresa Lavell
San Mateo	San Mateo 632, E. Palo Alto 6603	Suzanne Bontempo
Solano	Fairfield 637, Vallejo 633	Teresa Lavelle
Sonoma	Santa Rosa 1379	Annie Joseph
Contra Costa	San Ramon 6604	Debi Tidd
Sacramento	Elk Grove 6674	Steve Zien

## RESULTS AT A GLANCE

During the this project, IPM Advocates successfully:

- Trained 130 Associates
- Provided 20 outreach events
- Helped create/label 10 end caps and participated in wing stack displays (see page 9).
- Reached over 1400 customers with work in-aisle and at outreach events

As a result of this project:

- 100% of store managers surveyed reported greater sales of less-toxic products from 2013 - 2014 even with a drought.
- 100% of the managers say their employees now have more confidence when identifying pest problems.
- 100% of the stores increased their shelf space for less-toxic products in 2013 – 2014 with the end cap displays. The store managers attribute these changes to the efforts of the IPM Advocates in the Home Depot Regional Pilot Program.

## PROJECT TASKS

### TASK 1: Develop Materials

**Task 1.1: Develop resources for a two-tiered training program for Associates, and identify a key individual at each store who will become the Green Gardening Specialist.**

Providing Home Depot Associates with extensive training and supporting resource materials is a key component of this program. This training helps Associates know how to use the OWOW in-store materials, such as shelf talkers and fact sheets, and gives them an understanding of water pollution issues associated with more toxic-products. Trainings were designed to help them answer a variety of customer questions on pest management, and to help them quickly identify less-toxic products.

A Green Garden Specialist was identified at each store and provided with additional training and resources. Working as a mentor to other Associates, each Green Garden Specialist helped to disseminate product and pest management information provided by Advocates.

All store Associates were offered a basic training in pest identification and management techniques. These trainings also included helping customers to select plant material, fertilizers and soil amendments. In addition to this training, Green Garden Specialists were provided with a more advanced training with detailed information on pests and products, as well as new pests and diseases. This training included hands-on experience using pest management resources and identification of pests with hand lenses.



Learning to use a hand lens at the Green Garden Specialist Training



Training for Associates in San Mateo

### **Task 1.2: Provide easy-to-access resources for Associates so they can confidently assist customers with pest management questions.**

Each Associate was provided with an extensive resource packet, and Green Garden Specialists were provided with even more advanced resource materials in a training binder. These materials included:

- A laminated Good Bug/Bad Bug insect identification chart.
- 10 Most Wanted Bugs brochures for identifying beneficial insects and associated plants.
- A *Home Depot Monthly Pest-at-a Glance Calendar* of seasonal pest management techniques and products specific to Home Depot stores (See Appendix A)
- Copies of the OWOW fact sheet handouts on a variety of specific pests and landscape problems.
- A copy of *Plants and Landscapes for Summer-Dry Climates* to help with customer plant selections.
- A list of less-toxic products carried by Home Depot, information on ordering beneficial insects on Home Depot on-line (see Appendix C), and lists of other store materials for pest management such as screening, caulking, mulch, etc.

- An extensive resource list with books and web-sites for locating more detailed information on pest management solutions.
- A set of UC Statewide IPM retail newsletters with articles on pest management and marketing tips.
- Additional training packet information including: information on product ingredients and how they work, how to read a pesticide label, lists of plants to attract beneficial insects, guides to managing common landscape pests, instructions for helping customers with management techniques such as dormant spraying and using nematodes, and information on identifying new and invasive pests.

### **Task 1.3: Provide IPM Materials from the University of California for Associates to use when assisting customers.**

During the training, Associates were introduced to several easy-to-use resource materials published by the University of California, and were instructed in the use of these materials to answer customer questions. These materials included:

- Two sets of laminated, Pest Identification Cards along with hand lenses to help with identification.
- Copies of Pests of Landscape Trees and Shrubs for identifying pests and diseases.

### **Task 1.4: Develop and provide a Pests Bugging You Pocket Guide for Associates with solutions specific to Home Depot’s product line. (See Appendix B)**

Part of this project included the development of a small, folded, ‘apron-pocket’ sized pest management guide called “**Pests Bugging You? Products Less Toxic to People and Pets.**” This guide was designed to be used by Associates when answering customer questions, and to be given out to store customers to refer to on future visits. The guide was designed to reflect products and plants specific to Home Depot stores. Included in the guide:

- A list of 10 common pests with less-toxic products for managing each pest.
- A list of less-toxic ingredients listed on product labels.
- General information on choosing products and managing pests with less-toxic products.
- How to safely dispose of unwanted products.
- Resource information for more detailed information.
- A list of plants that attract beneficial insects and butterflies.

**Pests Bugging You? Products Less Toxic to People and Pets**

[www.ourwaterourworld.org](http://www.ourwaterourworld.org)

**Ants**  
 Amdro Kills: Ants (bait stations)  
 EcoSmart Ant & Roach Killer  
 EcoSmart Organic Insect Killer (spray)  
 Safer Brand Diatomaceous Earth Ant & Crawling Insect Killer  
 Terminix Ultimate Protection Crawling Insect Killer (aerosol)  
 Terro II Liquid Baits

**Aphids**  
 Bayer Advanced Natria Insecticidal Soap  
 Bayer Advanced Natria Insect, Disease and Mite Control (spray)  
 Bayer Advanced Natria Neem Oil  
 Bayer Advanced Natria Rose and Flower Spray  
 Bonide All Seasons Horticultural and Dormant Spray Oil  
 Bonide Rose Rx 3 in 1 Spray  
 EcoSmart Garden Insect Killer  
 Ladybugs (Home Depot On-line)  
 Organic Labs Organocide

**Fleas**  
 Insecticidal soaps (apply outdoors where pets lie)  
 Safer Brand Diatomaceous Earth Ant & Crawling Insect Killer  
 Victor Ultimate Flea Trap (monitoring tool)

**LESS TOXIC PRODUCTS**

**Gophers and Moles**  
 Digger's Root Guard Gopher Baskets  
 Gopher Traps  
 Sweeney's Mole and Gopher Repellent  
 Uncle Sam's Mole and Gopher Repellent

**Mealybugs**  
 Bayer Advanced Natria Insect, Disease and Mite Control (spray)  
 Bayer Advanced Natria Insecticidal Soap  
 Organic Labs Organocide

**Mites and Whiteflies**  
 Bayer Advanced Natria Insecticidal Soap  
 Bayer Advanced Natria Insect, Disease and Mite Control (spray)  
 Bayer Advanced Natria Neem Oil  
 Bayer Advanced Natria Rose & Flower Insect, Disease and Mite Control (spray)  
 Bonide All Seasons Horticultural and Dormant Spray Oil  
 Bonide Captain Jack's Dead Bug Brew  
 Bonide Rx 3 in 1 Spray

**Mosquitoes**  
 Mosquito Dunks

**Roaches**  
 Black Flag Roach Motel  
 Combat Source Kill Max Small Roach Bait Station  
 EcoSmart Ant and Roach Killer  
 Harris Famous Roach Tablets  
 Safer Brand Diatomaceous Earth Ant & Crawling Insect Killer  
 Terminix Ultimate Protection Crawling Insect Killer (aerosol)

**Snails and Slugs**  
 Bayer Advanced Natria Snail and Slug Killer Bait  
 Corey's Slug and Snail Copper Tape (barrier)  
 Sluggo

**Yellowjackets**  
 Eco Smart Flying Insect Killer  
 Rescue WFF Trap  
 Rescue Yellowjacket Trap Attractant  
 Rescue Yellowjacket Traps  
 Terminix Ultimate Protection Stinging Insect Killer (Aerosol)

**LESS TOXIC ACTIVE INGREDIENTS**

Active ingredients are listed on the front of the product. This is a partial list of active ingredients found in products considered less toxic. For a more complete list, go to [www.ourwaterourworld.org](http://www.ourwaterourworld.org).

Abamectin	Hydramethylnon (ONLY use in containerize/bait or gel form)
Azinphos methyl	Hydrophobic extract of neem
Bacillus thuringiensis	Iron phosphate
Isorelensin	Limonene eucalyptus oil
Borax and boric acid	Methoxyne
Castor oil, vegetable wax, gum resin	Orthoboric acid
Citric acid	Paraffinic oil
Clove, rosemary, scallion and thyme oil	Petroleum oil
Corn gluten	Picardrin
Cottonseed oil	Potassium bicarb onate of fatty acids
D-Limonene	Sodium tetraborate decahydrate
Diatomaceous earth	Soybean oil
Eggenol	Spinosad
Figuralol (ONLY use in containerized/bait form)	

Developed for Home Depot stores by the Bay Area Stormwater Management Agencies Association © 2014

**Manage pests with LESS TOXIC PRODUCTS!**

Watering your lawn or garden after applying pesticides or fertilizer can pollute water that runs off into storm drains and on to local creeks, lakes, bays, or the ocean. In fact, there are plenty of ways to manage pests, and many products that keep pests away and don't pollute.

**Our Water Our World** is a partnership between Home Depot stores and local government agencies working together to reduce water pollution caused by pesticides. The **Our Water Our World** literature stand has a wide selection of fact sheets that explain less toxic ways to manage common pests.

This pocket-guide highlights Home Depot products that are less toxic to people, pets, and the environment. For a longer list and more information, visit [www.ourwaterourworld.org](http://www.ourwaterourworld.org).

**Choosing Products**  
 Good pest management often means preventing pest problems before they happen.

**Indoors**

- Good housekeeping practices can keep ants and cockroaches away.
- Enclosed ant or roach baits are less toxic than other applications.

**In the garden**

- Prune away and hose off aphid infestations.
- Buy plants that attract ladybugs and other beneficial insects to help keep garden pests like aphids and mealybugs under control.
- Order ladybugs from Home Depot online.
- Slow-release and organic fertilizers or compost keep plants and grass healthy by helping them absorb nutrients more efficiently.

Many gardeners kill beneficial insects because they mistake them for pests. When you lose beneficial insects, you lose one of the best nontoxic defenses to a healthy garden! For more information on these garden predators, go to [www.ipm.ucdavis.edu/PMG/NE/index.html](http://www.ipm.ucdavis.edu/PMG/NE/index.html).

**Plants that Attract Helpful Insects and Butterflies**

- Aster (*Aster spp.*)
- Calendula (*Calendula spp.*)
- California poppy (*Eschscholzia californica*)
- California wild lilac (*Lesmothus spp.*)
- Chervil (*Anthriscus cerefolium*)
- Chrysanthemum (*Chrysanthemum spp.*)
- Coriander (*Coriander sativum*)
- Cosmos (*Cosmos spp.*)
- Coyote brush (*Baccharis pilularis*)
- Dill (*Anethum graveolens*)
- Eklabower (*Gambusia spp.*)
- Fleabane (*Erigonum spp.*)
- Pincushion flower (*Scabiosa columbaria*)
- Rosemary (*Rosmarinus officinalis*)
- Rudbeckia (*Rudbeckia spp.*)
- Sticky monkey flower (*Mimulus aurantiacus*)
- Sunflower (*Helianthus spp.*)
- Sweet alyssum (*Lyabridora maritima*)
- Wild buckwheat (*Eriogonum spp.*)
- Yarrow (*Achillea millefolium*)
- Zinnia (*Zinnia spp.*)

**Disposing of Unwanted Products**

If you have pest control products you no longer want, drop them off at a local household hazardous waste collection site. To find a nearby location, go to [www.earth11.com](http://www.earth11.com) and enter 'pesticide' and your zip code.

Visit [www.ourwaterourworld.org](http://www.ourwaterourworld.org) for more information, including:

- **Pest Fact Sheets** – detailed information on common pests and methods to manage them without using toxic materials.
- **Beneficial bugs brochure** (*The 10 Most Wanted Bugs in Your Garden*) with color photos of beneficial bugs that eat pests and plants that attract them.

Learn more about less-toxic pest control:

- To see photos and learn more about beneficial insects, visit the Natural Enemies Gallery at the UC IPM website at: [www.ipm.ucdavis.edu/PMG/NE/index.html](http://www.ipm.ucdavis.edu/PMG/NE/index.html)
- Contact your local Agricultural Extension Office for help identifying and managing pests

Pests Bugging You? pocket guide for Associates and customers

**Task 1.5: Install new signage for wing-stack seasonal pest displays.**

Working in partnership with Home Depot product vendors, the OWOW team was able to help design, install and label end-caps and wing-stacks highlighting less-toxic products. Large end-caps with OWOW banners were installed promoting less-toxic Kellogg and Bayer products. Small, wing-stacks were located in the nursery area promoting Miracle-Gro's line of organic fertilizers.



Miracle Gro wing stack display



Kellogg and Bayer display

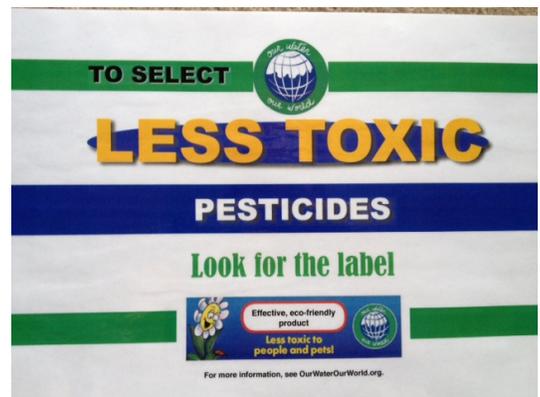
## TASK 2: Establish store set-ups, call schedule, and training workshops

### Task 2.1: Schedule meetings for Green Garden Specialist and IPM Advocate

Annie Joseph met with the Managers from each Home Depot pilot store to discuss the criteria for selecting an Associate as the Green Garden Specialist. Once an Associate was selected, Annie Joseph met with most of the Green Garden Specialists to introduce the IPM Advocate assigned to their store, and to explain the project.

### Task 2.2: Place new signage for shelf talker awareness, wind-stack displays and banners.

In some of the project stores, we were able to place some additional signage highlighting the connection between shelf talkers and how to find less-toxic products.



Signage reminding customers to look for shelf talkers

### Task 2.3: Label all less-toxic products; use laminated shelf talkers for outdoor products.

All less-toxic products were labeled with OWOW shelf talkers. The name of each product is printed on the shelf talkers to avoid confusion about which product is labeled. These labels were monitored on a monthly basis to make sure they were correctly placed and to add labels on new products. Labels for products and displays located outside were laminated to protect them from weather and humidity damage.



Shelf Talker



Laminated shelf talkers



Shelf talkers labeling less-toxic products

### Task 2.4: Display Literature racks in prominent areas.

The OWOW program offers store customers 15 different fact sheets with pest management tips, including fact sheets on several common pests, lawn and rose care, creating a healthy garden, and how to protect water quality. In addition to fact sheets in English, each store is stocked with Spanish versions of the most commonly used fact sheets. The fact sheets are displayed in metal racks with signage identifying the OWOW program.

Each store in this program was provided with the fact sheets and rack. Racks were most commonly located in a prominent place near the pesticide aisle.



Literature rack in pesticide aisle



### Task 2.5: Schedule monthly store visits.

Once shelf talkers and fact sheet racks were in place, IPM Advocates visited their stores on a monthly basis. During these visits, Advocates were able to

- Add or replace shelf talkers.
- Re-stock fact sheets
- Work with new Associates to explain the program and tools available to them.
- Answer any questions from Associates.
- Work with customers in aisle to help with product selection and answer questions.
- Research questions from Associates and customers and bring in answers and additional materials.
- Bring in seasonal information and information on new pests and products.

### Task 2.6: Train Associates and Green Garden Specialists

In addition to the Green Garden Specialist training, trainings were provided to Associates at each store. These 1-hour trainings were conducted off the floor in the training room. Associates were provided with packets containing extensive resource materials, insect ID Guides, and product lists.



Home Depot, Emeryville Associate's training



Home Depot, Santa Rosa Associate's training

## TASK 3: Develop Displays for Less-Toxic Products

### Task 3.1: Provide and display end-cap banners for all ten stores.

Each of the stores in the project was provided with an OWOW banner to highlight less-toxic products. These full-color, 6' by 24" banners were used in pesticide aisles, or to promote special end caps/wing stacks of less-toxic products.



Our Water Our World banner to highlight less-toxic product displays

### Task 3.2: Work with vendors who supply less-toxic products to build displays and order enough products to keep displays full.

Working in partnership with Home Depot product vendors, IPM Advocates were able to help design, install and label end-caps and wing-stacks highlighting less-toxic products. Large end-caps with OWOW banners were installed promoting less-toxic Kellogg and Bayer products. Small, wing-stacks were located in the nursery area promoting Miracle-Gro's line of organic fertilizer.



Kellogg and Bayer display



Miracle Gro Wingstack

### Task 3.3: Add Seasonal Wing-Stack Displays with signage for bimonthly seasonal pests

At some of the stores in the project, Advocates were able to assist stores in putting together additional displays highlighting seasonal pests and products. These displays were labeled with OWOW shelf talkers, and helped promote less-toxic products.



Less-toxic spring display



Dormant spray display for fall



Poster used on end caps and wing stacks

### Task 3.4: Provide stores with a seasonal pest calendar to help them plan in advance of pest problems

As part of this project, a monthly pest-at-a-glance calendar was developed specifically for Home Depot stores. This calendar was designed to alert Associates to pests, diseases or landscaping problems ahead of time so that they could become familiar with management options and products they could recommend to customers. Each month's pest or disease also includes a list of Home Depot products that can be used for management, and any OWOW resources they had to get more information or to help them work with customers.

For the complete Home Depot Monthly Pest-At-A Glance Calendar, see Appendix A.



Home Depot Monthly Pest-At-A Glance Calendar

Month	Pest/Disease	Notes	Resources	Products to Highlight
January	Dormant spray for diseases/over-wintering insects	remove/dispose of infected plant material	OWOW Dormant Spray handout	Bonide Copper Fungicide Bonide All-Seasons Oil
February	Rose Care	Mulch to prevent fungal diseases & conserve water	OWOW Rose Fact Sheet	Natria Neem Oil Bonide All Seasons Oil Nature's Care Insect Soap
March	Snail/Slug	Water early morning to prevent wet foliage at night	OWOW Snail & Slug Fact Sheet	Natria Slug & Snail Sluggo Nature's Care Slug and Snail
April	Aphids	Look for ladybugs & other beneficials that eat aphids	OWOW Aphid Fact Sheet	Nature's Care Insect Soap Bonide All Seasons Oil Organocide
May	Grubs	Buy beneficial nematodes on-line to manage young grubs	OWOW Grub Handout	Beneficial Nematodes
June	Mosquitoes	Check for standing water/screen windows	OWOW Mosquito Fact Sheet	Mosquito Dunks
July	Yellowjackets	Set traps at perimeter of yard, not near eating areas	OWOW Yellowjacket Fact Sheet	Yellowjacket traps/lures
August	Fleas & Flies	Flies: remove pet waste & fallen fruit. Fleas: use nematodes in outside breeding areas	OWOW Flea Fact Sheet	Fly Traps, Fly Tape Fly predators (on-line) Flea Traps, Nematodes EcoSmart Flying Insect
September	Ants	Use caulk to seal entries/manage aphids to discourage ants	OWOW Ant Fact Sheet	Amdro & Terro ant baits EcoSmart Ant & Roach
October	Rats/Mice	Pick up fallen fruit/nuts Seal entries with foam	OWOW Rats and Mice Fact Sheet	Rat/Mouse Traps Great Stuff Foam
November	Dormant Spray	Use when roses and fruit trees have lost their leaves	OWOW Rose Fact Sheet	Bonide All Seasons Oil Bonide Copper Fungicide
December	Bed Bugs	Use a monitoring tool to detect bed bugs	Bed Bugs Quick Tips	Safer Ant and Crawling Insect Killer

**Task 3.5: Evaluate the effectiveness by keeping track of the SKUs on the end-cap and seasonal wing stack displays.**

Over the course of the year, the Advocates worked closely with the vendors to make sure that displays were kept full and that shelf talkers were in place if displays were moved or rebuilt.

Sixty percent of the stores in the end cap program showed an increase in the sales of the less-toxic pesticides on display. 100% of the stores with wing stack displays showed an increase in the sales of the Miracle Gro organic fertilizers that were featured in the display.

**TASK 4: Hold Tabling Events**

**Task 4.1: Provide two tabling events at each store with a theme, such as organic rose care.**

One of the most important aspects of this program was to be able to offer Home Depot customers access to IPM Advocates to answer their pest management and landscaping questions. Advocates held two tablings at each store during the project period. Less-toxic products were highlighted, and we were able to bring in additional resource materials and handouts for customers. Customers were

helped at the table and in aisle. In addition, Associates that were not able to attend a training were able to stop by for information about the program and to get help with customer questions.

Each four-hour tabling was held on a busy weekend or weekday morning in the Pesticide aisle or in the nursery. Advocates were able to work with over 800 customers during the 20 tablings provided. The tablings held at the Home Depot Road Shows in Pleasanton and Elk Grove reached an additional 250 Associates.



Store tablings for customers



Tablings at Home Depot Road Shows in Pleasanton and Elk Grove

## TASK 5: EVALUATION MEASURES

### Task 5.1: Analyze pre- and post training surveys of Associates

During both basic Associate trainings and the more advanced Green Garden Specialist training, Associates were asked to fill out a short pre-training survey before the training, and an evaluation form at the conclusion of the training. The pre- survey helped us to determine the level of the Associate’s knowledge about pesticides and water quality issues before this information was provided to them in the training. The final survey included questions to help us determine how effective the training information was, and how the training could be adjusted to provide the most relevant and understandable information.

A total of 130 Associates were training during this project. We received 115 pre-surveys and 114 final evaluation forms back from training participants. In some cases, participants left questions blank. The percentages for each question represent the actual number of answers we got back.

### Summary of Regional Pilot Program Pre-Training Survey

Survey Question	Yes	No	Don't Know
<b>When water runs into a storm drain in the street, is it treated before it reaches a stream or the Bay?</b>	9%	88%	3%
<b>When water enters the sewer system from a house drain, are pesticides removed at the sewage treatment plant before the treated water enters the Bay?</b>	48%	45%	7%
<b>How do you dispose of leftover pesticides after you finish applying them, or when you no longer need the pesticides? (Number indicates number of answers for each method of disposal.)</b> <ul style="list-style-type: none"> <li>• Household Hazardous Waste Sites: 36%</li> <li>• Don't know: 27%</li> <li>• Store for next use: 7%</li> </ul>			

- Use until empty: 6%
- Recycle: 9%
- Never have had leftovers: 2%
- Pour it down drain: 1%
- Throw away: 7%
- Dispose of properly: 3%
- Call for pickup: 1%
- Make sure it's not mixed and put back in the bottle: 1%

**Do you know where your local Household Hazardous Waste facility is located?**

YES: 39%      NO: 61%

### Summary of Regional Pilot Program End of Training Evaluation Form

Survey Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The information provided was useful to you.			1%	11%	88%
The training binder and resources will be useful to you in the future.			2%	4%	94%
The information will help you recommend and sell less-toxic products.			2%	10%	88%

**What part of the training was most useful?**

- Resource packets/information: 5%
- Pest calendar: 2%
- Information about less-toxic products: 28%
- Learning how to manage specific pests and diseases: 5%
- Everything was useful: 20%
- Good bug/bad bug information: 12%
- Learning about compost and mulch: 3%
- Learning about HHW/how to dispose of chemicals: 4%
- Product list: 1%
- Being more knowledgeable about pesticides and hazardous products/how they affect environment: 4%
- Learning about water pollution: 3%

- Knowing which products to recommend to customers who are eco-friendly
- Info on organic fertilizers: 2%
- Visuals: 3%
- Learning about natural bug repellents: 1%
- The question and answer portion: 1%
- Drought information/examples of water-wise landscapes: 2%
- Rebate information for irrigation and lawn removal: 2%
- Gardening guidelines: 1%
- The instructor – she was clear, informed, interesting: 1%

### **What part of the training was least useful?**

- Everything was useful: 40%
- Need more time for training: 4%
- Identification of bug damage: 1%
- Outside garden products: 1%

### **Did the information change your views about pesticides? Why or why not?**

#### **Yes: 85%**

- Now know more about how to use/recommend less-toxic products: 6%
- I feel more informed/know how to be eco-smart: 3%
- Good to know how to dispose of unwanted pesticides: 1%
- I know more about less-toxic choices: 4%
- Know more about pesticides and pesticide pollution impacts/issues: 6%
- More excited about using less-toxic products: 1%
- Know now to read the label: 1%
- I will only use/recommend less-toxics: 4%
- Made me more aware/more conscious about pesticide choices: 6%
- Now know the importance of keeping toxic pesticides out of water: 8%
- Will recommend products better for environment: 3%
- Knowing what to use when children and pets are near: 2%
- Better to use beneficial insects: 2%
- Will help me work with customers who are eco-friendly: 3%
- Reinforced my views: 1%
- Shows how something little has a big effect: 1%
- Know how to choose water-wise products: 1%
- Continual awareness of vastness of product offerings is helpful: 1%

#### **No: 15%**

- Already recommend less-toxic products: 13%

### **When this training is held again, what changes do you recommend?**

- Longer time for training: 18%
- More training: 4%
- More Q & A: 1%
- More in-depth about what kills certain insects and diseases: 2%
- More info on pests: 2%
- Larger customer attention grabbers in store: 1%
- More on each type of toxic product: 1%
- More on soils: 2%
- Add a section on plants: 2%
- More detail on each best-selling product: 1%
- Discuss traps: 1%
- Don't need any changes: 4%

### **Additional Comments:**

- It was all great; a great learning experience. (5 comments)
- Everything was good, a lot of information.
- Found all the information very interesting (2 comments)
- Love to see more instructors with more information. Love this.
- The instructor was great and super helpful.
- Would like you guys to stay longer. I'm fascinated.

### **Task 5.2: Measure changes of less-toxic product sales.**

Partner stores were contacted to get data on changes in the types of products available, and changes in the sales of less-toxic products. Data on end caps and wing stacks was collected with the help of vendors.

As a result of this project, all of the stores reported an increase in sales of less-toxic products from 2013 to 2014 due to products displayed on end caps and wing stacks, even with an economy impacted by drought.

### **Task 5.3: Measure tabling evaluations by the number of customers reached and guided to less-toxic solutions for specific areas.**

During the 20 tabling events, over 800 customers were reached and most took the guidance offered by the IPM Advocates. The tablings also offered additional opportunities for Associates to be mentored.

On their tables, the Advocates featured current pests problems that customers were likely to see along with their less toxic solutions. Because of the drought, the

Advocates were also able to feature two hand- outs “Ten Tips for Waterwise Gardening” and “Helping Landscapes Survive a Drought.” The “Helping Landscapes Survive a Drought” piece was created midsummer in response to the myriad of problems that occur more during those conditions and included tips for how the potential damage could be minimized. Advocates also showcased plant material that attracted beneficial insects so customers would know how to set their garden up for success.

In addition, Advocates provided customers with information on their local Household Hazardous Waste facilities for disposal of old pesticides and fertilizers. They also gave out information to customers and Associates on local Mosquito and Vector Control Districts for help with concerns about mosquito populations, rat and mouse infestations, and help with in-ground yellowjacket management.

**Subjects covered during the tablings included:**

Proper plant selection for various landscape situations, native plant selection, proper irrigation practices, benefits of mulching, use of organic and slow release fertilizers, how to attract beneficial insects to the garden, how products like neem oil, iron phosphate snail baits, and Bt work. The Advocates also promoted the array of beneficial insects that are available through the store online.

**Pests covered during the tablings included:**

Ants, aphids, bedbugs, blackspot, borers in fruit trees and ornamentals, caterpillars, citrus leaf miner, citrus psyllid, codling moth on apples and pears, fire blight, fleas, fungus gnats, gophers, grubs in lawns, lacebugs, leaf beetles, leafhoppers, mice, mites, moles, mosquitoes, olive fruit fly, peach leaf curl, rats, slugs and snails, spotted winged drosophila, skunks, spider mites, squash bugs , squirrels, thrips, voles, and yellow jackets.

**Task 5.4: Evaluate store manager surveys.**

A survey was developed to assess the effectiveness of the IPM Advocates and the OWOW program materials. At the conclusion of the project, managers from each store in the program were asked to evaluate the project. They were asked to determine how effective the program was at educating staff and customers, how helpful they found their IPM Advocate, if the OWOW materials were effective aids to Associates and customers, and if the project helped to boost sales of less-toxic products. Here are the results of that survey:

## Home Depot Pilot Project – Exit Interview with Managers

Survey Question	Agree	Somewhat Agree	Not Sure	Disagree
Training Associates has helped them more confidently answer customer questions about pests and less-toxic products.	100%			
Training Associates has helped them more confidently sell less-toxic products.	90%	10%		
This program has helped to increase the visibility and sales of less-toxic products.	80%	20%		
Shelf talkers have helped Associates and customers to identify less-toxic products.	90%	10%		
The fact sheets have helped Associates and customers answer questions about pest problems.	100%			
This program has helped to promote your store in the community as a resource for eco-friendly, less-toxic solutions.	60%	40%		
The resource materials provided by this program (books, ID guides, hand lens, supplemental handouts) have helped Associates answer pest questions and recommend less-toxic products.	100%			

### **What additional things can this program do to help you promote less-toxic products?**

- Training cashiers is very helpful.
- We would love a webinar that would cover plants, products, bugs.
- We would like to have training materials on-line.
- We would like more classes and tutorials by Advocates. These trainings show that our employer cares. It gives us a comfort level in what we are selling. We also learn from the tabling events.

- More training for all employees, especially all the new employees as they come on. All of the people on the floor need to be trained.
- Have the fact sheets at the cashier stands so they can hand them out.
- Would like Sudden Oak Death information put into the rack so they can hand this out to customers.
- Maybe season pest or invasive pests have a spot in the rack.
- I would like to see two days where we train all the people early in the season.
- I would like to have a less-toxic rat display if we could get approval and support from our district manager.
- Want more hands-on trainings of Associates.
- We would like a link to our garden club for Our Water Our World.
- We like suggestions for what we should have in stock for the season.
- More outreach for Spanish speakers.
- Need more signage that stands out with the end cap.
- I would like more coaching about our products.
- I would like Debi to go into the aisles answering customer questions (hang out in the aisle) in addition to tabling events.
- Would like more trainings of our Associates. It gives them a sense of pride in what they do.
- We need more end caps.

### **General Comments:**

- The point of purchase is great. People come to us and we guide them. Keep doing the great job you are doing.
- Trainings are great and the customer tablings are very helpful.
- Teresa brings in the actual bug samples and we really learn from that, as do our customers.
- Fact sheets are so helpful to us and to our customers.
- Not sure if the program has helped to promote the store in the community, but think so, especially with the end cap.
- Want to set dates for tabling events with customers – those are extremely helpful.
- Training Associates makes them proud.
- Not sure how stores are being promoted through the OWOW program.
- Like the practical explanations of products and how they work that Suzanne does. We need it for more Associates more often.
- Having more customer tabling events helps customers understand more and helps us more too.
- Suzanne really knows how to explain things to us.
- Steve comes in once a month, but we would like to see him more and more.
- We really appreciate the program. Anne is helping to reach out to the Spanish speaking community with her tabling events with Spanish Speakers.
- I should use facts sheets more and get others to use them more.
- Resource materials have been a great help.
- The tabling events are very helpful to our Associates and our customers. Everything is helpful.

## **TASK 6: COORDINATION**

Krissa Glasgow, Senior Manager of The Home Depot Environmental Innovations, helped to coordinate Home Depot's participation in the Green Garden Specialist training and mentoring pilot program with Our Water Our World. In December 2013, Krissa Glasgow came to tour several local stores to see the OWOW program in action. She was very supportive of the pilot program and planned a trip in the spring to attend a training at one of the pilot stores. Annie Joseph and Krissa Glasgow were in touch monthly throughout the pilot program as it was implemented.

Annie met with IPM Advocates in early December of 2013 to discuss the coming pilot program. In December and early January she went to the stores and met with the store managers along with the Advocates to tell them about the Green Garden Specialist training. They talked about selecting an Associate at their store to designate and train as the Green Garden Specialist.

In mid December 2013 Annie met with vendors to discuss the pilot program for the coming year. A coordinated plan was laid out to support all of the less-toxic products which Home Depot carries through Associate trainings, end cap promotions, and additional displays. The products would also be featured throughout the season during tabling events where time appropriate. The vendors were very supportive of the pilot program.

In January Annie arranged a meeting with District Manager Gregg Kenney, store manager Rod Wieldrayer of the Napa store, Debi Tidd IPM Advocate and educator, and several key Associates from the Napa Home Depot. They set the plan for the Regional training that would occur in February and would lay the ground for the Green Garden Specialist training kickoff. At the date selected, the ten Associates would meet for the kickoff at the Napa location.

Debi Tidd created the training materials and hands on activities for the Green Garden Specialists. Support materials were purchased consisting of reference books from UCANR "Pests of the Landscape Trees and Shrubs" and Landscape Pest ID Cards, hand lenses, and a book titled "Plants and Landscapes for Summer Dry Climates." Debi Tidd also created powerpoint presentations for the Advocates to use for the enhanced store trainings for the ten stores that spring.

The training was attended by the Green Garden Specialist Associates from the 10 pilot stores, IPM Advocates who were their future mentors, and sponsoring agency representatives. The agency representatives included Gina Purin from Marin County Stormwater Pollution Prevention Program, Jamison Crosby from Napa County Flood Control and Water Conservation District, and Jennifer Kaiser from Vallejo Sanitation and Flood District.

Following the training, the Advocates set dates for outreach events, store trainings, and call schedules. The end cap promotions were planned with the vendors. Vendors met many of the Advocates at the stores and were instrumental

in helping to build end caps, wing stacks, and displays. OWOW banners for displays were printed and distributed to the Advocates so each store had a banner. Annie made sure the Advocates were in communication with their vendors so the end cap signage would remain up and the products would be kept in stock during the season. Signage for wing stacks was also created and put up in the stores. Photographs were taken of end caps, wing stacks, and displays.

In March 2014, Krissa was able to travel to attend an enhanced store training at the Emeryville Home Depot. There she was able to meet Geoff Brossueau the Executive Director of BASMAA, Jim Scanlin from Alameda Countywide Clean Water Program, IPM Advocate Suzanne Bontempo, and Advocate and instructor Debi Tidd. After the training she was able to tour the store seeing the end cap display in the nursery and to discuss the less toxic products that Home Depot carries.

During the year the Advocates were in continuous communication with Annie via e-mail, texting, and phone calls regarding the progress of their mentoring of the Green Garden Specialists. They also kept her up to date on their mentoring of additional store Associates and the customers they helped while they were in the stores. Advocates sent Annie monthly reports that detailed their store visits and trainings. When they conducted tablings, they kept records of customer interactions and also sent photos of their tablings and displays.

In January and February of 2015 Annie interviewed the store managers and department leads to conduct a survey about the pilot program. It was very evident that the IPM Advocates had risen to a higher level of importance in the eyes of the stores over the past year.

The Advocates had deepened the confidence of the Associates through doing research to address Associate and customer questions using science based systems with support from UCIPM Collaborative Tools, UCIPM online, OWOW Ask the Expert Dr. Quarels from the Bio-Integral Resource Center, and the expertise of Dr. Nita Davidson from the Department of Pesticide Regulation. The Advocates also became valued partners by working tirelessly to maintain shelf talkers and signage on the end caps and displays. Vendors and Associates alike truly appreciated the work of the IPM Advocates.

Through this successful coordination with Associates, Advocates, and vendors with the Our Water Our World Program, Home Depot is supporting an expansion of the training to include more Associates in the Green Garden Specialist training in 2015.

## CONCLUSIONS

Over the course of this pilot project, six IPM Advocates put in more than 1000 hours working in the 10 stores in the project. During this time they met with store managers and Associates, customers and vendors. They labeled less-toxic products with shelf talkers so that Associates and customers could easily find them, provided a series of fact sheets on pest management, and worked with customers in-aisle to help with pest management strategies.

- Advocates trained a total of 130 Associates in 13 workshops.
- Each Advocate participated in two tabling events for their store, totaling 20 outreach events, and reaching over 800 customers. In addition, Advocates reached an additional 600 customers during their regular store visits.
- In addition to researching Associates' pest questions, the Advocates showed them how to access additional information on the OWOW Ask the Expert feature and the UC Statewide IPM Project by using their store computer or showing how easy it is by using an I-pad or smart phone.

After the year was completed, the Green Garden Specialists, store managers, department leads, and additional Associates did not want the program to end. They valued the diligence with which the Advocates worked with vendors on displays, created additional signage, helped increase the sales of their less toxic products, guided many customers in the aisles to get answers for their pest questions, and supported all the Associates with additional materials and resources. The store managers realized the improved expertise and confidence their Associates gained working with the Advocates and wanted to have the Advocates in their stores full time.

As we move into 2015 and the completion of this pilot project, all of the 56 Home Depot stores in the OWOW partnership will continue to receive support from IPM Advocates or Public Agency personnel. All stores will be visited to refresh shelf talkers and fact sheets.

In most counties where Advocates are working in the stores, the store will also receive:

- Continued support for Associates, including providing seasonal pest information and researching pest questions.
- Working in-aisle with customers to answer pest management questions and to recommend products.
- Outreach and tabling events for customers.

## Home Depot Stores Currently Partnering with the *Our Water Our World* Program

County	City and Store Number
<b>Alameda</b>	Fremont 6636, Newark 6964, Pleasanton 629, Union City 635, Oakland 1007, Hayward 1017, Emeryville 6627, and Livermore 6678
<b>Contra Costa</b>	Concord 634, El Cerrito 643, Pittsburg 644, Brentwood 1076, Hercules 1044, San Ramon 6604
<b>Fresno (Pac.C.)</b>	East King’s Canyon Road 1086
<b>Marin</b>	San Rafael 657
<b>Mendocino</b>	Ukiah 8408
<b>Monterey</b>	Salinas 1843, Seaside 6967
<b>Napa</b>	6652
<b>Placer</b>	Roseville 636, Roseville 6688
<b>Sacramento</b>	Carmichael 650, Florin Road 651, Folsom 6675; Sacramento: Meadowview Road 1003, Power Inn/Folsom Blvd. 6620, Truxel Road 6649, Howe Ave 6966, Rancho Cordova 652, Elk Grove 6678
<b>Santa Cruz</b>	Soquel 6968
<b>San Mateo</b>	Colma 639, Daly City 1092, San Carlos 628, San Mateo 632, East Palo Alto 6603
<b>Santa Clara</b>	Blossom Hill Road 622, Campbell 642, De Anza Blvd. 6635, Hillsdale 1009, Milpitas 1041, Monterey Hwy 1861, Santa Clara—Lafayette St. 630, Story Road 6672, Sunnyvale—Kiefer Road 640, West Capital Expressway 6621
<b>San Luis Obispo</b>	San Luis Obispo 1052
<b>Shasta</b>	Redding 6682
<b>Solano</b>	Fairfield 637, Vallejo 633
<b>Sonoma</b>	Rohnert Park 641, Santa Rosa 1379, Windsor 6667
<b>Stanislaus</b>	Modesto 6601

## RECOMMENDATIONS

Going forward, we hope to continue all the work Advocates are currently doing in stores. As funding becomes available, we hope to expand the program by:

- Developing on-line training modules for Associates that would be available to them for expanded and seasonal information, and to help train new Associate's on less-toxic pest management.
- Developing and providing more seasonal pest identification and management information.
- Working with the stores to identify and promote water-wise plants and plants that attract beneficial insects.
- Providing research on new products and ways to reach customers and expand the market for less-toxic products.
- Developing a documentary about the partnership between Home Depot and the Our Water Our World program. As partners, Home Depot helped us to develop a truly unique program to reduce pesticide pollution while promoting less-toxic and sustainable landscaping practices. We hope to share this process and it's benefits with the public and other stores.

## ACKNOWLEDGEMENTS

Thank you to the following:

- **Alameda Countywide Clean Water Program, Fairfield-Suisun Urban Runoff Management Program, Marin County Stormwater Pollution Prevention Program, Napa Countywide Stormwater Pollution Prevention Program, Palo Alto Regional Water Quality Control Plant, Sacramento Stormwater Quality Partnership, San Mateo Countywide Water Pollution Prevention Program, City of San Ramon, City of Santa Rosa and Sonoma County Water Agency, and Vallejo Sanitation and Flood Control District** for providing additional funding to support this enhanced pilot project in their local Home Depot store.
- **Geoff Brosseau**, Executive Director of BASMAA, who believed deeply in the project and made sure the Advocates received support for the Home Depot Pilot Program from the local public agencies and beyond.
- **Jim Scanlin**, Alameda Countywide Clean Water Program, for his undying support for this pilot program as soon as he heard it was a possibility.

- **Krissa Glasgow**, Senior Environmental Innovations for Home Depot, for her enthusiastic support for the pilot program. She helped to make the program flow smoothly and gain support throughout Home Depot so it could have such a great opportunity for success currently and in the future.
- **Debi Tidd**, OWOW, for her tireless efforts for the Our Water Our World Program in creating useful practical materials, offering vision and clarity to the pilot program, and to mentoring hundreds of Associates in the practice of IPM.
- **Karey Windbiel-Rojas**, Urban IPM Educator at UC IPM, for providing continuing education and training as well as resources and support materials for the Advocates.
- **Nita Davidson**, from the California Department of Pesticide Regulation, who donated endless hours to edit training materials, identify pest problems, and offer support on her own time at the road shows.
- **Dan Joseph** and **Jenna Tidd**, for their support.
- Thanks to the representatives from the companies that helped us to implement, build and support store displays:
  - Kellogg Garden Supply: National Account manager, **Frank Pierce**; Regional Manager, **Gary Burnett**; Reps **Adam Hall**, **Juan Ballestreros** and **Kris Kaczanowski**.
  - Bayer Company: Area Sales Manager, **Daniel Valez**, and Alice
  - Scott's Miracle Gro: District Market Manager, **Louie Licad**
  - Monterey Lawn and Garden Products: Key Account Manager, **Clayton Smith**
- And finally, our enthusiastic and committed IPM Advocates for their continuous commitment to mentoring the public, the Associates, and the vendors in less-toxic pest management: **Suzanne Bontempo**, **Debi Tidd**, **Annie Joseph**, **Teresa Lavell**, **Anne Rogers**, **Steve Zien**.



Emeryville Home Depot less-toxic display with Krissa Glasgow, from Home Depot, Jim Scanlin with Alameda Countywide Clean Water, and IPM Advocates Debi Tidd and Suzanne Bontempo



Santa Rosa Associates with Home Depot Pocket Guides



Annie Joseph at Santa Rosa tabling event

*The point of purchase is great. People come to us and we guide them. Keep doing the great job you are doing!*

Associate, Home Depot, Napa

*I learned a lot of great information. I'll be recommending organic pesticides.*

Associate, Home Depot, Elk Grove

*It is nice to know there are more environmentally friendly ways to manage pests other than harsh chemicals.*

Associate, Home Depot, San Ramon

*Now it's a must for me to read the label on pesticides.*

Associate, Home Depot, Vallejo

*(Useful) knowing products to recommend to customers are eco-friendly.*

Associate, Home Depot, Santa Rosa

# Appendix A

## Home Depot Monthly Pest At-a-Glance Calendar



*Our Water - Our World*



Home Depot Monthly Pest-At-A Glance Calendar

Month	Pest/Disease	Notes	Resources	Products to Highlight
January	Dormant spray for diseases/over-wintering insects	remove/dispose of infected plant material	OWOW Dormant Spray handout	Bonide Copper Fungicide Bonide All-Seasons Oil
February	Rose Care	Mulch to prevent fungal diseases & conserve water	OWOW Rose Fact Sheet	Natria Neem Oil Bonide All Seasons Oil Nature's Care Insect Soap
March	Snail/Slug	Water early morning to prevent wet foliage at night	OWOW Snail & Slug Fact Sheet	Natria Slug & Snail Sluggo Nature's Care Slug and Snail
April	Aphids	Look for ladybugs & other beneficials that eat aphids	OWOW Aphid Fact Sheet	Nature's Care Insect Soap Bonide All Seasons Oil Organocide
May	Grubs	Buy beneficial nematodes on-line to manage young grubs	OWOW Grub Handout	Beneficial Nematodes
June	Mosquitoes	Check for standing water/screen windows	OWOW Mosquito Fact Sheet	Mosquito Dunks
July	Yellowjackets	Set traps at perimeter of yard, not near eating areas	OWOW Yellowjacket Fact Sheet	Yellowjacket traps/lures
August	Fleas & Flies	Flies: remove pet waste & fallen fruit Fleas: use nematodes in outside breeding areas	OWOW Flea Fact Sheet	Fly Traps, Fly Tape Fly predators (on-line) Flea Traps, Nematodes EcoSmart Flying Insect
September	Ants	Use caulk to seal entries/manage aphids to discourage ants	OWOW Ant Fact Sheet	Amdro & Terro ant baits EcoSmart Ant & Roach
October	Rats/Mice	Pick up fallen fruit/nuts Seal entries with foam	OWOW Rats and Mice Fact Sheet	Rat/Mouse Traps Great Stuff Foam
November	Dormant Spray	Use when roses and fruit trees have lost their leaves	OWOW Rose Fact Sheet	Bonide All Seasons Oil Bonide Copper Fungicide
December	Bed Bugs	Use a monitoring tool to detect bed bugs	Bed Bugs Quick Tips	Safer Ant and Crawling Insect Killer

## Appendix B

### *Home Depot Pests Bugging You Pocket Guide*

# Pests Bugging You?

## A Home Depot Pocket Guide



Choose Products Less Toxic  
to People and Pets

[www.ourwaterourworld.org](http://www.ourwaterourworld.org)

### LESS TOXIC PRODUCTS

#### Ants

Amdro Kills Ants (bait stations)  
EcoSmart Ant & Roach Killer  
EcoSmart Organic Insect Killer (spray)  
Safer Brand Diatomaceous Earth Ant & Crawling Insect Killer  
Terminix Ultimate Protection Crawling Insect Killer (aerosol)  
Terro II Liquid Baits

#### Aphids

Bayer Advanced Natria Insecticidal Soap  
Bayer Advanced Natria Insect, Disease and Mite Control (spray)  
Bayer Advanced Natria Neem Oil  
Bayer Advanced Natria Rose and Flower Spray  
Bonide All Seasons Horticultural and Dormant Spray Oil  
Bonide Rose Rx 3 in 1 Spray  
EcoSmart Garden Insect Killer  
Ladybugs (Home Depot On-line)  
Organic Labs Organocide

#### Fleas

Insecticidal soaps (apply outdoors where pets lie)  
Safer Brand Diatomaceous Earth Ant & Crawling Insect Killer  
Victor Ultimate Flea Trap (monitoring tool)

### LESS TOXIC PRODUCTS

#### Gophers and Moles

Digger's Root Guard Gopher Baskets  
Gopher Traps  
Sweeney's Mole and Gopher Repellent  
Uncle Ian's Mole and Gopher Repellent

#### Mealybugs

Bayer Advanced Natria Insect, Disease and Mite Control (spray)  
Bayer Advanced Natria Insecticidal Soap  
Organic Labs Organocide

#### Mites and Whiteflies

Bayer Advanced Natria Insecticidal Soap  
Bayer Advanced Natria Insect, Disease and Mite Control (spray)  
Bayer Advanced Natria Neem Oil  
Bayer Advanced Natria Rose & Flower Insect, Disease and Mite Control (spray)  
Bonide All Seasons Horticultural and Dormant Spray Oil  
Bonide Captain Jack's Dead Bug Brew  
Bonide Rx 3 in 1 Spray

#### Mosquitoes

Mosquito Dunks

### LESS TOXIC PRODUCTS

#### Roaches

Black Flag Roach Motel  
Combat Source Kill Max Small Roach Bait Station  
EcoSmart Ant and Roach Killer  
Harris Famous Roach Tablets  
Safer Brand Diatomaceous Earth Ant & Crawling Insect Killer  
Terminix Ultimate Protection Crawling Insect Killer (aerosol)

#### Snails and Slugs

Bayer Advanced Natria Snail and Slug Killer Bait  
Corry's Slug and Snail Copper Tape (barrier)  
Sluggo

#### Yellowjackets

Eco Smart Flying Insect Killer  
Rescue WHY Trap  
Rescue Yellowjacket Trap Attractant  
Rescue Yellowjacket Traps  
Terminix Ultimate Protection Stinging Insect Killer (Aerosol)

### LESS TOXIC ACTIVE INGREDIENTS

*Active ingredients are listed on the front of the product. This is a partial list of active ingredients found in products considered less toxic. For a more complete list, go to [www.ourwaterourworld.org](http://www.ourwaterourworld.org).*

Abamectin	Hydramethlynon (ONLY use in containerized bait or gel form)
Ammoniated soap of fatty acids	Hydrophobic extract of neem
Bacillus subtilis	Iron phosphate
Bacillus thuringiensis israelensis	Lemon eucalyptus oil
Borax and boric acid	Methoprene
Castor oil, vegetable wax, gum resin	Orthoboric acid
Citric acid	Paraffinic oil
Clove, rosemary, sesame and thyme oil	Petroleum oil
Corn gluten	Picardin
Cottonseed oil	Potassium bicarbonate
D-Limonene	Potassium soap (or salts) of fatty acids
Diatomaceous earth	Sodium tetraborate decahydrate
Eugenol	Soybean oil
Fipronil (ONLY use in containerized bait form)	Spinosad

## Disposing of Unwanted Products

If you have pest control products you no longer want, drop them off at a local household hazardous waste collection site. To find a nearby location, go to [www.earth911.com](http://www.earth911.com) and enter 'pesticide' and your zip code.

Visit [www.ourwaterourworld.org](http://www.ourwaterourworld.org) for more information, including:

- **Pest Fact Sheets** – detailed information on common pests and methods to manage them without using toxic materials
- **Beneficial bugs brochure** (*The 10 Most Wanted Bugs in Your Garden*) with color photos of beneficial bugs that eat pests and plants that attract them

Learn more about less-toxic pest control:

- To see photos and learn more about beneficial insects, visit the Natural Enemies Gallery at the UC IPM website at: [www.ipm.ucdavis.edu/PMG/NE/index.html](http://www.ipm.ucdavis.edu/PMG/NE/index.html)
- Contact your local Agricultural Extension Office for help identifying and managing pests

## Choosing Products

Good pest management often means preventing pest problems before they happen.

### Indoors

- Good housekeeping practices can keep ants and cockroaches away.
- Enclosed ant or roach baits are less toxic than other applications.

### In the garden

- Prune away and hose off aphid infestations.
- Buy plants that attract ladybugs and other beneficial insects to help keep garden pests like aphids and mealybugs under control.
- Order ladybugs from Home Depot online.
- Slow-release and organic fertilizers or compost keep plants and grass healthy by helping them absorb nutrients more efficiently.

Many gardeners kill beneficial insects because they mistake them for pests. When you lose beneficial insects, you lose one of the best nontoxic defenses to a healthy garden! For more information on these garden predators, go to [www.ipm.ucdavis.edu/PMG/NE/index.html](http://www.ipm.ucdavis.edu/PMG/NE/index.html).

## Plants that Attract Helpful Insects and Butterflies

- Aster (*Aster spp.*)
- Calendula (*Calendula spp.*)
- California poppy (*Eschscholzia californica*)
- California wild lilac (*Ceanothus spp.*)
- Chervil (*Anthriscus cerefolium*)
- Chrysanthemum (*Chrysanthemum spp.*)
- Coriander (*Coriander sativum*)
- Cosmos (*Cosmos spp.*)
- Coyote brush (*Baccharis pilularis*)
- Dill (*Anethum graveolens*)
- Elderberry (*Sambucus spp.*)
- Fleabane (*Erigeron spp.*)
- Pincushion flower (*Scabiosa columbaria*)
- Rosemary (*Rosmarinus officinalis*)
- Rudbeckia (*Rudbeckia spp.*)
- Sticky monkey flower (*Mimulus aurantiacus*)
- Sunflower (*Helianthus spp.*)
- Sweet alyssum (*Lobularia maritima*)
- Wild buckwheat (*Eriogonum spp.*)
- Yarrow (*Achillea millefolium*)
- Zinnia (*Zinnia spp.*)

## Manage pests with **LESS TOXIC PRODUCTS!**

Watering your lawn or garden after applying pesticides or fertilizer can pollute water that runs off into storm drains and on to local creeks, lakes, bays, or the ocean. In fact, there are plenty of ways to manage pests, and many products that keep pests away and don't pollute.

**Our Water Our World** is a partnership between Home Depot stores and local government agencies working together to reduce water pollution caused by pesticides. The *Our Water Our World* literature stand has a wide selection of fact sheets that explain less toxic ways to manage common pests.

This pocket-guide highlights Home Depot products that are less toxic to people, pets, and the environment. For a longer list and more information, visit [www.ourwaterourworld.org](http://www.ourwaterourworld.org).



## Appendix C

### Home Depot On-Line Ordering Information for Beneficial Insects



## Home Depot On-Line Ordering Information for Beneficial Insects

**TO ATTRACT BENEFICIAL INSECTS:** Nutritional yeast protein that attracts a variety of beneficial insects to the garden.

- Ladies in Red Biocontrol Honeydew Beneficial Insect Attractant (8 oz or 16 oz)

**LADYBUGS:** To manage aphids, whitefly, thrips, spider mites, scale and other soft-bodied insects.

- Ladies in Red Live Ladybugs (available in 1/3 cup, ½ pint, one pint, or 1 qt. of live insects)

**BENEFICIAL NEMATODES:** To manage flea larvae, grubs, ants, fungus gnat, cutworms, rootworms. Look for the nematodes that manage your customer's specific pest.

- Ladies in Red Beneficial Nematodes for Organic Pest Control
- Nema-globe Fungus Gnat Control Nematodes
- Nema-globe Grub Busters Natural Grub Eliminator
- Nema-globe Ant Attack Eliminator
- Nema-globe Pre-Calculated Nematode Sprayer

**FLY PREDATOR:** Kills fly larvae before they hatch.

- Ladies in Red Ready-to-Use Fly Parasites for Natural Fly Control

**PRAYING MANTIS:** To manage flies, mosquitoes, crane-flies, wasps and other garden pests.

- Ladies in Red Five Praying Mantis Egg Cases for Organic Control of Yard and Garden Pests
- Ladies in Red Ten Praying Mantis Egg Cases for Organic Control of Yard and Garden Pests
- Ladies in Red Twenty Praying Mantis Egg Cases for Organic Control of Yard and Garden Pests

**Fairfield Suisun Sewer District OWOW Report 2014/2015  
July 2014 through June 2015**

**Annie Joseph  
Ann Joseph Consulting**

**Store visits: Teresa Lavell IPM Advocate covered the Home Depot through the regional Pilot Program until December of 2014. Her store visits from July through December under that Pilot were: 8/01, 9/13, 9/19, 9/21, 10/26, 11/11, 11/20, 12/08.**

**After the pilot program ended in 2014 Teresa called on the store in 2015 on the following dates:**

**1/26, 2/11, 3/03, 4/09/4/14, 4/30, 5/05, 6/02.**

**On the calls she helped customers in the aisles and guided them to less toxic solutions. She updated shelf talkers and fact sheets and made sure the garden Associates were kept up to date on invasive pests, plants that attract beneficial insects, how their less toxic products work, and a heads up on seasonal pests for the coming month.**

**Solano County Master Gardener Outreach:** Annie trained the new class of Master Gardeners on Water Quality and Pesticides on **January 09, 2015**. There were **35** new class members and she concentrated on the runoff from pyrethroid pesticides and the residues that can end up in wastewater in addition to Suisun Marsh. She also discussed proper disposal of pesticides.

In addition Annie discussed the concerns with nutrient runoff from customers fertilizing lawns with synthetic fertilizers. Kevin Cullen joined up and was able to meet the class and talk about the vulnerability of the Suisun Marsh to pesticide runoff from home gardeners.

These Master Gardeners will carry this message to tablings they do at libraries, and the local Farmers Markets in the area. Many of the Master Gardeners have their own gardening businesses so these messages will go also into the communities they service with their business and as volunteers in the communities. Photos sent to Kevin.

**Home Depot:**

We added a Home Depot Pocket Guide that was a big hit with the Associates. Funding for this came from the Home Depot Pilot Program 2014. These were handed out to customers and to Associates. The pocket guide had pests listed with the less toxic solution that Home Depot carries. It

also had information on proper disposal of unused pesticides and a list of plants that attract beneficial insects. Pocket guide sent in an attachment. **Linda Pruitt garden department lead** attended a special training in Napa on February 25<sup>th</sup> at the Napa Home Depot. This special training was a part of a Regional Training at the request of Home Depot corporate that included additional Associates to have the advanced training course that the Green Garden Specialists had last year. This training was sponsored by the EPA Region 9. At the training she received a pack of cards from the University Of California on pest identification, a Good/Bug Bad Bug chart of bugs of California, a binder of resources for pest identification, local rebates from water agencies, how to protect landscapes in a drought, local HHW information, a set of OWOW fact sheets, and a list of resources. She also received a hand lens and lanyard and learned how to identify pest problems with the new tools. She took these tools and the day of training back to the store to share with fellow employees. Teresa has been mentoring all the Associates when she does her monthly store visits on current pests and disease problems that pertain to each month. Photos sent

There was **one training for additional store associates** scheduled 5/07/15 at 10 am and 2 pm so the morning and afternoon Associates could attend. Teresa trained 9 Associates. Annie was able to attend the first training that day. Teresa has created a terrific relationship with the store Associates and they were very interested to learn about the systemic pesticides in the class of neonicotinoids. Home Depot has decided to mark their plants that have that pesticide in them so the consumers can make a choice to purchase or not to purchase. They also enjoyed learning about the benefits of organic fertilizers in a drought and the reduction of sucking insects when using them. Teresa has a great rapport and is an incredible mentor gently delivering the message of pesticide reduction.

Responses to those surveys are as follows:  
In the pre- class survey most of the class knew that stormwater does not get treated before it reaches a stream. They all knew that wastewater gets treated but did not know that it did not get treated for pesticides.  
They all knew to store left over pesticides in the original container or to take it to their local HHW.  
6 knew where the local HHW facility is 3 did not.

- In the after class survey all agreed or strongly agreed that the training was well organized and interesting.

- All agreed or strongly agreed that the written materials would be a useful resource in the future
- All agreed or strongly agreed that the information will help them sell and recommend less toxic products
- All agreed or strongly agreed that the instructor was responsive to questions
- All agreed or strongly agreed that visual aides were effective
- All agreed written materials were effective
- All agreed or strongly agreed they would recommend training to coworkers
- Two people were neutral and the balance agreed or strongly agreed they would like to learn more about IPM methods and IPM Certification
- What part of the training was most useful: Information on neonicotinoids, visual aids, how organic insecticides and fertilizers work, learning more about how toxic carbonyl is, the product list of less toxic products that they carry, the different use of chemicals, new product information about the Nature's Care products, learning about the pests that are more common in a drought, how helpful much is to reduce water loss.
- What part of the training was least useful: it all was useful
- Did the information change your mind about pesticides, how: yes organics are less toxic and we have a lot of options, yes, taking care of the environment, more excited about less toxic products, very concerned about the products that harm honeybees and now know about alternative products?
- When the training is held again what changes you would suggest: more time, more detail, no changes it was wonderful!

### **Store updates**

Teresa researched many pest questions from Associates and customers during the year and followed up with thorough answers shortly thereafter. She concentrated on making sure Home Depot Associates were up to speed on current pests that were coming due to the hot weather like increased cockroaches, fleas, mosquitoes, and yellow jackets. She also made sure shelf talkers were placed on new displays of less toxic products.

When Teresa was at the store she also helped customers find less toxic solutions to their pest problems.

In a contest of less toxic product sales that were on an endcap the Fairfield Home Depot had a 24% increase in sales through the fall of 2014 over the prior year.

### **Teresa conducted an outreach event at Home Depot. On April 18<sup>th</sup> Saturday**

She contacted 30 customers. Customers had questions about soil so she focused on the advantages of using organic soil amendments. She had a customer with Bermuda grass in a lawn and talked about growing conditions and how he needs to make sure his lawn is healthy and not stressed out when he is spraying. She also spoke with customers about rats and how the laws had changed as to what products are not available because of risks for secondary poisoning. She encouraged trapping. She helped a customer with a caterpillar problem and guided them to using bt. She helped a customer who was interested in drought information and handed them the Ten Tips for Waterwise Gardening.

She had a customer who had an unidentified problem. She gave them a bookmark for the UCIPM website and encouraged them to see if they could identify the problem online and if not send a sample to the extension office.

Photo sent

**On June 28<sup>th</sup> at Home Depot** Teresa set up the table in the pesticide aisle. It started out slow so Teresa was able to spend time with an Associate Duane to discuss the labeling of the plants that are pretreated with neonicotinoids. She helped customers with fleas, snails, mosquitoes, ants in kitchens, caterpillars on vegetables, ants in vegetable gardens, and rats in fruit trees. She guided customers to less toxic products and the OWOW fact sheets.

She reached 20 customers.

### **Outreach to the landscape community.**

In addition to training the Master Gardeners Annie contacted Ken Williams from Solano Community College to make a connection through Ken to the local landscapers and gardeners.

On 7/21/14 Annie conducted a class on Sustainable Landscapes in a Drought.

There were 34 attendees many of them landscape professionals. It was a very successful class and encouraged them to use preventative care when going into the drought. Photo sent

Lowe's corporate – Annie continues to contact the district manager who she met in Rohnert Park. He is in communication with their headquarters in North Carolina. They are considering participation but there are a few issues they are dealing with labeling and must clear that up before they can move forward.

**School Water Education Program (SWEP) of Solano County**  
**Year-End Narrative Report                      July 2014 to June 2015                      Presented 25 June 2015**

Content

The SWEP Year-End Report consists of this narrative report as well as a personalized Excel workbook for each SWEP member agency covering their service area for this school year, broken into quarters. This narrative report includes a summary of SWEP-only impacts as well as an analysis of county-wide trends and a discussion of opportunities for the 2015-2016 school year and beyond.

SWEP Deliverables

The SWEP Educator provides three main types of services: programs for students, teacher trainings, and deliveries of educational materials. The chart below shows the impact of each service, by city, 2014-15:

Service Area	# students contacts by SWEP Educator	# workbooks, incentives, and students using SWEP kit loans	# teacher items distributed thru SWEP	# teachers served by SWEP Educator
Dixon	-	-	-	-
Vacaville	420	715	18	10
Fairfield	2,100	3,091	44	14
Suisun	-	-	-	-
TAFB	-	-	-	-
Vallejo	515*	2,204	90	25
Benicia	1,100	400	20	10
Ag Day	900	3,450	325	125
PWET	-	-	16	8
County	-	450	-	-
total	5,035	10,310	513	192

\* Does not include students attending Fleming Hill tour on 5/18

Of the 5,035 student contacts made by the SWEP Educator, 84% were in grades 7-12 and 16% were K-6. This is in keeping with a trend of more demand for secondary programs as part of the NGSS upswing. 72% of students were served once only, while 28% from 4 schools were seen multiple times as part of collaborations between SWEP and their science departments. And regardless of the topic or unit used, all students learned the source(s) of their city’s water, were told about the current drought and the need for conservation, and heard at least 3 age-appropriate actions they could take to use less water.

Materials distribution was 2,218 for workbooks and 6,137 for incentive items. SWEP kits were checked out 39 times, usually serving several classes and periods per teacher. The “Test Your Tap” drinking water quality lab was the most popular kit, followed by Sewer Science, and the Solano Water Story.

The SWEP Educator organized water education fairs at two schools, assisted with public outreach at two city Earth Day fairs, created a new “Water & Ag” display for the Loma Vista Farm, and held one PWET workshop. The SWEPstore had 91 (new) viewers and 15 (new to SWEP) customers since January 2015.

## School Water Education Program (SWEP) of Solano County

Year-End Narrative Report

July 2014 to June 2015

Presented 25 June 2015

### Challenges

Several situations and trends require additional thought when planning for the future of SWEP:

- Some school districts (directly or indirectly) refuse to advertise SWEP to their teachers
- In the past, SWEP got thousands of workbooks for free from DWR; DWR's budget has shrunk, so SWEP has had to increase the % of the budget spent on workbooks the past two years
- Project WET workshops have a 50% no-show rate and have the highest cost:teacher ratio (though the kits are very popular when SWEP educators bring them into the classroom)
- There is still more demand for middle and high school programming than is being met by SWEP and its partner programs, but elementary school coverage is very good county-wide
- Vallejo's STEAM program is expanding and cornered about 50% of all programs offered in the county this year to meet their demand. It may be best to work with their director Dr. PinPin to help them choose programs strategically so that schools in other districts retain access.

### Prospectus for 2015-2016

There are a number of opportunities for the years ahead:

- Both ZunZun and Rock Steady are happy to have the SWEP Educator distribute "goody bags" of workbooks and incentives to teachers on the day of their programs, effectively doubling or tripling the "points" earned by each assembly, if SWEP can afford this- for example, ZunZun books about 20 schools per year with an average of 500 students per assembly, so at the price of \$1.25 per booklet, this would cost SWEP \$12,500
- WaterWays is aiming to reinstate 4<sup>th</sup> and 5<sup>th</sup> grade field trips starting Spring 2016, and they are also happy to serve as a distributor of student and teacher items (for about 8 to 12 teachers)
- CA Waterfowl Association continues to serve Solano students with wetland education programs in the classroom and at their Suisun Marsh holdings- subsidizing these could net SWEP or some of its member cities more student contacts with little outlay on the part of the SWEP Educator
- Establishing contact with the after-school programs run by the cities at an administrative level could eliminate the "gatekeeper problem" seen at the coordinator-to-coordinator level and open up access to thousands of school-age children at times that are otherwise inaccessible
- Teachers at Holy Spirit School in Fairfield think that the network of Catholic schools in Solano would be very interested in using SWEP kits and materials, so a partnership is possible there

Even though I will be moving to southern California, I am still committed to the success of the SWEP program, its partners, and especially its teachers. Please contact me any time if I can provide additional networking contacts, curriculum support, or any other kind of information. It has been my pleasure to work with each of you and the Solano education community these past three school years. Please be on the lookout for an email following this report containing your 2014-2015 numbers for CUWCC.

With my utmost respect and sincere thanks for your support,

Megan Harns

# The Watershed Explorers Program

## 2015 Program Summary

Solano RCD is very grateful to its current funders, which include:

The Habitat Conservation Fund  
Solano County & All City Jurisdictions  
Vallejo Water Conservation Program  
Fairfield Suisun Sewer District  
Suisun Resource Conservation District  
Vallejo Sanitation and Flood Control District  
City of Vacaville - Utilities Department  
Potrero Hills Landfill

Written and Administered by  
Solano Resource Conservation District



1170 N. Lincoln Street, Suite 110  
Dixon, CA 95620  
Tel (707) 678-1655

## The Watershed Explorers Program 2015 Program Summary

### 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 ways in which we care for them. In-the-field discussions and activities teach children about the fragile habitats of birds and other wildlife. Students learn the importance of water quality in their watershed and discover the impacts of urban runoff and its components: trash, oil, household chemicals and other human and domestic animal waste and discards. 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 the creatures that inhabit it.

### Audience

Year	Locations	Number of Classes	Number of Students	Number of Adult Chaperones	Total People Attending
2007	Lynch Canyon	4	120	n/a	n/a
2008	Lynch Canyon	18	427	n/a	n/a
2009	Hanns Park	4	80	n/a	n/a
2010	Hanns Park Lynch Canyon	37	807	214	1,021
2011	Hanns Park Rockville Hills Park	54	1,181	308	1,489
2012	Hanns Park Rockville Hills Park	39	923	275	1,198
2013	Hanns Park Rockville Hills Park	63	1,761	449	2,210
2014	Hanns Park Rockville Hills Park Lagoon Lake Park	70.5	1,912	427	2,339
2015	Hanns Park Rockville Hills Park Lagoon Lake Park	79	2,119	492	2,611

### 2015 Participants

- Benicia – 1 school comprising 3 classes of 80 students and 25 adults
- Vallejo – 7 schools comprising 23 classes of 634 students and 133 adults
- Fairfield/Suisun – 5 schools comprising 19 classes of 541 students and 143 adults
- Vacaville – 6 schools comprising 20 classes of 531 students and 73 adults
- Dixon – 3 schools comprising 11 classes of 264 students and 98 adults
- Rio Vista – 1 school comprising 3 classes of 69 students and 20 adults

### Goals and Objectives

The primary program goal is to help students develop an awareness of the outdoor, natural world. Participants leave the program:

- Understanding the impact of storm water on their watershed, particularly the impacts of oil, chemicals and human debris in that storm water.
- Knowing individual stewardship practices in their watershed, i.e., how they can mitigate or eliminate the impacts of their own and their family's behaviors around storm water protection and water quality.
- Understanding the difference between native and non-native, invasive plants.

## **The Watershed Explorers Program 2015 Program Summary**

Prior to the field trip, teachers are provided with manuals to prepare students for their experience. Students are given journals and participate in various activities including:

- Making a paper watershed model to observe what happens when oil or other contaminants are improperly disposed of in the watershed.
- 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.

### **Method**

Participants receive preparatory information in the classroom, from their teachers, who use the program's manual to ready students for the field trip.

When they arrive at the site, they are outfitted with the equipment they'll need, and then divided into groups to visit a series of learning stations that help them to explore and understand their field trip site.

A hands-on, three-dimensional Enviroscape presentation demonstrates the dynamics of a watershed and how it is affected by pollution. After discussing and demonstrating how water moves oil and other pollutants, students review a used motor oil collection brochure in their manuals to share with their parents/guardians when they get home.

Students look for traces of birds, insects and mammals, as they hike through the park. Guided by program staff, students use their journals to identify native and non-native plant species and wildlife.

Another station engages students in hands-on restoration work, planting starter plugs or propagating plants to improve the park habitat. At Rockville Park and Lagoon Lake, participants propagated Yellow Goldfields in 'cow pots', small pots made from cow dung that are biodegradable and can be placed directly into the ground. At the Hanns Park site along Blue Rock Springs Creek, students planted native grass plugs of red fescue. These students participated in a major restoration project in their city. They will be able to observe the progress of their work for many years.

At the end of the field trip, program staff gathers all participants together to debrief about their day's experience. Most students report that planting seeds and vegetation and seeing wildlife were highlights of their day. Students also report enjoying the hands-on demonstration of hydrology and how the flowing water and the pollution it can carry can impacts the park they've just visited and their larger watershed.

## **The Watershed Explorers Program 2015 Program Summary**

### **2015 Watershed Explorers Evaluation Narrative**

We measure program outcomes against program goals with a 6-question pre and post-assessment administered to each participating student. Questions are designed to measure student understanding of two watershed systems (the water cycle, focusing on storm water runoff and native plant systems), and knowledge of concrete ways to interact with those systems to protect and enhance their watershed.

#### *Pre and Post-Assessment Questions*

1. *What's the name of your watershed?*
2. *What happens if oil gets in to our creeks?*
3. *Name a native plant that grows in Solano County.*
4. *a. What is a native plant?  
b. What is an invasive plant?*
5. *In your city, where is the first place rainwater goes after it hits the pavement?*
6. *Write down two things you can do to make your watershed a healthier place.*

We collected 1,951 pre-assessments, administered by participating teachers in their classrooms to students who took part in the 2015 program, followed by 1,605 post-assessments, which were administered during an in-classroom lesson on a separate day following the field trip. This year's program took place in both late winter and spring, and involved field trips to three distinct sites: Hann's Park in Vallejo, Rockville Regional Park in Fairfield, and Lagoon Valley Park in Vacaville. Students from every city in the County participated in the program. The data table for the program is available by request.

Looking at the pre-assessment as a whole, 23% of respondents were able to answer all questions with correct/partially correct answers. By the post-assessment, 81% of the respondents were able to respond to all questions with correct/partially correct answers. This represents a performance increase of 58 percentage points, and represents a "grade" movement from an "F" to a "B-."

87% of participants responded with correct/partially correct answers to question 6 (the question that asked for students to demonstrate real-life applications to what they learned) in the post-assessment. In the pre-assessment, 41% gave correct/partially correct answers for that question, an improvement in performance 46 percentage points.

Participants are asked to list specific practices for this question. Various water conservation practices generated more correct answers in both the pre and post-assessments: 13% listed water conservation practices in the pre-assessment and 20% listed them in the post-assessment quiz. We believe that these responses reflect the increased water conservation message that is being transmitted throughout the County and state by numerous agencies in response to the severe drought.

Students demonstrated an increase in awareness of other stewardship practices as well. In pre-assessments, just 1% of respondents listed "recycle used oil" as a practice. In the post-assessments, 16% listed this specific practice. In the pre-assessment, 4% of students listed "Reduce, Reuse, Recycle" as a response to this question; in the post-assessment this

## **The Watershed Explorers Program 2015 Program Summary**

number rose to 18%. Some students listed just one component of the “three Rs”, and the frequency of those answers fell in the post-assessment, likely in direct relation to the increase in students attaching all three concepts to one practice/answer.

Improvement in pre and post-assessment performance was generally consistent for all questions, though some concepts were more difficult for the students than others. In the pre-assessment, just 2% of students could explain what a native or non-native, invasive plant was. By the post-assessment, 81% of respondents could identify a native plant that grows in Solano County (only 16% of students in the pre-assessment could do this). 78% demonstrated understanding of native plants, and 66% could correctly or partially correctly explain what an invasive plant was. These results are consistent with the responses in past years of the program, and across all age groups of the RCD’s watershed education programming. The concept of “non-native, invasive plant” is clearly one of the more difficult concepts we teach.

2015 is the third year of doubled program funding through a Habitat Conservation Fund grant with CA State Parks, and this year saw our largest program enrollment to date. The program continues to run at three sites- Hanns Park in Vallejo, Rockville Park in Fairfield and Lagoon Valley Park in Vacaville, allowing greater access to each students local open space areas, where students can return later with their families to share what they have learned.

### **2015 Grant Manager Quote**

“Thank you for arranging for my co-worker Karen and I to attend the Solano Outdoor Program. We truly had a wonderful time at Rockville Hills – and the program you run is amazing! It was a great experience to see first-hand how the youth interact with the Solano RCD staff and how these children are given the opportunity to learn about so many aspects of the environment in their own backyard.”

Natalie Bee, Office of Grants and Local Services, Habitat Conservation Fund

### **2015 Teacher Quotes**

“You guys put on a very comprehensive program where students have a good understanding of native and non-native plants, our watershed and things we can do to protect it.”

Emily Nute, Crescent Elementary, Fairfield

“I really appreciate this opportunity for the students to experience this outdoor class that they otherwise may not have an opportunity to do.”

Elaine James, Crescent Elementary, Fairfield

“This was a fantastic field trip! The lessons are well written and practical.”

Jennifer Young, D.H.White, Rio Vista

“Our best field trip by far this year. It kept students interest all day was grade level appropriate.” Melissa Thielker, D.H. White, Rio Vista

# The Watershed Explorers Program 2015 Program Summary

## Photo Documentation



*CalRecycle with Narcisa Untal attending a field trip at Hanns Park*



*Students raining down on the enviroscape model at Rockville*



*Students observing macroinvertebrates at Lagoon Valley Park*



*Students preparing their cow pots to plant goldfields*



*RCD educator Jamie Solomon and students search for insects at Hanns Park*



*Students exploring the trails at Hanns Park*

# Suisun Marsh Watershed Education Program

## *2014 Program Summary*

January 2015

**Program Funding**  
Solano County Water Agency

**Additional Support**  
Solano Community College in partnership with  
Solano County Office of Education

**Transportation Funding**  
Fairfield-Suisun Sewer District

Program in conjunction with  
Fairfield-Suisun Unified School District &  
Vacaville Unified School District



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SEWER DISTRICT

Solano County Water Agency (SCWA) is in the seventh year contracting the Solano Resource Conservation District (Solano RCD) to implement the Suisun Marsh Watershed Education Program. Through SCWA, Solano Community College, Solano Office of Education and Fairfield-Suisun Sewer District, 30 classes participated in the program. The program was implemented by Solano RCD.

Sections of the curriculum were adapted from the California Coastal Commission's Waves, Wetlands and Watersheds and Our Wetlands, Our World and the teaching objectives are directly linked to California's common core standards. The curriculum was written in August of 2008 and has been revised each year. It includes three pre-field trip classroom lessons, one poster session, a five hour field trip at Rush Ranch and two post-field trip lessons. Funding through a CalRecycle grant in 2014 and 2015 will allow for a 5<sup>th</sup> lesson to wrap-up the program.

Marianne Butler manages the program, Jamie Solomon teaches the in-class lessons and leads the field trips, and Solano RCD's program educators Don Broderson, Carla Murphy, Wendy Low, Marisa Britts and Deborah Bartens assist on the field trips. The program is split into two sessions – Session 1 occurs from late-August to mid-October and Session 2 from mid-October to mid-December.

### Students

In 2008, 4 classes of 140 students participated from Crystal Middle School in Suisun City.

In 2009, 18 classes of 600 students participated from Crystal Middle in Suisun City, Grange Middle in Fairfield, Sullivan Middle in Fairfield, and Cambridge Elementary in the Travis Unified School District.

In 2010, 18 classes of 626 students participated from Crystal Middle School in Suisun City and Grange Middle School in Fairfield.

In 2011, 33 classes of 1,129 students participated from Crystal Middle in Suisun City, Grange and Sullivan Middle in Fairfield, Vaca Peña and Orchard in Vacaville, Center Elementary in the Travis District, and Solano Middle in Vallejo.

In 2012, 27 classes of 882 students participated from Crystal Middle in Suisun City, Grange, Tolenas, and Suisun Valley in Fairfield, Vaca Peña and Orchard in Vacaville.

In 2013, 27 classes of 869 students participated from Crystal Middle School in Suisun City, Public Safety Academy, Matt Garcia, David Weir, Nelda Mundy, and Suisun Valley Elementary School in Fairfield, Vaca Peña and Orchard Elementary School in Vacaville.

In 2014, 30 classes of 940 students (see Figure 1).

School	City	Total Students	Number of Classes
Crystal Middle	Suisun City	312	10
Vaca Pena Middle	Vacaville	156	5
B Gale Wilson	Fairfield	58	2
Orchard Elementary	Vacaville	48	2
Rolling Hills Elementary	Fairfield	100	3
Nelda Mundy Elementary	Fairfield	131	4
Grange Middle	Fairfield	35	1
Public Safety Academy	Fairfield	100	3
<b>TOTAL</b>		<b>940</b>	<b>30</b>

Figure 1 – Students totals

**Since 2008, 5,086 students in 157 classes have participated in the program.**

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## Methods

Beginning in late August, three classroom sessions are held. Each class then participates in a poster session at their school followed by the all-day field trip to Rush Ranch Open Space. Field trips are followed with a classroom session where students solidify what they've learned and talk about the ramifications of human behaviors on marine and marsh health. Jamie Solomon with Solano RCD presents the lessons separately to each class.

The student field manual is included with this report. Descriptions of the lessons are as follows:

The first lesson discusses California's drought and provides techniques where students can take action to help relieve the pressure on the watershed. The concept of a water conservation challenge is revealed and students are informed of their objective to begin working to save water. Prior to this lesson, students collect their baseline water usage data. From this discussion onward, students start a 3 day challenge of tracking their water use for each of the 3 weeks of program lessons. This data is then be compared to their baseline data at the end of the challenge. The second part of the lesson addresses the characteristics of a watershed and demonstrates how storm water pollution affects our creeks, marsh, and ocean. An enviroscape model is presented to visually show students how litter and debris runs off the pavement, flows into the storm drain, to the nearest creek, enters the Suisun Marsh and eventually makes its way to the ocean.

In the second lesson, students review their water usage, discuss what worked well with their conservation practices, and strategize how to save a bit more for the next week. Then, students look at the geography of Solano County as it relates to the Suisun Marsh Watershed through various types of maps. Students travel around the classroom in small groups, visiting different mapping stations and work together in groups to answer questions about each map. Maps for this session include a local area road map, Solano County topographic map, Suisun Marsh watershed map, a nautical chart of Suisun Bay, and an aerial map stretching from Lake Berryessa to Suisun Bay.

The third lesson consists of several central concepts. The students start their final water conservation challenge week and continue the discussion on water saving methods. Following, a power point provides background on native and non-native plants and reveals the significance of plants and animals on the endangered, threatened, and species of concern lists that reside within the Suisun Marsh. Classes participate in a discussion on how human actions dictate whether a species is tipped over the edge to extinction, or brought back to increase in numbers for future generations. Following, students work together to create a wetland model, which demonstrates the buffering and filtering effects of the marsh. The lesson works to bring home the concept that the Suisun Marsh is part of the students' watershed, while demonstrating the important features of a marsh. Finally, this lesson provides instruction for the poster session. Students are broken into eight groups and assigned a species to research. The list of species included: Riparian Woodrat, Chinook Salmon, Soft Birds-beak, Giant Garter Snake, Delta Smelt, Salt Marsh Harvest Mouse, Suisun Thistle, and the California Ridgeway Rail. Each group is provided with a packet of information on their species.

The poster sessions are primarily held prior to each class's field trip. Students research their species and present their findings to the class.

The all-day outdoor excursions at Rush Ranch are held September - December. Each field trip begins with a rotation through three stations centered on the topics of soil, water, and plants. At the soil station, students use a color chart to identify soil composition and use their hands to experience the different textures of soil in the marsh and grassland. At the water station, students test the water from First Mallard Slough for dissolved oxygen, temperature, phosphate, pH, and turbidity. As a small group, they discuss the data from the experiments and theorize how various types of pollution may affect Suisun Marsh and other wetlands. At the plant station, students set up a plant sampling quadrant by using a hula-hoop to randomly select a site. Students analyze the percent cover of plant

species (native or non-native) within the site using plant guides created by Suisun RCD. Following the stations, students enjoy lunch at the picnic tables in the eucalyptus grove.

Next, students explore the Rush Ranch property by taking a nature walk through the different habitats, which include a eucalyptus grove, grassland, and marsh. While on the walk, students look for scat, tracks, plants, and wildlife. Each student is equipped with a pair of binoculars to look for birds and they have the opportunity to view barn owls. An olive tree outside of the barn provides evidence of owls as students observe owl pellets found on the ground by the tree's trunk.

Following the interpretive walk, students sit quietly on top of Overlook Hill and write poetry about their experiences and impressions of the wetland. Teachers submit the poems to River of Words. River of Words is a California-based non-profit organization that connects kids to the watersheds they live in through art and poetry. The organization runs an annual Art and Poetry Contest in conjunction with the Library of Congress. All program participants receive a Watershed Explorers Certificate. In 2010 a student from Grange Middle School was a finalist in the One Block Contest.

After the field trip teachers are asked to play "Our Synthetic Sea," which explains the harmful effects of marine debris, especially plastic, in an easy to understand scientific study by the Algalita Marine Research Foundation. The video prepares students for the final lesson on marine debris.

Lesson four discusses how birds and other marine life are affected by marine debris. A display box of an albatross bolus (consisting of squid beaks and plastic) is past around the class. We want students to feel within them that the land, the plants, and the animals are all part of the same system we are and that their survival and health is not only as important as ours, but that the two are linked. The lesson concludes with the results from the water challenge. Students learn how much water they saved as a class and receive a shower timer donated from SCWA to continue their conservation practices.

For the years 2014 and 2015, students take the post-assessment quiz during a 5<sup>th</sup> lesson. Bilgee the Bilge Pad (Protector of Lake Berryessa) joins each class to request support to help keep storm drains clean, and solicits student participation to create a new super hero suit and comic for Bilgee's partner, Petrolia.

### **Deliverables and Results**

All deliverables involved in initiating and completing the program were successfully completed. We have met the central program themes that include; watersheds, wetlands, marsh functions, native and non-native plants, storm run-off, endangered and threatened species, origin of Solano County drinking water, and watershed connections between their residential communities, the Suisun Marsh, the San Francisco Bay, and the Pacific Ocean.

We worked with Brandan Hiltman to schedule classes for a North Bay Regional Water Treatment Plant tour. Nearly half of the classes took the tour and a quarter of classes participated in 2013.

### **Water Conservation Challenge**

This year we included a water conservation component as part of the curriculum. We worked with two teachers over the summer to incorporate this element into the existing lessons.

The first goal was to get students to collect baseline household water usage data to find out how much water they typically use on any given day. Students were given a datasheet to take home and record usage data for 7 days. This was much more onerous for the students and teachers than we expected. It came as a surprise to find out early in the first session that our planned curriculum was too much for teachers and students to manage.

When the RCD Coordinator presented lessons one, two and three, the plan was for students to start a new challenge each week, working to conserve more and more water as time went on.

At the end of the 3 week challenge, students were intended to take their average daily use from their baseline data, and compare it to their average daily use from week four. It turned out that 7 days of recording 4 separate weeks (including the baseline data) was way too much for any of our teachers or students to even contemplate.

In response we began working with our teachers to develop a less daunting challenge. We were forced to revise our expectations down to a 3 day per week, 3 week-long challenge.

At the end of session one and two, we had full compliance of nearly half of the teachers.

Lisa Lewis from Crystal Middle School (session one) and Meghan Johann (session two) were our winners. They saved approximately 3,000 gallons of water in their classroom when subtracting the amount of water used in the 3<sup>rd</sup> week of the challenge from their baseline data. Each teacher received a gift certificate for \$50 for a student pizza party to celebrate their hard work.

We are working to make this into something students can become excited about and take to heart.

Our goal is to inspire the students to improve their water conservation habits for both themselves and their families.

## Program Evaluation

This program took place over an eighteen-week period during August through December, 2014. 30 classes from 8 schools participated. Students who participated in this program completed a six-question pre-assessment quiz prior to receiving any program instruction. After participating in the program's in-class lessons and the Rush Ranch fieldtrip, students completed a post-assessment quiz composed of the same questions. Both sets of responses were randomized (to remove correlation to class or field trip date) and a 10% sample of each set of responses was chosen for analysis. The pre and post assessments are listed below in italics. Directly below each question is a representative answer from the post assessment.

1. *What watershed do you live in?*

All Fairfield and Suisun City students – Suisun Marsh Watershed

All Vacaville students – Sacramento River Watershed

2. *Where does your drinking water come from?*

Lake Berryessa & Delta

3. *Where does storm (rain) water go after it hits the pavement?*

The storm drain.

More complex response: From the storm drain, water travels to a nearby creek, then the marsh (or Sacramento River) and out to the Pacific Ocean.

4.a. *What are the main threats to the Suisun Marsh?*

Development (habitat loss), pollution (oil, litter, animal waste), and non-native, invasive plants (pepperweed plant).

4.b. *Write the name of one species that is in danger now in the Suisun Marsh.*

Salt Marsh Harvest Mouse, Riparian Woodrat, Giant Garter Snake, Clapper Rail, Delta Smelt, Chinook Salmon, Soft Birds Beak, Suisun Thistle

5. *Write down two ways you can help protect the Suisun Marsh Watershed.*

Reduce, Reuse Recycle, Don't litter, Pick up litter, Pick up after your dog, Recycle used oil and Don't let your car leak oil, Use less pesticides and fertilizers

6. *List how you conserve water at home?*

Answers could be:

- Take shorter showers
- Turn off the water while brushing teeth and washing dishes and hands
- Make sure laundry and dishwasher loads are full
- Don't let the hose run while washing the car
- Get a low flush toilet

### **Pre and Post Assessment Quizzes**

Student answers on the pre-assessment instruments in the 10% sample reflected low knowledge about all concepts examined in the quiz except for water conservation. This question (asking students to list ways they can conserve water at home) generated the greatest number of correct answers - 76% correct or partially correct answers - for any question in the pre-assessment. Students' ability to answer the other 5 questions ranged from none to 33%. No students were able to correctly identify an endangered species in the Suisun Marsh, but 24% of students could identify their home watershed.

When we looked at partially correct answers – those that identified at least some portion of the concept we were looking for – appropriate responses rose from 21% to 26%. 74% percent of the sample provided incorrect or no answers to the pre-assessment quiz questions.

For the post assessment, we saw a marked improvement of student knowledge. 91% of student responses for the post-assessment were correct and partially correct answers. This is an increase of 278% in students who were able to answer correctly or partially correctly on the pre-assessment. 94% percent of students in the sample were able to correctly or partially correctly name their watershed, while 89% could identify major threats to the Suisun Marsh. 82% of participants could also identify two stewardship behaviors they could enact to protect the marsh (this is a 169% improvement of the number of students who could answer that correctly from the pre-assessment), and almost all students (94%) could identify an endangered species native to the Marsh.

Sample performance on the question about storm water runoff, improved from 13% correct and partially correct responses in the pre-assessment, to 92% in the post-assessment. When we look at the number of students who answered this question partially correct and correct on the pre-assessment, there was a 625% improvement when compared to the post-assessment. Performance improvement on this question matches that of the ecosystem questions discussed above.

The greatest improvement in sample performance was in response to the questions about where drinking water comes from. Correct answers rose from 12% to 85%. When we look at the number of students who answered partially correct and correct responses on the pre-assessment, there was a 636% improvement of understanding when compared to the post-assessment.

This year's program added a water conservation component to the curriculum. 76% of the sample provided correct or partially correct answers to the request to list home water conservation practices in the pre-assessment quiz. By the post assessment, 100% of the sample provided correct or partially correct answers to the question. We hypothesize that local, regional and State responses to California's ongoing drought have provided similar messaging to students, and that their responses reflect the increasing discussion of ways to live in perpetual drought going on around the State.

Overall, 91% of respondents gave correct or partially correct answers to all questions, compared to the 26% able to do so in the pre-assessment.

In addition to completing the post assessment quiz instruments, some respondents drew pictures or wrote additional comments on the back of their assessment quizzes. These drawings and comments were universally positive about the program – some illustrated a concept covered in the program and some seemed to be images of positive things students felt in response to participating in the program.

In conclusion, students represented by the sample improved dramatically in their ability to answer every question, indicating an overall gain in understanding of the big concepts we are working with. The correlation in answers about linked concepts indicates participants learned more than just rote answers to individual questions, and suggests the beginnings of a good foundation for further learning and understanding of the multi-disciplinary concepts necessary for them to become good stewards of their watershed and environment.

2014 Suisun Marsh Watershed Education Program Summary

**Appendix A – Pre and Post Class Assessment Data**

2014 Solano County Environmental Education  
Suisun Marsh Watershed Program  
Pre and Post Class Assessment Data

#	Assessment Questions	Pre-Assessment								Post-Assesment															
		correct	%	part correct	%	correct & part. correct	%	wrong/ no answer	%	correct	%	Δ	part correct	%	Δ	correct & part. correct	%	Δ	wrong/ no answer	%	Δ				
1	What watershed do you live in?	21	24%	0	0%	21	24%	68	76%	89	94%	68	0	0%	0	89	94%	68	6	6%	62				
2	Where does your drinking water come from?	0	0%	11	12%	11	12%	78	88%	81	85%	81	0	0%	-11	81	85%	70	14	15%	64				
3	Where does storm (rain) water go after it hits the pavement?	4	4%	8	9%	12	13%	77	87%	36	38%	32	51	54%	43	87	92%	75	8	8%	69				
4.a.	What are the main threats to Suisun Marsh	16	18%	3	3%	19	21%	70	79%	77	81%	61	8	8%	5	85	89%	66	10	11%	60				
4.b.	Write the name of one species that is in danger now in the Suisun Marsh	0	0%	0	0%	0	0%	89	100%	89	94%	89	0	0%	0	89	94%	89	6	6%	83				
5	Write down two ways you can help protect the Suisun Watershed.	5	6%	24	27%	29	33%	60	67%	52	55%	47	26	27%	2	78	82%	49	17	18%	43				
6	List how you can conserve water at home.	63	71%	5	6%	68	76%	21	24%	95	100%	32	0	0%	-5	95	100%	27	0	0%	21				
	total percentage per category	21%		8%		26%		74%		78%		367%		13%		67%		91%		278%		9%		659%	

# pre-class assessment participants: 887  
sample total =10% = 89

# post-class assessments: 940  
sample total =10% = 95

## **Appendix B – Quotes**

### **Teacher Quotes**

Kids loved the experience, and I thought everything was very well done. Thank you for the fun activities and great learning.

Jamie VanWart – B Gale Wilson

Thank you for the wonderful program that you put together. It was great for my students to see the Suisun Marsh and the water treatment plant. They got a kick out of seeing the process of cleaning the water! It was an experience I am sure they never would have had if it was not for this program.

Tori Ridosh – Fairfield Suisun Public Safety Academy

Poster session went great. I am proud of the kids and what they did for this project. I think they had a lot of fun too!

Dana Ix – B Gale Wilson

### **Student Quotes**

Thank you for the wonderful learning experience. I learned a lot. My favorite thing was the field trip and Overlook Hill. I pledge to start recycling my oil and pick up after myself.

Miles – Nelda Mundy 6<sup>th</sup> grader

Thank you so much for keeping our Suisun Marsh clean. By doing this, we all keep our plants, animals, and earth healthy! We will always remember to:

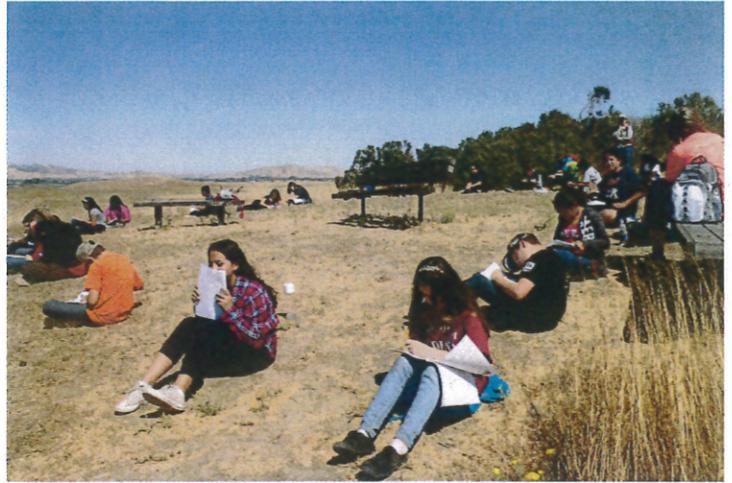
- Conserve water
- Pick up trash/doggie waste
- Not dump car oil
- Not litter
- Limit washing hands/body
- Reuse/reduce/recycle

Aubrey – Nelda Mundy 6<sup>th</sup> grader

**Appendix C – Photo Documentation**



Carla Murphy taking students on a nature walk



Students writing watershed poetry on Overlook Hill



Poster Session: Endangered and Threatened Species in Suisun Marsh



Jamie Solomon presenting the shower water timer



Students performing water quality tests



Students completing their soil analysis



## RUSH RANCH

# Marsh program restarts

The second session of the 2014 Suisun Marsh Watershed Program has begun, with 940 sixth- and seventh-graders taking day-long field trips to the Solano Land Trust's Rush Ranch Open Space.

After learning about the Marsh and watershed ecology in three pre-trip classroom lessons, these students will spend a day on an activity-packed fieldtrip exploring part of the largest contiguous brackish tidal marshes remaining on the west coast of North America. At the marsh, students hike through one of the last intact wetlands in the Bay Area and study the soil, water and plants they found there. In the day's final activity, participants hike to Overlook Hill, to write poems about their experience, which their teachers submit to the River of Words International art and poetry contest. Back in their classrooms after the field trip, students complete additional lessons covering the problems and solutions of ocean debris and water conservation.

In the program's five in-class lessons, students learn about the marsh's ecosystem and its essential role in the larger watershed habitat. One lesson focuses on invasive species and the harm they can cause to fragile environments. Students research and present their findings about a specific species at a poster session. During the field trip, students see firsthand the threat infestation of invasive pepperweed poses to pickleweed, a native plant that provides necessary habitat for many of the marsh's animal residents. This year, the in-classroom curriculum for the program has expanded to add a focused water conservation element. As California looks at a 4th year of serious drought, program staff are working with students and teachers to help them begin thinking about daily water usage in a more conservation-minded way.

Rush Ranch Open Space is a working cattle ranch. Field trip participants see wildlife every day. This first group of classes have seen cow calves and horse foals with their mothers, and they and every class in the program see the resident barn owl, as well as birds, lizards and other creatures.

The 1,050-acre property represents more than ten percent of the remaining wetland area in California. This wonderful open space area is available to the public every day. Entrance is free.

The seven-year old program was developed by the Solano and Suisun Resource Conservation Districts and is funded by the Solano County Water Agency. Additional support from Solano Community College in partnership with Solano County Office of Education and Fairfield-Suisun Sewer District has also helped play a big role the past few years. The funding provides leveraging for a State Parks Habitat Conservation Fund grant, which is now in the third of four program years. At the end of that period, 10,800 children will have taken field trips to explore County open space in a hands-on, place-based program that meets CA Standards, thanks to the grant and local partners.

Program participants this year come from Orchard, Rolling Hills, B. Gale Wilson, and Nelda Mundy elementary schools; Vaca Pena, Crystal, and Grange middle schools; and Fairfield Safety Academy.

Marianne Butler, Education Program Manager for Solano RCD runs the program and says it is a major goal of the RCD to provide the opportunity to as many students as possible.

Solano RCD works with multiple partners to provide students from elementary through high school with the same kinds of learning experiences in the watersheds they live in. More information about the Suisun Marsh Watershed Program and other school-based watershed education programs is available from the Solano Resource Conservation District. For more information, call 301-5778.



# Annual Report 2015

## Solano County Biomonitoring Program

Report written by Marianne Butler, Solano Resource Conservation District  
Report format and data provided by Patrick Edwards, Portland State University

### Goal of the Watershed Program:

Benicia ECH20 Academy and Fairfield Suisun Sewer District contracted Solano Resource Conservation District (Solano RCD) during the 2015 school year to manage and implement the Solano County Biomonitoring Program, a pre-existing urban-runoff education program.

The program operated during late winter and spring of 2015 and included classroom instruction, mapping activities, a watershed walk, field sampling, and analysis of Union Ave Creek and Sulphur Springs Creek. The classes worked with Jamie Solomon, Don Broderson, and Doug Darling from Solano RCD and used the CA Streamside Biosurvey, which is a California Department of Fish & Wildlife protocol for stream bioassessment.

### Overall Program Objectives:

- To raise knowledge and awareness of student efforts to improve surface water quality
- To develop students' problem solving and critical thinking skills
- To promote stewardship of local water resources

### Macroinvertebrate Bioassessment Program Specific Objectives:

- To teach students about stream ecology and water quality
- To implement student-conducted bioassessment of streams
- To provide students with the opportunity to analyze bioassessment data
- In future years we plan to have students communicate their results to stakeholders

### School Partners

- Fairfield High School (teacher Jill Bolduc, biology class~ 33 students)
- Benicia High School (teacher Josh Bradley, Academy class ~ 28 students)

### School Demographics

The students come from the most urban areas of Solano County. In Fairfield, 14.5% of children live below the poverty line, and 53.3% of students are enrolled in their school's free lunch program. In the 2012 CST test, 41% of 10<sup>th</sup> grade biology scores were below or far below basic skill levels, 41% were at basic proficiency and 19% of students demonstrated proficiency or better.

Benicia is doing better: 6.6% of children live below the poverty line; 16.6% of students participate in the school free lunch program; 15% of students scored below or far below basic in the 2012 CST 10<sup>th</sup> grade biology test, with 24% achieving basic proficiency. 61% of students scored proficient or better.

Data comes from [www.city-data.com](http://www.city-data.com), 2013; [www.ed-data.k12.ca.us](http://www.ed-data.k12.ca.us), 2013; and [star.cde.ca.gov](http://star.cde.ca.gov), 2013

### Overview of Curriculum

The curriculum utilizes an inquiry-based approach to engage students in research of local streams and promote stewardship and awareness of regional surface water resources. Pre-field trip lessons are taught by Solano RCD staff and include:

1. Opening introduction to the program
2. Stream ecology
3. Stormwater and watersheds
4. Watershed Mapping
5. Introduction to macroinvertebrates and macroinvertebrate identification
6. Introduction to chemical water testing including dissolved oxygen, pH, temperature, turbidity, phosphates and nitrates
7. Field trip overview with macroinvertebrate identification using dissection scopes

Teachers and students work with regional experts to implement stream restoration and monitoring activities and to conduct macroinvertebrate bioassessments. After collecting data, students organize, summarize and analyze the data. Please see Table 1 for program activity dates.

Additionally, students participate in a comprehensive watershed walk, accompanied by restoration activities that take place in February after the opening introduction session. This provides students with an understanding of their local watershed and prepares them for the biomonitoring process.

With the guidance from regional restorationists, students have the opportunity to remove invasive non-native plants and to plant native vegetation. The restoration work varies at each site -- In 2014, students removed himalayan blackberry, planted hundreds of native perennial grass plugs, and planted native shrubs and trees.

Date	Activities
<b>February-May 2015</b>	In-class lessons (7 – one hour lessons)
<b>February 2015</b>	Restoration work/Watershed walk (3 hour field trip)
<b>May 2015</b>	Field work: collect data along creeks (6 hour field trip)
<b>May 2015</b>	Data Analysis in classroom (1 – one hour lesson)

Table 1: Summary of major activities from the 2014 school year

**Quantifying the Bioassessment Program**

- Students learned about surface water quality and conducted bioassessments in three areas along Union Ave Creek and Sulphur Springs Creek.
- Approximately 61 students participated in more than 12 hours of field trips to Union Ave Creek, Sulphur Springs Creek and Blue Rock Springs Creek Corridor during which they performed restoration work, collected, randomly subsampled and identified aquatic insects.
- Students received 16 hours of direct in-class instruction and curriculum covering non-point source pollution, aquatic insects ecology and identification, the use of aquatic insects in stream bioassessment, and data analysis.

**Data and Data Quality Charts IN THE WORKS**

Students collected family-level bioassessment data using a modified version of the California Streamside Biosurvey protocol. All insect counts and identification were verified by staff members. Over the spring, students conducted four bioassessment studies. Benicia High students collected data from Sulphur Springs Creek on May 12<sup>th</sup>, and Fairfield High students were supposed to collect data along Union Ave Creek on May 13<sup>th</sup>. The teacher was on maternity leave and the substitute was unable to secure participation. The RCD has found it is not conducive to work with a substitute and the mistake has been understood. All in-class lessons and restoration field trip occurred as intended .Solano RCD staff collected the data so that the long-term data set would continue.

During each bioassessments, students and staff collected, randomly subsampled and identified organisms.

Chart 1 demonstrates the number of taxa (at either the family or order level) of the aquatic community found at each sampling site. Communities with a higher number of taxa generally indicate a higher quality, healthier environment.

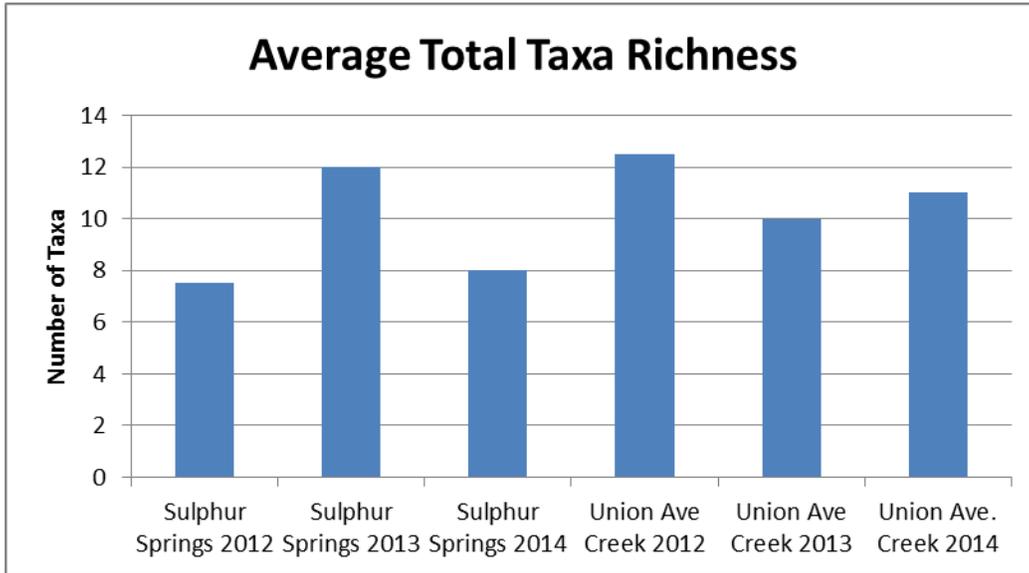


Chart 1 – 2012-2014 Macroinvertebrate Taxa Richness

Chart 2 demonstrates the Max EPT (Mayflies, Stoneflies, Caddisflies) Richness of the aquatic community found at each sampling site. EPT Richness illustrates the number of mayflies, stoneflies and caddisflies taxa. These are the most sensitive organisms in terms of pollution found in the creek.

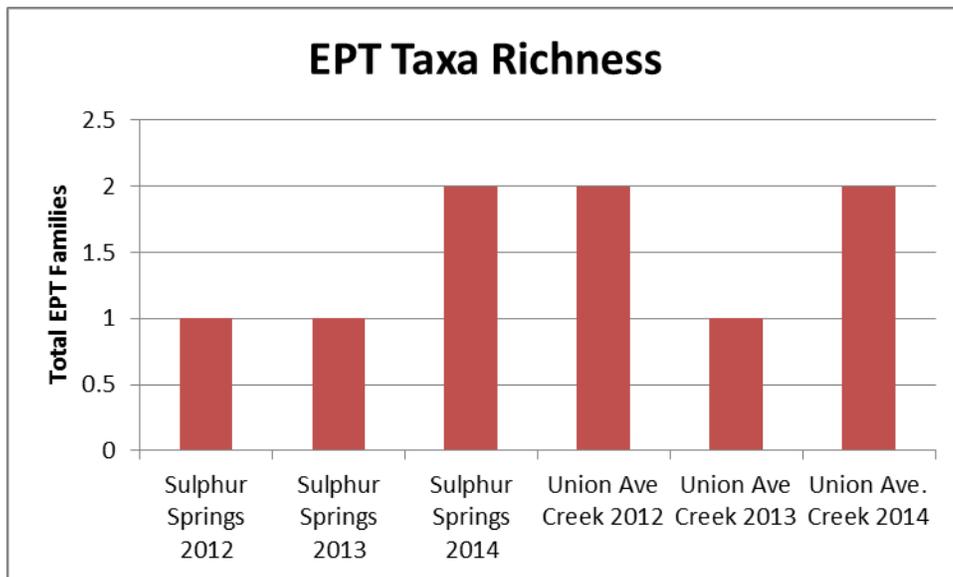


Chart 2 – 2012-2014 Max EPT Richness

Chart 3 demonstrates the IBI score of the aquatic community found at each sampling site. The Index of Biological Integrity (IBI) is a regionalized multi-metric index frequently used by professionals to determine stream quality. The IBI uses the richness and dominance of the macroinvertebrate community to characterize the biologic integrity of the stream. The IBI score increases as stream quality improves. The IBI can be used to contrast with previous or future samples taken at the same site to see how water quality has changed.

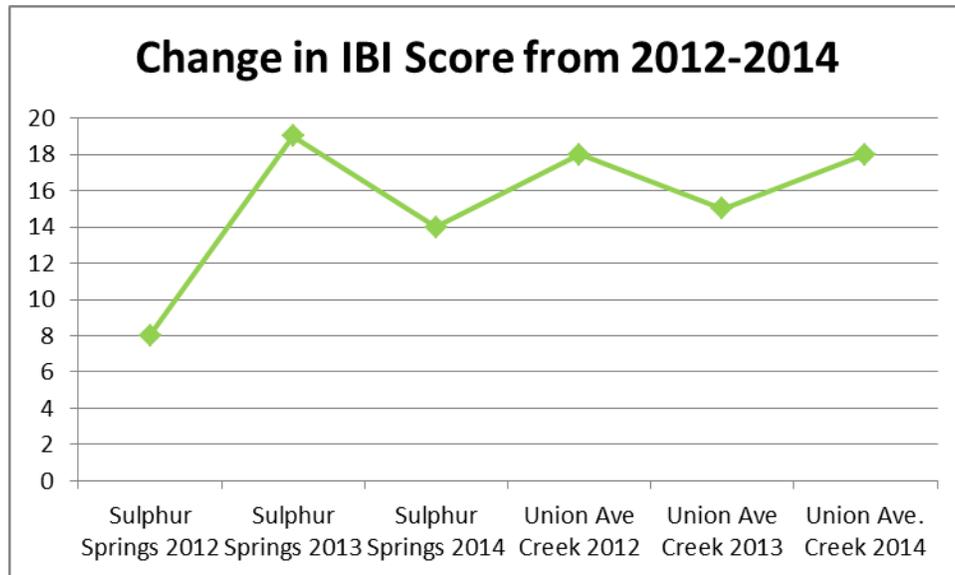


Chart 3 – 2012-2014 Max IBI Score

### Data and Data Quality Summary

- Students identified and counted more than 1,370 insects from 8-11 taxa (all organisms were returned to the stream unharmed)
- Students found that the aquatic insect community was dominated by Blackflies and Midges, both of which are tolerant to pollution
- In 2014, Sulphur Springs Creek site has the lowest IBI score while Union Ave. Creek has the highest.
- IBI scores are increasing at Union Ave. Cr and decreasing at Sulphur Springs Cr - See Table 2

Site	IBI Score	Category
Sulphur Sp. Cr 2014	(14/50)	Poor
Union Ave Cr 2014	(18/50)	Fair
Sulphur Sp. Cr 2013	(19/50)	Fair
Union Ave Cr 2013	(15/50)	Fair
Sulphur Sp. Cr 2012	(8/50)	Poor
Union Ave Cr 2012	(18/50)	Fair

Table 2: IBI and tolerance values at each sampling site

## **Additional Data Collected**

In addition to the biological data collection, students assessed the physical and chemical aspects of the creek. The physical and chemical data is collected, however it is not utilized for our annual reporting since it is nearly the same each year. It provides students with an opportunity to further understand the functions and aspects of a riparian area.

The physical (or Habitat) assessment is used to assess each reach where the macroinvertebrate samples are collected as part of a non-point source sampling design. When using the Habitat Assessment, the evaluation team completes a survey of questions to assess different physical variables. Each reach includes three riffles (spanning 100 feet) surveyed in the Biosurvey, the portions of the stream between each riffle, the right and left banks, and the surrounding riparian zone for each bank. Assessment measurements include length of riffles, pools, and runs/glides, particle sizes on the stream bottom, bottom cover of the stream bed, percent of streambank cover, slopes and erosion, stream size, flow conditions and velocity.

The chemical analysis tests the water quality for dissolved oxygen, pH, temperature, turbidity, phosphates, and nitrates.

## **References**

1. Borne, M & Harrington, J. 1999. Measuring the Health of California Streams and Rivers A Methods Manuel for Water Resource Professionals, Citizen Monitors and Natural Resources Students, Second Edition, 4th Revision. Sustainable Land Stewardship International Institute, Sacramento, California.
2. Cheo, M. & Murdoch, T. 1999. Streamkeeper's Field Guide, Second Printing. Adopt-A-Stream Foundation, Everett, WA.
3. Herbst, David B., Feng, Arleen Y., & Gregorio, Dominic E. 2001. The California Streamside Biosurvey. Clean Water Team Citizen Monitoring Program, Sacramento, CA.
4. Lindbo, Torrey D. & Renfro, Stacy L. 2003. Riparian & Aquatic Ecosystem Monitoring: A Manual of Field and Lab Procedure, 4th Edition. A Saturday Academy Publication, Portland, Oregon.
5. Voshell Jr., Reese J. 2002. A Guide to Common Freshwater Invertebrates of North America. The McDonald & Woodward Publishing Company, Blacksburg, Virginia.

## 2014 California Coastal Cleanup Day

### CCD Coordinator Report Form

People, Pounds & Miles

County: <b>Solano County</b>													Organization: <b>Solano RCD</b>
Cleanup Information													
	Site Name	Coastal or Inland	Site Captain	Phone/E-mail Address	# of People	Weight of Trash Collected	Weight of Recyclables Collected	Distance Cleaned	# of Sites	Zero Waste Sites	# of ppl w/ reusables	# of Bags	Unusual Finds
<b>Fairfield/Suisun City</b>													
1	Ledgewood Creek	Inland	Sandra Gonzalez	sgonzalez@ci.fairfield.ca.us	21	80	0	3.00	1	1	21	0	Electrical Scooter
2	SuisunBoat Ramp/Peytonia Preserve	Coastal	Connie Gordon	Constance.Gordon@anheuser-busch.com	40	800	0	1.25	1	0	0	48	Running Stroller
3	Belden's Landing	Coastal	Gregg Walter Goodman	ggoodman@att.net	34	100	20	2.25	1	0	0	18	Auto brake Assembly
4	Upper Laurel Creek	Inland	Nellie	<a href="mailto:Ndimalanta@fssd.com">Ndimalanta@fssd.com</a>	76	80	20	1.25	1	0	0	40	Vinyl Record
5	Mid Laurel Creek	Inland	Dave Chandler	<a href="mailto:Dchandler@fssd.com">Dchandler@fssd.com</a>	27	590	100	2.00	1	0	6	20	6 gallon bottle of oil
6	Lower Laurel Creek	Inland	David Avery	DavidAv@fsusd.org	120	400	8	1.25	1	0	0	20	Bike
7	Hill Slough/Rush Ranch	Coastal	Ken Poerner	ken@solanolandtrust.org	6	1000	0	1.50	1	0	0	23	buckets of used oil
8	American Canyon Creek (Silverado Dr. off Oakwood)	Inland	John Kilam	john@irasvens.com	25	160	0	2.00	1	0	0	35	Television
9	Dan Wilson Creek	Inland	Olivia Ruiz	<a href="mailto:oruiz@fssd.com">oruiz@fssd.com</a>	42	50	0	2.00	1	0	0	55	Back Pack
10	Serpas	Inland	Teri Luchini	tluchini@ci.fairfield.ca.us	12	100	10	1.20	1	0	0	20	Martial Arts Dagger
11	Union Avenue	Inland	Ben from City Hope	<a href="mailto:Jandreau5@Comcast.net">Jandreau5@Comcast.net</a>	27	800	0	1.50	1	0	0	25	Dog House
12	Green Valley Creek	Inland	Marianne Cox	marianncox@comcast.net	30	200	2	1.00	1	0	10	26	Habitat Restoration Sign
13	Lower Union Ave	Inland	Adrian Antoo	<a href="mailto:Aantoo@fssd.com">Aantoo@fssd.com</a>	5	150	0	0.50	1	0	0	9	Matress
14	Upper Dan Wilson	Inland	Pam Muick	pmuick@sbcglobal.net	60	600	110	2.50	1	0	0	200	50 dollar bill cut in one quarter
15	Mic Coy Creek	Inland	Nicole Williams	WilliaN3@sutterhealth.org	50	800	20	2.00	1	0	0	50	Motorcycle body
16	Grizzly Island Trail	coastal	Amanda Dam	<a href="mailto:adum@suisun.com">adum@suisun.com</a>	19	60	0	1.25	1	0	0	16	Yoga Mat
17	Lower Ledgewood Creek	Inland	Justen Nunes	JNunes@EParkway.com	23	600	0	2.00	1	0	0	30	Antique Refer
	<b>TOTALS</b>				<b>617</b>	<b>6570</b>	<b>290</b>	<b>28</b>	<b>17</b>	<b>1</b>	<b>37</b>	<b>635</b>	
	<b>TOTALS</b>												

**Section 8 - Provision C.8 Water Quality Monitoring**

**C.8 ► Water Quality Monitoring**

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

Summary

During FY 14-15, we contributed to the BASMAA Regional Monitoring Coalition (RMC). In addition, we contributed financially to the Regional Monitoring Program for Water Quality in the San Francisco Estuary (RMP) and were represented at RMP committees and work groups. Monitoring efforts and results are documented in a separate report submitted March 15 of each year, as required in Provision C.8. For additional information on monitoring activities conducted by the FSURMP, BASMAA RMC and the RMP, see the Program's FY 14-15 Urban Creeks Monitoring Report submitted on March 15, 2015 by the FSURMP.

**Section 9 – Provision C.9 Pesticides Toxicity Controls**

<b>C.9.b ► Implement IPM Policy or Ordinance</b>						
Report implementation of IPM BMPs by showing trends in quantities and types of pesticides used, and suggest reasons for increases in use of pesticides that threaten water quality, specifically organophosphates, pyrethroids, carbaryl, and fipronil. A separate report can be attached as evidence of your implementation.						
<b>Trends in Quantities and Types of Pesticides Used<sup>60</sup></b>						
Both Program cities have adopted IPM policies. This provision is handled at the city level. Please see individual city reports for this information.						
<b>Pesticide Category and Specific Pesticide Used</b>	<b>Amount<sup>61</sup></b>					
	<b>FY 09-10</b>	<b>FY 10-11</b>	<b>FY 11-12</b>	<b>FY 12-13</b>	<b>FY 13-14</b>	<b>FY 14-15</b>
<b>Organophosphates</b>	NA	NA	NA	NA	NA	NA
<b>Product or Pesticide Type A</b>	NA	NA	NA	NA	NA	NA
<b>Product or Pesticide Type B</b>	NA	NA	NA	NA	NA	NA
<b>Pyrethroids</b>	NA	NA	NA	NA	NA	NA
<b>Product or Pesticide Type X</b>	NA	NA	NA	NA	NA	NA
<b>Product or Pesticide Type Y</b>	NA	NA	NA	NA	NA	NA
<b>Carbaryl</b>	NA	NA	NA	NA	NA	NA
<b>Fipronil</b>	NA	NA	NA	NA	NA	NA

<sup>60</sup>Includes all municipal structural and landscape pesticide usage by employees and contractors.

<sup>61</sup>Weight or volume of the product or preferably its active ingredient, using same units for the product each year. The active ingredients in any pesticide are listed on the label. The list of active ingredients that need to be reported in the pyrethroids class includes: allethrin, bifenthrin, beta-cyfluthrin, bioallethrin, cyfluthrin, cypermethrin, cyphenothrin, deltamethrin, esfenvalerate, etofenprox, fenpropathrin, gamma-cyhalothrin, imiprothrin, lambda-cyhalothrin, metofluthrin, permethrin, phenothrin, prallethrin, resmethrin, sumithrin (d-phenothrin), tau-fluvalinate, tefluthrin, tetramethrin, tralomethrin, cis-permethrin, and zeta-cypermethrin.

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

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

C.9.d ▶ Require Contractors to Implement IPM				
Did your municipality contract with any pesticide service provider in the reporting year?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
If yes, attach one of the following:				
<input type="checkbox"/>	Contract specifications that require adherence to your IPM policy and standard operating procedures, OR			
<input type="checkbox"/>	Copy(ies) of the contractors' IPM certification(s) or equivalent, OR			
<input type="checkbox"/>	Equivalent documentation.			
If <b>Not attached</b> , explain:				
Both Program cities have adopted IPM policies. This provision is handled at the city level. Please see individual city reports for this information.				

C.9.e ▶ Track and Participate in Relevant Regulatory Processes
Summarize participation efforts, information submitted, and how regulatory actions were affected <b>OR</b> reference a regional report that summarizes regional participation efforts, information submitted, and how regulatory actions were affected.
Summary:
The actual work of tracking and participating in the ongoing regulatory efforts related to pesticides was accomplished through CASQA. CASQA conducted its activities on behalf of members and coordinated funding contributions and activities through its Pesticides Subcommittee, a group of stormwater quality agencies affected by pesticides or pesticides-related toxicity listings, TMDLs, or permit requirements, as well as others knowledgeable about pesticide-related stormwater issues. The CASQA Pesticides Subcommittee's annual report for FY 2014-15 provides a comprehensive and detailed accounting of efforts to track and participate in relevant regulatory processes as well as accomplishments related to pesticides and stormwater quality.
Furthermore, through discussions with other Clean Water Programs, the Fairfield Suisun Urban Runoff Program has learned the following the regarding regulatory process and DPR:

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

New California Department of Pesticide Regulation (DPR) requirements that become effective July 19, 2014 will modify the way that professional applicators apply Pyrethroids insecticides around buildings. In parallel, new pyrethroid product labeling being implemented voluntarily by manufacturers at DPR's request—including special labels for the most persistent pyrethroid, bifenthrin—will provide further water quality protection. Both the regulations and the labeling will reduce treatments of outdoor impervious surfaces, thus reducing the quantity of pyrethroids that can be washed directly into gutters and storm drains when it rains or when water like irrigation overflow runs across treated surfaces. Together, the regulations and the new labeling will reduce the amount of pyrethroid insecticides in urban stormwater runoff by 80-90%.

DPR developed the regulations and requested manufacturers modify product labels in response to the finding that pyrethroid insecticides are causing water and sediments in California urban creeks to be toxic to sensitive aquatic organisms. California Water Boards and the California Stormwater Quality Association (CASQA), using information assembled by the government-funded Urban Pesticides Pollution Prevention Project (UP3 Project), worked with DPR toward development of a solution to this water pollution problem.

University of California scientific research played a key role in the characterization of the pyrethroid insecticide water pollution problem and in identification of application practices that reduce pyrethroid use while continuing to control pests. California's professional structural pest control applicators provided DPR and other agencies invaluable information about pyrethroid application practices and the practical aspects of controlling insects around buildings.

UP3 Project analysis—based on pyrethroid monitoring data, pyrethroid use data, and urban runoff modeling by U.C. Davis— suggests that the regulations will largely—but not completely—end widespread water and sediment toxicity from pyrethroids in California's urban watersheds. In some watersheds, lower levels of toxicity may continue. In a larger number of watersheds, pyrethroid concentrations will continue to exceed aquatic life protection benchmarks such as the water quality criteria developed by UC Davis with funding from the Central Valley Water Board.

In coming months, some professional pest control operators are likely to switch to other insecticides, some of which may create new water pollution problems. A recent CASQA monitoring data summary suggests that one substitute insecticide, fipronil, may already be washing into urban creeks at levels sufficient to harm sensitive aquatic organisms.

California government agencies will be monitoring urban creeks and working together toward making further adjustments as necessary to protect water quality.

Businesses and residents can prevent pesticide-related water pollution by employing effective pest control practices that minimize the need to use pesticides. Professional applicators certified by Ecowise or Green Pro provide this type of pest control. Do-it-yourselfers can learn how to implement these practices from Our Water Our World or University of California's Integrated Pest Management Program.

DPR's Enforcement Branch will be working with California's Agricultural Commissioners and California professional pest control applicators to implement the new regulations. For implementation questions, DPR recommends contacting George Farnsworth, Chief of DPR's Enforcement Branch at [gfarnsworth@cdpr.ca.gov](mailto:gfarnsworth@cdpr.ca.gov)

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

**C.9.f ▶ Interface with County Agricultural Commissioners**

Did your municipal staff observe any improper pesticide usage or evidence of improper usage (e.g., pesticides in storm drain systems, along street curbs, or in receiving waters) during this fiscal year?		Yes	x	No
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If yes, provide a summary of improper pesticide usage reported to the County Agricultural Commissioner and follow-up actions taken to correct any violations. A separate report can be attached as your summary.

**C.9.h.ii ▶ Public Outreach: Point of Purchase**

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

Summary:

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

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

Also, 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. For additional information on regional efforts, see the Regional Pollutants of Concern Report for FY2014-2015 submitted by BASMAA on behalf of all MRP Permittees.

The Program provided extra funding this year to participate in the Home Depot pilot program, which raises the profile of less toxic products in specific Home Depot stores through a trained Green Garden Specialist on staff, and provides increased visibility of less toxic products on the end caps at local Home Depot stores.

IPM Program Consultant Annie Joseph and Program Manager, provided IPM training for Solano County Master Gardeners, who in turn instruct the general public on safe gardening practices at local farmers' markets and events throughout the county. Also described was the connectivity of the streets to our local creeks; the difference between stormwater and wastewater; the wastewater treatment process; how pesticides can impact the process.

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

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

Summary:

On January 9, 2015 IPM Consultant Annie Joseph and Program Manager, provided IPM training for Solano County Master Gardeners, who in turn instruct the general public on safe gardening practices at local farmers' markets and events throughout the county. Also described was the connectivity of the streets to our local creeks; the difference between stormwater and wastewater; the wastewater treatment process; how pesticides can impact the process.

During outreach events OWOW flyers were prominently displayed. Discussions occurred during the events regarding the control of particular pests. Flyers were described and explained to the individuals expressing interest. The Program elected not to count the number of brochures distributed nor the number of residents contacted. Annually, the Program orders print materials from OWOW.

Section 10 - Provision C.10 Trash Load Reduction

**C.10.a.iii ► Minimum Full Trash Capture**

Provide the following:

- 1) Total number and types of full capture devices (publicly and privately-owned) installed to-date;
- 2) Total land area (acres) and land areas within each trash generation category (i.e., very high, high, moderate and low) treated by full capture devices (or other types of devices for non-population based Permittees); and, compare with the total required in the permit.
- 3) A narrative summary of maintenance activities implemented for each device, group of devices, or device type, including descriptions of typical maintenance frequencies and issues associated with maintaining these devices. Describe, in particular, any devices that have trash or debris overflowed, bypassed or are not functioning properly in any other manner. Describe corrective actions.

Type of Device	# of Devices	Acres Treated in FY 14-15 by Trash Generation Category				
		Low	Moderate	High	Very High	Total
This provision is handled and reported at the city level. Please see individual city reports for this information.						
<b>Total for all Types</b>						
						<b>Required by Permit</b>

**Maintenance Summary** (Describe, in particular, any devices that have trash or debris overflowed, bypassed or are not functioning properly in any other manner. Describe corrective actions).

This provision is handled and reported at the city level. Please see individual city reports for this information.

**Descriptions of Actions/Tasks (Conducted or Planned):**

The cities participated in the Bay Area SFEP/ABAG Trash Capture Grant Project. In an effort to provide as much full trash capture treatment area as possible and because the city of Fairfield drains through Suisun City, the cities proposed a combined full trash capture device for approval to the Water Board. On March 11, 2011 the cities received approval from the Water Board to share their full trash capture device.

The device was installed in June 2012 and is located downstream from the city of Fairfield and upstream from Suisun City Marina. The device chosen is a Contech CDS 5653, one of the largest devices made by Contech. With the MRP requiring Fairfield to fully capture 146 acres and Suisun City's to fully capture 22 acres, the total required treatment area is 168 acres. The collaborated treatment area provided resulted in 270 acres which is 102 acres (61%) above that required in the MRP.

Both Cities have applied

**Descriptions of Maintenance Activities:**

- As a clear indicator of the collaborative nature of our Program, maintenance for the CDS device has been accepted by the city of Fairfield. Please see city of Fairfield annual report for 2013 2014 for maintenance activities on the Contech CDS 5653.

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

Provide the volume of material removed during each MRP-required Trash Hot Spot cleanup during each fiscal year, and the dominant types of trash (e.g., glass, plastics, paper) removed and their sources in FY 2014-15 to the extent possible. Also, provide additional information on creek cleanups conducted beyond those required that are .

Trash Hot Spot	FY 14-15 Cleanup Date(s)	Volume of Trash Removed (cubic yards)					Dominant Type(s) of Trash in FY 2014-15	Trash Sources in FY 2014-15 (where possible)
		FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15		

This provision is handled at the city level. Please see individual city reports for this information.

**Additional Receiving Water Cleanups** – If claimed as load reductions described in C.10.d – part C, describe the number and frequency of receiving water cleanups conducted in addition to those reported above. Include locations, cleanup dates, and the total volume of trash removed. Describe the overall plan, if any, associated with these additional cleanups if meant to change the trash condition of certain reaches of creeks or shorelines.

On September 20th, 2014 the program led volunteer cleanup of local creeks throughout both cities. 617 volunteers picked up 6570 gallons of trash and recyclable on 28 miles of waterway.

On April 25, 2015 the Program led volunteer cleanup of LedgeWood Creek in Fairfield. 36 volunteers picked up 2000 gallons of trash along 2 miles of waterway.

On March 28, 2015 the Program led volunteer cleanup of the Lower Union Ave., Creek in Suisun city. Seven volunteers picked up 200 gallons of trash along a mile of waterway.

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

Provide descriptions of significant revisions made to your Long-term Trash Load Reduction Plan submitted to the Water Board in February 2014. Describe significant changes made to primary or secondary trash management areas (TMA), trash generation maps, control measures, or time schedules identified in your plan.

Description of Significant Revision	Associated TMA
This element is being reported at the city level. Please see individual city reports for these items.	

**C.10.d ► PART A - Trash Control Measure Implementation and Assessment (Jurisdictional-wide Actions)**

Provide a description of each jurisdictional-wide trash control measure implemented to-date. Identify the dominant trash source(s) and dominant type(s) of trash addressed by each control measure. For each jurisdictional-wide measure, identify the trash assessment method(s) used to demonstrate on-going reductions, summarize the results of the assessment(s), and estimate the associated reduction of trash within your jurisdictional area.

Control Measure	Summary Description of Control Measure & Dominant Trash Sources and Types	Assessment Method(s)	Summary of Assessment Results To-date	Estimated % Trash Reduced
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**C.10.d ► PART A - Trash Control Measure Implementation and Assessment (Jurisdictional-wide Actions)**

Provide a description of each jurisdictional-wide trash control measure implemented to-date. Identify the dominant trash source(s) and dominant type(s) of trash addressed by each control measure. For each jurisdictional-wide measure, identify the trash assessment method(s) used to demonstrate on-going reductions, summarize the results of the assessment(s), and estimate the associated reduction of trash within your jurisdictional area.

<p>Single-use Plastic Bag Ordinance or Policy</p>	<p>The Program is relying on the passage of SB 270 to control the distribution of single use plastic bags in our Cities. Last year, we celebrated a landmark environmental win as California became the first state to sign a bag ban into law. Now, the plastic industry has gathered enough signatures to put a referendum on the November 2016 ballot to overturn SB 270. They filed the paperwork last month, and more than 18 months away from election day, have already spent \$7 million on the effort. This push is coming from out of state plastic companies, who report that plastic bags are a \$100-150 million-a-year business in California.</p> <p>What's the take from actual Californians? Over 70 local cities and county governments have passed their own bag bans, and a poll conducted last year shows 60% of Californians are in favor of the statewide ban. The California Grocer's Association also supported the statewide bag ban.</p> <p>This issue is lining up to be another fight against a deep-pocketed group who will attempt to buy an election. Luckily, there's a strong grassroots campaign that's coming together to fight for 60% of Californians, and our watersheds, too. Check out California vs Big Plastic, which is the collective effort of groups like Californians Against Waste, Story of Stuff, and more.</p>	<p>Not yet implemented</p>	<p>Not yet implemented</p>	<p></p>
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**C.10.d ► PART A - Trash Control Measure Implementation and Assessment (Jurisdictional-wide Actions)**

Provide a description of each jurisdictional-wide trash control measure implemented to-date. Identify the dominant trash source(s) and dominant type(s) of trash addressed by each control measure. For each jurisdictional-wide measure, identify the trash assessment method(s) used to demonstrate on-going reductions, summarize the results of the assessment(s), and estimate the associated reduction of trash within your jurisdictional area.

Expanded Polystyrene Food Service Ware Ordinance or Policy	Within both of the Program's Long-Term Trash Load Reduction Plans, it states that the City is further researching the possibility of adopting and enforcing this ban in the future. If the Cities do implement this ban, it will likely be done on a county or state-wide basis.	Not yet implemented	Not yet implemented	
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**C.10.d ► PART A - Trash Control Measure Implementation and Assessment (Jurisdictional-wide Actions)**

Provide a description of each jurisdictional-wide trash control measure implemented to-date. Identify the dominant trash source(s) and dominant type(s) of trash addressed by each control measure. For each jurisdictional-wide measure, identify the trash assessment method(s) used to demonstrate on-going reductions, summarize the results of the assessment(s), and estimate the associated reduction of trash within your jurisdictional area.

<p>Other Source Control Actions with sufficient documentation and supporting assessment</p> <p>FY 14-15 AR Form</p>	<p>As part of the Program's Protect the Suisun Marsh - Put Trash Where it Belongs campaign, both cities have or will be installing "Put Trash Where It Belongs" signs (see attached) around town at locations in the very high and high trash generation rate areas. The same sign has been attached to Solano Garbage Company dumpsters to promote the protection of our local creeks and the Suisun Marsh.</p> <p>The Program is also working with Solano Garbage Company's (Republic Services) route drivers to educate facility managers and property owners during garbage pickups. Drivers have been given maps of high trash generation areas and City Trash/Ordinance cards (see attached) as well as instructions to pay particular attention toward the maintenance, proper disposal and pick-up frequency during garbage pickup. Upon observation of inadequately maintained trash disposal facilities, drivers have been instructed to deliver City Trash/Ordinance cards to facility managers depicting the deficiencies of the facility's trash disposal. If the problem is not seen by the garbage route driver as being resolved on the next round of pickups, city code enforcement officers may be drawn in to assist in education and compliance.</p> <p>The Program is also working with Solano County Health Inspectors to educate and enforce facility managers and property owners during their normal daily inspections following similar procedures as described above.</p>	<p>Program Cities will monitor the amount of trash in the Very High and High Generation Areas,</p> <p>10-8</p>	<p>Observations show a reduction in trash loads.</p>	<p>4/1/15</p>
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**C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)**

Complete the following trash control measure implementation and assessment summary for each primary trash management area (TMA) identified in your Long-term Plan. Include the following information:

- Identify the total jurisdictional area and the % of that area that generated very high (VH), high (H), moderate (M), or low (L) levels of trash in 2009, as depicted on trash generation maps;
- Identify the dominant trash source(s) and dominant type(s) of trash addressed or to-be addressed in the TMA;
- Provide the area currently treated by full capture devices, the quantity and type of devices installed to-date, and the % and acres of jurisdictional area in very high (VH), high (H), moderate (M), and low (L) generation categories that are currently treated by full capture devices in the TMA;
- Summarize control measures other than full capture devices implemented to-date, distinguishing between implementation that began pre- and post-MRP effective date. If not implemented in the entire TMA, describe generation category targeted and % of TMA addressed;
- Provide the acres of jurisdictional area in very high (VH), high (H), moderate (M), and low (L) generation categories in areas associated with actions other than full capture devices in the TMA;
- Describe the methods used to evaluate the effectiveness of control measures other than full capture devices, and any assessment results to-date. If the method was not implemented in the entire TMA, describe generation category targeted and % of TMA addressed.
- Provide the acres in VH, H, M or L generation categories after accounting for reduction associated with control measures other than full capture devices;
- Provide the acres in VH, H, M or L generation categories after accounting for reductions associated with ALL control measures (i.e., full capture and other actions) implemented to-date in the TMA
- Provide an estimate of the % of trash reduced in the TMA as a result of ALL control measures implemented to-date in the TMA. using the following formula:

$$\% \text{ Reduction} = 100 \left[ \frac{(12A_{VH(2009)} + 4A_{H(2009)} + A_{M(2009)}) - (12A_{VH} + 4A_H + A_M)}{(12A_{VH2009} + 4A_{H2009} + A_{M2009})} \right]$$

where:

- $A_{VH(2009)}$  = total amount of the 2009 very high trash generation category in jurisdictional area
- $A_{H(2009)}$  = total amount of the 2009 high trash generation category in jurisdictional area
- $A_{M(2009)}$  = total amount of the 2009 moderate trash generation category in jurisdictional area
- $A_{VH}$  = total amount of very high trash generation category in jurisdictional area in the reporting year
- $A_H$  = total amount of high trash generation category in jurisdictional area in the reporting year
- $A_M$  = total amount of moderate trash generation category in jurisdictional area in the reporting year
- 12 = Very High to Moderate weighing ratio
- 4 = High to Moderate weighing ratio
- 100 = fraction to percentage conversion factor

C.10.d ► PART B - Trash Control Measure Implementation and Assessment (TMA Specific Actions)									
TMA ID	TMA Area (Acres)	Dominant Sources	Dominant Types	Baseline Generation Areas (2009)	Area (Acres) in Each Trash Generation Category				
					VH	H	M	L	
Full Capture Devices	Area Treated by Full Trash Capture Devices (Acres)	Quantity and Type of Full Trash Capture Devices		Area Treated by <u>Full Capture Devices</u>					
Actions other than Full Capture Devices	Summary Description of Other Actions Implemented in the TMA Since MRP Adoption			Area <u>Not</u> Treated by Full Capture Devices  Area after Accounting for Other Actions (based on assessment results)					
	See City reports for TMA Specific Actions.								
	Assessment Methods for Control Measures Other than Full Capture Devices								
	Summary of Assessment Results								
Area After Taking into Account Full Capture Devices AND Other Actions									
Estimated % Trash Reduction in this TMA					See City reports for TMA Specific Actions.				

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

<b>C.10.d ► PART C – Estimated Overall Trash Load Reduction</b>	
<p>For Population-based Permittees, provide an estimate of the overall trash reduction percentage achieved to-date within the jurisdictional area of your municipality that generates problematic trash levels (i.e., Very High, High or Moderate trash generation). Base the estimate on the information presented in C.10.d – Parts A and B and receiving water cleanups not reported in C.10.b.iii.</p>	
<p><b>Discussion of Trash Reduction Estimate (including Receiving Water Cleanups):</b></p>	
Estimated % Trash Reduction due to Jurisdictional-wide Actions (as Reported in C.10.d – Part A)	
Estimated % Trash Reduction in All TMAs due to Trash Full Capture Devices (as Reported in C.10.d. – Part B)	
Estimated % Trash Reduction in all TMAs due to Control Measures Other than Trash Full Capture Devices in All TMAs) (as Reported in C.10.d. – Part B)	
<b>Subtotal for Above Actions</b>	
Estimated % Trash Reduction due to Receiving Water Cleanups (All TMAs)	
<b>Total Estimated % Trash Reduction FY 14-15</b>	See City reports for TMA Specific Actions.



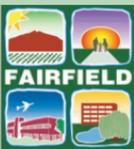
**THE SUISUN  
MARSH  
IS OURS TO  
PROTECT**

**PUT TRASH  
WHERE IT  
BELONGS**

Our Creeks.

Our Water.

Ours to Protect.



# ATTENTION

Restaurant Owners and Managers



Trash harms our Suisun Marsh. Maintaining a trash free facility is your responsibility. (Ord nos. S-714 and F-22B)

- Inspect your trash enclosure and facility area daily
- Close your dumpster lid
- Pick up any loose trash
- Provide plenty of trash receptacles
- Minimize food wrappers and bags
- Ensure adequate trash pickup frequency



**REPUBLIC  
SERVICES**

Solano Garbage Company  
A Division of Republic Services



**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).

- 1) Promotion (i.e., media advertising, providing information on your agency's website, etc.) of:
  - a) Household Hazardous Waste (HHW) Programs, including promotion of HHW drop-off events and local businesses that provide residents and small businesses the opportunity to drop-off mercury-containing devices and equipment (e.g., bulbs, thermostats, thermometers and/or switches). Solano Garbage Company (Republic Services) at 2901 Industrial Court runs the household hazardous waste collection facility that serves the City of Fairfield, Suisun City and Solano County unincorporated areas. They operate twice monthly on the second and fourth Saturday from 9 AM to 12 noon. Household hazardous waste drop-off is offered free to residents for a small fee and to Fairfield businesses that qualify as small quantity generators. Other items can be dropped off at local businesses such as: Home Depot, Lowe's, and Orchard Supply Hardware, DND Plumbing, Slinky Brothers Fairfield, and Solano Garbage Company.

Promotional events include websites information on cities of Fairfield, Suisun City and Solano County and Solano garbage company's website; printed/published materials include countywide recycling guide household hazardous waste/used oil brochures, flyers and handouts; mailers included in billing by Solano garbage company; community events such as weekly farmers market, Earth Day, tomato Festival, coast and Creek cleanup and radio ads on the local station, KUIC.

- b) The Thermostat Recycling Corporation is an organization developed on behalf of the thermostat manufacturers that recycles mercury-containing thermostats and switches generated by residents and small businesses. The HVAC industry is the largest generator of these waste streams and is the targeted audience to inform of this recycling option.

- 2) Facilitation/Organization: Solano Garbage Company (Republic Services) at 2901 Industrial Court runs the household hazardous waste collection facility that serves the City of Fairfield, Suisun City and Solano County unincorporated areas. They operate twice monthly on the second and fourth Saturday from 9 AM to 12 noon. Household hazardous waste drop-off is offered free to residents for a small fee and to Fairfield businesses that qualify as small quantity generators. Other items can be dropped off at local businesses such as: Home Depot, Lowe's, and Orchard Supply Hardware, DND Plumbing, Slinky Brothers Fairfield, and Solano Garbage Company.

- 3) Collection of:
  - a) Mercury-containing devices and equipment at designated drop-off points or HHW drop-off events is organized and conducted by Solano Garbage Company. Twice a month on the second and fourth Saturdays from 9 to 12 noon. Household hazardous waste drop-off events are offered to residents and small businesses within the Fairfield and Suisun city area
  - b) Currently, there are no curbside Programs offered in the City of Fairfield and City of Suisun City.

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

**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.

The estimated mass of mercury collected through recycling efforts conducted by the cities of Fairfield and Suisun City's designated HHW Program, are included in each city's 2014-15 Annual Report. The Program has only counted mercury-containing devices and equipment collected from residents and businesses in our jurisdiction. We have used the Supplemental Excel Spreadsheet and Guidance developed by BASMAA to estimate the mass of mercury collected through our efforts, and have only counted those items indicated herein as restricted in the footnotes.

Mercury Containing Device/Equipment	Total Amount of Devices Collected	Estimated Mass of Mercury Collected
Fluorescent Lamps <sup>62</sup> (linear feet)		
CFLs <sup>63</sup> (each)		
Thermostats <sup>64</sup> (each)		
Thermostats (lbs)		
Thermometers (each)		
Switches (lbs)		
HID Headlamps (each)		
Elemental Mercury (kg)		
<b>Total Mass of Mercury Collected During FY 2014-2015:</b>		See individual city reports.

<sup>62</sup>Only linear fluorescent lamps should be included

<sup>63</sup>Only compact fluorescent lamps should be included

<sup>64</sup>Thermostats can be reported by quantity or by pounds. Whichever unit is used, please avoid double-counting.

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

- 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

Highlights from the Program include:

The Program has dedicated a significant amount of time and money toward the development of the design, plans and specifications for the Vallejo retrofit projects, and other elements of the Clean Watersheds for Clean Bay grant project. It was decided through the Clean Water for a Clean Bay Project Management Team that the city of Vallejo was the best location to conduct pilot projects for the evaluation of on-site stormwater treatment via retrofits in Solano County.

The first project is located on Broadway and Redwood streets between Redwood and Valle Vista in downtown Vallejo. The project retrofits a vegetative swale in the area between Broadway and the Southern Pacific railroad tracks. The land is owned by Southern Pacific Railroad but the Vallejo Sanitation and Flood Control District has an easement on the property that permits construction of a BMP. The BMP concept is to install a vegetative swale for a large portion of the block and provide curb cuts along Broadway to divert roadway runoff into the swale. There is a holdup on this project due to the encroachment onto UPRR right-of-way. The difficulties in communicating and obtaining permission from UPRR to work in their right-of-way may just prove to be the lesson learned on this project.

The second project is a retrofit of a PG&E substation with a two cartridge linear precast storm filter. The storm filter will receive all of the runoff from the PG&E substation. It is anticipated that this project will be constructed before the rain arrives in 2014 so that assessment of effectiveness of at least this portion of the project will be reported in the 2015 2016 Annual Report.

**Permittee Name: Fairfield-Suisun Urban Runoff Management Program**

The diversion of dry weather and first flush flows to POTWs in Solano County has been taken on by the Fairfield Suisun Sewer District. The project involves changing the operation of an existing pump station so as to divert stormwater from the station to the Fairfield Suisun Sewer District wastewater treatment plant. The pump station is located in the city of Fairfield just upstream from Suisun city. It serves a watershed area of approximately 6 acres all of which is zoned commercial, of which a significant portion is automotive repair. The pump station changes to be evaluated for this project include:

- Shutting off the stormwater pump station during dry weather
- Removing standing water in the pump station wet well throughout the dry season and before the first flush
- Monitoring concentrations of pollutants and pollutant indicators in the diverted water

The goal of this pilot project is to comply with provision C.11/12f of the MRP by better understanding the applicability, costs, and benefits associated with this and similar projects. The results from this in parallel studies by other agencies will inform planning for focused implementation of urban runoff measures during subsequent permit terms, in order to achieve maximum benefits and continue to make progress towards achieving load reductions called for in Mercury and PCB TMDLs.

#### Current Status

Normal discharges from the State Street Pump Station were terminated in mid -June. The contents of the pump stations wet well removed by Vactor truck and then discharged to the Fairfield Suisun Sewer District treatment plant. As dry weather runoff accumulates in the pump station, the water will be removed and disposed of at the POTW.

The Final Diversion Report was submitted as Part B of the Integrated Monitoring Report which was submitted by the Program to the Water Board on March 15, 2015.

**Section 12 - Provision C.12 PCBs Controls**

**C.12.a.ii,iii ▶ Ongoing Training**

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

Description:

Inspector training materials have been developed by BASMAA and provided to Solano County Health Inspectors. Training of Health Inspectors was performed on October 21, 2014. The focus of the training was consistency in enforcement levels, enforcement authority; city stormwater ordinances; high-priority facilities needed to be inspected during the fiscal year and enforcement levels associated with illegal discharges.

On June 24, 2014 the Program met and trained 4 Solano County Environmental Health inspectors utilizing the presentation which was prepared by BASMAA for recognition of POCs during industrial inspections. All four inspectors left the training with a better understanding of how to recognize PCB, copper and mercury containing equipment. Please see attached sign in sheet and first page of the presentation. There was no post survey taken.

Permittee Name: Fairfield-Suisun Urban Runoff Management Program

- C.12.b ▶ Conduct Pilot Projects to Evaluate Managing PCB-Containing Materials and Wastes during Building Demolition and Renovation Activities**
- C.12.c ▶ Pilot Projects to Investigate and Abate On-land Locations with Elevated PCB Concentrations**
- C.12.d ▶ Conduct Pilot Projects to Evaluate and Enhance Municipal Sediment Removal and Management Practices**
- C.12.e ▶ Conduct Pilot Projects to Evaluate On-Site Stormwater Treatment via Retrofit**
- C.12.f ▶ Diversion of Dry Weather and First Flush Flows to POTWs**
- C.12.g ▶ Monitor Stormwater PCB Pollutant Loads and Loads Reduced**
- C.12.h ▶ Fate and Transport Study of PCBs In Urban Runoff**
- C.12.i ▶ Development of a Risk Reduction Program Implemented Throughout the Region**

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

Summary

Highlights from the Program include:

The Program has dedicated a significant amount of time and money toward the development of the design, plans and specifications for the Vallejo retrofit projects, and other elements of the Clean Watersheds for Clean Bay grant project. It was decided through the Clean Water for a Clean Bay Project Management Team that the city of Vallejo was the best location to conduct pilot projects for the evaluation of on-site stormwater treatment via retrofits in Solano County.

The first project is located on Broadway and Redwood streets between Redwood and Valle Vista in downtown Vallejo. The project retrofits a vegetative swale in the area between Broadway and the Southern Pacific railroad tracks. The land is owned by Southern Pacific Railroad but the Vallejo Sanitation and Flood Control District has an easement on the property that permits construction of a BMP. The BMP concept is to install a vegetative swale for a large portion of the block and provide curb cuts along Broadway to divert roadway runoff into the swale. There has been a holdup on this project due to the encroachment onto UPRR right-of-way. The difficulties in communicating and obtaining permission from UPRR to work in their right-of-way may just prove to be the lesson learned on this project. The City of Vallejo has indicated that the project will break ground within the month of August 2015 and be completed within a month's time.

The second project is a retrofit of a PG&E substation with a two cartridge linear precast storm filter. The storm filter will receive all of the runoff from

**Permittee Name: Fairfield-Suisun Urban Runoff Management Program**

the PG&E substation. It is anticipated that this project will be completed before the rain arrives in 2015 so that assessment of effectiveness of at least this portion of the project will be reported in the 2015 2016 Annual Report. The project is been completed except for the vegetation of the filter media. The contractor has chosen to complete this step later in the year just prior to the onset of rain.

The diversion of dry weather and first flush flows to POTWs in Solano County has been taken on by the Fairfield Suisun Sewer District. The project involves changing the operation of an existing pump station so as to divert stormwater from the station to the Fairfield Suisun Sewer District wastewater treatment plant. The pump station is located in the city of Fairfield just upstream from Suisun city. It serves a watershed area of approximately 6 acres all of which is zoned commercial, of which a significant portion is automotive repair. The pump station changes to be evaluated for this project include:

- Shutting off the stormwater pump station during dry weather
- Removing standing water in the pump station wet well throughout the dry season and before the first flush
- Monitoring concentrations of pollutants and pollutant indicators in the diverted water

The goal of this pilot project is to comply with provision C.11/12f of the MRP by better understanding the applicability, costs, and benefits associated with this and similar projects. The results from this in parallel studies by other agencies will inform planning for focused implementation of urban runoff measures during subsequent permit terms, in order to achieve maximum benefits and continue to make progress towards achieving load reductions called for in Mercury and PCB TMDLs.

**Current Status**

Normal discharges from the State Street Pump Station were terminated in mid -June. The contents of the pump stations wet well removed by Vactor truck and then discharged to the Fairfield Suisun Sewer District treatment plant. As dry weather runoff accumulates in the pump station, the water will be removed and disposed of at the POTW.

A Final Diversion Report was submitted as Part B of the Integrated Monitoring Report which was submitted by the Program to the Water Board on March 15, 2014.



**Section 13 - Provision C.13 Copper Controls**

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

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

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

Training of Health Inspectors was performed on October 21, 2014. The focus of the training was consistency in enforcement levels, enforcement authority; city stormwater ordinances (including Copper controls); high-priority facilities needed to be inspected during the fiscal year and enforcement levels associated with illegal discharges.

The Program has revised its C.3 New Development Guidance Document and BMPs to reduce the impact of architectural copper features, including copper roofs, during construction and post construction. Because architectural Copper is not a popular feature in the Fairfield Suisun area, discharge of copper laden water from these structures is not seen as a significant source of copper.

In addition, the Program has developed a flyer for the permit counter entitled: Requirements for Architectural Copper. The flyer is based on a similar version from the San Mateo County-wide Water Pollution Prevention Program. The flier (see attached) describes how copper can harm aquatic life and best management practices which must be implemented to prevent prohibited discharges to the storm drain system.

**C.13.d.iii ▶ Industrial Sources Copper Reduction Results**

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

Summary

Training of Health Inspectors was performed on October 21, 2014. The focus of the training was consistency in enforcement levels, enforcement authority; city stormwater ordinances (including Copper controls); high-priority facilities needed to be inspected during the fiscal year and enforcement levels associated with illegal discharges.

No facilities were identified as potential sources of elevated levels of copper due to their industrial inspections. The Program will continue to attempt to identify industrial facilities with a higher potential to discharge copper to the storm drain system.

# Requirements for Architectural Copper

## Fairfield-Suisun Urban Runoff Management Program

**Protect water quality during installation, cleaning, treating, and washing!**

### Copper from Buildings May Harm Aquatic Life

Copper can harm aquatic life in San Francisco Bay. Water that comes into contact with architectural copper may contribute to impacts, especially during installation, cleaning, treating, or washing. Patination solutions that are used to obtain the desired shade of green or brown typically contain acids. After treatment, when the copper is rinsed to remove these acids, the rinse water is a source of pollutants. Municipalities prohibit discharges to the storm drain of water used in the installation, cleaning, treating and washing of architectural copper.



*Building with copper flashing, gutter and drainpipe.*

### Use Best Management Practices (BMPs)

The following Best Management Practices (BMPs) must be implemented to prevent prohibited discharges to storm drains.

#### ***During Installation***

- If possible, purchase copper materials that have been pre-patinated at the factory.
- If patination is done on-site, implement one or more of the following BMPs:
  - Discharge the rinse water to landscaping. Ensure that the rinse water does not flow to the street or storm drain. Block off storm drain inlet if needed.
  - Collect rinse water in a tank and pump to the sanitary sewer. Contact your local sanitary sewer agency before discharging to the sanitary sewer.
  - Collect the rinse water in a tank and haul off-site for proper disposal.
- Consider coating the copper materials with an impervious coating that prevents further corrosion and runoff. This will also maintain the desired color for a longer time, requiring less maintenance.



*Storm drain inlet is blocked to prevent prohibited discharge. The water must be pumped and disposed of properly.*

#### ***During Maintenance***

Implement the following BMPs during routine maintenance activities, such as power washing the roof, re-patination or re-application of impervious coating:

- Block storm drain inlets as needed to prevent runoff from entering storm drains.
- Discharge the wash water to landscaping or to the sanitary sewer (with permission from the local sanitary sewer agency). If this is not an option, haul the wash water off-site for proper disposal.

### Protect the Bay/Ocean and yourself!

If you are responsible for a discharge to the storm drain of non-stormwater generated by installing, cleaning, treating or washing copper architectural features, you are in violation of the municipal stormwater ordinance and may be subject to a fine.



*Photo credit: Don Edwards National Wildlife Sanctuary*

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

Note: There are no reporting requirements in the FY 14-15 Annual Report for Section C.14.

**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 <b>No</b> , skip to C.15.b.vi.(2):				
If <b>Yes</b> , Complete the attached reporting tables or attach your own table with the same information. Provide any clarifying comments below.				
Comments:				

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

Provide implementation summaries of the required BMPs to promote measures that minimize runoff and pollutant loading from excess irrigation. Generally the categories are:

- 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.

Summary:

See Program's annual report, section C.7. This portion of the annual report shows the Program's efforts towards the promotion of the School Water Education Program (SWEP). One of the primary focuses of this Program is water conservation. SWEP provides free water education resources to teach water awareness and conservation to students, teachers and parents in our service areas of Fairfield, Suisun City and Travis Air Force Base. The in-class education Programs as well as in an and he is ell as the resource materials and assembly Programs are multi-discipline and aligned to the content standards for California public schools. The Programs encourage students and adults to develop a healthy attitude of personal responsibility towards our environment and develop skills needed to contribute meaningfully to decision-making process on issues involving our resources and particularly conserving our most precious resource, water.

See above section C.9 of the Program's annual report. This portion of the annual report shows the Program's efforts toward the promotion of less toxic pest control and landscape management. The Program contracts with consultant Annie Joseph regarding Our Water Our World, including outreach efforts regarding pesticide reduction or the use of less toxic products to pesticides. For additional information on regional efforts, see section C.9.h.i of the Regional Supplement for Training and Outreach for FY2014-2015 submitted by BASMAA on behalf of all MRP Permittees.

**Permittee Name: Fairfield-Suisun Urban Runoff Management Program**

Suisun City Council has adopted a 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 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 has also put the State Water Efficient Landscape Ordinance into effect. 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.

**C.15.b.iii.(1) ► Planned Discharges of the Potable Water System**

Site/ Location	Discharge Type	Receiving Waterbody(ies)	Date of Discharge	Duration of Discharge (military time)	Estimated Volume (gallons)	Estimated Flow Rate (gallons/day)	Chlorine Residual (mg/L)	pH (standard units)	Discharge Turbidity <sup>65</sup> (NTU)	Implemented BMPs & Corrective Actions

<sup>65</sup>Monitor the receiving water for turbidity if necessary and feasible. Include data in this column if available.

