Santa Clara Valley
Urban Runoff
Pollution Prevention Program

September 15, 2014

FY 2013-2014 Annual Report

Submitted in Compliance with NPDES Permit No. CAS612008 (Order R2-2009-0074)

Program Annual Report
Sections 1 - 14

Campbell • Cupertino • Los Altos • Los Altos Hills • Los Gatos • Milpitas • Monte Sereno • Mountain View • Palo Alto
San Jose • Santa Clara • Saratoga • Sunnyvale • Santa Clara County • Santa Clara Valley Water District

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Hand Delivered on September 15, 2014

September 15, 2014

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

Subject: Submittal of FY 2013-2014 Program Annual Report

Dear Mr. Wolfe:

I am pleased to submit the Santa Clara Valley Urban Runoff Pollution Prevention Program's *FY 13-14 Annual Report* documenting Program-wide activities conducted during FY 2013-2014. The Program's *FY 13-14 Annual Report* consists of 14 sections and an Appendix. Each section reports on Program activities and the Program's involvement in regional activities associated with a specific Permit Provision. Related tasks and activities not related to a specific Permit Provision (e.g., street sweeping, Santa Clara Basin Watershed Management Initiative (SCBWMI) activities, etc.) are placed in the most appropriate section.

Pursuant to Provision C.16.c., the Program's *FY 13-14 Annual Report* includes a certification statement signed by the Program Manager. The Program's Management Committee, at its August 28, 2014 meeting, authorized the Program Manager to submit the *FY 13-14 Annual Report* on its behalf. This submittal was also provided electronically to the Water Board in accordance with the directions provided by Water Board staff in the document entitled *Guide for Submitting Electronic Documents*.

We would like to bring the Water Board staff's attention to Section 8 of the report, which provides a summary of the alternative approach that the Program and its member agencies will pursue in FY 14-15, in compliance with Pollutant of Concern Loads Monitoring requirements (Provision C.8.e). This approach addresses each management information need described in Provision C.8.e and will be implemented at a level equivalent to the monitoring effort described in this provision. The alternative approach was developed in collaboration with Water Board staff and Regional Monitoring Coalition (RMC) partners.

Please contact me if you have any comments or questions. We look forward to working with you to successfully address new challenges during FY 14-15.

Very truly yours,

Adam W. Olivieri, Dr. P.H., P.E.
Program Manager

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CC: SCVURPPP Management Committee Members
Attachments: FY 2013-2014 Annual Report- Sections 1-14- one (1) hard copy
FY 2013-2014 Annual Report- Appendices- one (1) hard copy
FY 2013-2014 Annual Report- Sections 1-14 and Appendices- one (1) compact disc

** The Program's *FY 13-14 Annual Report* is also available at www.scvurppp.org.

Santa Clara Valley
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Pollution Prevention Program

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Certification Regarding SCVURPPP Program Annual Report

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted.[1] 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.[2] I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.[3]"

Submitted on behalf of the Santa Clara Valley Urban Runoff Pollution Prevention Program (per Management Committee Direction)

September 15, 2014

Adam W. Olivieri, Dr. P.H., P.E.
Program Manager

[1] Notwithstanding the above, certain attachments were prepared as regional submissions as part of BASMAA collaborative efforts on behalf of all MRP Co-permittees.

[2] Notwithstanding the above, some of the attachments are works-in-progress and are submitted only with the intent and for the purpose of illustrating progress.

[3] Even though the Program report contains and incorporates the individual Co-permittee annual reports as attachments, this certification is made only with respect to the former; separate Co-permittee certifications have been provided with the latter.

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Table of Contents

Credits **i-3**

Section 1: Introduction **1-1**
- Background 1-1
- Organization of Report 1-2

Section 2: Municipal Operations **2-1**
- Introduction 2-1
- Program Activities 2-1
- Regional Activities 2-1

Section 3: New Development and Redevelopment **3-1**
- Introduction 3-1
- Program Activities 3-1
- Regional Activities 3-5

Section 4: Industrial and Commercial Site Controls **4-1**
- Introduction 4-1
- Program Activities 4-1
- Regional Activities 4-1

Section 5: Illicit Discharge Detection and Elimination **5-1**
- Introduction 5-1
- Program Activities 5-1
- Regional Activities 5-2

Section 6: Construction Site Controls **6-1**
- Introduction 6-1
- Program Activities 6-1
- Regional Activities 6-1

Section 7: Public Information and Outreach **7-1**
- Introduction 7-1
- Program Activities 7-1
- Regional Activities 7-11

Section 8: Water Quality Monitoring **8-1**
- Introduction 8-1
- Bay Area Regional Monitoring Coalition 8-1
- Creek Status Monitoring (C.8.c) 8-1
- Stressor/Source Identification Projects (C.8.d) 8-2
- Additional Monitoring Projects (C.8.d) 8-4

- San Francisco Estuary Receiving Water Monitoring (C.8.b) 8-4
- Citizen Monitoring and Participation (C.8.f) 8-5
- POC Loads Monitoring (C.8.e) 8-5
- Additional C.8.e Associated Activities 8-8
- Reporting, Data Quality and Data Management (C.8.g&h) 8-9

Section 9: Pesticides Toxicity Control 9-1
- Introduction 9-1
- Program Activities 9-1
- Regional Activities 9-6

Section 10: Trash Controls 10-1
- Introduction 10-1

Section11: Mercury and PCBs Controls 11-1
- Introduction 11-1
- Program and Regional Activities 11-1
- Additional Activities 11-11

Section 12: Copper Controls 12-1
- Introduction 12-1
- Program Activities 12-1
- Regional Activities 12-4

Section 13: PBDE, Legacy Pesticides and Selenium 13-1
- Introduction 13-1
- Regional Activities 13-1

Section 14: Exempt and Conditionally Exempted Discharges 14-1
- Introduction 14-1
- Program Activities 14-2
- Regional Activities 14-3

CREDITS

This Annual Report was a collaborative effort of the fifteen agencies participating in the Santa Clara Valley Urban Runoff Pollution Prevention Program (Program). EOA, Inc., as the Program management consultant, coordinated and compiled the Annual Reports submitted by the fifteen Co-permittees; and was responsible for the overall preparation of the Program's Annual Report. The Program expresses its appreciation to all those who contributed to this twenty-third Annual Report.

Management Committee Voting Members

- Cupertino – Cheri Donnelly
- Los Altos – Aida Fairman
- Los Altos Hills – Richard Chiu
- Milpitas – Steven Machida
- Mountain View – Eric Anderson
- Palo Alto – Joe Teresi
- San Jose – Napp Fukuda, MC Vice Chair
- Santa Clara – Dave Staub
- Sunnyvale – Melody Tovar, Budget AHTG/Executive Committee Chair
- Santa Clara County – Michael Rhoades
- Santa Clara Valley Water District – Liang Lee, MC Chair
- West Valley Communities – Kelly Carroll
  - Campbell
  - Los Gatos
  - Monte Sereno
  - Saratoga

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 1

Introduction

September 15, 2014

Section 1 Introduction

■ Background

Program Description

The Santa Clara Valley Urban Runoff Pollution Prevention Program ("Program") is an association of thirteen cities and towns in Santa Clara Valley, the County of Santa Clara, and the Santa Clara Valley Water District ("Co-permittees") that share a common permit to discharge stormwater to South San Francisco Bay. The Program incorporates regulatory, monitoring and outreach measures aimed at reducing pollution in urban runoff to the "maximum extent practicable" to improve the water quality of South San Francisco Bay and the streams of Santa Clara Valley. The Program is organized, coordinated, and implemented in accordance with a Memorandum of Agreement (MOA) signed by the Co-permittees in 1990, 1999, 2005 and 2006. The MOA covers the responsibilities of each Co-permittee and a cost-sharing formula for joint expenditures.

In June 1990, the San Francisco Bay Regional Water Quality Control Board (Water Board or RWQCB) issued the Program its first NPDES permit.[1] The permit was reissued in 1995[2], 2001[3] (amended in 2001[4] and 2005[5]) and 2009[6] (amended in 2011[7]). The permit reissued in 2009 and amended in 2011 is referred to as the Municipal Regional Stormwater NPDES Permit (MRP). The MRP covers stormwater discharges from a total of 76 municipalities and local agencies in Alameda, Contra Costa, San Mateo, and Santa Clara Counties, and the cities of Fairfield, Suisun City, and Vallejo.

Program Management

At the inception of the Program, the Santa Clara Valley Water District took the lead responsibility for management of the Program. EOA, Inc. was later retained to provide Program management services, and the Program's Management Committee designated the District as the Program's fiscal agent. On July 1, 2005, the City of Sunnyvale became the Program's fiscal agent.

The Program's Management Committee (MC) is the official decision-making body for the Program. The MC consists of at least one person from each Co-permittee who is officially designated and duly authorized to vote in his or her capacity as representative to the Program. In most instances, Co-permittees have also designated and authorized alternative representatives to vote in the absence of the primary representative. In all cases, the person authorizing and designating the representative to the Program is a duly authorized representative of the principal executive officer or ranking official of the Co-permittee.

During the term of the Permit, the Program Manager will submit, on a "joint basis", certain permit-required reports and a certification statement on behalf of the Co-permittees to the Water Board. In

[1] NPDES Permit No. CAS029718, Order No. 90-094.
[2] NPDES Permit No. CAS029718, Order No. 95-180 (as amended 7/21/99).
[3] NPDES Permit No. CAS029718, Order No. 01-024 (2/21/01).
[4] NPDES Permit No. CAS029718, Order No. 01-119, Amendment Revising Provision C.3. (10/17/01).
[5] NPDES Permit No. CAS029718, Order No. R2-2005-0035, Amendment Revising Order 01-119 (7/20/05).
[6] NPDES Permit No. CAS612008, Order No. R2-2009-0074 (10/14/09).
[7] NPDES Permit No. CAS612008, Order No. R2-2011-0083, Amendment Revising Order R2-2009-0074 (11/28/11).

August 2010, Co-permittees authorized the Program to continue submitting "joint reports" and a certification statement on their behalf. A signed confirmation statement from each Co-permittee designating a MC representative and/or alternate for their agency, and authorizing the Program Manager to submit certain reports to the Water Board on their behalf was included within Appendix 1-1 of the Program's *FY 09-10 Annual Report*. During FY 13-14, there were several changes made to MC representatives and alternates. The signed confirmation statements authorizing these changes are included within Appendix 1-1 of this Annual Report.

Program Annual Report

Permit Provision C.16.a of the MRP requires each Co-permittee to submit an Annual Report by September 15 of each year. Program annual reports are not required in accordance with the MRP; however, the Program's Management Committee decided at its June 17, 2010 meeting that a Program Annual Report is useful for documenting Program-wide activities and should be developed each year.

■ Organization of Report

The Program's *FY 13-14 Annual Report* consists of 14 sections, with relevant tables placed at the end of each section, and one Appendix. Each section reports on a specific Permit Provision. The Appendix provides final work products and other relevant information related to the completion of Program activities for specific provisions. Related tasks and activities not related to a specific Permit Provision (e.g., street sweeping, Santa Clara Basin Watershed Management Initiative (SCBWMI) activities, etc.) are placed in the most appropriate section. The structure of each Annual Report section, in most cases, consists of the following:

- Introduction – provides brief background information about the specific Permit Provision and its requirements;
- Program Activities – provides Program accomplishments for specific sub-provisions and/or projects; and
- Regional Activities – provides accomplishments conducted at the regional-level (e.g., BASMAA-related tasks) for specific sub-provisions and/or projects.

Following Section 1, the Program *FY 13-14 Annual Report* volume consists of the following sections:

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

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 2

Municipal Operations

September 15, 2014

Section 2 Municipal Operations

■ Introduction

Provision C.2 of the MRP requires Permittees to implement appropriate best management practices (BMPs) during operation, inspection and routine repair and maintenance of municipal facilities and infrastructure to control and reduce non-stormwater discharges and polluted stormwater to storm drains and watercourses. The provision identifies the following specific maintenance activities that require development and implementation of BMPs:

- Street and road repair and maintenance (C.2.a.),
- Sidewalk/plaza maintenance and pavement washing (C.2.b.),
- Bridge and structure maintenance and graffiti removal (C.2.c.),
- Stormwater pump stations (C.2.d.),
- Rural public works construction and maintenance (C.2.e.), and
- Corporation yards (C.2.f.).

■ Program Activities

The SCVURPPP Municipal Operations Ad Hoc Task Group (AHTG) was formed in 2009 to assist Co-permittees with implementing the new requirements in Provision C.2. In FY 13-14, the AHTG met once to plan the Rural Roads Training Workshop.

Rural Roads Maintenance Training Workshops – On November 12 and 13, 2013, the Program co-sponsored and helped conduct in-class workshops on rural roads maintenance best management practices (BMPs). The same workshop was conducted on both days. The workshops were aimed at rural roads maintenance workers and their direct supervisors, and covered practical, effective BMPs for rural road maintenance. Topics included effects of uncontrolled stormwater, types of erosion, and proper BMPs for stormwater and erosion control. The training included a group exercise sponsored by the Santa Clara Water District where attendees had an opportunity to assess BMPs installed in the field. Approximately 75 municipal staff attended the training. The evaluation forms indicated that the attendees thought the workshop was either very useful or somewhat useful. The agenda, attendance list and evaluation summary for this training are included in Appendix 2-1. Workshop presentations are available on the Program's website (www.scvurppp.org).

■ Regional Activities

Program staff continues to participate in the BASMAA Municipal Operations Committee and provides input on activities being conducted at the regional level. During FY 13-14, the Municipal Operations Committee did not meet. However, a workgroup meeting was held on June 3rd via a phone conference to discuss adding mobile automotive washing and carpet cleaning to the BASMAA Surface Cleaner Training and Recognition Program.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 3

New Development and Redevelopment

September 15, 2014

Section 3 New Development and Redevelopment Control Measures

■ Introduction

Provision C.3 contains the requirements for appropriate source control, site design, stormwater treatment and hydromodification management measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows, with emphasis on implementation of low impact development (LID) techniques. This section of the Annual Report describes the Program's efforts during FY 13-14 to assist Co-permittees to control the impacts of development on stormwater quality and flow through the development project planning, review and approval process.

■ Program Activities

During FY 13-14, Program efforts continued to focus on providing assistance to Co-permittees with C.3 and HMP implementation, and conducting training workshops for municipal staff and the development community. Program staff also began to participate in meetings with Water Board staff to discuss requirements for the next MRP. The Program continued to support the C.3 Provision Oversight Ad Hoc Task Group (C3PO AHTG) and use it as a forum to discuss Co-permittee needs, C.3 implementation issues, and regional activities, and get input on Program and regional products. The C3PO AHTG met approximately bimonthly during FY 13-14 to accomplish required tasks.

C.3.a. New Development and Redevelopment Performance Standard Implementation

This provision requires Co-permittees to update legal authority and development review and permitting processes, and conduct training and outreach to address new C.3 requirements. It also requires Co-permittees to encourage all projects not regulated by Provision C.3, but subject to the Co-permittees' planning, building, development, or other comparable review, to include adequate source control and site design measures.

During FY 13-14, the Program implemented the following activities to help meet this requirement:

Municipal Staff Training

The Program conducted two workshops to assist Co-permittees with implementation of Provision C.3:

- Workshop for Inspectors, "Improving Your Stormwater Treatment System Construction and O&M Inspections". December 16, 2013 (Cupertino).
- The Annual C.3. Workshop, "Current Trends in Low Impact Development and Green Street Implementation". June 4, 2014 (Campbell).

The workshop for inspectors provided information on inspecting stormwater treatment measures during construction and 45-day inspections, conducting ongoing O&M inspections, and vector control considerations. A total of 109 municipal staff attended the workshop. The workshop flyer, agenda, evaluation summary, and attendance list are included in Appendix 3-1.

The Annual C.3. Workshop, conducted in coordination with the Santa Clara Basin Watershed Management Initiative's Land Use Subgroup (SCBWMI LUS), covered basic C.3 training, updates on current and future permit requirements, announcement of the Site Design Awards recipients, a presentation on design review and inspection of stormwater treatment measures, a panel on C.3 implementation, and an afternoon session on green infrastructure planning, funding, and implementation. The workshop attracted 108 participants. The workshop flyer, agenda, evaluation summary, and attendance list are included in Appendix 3-2.

Site Design Awards

In 2006, the Program began an awards program for exemplary site designs to protect water quality. This awards program recognizes Santa Clara Valley's public agency and private development community leaders who are solving site design challenges, reducing stormwater pollution and runoff quantity, and going above and beyond the requirements of the MRP. An Awards Committee consisting of Program staff, Co-permittee representative(s), and an environmental group representative reviews the submittals and selects the winners.

The Program continued the Site Design Awards program in 2014, and one applicant was selected to receive the award. The Commodore Park Project in San Jose received the award in the Public Project, Community Park category. Stormwater treatment within the park is provided using bioretention, porous concrete, porous asphalt, and pervious pavers. It is also the first park within the City's park system without a conventional storm drain system. The City of San Jose will be formally recognized at an awards event being planned for October 2014.

C.3.b. Regulated Projects

Green Streets Pilot Projects and Summary Report

MRP Provision C.3.b.iii requires Permittees to cumulatively complete ten green street pilot projects that incorporate LID site design and treatment techniques during the permit term. A minimum of two projects must be completed in each county.

As required by MRP Provision C.3.b.v.(2), a Green Street Pilot Projects Summary Report describing the ten pilot projects was prepared and submitted via BASMAA on September 15, 2013. The report was funded by SCVURPPP and other stormwater programs through BASMAA as a regional submittal and prepared by BASMAA's contractor, Geosyntec Consultants.

The following projects were identified as qualifying green street pilot projects in Santa Clara County:

Hacienda Avenue, Campbell

The Hacienda Avenue Green Street Project is located in the City of Campbell on a segment of Hacienda Avenue that connects the San Tomas Area Neighborhood to Winchester Boulevard. Hacienda Avenue is a residential collector street that provides an important east/west link for residents of Campbell and San Jose to the Santa Clara County Los Gatos Creek Park and Trail, as well as other points to the north and south. Currently the roadway is a 70-foot wide expanse of pavement, which creates a physical separation between the neighborhoods to the south and north. The goals of the project are to significantly reduce the roadway width by reclaiming and transforming approximately 25% of the

existing roadway surface into public green space, running the length of Hacienda Avenue (approximately 1 mile). The project will include:

- Replacement of asphalt concrete surfaces with pervious material such as permeable paving, landscaped areas, and bioretention areas.
- Landscaped bioretention areas with non-turf, non-invasive and low maintenance drought tolerant plant materials, for treatment of runoff from street surfaces.
- Street trees, where appropriate, to provide shading over new paved surfaces.
- Bicycle lanes and sidewalks to provide an attractive pedestrian and bicycle route.

The project received $2,000,000 in funding from the Bay Area Integrated Regional Water Management Plan (IRWMP), and $500,000 in funding from Caltrans (in the form of a Federal Grant under Community Development Transportation Program, with funds originating from Federal Transportation Enhancement Fund). The total budget for the project is approximately $4,635,000. The City of Campbell is providing the remaining funds for this project. Project construction began in summer 2014.

Packard Foundation Project, Los Altos

The David and Lucile Packard Foundation Green Street is located in the City of Los Altos on Second Street between Lyell Street and Whitney Street. The green street features were constructed in 2012 as part of the Packard Foundation's development of its new office building at 343 Second Street. The green street portion of the project incorporates curbside flow-through rain gardens and corner bulb-outs to capture, treat and infiltrate runoff from adjacent impervious surfaces. (The runoff from the building and associated hardscape and parking lots is captured and treated by other stormwater treatment measures.) The Packard Foundation provided full funding for this project.

Southgate Neighborhood Green Streets, Palo Alto

The Southgate Neighborhood Green Streets Project is located within the Southgate neighborhood in the City of Palo Alto. This is a single family residential neighborhood which was designed in the 1920s to have an existing storm drainage pattern based on gutter flows. Over time, the storm water drainage system deteriorated and drainage problems within the neighborhood resulted in extended ponding of storm water. The City of Palo Alto decided to retrofit the neighborhood to improve surface drainage and incorporate green street elements to improve water quality.

The proposed treatment measures include bioretention and bioinfiltration areas, porous pavement crosswalks, and a porous pavement "paseo" (pedestrian walkway connecting two streets). The bioretention areas will be incorporated into the street right-of-way and existing parkway strips (vegetated areas between the sidewalks and the streets). The project includes installation of 16 bioretention areas. The bioretention areas will be sited in locations that optimize the amount of tributary area draining to each system. The size and configuration of each bioretention area vary based on various constraints in the neighborhood. Porous pavers will be incorporated into the crosswalks of two (four-legged) intersections in the neighborhood. The pavers will connect each adjacent corner with a 10-foot-wide crosswalk, creating approximately 4, 560 square feet of pervious walkway as a part of the project. Project construction began in spring 2014.

C.3.c. Low Impact Development (LID)

LID Outreach Presentations

Program staff (Jill Bicknell) gave two presentations to help educate members of the development community, industry and business representatives, consultants, public agencies, students, and other groups about LID implementation in Santa Clara Valley and the new LID requirements. These included:

- "Hydromodification Performance Standards", presented at the Hydromodification Workshop at the CASQA 2013 Annual Conference, September 9, 2013;
- "Stormwater Controls for Development Projects", presented as a guest lecturer for the Santa Clara University course entitled "CENG 161/261: Sustainable Water Resources", May 16, 2014.

LID Guidance

Program staff provided technical guidance and expertise as needed to Co-permittee staff and consultants, via email, phone conversations and meetings, on implementation of LID at private and public development projects. Based on experience of the Co-permittees in implementing LID, Program staff began preparing updates to the SCVURPPP C.3 Stormwater Handbook. The updates will be completed in FY 14-15.

Participation in BASMAA Development Committee

Program and Co-permittee staff continued to participate in the BASMAA Development Committee to implement the requirements under this provision, as many of the requirements were or will be met by the development of regional products. Highlights of the tasks implemented by the BASMAA Development Committee in FY 13-14 are presented under "Regional Activities".

C.3.f. Alternative Certification of Stormwater Treatment Systems

Update of Qualified Consultants List

To assist Co-permittees in identifying third parties to conduct alternative certification reviews of stormwater plans for proposed development projects, the Program has maintained a "List of Qualified Consultants" on its website. This is a list of licensed engineers who are qualified to design or review proposed storm water treatment control measures and hydromodification flow control facilities for new and redevelopment projects. The list is updated every two years. The update process consists of Program staff sending out a Request for Qualifications (RFQ) to those currently on the list as well as those who have requested to receive the RFQ. Program staff then compare submitted Statements of Qualifications to a list of requirements and evaluation criteria. During FY 11-12, the RFQ was revised to require consultants to demonstrate experience with the sizing and design of LID treatment measures as well as experience with inspection of constructed LID measures for consistency with approved plans. The next update process will occur in summer/fall of 2014.

C.3.g. Hydromodification Management

Bay Area Hydrology Model Update

In 2006, SCVURPPP collaborated with the San Mateo and Alameda countywide stormwater programs to fund the development of the Bay Area Hydrology Model (BAHM), a tool for simulating pre- and post-project runoff conditions and sizing hydromodification control measures to meet permit requirements. The BAHM included simplified methods to simulate the effect of LID treatment measures on runoff

hydrology but did not explicitly model the movement of runoff through these measures. During FY 12-13, the three countywide programs contracted with the BAHM developer, Clear Creek Solutions, to update the BAHM to a Windows 7 platform and to explicitly model LID treatment measures including bioretention, planter boxes, pervious pavement, infiltration basins and trenches, and dry wells. In addition, enhancements were made to the data management, plotting, and reporting features of the BAHM. The updated model and User Manual were completed in FY 13-14. Trainings on the updated model were also conducted in FY 13-14. Two half-day sessions, Basic (8AM-12 PM) and Advanced (1-5 PM) were held on April 8, 2014 in Santa Clara and on April 9 and 10, 2014 in Fremont.

C.3.h. Operation and Maintenance of Stormwater Treatment Systems

Program staff continued to collect annual inspection data from Co-permittees for submittal to the Santa Clara County Vector Control District per Provision C.3.h.iv.(2); and for conducting internal analyses of common BMP O&M issues. Also, as previously described under Section C.3.a above, the Program held a workshop on "Improving Your Stormwater Treatment System Construction and O&M Inspections" on December 16, 2013 in Cupertino. More information is provided in Appendix 3-1.

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

Site Design Fact Sheets

Per MRP Provision C.3.i., Permittees must require development projects that create and/or replace 2,500 – 10,000 square feet of impervious surface and detached single family home projects that create and/or replace 2,500 square feet or more of impervious surface to install one of six site design measures, beginning December 1, 2012. Before this date, Permittees were required to develop standard specifications for lot-scale site design and treatment measures as a resource for applicants with these types of projects. Program staff worked with the BASMAA Development Committee and Geosyntec Consultants during FY 11-12 to develop regional standard specifications in the form of four fact sheets on the following measures: pervious paving, landscape dispersion, rainwater harvesting and use, and rain gardens. (The first three fact sheets cover the six required site design measures, and the fourth fact sheet on rain gardens is an optional measure available to small and single family home projects). The completed fact sheets were distributed to MRP Permittees in early September 2012 as a resource for their use. The Program customized the fact sheets for SCVURPPP member agencies and posted the fact sheets on its website (www.scvurppp.org). Co-permittees continued to use the fact sheets as a resource in FY 13-14.

■ Regional Activities

Program staff continued to participate actively in the BASMAA Development Committee to implement the regional MRP requirements under this provision, with the Assistant Program Manager continuing to serve as Committee Chair. The Development Committee accomplished the following regional tasks in FY 13-14:

- Annual Report Form Revisions – SCVURPPP staff took the lead for BASMAA in preparing revisions to the Annual Report Form to address changes in MRP reporting requirements for FY 13-14. The Development Committee reviewed and approved the revisions proposed for Section C.3 of the form.

- Green Street Pilot Project Summary Report – MRP Provision C.3.b.v.(2) requires that a Green Street Pilot Projects Summary Report describing the ten pilot projects be prepared and submitted by September 15, 2013. The report must also describe the results of the water quality monitoring or modeling performed for each project to determine the estimated reduction in pollutant loading achieved by the project. The report was funded by SCVURPPP and other stormwater programs through BASMAA as a regional submittal and prepared by BASMAA's contractor, Geosyntec Consultants. In FY 12-13 and early FY 13-14, Program staff reviewed and commented on the pilot project reporting forms and data collection procedures, submitted information on local green street projects (with assistance from Campbell, Los Altos, and Palo Alto staff), and reviewed the draft and final draft reports. The Green Street Pilot Projects Summary Report was submitted to the Water Board in the BASMAA FY 12-13 Regional Supplement for New Development and Redevelopment.
- LID Feasibility/Infeasibility Status Report – Program staff provided in-kind services to assist with the preparation of a regional "Status Report on Application of Feasibility and Infeasibility Criteria" for the LID treatment techniques of infiltration and rainwater harvesting and use, which was submitted to the Water Board on December 1, 2013. The Report found that the application of current feasibility/infeasibility criteria has resulted in widespread installation of bioretention facilities that are effectively treating water quality design runoff volumes and retaining a significant portion of total runoff. In addition, nearly half of the regulated development projects approved during the last two fiscal years reported using infiltration-based site design measures, including pervious paving. The Permittees will continue to promote infiltration to the degree achievable on each development site via site design and bioretention.
- Municipal Regional Permit Reissuance – Under direction of the BASMAA Board of Directors, the Development Committee began discussions (internally and with Water Board staff) of major issues to be addressed in Provision C.3 of the next MRP. Program staff are helping to lead these efforts. In FY 13-14, the Committee worked on the following main issues:
  - Development of an LID White Paper to inform and support future C.3 requirements;
  - Formation and leadership of a Green Infrastructure Work Group to explore approaches to long term planning and funding for green infrastructure and identify short term actions associated with long term planning that are reasonable for inclusion in the next MRP (for Provision C.3 as well as Provisions C.10, C.11 and C.12).

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 4

Industrial and Commercial Site Controls

September 15, 2014

Section 4 Industrial and Commercial Site Controls

■ Introduction

Provision C.4 requires Permittees to implement an industrial and commercial site inspection and control program at all sites which could reasonably be considered to cause or contribute to pollution of stormwater runoff, with follow-up and enforcement consistent with local Enforcement Response Plans (ERPs), to prevent discharges of pollutants and impacts on beneficial uses of receiving waters. The provision identifies specific elements of the program including identifying sites to inspect (C.4.b.ii.(1) and (2)), inspection frequency (C.4.b.ii.(3) and (5)), inspection content (C.4.b.ii.(4)), data tracking (C.4.b.ii.(6) and C.4.c.ii.(4)) and staff training.

■ Program Activities

The SCVURPPP Industrial and Commercial Business Inspection and Illicit Discharge Detection and Elimination (IND/IDDE) Ad Hoc Task Group (AHTG) was formed in 2009 to assist Co-permittees with implementing new requirements in the MRP. The AHTG continued to meet in FY 13-14 and accomplished the following tasks related to industrial and commercial business inspection:

- Statewide Industrial General Permit Update -- Program staff provided a summary of the adopted Industrial General Permit (IGP) highlighting significant changes to the IGP. The AHTG discussed the potential impacts of the revised IGP to agency owned facilities and to the industrial inspection program.
- Industrial Inspector Training -- The Program planned and held a training roundtable for inspectors on May 20, 2014. The training *"Industrial and Commercial Stormwater Inspections"* included a regulatory refresher, methods for identifying pollutants of concern source areas, and procedures for documenting inspections and investigations. Attendees also participated in evaluating several inspection scenarios provided by the Cities of San Jose, Sunnyvale and Palo Alto. Participants worked in groups to determine different types of violations presented in inspection scenarios related to a commercial produce distributor, a nonresidential construction facility, a restaurant trash enclosure, an industrial facility cooling tower, a large industrial truck rental and maintenance facility, and a used automobile dealer. Approximately 70 municipal staff attended the training. The evaluation forms indicated that the majority of the attendees thought the workshop was either very useful or somewhat useful. The agenda, attendance list and evaluation summary for this training are included in Appendix 4-1. Workshop presentations are available on the Program's website (www.scvurppp.org).

■ Regional Activities

Regional activities related to Provision C.4 are addressed, as needed, by the BASMAA Municipal Operations Committee. Program staff continues to participate in this Committee and provides input on activities being conducted by the Committee (see Section 2).

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 5

Illicit Discharge Detection and Elimination

September 15, 2014

Section 5 Illicit Discharge Detection and Elimination

■ Introduction

Provision C.5 requires Permittees to implement an illicit discharge control program that includes an active surveillance component, a centralized complaint collection component, and a follow-up component to target illicit discharge and non-stormwater sources. The provision identifies specific elements of the program including follow up and enforcement consistent with local Enforcement Response Plans (C.5.b), a central contact point for complaints and spill reporting (C.5.c.), mobile business discharge control program (C.5.d.), collection system screening program (C.5.e) and spill and discharge complaint tracking system (C.5.f).

■ Program Activities

The SCVURPPP Industrial and Commercial Business Inspection and Illicit Discharge, Detection and Elimination (IND/IDDE) Ad Hoc Task Group (AHTG) was formed in 2009 to assist Co-permittees with implementing new requirements in the MRP. The AHTG continued to meet in FY 13-14 to assist with implementing the MRP and accomplished the following tasks related to illicit discharges:

- Mobile Business Inventory -- The AHTG developed an inventory of mobile businesses located in Santa Clara County. The inventory was developed by reviewing business licenses, yellow page searches and online business searches. The inventory includes automotive washing, steam cleaning and carpet cleaning mobile businesses. The list is being used to share mobile business inventories among co-permittees to comply with MRP Provision C.5.d.ii.

  The intent of the mobile business inventory is to assist agencies with providing consistent education and distribution of BMP information. Standard procedures for handling and managing the mobile business inventory will be developed next year. The procedures will include steps for adding businesses to the inventory and regularly sharing information.

- Mobile Business Outreach -- The AHTG conducted an outreach mailing to mobile businesses located in Santa Clara County. The mailing consisted of a letter introducing the stormwater program and the mobile business BMPs. The mobile business BMP Brochure was included with the letter. The list of businesses compiled by the AHTG was used for the mailing. The letter and brochure was sent to 160 businesses throughout the County. The AHTG will continue to collect ideas regarding outreach opportunities to mobile businesses including distributing BMP information at public outreach events. Co-permittees will also continue to distribute the brochure to mobile businesses as part of their inspection and illicit discharge elimination programs.

- Inspector Training – The Program planned and held a training roundtable for inspectors on May 20, 2014. The training *"Industrial and Commercial Stormwater Inspections"* included a regulatory refresher, methods for identifying pollutants of concern source areas, and procedures for documenting inspections and investigations. Attendees also participated in evaluating several inspection scenarios provided by the Cities of San Jose, Sunnyvale and Palo Alto. Participants worked in groups to determine different types of violations presented in inspection scenarios related to a commercial produce distributor, a nonresidential construction facility, a restaurant trash enclosure, an industrial facility cooling tower, a large industrial truck

rental and maintenance facility, and a used automobile dealer. Approximately 70 municipal staff attended the training. The evaluation forms indicated that the majority of the attendees thought the workshop was either very useful or somewhat useful. The agenda, attendance list and evaluation summary for this training are included in Appendix 4-1. Workshop presentations are available on the Program's website (www.scvurppp.org).

Regional Activities

- Regional activities related to Provision C.5 are addressed, as needed, by the BASMAA Municipal Operations Committee. Program staff continues to participate in this Committee and provides input on activities that will be conducted by the Committee (see Section 2).

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 6

Construction Site Controls

September 15, 2014

Section 6 Construction Site Controls

■ Introduction

Provision C.6 requires Permittees to implement a construction site inspection and control program at all construction sites, with follow-up and enforcement consistent with local Enforcement Response Plans (ERPs), to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The provision identifies specific elements of the program including six Best Management Practices (BMPs) categories (C.6.c), the plan approval process (C.6.d), inspection frequency (C.6.e.ii.(2)), inspection content (C.6.e.ii.(3)), data tracking and reporting (C.6.e.ii.(4) and iii.) and staff training (C.6.f). In addition, Permittees reported on the adequacy of their legal authority and implementation of their Enforcement Response Plan in the FY 09-10 Annual Report.

■ Program Activities

Co-permittee Guidance

The SCVURPPP Construction Inspection Ad Hoc Task Group (AHTG) was formed in September 2009 to assist Co-permittees with implementing the new requirements in the MRP. The AHTG developed tools during FY 09-10 to assist with implementation of the MRP, including an enforcement response plan (ERP) outline, a model stormwater construction inspection form, an Excel workbook template for construction inspection data tracking, and guidance for identifying high priority construction sites for inspection during the wet season.

During FY 13-14, the AHTG did not meet in person. The AHTG exchanged ideas for the annual construction inspector training by email. Details on the FY 13-14 training workshop are provided below.

Construction Inspector Training

The Program conducted a *Construction Site Stormwater Compliance Workshop* for municipal staff on April 22, 2014 in Sunnyvale. The workshop addressed inspection of construction BMPs and permanent stormwater controls. The first half of the workshop was classroom session with presentations on the MRP requirements, the Statewide Construction Stormwater General Permit and BMPs at construction sites. The second half of the workshop was a field session with hands-on demonstrations of BMPs. Approximately 75 municipal staff attended the workshop. The agenda, attendance list and evaluation summary for the workshop are included in Appendix 6-1. Workshop presentations are available on the Program's website (www.scvurppp.org).

The Program also renewed its subscription to the CASQA Construction BMP Handbook portal for Co-permittees' use.

■ Regional Activities

Program staff participated in the BASMAA Development Committee, which serves as the forum for discussion of regional issues and activities related to Construction Site Control. In FY 13-14, there were no construction-related issues discussed by the Committee.

Program staff also participated in the CASQA Construction Subcommittee conference calls and provided information of interest to Co-permittee staff. The Statewide Construction General Stormwater Permit (Order No. 2009-0009-DWQ) expired on September 2, 2014. The State Board staff indicated their intent to reissue the Permit with minor revisions and no changes with the implementation approach. The CASQA Construction Subcommittee developed and provided the State Water Board staff with an informal document detailing issues and recommended revisions to the Permit that would provide clarification and consistency for a reissued permit.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 7

Public Information and Outreach

September 15, 2014

Section 7 Public Information and Outreach

■ Introduction

The goals of the Public Information and Outreach (Public Information and Participation or PI/P) element of the Program are to identify and change behaviors that adversely affect water quality, and to increase the understanding and appreciation of streams and the Bay. The Program's FY 13-14 PI/P Work Plan provided a strategy to achieve these education and public participation goals with specific projects funded in the Program's FY 13-14 budget.

Highlights of the accomplishments of FY 13-14 PI/P projects and ongoing projects from previous years are described in the sections below according to permit requirements.

FY 13-14 PI/P projects included the following:

- Program Activities
  - Advertising Campaign – Watershed Watch Campaign (Provision C.7.b.)
  - Public Opinion Survey (Provision C.7.b.)
  - Public Outreach Events (Provision C.7.e.)
  - Citizen Involvement Events - Watershed Watchers Program at the Don Edwards San Francisco Bay National Wildlife Refuge, and funding for advertising the National River Cleanup Day (Provision C.7.f.)
  - School-Age Children Outreach - ZunZun School Assemblies and Watershed Watchers Program at the Don Edwards San Francisco Bay National Wildlife Refuge. (Provision C.7.e.)
- Regional Activities
  - BASMAA Regional Advertising Campaign (C.7.b.)
  - BASMAA Media Relations Project (C.7.c.)
  - BASMAA IPM Store Partnership Program (C.9.h.i)

■ FY 13-14 Program Activities

C.7.b. Advertising Campaigns

The cornerstone of the Program's outreach activities is the Watershed Watch Campaign (Campaign). The Campaign completed 14 years of implementation (and 13 years of advertising) in FY 13-14. The Campaign implemented various outreach activities including media advertising. The FY 13-14 Campaign Work Plan and Media Advertising Plan are included in Appendix 7-1.

The following tasks were completed by the Program's consultant, with assistance from Program and Co-permittee staff, during FY 13-14. The FY 13-14 Watershed Watch Campaign Annual Report is included in Appendix 7-1.

- **Task 1: Creative Development** – Developed new television and radio advertisements on Integrated Pest Management topics: Hiring an IPM-trained pest control company, hiring a Green Gardener, and choosing/using less-toxic pest control. Developed a new transit advertisement focusing on litter prevention. Other creative (e.g., web tiles, online banners) was also developed for digital media.

- **Task 2: Media Advertising** – Conducted a media promotion consisting of radio, television, online and transit advertising. Messages included less-toxic pest management, litter prevention, Green Gardener program promotion, car washing, and proper disposal of household hazardous waste.

  Overall, the Watershed Watch media buys included 614 radio advertisements (387 paid and 227 free), 152 television advertisements (94 paid and 58 free), 50 transit advertisements (40 paid and 10 free), and 146 online advertisements. The net advertising budget for media was $94,285. Media partners provided an added value package of benefits and resources of $53,452. Additional details on the media campaign are included in the FY 13-14 Watershed Watch Campaign Year-End Report included in Appendix 7-1.

- **Task 3: Partnership Development and Coordination** – Continued development of the partner database and conducted meetings with potential partners. Developed a new business partnership with SprinklerTimes which sells an easy to use online program and smartphone app for scheduling watering irrigation times. Currently, nine Watershed Watch partners offer discounts with the Watershed Watch discount card. A list of current partners is included in Appendix 7-2.

- **Task 4: Added Value Development** – As a result of media partnership negotiations and community partnership activities, the Campaign received significant added-value resources. These include free advertising, partnership discounts, live promotions, etc. The estimated total added-value to the FY 13-14 Campaign from partners (community and media) is $58,992. Additional details are included in the Watershed Watch Campaign Year-End Report included in Appendix 7-1.

- **Task 5: Website Maintenance** – Continued to maintain the Watershed Watch website. The Watershed Watch Web Statistics Report is included in Appendix 7-3. Continued to maintain the Campaign's Facebook and Twitter pages. The Campaign's Facebook page currently has 577 fans. The Campaign's Twitter page has 422 followers.

- **Task 6: Events Coordination** – Coordinated and attended community outreach events. The consultant staffed five outreach events.

- **Task 7: Public Relations** – Publicized relevant BASMAA press releases and developed a local press release on the promotional discounted car wash events. The car wash press release received coverage in the two Silicon Valley Community Newspapers, Almaden Resident and Cambrian Resident, published on June 6, 2014.

- **Task 8: FY 14-15 Work Plan and FY 13-14 Annual Report Development** – Developed the FY 14-15 Work Plan and the FY 13-14 Year-End Report.

Evaluation of Effectiveness

Many factors indicate that the FY 13-14 Watershed Watch Campaign was a success (see the FY 13-14 Watershed Watch Campaign Year-End Report in Appendix 7-1). Some of these include:

- The continued successful partnership with Classic Car Wash, Premier Car Wash, Happy Hollow Park and Zoo, and Jiffy Lube;
- The large number of gross impressions made by media advertising: 14,553,943;
- Media and community partners provided $58,992 in added-value resources, which greatly supplemented the Campaign's total media buy of $ 94,285.26;
- Number of WW Discount Cards used at Classic Car Wash: 565 discounted car washes ($2,260 value).
- Increase in website visits following outreach events and media advertising.
- Increase in Twitter followers during the "follow me to be litter-free" transit and digital advertising media campaign. The Campaign gained a total of 350 followers on Twitter during FY 13-14.
- The completion of all tasks in the FY 13-14 scope of work, with active participation of Program and Co-permittee staff.

Be the Street Campaign

The Program is participating in BASMAA's "Be the Street" Campaign to conduct anti-litter outreach. The Be the Street Campaign is using a Community Based Social Marketing approach to set "no littering" as the norm among the target audience, which is youth between the ages of 14 – 24. In FY 13-14, Program and Co-permittee staff participated in Be the Street Campaign meetings, reviewed work products, and provided feedback on campaign implementation. Additional information on the Be the Street Campaign is included under "Regional Activities".

C.7.b.Post-Campaign Public Opinion Surveys

Municipal Regional Permit (MRP) Provision C.7.b. Advertising Campaign requires Co-permittees to conduct advertising campaigns on trash/litter and pesticides, and to conduct pre-campaign and post-campaign surveys to evaluate the success of these campaigns. The Program participated in BASMAA's "Be the Street" anti-littering campaign that includes pre- and post-campaign surveys. Information on the Be the Street Campaign's post-campaign survey is included under "Regional Activities".

The Program conducted advertising on pesticides as part of the Watershed Watch Campaign. Effectiveness evaluation of pesticide advertising was done via a Public Opinion Survey of Santa Clara Valley residents conducted in March and April 2014. Information on the 2014 Public Opinion Survey is provided below.

SCVURPPP 2014 Public Opinion Survey

In March 1991, the Program conducted its first public opinion survey to determine public awareness of urban runoff pollution issues. The Program has been conducting public opinion surveys approximately every five years since the 1991 survey. Surveys were conducted in 1996, 1999, 2003 and 2009. In 2014, SCVURPPP again conducted a public opinion survey in FY 13-14 to estimate if any changes have occurred in the public's understanding of watershed and pollution prevention issues since 2009.

The Program contracted with EMC Research to conduct the Public Opinion Survey. EMC Research conducted Random Digit Dialing Survey of Santa Clara Valley residents in March and April 2014. Overall,

565 interviews were conducted that included 37 high school students and 528 adults. Highlights of survey results are below:

- Santa Clara Valley residents continue to understand that their actions impact local water quality. 75% of respondents believe that private residents are "somewhat responsible" or "very responsible" for water pollution; compared to 81% in 2009, and 74% in 1999.
- Many pollution prevention actions show gains in participation rates, including the following:
  - 61% of residents report using reusable shopping bags in 2014 compared to 36% in 2009.
  - 40% of residents report sweeping driveways instead of hosing; compared to 34% in 2009, 29% in 2003, and 30% in 1999.
  - 31% of residents are properly disposing fluorescent light bulb; compared to in 27% 2009 and 9% in 2003.
  - 32% of residents are taking leftover paints, insecticides and other Hazardous Wastes to a Household Hazardous Waste collection center; compared to 30% in 2009, 25% in 2003, and 25% in 1999.
- Understanding of the watershed concept has remained unchanged since 1999. 27% of respondents could define a watershed in 2014, compared to 27% in 2009, 20% in 2003, and 27% in 1999.
- In 2014, 75% of residents understand that water that runs into the storm drains is not treated compared to 81% in 2009.

The survey included several questions to understand residents' awareness of pesticide issues. Information on responses to pesticide related questions is below:

- 21% of Santa Clara Valley residents report that they currently use less-toxic pest control substances and methods for pest control, compared to 22% in 2009, 20% in 2003, and 20% in 1999. (Note that the surveys in 1999, 2003, 2009 asked about non-toxic pest control; verbiage was changed in 2014 for consistency with outreach messages.)
- 19% of Santa Clara Valley residents that have a yard or garden currently hire landscape maintenance hire landscape and yard maintenance contractors that use less-toxic weed and pest control methods. This question was asked for the first time in 2014.
- 17% of Santa Clara Valley residents hire exterminators and pest control professionals that use less-toxic pest control methods. This question was asked for the first time in 2014.
- 14% of Santa Clara Valley residents that have a yard or garden use watershed-friendly, sustainable techniques such as building a rain garden or removing paved surfaces. This question was asked for the first time in 2014.

Overall, the results indicate that there has been progress is changing some pollution prevention behaviors. However, the percentage of residents using less-toxic pesticides continues to be at the same level as reported in previous surveys. In FY 14-15, the WEO AHTG will further analyze survey results and develop an outreach strategy for conducting future outreach.

The 2014 Public Opinion Survey Report is included in Appendix 7-4.

C.7.c. Media Relations – Use of Free Media

Regional

During FY 13-14, the Program participated in the BASMAA Media Relations Project which conducted six pitches on various pollution prevention topics. The pitches resulted in a total of 50 media placements. Copies of the pitches were provided to Co-permittees for placement in local community newspapers. Additional information on the BASMAA Media Relations Project is included under "Regional Activities".

Local

In addition to promoting the BASMAA pitches, the Watershed Watch Campaign developed a press release to publicize the car wash promotions.

Evaluation of Effectiveness

The six pitches conducted by the BASMAA Media Relations Project resulted in 50 media placements: twenty two on the radio; twenty seven online (this included radio station and newspaper websites), and one on TV. Additional details are included in the BASMAA Media Relations Final Report included in Appendix 7-5. The effectiveness of placement in local media is described in the SCVURPPP Co-permittee annual reports.

The Watershed Watch press release on car wash promotions received coverage in the two Silicon Valley Community Newspapers (Almaden Resident and Cambrian Resident) published on June 6, 2014. Copies of the press release are included in Appendix 7-5

C.7.d. Stormwater Point of Contact

Program's Toll-Free Telephone Numbers

The Program maintained two toll free telephone numbers, the Program's information number (800-794-2482) and the Watershed Watch hotline (866-WATERSHED), for calls from the general public and requests for information. Program and Watershed Watch consultant staff continued to maintain the Program and Watershed Watch websites respectively.

Individual agency points of contact are publicized on Program outreach materials and websites and the point of contact list is maintained by the Program and their authorized agents. The Management Committee Contact List and the Construction-Illegal Discharge-Industrial Inspection Contact List are included in Appendix 7-6.

Evaluation of Effectiveness

The Watershed Watch website continued to receive a large number of visits this year. Program staff received 21 requests on the Watershed Watch website for outreach materials, and 14 requests for information. Program staff also responded to approximately 7 calls from the public in FY 13-14. The Watershed Watch Web Statistics Report is included in Appendix 7-3.

C.7.e. Public Outreach Events

Program staff, the Watershed Watch consultant, and Co-permittees staffed ten events at which IPM, proper car washing, litter, and general storm water pollution prevention outreach was conducted. Events were selected based upon target audience and expected attendance. Outreach events in FY 13-14 included:

- Pumpkins in the Park, October 12, 2013
- Haunt the Hollow, October 27, 2013
- San Jose Trash Summit, November 15, 2013
- Mission College Eco Fair, April 17, 2014
- Capitol Premier Car Wash, May 21, 2014
- Delta Queen Classic Car Wash, June 4, 2014
- Festival in the Park, June 7, 2014
- Robertsville Classic Car Wash, June 11, 2014

The Watershed Watch event display developed in FY 12-13 was used at all events. The display features a central panel titled "You are the Solution to Water Pollution" that is used at all events. This panel uses a large illustration to show the impact of daily activities on stormwater pollution. The side panels are pollutant/behavior specific and changed according to the event focus. The side panels address the following issues: preventing litter, practicing Integrated Pest Management, and environmentally-friendly car washing.

Event staff distributed the following brochures at the events: Less-Toxic Pest Management fact sheets, "10 Most Wanted Backyard Bugs" brochures, "Pests Bugging You" pocket guides, "You are the Solution to Water Pollution" brochures, and "Clean Cars & Clean Creeks" brochures. Giveaways included flyswatters, OWOW magnets, and temporary tattoos. The flyswatters have the Watershed Watch website, hotline number and the words "The Original Earth-Friendly Pest Control" printed on them. The bean bag game for children was used at most of the outreach events. Children learn about the proper disposal of wastes by tossing bean bags that represent different wastes (e.g., soap, paint, fluorescent light bulbs, candy wrappers, pesticides etc.) into appropriate holes (sanitary sewer, storm drain, household hazardous waste collection center, recycle, or garbage). The bean bag labeled "rain" is the only one that is tossed into the hole marked "storm drain".

Evaluation of Effectiveness

Event staff distributed approximately 3,000 fact sheets, brochures and giveaways. The bean bag game continued to be very popular at events and offered a good opportunity to educate children and adults about stormwater pollution prevention. Approximately 816 kids played the bean bag game at events this year. Additional details on each event are provided in Table 7-1 Outreach Events Reporting.

C.7.f. Watershed Stewardship Collaborative Efforts

Santa Clara Basin Watershed Management Initiative (SCBWMI)

During FY 13-14, the Program continued to participate in the Santa Clara Basin Watershed Management Initiative (WMI or SCBWMI). The Steering Committee did not meet in FY 13-14. The main actions that the WMI focused on this year were the implementation of the Zero Litter Initiative activities and implementing Land Use Subgroup activities. Program staff participated in the following activities:

- Zero Litter Initiative (ZLI) – In FY 09-10, the SCBWMI launched a "Zero Litter Initiative" (ZLI) to address urban runoff and non-urban runoff related litter problems in Santa Clara Valley. Program staff actively participated in ZLI meetings in FY 13-14. The ZLI conducted two roundtable discussions in FY 13-14 to discuss actions to reduce trash in water bodies from

municipal trash hauling activities. Through ZLI, the Program also participated and moderated a session in the San Jose Trash Summit held on November 15, 2013, supported the ZLI Outreach Work Group, and facilitated the update and distribution of the 'How Trash Gets into Creeks' Poster. Additional information about the ZLI and its relationship to SCVURPPP trash control activities is presented within Section 10 of this Annual Report.

- SCBWMI Land Use Subgroup – Program staff continued to serve as Chair of the SCBWMI Land Use Subgroup and implemented the following activities:
  - Coordinated meeting dates and prepared meeting agendas and summaries.
  - On April 5, 2014, represented the SCBWMI Land Use Subgroup at the "Going Native Garden Tour" training session for volunteer docents, who were being trained to provide information on native plants to visitors at gardens in the tour. Program staff gave a presentation on the benefits of incorporating watershed-friendly designs in residential landscapes and gardens, based on information in the Land Use Subgroup's "Soak It Up!" flyer. The presentation included photographs of projects with site design measures such as pervious paving, disconnected downspouts, swales and dry creeks, and rain gardens. The intent of the Land Use Subgroup's presentation was to help prepare docents to discuss watershed-friendly site designs with tour visitors. Approximately 125 docents attended the training.
  - Helped plan the afternoon session of the SCVURPPPP Annual C.3 Workshop held on June 4, 2014. This session included presentations on local Green Street projects. Additional information on the Annual C.3 Workshop is included in Section 3 of the FY 13-14 Annual Report

Stevens & Permanente Creeks Watershed Council

In FY 13-14, the Program continued to coordinate with the Stevens Permanente Creek Watershed Council (SPCWC) on their volunteer monitoring efforts and provided technical assistance when requested. The SPCWC, which is now coordinated through Acterra (a non-profit organization that assists in managing community-based environmental activities), is generally focused on coordinating volunteer water quality monitoring, benthic macroinvertebrate bioassessments, habitat restoration projects, and general outreach and education.

Going Native Garden Tour

The Program provided funding to support the Going Native Garden Tour (GNGT) held on April 26 and 27, 2014. Approximately 5,693 people registered for the tour and made 9,834 garden visits. The tour featured 56 gardens that demonstrated environmentally friendly gardening practices with an emphasis on reduced water use, reduced chemical and pesticide use, and improved habitat using California native plants. The OWOW Less-Toxic Pest Management fact sheets and the "Soak it Up" flyer were available at each garden on the tour. The GNGT Summary Report is included in Appendix 7-7.

C.7.g. Citizen Involvement Events

The Program provided funding for the following citizen involvement events:

1) The Don Edwards San Francisco Bay Wildlife Refuge (Refuge) – A number of citizen involvement and stewardship programs were conducted as part of the Program-funded Watershed Watchers Program at the Refuge. Participants worked in the Refuge gardens planting native plants,

pulling non-native plants, and mulching. More details are included in the Watershed Watchers Report included in Appendix 7-8.

2) National River Clean-up Day – The Program provided funding to conduct advertising to promote the National River Clean-up Day held on May 17, 2014.

Evaluation of Effectiveness

Citizen Involvement Events at the Refuge – Approximately 160 people participated in the citizen involvement events conducted at the Refuge, compared to 145 in FY 12-13.

Creek Clean-up Events - In FY 13-14, the Creek Connection Action Group sponsored two creek clean-up events: Coastal Clean-up Day on September 21, 2013 and National River Clean-up Day on May 17, 2014. The Program provided financial support for advertising of one of the events (National River Clean-up Day). During National River Clean-up Day, a total of 1,176 volunteers participated in cleaning 38 sites and removed approximately 28,812 pounds of trash and 4,247 pounds of recyclables. During the course of both clean-up events, a total of 2,758 volunteers participated in cleaning 97 sites and removed approximately 62,862 pounds of materials (trash and recyclables) from local creeks.

Results by clean-up event for FY 13-14 are as follows:

	Coastal Clean-up Day September 21, 2013	**National River Clean-up Day** May 17, 2014	**Total**
Number of sites	46	51	97
Number of volunteers	1,582	1,176	2,758
Pounds of recyclables	4,447	4,247	8,694
Pounds of trash	34,050	28,812	62,862
Pounds of material (trash plus recyclables)	38,497	33,059	71,556

To evaluate the effectiveness of the two annual creek clean-up events, data from the past twelve years of events were compiled and reviewed. The table below presents the total numbers of sites, numbers of volunteers, and pounds of materials collected each year.

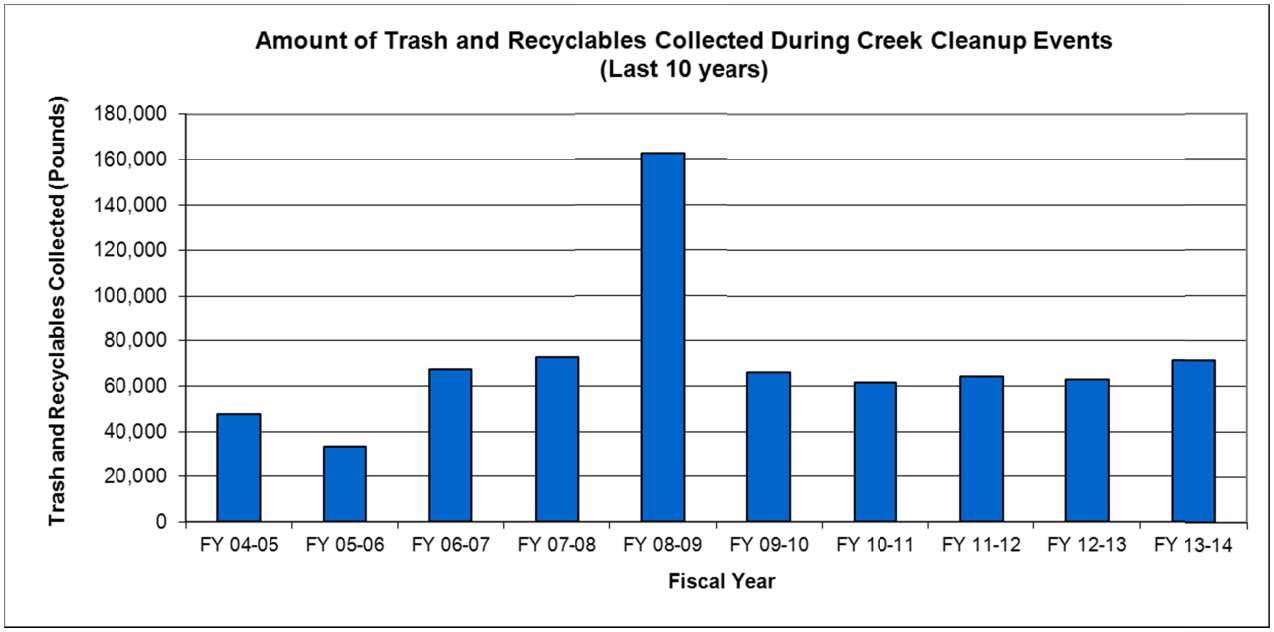
Summary Results of Creek Clean-up Events, September 2000 – June 2014

	No. of sites	**No. of volunteers**	**lbs. of recyclables**	**lbs. of trash**	**Total lbs. collected**	**Average lbs./site**
FY 00-01	41	1,745	n/a	58,108	58,108	1,417
FY 01-02	37	1,742	13,750	59,340	73,090	1,975
FY 02-03	48	2,091	8,071	44,883	52,954	1,103
FY 03-04	56	1,943	6,537	36,718	43,255	778
FY 04-05	61	1,618	7,890	39,730	47,620	781
FY 05-06	55	1,458	4,110	29,248	33,358	607
FY 06-07	44	1,631	15,394	52,067	67,461	1,533
FY 07-08	51	1,534	23,570	49,194	72,764	1,427
FY 08-09	56	2,298	38,960	123,591	162,551	2,903
FY 09-10	69	2,554	13,893	52,271	66,164	958
FY 10-11	87	2,827	10,656	51,044	61,700	701

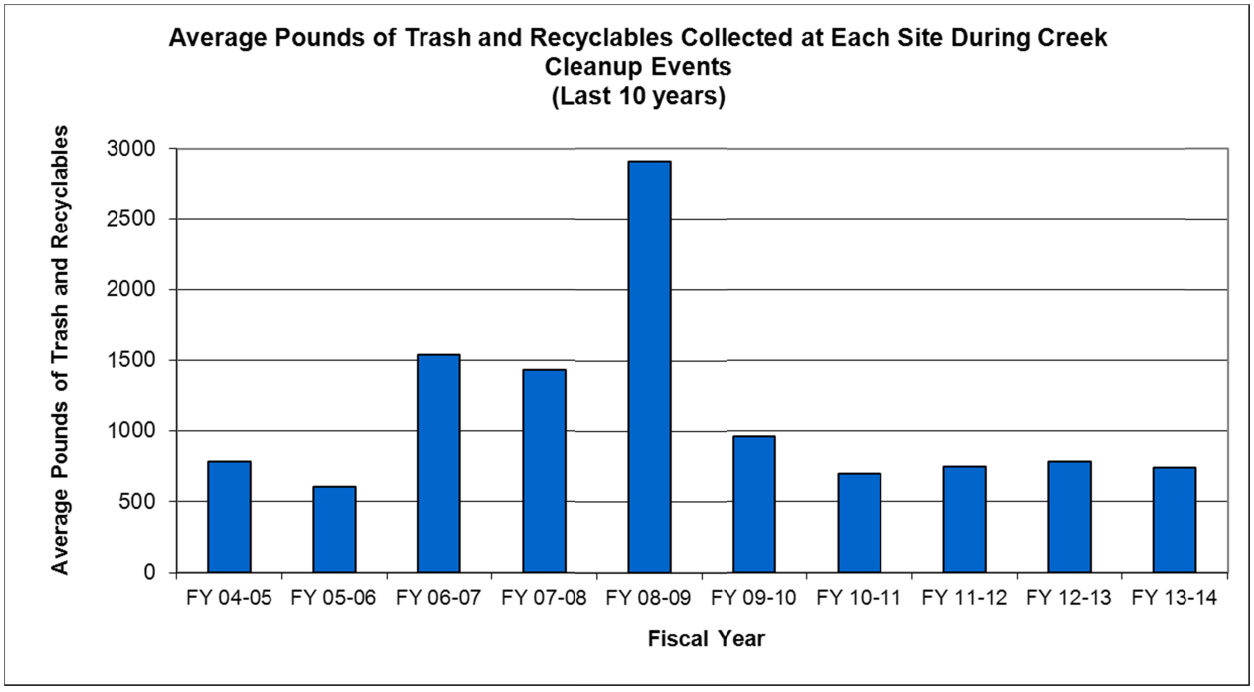
FY 11-12	86	2,740	9,183	50,700	64,065	745
FY 12-13	80	2,582	12,330	50,601	62,931	787
FY 13-14	97	2,758	8,694	62,862	71,556	738
Annual Average	**62**	**2,109**	**13,311**	**54,311**	**66,970**	**1,175**
Total	**868**	**29,521**	**173,038**	**760,357**	**937,577**	**16,453**

Beginning in FY 01-02, some site managers implemented a procedure for separating out recyclable materials from trash prior to weighing it. Thus, the total pounds of material collected are the sum of the recyclables and trash quantities. According to the Santa Clara Valley Water District, this procedure is done more frequently at Coastal Clean-up Event sites than at National River Day sites. Since this procedure is not done at all sites, it is more appropriate to compare the total quantities of materials collected rather than the individual components.

The total amount of trash and recyclables collected during the two creek cleanup events each year are plotted in the figure below:



The average pounds of trash and recyclables collected at each site during the two creek cleanup events each year are plotted in the figure below:



Co-permittees intend to continue participating in creek cleanups in future fiscal years, as they provide a valuable opportunity for citizen participation as well as an important element of a trash management program.

Table 7-2 summarizes the Program-funded FY 13-14 citizen involvement events, including evaluation of effectiveness.

C.7.h. School-Age Children Outreach

ZunZun Musical Assembly

Each year the Program sponsors up to fifty ZunZun assemblies at elementary schools in the Santa Clara Valley. These bilingual musical assemblies educate elementary school students and their teachers on watersheds and urban runoff pollution prevention. ZunZun performances use physical comedy, audience participation and musical instruments to educate teachers and children about watersheds and stormwater pollution prevention.

The Program's Schools and Youth Education and Outreach Work Group provide a list of schools for ZunZun to contact. The list includes schools with high Hispanic populations and high Asian/Pacific Islander populations. A list of 131 schools was provided to ZunZun in FY 13-14.

Evaluation of Effectiveness

In FY 13-14, ZunZun conducted 48[1] assemblies at elementary schools in Santa Clara Valley. In addition, two assemblies were conducted at the Pumpkins in the Park event and one at the Water Wizards event. The assemblies reached approximately 13,613 elementary school students and their teachers.

[1] Due to a tracking error, ZunZun conducted 52 assemblies instead of the planned 50 in FY 12-13. Therefore, to balance the budget, 48 assemblies were conducted in FY 13-14.

ZunZun assemblies were evaluated using postage-paid evaluation cards that were distributed to all teachers present at the performances. The Program received completed evaluation cards from 117 teachers. Overall, the feedback has been very positive and indicates an increase in the students' knowledge about watersheds and pollution prevention. The FY 13-14 Teacher Evaluation Report and the FY 13-14 ZunZun School Assembly Report are included in Appendix 7-9.

Watershed Watchers Program at the Don Edwards San Francisco Bay Wildlife Refuge

The Program funds an interpretive specialist position to conduct the Watershed Watchers Program at the Refuge. The Watershed Watchers program conducts numerous activities and sessions to educate children about watersheds and urban runoff pollution prevention. These include marsh walks, gardening events, bird watching, wildlife observation, etc.

Evaluation of Effectiveness

In FY 13-14, Refuge staff conducted 99 educational activities and sessions, attracting a total of approximately 3,809 people. Participants included 124 pre-kindergarteners, 1,423 elementary school students, 128 middle school students, and 109 high school students. Visitor Surveys are used to determine visitor demographics, effectiveness of publicity, and the effectiveness or the Watershed Watchers Program. In addition, an "Urban Runoff Bead Drop" display is used to record actions (e.g., pick up litter, spread the word, take car to car wash) that children promise to do the help keep storm drains clean. Results of both of these evaluation mechanisms are summarized in the Watershed Watchers Report in Appendix 7-8.

Additional details on the Program's school outreach activities are included in Table 7-3- School-Age Children Outreach.

■ FY 13-14 Regional Activities

The Program participated in the BASMAA PIP Committee which implemented the following projects:

Media Relations Project – During FY 13-14, the Program participated in the BASMAA Media Relations Project which conducted seven pitches. The topics include the following:

- Green Streets
- Ants/pesticides
- Don't Burn Holiday Gift Wrap
- IPM Advocates/DPR Award
- OWOW App
- Trash

The pitches resulted in a total of 50 total media placements. Copies of the pitches were provided to Co-permittees for placement in local community newspapers. Additional details are included in the BASMAA Media Relations Final Report included in Appendix 7-5.

Regional IPM Partnership Program – The Regional IPM Partnership Program (also known as *Our Water, Our World* program) implemented the following activities in FY 13-14:

- Coordinated program implementation with major chains Home Depot, Orchard Supply Hardware (OSH), and Ace Hardware National. Corporate office of OSH (San Jose) and Home Depot (Atlanta) directed support of the program with their stores.
- Coordinated updates and master print run of the following: fact sheets, shelf talkers, literature rack signage, beneficial bug brochure, magnet, Pest or Pal activity guide for kids, pocket guide, and Pests Bugging You? booklet.
- Updated less-toxic Product Lists: general plus OSH and Home Depot-specific lists/labels.
- Maintained *Our Water, Our World* website.
- Provided Ask-the-Expert service, which provides 24-hour turnaround on answers to pest management questions.
- Provided and staffed the following exhibitor booths:
  - Excel Gardens Dealer Show, Las Vegas (August 2013)
  - L&L Dealer Show, Reno (October 2013)
  - NorCal trade show (February 2014)
- Provided on-call assistance (e.g., display set-up, training, IPM materials review) to specific stores (e.g., OSH, Home Depots).
- Provided print and web advertising – Bay Nature magazine, Bringing Back the Natives Garden Tour's garden guide, and Chinook Coupon Book.

Additional information is included in the FY 13-14 Regional IPM Partnership Program Report included in Appendix 9-4**.**

Regional Advertising Campaign – During FY 13-14, the BASMAA Public Information / Participation (PI/P) Committee worked with SGA, Inc. to implement the "Be the Street" anti-litter Youth Outreach Campaign. Be the Street focuses heavily on social media and innovative outreach strategies to promote awareness of littering issues and change behaviors. The intent of the campaign is to make "no-littering" the norm among the target audience (youth between the ages of 14 and 24). In FY 13-14, the Be the Street Campaign implemented the following activities:

- Continued to maintain the Be the Street website and social networking sites, i.e., Facebook and Instagram. Currently, the Be the Street Facebook page has 5,348 likes.
- Conducted a contest asking participants to submit their best anti-litter internet memes[2]. The campaign received 100 entries in response to the contest. Contest entries can be viewed by clicking on "view entries" at https://www.facebook.com/BetheSt/app_448952861833126
- Developed an "anti-littering" mobile app. The intent of the app is to have users complete challenges that educate them on water pollution and litter issues.

2 Generally defined as a popular photo with caption.

The Be the Street Campaign also conducted a post-campaign survey to gauge effectiveness of outreach. The survey was conducted online via Facebook. Approximately 60 members of the target audience (youth 14-24 years of age residing in Bay Area zip codes) completed the survey. The survey compared the changes in attitude and perception of respondents that were exposed to the Be the Street campaign to those that were not. Highlights of survey results are provided below:

- 90% of exposed respondents reported that they were 'very likely' or 'likely' to pick up someone else's litter while only 38% of unexposed respondents reported the same.
- 70% of exposed respondents reported that they were 'very likely' or 'likely' to voice disapproval when their friends litter, compared to 48% of unexposed respondents.
- 47% of exposed respondents were likely to be willing to volunteer at a litter clean-up event compared to 30% of unexposed respondents.

The Be the Street Survey Report is included within Appendix 7-10. Additional information is included in the BASMAA FY 13-14 Regional Supplement for Training and Outreach.

"Got Ants?" Pesticide Outreach Campaign – In 2012, the San Francisco Estuary Partnership (SFEP) received a grant from the Department of Pesticide Regulation to implement an outreach campaign to educate residents on choosing IPM techniques for ant control. SCVURPPP participated on the grant as a Managing Team member and Program staff assisted with the development and implementation of the outreach campaign. The grant proposal was developed based on BASMAA's Pesticide Outreach Strategy. The campaign entitled "Got Ants? Get Serious" was launched in 2012 and completed in 2014. Highlights of activities are provided below:

- Development of the www.GotAntsGetSerious.org website - The website includes a pledge that people can sign to show their commitment toward using less-toxic pest control methods. The website also links to the three IPM Certification Programs GreenPro, Ecowise Certified, and Green Shield and encourages website visitors to hire an IPM Certified Pest Control Operator. The website received 6,594 unique visitors over the course of the project.
- Creation of a Facebook page – The Facebook page https://www.facebook.com/safer.ant.control was created to share information and encourage people to share their stories about controlling ants. The Facebook page received 84 likes over the course of the project. In addition, posts and photos on the Facebook page received 106 likes.
- Media Campaign – A media advertising campaign that included transit (interior cards on BART and AC Transit), online (Google Ad Sense and Facebook) and print (Sunset Magazine) advertising was conducted. The media campaign is estimated to have received 14.75 million impressions.

Regional Point of Contact - BASMAA continued to maintain the Baywise website (www.Baywise.org) as a regional point of contact.

Table 7-1: Public Outreach Events - Outreach Events Reporting (C.7.e.)

Program staff, the Watershed Watch consultant, and Co-permittees staffed eight outreach events in FY 13-14. Events were selected based upon target audience and attendance. Materials distributed at the events included the following: Less Toxic Pest Management fact sheets, "10 Most Wanted Backyard Bugs" brochures, "Don't Plant a Pest" brochure, "You are the Solution to Water Pollution" brochures, "Clean Cars & Clean Creeks" brochure, "Mercury in Fish" brochure, and giveaways (e.g. flyswatters, OWOW magnets, , and temporary tattoos). The flyswatters have the Watershed Watch website and hotline number and the words "The Original Earth-Friendly Pest Control" printed on them. The Campaign also continued using QR codes ("Quick Response" codes) in printed materials. These codes have URLs embedded in them and when scanned with smart phones direct users to specific webpages. This was targeted at people that are reluctant to collect paper materials and only want to look up information online. The bean bag game for children was used at most of the events. Event staff distributed approximately 3,000 outreach materials and giveaways.

Event Details	Focus & Short Description	Evaluation of Effectiveness
Name: Pumpkins in the Park Date: October 12, 2013 Location: Guadalupe River Park/Discovery Meadow, San Jose Region: Countywide	Type of Event: Community fair Audience: Families with children Messages: Stormwater pollution prevention, less-toxic pest control, and proper disposal of HHW.	General Feedback: Good attendance with lots of children and families. This is a great event for educating families with small children. The bean bag game was very popular with the kids. Estimated Overall Event Attendance: 13,000-15,000 Number of Brochures/Flyers Distributed: 216 Number of Giveaways Distributed: 694 Number of Watershed Watch Discount Cards Distributed: 141 Number of kids that played the bean bag game: 299
Name: Haunt the Hollow Date: October 27, 2013 Location: Happy Hollow Park & Zoo at Kelley Park, San Jose Region: Countywide	Type of Event: Halloween Event Audience: Families with children Messages: Stormwater pollution prevention and proper disposal of HHW	General Feedback: The event is small but well attended. Event organizers encouraged attendees to participate in activities at each booth. As a result a lot of children stopped by the booth and played the bean bag game. Estimated Overall Event Attendance: 5,000 Number of Brochures/Flyers Distributed: 140 Number of Giveaways Distributed: 770 Number of Watershed Watch Discount Cards Distributed: 81 Number of kids that played the bean bag game: 342

Table 7-1: Public Outreach Events - Outreach Events Reporting (C.7.e.)

Event Details	Focus & Short Description	Evaluation of Effectiveness
Name: Mission College Eco Fair Date: April 17, 2014 Location: Mission College Campus, Santa Clara Region: Citywide	Type of Event: College event Audience: Young adults, students Messages: Stormwater pollution prevention and proper disposal of HHW	General Feedback: The event was well organized and a good place to reach young adults. Estimated Overall Event Attendance: 500-1,000 Number of Brochures/Flyers Distributed: 87 Number of Giveaways Distributed: 89 Number of Watershed Watch Discount Cards Distributed: 45 Number of kids that played the bean bag game: 20
Name: San Jose Trash Summit Date: November 15, 2013 Location: San Jose Convention Center Region: Countywide	Type of Event: BE the Street event Audience: Municipal staff, non-profit organization staff, general public Messages: Litter Prevention	General Feedback: The event offered a good opportunity to reach municipal staff and general public interested in issues pertaining to litter prevention. The BASMAA Be the Street photo booth was used at this event and approximately 50 attendees posed for pictures. Estimated Overall Event Attendance: 500-1,000
Name: Watershed Watch "half-off" two hour Car Wash Event Date: May 21 2014 Location: Capitol Premier Car Wash, 735 Capitol Expressway Auto Mall, San Jose Region: Countywide	Type of Event: Car Wash Audience: Car wash customers Messages: Stormwater pollution prevention and proper car washing.	General Feedback: The event was well attended. It is an annual Watershed Watch event and offers a good opportunity to reach car wash customers. Estimated Overall Event Attendance: 50 car washes Number of Brochures/Flyers Distributed: 2 Number of Watershed Watch Discount Cards Distributed: 92
Name: Watershed Watch "half-off" two hour Car Wash Event Date: June 4, 2014 Location: Delta Queen Classic Car Wash, 981 E Hamilton Avenue, Campbell Region: Countywide	Type of Event: Car Wash Audience: Car wash customers Messages: Stormwater pollution prevention, proper car washing.	General Feedback: The event was well attended. It is an annual Watershed Watch event and offers a good opportunity to reach car wash customers. Estimated Overall Event Attendance: 100 car washes Number of Brochures/Flyers Distributed: 23 Number of Watershed Watch Discount Cards Distributed: 74

Table 7-1: Public Outreach Events - Outreach Events Reporting (C.7.e.)

Event Details	Focus & Short Description	Evaluation of Effectiveness
Name: Festival in the Park Date: June 7, 2013 Location: Hellyer County Park, San Jose Region: Countywide	Type of Event: Community Health Fair Audience: Families with children. Message: Stormwater pollution prevention, less-toxic pest control, and proper disposal of HHW.	General Feedback: Great attendance throughout the whole event. This event is great for reaching Spanish speaking segments of the population. Estimated Overall Event Attendance: 3,500-4,000 Number of Brochures/Flyers Distributed: 143 Number of Giveaways Distributed: 415 Number of Watershed Watch Discount Cards Distributed: 62 Number of kids that played the bean bag game: 155
Name: Watershed Watch "half-off" two hour Car Wash Event Date: June 11, 2014 Location: Robertsville Classic Car Wash, 5005 Almaden Exp., San Jose Region: Countywide	Type of Event: Car Wash Audience: Car wash customers Messages: Stormwater pollution prevention, proper car washing.	General Feedback: The event was well attended. It is an annual Watershed Watch event and offers a good opportunity to reach car wash customers. Estimated Overall Event Attendance: 100 car washes Number of Brochures/Flyers Distributed: 56 Number of Watershed Watch Discount Cards Distributed: 85

Table 7-2: Citizen Involvement Events (C.7.g.)

The Program provided funding for the following citizen involvement events:

1) National River Clean up Day – The Program supports the involvement of Santa Clara County citizens by providing advertising support for the National River Clean-up Day.
2) Citizen involvement events at the Don Edwards San Francisco Bay Wildlife Refuge (Refuge) – A number of citizen involvement and stewardship programs are conducted as part of the Program funded Watershed Watchers Program at the Refuge. Participants usually work in the Refuge gardens planting native plants, pulling non-native plants, and mulching. More details are included in the Watershed Watchers Report in the Program Annual Report Appendix 7-8.

Event Details	Description	Evaluation of effectiveness
Name: Summer of Service Program Date: 7/10/13, 7/25/13, 8/8/13, 6/25/14 Location: Don Edwards Wildlife Refuge, Alviso Focus: Countywide	Partnership program between Santa Clara Valley youth groups and the Watershed Watchers program. Youth spend a day at the Refuge and they work in the gardens in the morning and explore the Refuge in the afternoon.	Number of attendees on 7/10/13: 10 middle school students, 1 high school student, and 2 adults. Number of attendees on /25/13: 11 middle school students, 1 high school student and 2 adults. Number of attendees on 8/8/13: 10 middle school students, 1 high school student and 2 adults. Number of attendees on 6/25/14: 16 middle school students, and 2 adults.
Name: Community Service Days/Gardening Without Chemicals Date: 11/23/13, 12/7/13, 2/8/14, 2/22/14, 3/15/14, 4/23/14, 5/13/14, 5/15/14, 5/20/14, 5/31/14 Location: Don Edwards Wildlife Refuge, Alviso Focus: Countywide	This is an open day for the corporate groups, schools groups or the general public to work in the gardens planning native plants, pulling non-native plants, and mulching.	Number of attendees on 11/23/13: 2 adults. Number of attendees on 12/7/13: 2 adults. Number of attendees on 2/8/14: 11 elementary school students and 10 adults. Number of attendees on 2/22/14: 7 elementary school students, 10 middle school students, 3 high school students and 6 adults. Number of attendees on 3/15/14: 3 high school students. Number of attendees on 2/16/13: 13 middle school students and 12 adults. Number of attendees on 4/23/14: 10 adults. Number of attendees on 5/13/14: 25 pre-kindergartners, and 13 adults. Number of attendees on 5/15/14: 8 adults. Number of attendees on 5/20/14: 6 adults. Number of attendees on 5/31/14: 13 middle school students, 1 high school student, and 3 adults.

Table 7-2: Citizen Involvement Events (C.7.g.)

Event Details	Description	Evaluation of effectiveness
Name: National River Cleanup Day Date: 5/17/14 Location: Various locations throughout the County Focus: Countywide	In FY 13-14, the Creek Connections Action Group sponsored two creek clean-up events: California Coastal Clean-up Day on September 21, 2013 and National Rivers Clean-up Day on May 17, 2014. The Program provided funding for the National Rivers Clean-up Day advertising.	On National River Cleanup Day, a total of 1,176 volunteers participated in cleaning 51 sites and removed approximately 28,812 pounds of trash and 4,247 pounds of recyclables from creeks.

Table 7-3: School-Age Children Outreach (C.7.h.)

Outreach to school-age children is implemented through ZunZun assemblies at local elementary schools and the "Watershed Watchers" program at the Environmental Education Center at the Don Edwards San Francisco Bay Wildlife Refuge (Refuge) in Alviso. The Program sponsors up to 50 ZunZun assemblies at elementary schools in Santa Clara Valley and funds an Interpretive Specialist position at the Refuge for conducting activities and programs about watershed and urban runoff pollution prevention. The Fourth Quarter "Watershed Watchers" Report including the End-of-Year summary is included in the Program Annual Report Appendix 7-8. The Final ZunZun Report and Teacher Evaluation Report are included in the Program Annual Report Appendix 7-9.

Program Details	Focus & Short Description	Number of Students reached	Evaluation of Effectiveness
Name : ZunZun Musical Assembly Grade or level: elementary	Interactive, musical school assemblies educating K-6 children about watersheds and pollution prevention.	13,613 students	ZunZun assemblies were evaluated using postage-paid evaluation cards that were distributed to all teachers present at the performances. The Program received 177 completed evaluation cards from teachers. Overall, the feedback was positive and indicates an increase in the students' knowledge about watersheds and pollution prevention. A few highlights of the evaluations are: • 20 teachers indicated that after the performance, 25% of their students knew what a watershed was; 29 teachers indicated that 50% of their students knew what a watershed was; 35 teachers indicated that 75% of their students knew what a watershed was, and 30 teachers reported that 100% of their students knew what a watershed was. • 9 teachers indicated that after the performance, 50% of their students could name a way to prevent pollution in the watershed; 31 teachers indicated that 75% of their students could name a way to prevent pollution in the watershed; and 71 teachers indicated that 100% of their students could name a way to prevent pollution in the watershed.

Table 7-3: School-Age Children Outreach (C.7.h.)

Program Details	Focus & Short Description	Number of Students reached	Evaluation of Effectiveness
Name: Watershed Watchers Program at Don Edwards Wildlife Refuge in Alviso Grade or level: pre-school, elementary, middle, high school.	The Refuge offers a number of interpretive programs to educate children and youth about preventing urban runoff pollution.	124 pre-kindergarteners, 1423 elementary school students, 128 middle school students, and 109 high school students.	Visitor Surveys are used to determine visitor demographics, effectiveness of publicity, and the effectiveness or the Watershed Watchers Program. In addition, an "Urban Runoff Bead Drop" display is used to record actions (e.g., pick up litter, spread the word, take car to car wash) that children promise to do the help keep storm drains clean. Results of both these evaluation mechanisms are summarized in the Watershed Watchers Fourth Quarter Report included in the Program Annual Report Appendix 7-8.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 8

Water Quality Monitoring

September 15, 2014

Section 8 Water Quality Monitoring

■ Introduction

The Program has maintained an effective and scientifically sound water quality monitoring and assessment program since its inception. During this time, the *SCVURPPP Monitoring and Assessment Program* has provided Co-permittees, the Water Board and other stakeholders with invaluable information on the condition of water quality and associated beneficial uses in Santa Clara Basin creeks and the San Francisco Bay Estuary (Bay). Provision C.8 of the MRP requires Co-Permittees to continue conducting water quality monitoring and associated projects during the Permit term. Although monitoring requirements became more prescriptive and expanded significantly under the MRP, the goal generally remains the same - develop high quality information on water quality in local creeks and the Bay that leads to effective municipal stormwater management.

This section is intended to provide brief summaries of the status of water quality monitoring activities/projects conducted during FY 13-14 in compliance with Provision C.8. No water quality data are included within this section. Water quality monitoring data collected during FY 13-14 will be submitted to the Water Board by January 15, 2015 consistent with the schedule included in the MRP. Additionally, a more complete interpretation and discussion of all monitoring results and conclusions of all water quality monitoring activities conducted in FY 13-14 in compliance with the MRP will be described in the Program's Urban Creeks Monitoring Report, which will be submitted to the Water Board by March 15, 2015.

■ Bay Area Regional Monitoring Coalition

Under the MRP provision C.8.a, Co-permittees have the option to address monitoring requirements through a "regional collaborative effort", their stormwater program and/or individually. On June 29, 2010, Co-permittees notified the Water Board in writing of their agreement to participate in a regional monitoring collaborative to address all requirements in Provision C.8. The regional monitoring collaborative is referred to as the BASMAA Regional Monitoring Coalition (RMC). The RMC is focused on providing a forum to implement regionally consistent creek monitoring approaches and designs in the Bay Area, through the improved coordination among existing Bay Area municipal stormwater monitoring programs; and, in turn stabilizing the costs of creek monitoring by reducing duplication of effort and streamlining reporting. Participation in the RMC is coordinated by stormwater program and/or Co-permittee representatives (or equivalent), and facilitated through the BASMAA Monitoring and Pollutants of Concern Committee (MPC) and the RMC Work Group. Representation at MPC and RMC meetings by SCVURPPP is coordinated through the Program's Monitoring Ad Hoc Task Group (AHTG).

■ Creek Status Monitoring (C.8.c)

Creek status monitoring requirements are described in MRP provision C.8.c, and monitoring parameters, methods, occurrences, durations and minimum number of sampling sites for each stormwater program are listed in Table 8.1 of the MRP. The RMC's regional monitoring strategy for complying with MRP Provision C.8.c - Creek Status Monitoring, was completed in FY 11-12. The strategy, which is described in *RMC Creek Status and Long-Term Trends Monitoring Plan*, includes ambient/probabilistic and

targeted monitoring designs. These monitoring designs allow each individual RMC participating program to assess the status of beneficial uses in local creeks within its Program area while contributing data to answer management questions at the regional scale (e.g., differences between aquatic life condition in urban and non-urban creeks). The creek status monitoring designs are primarily intended to answer the following core management questions:

- What is the condition of aquatic life in creeks in the San Francisco Bay Area; are water quality objectives met and are beneficial uses supported?
- What are the major stressors to aquatic life?
- What are the long-term trends in water quality in creeks over time?

Chemical, biological and physical response and stressor indicators monitored at creek status monitoring sites include benthic macroinvertebrate and algae bioassessments, physical habitat and riparian (CRAM) assessments, water and sediment toxicity and chemistry, general water quality and temperature (continuous), and pathogen indicators. The Program began implementing creek status monitoring consistent with the MRP in the fall/winter of 2011. Monitoring data collected during FY 11-12 and FY 12-13 were described in the Program's *Integrated Monitoring Report - Part A: Water Quality Monitoring for Water Years 2012 and 2013 (IMR - Part A)*, submitted to the Water Board on March 17, 2014.

The Program recently completed field data collection efforts for FY 13-14 and is currently conducting quality assurance and control procedures on data collected during this fiscal year. Specifically, bioassessment monitoring to support condition assessments, and physical habitat, chlorine, and nutrient monitoring to support stressor assessments were completed in late April and early May 2014 at 20 sites in the Santa Clara Valley. SCVURPPP also successfully completed wet weather toxicity sampling in February 2014, and dry weather water and sediment toxicity and sediment chemistry monitoring in June at 3 sites. Pathogen indicator (bacteria) monitoring was also completed at 5 sites in June 2014. Continuous temperature and water quality monitoring were also conducted consistent with the time schedules in MRP Table 8.1. Stream surveys (CRAM) were also completed at 20 (bioassessment) sites in June 2014. All monitoring data collected in FY 13-14 will be described in the Program's Urban Creeks Monitoring Report, which will be submitted to the Water Board by March 15, 2015.

■ Stressor/Source Identification Projects (C.8.d)

Provision C.8.d.i of the MRP requires the implementation of stressor/source identification studies (SSID) based on receiving water data collected through creek status monitoring. In previous fiscal years, the Program initiated stressor identification projects in Stevens Creek, Coyote Creek, and the Guadalupe River in compliance with this provision. In FY 13-14, the Program completed both the Coyote Creek and Guadalupe River SSID Projects and summary results were described in Appendix B of the Program's IMR – Part A, submitted to the Water Board on March 17, 2014. The findings from each project are briefly described below. Additionally, in FY 13-14, the Program also initiated a new stressor/source identification project in Upper Penitencia Creek. A summary of the scope and schedule of the project is also included below.

Coyote Creek Stressor Identification Monitoring Project

The Coyote Creek SSID project was initiated in 2011 and completed in 2014. The SSID project defined the geographic extent, magnitude and duration of low DO conditions within a 1.9 mile reach of Coyote Creek extending between the Lower Silver Creek confluence and Orvis Avenue. The reach of the lowest

mean DO concentrations (2.5 to 3.9 mg/L) occurred within a one mile reach between the Lower Silver Creek confluence and slightly upstream of the Santa Clara St. Bridge. The lowest instantaneous (15-minute sonde reading) DO concentration (<0.2 mg/L) was measured at the site just downstream of the Julian Street Bridge.

Based on the testing of a project-specific conceptual model through data collection and analysis, the study suggests that low DO conditions in this creek reach are likely caused by the accumulation of fine sediment and organic material which is a result of the low gradient, deeply incised channel with low stream flow velocity conditions. Sediment quality was consistent along the study area, which suggests that reduction of DO is primarily driven by the quantity of sediment deposited throughout the reach. Potential future monitoring and management actions should be directed at reducing fine sediment accumulation within the low DO reach by increasing stream flow velocities in the near term and considering channel modifications in the longer term to reduce sediment accumulation and encourage enhanced sediment transport processes.

Guadalupe River Stressor Identification Monitoring Project

The Guadalupe River SSID project was initiated in 2010 and completed in 2014. The SSID project attempted to identify the stressor(s) of fish kills that occurred between 2008 and 2010. Based on the information collected prior to and during the project and the evaluation of a project-specific conceptual model, the timing, location and intensity of storms in the watershed appear to have the greatest influence on low DO conditions in the reach where fish kills were observed. In particular, small first flush events confined to the lower watershed that convey accumulated organic matter from both the watershed into the river and/or re-suspend and remobilize previously bedded sediment in the channel provide oxygen demanding organic and inorganic material (over a short duration) that temporarily reduces DO. The limited volume of runoff and resultant creek flow provides minimal volume for dilution and dispersion of this new potentially oxygen demanding material.

Based on the information available, the study concluded that fish kills in the Guadalupe River are rare and episodic events that only occur under specific environmental conditions. For example, in 2009 the first storm event of the season in September resulted in fish kill in Guadalupe River. The storm was brief and intense, primarily centered in the urban portion of the watershed, preceded by a relatively dry spring and summer, and occurred during warm weather and unusually low summer stream flow conditions. Since that time, fish kills have not been observed in Guadalupe River following early season storm events. Based on these conclusions, the recommended action was to the extent possible, provide adequate stream flow in the river during the late summer and prior to the first rainfall events in the fall to avoid future conditions that enhance the risk of low DO and associated fish kills.

Upper Penitencia Stressor Identification Monitoring Project

This project serves as the third SSID project conducted in compliance with provision C.8.d of the MRP. Its selection was based on the results from creek status monitoring conducted in WYs 2012 and 2013 that indicated relatively poor biological condition at two sites in Upper Penitencia Creek (tributary to Coyote Creek). The project was initiated in FY 13-14 and will evaluate potential factors causing the biological condition within this creek reach by implementing the following tasks:

- Compile and evaluate existing data sources;
- Develop conceptual model to identify factors potentially causing low biological conditions;

- Develop work plan to assess the relevant monitoring parameters for each factor; and
- Conduct further monitoring to investigate the extent of impacts and identify and prioritize stressors causing the impacts.

Field work associated with the Upper Penitencia Creek SSID project will begin in FY 14-15. Results will be documented in the FY 2014-15 Urban Creeks Monitoring Report.

■ Additional Monitoring Projects (C.8.d)

In addition to the stressor/source identification projects described in the previous section, the MRP requires the implementation of a BMP effectiveness investigation (C.8.d.ii) and a geomorphic project. The overall scopes of these projects are generally described in the MRP and the RMC Work Plan.

Through the Clean Watersheds for Clean Bay project (CW4CB) and modeling conducted in compliance with Provision C.3.iii (Green Streets Pilot Projects), the Program conducted a number of BMP effectiveness monitoring projects. Modeling/monitoring conducted as part of the green streets pilot projects is described in the BASMAA *Green Street Pilot Project Summary Report* submitted to the Water Board on September 15, 2013[1].. Additionally, the Program is currently conducting BMP effectiveness monitoring at a stormwater treatment device in the Leo Avenue watershed (City of San Jose) as part of the CW4CB project. Results available to-date for both BMP effectiveness projects were included in the IMR - Part A, which was submitted to the Water Board on March 17, 2014. Additional information will also be included in the Program's Water Year 2014 Urban Creeks Monitoring Report, set for completion in March 2015.

In FY 13-14, the Program also completed a study to help in the development of regional hydraulic curve(s) which will help estimate equilibrium channel conditions for different sized drainages. The study was conducted by the Program, in collaboration with the SCVWD, to comply with MRP Provision C.8.d.iii (Geomorphic Project). As part of this Geomorphic Project, bankfull geometries were surveyed at two consecutive riffles in Coyote Creek above Coyote Reservoir near USGS gaging station #11169800 (Coyote Creek near Gilroy, CA). The reach was determined to be a geomorphically stable, self-formed alluvial channel. Results of this study were described in Appendix C of the Program's IMR – Part A, submitted to the Water Board on March 17, 2014.

■ San Francisco Estuary Receiving Water Monitoring (C.8.b)

In compliance with Provision C.8.b, Co-permittees are required to contribute their fair-share financially on an annual basis towards implementing an Estuary receiving water monitoring program that at a minimum is equivalent to the Regional Monitoring Program for Water Quality in the San Francisco Estuary (RMP). During FY 13-14, Co-permittees complied with this Provision by contributing a total of $181,820 to the RMP. In addition, Program and Co-permittee staff actively participated in RMP committees and work groups. Specifically, on behalf of all BASMAA member agencies, the SCVURPPP Program Manager provides representation on the RMP Steering Committee and the SCVURPPP Watershed Monitoring and Assessment Coordinator is a member of the RMP's Technical Review Committee and a number of work groups and strategy teams. Additional information on the RMP,

[1] http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/MRP/2013_AR/BASMAA/BASMAA_2012-13_MRP_AR_Green_Streets.pdf

including monitoring results and conclusions, can be found on the San Francisco Estuary Institute's website (www.sfei.org/rmp/).

■ Citizen Monitoring and Participation (C.8.f)

Provision C.8.f of the MRP requires Co-permittees to encourage citizen monitoring and make reasonable efforts to seek out citizen and stakeholder information and comment regarding waterbody function and quality. In compliance with this provision, the Program continued to coordinate with the Stevens Permanente Creek Watershed Council (SPCWC) on their volunteer monitoring efforts and provided technical assistance when requested. The SPCWC, which is now coordinated through Acterra (a non-profit organization that assists in managing community-based environmental activities), is generally focused on coordinating volunteer water quality monitoring, benthic macroinvertebrate bioassessments, habitat restoration projects, and general outreach and education. In FY 13-14, Program staff in collaboration with City of Palo Alto staff also met with Acterra to discuss technical aspects of volunteering monitoring in the City of Palo Alto.

■ POC Loads Monitoring (C.8.e)

Pollutants of Concern (POC) loads monitoring is required by MRP Provision C.8.e.i. Loads monitoring is intended to assess inputs of POCs to the Bay from local tributaries and urban runoff, assess progress toward achieving wasteload allocations (WLAs) for TMDLs, and help resolve uncertainties associated with loading estimates for these pollutants. In particular, there are four priority management questions that need to be addressed though POC loads monitoring:

1. Which Bay tributaries (including stormwater conveyances) contribute most to Bay impairment from POCs?
2. What are the annual loads or concentrations of POCs from tributaries to the Bay?
3. What are the decadal-scale loading or concentration trends of POCs from small tributaries to the Bay?
4. What are the projected impacts of management actions (including control measures) on tributaries and where should these management actions be implemented to have the greatest beneficial impact?

Like creek status monitoring, POC loads monitoring is conducted as part of the BASMAA Regional Monitoring Coalition (RMC). The forum for collaborating on POC loads monitoring is referred to as the Small Tributaries Loading Strategy Workgroup (STLS), which is a subcommittee of the Regional Monitoring Program's (RMP) Sources, Pathways and Loadings Workgroup. Stakeholders involved in the STLS include BASMAA representatives, staff of the San Francisco Estuary Institute, and staff of the SFRWQCB. The objective of the STLS is to implement a comprehensive planning framework to coordinate POC loads monitoring/modeling between the RMP and RMC participants.

Fiscal Year 2013-14 Approach (Water Year 2014)

The POC loads monitoring framework implemented in Water Years 2012, 2013 and 2014 is described in the STLS Multi-Year Plan (version 2013), which was included in the *Regional Monitoring Coalition Urban Creeks Monitoring Report - Water Year 2012*. As allowed by Provision C.8.e and with concurrence of participating Water Board Staff, the Multi-Year Plan presented an alternative approach to complying with the POC loads monitoring requirements described in MRP Provision C.8.e.i.

The Multi-Year Plan includes four main elements that collectively address the four priority management questions for POC monitoring:

1. Watershed modeling (Regional Watershed Spreadsheet Model);
2. Bay Margins Modeling;
3. Source Area Runoff Monitoring; and,
4. Small Tributaries Monitoring.

Program activities conducted in during FY 13-14 in compliance with Provision C.8.e.i (POC loads monitoring) were focused on the third year of Small Tributaries Monitoring and supporting the development of the Regional Watershed Spreadsheet Model, both of which were coordinated through the STLS Team and the associated RMP Sources, Pathways and Loadings Work Group (SPLWG). Brief summaries of the status of these activities are included below.

- **Watershed Modeling** –Program staff continued to provide oversight of the construction and initial testing of the RMP's Regional Watershed Spreadsheet Model, which is the primary tool for estimation of overall POC loads from small tributaries to San Francisco Bay. Initial modeling efforts focused on developing load estimates for sediment, mercury and PCBs. For each POC, a submodel architecture was developed specific to its runoff characteristics and source areas in the Bay Area landscape. An initial test model was constructed for copper for which the submodel is similar to the basic hydrologic version and inputs from other efforts that were readily available. A graphic user interface was developed in 2012 that allows for customization and running of submodels by users who are not GIS software experts. A draft report summarizing modeling results was developed in mid-2014 and submitted to the RMP's Sources Pathways and Loadings Workgroup for review. The modeling report is anticipated to be finalized in late 2014.
- **Small Tributaries Watershed Monitoring** – The approach implemented in FY 13-14 for this STLS element is outlined in the Multi-Year Plan and consists of intensively monitoring a total of six "bottom-of-watershed" stations over several years to accumulate data needed to calibrate the watershed spreadsheet model and assist in developing loading estimates from small tributaries for priority POCs. Monitoring is also intended to provide a more limited characterization of additional lower priority analytes. Water Year 2014 (FY 13-14) was the third year of monitoring activities at four stations (1-4 below) that were set up and mobilized beginning in October 2011. Two additional stations (5-6 below) were established in October 2012 to begin monitoring and complete the phasing in of all watershed stations:
    1. Lower Marsh Creek (Contra Costa County)
    2. Guadalupe River (Santa Clara County)
    3. Lower San Leandro Creek (Alameda County)
    4. Sunnyvale East Channel (Santa Clara County)
    5. North Richmond Pump Station (Contra Costa County)
    6. Pulgas Pump Station (San Mateo County)

In Santa Clara County, the Guadalupe River station was operated by the Program in FY 13-14 in coordination with the SCVWD, and the Sunnyvale East Channel Station was operated by SFEI on behalf of all Co-permittees (via RMP funding). During Water Year 2014 (FY 13-14), a total of four wet weather sampling events and two dry weather events were successfully conducted at the Guadalupe River station. At the Sunnyvale East Channel station, a total of six wet weather sampling events and 2 dry weather events were also conducted.

Monitoring results and conclusions associated with all POC loads monitoring activities will be included in the Program's Water Year 2014 Urban Creeks Monitoring Report, which is due to the Water Board by March 15, 2015.

Fiscal Year 2014-15 Approach (Water Year 2015)

Based on the lessons learned through the implementation of the STLS Multi-Year Plan in Water Years 2012, 2013 and 2014; and the reprioritization of near-term information needs, SCVURPPP and its RMC partners are implementing a revised approach to POC Loads monitoring in FY 2014-15[2]. The alternative monitoring approach was discussed at numerous STLS workgroup meetings during FY 13-14[3] and was agreed upon by STLS members, including Water Board staff, as the best approach to addressing near-term high priority information needs regarding PCB and mercury sources and loadings. The approach will be implemented in compliance with MRP provision C.8.e[4] beginning in the fall of 2014. The alternative approach includes the discontinuation of most POC loads monitoring stations sampled in previous Water Years and includes the implementation of the following activities by SCVURPPP and/or the RMP via the STLS workgroup:

- **PCB and Mercury Opportunity Area Analysis (SCVURPPP)** - As part of the development of PCB and mercury loading estimates presented in Part C of the Program's Integrated Monitoring Report, SCVURPPP (in collaboration with the San Francisco Estuary Institute) developed preliminary GIS data layers illustrating potential PCB and mercury source areas. These data layers along with existing data on PCBs/mercury concentrations in sediment and stormwater represent the current state-of-knowledge of source areas for these pollutants in the Santa Clara Valley. These preliminary data layers, however, are based on limited and potentially outdated information on land uses and current activities at properties that may contribute or limit the level of pollutants transported to the Bay via stormwater. In an effort to collect additional information on current land uses, facility practices and contributions of PCBs and mercury from these properties, SCVURPPP is planning to conduct a *PCB and Mercury Opportunity Area Analysis* as part of the Program's revised POC loads monitoring approach in FY 14-15 to assist Permittees in identifying source areas in the Santa Clara Valley (i.e., within the SCVURPPP program area). The outcome of this activity will be a refined understanding and maps of PCB/mercury source area locations, which if managed may provide further load reduction opportunities during future NPDES permit terms.

[2] The BASMAA Phase I stormwater managers discussed the approach with the Assistant Executive Officer of the SF Bay Regional Water Quality Control Board at the August 28, 2014 monthly meeting and amended the RMC to reflect the modification.

[3] Discussions about revised POC loads monitoring approaches for FY 13-14 (Water Year 2015) were discussed and ultimately agreed upon by Water Board staff and other STLS and RMC partners at the following STLS meetings: October 13, 2013; March 19, 2014; April 1, 2014; April 16, 2014; May 15, 2014; and June 9, 2014.

[4] The FY 14-15 revised alternative approach summarized in this section addresses each of the POC Loads Monitoring management information needs described in provision C.8.e and will be performed at an equivalent level of monitoring effort as the effort described in this MRP provision.

- **POC Monitoring (RMP/STLS)** - Working through the STLS workgroup, SCVURPPP also plans to coordinate/collaborate with RMP staff on the implementation of a stormwater characterization field study that is intended to complement the opportunity area analysis described above. The goal of the project is to assist Permittees in identifying watershed sources of PCBs and mercury through sampling of stormwater and sediment transported from the watershed to stormwater conveyances during storm events. This monitoring will be funded through the RMP and will begin in the fall/winter of 2014.
- **Guadalupe River Contingency Monitoring (SCVURPPP)** – POC loads monitoring activities have been conducted for nearly a decade on the Guadalupe River near the Highway 101 overpass. These efforts have occurred via a combination of RMP, SCVURPPP and Santa Clara Valley Water District (SCVWD) funding and were generally aimed at developing robust estimates of annual mercury and other POC loading to the Bay from the watershed. One key information gap that remains is the concentrations and loading associated with high intensity storm events that necessitate the release of water from reservoirs located in the upper watershed. These events rarely occur, but the Program intends to institute contingency monitoring in FY 14-15 to sample water at the Highway 101 station should a qualifying storm event occur.

In addition to these activities conducted as part of the revised POC loads monitoring approach for FY 14-15, the Program also intends to continue participating in other STLS activities during this fiscal year. The activities summarized above will be further described in a project work plan scheduled for completion in fall 2014.

■ Additional C.8.e Associated Activities

- **Long-Term Trends Monitoring (C.8.e.ii) -** In addition to POC loads monitoring, Provision C.8.e.ii requires Permittees to conduct long-term trends monitoring to evaluate if stormwater discharges are causing or contributing to toxic impacts on aquatic life. Similar to creek status and POC loads monitoring, long-term trends monitoring was scheduled to begin in October 2011. As described in the *RMC Creek Status and Trends Monitoring Plan*, SWAMP through its Statewide Stream Pollutant Trend Monitoring (SPoT) Program currently monitors the seven long-term monitoring sites required by Provision C.8.e.ii. Sampling via the SPoT program is currently conducted at the sampling interval described in Provision C.8.e.iii in the MRP. Based on discussions with Region 2 Water Board (SWAMP) staff, the Program (and other RMC participants) is complying with long-term trends monitoring requirements described in MRP provision C.8.e.ii via monitoring conducted by the SPoT program. This manner of compliance is consistent with the MRP language in provisions C.8.e.ii and C.8.a.iv.[5] Based on discussions with staff coordinating the SPoT program, a technical report on data collected to-date is currently under review and will be released to the public in 2014. During FY 14-15, the Program plans to continue to coordinate with the SPoT program on long-term monitoring to ensure MRP monitoring and reporting requirements are addressed. Additional information on the SPoT program can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/reports.shtml#spot.
- **Sediment Delivery Estimate/Budget (C.8.e.vi)-** Provision C.8.e.vi of the MRP requires Permittees to develop a design for a robust sediment delivery estimate/sediment budget in local

[5] MRP Provision C.8.a.iv "Third Party Monitoring" states that where an existing third-party organization has initiated plans to conduct monitoring that would fulfill one or more requirements of Provision C.8 but the monitoring would not meet MRP due date(s) by a year or less, the Permittees may request that the Executive Officer adjust the due date(s) to synchronize with such efforts.

tributaries and urban drainages, and implement the study by July 1, 2012. The purpose of the sediment delivery estimate is to improve the Permittees' ability to estimate urban runoff contributions to loads of POCs, most of which are closely associated with sediment. The Program is complying with this requirement through sediment-specific modeling linked to the regional watershed spreadsheet model and conducted in coordination with the STLS Multi-Year Plan. Sediment modeling is intended to enhance the development of the watershed spreadsheet model for PCBs and other sediment-bound POCs. A more detailed work plan and schedule for the integration of the sediment load estimation with other regional watershed modeling work was included in the *Regional Monitoring Coalition Urban Creeks Monitoring Report - Water Year 2012*, which was submitted to the Water Board on March 15, 2013.

- **Emerging Pollutants Work Plan -** In compliance with Provision C.8.e.v, Co-permittees were required by March 2014 to develop a work plan and schedule for initial loading estimates and source analyses for the following emerging pollutants:

    1. Endocrine-disrupting compounds;
    2. Perfluorooctane Sulfonates (PFOS);
    3. Perfluoroalkyl Sulfonates (PFAS); and,
    4. Nonylphenols/nonylphenol esters —estrogen-like compounds (NP/NPEs).

    The intent of the work plan is to begin planning for implementation during the next permit term. In FY 13-14, Program representatives to the STLS Team continued to coordinate efforts on the development of this work plan with the development of the RMP Emerging Contaminants Strategy. A work plan addressing this MRP provision was submitted to the Water Board on March 17, 2014 as part of the Program's Integrated Monitoring Report (IMR) – Part A.

■ Reporting, Data Quality and Data Management (C.8.g&h)

Provision C.8.g requires Permittees to report annually on water quality data collected in compliance with the MRP. Annual reporting requirements include: 1) water quality standard exceedances; 2) creek status monitoring electronic reporting; and, 3) urban creeks monitoring reporting. Annual reporting requirements began with the initial creek status monitoring electronic data submittal to the Water Board that occurred on January 15, 2013. A subsequent submittal occurred on January 15, 2014. Preliminary evaluations of data compared to water quality objectives were included in these submittals. Additional evaluations of data collected pursuant to Provision C.8 were also included in the Program's IMR – Part A, which was submitted to the Water Board on March 17, 2014.

Provision C.8.h requires that water quality data collected by Co-permittees in compliance with the MRP should be of a quality that is consistent with the State of California's Surface Water Ambient Monitoring Program (SWAMP) standards, set forth in the SWAMP Quality Assurance Project Plan (QAPP). To assist Permittees in meeting SWAMP data quality standards and developing data management systems that allow for easy access of water quality monitoring data by Co-permittees, the Program completed the following regional projects via the RMC in FY 13-14:

- **Standard Operating and Data Quality Assurance Procedures** – With regards to POC monitoring, a draft field manual and quality assurance project plan (QAPP) for POC loads monitoring are were developed through the STLS Team and described in the STLS Multi-Year Plan. The Field Manual and QAPP were completed in late 2013. For creek status monitoring, in Water Year 2013

the RMC adapted existing creek status monitoring SOPs and QAPP developed by SWAMP to document the field procedures necessary to maintain comparable, high quality data among RMC participants. RMC SOPs and the QAPP were revised and finalized in Water Year 2014 (FY 13-14).

- **Information Management System Development/Adaptation** – Two projects regarding information management continued in FY 13-14 - one for POC Loads Monitoring and one for Creek Status and Trends Monitoring. Information management systems developed in previous fiscal years store and manage water quality data collected in compliance with Provision C.8 in a cost-effective manner that provides data users easy access. Creek status and trends monitoring data are managed individually by the Program and other RMC participants. In FY 13-14, BASMAA (on behalf of the Program and all RMC participants) continued to contract with SFEI to coordinate laboratory analyses, data management and data quality assurance for POC loads monitoring data. Both creek status and POC loads monitoring data are managed in formats comparable to SWAMP.

Biological Integrity Policy for California Freshwater Creeks

The State Board initiated a process to develop biological objectives for assessing the health of creeks statewide in FY 09-10. These objectives will supplement existing narrative and numeric chemical water quality objectives and will be in the form of a narrative statement that will be applied statewide, accompanied by a detailed implementation plan.

Three oversight committees (Stakeholder, Scientific Steering and Regulatory Oversight) have been established for the development and public vetting of the regulatory and technical policy statements. Program staff was asked by State Board staff to participate on the Stakeholder Committee, which had its first meeting on May 26, 2010, and met consistently during FYs 11-12, 12-13 and 13-14. In FY 13-14, the State Board staff changed the name of the effort from the Biological Objectives Policy to the Biological Integrity Policy, signifying the complexities in developing statewide objectives for biological condition. Additionally in FY 13-14, Program staff actively participated in reviewing and informally commenting on early drafts of the proposed structure and content of policy elements. In FY 14-15, Program staff plan to continue providing input on this important policy.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 9

Pesticides Toxicity Control

September 15, 2014

Section 9 Pesticides Toxicity Control

■ Introduction

Provision C.9 of the MRP requires Co-permittees to implement pesticide toxicity control programs within their jurisdictions to address the use of pesticides that pose a threat to water quality and have a potential to enter the municipal stormwater conveyance system. Consistent with the requirements of Provision C.9, the Program's (and Co-permittees') approach to pesticide management focuses on the use of best management practices (BMPs) for source control and pollution prevention. Program BMPs for pesticide management include significant outreach efforts to residents, businesses, and municipal staff to provide education and achieve behavior changes relative to uses of pesticides and less toxic pest control methods. Outreach efforts have been supplemented by: local and regional monitoring studies to define the problem; participation in regional organizations to address pesticide regulations and other issues; and development of local integrated pest management plans.

In FY 13-14, activities associated with Provision C.9 were conducted at the Co-permittee, Program and regional levels. These activities built upon a large body-of-knowledge gained through tasks completed in previous fiscal years.[1] Local actions are documented in each Co-permittee's annual report. This section highlights pesticide toxicity control activities conducted at the Program and/or regional levels that are associated with the following sub-provisions of the C.9 Provision:

- Program Activities
  - Interface with County Agricultural Commissioner (C.9.f)
  - Public Outreach (C.9.h)
- Regional Activities
  - Track and Participate in Relevant Regulatory Processes (C.9.e)
  - Evaluate Implementation of Source Control Actions Relating to Pesticides (C.9.g)

■ Program Activities

C.9.f. Interface with County Agricultural Commissioners

Program staff met with Joseph Deviney (Agricultural Commissioner, Santa Clara County Division of Agriculture), Michelle Thom (Deputy Agricultural Commissioner, Santa Clara County Division of Agriculture) , and Eric Wylde (Deputy Agricultural Commissioner, Santa Clara County Division of Agriculture) to update them on requirements in Provision C.9 of the MRP, the Effectiveness Evaluation of Source Control Actions Related to Pesticides Report and pesticide outreach being conducted by the Program and Co-permittees. The meeting also discussed how the two agencies can coordinate their outreach efforts.

Division of Agriculture (DOA) staff noted that they are continuing to provide information on the new pyrethroid regulations to Pest Control Operators/Pesticide Applicators via meetings. During FY 13-14, information was provided at the following seminars:

[1] Pesticide-related work products completed by the Program or through regional efforts in previous fiscal years, and associated task summaries of Program efforts can be found on the SCVURPPP website (www.scvurppp.org).

- California Association of Pest Control Advisers Seminar, September 18, 2013 - 85 attendees
- Pesticide Applicators Professional Association Seminar, September 12, 2013 - 83 attendees
- Arborist Association Seminar, December 12, 2013 - 62 attendees

Additionally, a link to the Watershed Watch website's "less-toxic gardening" webpage is posted on the DOA website. The DOA's pesticide violations reporting phone number is posted on the Watershed Watch and SCVURPPP websites.

In future years, Program staff intends to continue interfacing with the County's Agricultural Commissioner through meetings, phone conversations and sharing of information by email. Program staff will also continue to develop articles on urban runoff issues for including in the Division of Agriculture's *The Pesticide Review* newsletter. This newsletter is distributed to all Pest Control Operators registered in Santa Clara County.

C.9.h. Public Outreach

Point of Purchase Outreach to Consumers (C.9.h.i & ii)

The Program contributed funds to and actively participated in, the BASMAA IPM Store Partnership Program (also know as the Our Water Our World Program). The aim of the OWOW Program is to partner with retail stores and nurseries to provide less-toxic pest control information to residents at the point of purchase. This involves stocking literature racks at stores with "Less-Toxic Pest Management" fact sheets and placing "shelf-talkers" on store shelves. Shelf-talkers are product identification tags that are placed on store shelves to help customers identify less-toxic products. The OWOW Program also includes a training component where store employees are trained on IPM and selling less-toxic pest control products to customers.

Currently, 37 local stores in Santa Clara Valley participate in the OWOW Program. Program staff visited each participating store two to three times in FY 13-14 for restocking literature racks and updating shelf-talkers.

The Program continued to contract with Ann Joseph (IPM Consultant) for store employee training. Ms. Joseph worked with Suzanne Bontempo (IPM Advocate) to train 100 employees representing 13 stores. The trainers provided two hours of on-site training at stores and supplied attendees with informational handouts and lists of less-toxic products. In addition, David Perkins (IPM Advocate) conducted an employee training at SummerWinds Mountain View and trained 5 employees. This training was funded through EPA's Greener Pesticides for Cleaner Waterways Grant to SFEP. Additional details, including the detailed Store Training Summary Report and the list of stores participating in the program in Santa Clara Valley, are provided in Appendix 9-1.

In FY 13-14, the Regional OWOW Program began a pilot program to conduct enhanced outreach at select Home Depot stores. SCVURPPP provided OWOW banners for displaying in six Santa Clara Valley Home Depot stores. Additional details on this pilot program are described under the Regional Activities section.

Evaluation of Effectiveness

The OWOW Program has been very successful in engaging stores, educating customers, and training employees on promoting less-toxic products to customers. In FY 13-14, the store managers continued to be enthusiastic about the program and extremely receptive to having the OWOW materials in their stores.

Store employees attending the training were asked to complete survey forms to provide feedback on the training. Feedback on the trainings was very positive, as indicated in the evaluation summary included in Appendix 9-1. A few highlights of the evaluation are:

- 96% of survey respondents agreed that the training will help them sell less-toxic products.
- 99% of survey respondents said that they will recommend the training to co-workers.
- 75% of survey respondents said that the training changed their attitude toward pesticides.

The Program intends to continue the local implementation of the IPM Store Partnership Program.

Pest Control Contracting Outreach (C.9.h.iii) – Outreach to Residents

As required by Provision C.9.h.iii., the Program conducted outreach about less-toxic pest control to residents who use pesticides, or contract for structural or landscape pest control. Messages included the following: proper use and disposal of pesticides, IPM, information about the *Green Gardener* Program, the list of trained *Green Gardeners*, IPM Certification Programs, and the OWOW Program. The Program conducted the following IPM outreach activities in FY 13-14 to meet this requirement:

- New Advertisements - New television and radio advertisements on the following Integrated Pest Management topics were developed: Hiring an IPM-trained pest control company, hiring a Green Gardener, and choosing/using less-toxic pest control.
- Media Advertising – The new advertisements were placed on local radio stations and television channels as part of the Watershed Watch Campaign media advertising. Highlights of the media advertising campaign on pesticides are described below:
  - 30-second Spanish radio ads promoting the use of IPM practices ran on KVVF and KSOL.
  - 15-second radio tips and 2 e-blasts promoting IPM practices and hiring an IPM PCO ran on KBAY, and Planet KBAY web page.
  - 10-second IPM tips ran on KRTY and KRTY.com.
  - 60-second English radio ads promoting hiring an IPM PCO, choosing less toxic pest control, and hiring a Green Gardener ran on KBAY and KRTY.
  - 30-second Spanish TV ads promoting hiring an IPM PCO, choosing less toxic pest control, and hiring a Green Gardener ran on KDTV.
  - 30-second English TV ads promoting hiring an IPM PCO, choosing less toxic pest control, and hiring a Green Gardener ran on KNTV.
  - IPM and “Got Ants?” campaign messages posted on Facebook and Twitter.
  - IPM messages ran on NBCBayArea.com banner ads, mobile and 4-22-14 e-blast.

  Overall, the Watershed Watch Campaign advertising included 447 total spots on IPM topics. Additional details on the media campaign are included in Appendix 7-1.
- Outreach at Events – Program, Co-permittee and Watershed Watch Campaign staff conducted IPM outreach at four events. These were:

- Pumpkins in the Park, October 12, 2013
- Haunt the Hollow, October 27, 2013
- Mission College Eco Fair, April 17, 2014
- Festival in the Park, June 7, 2014

The Program also provided funding to support the Going Native Garden Tour (GNGT) held on April 26 and 27, 2014. The tour featured 56 gardens that demonstrated environmentally friendly gardening practices with an emphasis of reduced water use, reduced chemical and pesticide use and improved habitat using California native plants. The OWOW Less-Toxic Pest Management fact sheets and the "Soak It Up" flyer were available at each garden on the tour. The GNGT Summary Report is included in Appendix 7-7.

- Watershed Watch Website - Messages about less-toxic pest management information, including the list of Green Gardeners, IPM Certification Programs, OWOW Fact Sheets, and the list of stores selling less-toxic products were posted on the website throughout the year. The website also promotes proper disposal of pesticides and refers users to the County Household Hazardous Waste Program's website (www.hhw.org) to find a disposal location near them.
- Eco-Gardener Program – In FY 12-13, the Santa Clara County Recycling and Waste Reduction Commission (SCCRWRC) and SCVURPPP formed the Eco-Gardener Work Group to discuss the development of a County-wide sustainable gardening program to coordinate and improve existing efforts to educate residents, landscape construction maintenance professionals, and municipal staff on sustainable landscaping techniques. SCVURPPP and SCCRWRC allocated funds in FY 12-13 and FY 13-14 toward the development of the Eco-Gardener Program. Program staff and several Co-permittee staff are participating in meetings of the Eco-Gardener Work Group. In FY 13-14, the Work Group worked with a consultant to develop the www.BayAreaEcoGardens.org website. The website includes information on sustainable landscaping topics, features photographs of sustainable gardens from around the Bay Area, and provides an events calendar that covers all landscaping classes held in Santa Clara County. The website received a total of 7,468 visits in FY 13-14. The Work Group is currently working with the consultant to further enhance the website with a water calculator and additional sustainable gardening information.

Evaluation of Effectiveness

Results from FY 13-14 media advertising and outreach events conducted by the Program yielded the following conclusions regarding their effectiveness:

- Media Advertising - The Watershed Watch media campaign, which included 992 media placements (including radio, television, and online advertisements) overall, delivered approximately 14,553,943 gross impressions. The IPM ads resulted in the Less Toxic Pest Control page (www.mywatershedwatch.org/lesstoxicgarden.html) being the most visited page on the Watershed Watch website site this year. Additional details are included in the FY 13-14 detailed Watershed Watch Campaign and Media Report included in Appendix 7-1.
- Outreach at events - Overall, the four outreach events were successful in providing opportunities for educating the public about less-toxic pest control methods. Materials distributed at the events included the following: Less Toxic Pest Management fact sheets, "10 Most Wanted Backyard Bugs" brochures, "Don't Plant a Pest" brochure, and giveaways (e.g. flyswatters, OWOW magnets, notepads, and temporary tattoos). The flyswatters have the

Watershed Watch website and the words "The Original Earth-Friendly Pest Control" printed on them. Additional details on outreach events and numbers of brochures distributed are included in Section 7 of this Annual Report.

- Public Opinion Survey – In March 2014, the Program contracted with EMC Research to conduct the Public Opinion Survey. EMC Research conducted Random Digit Dialing Survey of Santa Clara Valley residents in March and April 2014. Overall, 565 interviews were conducted that included 37 high school students and 528 adults. The survey results indicate that there has been progress is changing some pollution prevention behaviors such as proper car washing, use of reusable bags, disposal of used motor oil, sweeping of driveways, and self-reported littering. However, the percentage of residents that report using less-toxic pesticides continues to be at the same level as reported in previous surveys. In FY 14-15, the Program's Watershed Education and Outreach Ad Hoc Task Group will further analyze survey results and develop a strategy for conducting future outreach.

Outreach to Pest Control Operators (C.9.h.v)

In FY 07-08, the Program began the Santa Clara Valley Green Gardener Training Program, an educational initiative that brings quality training to professional landscapers, gardeners and landscape maintenance workers on how to "garden green". Each training session consists of ten 2-hour classes, held once a week for ten weeks. The training is conducted in collaboration with Sunnyvale-Cupertino Adult Community Education (ACE) training center in Sunnyvale, and the Master Gardeners of Santa Clara County.

The Green Gardener Program is offered at two levels, Basic and Advanced. Each training level consists of ten, 2-hour sessions on the core curriculum topics. Students must attend at least 80 percent of the classes and pass a final examination on the core subjects to be placed on the Green Gardener list promoted to the public. To maintain their status as Green Gardeners, individuals must meet annual continuing education requirements or demonstrate that they are implementing the practices learned.

From FY 07-08 to FY 12-13, the Program conducted Basic Green Gardener trainings. In FY 13-14, for the first time, the Program conducted the Advanced Green Gardener training. Students who had completed the Basic Green Gardener training were contacted and encouraged to attend the advanced training. The training included topics such as green design, advanced irrigation techniques, soil management, and using integrated pest management techniques to manage weeds, insects and plant diseases. Topic experts were invited to present information to students. Staff from the City of Sunnyvale helped provide classroom instruction for the Green Gardener training class on "Successful Plant Installation". Attendees were required to take a final test to receive the certificate of completion. This ensured that they understood the curriculum and would be able to implement the practices at their client locations. A total of 25 individuals completed the Advanced Green Gardener training (10 completed the training in English and 15 in Spanish).

The Program held two re-certification classes on "Drip Irrigation" in February and March 2014 to help Green Gardeners meet the continuing education requirements. The City of Sunnyvale provided space to host these trainings. A total of 31 Green Gardeners attended these re-certification classes. In addition, 6 Green Gardeners re-certified using other options (e.g., attending a relevant class or completing self-assessment forms). Additional details on the FY 13-14 Green Gardener Training Program, including a list of trained Green Gardeners, are included in the Green Gardener Training report in Appendix 9-2.

The Program plans to continue implementing the Green Gardener Training Program in FY 14-15, and will offer the Basic Green Gardener Training. Classes will be held at the ACE training center in Sunnyvale. The Program will also continue to work with the Santa Clara County Master Gardeners to receive their help in teaching the class and promoting the use of trained Green Gardeners through their hotline and other outreach venues.

■ Regional Activities

During FY 13-14, the Program participated in the following regional activities to address MRP C.9 Provisions:

- Track and Participate in Relevant Regulatory Processes (C.9.e) – This provision requires Permittees to track U.S. Environmental Protection Agency (EPA) and California Department of Pesticide Regulation (DPR) actions related to urban uses of pesticides and actively participate in the shaping of regulatory efforts. The Program and Co-permittees work with CASQA to communicate to the EPA Office of Pesticide Programs and DPR the need to reduce pesticide-related toxicity in Bay Area water bodies by considering the impact on water quality during the pesticide approval and registration process. As a CASQA member, SCVURPPP helped fund the efforts of the CASQA Pesticide Subcommittee to track regulatory efforts and write letters regarding pesticide reregistration and maintain other communications with State and Federal agencies. Program staff participates in the CASQA Pesticide Subcommittee and provides input on draft letters and regulatory efforts related to pesticides. Highlights of tasks completed by the CASQA Pesticide Subcommittee in FY 13-14 are provided in Table 9-1. Tasks generally fall into the following categories:
  - Tracking Federal Register notices;
  - Tracking DPR notices of evaluations and decisions;
  - Tracking activities at the Water Boards;
  - Briefing EPA and DPR via phone calls and emails;
  - Writing letters and tracking responses to letters;
  - Meeting with EPA and DPR;
  - Presenting to EPA, DPR, Water Board, CASQA members and other collaborators;
  - Developing and delivering public testimony; and,
  - Analyzing DPR/SWAMP/MS4 monitoring data.

  A full report of the accomplishments of the CASQA Pesticide Subcommittee is included in Appendix 9-3.

Table 9-1. Summary of tasks conducted to track and participate in regulatory processes associated with pesticides.

Issue/Outcome	Participation Actions[2]
DPR initiated an effort in 2014 to address fipronil water pollution in California urban area – DPR has informally outlined potential actions. The informal outline should be refined into an action plan after DPR meets with fipronil registrants in summer 2014. Timely DPR action to reduce fipronil concentrations in urban runoff could avoid many future urban TMDLs. Fipronil is a highly toxic pyrethroid alternative that is used only in urban areas. Fipronil monitoring data that has already been generated by DPR and others is likely to provide the basis for multiple fipronil 303(d) listings in future cycles.	This effort was conducted in direct response to a joint CASQA and Water Board request based on CASQA's 2013 compilation of fipronil monitoring data.
EPA modified its work plan in 2014 for review of the indoxacarb to include urban uses – EPA's upcoming review will not omit urban uses of the highly toxic pyrethroid alternative. The modified work plan will address urban uses; substantially expand data requirements to obtain environmental fate and aquatic toxicity data for indoxacarb and its stable, toxic degradates; and require development and validation of chemical analysis methods.	This modification was in direct response to CASQA and Water Board comments. CASQA and Partners called these uses to EPA's attention and made a strong and well-documented case for detailed review of water quality impacts.
Application to Register Potential Pyrethroid Substitute Cyantraniliprole – Based on the limited information in EPA's and DPR's registration application public notices, it appears that cyantraniliprole could substitute for pyrethroids, and thereby could potentially see widespread use in urban areas if EPA and DPR register it. Although there are no publicly available aquatic toxicity data for cyantraniliprole, a related chemical, (chlorantraniliprole) is very highly toxic to aquatic invertebrates and has multiple stable (and similarly toxic) degradates. Comments requested a careful evaluation of the potential water quality risks associated with all proposed urban uses of this new insecticide. Both EPA and DPR are currently reviewing the registration application. In comments developed in early FY 2013-14 (submitted 7/6/13), CASQA commented on the registration review of cyantraniliprole urban products. The input to EPA focused on only one use –broadcast applications on urban impervious surfaces (e.g., building perimeter sprays to control ants). EPA's modeling predicts that such applications could cause toxicity to aquatic invertebrates. EPA's risk managers proposed mitigation measures that address toxicity in agricultural areas, but do not work in the urban setting. The letter proposes alternative measures, similar to those that California Department of Pesticide Regulation adopted for the pyrethroid insecticides (which were agreeable to the industry).	CASQA letter to EPA, July 6, 2013

[2] The San Francisco Bay Regional Water Quality Control Board also participated in almost all of these regulatory processes, providing input that paralleled CASQA's, BASMAA's and the Program's. The State Water Resources Control Board, the Central Valley Regional Water Quality Control Board, and California municipal wastewater treatment plants also joined CASQA and the San Francisco Bay Water Board in participating in many of these processes. Outcomes should be attributed to the combined communications of all participants.

Issue/Outcome	Participation Actions[2]
Ending Registration Review of Metofluthrin – EPA has proposed to end the Registration Review of this relatively new and not heavily used pyrethroid. This is a surprise, because EPA had previously committed to take all pyrethroids together through Registration Review. Although this new pyrethroid currently has only a few approved uses, its uses are growing rapidly--and particularly expanding in urban areas, where it is approved for use in systems that automatically spray mists of this pesticide on decks and patios, such as at outdoor restaurants. EPAs Office of Pesticide Programs (OPP) Registration Review work plan did not proposed to examine water quality risks, and instead proposed to terminate its review. Terminating meofluthrin's review opens the door to continued increases in use without measures to prevent water pollution. Ending its Registration Review also prevents OPP from requiring metofluthrin products to implement mitigation measures required in the future for other pyrethroids. In comments developed in August 2013, CASQA[3] advocates that EPA conduct a risk assessment reflecting the same aquatic toxicity endpoints and same level of scientific rigor as the risk assessments for all other pyrethroids. It also urges the revision of the Registration Review work plan to provide a specific commitment to reopen the review when other pyrethroids have completed Registration Review. In early 2014, OPP decided to refuse the request to revise its approach. OPP's decision to terminate review is based on a formal determination that metofluthrin poses only "de minimis" water quality risk. OPP promised future documentation of the scientific basis for this determination, which was not included in its decision.	Engagement with the EPA Office of Pesticide Programs, including letters and phone calls. Letter to EPA, August 26, 2013
Registration Review of Momfluorothrin – On October 30, EPA announced that it received an application to register a new pyrethroid. It appears that momfluorothrin is a pyrethroid proposed for use in urban areas, and thereby could potentially add to existing pyrethroid water pollution that is widespread in California urban areas. In November 2013, CASQA sent comments and water quality monitoring data from California urban watersheds documenting the widespread water pollution from pyrethroids. The letter requests that EPA carefully evaluate each and every proposed use of momfluorothrin for its ability to cause adverse impacts in the water column and/or sediments in California's urban waterways.	Letter to EPA, November 25, 2013
Registration evaluation of copper sulfate pentahydrate as an antimicrobial materials preservative - EPA has received an application to register copper sulfate as a materials preservative. This application is of interest for several reasons: (1) because copper sulfate is very water soluble, if it were widely used to preserve an outdoor product like paint, there could potentially be significant new source of copper in urban runoff. (2) materials preservatives are the sole class of pesticides for which DPR cannot prevent their sale in California (because they come to us in consumer products like paint, rather than in pesticide jars used to formulate the paint out of state). (3) There are 83 copper 303(d) listings and numerous copper TMDLs, particularly in urban areas of Southern California. In comments sent to EPA in March, CASQA lists reasons for concern, listed above, and requests that EPA evaluate potential pathways to receiving waters under conditions consistent with usage and disposal of each end-use product type. It urges the evaluation of restrictions on use since states cannot prevent the sale and use of end-use products containing antimicrobials that function as materials preservatives.	Letter to EPA, March 31, 2014
Adoption of Basin Plan Amendments for Diazinon and Chlorpyrifos by Region 3 Water Quality Control Board in lieu of a TMDL Sacramento County included a February 2013 CASQA letter (written to the California State Water Resources Board and Region 2 Water Quality Control Board) in their letter to the Region 3 Board. The CASQA letter calls on the State to establish a statewide cooperative monitoring program for pesticides, and encourages restructuring the state's stormwater pesticide monitoring.	Feb 2013 letter to State Board and Region 2 forwarded to the Region 3 Board in February 2014

[3] The San Francisco Bay Regional Water Quality Control Board also participated in almost all of these regulatory processes, providing input that paralleled CASQA's.

Issue/Outcome	Participation Actions[2]
Proposed adoption of TMDL for Toxicity and Pesticides in the Santa Maria Watershed – Proposed by the Region 3 Water Board, this is the first California Water Board TMDL since the mid-2000s to address pesticides that are currently used in California's urban areas. Comments to the Region 3 Water Board express support for the TMDL's integration of the collaborative statewide monitoring approach. The TMDL anticipates a future of continued collaboration among the Water Boards, CASQA, and DPR toward ending pyrethroids water pollution in California urban areas	Letter to Region 3 Water Board, January 2014
Water Quality Protection Label Changes for All Types of Pyrethroid Products—Including Consumer Products—Start to Appear on Product Shelves But Are Being Implemented Slowly. In 2009, EPA began working with pyrethroid manufacturers to modify pyrethroid product labels with instructions that provide additional water quality protections. The instructions direct users to apply only spot or "crack and crevice" treatments on impervious surfaces and contain other recommendations, such as to avoid applications when rain is forecast in the next 24 hours. EPA required these changes for pyrethroids that went through re-registration (cypermethrin, permethrin, resmethrin, tetramethrin, sumithrin, and allethrins). For all other pyrethroids (e.g., bifenthrin, cyfluthrin, esfenvalerate), the changes are voluntary until Registration Reviews are completed late this decade. The letter also reiterates the need for pyrethroids to be reviewed in parallel with parallel mitigation requirements. EPA's initial goal was to achieve 100% voluntary label changes and to approve both voluntary and mandatory label changes in 2010. The reality has fallen short of this goal. The first modified consumer product labels began appearing on retail shelves in fall 2011. In spring 2012, manufacturers started to ship professional products with the new labels. In May 2012, EPA admitted that there is no current target implementation date for the new labels and that not all manufacturers are voluntarily making the label changes. On January 10, 2013, in response to requests from pesticide users and regulators facing pest problems not present in California, EPA modified label language designed to minimize water pollution to allow additional types of applications on buildings by professional applications under limited circumstances. EPA's language changes clarify the legality of California's regulatory exception allowing treatments under building eaves in areas full sheltered from rain. Otherwise, these changes should not affect California because DPR's surface water protection regulations do not include the new exceptions. EPA has only required this language be placed on labels for the pyrethroids that were reviewed in EPA's last review cycle, re-registration (cypermethrin, permethrin, allethrins, tau-fluvalinate, resmethrin, sumithrin, and tetramethrin). For all other pyrethroids (bifenthrin, cyhalothrin, cyhalothrin, cyfluthrin, tralomethrin, deltamethrin, esfenvalerate, etofenprox) the language is voluntary. DPR's adoption of the Surface Water Protection regulations was partially motivated by the delays and limited adoption of these product labels. Since DPR regulations can only address professional applicators, the EPA label change program is the only effort underway to reduce pyrethroid water pollution from non-professional (consumer) products. For most of the pyrethroids linked to water pollution, non-professional use is relatively small. The exception is bifenthrin, for which non-professional use comprises about 20% of the market	Since the mid 2000s, multiple meetings and ongoing communications with California DPR and EPA about pyrethroid insecticide water pollution and specific early mitigation actions, including product label language improvements. The label change process was initiated by DPR in response to October 2007 letters from CASQA and the Water Boards requesting early mitigation actions for pyrethroids in urban runoff.

Issue/Outcome	Participation Actions[2]
DPR Incorporated Surface Water Into Registration Process for Most New Pesticide Chemicals Intended for Use Outdoors in Urban Areas. On September 16, 2011, DPR announced a formal procedure to ensure that pesticides with potential to pollute surface water will be identified when they enter DPR's registration process and will be routed to DPR's Surface Water Program for review. Past DPR registration process shortcomings have allowed at least one problem pesticide (fipronil) to slip through and have constrained the quality of DPR's evaluations. DPR's new procedure should identify most pesticides likely to be water quality problems (however, there are a few critical gaps in the program, such as swimming pool chemicals). When registration is approved, DPR will have the necessary scientific basis to require appropriate mitigation measures. In parallel, DPR has established procedures to create a surface water quality "watch list," to require analytical methods when it registers pesticides on this watch list, and to track usage and annually reevaluate its monitoring program to respond to changes in use of watch list pesticides. In July 2011, just as DPR was finalizing its procedure, DPR demonstrated how the new process would work when it denied the application to register a product called Abtech Smart Sponge. The "Smart Sponge" is designed to kill bacteria in storm drains with a biocide that may also be toxic to aquatic organisms. Although EPA's Antimicrobials Division gave minimal review of water quality implications when approving this product, DPR (in an early implementation of its new procedure) ensured that the product was fully reviewed by DPR's Surface Water Program. Because DPR Surface Water Program reviewers determined that there was insufficient information available to determine if the product would adversely impact water quality, DPR denied the registration application.	Since the early 2000s, multiple meetings, letters, and ongoing communications with California DPR.
DPR and EPA to Improve Ability to Model Pesticides in Urban Runoff. California input to EPA and DPR has long encouraged development of modeling methods that EPA and DPR can use to evaluate water quality risks associated with pesticide use in urban areas. In 2011, U.S. EPA formalized plans to modify its pesticide runoff model (PRSM/EXAMS) to account for both pervious and impervious surfaces, to use washoff data, and to develop multiple urban modeling scenarios. In late 2011, DPR initiated a project to fill a key gap in urban runoff modeling by developing a computational model for pesticide wash-off from impervious surfaces. In June 2012, DPR provided funding to U.C. Davis to extend an existing pesticide environmental fate and transport model (HYDRUS 2/3D) to address urban runoff. Developing these improved models will help protect water quality because DPR and EPA will be better able to predict water pollution before it occurs. In a February 2013 letter to EPA on the chlorinated isocyanurates registration review, CASQA recognized the improved examination of surface water quality risks done by EPA for that registration review. CASQA noted that EPA developed conceptual models that appropriately identified pathways for transport of chlorinated isocyanurates through urban storm drainage systems to surface waters, and also noted that identifying all pathways by which antimicrobials may flow into and through urban storm drainage systems is a critical first step in a thorough ecological risk assessment.	Since the early-2000s, multiple meetings, letters, and ongoing communications with EPA and DPR about the need for predictive modeling tools to inform pesticide registration decisions.

- Regional OWOW Program – The Program provided funds toward implementing the Regional OWOW Program. Program staff participated in the BASMAA PIP Subcommittee and provided input, as needed. The Regional OWOW Program implemented the following activities in FY 13-14:
  - Coordinated program implementation with major chains Home Depot, Orchard Supply Hardware (OSH), and Ace Hardware National. Corporate office of OSH (San Jose) and Home Depot (Atlanta) directed support of the program with their stores.
  - Coordinated updates and master print run of the following: fact sheets, shelf talkers, literature rack signage, beneficial bug brochure, magnet, Pest or Pal activity guide for kids, pocket guide, and Pests Bugging You? booklet.
  - Updated less-toxic Product Lists: general plus OSH and Home Depot-specific lists/labels.
  - Maintained *Our Water, Our World* website.
  - Provided Ask-the-Expert service, which provides 24-hour turnaround on answers to pest management questions.
  - Provided and staffed the following exhibitor booths:
    - Excel Gardens Dealer Show, Las Vegas (August 2013)
    - L&L Dealer Show, Reno (October 2013)
    - NorCal trade show (February 2014)
  - Provided on-call assistance (e.g., display set-up, training, IPM materials review) to specific stores (e.g., OSH, Home Depots).
  - Provided print and web advertising – Bay Nature magazine, Bringing Back the Natives Garden Tour's garden guide, and Chinook Coupon Book.

Additional information is included in the FY 13-14 Regional IPM Partnership Program Report included in Appendix 9-4**.**

- "Got Ants?" Pesticide Outreach Campaign – In 2012, the San Francisco Estuary Partnership (SFEP) received a grant from the Department of Pesticide Regulation to implement an outreach campaign to educate residents on choosing IPM techniques for ant control. SCVURPPP participated on the grant as a Managing Team member and Program staff assisted with the development and implementation of the outreach campaign. The grant proposal was developed based on BASMAA's Pesticide Outreach Strategy. The campaign entitled "Got Ants? Get Serious" was launched in 2012 and completed in 2014. Highlights of activities are provided below:
  - Development of the www.GotAntsGetSerious.org website - The website includes a pledge that people can sign to show their commitment toward using less-toxic pest control methods. The website also links to the three IPM Certification Programs GreenPro, Ecowise Certified, and Green Shield and encourages website visitors to hire an IPM Certified Pest Control Operator. The website received 6,594 unique visitors over the course of the project.
  - Creation of a Facebook page – The Facebook page https://www.facebook.com/safer.ant.control was created to share information and encourage people to share their stories about controlling ants. The Facebook page received

84 likes over the course of the project. In addition, posts and photos on the Facebook page received 106 likes.

- Media Campaign – A media advertising campaign that included transit (interior cards on BART and AC Transit), online (Google Ad Sense and Facebook) and print (Sunset Magazine) advertising was conducted. The media campaign is estimated to have received 14.75 million impressions.

- IPM Outreach at Multi-family Units - In February 2014, BASMAA applied for a Department of Pesticide Regulation (DPR) grant to conduct IPM outreach to managers and residents multi-family units. The project will focus on structural pest control and be implemented in selected apartment buildings located in San Jose, East Palo Alto, Palo Alto and San Francisco. Program staff participated in meetings to discuss and develop the grant application. In June 2014, DPR selected the project for funding, and implementation will begin in September 2014.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 10

Trash Controls

September 15, 2014

Section 10 Trash Controls

■ Introduction

The goal of MRP Provision C.10 (Trash Load Reduction) is to implement control measures and other actions to reduce trash loads from the stormwater conveyance system to local urban creeks by 40 percent by July 1, 2014. This goal is intended to set the course for additional load reductions in future years. To achieve this reduction goal, Co-permittees were required to develop and implement trash reduction plans that include the installation and maintenance of trash full-capture devices designed to treat a mandatory minimum level of land area, implement other control measures and best management practices that prevent or intercept trash before entering local water bodies, and remove trash from creek and shoreline hot spots. To address longer-term goals of trash reduction, Co-permittees were also required to develop a Long-Term Trash Load Reduction Plan by February 2014 in preparation for the next Permit.

Activities associated with Provision C.10 requirements were conducted at the Co-permittee, Program and Regional levels in FY 13-14. Local actions are documented in each Co-permittee's annual report. This section highlights trash management and assessment activities conducted at the Program and/or regional levels, including:

- SF Bay Area Trash Generation Rates Project
- Long-Term Trash Load Reduction Plan Framework, Template and Guidance
- SCVURPPP Pilot Trash Assessment Strategy
- Trash Hot Spot Assessment and Cleanup Guidance and Reporting
- SCVURPPP Trash Ad hoc Task Group
- Participation in SCBWMI Zero Litter Initiative (ZLI)
- Participation in Bay Area-wide Trash Capture Demonstration Project
- Tracking California's Trash Project (Proposition 84 Grant)
- Coordination of BASMAA Trash Committee
- Participation in SF Bay Area Water Board Workshops on Trash Management
- Tracking the Trash Amendments to Statewide Water Quality Control Plans

These activities built upon a large body of knowledge gained through tasks completed in previous fiscal years.[1] Program and regional task highlights presented in this section are organized by Permit provision or by major heading (both marked in bold).

[1] Trash-related work products completed by the Program in previous fiscal years and task summaries of Program efforts can be found on the "trash" section of the SCVURPPP website (http://www.scvurppp-w2k.com/poc_wp.shtml#trash).

Trash Generation Rates Project (C.10.a.ii)

Provision C.10.a.ii of the MRP requires Co-permittees to develop and report on baseline trash loads from their MS4s by February 1, 2012. To accomplish this task, the BASMAA Board of Directors approved the *Preliminary Baseline Trash Generation Rates Project* for developing baseline trash generation rates used to develop preliminary baseline trash load estimates in December 2010. On February 1, 2011, BASMAA submitted a progress report to the Water Board on behalf of all MRP Permittees. Through the submittal of this progress report, all Permittees agreed to use methods developed collaboratively through BASMAA to develop their baseline trash load. These methods are fully described in the *Method to Estimate Baseline Trash Loads from Bay Area Municipal Stormwater Systems – Technical Memorandum #1* and the *Baseline Trash Loading Rates from Bay Area Municipal Stormwater Systems - Sampling and Analysis Plan*.

The Program, along with the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), led the effort on this regional project to establish trash generation rates for the region. As part of the project, existing and new trash full-capture devices installed in a total of 159 storm drain inlets throughout the Bay Area were monitored during wet and dry periods. Monitoring sites were selected to test the effect that land use and other factors (e.g., economic profile and population density) may have on trash loading rates. Trash and other debris removed from the monitoring sites were characterized in May and September 2011, and January and April 2012. The results from the May and September 2011 characterization events were used to develop the preliminary baseline trash load estimate included in the technical report entitled *Preliminary Baseline Trash Generation Rates for San Francisco Bay Area MS4s* submitted to the Water Board (under BASMAA letterhead) on February 1, 2012.

During FY 13-14, the technical report submitted in February 2012 was revised to include the results from the January and April 2012 characterization events. Findings from similar efforts conducted in Los Angeles County in early 2000s were also incorporated into the report. The final technical report entitled *San Francisco Bay Area Stormwater Trash Generation Rates* was approved by BASMAA in June 2014 and forwarded to the Water Board. The report also includes descriptions of how trash generation rates were transformed into trash generation maps included in Co-permittee *Long-Term Trash Load Reduction Plans*.

Long-Term Trash Load Reduction Plan Framework, Template and Guidance (C.10.c)

Provision C.10.c of the MRP requires Co-permittees to submit a *Long-Term Trash Load Reduction Plan* (Long-Term Plan) by February 1, 2014. The Long-Term Plans must describe control measures that are currently being implemented, including the level of implementation, and additional control measures that will be implemented and/or increased level of implementation designed to attain a 70% trash load reduction by July 1, 2017, and 100% (i.e., “No Adverse Impacts”) by July 1, 2022.

A work group of Co-permittees, SCVURPPP and other Bay Area countywide stormwater program staff, and Water Board staff met between October 2012 and March 2013 to better define the process for developing Long-Term Trash Load Reduction Plans, methods for assessing progress toward reduction goals, and tracking and reporting requirements. Through these discussions, a framework for developing Long-Term Plans was developed. The first step of the framework is the identification of very high, high, moderate, and low trash generating areas within each Co-permittee’s jurisdictional areas. Trash generation rates developed through the BASMAA regional study were used as a starting point for differentiating and delineating land areas with varying levels of trash generation. Permittees then used local knowledge and field and/or desktop assessments to confirm/refine the level of trash generation

for specific areas (Figure 10-1). As part of this process, Program staff developed guidance in FY 13-14 to assist Co-permittees in refining land uses classifications, and conducting assessments to confirm/refine trash generation levels depicted on draft trash generation maps, which would eventually be the focal point of the Long-Term Plans.

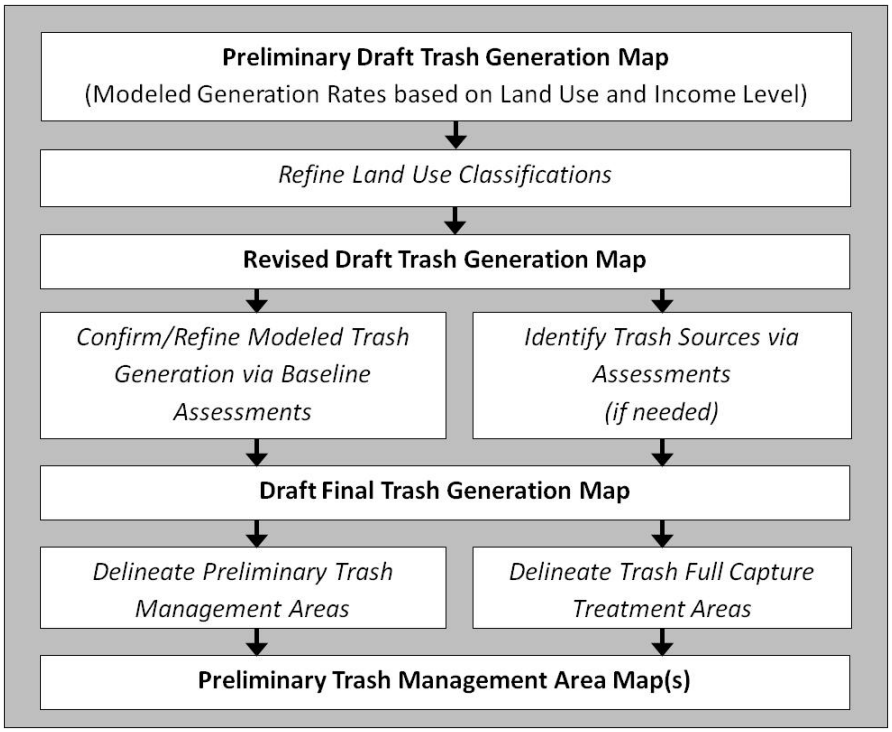


Figure 10-1. Trash generation and management area mapping process implemented by Co-permittees during FYs 12-13 and 13-14.

In October 2013, Program staff assisted Co-permittees (and other BASMAA member agencies) in developing and distributing a template and guidance document entitled *Long-Term Trash Load Reduction Plan and Assessment Strategy: Template & Guidance*. This document was prepared to provide MRP Permittees with a format for developing their Long-Term Plans in compliance with Permit Provision C.10.c. The template was consistent with the BASMAA Long-Term Plan outline that was reviewed by Water Board staff and finalized in October 2013.

As part of the Long-Term Plan development process, Program staff also assisted in developing and distributing trash generation maps, trash management area maps, trash full capture device maps and data tables in December 2013 and January 2014. Final maps were included in Co-permittee Long-Term Plans submitted to the Water Board on in February 2014.

Pilot Trash Assessment Strategy (C.10.a.ii)

Early into the term of the MRP, Permittees decided to work collaboratively through BASMAA to develop a trash load reduction tracking method in accordance with Permit Provision C.10.a.ii. Although Water Board staff and other stakeholders assisted in developing version 1.0 of the tracking method, Water Board members requested that the tracking method be clearly linked to environmental outcomes, rather than control measure implementation. In response to this direction, the Program developed the *Pilot Trash Assessment Strategy* (Strategy) in FY 13-14 on behalf of SCVURPPP Co-permittees. The

Strategy was submitted to the Water Board on February 3, 2014 as part of Co-permittee Long-Term Trash Load Reduction Plans, and is intended to serve as version 2.0 of the trash tracking method required by the Permit.

The Program began to implement the Strategy at a pilot-scale in FY 13-14 on behalf of and in collaboration with, all SCVURPPP Co-permittees. The Strategy is intended to provide information on the magnitude and extent of trash reductions associated with stormwater in the Santa Clara Valley. The Strategy is designed to answer the following core management questions:

- Are the MS4 trash load reduction targets (i.e., 40%, 70%, and No Adverse Impacts) being achieved?
- Are there trash problems in receiving waters (e.g., creeks and rivers)?
- If trash problems in receiving waters exist, what are the important sources and transport pathways?

Environmental and programmatic indicators that the Program and Co-permittees began to track in FY 13-14 to answer core management questions include:

1. Level of trash observed on-land and available to MS4s (primary indicator)
2. Areas effectively treated by full capture devices (primary indicator)
3. Extent and magnitude of trash control measures implementation (secondary indicator)
4. Levels of trash in receiving waters (secondary indicator)

In selecting the indicators above, SCVURPPP Co-permittees recognized that no one environmental indicator could provide the information necessary to effectively determine progress made in reducing trash discharged from stormwater conveyance systems and improvements in the levels of trash in receiving waters. The Program's methods used to collect information on the primary indicators listed above (i.e., #1 and #2) are briefly described below. Information and results on initial data collection can be found in Co-permittee Annual Reports (see Sections 10 – Provision C.10.d – Part B).

Full Capture Device Treatment Areas and Operation/Maintenance

Devices and facilities meeting the trash full capture design criteria are effective trash controls if adequately maintained to ensure their capture efficiency. Consistent with the Long-Term Plan Framework and discussions with Water Board staff, if a full capture device is maintained effectively then trash from the area draining to the device is effectively reduced to a level of "no adverse impacts". Additional trash reduction, therefore, are not needed in this area. In an effort to delineate the areas draining to full capture devices, Program and Co-permittee spent considerable time delineating and mapping these areas using a combination of field work and Geographical Information Systems (GIS) during FY 13-14. As a result, the Program and Co-permittees have delineated most drainage areas for devices installed to-date in the Santa Clara Valley.

Additionally, in FY 13-14 the Program began development of a Draft Model Trash Full Capture Device O&M Verification Program, which is intended to ensure that devices are operated at a level necessary to maintain their full capture designation. The Model Program includes a template for an O&M Verification Plan, standard operating procedures for small and large devices, and materials to assist in future trainings on the O&M Verification Program. Draft Model Program materials are currently in their initial

phase of review by Co-permittees and are planned to completion in FY 14-15. It is anticipated that by the end of FY 14-15, each Co-permittee with full capture devices will begin implementing an O&M verification program tailored to fit the types of devices in their stormwater conveyance system and the associated maintenance procedures needed to adequately maintain these devices.

On-land Trash Visual Assessments

In FY 13-14, the Program developed a pilot approach to assess trash reductions in land areas that generate substantial levels of trash (i.e., very high, high or moderate trash generation), but do not drain to full capture devices. The approach uses the on-land visual trash assessment protocol developed by Bay Area stormwater programs to observe changes in the levels of trash on streets, sidewalks and properties over time. The assessment protocol scores sites/areas using a 4-tier system (A-D, A being the least amount of trash). The four on-land visual assessment scoring categories are intended to correspond with the four trash generation rate categories (i.e., very high, high, moderate and low).

In April 2014, Program staff provided guidance to Co-permittees on prioritizing Trash Management Areas (TMAs) where initial on-land visual trash assessments would be conducted by the Program. Initial assessment sites were finalized in June 2014. Sites were selected in TMAs using a randomized approach to allow extrapolation of the assessment results to all or a subarea of a TMA.

More than 300 sites (averaging 1,000 feet in length) were assessed by Program and Co-permittee staff in June and July 2014. The results of the assessments are incorporated into Co-permittee trash reduction estimates reported in their Annual Reports. Additional assessments are planned for FY 14-15, consistent with the Program's Pilot Trash Assessment Strategy.

Trash Hot Spot Cleanup and Assessment Guidance (C.10.d)

Provision C.10.b(ii) of the MRP requires Permittees to clean up trash hot spots to a level of "no visual impact" at least one time per year for the term of the permit (December 1, 2009 through November 30, 2014). Based on discussions with lead Water Board staff, trash hot spot cleanups and assessments will be conducted each calendar year (CY) during the term of the permit (i.e., 2010 through 2014). To assist Co-permittees in meeting this requirement, Program staff developed the necessary tools (i.e., guidance memorandum, Trash Hot Spot Cleanup Data Collection Form and Trash Hot Spot Activity Reports) used to report trash hot spot assessment and cleanup activities conducted during FY 13-14. Trash Hot Spot Activity Reports for individual Co-permittees are included in Co-permittee Annual Reports (see Section C.10.b).

During FY 13-14, Co-permittees continued conducting annual cleanups required by the MRP. Results from this year's MRP-required cleanups indicated that a total of 71 trash hot spot assessments and cleanups were conducted within the Program's jurisdiction. Approximately 164 cubic yards of trash were removed from these hot spots during FY 13-14.[2] The timing of annual assessments and cleanups vary between hot spots due to the location of the hot spot, potential for natural resource impacts, crew availability and other site-specific factors.

[2]Only hot spot cleanups and assessments conducted in compliance with MRP provision C.10.b.iii are included in the numbers presented in this paragraph. Many SCVURPPP member agencies conduct cleanups at trash hot spots more frequent than the MRP-required annual cleanup, and/or at more sites than the MRP requires. See Section 10, C.10.d – Part C of member agency Annual Reports for additional information.

Trash Ad hoc Task Group Meetings

The Program's Trash Ad hoc Task Group (Trash AHTG) met a total of nine times during FY 13-14 to discuss 1) C.10 permit requirements; 2) Long-Term Trash Load Reduction Framework and Plans; 3) FY 13-14 Annual Report format for Provision C.10; 4) BASMAA's "Tracking California's Trash" Proposition 84 grant; 5) On-land trash assessments; 6) Statewide Trash Policy Amendments and 7) Opportunities for collaboration with Caltrans. Program staff coordinated all AHTG meetings. During FY 14-15, the Trash AHTG plans to continue meeting monthly to discuss the Trash Full Capture Device Operation and Maintenance Verification Program, trash on-land visual assessments, progress of BASMAA's "Tracking California's Trash" Proposition 84 grant and other permit-related requirements.

Participation in SCBWMI Zero Litter Initiative

The SCBWMI Zero Litter Initiative (ZLI) is a self-organized group of agencies that are impacted by litter issues or have an interest in reducing litter in Santa Clara County. The ZLI was formed in 2009 as an outgrowth of the Santa Clara Basin Watershed Management Initiative's Trash Subgroup. The ZLI includes representatives from the Cities of Palo Alto, San Jose, Sunnyvale, and Cupertino, West Valley Communities (the Cities of Campbell, Monte Sereno and Saratoga and the Town of Los Gatos), the Program, Santa Clara Valley Water District, non-governmental organizations (e.g., CLEAN South Bay), and other interested parties. In FY 10-11, the ZLI developed a draft strategic plan that outlines its mission statement and near-term priority topics/actions. As stated in its mission statement, "The Santa Clara Valley Zero Litter Initiative (ZLI) is committed to eliminating litter and littering throughout Santa Clara County, and is focused on litter and trash control along State-owned or maintained freeways/expressways and local streets, and preventing litter from entering our creeks and waterways."

In FY 13-14, the ZLI continued to make considerable progress in achieving its goals by: 1) Updating the original *Trash Sources and Pathways to Urban Creek* poster originally developed in 2007 into two posters now titled *How Trash Gets Into Creeks* that include illustrations of how schools and residents are potential trash sources; 2) Planning and conducting a Solid Waste-Litter Reduction Workshop on May 13, 2014; 3) Providing survey results of staff coordinating solid waste activities within Santa Clara Valley municipalities; and 4) Continuing to provide a forum to coordinate litter-related activities among ZLI participants. Additionally, ZLI members assisted in the preparation of and participated in, the November 2013 "Trash Summit" in San Jose, the development of Model Franchise Hauler Contract Language in coordination with the County's Recycling and Waste Reduction Commission's Technical Advisory Committee (RWRC-TAC) Maintenance Workgroup, and the development of public outreach language for a new "Right-Size, Right-Service" (RS2) campaign under development by ZLI members. The RS2 campaign is a regional effort by participating agencies to target and reduce consistently overflowing garbage and recycling containers to prevent litter and keep our communities and waterways clean. ZLI has prioritized solid waste collection activities at properties with shared solid waste collection areas and services. These properties may have services misaligned with need, resulting in litter that can be transported to creeks and the Bay through the storm drain system. The campaign includes aligning operating policies and procedures and communications to ensure that properties have adequate solid waste services and that escaping litter is eliminated.

Bay Area-wide Trash Capture Demonstration Project (C.10.a.iii)

In October 2009, the San Francisco Estuary Partnership (SFEP) was awarded a $5 million grant to fund the San Francisco Bay Area-wide Trash Capture Demonstration Project ("Project"). This grant was funded through the State Water Resources Control Board's Clean Water State Revolving Fund using

federal stimulus monies (American Recovery and Reinvestment Act of 2009). The 3-year project was primarily intended to provide preliminary resources to Bay Area municipalities in purchasing a limited number of the Permit-required trash full capture treatment devices for installation in municipally-owned stormwater conveyance systems. All municipalities in the eight Bay Area counties (i.e., Marin, Sonoma, Napa, Solano, Contra Costa, Alameda, Santa Clara and San Mateo) that hold an NPDES Phase I or Phase II Permit were asked to participate in the Project. Participating municipalities were allocated a minimum dollar amount to fund the purchasing and installation of trash full-capture devices. During FY 12-13, all participating Co-permittees completed the installation of trash full-capture devices using SFEP grant monies.

The Demonstration Project concluded in November 2013. More than 250 full-capture devices were installed in Santa Clara Valley as part of the Demonstration Project. Overall, more than of 4,000 trash capture devices were installed in more than 60 Bay Area municipalities. The results and lessons learned through the project are included in the *Bay Area-wide Trash Capture Demonstration Project Final Project Report,* finalized by SFEP on May 8, 2014.

Tracking California's Trash – Proposition 84 Grant

BASMAA was awarded a Proposition 84 Stormwater Monitoring and Planning grant by the State Water Board for a project entitled "Tracking California's Trash". The project includes three major tasks: trash monitoring and assessment methods development, BMP effectiveness monitoring, and creek hotspot and on-land cleanup data management and website development. The project is funded for $870,000. Project partners include the Five Gyres Institute and the San Francisco Estuary Partnership (SFEP).

In FY 13-14 a consultant team was selected through a Request for Qualifications (RFQ) process to assist on the project monitoring design and sampling/characterization. Draft monitoring, quality assurance/control, and project evaluation /assessment plans developed by the consultant were submitted to the State Board in April 2014. Additionally, a request for potential project partners was sent to municipal representatives and more than ten cities/counties in the Bay Area and Los Angeles region responded with interest in participating in the project. Five of the ten potential project partners were from Santa Clara County.

An initial Project Management Team meeting was held on May 27, 2014 to orient potential project partners to the project and answer questions. Additionally, a Stakeholder Committee meeting was held on May 27, 2014 to allow for initial feedback from interested parties, including staff from non-governmental organizations. Potential project sites were visited in the summer of 2014 and many of the sites in the SCVURPPP program area were not selected due to the limited amount of trash present on the streets. Next steps include the finalization of project sites and study designs via a Sampling and Analysis Plan (SAP) and holding a meeting to receive input from technical advisors. Monitoring is planned to begin in the fall/winter 2014/15.

Coordination of BASMAA Trash Committee

The BASMAA Trash Committee was formed in FY 09-10 to provide a forum to discuss trash-related activities, projects and issues that have regional applicability. Program staff (Chris Sommers) serves as Chairperson of the Committee, which meets monthly or bimonthly, depending on the need. Committee agendas in FY 13-14 included presentations, discussions and updates on the development of trash generation rates, trash load reduction planning, SFEP's Bay Area-wide Trash Capture Demonstration

Project and Regional Water Board Trash Management and Assessment Workshops. During FY 13-14, two regional projects under the direction of the Trash Committee were completed: 1) Trash Generation Rates Project, and 2) Long-Term Trash Load Reduction Plan Framework and Guidance. The Program led the development of each regional trash-related project through in-kind staff support. The Committee plans to continue meeting in FY 14-15 on a monthly or bimonthly basis.

Development FY 13-14 Annual Report Template and Guidance

Program staff also took the lead in developing the FY 13-14 format for Section C.10 (Trash Reduction) of Permittee annual reports. Staff facilitated meetings with Water Board staff and MRP Permittee and Program staff in an effort to develop an agreeable format that includes the documentation of progress towards MRP trash reduction goals. Guidance embedded in the format was also developed by the Program to further assist all MRP Permittees in documenting trash control measure implementation and trash reduction estimates.

Participation in SF Bay Area Water Board Workshops

The SF Bay Area Water Board conducted a workshop in the afternoon of their November 13, 2013 Board meeting to discuss the status of Trash Control Programs required by the MRP. The workshop began with Water Board staff presenting their perspectives on trash monitoring and assessment approaches and annual report submittals. Program staff and BASMAA member agencies presented information regarding trash generation, monitoring and assessment, and control measure implementation. Water Board members suggested that the continuation of the discussion be scheduled for the December Board meeting. At the December meeting Board members provided input on expectations regarding assessment of trash load reductions and methods to determine compliance with the 40% trash reduction goal in the MRP. Based on this input, the Program developed the SCVURPPP Pilot Trash Assessment Strategy.

Tracking Statewide Trash Amendment Development

The State Board began the development of amendments to the *California Ocean Plan* and the *Inland Surface Waters, Enclosed Bays, and Estuaries Plan* in 2010 that are intended to significantly reduce the impacts of trash on receiving waters. The proposed amendments will include five elements: (1) Water Quality Objective, (2) Prohibition of Discharge, (3) Implementation Plan, (4) Compliance Schedule, and (5) Monitoring, and could directly affect Co-permittees and other municipalities throughout the region and state. The Proposed Trash Amendments and Draft Staff Report were released by the State Board on June 10, 2014 for public comment. Program staff attended (via webcast) a State Board workshop on the Proposed Trash Amendments on July 16, 2014, and coordinated the development of both the SCVURPPP and BASMAA comment letters on the Proposed Trash Amendments. The amendments are currently scheduled for consideration of adoption in late 2014.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 11

Mercury and PCBs Controls

September 15, 2014

Section 11 Mercury and PCBs Controls

■ Introduction

Provisions C.11 and C.12 of the MRP require Co-permittees to implement control programs for mercury and Polychlorinated Biphenyls (PCBs). These pollutants are grouped into a single section of this report because many of the requirements in the two MRP Provisions are written identically, due to the similarities in the sediment-associated and legacy nature of their occurrence.

For mercury and PCBs, the Water Board has previously determined that the water quality objectives and associated beneficial uses of water bodies in the Bay Area are impacted as a result of these legacy pollutants. The Water Board adopted water quality attainment strategies called Total Maximum Daily Loads (TMDLs), which assign load reductions (through waste load allocations) to Bay Area municipal stormwater programs. Co-permittee control measures to address load reductions for mercury and PCBs are prescribed through Provisions C.11 and C.12 of the MRP.

Similar to other Fiscal Years, in FY 13-14 nearly all requirements in Provisions C.11 and C.12 were addressed through regional projects coordinated through BASMAA. The status of regional projects conducted in FY 13-14, along with those addressed through the Program are described in this section. Requirements addressed directly by Co-permittees are included in Co-permittee annual reports.

■ Program and Regional Activities

C.11.a. Mercury Collection and Recycling Implemented throughout the Region

Provision C.11.a.i requires Co-permittees to promote, facilitate and/or participate in the collection and recycling of mercury-containing devices and equipment at the consumer level (e.g., thermometers, thermostats, switches, bulbs). To meet this requirement, most Co-permittees continued to participate in the Santa Clara County Environmental Health Department's Household Hazardous Waste Program (HHW Program) during FY 13-14.

The HHW Program offers residents the opportunity to drop-off mercury-containing devices and equipment and other hazardous wastes at designated drop-off points every Friday and some Saturdays free of charge, by appointment only. The HHW Program provides an inexpensive hazardous waste disposal option to eligible businesses that generate less than 100 kilograms of waste per month. It operates by appointment only and charges a fee to cover the cost of transportation and disposal. Many Co-permittees promote the availability of the HHW Program on their agency websites. A description of Co-permittee efforts to promote, facilitate and/or participate in collection and recycling of mercury-containing devices and equipment during FY 13-14 is provided in their Annual Report Forms.

During FY 13-14, the HHW Program collected a total of 127,309 pounds[1] of fluorescent lamps at 38 retail drop-off locations within Santa Clara County[2]. This equates to 852,159 linear feet of fluorescent lamps

[1] Since fluorescent light bulbs come in different sizes, quantities are reported in terms of the total pounds. A new conversion factor for fluorescent lamps is used beginning in FY 09-10. The new conversion was established by the California Integrated Waste Management Board, now CalRecycle, in 2009, and is: 1 foot equals .125 lbs and 1 CFL equals .25lbs. Previously, the conversion used was: 1 foot equals .25lbs, and 1 CFL equals .0625lbs.

(tubes, u-shapes, etc.) and 167,688 linear feet of compact fluorescent lamps. In addition, the HHW Program also collected the following mercury-containing devices and equipment during FY 13-14:

- 143,593 pounds of household batteries; and,
- 675 pounds[3] of elemental mercury (including thermostats, thermometers and other products).

Provision C.11.a.ii requires Co-permittees to include an estimate of the mass of mercury collected. To assist with calculating the mass of mercury collected during FY 13-14 by the HHW Program, BASMAA developed a spreadsheet entitled "Estimated Mass of Mercury Collected Calculator (Version 1.0)." The estimated mass of mercury collected is based on the total amount of mercury-containing devices and equipment collected and calculated using the best available information from manufacturers and trade organizations regarding the amount of mercury in devices and equipment of interest. The estimated mass of mercury collected by the HHW Program during FY 13-14 is provided in Table 11-1. The calculator was funded by in-kind contributions from SCVURPPP.

Table 11-1. Estimated mercury mass collected by the Santa Clara County HHW Program in FY 2013-14.

Mercury Containing Device/Equipment	Total Amount of Devices Collected	Estimated Mass of Mercury Collected (kg)
Fluorescent Lamps (linear feet)[4]	852,159	1.77
CFLs (each)[5]	167,688	0.75
Thermostats (lbs)[6],[7]	314	1.67
Thermometers (each)[8],[9]	314	0.19
Total Mass of Mercury Collected During FY 2013-14:		**4.38**

[2] Information regarding the collection of mercury containing products (e.g., fluorescent bulbs, thermostats, thermometers and other products) during FY 13-14 was obtained from a memorandum entitled *Fiscal Year 2013-2014 HHW Program Update* (dated July 18, 2014). This memorandum was prepared by Rob D'Arcy, Household Hazardous Waste Program, County of Santa Clara.

[3] The weight of elemental mercury includes the weight of a 55-gallon drum. An empty 55-gallon steel drum is 48 pounds. The total weight of elemental mercury not including the 55-gallon drum is 627 pounds. Source: Weight of 55-gallon drum obtained from the Cary Company. Available at http://www.thecarycompany.com/containers/steel_drums.html. Accessed August 20, 2012.

[4] The average mercury content for a four-foot linear fluorescent lamp is 8.3 milligrams (mg). This is equal to 2.075 mg (2.075 X 10 -6 kilograms (kg)) per linear foot. Source: NEMA 2005. Fluorescent and Other Mercury-Containing Lamps and the Environment: Mercury Use, Environmental Benefits, Disposal Requirements. National Electrical Manufacturers Association. March 2005. 14p.

[5] The National Electrical Manufacturers Association (NEMA) announced that under the new voluntary commitment, effective October 1, 2010, participating manufacturers will cap the total mercury content in CFLs that are under 25 watts at 4 mg per unit, and CFLs that use 25 to 40 watts of electricity will be capped at 5 mg per unit. Each CFL recycled is assumed to have an average mass of 4.5 mg (4.5 X 10 -6 kg). New CFLs are also assumed to have 4.5 mg on average. Source: NEMA 2010. NEMA Lamp Companies Agree to Reduction in CFL Mercury Content Cap. Available at http://www.nema.org/media/pr/20101004a.cfm. Accessed April 11, 2012.

[6] Each thermostat recycled is assumed to contain approximately 4.0 g (0.004 kg) of mercury. The average weight of one thermostat is 12 ounces. There are 1.3333 thermostats in a pound of thermostats (1 pounds/0.75 pounds = 1.33 thermostats. It is estimated that 0.005333 kg of mercury is recycled for every pound of thermostat recycled (1.333*0.004= 0.005333). Source: Average weight of thermostat obtained from retail websites - www.amazon.com.

[7] It is estimated that approximately 50 % of elemental mercury collected by household hazardous waste facilities and shipped within a 55-gallon drum is thermostats. Thermostats placed with a 55-gallon drum are not intake and may not be shipped to the Thermostat Recycling Corporation for recycling. Fifty percent of 627 pounds is 314 pounds. Source: personal communication, Dermot Casey, San Mateo County Hazardous Materials Specialist, August 20, 2012.

[8] USEPA reports that glass mercury fever thermometers contain about 0.61 g (0.00061 kg) of mercury. Source: USEPA 2012. Thermometers. Available at http://www.epa.gov/mercury/thermometer-main.html. Accessed April 11, 2012.

[9] It is estimated that approximately 25 % of elemental mercury collected by household hazardous waste facilities and shipped within a 55-gallon drum is thermometers. Twenty-five percent of 675 pounds is 168.75 pounds. Two thermometers equal one pound. Two thermometers per pound is equal to 338 thermometers. Source: personal communication, Dermot Casey, San Mateo County Hazardous Materials Specialist, August 20, 2012. Average weight of thermometers obtained from retail websites - www.amazon.com.

In addition, the mercury load reduction to stormwater that is associated with mercury collection and recycling in the Program's Integrated Monitoring Report (IMR) – Part B, which was submitted to the Water Board on March 17, 2014.

C.11.b. Monitor Methylmercury

Provision C.11.b requires Co-permittees to monitor methylmercury in runoff discharges by analyzing samples already being collected for total mercury analysis, consistent with provision C.8.e. In FY 13-14 the Program continued to collect and analyze samples for methylmercury, consistent with the Small Tributaries Load Strategy (STLS) and the STLS multiyear monitoring plan. Results of data collected in compliance with this provision in FY 13-14 will be included in the Program's Urban Creeks Monitoring Report, planned for submittal by March 15, 2015.

C.12.b. Pilot Project to Evaluate PCBs in Building Materials

Projects and actions conducted to fulfill MRP requirements in Provision C.12.b were completed in previous fiscal years. Descriptions of the results of the projects conducted in fulfillment of this provision are included in the Programs IMR – Part B, submitted to the Water Board on March 17, 2014.

Clean Watershed for Clean Bay Pilot Projects (C.11/12 c, d, e, and i)

Provisions C.11/12.c through Provision C.11/12.f require pilot studies to test methods to reduce urban runoff loadings of PCBs and mercury to San Francisco Bay. These provisions require that Co-permittees pilot-test a variety of potential methods, including site remediation, enhancements of municipal operation and maintenance activities to remove sediments with pollutants, stormwater treatment retrofitting, and diversion of stormwater to existing Publicly-Owned Treatment Works (POTWs). Most projects are located in the older industrial regions in the Bay Area where past studies have found elevated PCB and mercury concentrations in sediments collected from street and storm drain infrastructure. Thus, the pilot projects appear representative of the known types of potentially effective control measures and the geographic area of potential wider implementation in the future.

Clean Watersheds for a Clean Bay (CW4CB) is a grant-funded project that is anticipated to result in Permittee compliance with the following MRP Provisions that jointly address PCBs and mercury:

- C.11/12.c (CW4CB Tasks 2 and 3) - Pilot Projects to Investigate and Abate Mercury/PCB Sources;
- C.11/12.d (CW4CB Task 4) - Pilot Projects to Evaluate Enhanced Municipal Operations and Maintenance Practices;
- C.11/12.e. (CW4CB Task 5) - Pilot Projects to Evaluate On-Site Stormwater Treatment via Retrofit; and,
- C.11/12.i (CW4CB Task 6) - Development of a Risk Reduction Program Implemented throughout the Region.

These provisions implement priority urban runoff-related actions called for by the San Francisco Bay PCBs and mercury TMDL water quality attainment programs. CW4CB is helping implement these TMDLs by developing and pilot-testing a variety of potential methods to reduce urban runoff loading of PCBs and mercury to the Bay. Summaries of the status of pilot projects currently being implemented in the Santa Clara Valley are described below.

C.11/12.c. Mercury/PCBs Source Identification Pilot Project

Provision C.11/12.c requires Co-Permittees to conduct investigations of PCB and mercury sources to their storm drain systems at five pilot project locations (region-wide). Activities associated with this provision are being coordinated through the Clean Watersheds for a Clean Bay (CW4CB) project administered by BASMAA and funded through a USEPA grant, with in-kind services provided by the Program and other BASMAA member agencies.

In FY 13-14, SCVURPPP Co-permittees continued to implement tasks in the Leo Avenue watershed (City of San Jose) in compliance with MRP provision C.11.c and C.12.c. Tasks were also completed in four other locations in Alameda, San Mateo and Contra Costa counties. In preparation for conducting the source investigation pilot project in the Leo Avenue watershed, the Program and the City of San Jose developed a Work Plan in FY 10-11 (see Appendix 11-1 of FY 10-11 Annual Report). The work plan included the following tasks:

1. Project planning and management. Design, coordinate, implement and manage the activities included in the Work Plan, and maintain project schedule and budget.
2. Records review. Review general information sources (e.g., spill site databases) and records on specific properties/businesses to begin identifying potential source properties.
3. Reconnaissance survey. Perform a driving/walking survey to further identify potential source properties and begin looking for evidence that runoff from such locations is likely to convey pollutants to storm drains.
4. Facility inspections. Perform inspections of selected facilities.
5. Surface soil/sediment testing. Test surface soils/sediments from the public right-of-way and private properties for PCBs, mercury and other particle-bound pollutants.
6. Property referrals. Where laboratory data confirm elevated pollutant concentrations, refer properties to regulatory agencies for cleanup and abatement.
7. Reporting. Write a comprehensive report to describe in detail the implementation and evaluation of the Work Plan.

Status Update and Next Steps

The goal of the Leo Avenue Source Identification and Referral Pilot Project was to assist the City of San Jose in identifying properties with potential for elevated PCB and/or mercury concentrations, including public rights-of-way and stormwater conveyances that have accumulated sediments with elevated PCBs and/or mercury concentrations, and refer those properties to the Regional Water Board and other appropriate agencies for abatement. Prior to FY 13-14, a total of 36 properties in the watershed were inspected, and the combined results of the records review/reconnaissance survey and inspections were used to develop a sampling plan. Thirty-three soil/sediment samples were then collected during two phases. The first sampling phase focused on public right-of-way areas, while the second targeted private properties and additional public right-of-way areas. All soil/sediment samples collected during both phases of monitoring were analyzed for PCBs, mercury, total organic carbon (TOC), and grain size, and 10% of these samples (selected randomly) were also analyzed for secondary analytes, including dioxins, PBDEs, organochlorine pesticides, and PAHs.

The results of sediment sampling are currently under review and interpretation by Program staff and the City of San Jose. Based on the initial review of the results, the City of San Jose, in collaboration with the

Program, will likely be making property referrals to the Regional Water Board for follow-up investigation and abatement. A final report summarizing the project findings and referrals to the Regional Water Board are scheduled for completion in FY 14-15, consistent with the CW4CB project schedule.

C.11/12.d. Enhanced Operation and Maintenance Pilot Projects

Region-wide, operation and maintenance pilot projects are being implemented at a total of six locations in compliance with Provisions C.11/12.d. Projects are being funded through a combination of stormwater programs and the CW4CB grant-funded project. In FY 12-13, the Program began planning for the implementation of two types of operation and maintenance pilot projects: 1) a storm drain line cleanout in the Leo Avenue watershed (San Jose); and 2) a street sweeping study in the Leo Avenue watershed and in the City of Sunnyvale. The following section describes the status of each type of pilot project being implemented by the Program.

Storm Drain Line Cleanout

The Leo Avenue storm drain line cleanout pilot project focused on the main storm drain line along Leo Avenue between the western Leo Avenue cul-de-sac and South 7th Street. The pilot study was designed to estimate the load reduction benefit of cleaning out the Leo Avenue main storm drain line in an area with previously documented elevated concentrations of PCBs. This study also aimed to document how a video inspection of the stormwater drainage system can facilitate load reduction by identifying sources of polluted sediment in the main line (e.g., surface infiltration in areas with storm drain lines located below legacy contamination or from sediment coming into the main line from private lateral connections).

The goals of this pilot project were as follows:

- Remove accumulated sediment from the Leo Avenue main storm drain line between 7th Street and the Leo Avenue cul-de-sac in San Jose, including any public laterals connected to the line, to the extent possible. Quantify the volume and mass of sediment removed;
- Characterize concentrations of mercury and PCBs in sediments that are removed from the storm drain line;
- Perform a post-cleanout video inspection of the storm drain line to better delineate the stormwater drainage system and identify all private properties that are connected to the public storm drain line (some connections/line locations are uncertain), and to determine whether cracks or joint separations exist that may allow infiltration of sediment into the storm drain from surrounding buried soils;
- Establish a baseline for comparison to future video inspections to be conducted by the City of San Jose.

A study design and work plan was developed in FY 12-13 through the CW4CB project. The line cleanout project began during the fall of 2013 and will continue through FY 14-15, with data analysis, interpretation and reporting. Information available to-date on the results of the project was included in the Program's IMR – Part B, submitted to the Water Board on March 17, 2014.

Street Sweeping

The primary goal of the street sweeping project is to conduct street sweeping studies in older industrial areas where PCBs may still be found in roadway sediments, assess the effectiveness of current actions,

and predict the effectiveness of enhanced sweeping were it to occur. In FY 13-14, the street sweeping project was conducted at four sites - a portion of East California Avenue in Sunnyvale, in the Leo Avenue Catchment in San Jose, and at two locations in Richmond. Data generated through the study will be used to populate and calibrate the Windows version of the Source Loading and Management Model (WinSLAMM). WinSLAMM will then be used to estimate the effectiveness of enhanced street sweeping practices in the pilot study areas. Such enhanced practices could include the use of advanced equipment, more frequent sweeping, or improvements in parking control. The increased cumulative effectiveness of enhanced street sweeping practices, compared to baseline, will be a measure of the potential for enhanced street sweeping to reduce loads to the Bay.

The project study design and work plan were finalized in FY 13-14 through the CW4CB project. Field work at all sites began in the fall of 2013 and was completed in mid-2014. Data analysis and interpretation are currently underway and final results and conclusions will be available in late 2014 or early 2015.

C.11/12.e. Stormwater Treatment Retrofit

A total of ten stormwater retrofit projects are currently being implemented by Co-permittees in the five MRP counties. One of the ten projects is located in the Santa Clara Valley. The Leo Avenue Hydrodynamic Separator (HDS) retrofit project is located on 7th Avenue just southeast of Phelan Avenue in southeast San Jose. This HDS unit was originally planned for installation as part of San Jose's Trash Load Reduction Plan, but it also provides additional benefits towards the reduction of sediment-bound pollutants (e.g., PCBs and mercury) from the industrial catchment. The prefabricated HDS unit was designed by Contech and treats runoff from a 214-acre catchment with primarily commercial and industrial land uses.

The construction of the Leo Avenue HDS Unit project was completed in October 2012. A study design and sampling and analysis plan was developed in FY 12-13 through the CW4CB project. Effectiveness monitoring began in FY 13-14 and will continue in FY 14-15. Monitoring results and conclusions will be developed as part of the CW4CB's reporting process, scheduled to begin in FY 14-15.

C.11/12.f. Diversion of Flows to Publicly Owned Treatment Works (POTWs)

Provisions C.11.f and C.12.f are nearly identical provisions for control of mercury and PCBs, requiring pilot studies that evaluate diversion of dry weather urban runoff and first flush events into publicly owned treatment works (POTWs). The first deliverable required under these provisions was met through submittal of a Feasibility Evaluation Report (FER) that was included in the 2010 Annual Report. The FER was revised in December 2010 in response to Water Board staff comments. Preliminary descriptions of candidate diversion projects were then summarized by BASMAA on behalf of member programs in a brief memorandum to the Water Board in February 2011. In addition, updates were provided in the FY 10-11 Annual Report and a status report submitted by BASMAA to Water Board staff in May 2012.

The pilot diversion project that is being implemented by the Program, in collaboration with the City of Palo Alto, is an existing dry/wet weather diversion structure located in the City of Palo Alto. The diversion structure was constructed in 1993 to divert a limited volume of urban runoff from the stormwater conveyance system to the Palo Alto Regional Water Quality Control Plant and is comprised of two valves: a vortex valve and plug valve. The vortex valve is designed to continually regulate flows to the sewer line to reduce erosive velocities. The plug valve diverts flows from the stormwater

conveyance system until a designed capacity of 350 gpm (0.78 cfs) is reached. It is estimated that wet weather diversions to the sanitary sewer occur up to a rainfall intensity of 0.33 inches per hour.

The Program developed a work plan for the Palo Alto Pilot Diversion Project that guided data and information collection activities. Monitoring began in FY 12-13 and was completed in FY 13-14. Monitoring data are currently being analyzed and interpreted. A final report with results and conclusions is scheduled for completion in FY 14-15.

C.11/12.g. Monitor Stormwater Pollutant Loads and Loads Reduced

MRP provisions C.11.g and C.12.g require Co-permittees to develop and implement a monitoring program to quantify mercury and PCB loads reduced through the implementation of these (and other) control measures and to compare these loads against the WLAs described in TMDLs. Consistent with the TMDLs, load reductions and progress toward urban stormwater runoff WLAs may be demonstrated through one of three methods:

1. Quantify through estimates the average annual load reduced by implementing pollution prevention, source control, and treatment control efforts required by the provisions of the MRP or other relevant efforts;
2. Quantify the load as a rolling five-year average using data on flow and water column PCB/mercury concentrations; or
3. Quantitatively demonstrate that the concentration of mercury/PCBs on suspended sediment that best represents sediment discharged with urban runoff is below the target of 0.2 mg mercury/kg dry sediment.

During the term of the MRP, Co-permittees have conducted and continue to conduct studies to demonstrate loads reduced and progress towards WLAs using each of the methods described above. Water quality monitoring activities conducted through the Regional Monitoring Program for Water Quality in the San Francisco Bay (RMP) and the BASMAA Regional Monitoring Coalition (RMC) are have attempted to quantify pollutant loads (Method #2) and concentrations (Method #3). However, due to the diffuse nature of mercury and PCBs in the San Francisco Bay watershed, observable trends in loads and concentrations in creeks and rivers draining to the Bay may take decades to observe. The results of initial quantification of loads reduced or avoided through pollution prevention, source controls, and treatment controls (Method #1) were provided in the Program's IMR – Part B, submitted to the Water Board on March 17, 2014. Methods described in the IMR are consistent with the preliminary methods described by BASMAA in 2010 and submitted to the Regional Water Board in compliance with MRP provision C.11/12.g.

C.11/12.h. Fate and Transport Study of POCs in Urban Runoff

MRP provisions C.11.j and C.12.j require Permittees to "conduct or cause to be conducted studies aimed at better understanding the fate, transport, and biological uptake of mercury and PCBs discharged in urban runoff to San Francisco Bay and tidal areas." Working through BASMAA, the Program and Co-permittees in FY 13-14 continued to comply with these provisions through their participation in the Regional Monitoring Program for Water Quality in San Francisco Bay (RMP). Program and Co-permittee staff actively represented Co-permittees on the RMP Steering Committee, Technical Review Committee and several Work Groups and Strategy Teams to oversee the implementation of studies, review results and comment on draft reports. Program and Co-permittee representatives plan to continue

participation in the RMP in FY 14-15 to promote future implementation of studies to address priority information needs for mercury and PCBs. A summary of studies conducted to-date by the RMP consistent with Provision C.11/12.h is included in the Program's Integrated Monitoring Report (IMR) – Part C, which was submitted to the Water Board on March 17, 2014.

C.11/12.i - Development of a Risk Reduction Program Implemented throughout the Region

Provisions C.11.i requires that Permittees develop and implement or participate in effective programs to reduce mercury-related risk to humans. Provisions of the Water Board's Mercury Watershed Permit covering industrial and municipal wastewater treatment plant discharges to San Francisco Bay contain a similar requirement to the MRP. A partnership composed of the Bay Area Clean Water Agencies, Western States Petroleum Association, and Bay Area Stormwater Management Agencies Association was formed to develop a regional approach to raise public awareness regarding fish contamination issues in San Francisco Bay and to encourage fish-consuming populations to reduce their exposure to mercury in contaminated fish. The partnership engaged the services of the SFEI/Aquatic Sciences Center and the California Department of Health, Office of Environmental Health Hazard Assessment to manage and develop the project entitled San Francisco Bay Fish Project (SFBFP).

The SFBFP was a two-year project (October 2010 to October 2012) implemented by the California Department of Public Health (CDPH). Project oversight was provided by the Bay Area Risk Communication and Exposure Reduction Work Group that included representatives from Bay Area Stormwater Management Agencies Association (BASMAA), the California Department of Public Health (CDPH), Bay Area Clean Water Agencies (BACWA), Regional Water Board, EPA staff, and County Health Departments.

CDPH developed several new educational materials under this project. These included a four-panel brochure, a kiosk flyer, a coloring book for kids, a warning sign, and an educational video. The brochures were produced in English and 10 other languages. The SFBFP also funded four community groups to conduct outreach and education projects tailored to the needs of fishing populations and underserved communities (i.e., communities that consume Bay fish disproportionately to other populations). Examples of outreach included bilingual workshops for Asian Pacific Islander families with high fish consumption, outreach to people fishing in Southeast San Francisco, and outreach to school children that have families fishing in Bay piers.

The following updates on the SFBFP project were provided to the Water Board as part of the BASMAA Annual Report submittals:

- Regional Pollutants of Concern Report for FY 2011-2012, BASMAA, September 11, 2012
- Regional Monitoring Coalition Monitoring Status Report for February-June 2012, BASMAA, September 11, 2012

SCVURPPP Outreach on Exposure Reduction

Due to mercury and PCB contamination issues, the following sites in Santa Clara have fish consumption advisories issued by the Office of Health Hazard Assessment:

- Guadalupe Reservoir
- Calero Reservoir
- Almaden Reservoir
- Guadalupe River

- Guadalupe Creek
- Alamitos Creek
- Vasona Lake
- Camden Ponds
- Stevens Creek Reservoir

Signage prohibiting fishing or recommending catch and release only is posted at all sites.

In FY 12-13, the SCVURPPP Watershed Education and Outreach Ad Hoc Task Group (WEO AHTG) discussed using the CDPH four-panel brochures for conducting local outreach about health impacts of eating San Francisco Bay-caught fish. Though the brochures provide guidance specific to the consumption of fish found in San Francisco Bay, the WEO AHTG agreed that it would be useful to provide these brochures to Santa Clara residents for the following reasons:

- Residents could be travelling outside Santa Clara County to fish.
- This outreach will make residents fishing in local creeks and reservoirs aware about the possibility of mercury contamination.
- The brochures contain useful information for residents that purchase fish and/or eat fish at restaurants.

Based on feedback from the WEO AHTG, an outreach plan was developed to reach residents that are likely to consume fish that are caught locally or from the San Francisco Bay.

SCVURPPPP implemented the following outreach activities in FY 13-14:

- Point of purchase outreach at fishing supply stores – Four fishing supply stores are located in the Program area. These are:
  - Fisherman's Warehouse – 1140 S. De Anza Blvd., San Jose, CA 95129
  - Orvis Retail Store – 377 Santana Row, Suite 1040, San Jose, CA 95128
  - Coyote Bait & Tackle – 8215 Monterey Rd., Coyote, CA 95101
  - West Marine – 375 Saratoga Ave., Suite C, San Jose, CA 95129

  In mid FY 12-13, Program staff contacted all stores to confirm their interest in stocking the educational brochures. All stores agreed to stock the brochures. In FY 13-14, Program staff visited each store three times to restock the brochure display racks. Based on follow-up discussions with store managers, some have indicated that brochures are popular with customers.
- Website posting – The brochures are posted on the SCVURPPP and Watershed Watch Campaign[10] websites. The brochures also promoted on the Watershed Watch Campaign's Facebook page (a SCVURPPP education and outreach site).
- Education Programs at the Don Edwards San Francisco Bay Wildlife Refuge – The brochures continue to be provided to Don Edwards San Francisco Bay Wildlife Refuge staff for incorporation into outreach conducted through the SCVURPPP-funded Watershed Watchers

[10] The Watershed Watch Campaign website www.MyWatershedWatch.org is SCVURPPP's main public education website. The website is promoted in all SCVURPPP public outreach materials including media advertisements, giveaways and brochures.

Program. The Watershed Watchers program conducts numerous activities and sessions to educate children about watersheds and urban runoff pollution prevention. SCVURPPP believes that it is particularly important to educate children about the mercury and PCB contamination issues in the Bay. The children can in turn educate their parents about these issues. Currently, the Watershed Watchers program is conducting education on mercury and PCBs in fish through the Webelos Naturalist badge program. Ten Webelos Naturalist badge programs were conducted in FY 13-14 and 287 people attended them. Future activities planned include the following:

- On September 25, 2014, Refuge staff will be hosting a seminar on Mercury Outreach for the Mid-Peninsula Environmental Educators Alliance along with staff from the State Water Board and East Bay Regional Parks. The workshop will provide attendees information on concerns about mercury in the South Bay and demonstrate programs that can be used to educate children on this topic.
- The FY 14-15 Refuge summer camp program will incorporate activities related to mercury pollution prevention.

- Distribution at outreach events – The brochures will continue to be distributed at SCVURPPP's community outreach events. SCVURPPP attends approximately ten outreach events each year. To reach the target audience of women and children, SCVURPPP staff distributes the brochures at events that are attended by families with children. In FY 13-14, the brochures were distributed at four outreach events.

C.11.j. Develop Allocation Sharing Scheme with Caltrans

The San Francisco Bay Mercury TMDL wasteload allocations for urban stormwater implicitly include California Department of Transportation (Caltrans) facilities located within the geographic boundaries of Bay Area urban runoff management agencies. Caltrans manages roadways and other transportation facilities within the urban areas that are covered under both the MRP and the TMDL. Consistent with the TMDL, MRP Provision C.11.j requires the Permittees to develop an equitable mercury allocation sharing scheme, in consultation with Caltrans, to address runoff from the Caltrans facilities in the program area. Caltrans may elect to pursue its own program of mercury load reduction, in lieu of sharing the allocation with the urban runoff management agencies, in which case the Water Board may designate a separate mercury wasteload allocation for Caltrans. Co-permittees were required to report on the status of the efforts to develop this allocation-sharing scheme in the 2010, 2011, and 2012 Annual Reports, and to submit in the 2014 Integrated Monitoring Report the details regarding the manner in which the urban runoff mercury TMDL allocation will be shared between the Co-permittees and Caltrans.

In FY 13-14, Program staff (via BASMAA Board of Directors) met with CalTrans staff several times to review provision C.11.j and to discuss the manner by which the allocation would be shared. Those discussions led to a general understanding that Co-permittees and Caltrans would take an alternative approach (consistent with provision C.11.j) to implementing mercury load reduction actions on a watershed or region-wide basis, consistent with TMDL and implementation requirements included in the Caltrans' MS4 Permit, and including developing an equitable sharing scheme with Permittees. Caltrans documented their understanding and interest in working with MRP Co-permittees in a letter submitted to BASMAA in February 2014.

A complete discussion of the Program's activities associated with this provision is described in the Program's IMR – Part C, which was submitted to the Water Board on March 17, 2014.

■ Additional Activities

PCB and Mercury Opportunity Area Analysis (SCVURPPP)

As part of the development of PCB and mercury loading estimates presented in Part C of the Program's Integrated Monitoring Report, SCVURPPP (in collaboration with the San Francisco Estuary Institute) developed preliminary GIS data layers illustrating potential PCB and mercury source areas. These data layers along with existing data on PCBs and mercury concentrations in sediment and stormwater represent the current state-of-knowledge of source areas for these pollutants in the Santa Clara Valley. These preliminary data layers, however, are based on limited and potentially outdated information on land uses and current activities at properties that may contribute or limit the level of pollutants transported to the Bay via stormwater.

In an effort to collect additional information on current land uses, facility practices and contributions of PCBs and mercury from these properties, SCVURPPP began conducting a *PCB and Mercury Opportunity Area Analysis* as part of the Program's revised POC loads monitoring approach in FY 14-15 (described in Section 8) to assist Permittees in identifying PCB and mercury source areas in the Santa Clara Valley (i.e., within the SCVURPPP program area). The outcome of this activity will be a refined understanding and maps of PCB/mercury source area locations, which if managed may provide further load reduction opportunities during future NPDES permit terms.

In FY 13-14, Program staff developed a Draft *Work Plan for Opportunity Area Analysis and Implementation Planning for PCBs and Mercury.* The Work Plan was reviewed with Co-permittee representatives and is currently being finalized by the Program. The Work Plan includes the following tasks:

1) Develop a final report and implementation plan for known high opportunity areas in Santa Clara Valley (i.e., parcels in the Leo Avenue watershed – San Jose).
2) Develop draft source area maps based on readily available land use and facility information, including the extent of industrial land uses and applicable facility types present in approximately 2002 and 2014;
3) Confirm/refine designations of parcel redevelopment status and level of "housekeeping" on the property through field visits and observations;
4) Develop sampling and analysis plan and conduct monitoring intended to delineate high, moderate and low/no opportunity areas.
5) Based on information gained to-date, develop draft opportunity area maps that identify high, moderate and low/no opportunity areas in each Co-permittee's jurisdictional area.
6) Develop a draft implementation plan for addressing opportunity areas during future NPDES permit terms.

The Program made significant progress on completing tasks 1, 2 and 3 in FY 13-14. The program is working with the City of San Jose on the completion of a final report, implementation plan, and a set of property referrals to the Water Board. Additionally, Draft PCB-Mercury Source Area Maps and associated the Source Area Database were distributed to Co-permittees in April for their review and updating based on information gained through staff knowledge, records review, and observations of the

areas and activities occurring at the associated facilities. Program staff developed the guidance to assist Co-permittees in updating and adding information to the database. Co-permittees spent significant time in reviewing and updating the database in late FY 13-14 and early FY 14-15, then forwarded revisions to Program staff. SCVURPPP guidance and process was also shared with other Phase I BASMAA member agencies in an attempt to ensure comparable review processes would take place in other counties.

As a next step, the Program intends to develop a project SAP in early FY 2014-15 in collaboration with other Phase I programs. The SAP will describe the sampling and laboratory methods that will be used by the Program to complete task 4 of the project. Task 5 and 6 will be completed in FY 14-15, subsequent to task 4 sampling and data analysis.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 12

Copper Controls

September 15, 2014

Section 12 Copper Controls

■ Introduction

Provision C.13 of the MRP is intended to address copper control measures identified in the Basin Plan that the Water Board has deemed necessary to support copper site specific objectives in San Francisco Bay. Requirements in the MRP are included in the following sub-provisions:

- C.13.a. Manage waste generated from cleaning and treating copper architectural features, including copper roofs, during construction and post-construction;
- C.13.b. Manage discharges from pools, spas and fountains that contain copper-based chemicals;
- C.13.c. Vehicle Brake Pads;
- C.13.d. Industrial Sources; and,
- C.13.e. Studies to Reduce Copper Pollutant Impact Uncertainties

In FY 13-14, activities associated with Provision C.13 were conducted at the Co-permittee, Program and regional levels. Local actions are documented in each Co-permittee's section of the annual report. This section highlights copper control activities conducted at the Program and/or regional levels. These activities built upon a large body-of-knowledge gained through tasks completed in previous fiscal years.[1] Program and regional task highlights presented in this section are organized by Permit provision or by major heading (both marked in bold).

■ Program Activities

C.13.a Manage waste generated from cleaning and treating copper architectural features, including copper roofs, during construction and post-construction

Provision C.13.a. requires the management of wastewater generated from cleaning and treating of copper architectural features, including copper roofs, during construction and post-construction. The requirements include the following:

- Establish local ordinance authority to prohibit the discharge of water to storm drains generated from the installation, cleaning, treating, and washing of the surfaces of copper architectural features, including copper roofs.
- Develop BMPs to manage wastewater during and post construction, and educate installers and operators on appropriate BMPs. Require use of appropriate BMPs when issuing building permits.

To assist Co-permittees in implementing these requirements, Program staff developed a guidance memorandum that provides:

- A description of ordinances related to copper architectural features that have been adopted by Co-permittees.

[1] Copper-related work products completed by the Program or through regional efforts in previous fiscal years, and associated task summaries of Program efforts can be found on the SCVURPPP website (www.scvurppp.org).

- Model ordinance language that may be used to develop local ordinances.
- A condition added to the SCVURPPP Model Conditions of Approval to address copper source control in development projects.
- Best management practices (BMPs) for managing wastewater generated from the installation, cleaning, treating, and washing of the surfaces of copper architectural features.

Program staff also developed a fact sheet entitled *Requirements for Copper Roofs and Other Architectural Copper - Protect water quality during installation, cleaning, treating, and washing!* for use in educating municipal staff, contractors, and property owners. The fact sheet describes BMPs for proper disposal of copper-containing wash water. The fact sheet was originally provided (via email) to attendees of the Program's Construction Site Inspection Workshop held on February 7 and 8, 2012. MRP requirements for architectural copper were reviewed at the Program's *IND/IDDE Training Roundtable for Industrial and Commercial Stormwater Inspectors* on May 20, 2014. Architectural copper BMPs were also presented and discussed at the Program's FY 13-14 *Construction Site Stormwater Compliance Workshop* on April 22, 2014.

C.13.b. Manage discharges from pools, spas and fountains that contain copper-based chemicals

Co-permittee efforts to manage discharges from pools, spas and fountains are described in their annual reports. This copper source is addressed in two ways: 1) through conditions of approval in the development project review process for new construction; and 2) through outreach to homeowners and pool maintenance businesses. Program staff assisted with implementation of this permit requirement by: 1) providing model conditions of approval requiring pools, spas and fountains to be connected to the sanitary sewer or drained to a nearby cleanout or landscaped area; and 2) continuing to reprint and distribute the brochure entitled *Draining Pools and Spas*, which provides information on proper methods of draining, maintaining, and cleaning pools and spas and avoiding use of copper-based algaecides.

Copper (and other pollutant) Loads Removed via Street Sweeping

Summary of Co-Permittee Street Sweeping Results

A summary of street sweeping activities conducted by Co-permittees is provided within the table entitled *Summary of Co-permittee Street Sweeping Activities- FY 2013-2014* (Appendix 12-1). All data presented within Appendix 12-1 was submitted to Program staff by individual Co-permittees for inclusion into this Annual Report.[2] During FY 13-14, Co-permittees swept approximately 204,675 miles of paved streets and removed approximately 79,235 yd^3 or 51,463 tons of material[3]. Approximately 20,794 yd^3 of leaf litter was also removed by Co-permittees who have leaf removal programs other than routine street sweeping. In addition, approximately 317,043 yd^3 and 52,698 tons of yard waste (which includes large amounts of leaves) was routinely collected by Co-permittees[4].

[2] All Co-permittees submitted data for inclusion into Appendix 12-1 except the Town of Los Altos Hills.

[3] To determine the total volume of material removed in tons, it is necessary to convert cubic yards to tons. It is estimated that the average density of street sweeping material is 1,299 pounds per cubic yard (0.6495 tons per cubic yard) (Source: EOA, Inc., October 1996, *Estimation of Copper Collected Through Street Sweeping Efforts*. Prepared for San Mateo Countywide Stormwater Pollution Prevention Program). A value of 51,463 tons is calculated when 79,235 cubic yards is converted over to tons (79,235 cubic yards* .6495 tons/cubic yard= 51,463 tons).

[4] Co-permittees who collect yard waste calculate the total volume in yd^3 or total weight in pounds. Yard waste includes leaves. Co-permittees do not have the ability to separate the volume or weight of leaves from yard waste.

One way to measure street sweeping effectiveness is to determine what solids and associated pollutants are collected within street sweeping debris. A typical unit of measure is the total volume of the pollutant removed by the sweeper relative to the curb length swept (e.g., yd^3/curb mile). This unit is typically referred as the removal rate. In the case of this effectiveness evaluation, the Program uses average removal rate to show the effectiveness of Co-permittee street sweeping activities within the Program's jurisdiction. The average Co-permittee removal rate during FY 13-14 was 0.39 yd^3/curb mile (see Appendix 12-1) with a range from 0.01 yd^3/curb mile to 0.78 yd^3/curb miles. In comparison, the average Co-permittee removal rate during FY 12-13 was 0.38 yd^3/curb mile.

The removal rate is influenced by a number of factors including accumulation rates of pollutants, the relationship between rainfall and sweeping frequencies, particle size, pavement condition and automobile parking controls[5]. As a result, effectiveness (i.e., removal rate) may vary each year depending on a change to any one of these factors. Many studies have shown that street sweeping removes significant quantities of dirt and debris from street surfaces[6]. However, results also demonstrate that the coefficient of variation of copper values and other metals (e.g., lead and zinc) in street sweeping debris is quite high[7]. In addition, the estimated pollutant load reduction is dependent on the volume of material collected (i.e., the more material collected, the greater the pollutant removal).

To illustrate the effectiveness of street sweeping activities for pollutant removal, Program staff estimated the mean pollutant reduction for the following four metals: copper, nickel, lead and zinc. These estimates are provided within the tables entitled *Summary of Co-permittee Street Sweeping Activities and estimated Mean Pollutant Load Reduction for Copper and Nickel- FY 2013- 2014* and *Summary of Co-permittee Street Sweeping Activities and estimated Mean Pollutant Load Reduction for Lead and Zinc- FY 2013- 2014*. Both tables are provided within Appendix 12-1.

To determine the estimated pollutant load reduction (in pounds), the volume of material collected (in cubic yards) for each Co-permittee land use type (i.e., residential, commercial and industrial) was determined. This value was then multiplied by the mean concentration of trace metal content for street sweeping samples collected in the study entitled *Chemical and Physical Characteristics of Street Sweeping Sediments in Tampa, Florida, May 1999* and converted to pounds of pollutant removed (mean concentration values and the algorithm used to calculate the pounds of pollutant removed are provided in Appendix 12-1). The estimated mean pollutant load reduction values for each land use type were then summed. Estimated pollutant load reductions for copper, nickel, lead and zinc via street sweeping in FY 13-14 are presented in Table 12-1. Estimated removals for copper, nickel, lead and zinc as a result of street sweeping activities from FY 08-09 through FY 13-14 are presented in Figure 12-1. It is important to note that there is uncertainty with these estimates since certain assumptions were made regarding the exact volume of material collected from a particular land use type.

[5] Woodward Clyde Consultants, December 1994. *Street Sweeping Literature Review/Storm Inlet Modification*, Prepared for Alameda County Urban Runoff Clean Water Program.
[6] Sartor, J. and G. Boyd, 1972. *Water Pollution Aspects of Street Surface Contaminants*. Prepared for United States Environmental Protection Agency, Washington, DC.
[7] EOA, Inc, October 1996. *Estimation of Copper Collected Through Street Sweeping Efforts: Final Report*. Prepared for San Mateo Countywide Stormwater Pollution Prevention Program.

Table 12-1. Estimated average pollutant load reduction from street sweeping conducted by Co-permittees in FY 13-14.

Land Use Type	Estimated Mean Pollutant Load Reduction (Pounds)			
	Copper	Nickel	Lead	Zinc
Residential	1,079	2, 132	2,010	2,705
Commercial	440	872	2,103	1,490
Industrial	478	93	449	369
Total	**1,998**	**3,097**	**4,562**	**4,565**

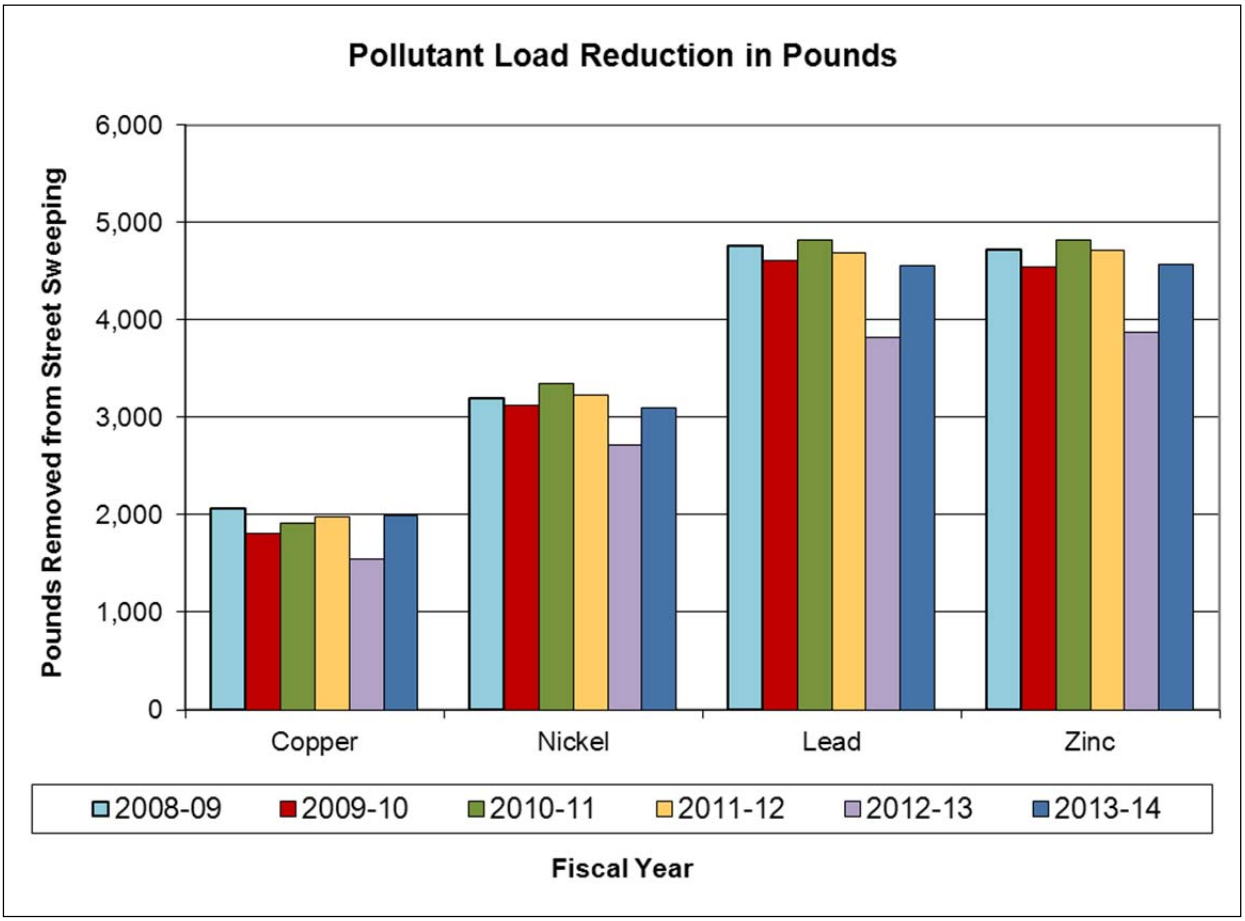


Figure 12-1. Estimated pollutant load reductions from Co-permittee street sweeping activities (in pounds) from FY 08-09 through FY 13-14.

■ Regional Activities

Regional activities conducted in FY 13-14 to address MRP provision C.13.c and C.13.e are summarized below. These activities were conducted via active participation in BASMAA, CASQA, or the RMP.

C.13.c. Vehicle Brake Pads

For many years, SCVURPPP has supported (directly or through BASMAA and CASQA) the Brake Pad Partnership, a voluntary partnership of brake pad manufacturers, government agencies and environmental organizations formed in 1999 to address the impacts of copper-containing brake pad wear debris on surface waters. In FY 10-11, the Brake Pad Partnership, Program and Co-permittee staff tracked the development of Senate Bill 346 (Kehoe) – Hazardous materials: motor vehicle brake friction materials – a bill to limit the amount of copper in brake pads, and sent letters of support. The bill was adopted on September 25, 2010, and sets in place a program that will phase out and nearly eliminate copper use in brake pads by 2025. Efforts in FY 13-14 have focused on tracking the implementation of the legislation and coordinating efforts through CASQA. Additional information on CASQA efforts is included within Appendix 12-2 Brake Pad Partnership FY 13-14 Summary Report.

C.13.c. Studies to Reduce Copper Pollutant Impact Uncertainties

This MRP provision requires Co-permittees to conduct or cause to be conducted technical studies to investigate possible copper sediment toxicity and technical studies to investigate sub-lethal effects on salmonids. These uncertainties regarding copper effects in the Bay are described in the amended Basin Plan's implementation program for copper site-specific objectives. Compliance with this provision has been achieved through continued participation in the RMP, whose multi-year planning process addresses these gaps through studies overseen by the Exposure and Effects Workgroup. While the MRP requires no reporting for this provision in FY 13-14, a summary of the RMP's efforts to-date to address these uncertainties is provided below.

- A study of the olfactory effects of copper on seawater-phase salmonids was completed in 2012 and found inhibition of the olfactory nerves of young (smolt stage) Chinook salmon in salt water was induced at higher copper concentrations than in previous freshwater studies. The study concluded that existing regulatory thresholds for copper in San Francisco Bay are likely to be protective for salmonids. A final summary of the study results is available at http://www.sfei.org/sites/default/files/SeawaterEOG2012report12202012_final.pdf.
- In 2013, additional external funding was provided to the RMP for further evaluation of the copper olfactory effects at intermediate salinities. Due to the effect of federal budget cuts on study facilities, the additional tests will be conducted with coho salmon instead of Chinook salmon used in previous tests, resulting in extension of the project timeline into 2014.
- Ongoing exploration of the causes of moderate sediment toxicity in San Francisco Bay included an expert workshop in November 2012, the second in a series of discussions on stressor identification. Workshop participants identified a number of possible chemical and non-chemical stressors that could affect the laboratory organisms used for the toxicity tests (the amphipod *Eohaustorius estuarius*), and a follow-up proposal to test the effects of sediment particle size and shape was recommended for 2014 pilot/special studies funding.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 13

PBDE, Legacy Pesticides and Selenium

September 15, 2014

Section 13 PBDE, Legacy Pesticides and Selenium

■ Introduction

Based on the Water Board's determination, legacy organochlorine pesticides (e.g. DDT, dieldrin and chlordane), Polybromated Diphenyl Ethers (PBDEs), and selenium are either known to impair or potentially impair water quality in the San Francisco Bay. The Water Board is currently developing, or planning to develop Total Maximum Daily Loads (TMDLs) for each of these groups of pollutants.[1] Provision C.14 requires all MRP Co-permittees to work together to identify, assess, and manage controllable sources of these pollutants found in urban runoff. Therefore, all tasks associated with this Provision are regionally-coordinated and described below.

■ Regional Activities

Provision C.14 requires Co-permittees to collectively characterize the representative distribution of PBDEs, legacy pesticides, and selenium in the urban areas of the Bay Region to determine:

1. If PBDEs, legacy pesticides, and selenium are present in urban runoff;
2. If PBDEs, legacy pesticides, or selenium are distributed relatively uniformly in urban areas; and
3. Whether storm drains or other surface drainage pathways are, in themselves, sources of PBDEs, legacy pesticides, or selenium, or whether there are specific locations within urban watersheds where prior or current uses result in land sources contributing to discharges of these pollutants to San Francisco Bay via urban runoff conveyance systems.

Additionally, Provision C.14 required Co-permittees to submit in their FY 12-13 Annual Report a report that: 1) contains information required to compute loads of PBDEs, legacy pesticides, and selenium to San Francisco Bay from urban runoff conveyance systems throughout the Bay Area; and, 2) identifies control measures and/or management practices to eliminate or reduce discharges of PBDEs, legacy pesticides, or selenium conveyed by urban runoff conveyance systems.

The Appendix to Section 15 of the Program's FY 12-13 Annual Report included three reports (one for each of the three pollutants of concern) that address requirements in Provision C.14 of the MRP. The reports include the results of the characterization of PBDEs, legacy pesticides, and selenium in urban runoff conveyances and control measures to reduce impacts associated with these pollutants. Characterization information and data that had been collected prior to and during MRP implementation were also included in the FY 12-13 Annual Report. There are no further reporting requirements for FY 13-14 regarding this provision.

[1] Selenium in the North Bay and for PBDEs and legacy pesticides in all parts of the Bay.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 14

Exempted and Conditionally Exempted Discharges

September 15, 2014

Section 14 Exempted and Conditionally Exempted Discharges

Introduction

Provision C.15 identifies the type of non-stormwater discharges that are exempted from the discharge prohibitions in Provision A.1 if such discharges are unpolluted and do not violate water quality standards. Provision C.15 also conditionally exempts certain non-stormwater discharges from the discharge prohibitions in Provision A.1 if they are identified by the Co-permittee or the Executive Officer as not being sources of pollutants to receiving waters. Per Provision C.15.b., the following categories of non-stormwater discharges are conditionally exempted from Provision A.1 if they are either identified as not being sources of pollutants or if appropriate control measures are developed and implemented prior to the discharge, and monitoring and reporting occur:

- Pumped groundwater from non-drinking water aquifers;
- Pumped groundwater, foundation drains, and water from crawl space pumps and footing drains;
- Air conditioning condensate;
- Planned, unplanned and emergency discharges of the potable water system;
- Individual residential car washing;
- Swimming pool, hot tub, spa and fountain water discharges;
- Irrigation water, landscape irrigation and lawn or garden watering.

Provision C.15.b.vii **(**Additional Discharge Types) directs the permittee(s) to identify and describe additional types and categories of discharges not yet listed in Provision C.15.b that they propose to conditionally exempt from Prohibition A.1 in periodic submissions to the Executive Officer. This provision further describes the necessary documentation, which includes a description of the control measures to eliminate adverse impacts of such sources, procedures and performance standards for their implementation, procedures for notifying the Water Board of these discharges, and procedures for monitoring and record management.

In addition, Provision C.15.b. viii (3) (Permit Authorization for Exempted Non-Stormwater Discharges) further states that the permittees may propose, as part of their annual updates consistent with the requirements of Provision C.15.b of this Permit, additional categories of non-stormwater discharges with BMPs, to be included in the exemption to Prohibition A.1. Provision C.15.b. viii (3) further states that such proposals may be subject to approval by the Executive Officer as a minor modification of the Permit. The FY 11-12 Program Annual Report (September 14, 2012 Annual Report Transmittal letter[1]), proposed an update to an existing conditionally exempted category to include non-stormwater discharge within Provision C.15.b.iii entitled *"Low Impact Planned Potable Water System Release".* A response from the Water Board was received on December 23, 2013 and the Program, as described in the January 29, 2014 letter to Mr. Bruce Wolfe, provided its response (see Appendix 14-1).

[1] The data analysis supporting the updated De Minimis sub-category, including BMPs and a monitoring and reporting plan, are contained in the FY 11-12 Program Annual Report.

This section describes the Program's activities to assist Co-permittees in reporting compliance with the requirements of C.15 and implementing appropriate control measures, monitoring and reporting for conditionally exempted discharges.

■ Program Activities

Potable Water System Discharges

The Water Utility Operation and Maintenance Pollution Prevention AHTG was formed to evaluate and recommend Program strategies for meeting new requirements in Provision C.15.b.iii. for planned, unplanned and emergency discharges that apply to water utility operations. The AHTG updated the SCVURPPP *Water Utility Operation and Maintenance Discharge Model Pollution Prevention Plan* (WUDPPP), which was approved by the Management Committee in August 2012. The WUDPPP is available on the Program website (www.scvurppp.org).

In FY 11-12, the AHTG analyzed their planned potable water release data and, consistent with MRP provisions C15.b.vii and viii(3), developed an updated conditionally exempted sub-category entitled "Low Impact Planned Potable Water Release." The "Low Impact Planned Potable Water Release" sub-category requirements essentially modify monitoring and reporting requirements below a De Minimis threshold, but do not modify the implementation of appropriate control measures below the threshold. The updated category is summarized as follows: For planned potable water discharges of 15,000 gallons or less, Co-permittees will continue to implement the required BMPs for dechlorination and sediment and erosion control per Provision C.15.b.iii.(1)(a). For these discharges, Co-permittees will also record the location, type, date of discharge, duration of discharge, and estimated total volume (in gallons). These records will be kept by the Co-permittee and submitted to the Regional Water Board if requested. Co-permittees will verify the continued effectiveness of BMPs by monitoring 5% of these conditionally exempted low threat discharge events annually.

Other Conditionally Exempted Discharges

Program staff updated the SCVURPPP Conditionally Exempted Discharges (CED) Report for consistency with MRP Provision C.15. The CED Report was reviewed by the Water Utility Ad Hoc Task Group (AHTG) and the Executive Committee, and approved by the Management Committee on February 17, 2011. The final report is available on the Program website (www.scvurppp.org).

Public outreach efforts that would benefit from Program-wide collaboration are being addressed in the Watershed Watch Campaign. The following activities were implemented to help the Program and Co-permittees comply with the outreach requirements for C.15.b.iv. Individual Residential Car Washing Discharge, C.15.b.iv. Swimming Pool, Hot Tub, Spa, and Fountain Water Discharges; and C.15.b.vi.a. Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering:

C.15.b.iv. Individual Residential Car Washing Discharge:

- Continued distributing the "Clean Cars and Clean Creeks" brochure at outreach events. The brochure can also be downloaded from Watershed Watch website and is available in four languages (English, Spanish, Chinese and Vietnamese). The brochure recommends washing your car at a commercial car wash and also provides pollution prevention best management practices for washing your car at home.
- The Watershed Watch Campaign once again partnered with two commercial car washes (Classic Car Wash and Capitol Premier Car Wash) to conduct discounted car wash events. Customers

received 50% off car washes at these events and were provided with information about proper car washing practices and general stormwater pollution prevention.

- Classic Car Wash, Capitol Premier Car Wash and Pacific Car Wash continued to offer discounts on car washes to residents using the Watershed Watch Discount Card

C.15.b.iv. Swimming Pool, Hot Tub, Spa, and Fountain Water Discharges

- The "Draining Pools, Spas and Fountain Water" brochure was distributed at outreach events. It is also available for download on the Watershed Watch website. The brochure provides information on potential pollutants in pool, spa and fountain discharges; proper methods for maintaining, cleaning and draining pools, spas and fountains; and how to find the closest sanitary sewer cleanout.

C.15.b.vi.a. Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering.

- The Watershed Watch website continued to include Information on water conservation and proper lawn and garden watering. A link to the Water District's "Save 20 Gallons" program was also included on the website.

Additional details on these activities are included in Section 7 of this Annual Report.

■ Regional Activities

Program staff has been participating in the Water Agency Task Force which serves as a forum to discuss the development of a Regional General Permit for potable water discharges. The Water Agency Task Force is comprised of water utility agencies not covered under the MRP. Program staff are attending to provide our experience with implementing the notification, monitoring, data collection and reporting requirements in the MRP and to express our objective to continue being regulated under the MRP and not have to apply for coverage under a second permit.

In addition to the WATF meetings, SCVURPPP co-permittees participated in permit workshops held by the State Water Quality Control Board in January 2014 and the Regional Water Board in May 2014.

The Regional Water Board released a Tentative Order (TO) General Permit for Discharges of Water from Drinking Water Supply Distribution, Transmission, and Groundwater Systems in May 2014. SCVURPPP and individual co-permittees provided comments on the TO in June 2014.

The State Water Resources Control Board released a Tentative Order (TO) General Permit for Drinking Water System Discharges on June 6, 2014. SCVURPPP plans on commenting on the State Board TO by the August 19, 2014 deadline.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

September 15, 2014

FY 2013-2014 Annual Report

Submitted in Compliance with NPDES Permit No. CAS612008 (Order R2-2009-0074)

Program Annual Report
Appendices

Campbell • Cupertino • Los Altos • Los Altos Hills • Los Gatos • Milpitas • Monte Sereno • Mountain View • Palo Alto
San Jose • Santa Clara • Saratoga • Sunnyvale • Santa Clara County • Santa Clara Valley Water District

Table of Contents Appendices

Section 1: Introduction

Appendix 1-1: Updated Confirmation Statements from Saratoga, San Jose, Sunnyvale, Palo Alto, Mountain View, Santa Clara Valley Water District, Milpitas, Los Gatos, Cupertino, and Santa Clara County designating a Management Committee representative and/or alternate

Section 2: Municipal Operations

Appendix 2-1: Rural Roads Maintenance Training Workshop – November 12 and 13, 2013

- Workshop Announcement
- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Section 3: New Development and Redevelopment

Appendix 3-1: Stormwater Treatment System Inspection Workshop – December 16, 2013

- Workshop Announcement
- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Appendix 3-2: Annual C.3 Stormwater Workshop: "Current Trends in Low Impact Development and Green Street Implementation" – June 4, 2014

- Workshop Announcement
- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Section 4: Industrial and Commercial Site Controls

Appendix 4-1: Industrial and Commercial Inspector Stormwater Training – May 20, 2014

- Workshop Announcement
- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Section 6: Construction Site Controls

Appendix 6-1: Construction Site Stormwater Compliance: "Training for Municipal Inspectors" – April 22, 2014

- Workshop Announcement
- Workshop Agenda
- Attendance List
- Workshop Evaluations Responses

Section 7: Public Information and Outreach

Appendix 7-1: FY 13-14 Watershed Watch Campaign

- FY 13-14 Watershed Watch Campaign Work Plan
- FY 13-14 Watershed Watch Media Plan
- FY 13-14 Watershed Watch Campaign Annual Campaign Report; July 2013 – June 2014

Appendix 7-2: FY 13-14 Watershed Watch Partner Report

Appendix 7-3: FY 13-14 Watershed Watch Web Statistics

Appendix 7-4: 2014 SCVURPPP Public Opinion Survey

Appendix 7-5: BASMAA Media Relations Campaign

- Final Report FY 2013-2014
- Watershed Watch Campaign Car Wash Press Release

Appendix 7-6: Program Contact Lists

- Management Committee Representatives/Attendees
- Construction, Illegal Discharge, and Industrial Inspection Contacts

Appendix 7-7: Going Native Garden Tour 2014- Summary Report

Appendix 7-8: Watershed Watchers: Keeping Out Waterways Clean: FY 13-14 Fourth Quarter Report including end-of-year Summary

Appendix 7-9: Zun Zun School Assemblies for Watershed Watch – FY 13-14

- ZunZun Assembly Programs for Watershed Watch- Final Report 2013-2014 School Year, July 11, 2014
- Memorandum- FY 13-14 Teacher Evaluation of the School Assembly Program

Appendix 7-10: BASMAA Regional Advertising Campaign

- Be the Street FY 2013-2014 Summary

Section 9: Pesticides Toxicity Control

Appendix 9-1: IPM Store Partnership Program

- Store Employee Trainings – FY 13-14 Final Report
- SCVURPPP Pesticide User Outreach - Store Employee Training Evaluations, FY 13-14 Evaluation Form Summary
- List of Stores in the IPM Store Partnership Program and Training Dates

Appendix 9-2: FY 13-14 Green Gardener Training Program

- Santa Clara Valley Green Gardener Training Program – FY 13-14 Activities
- Green Gardener English Class Evaluations
- Green Gardener Spanish Class Evaluations
- Spring 2014 Re-Certification Class Flyer – English
- Spring 2014 Re-Certification Class Flyer – Spanish
- Green Gardener List

Appendix 9-3: Preventing Urban Pesticide Pollution in Stormwater: CASQA Pesticide Subcommittee Annual Report, FY 13-14

Appendix 9-4: FY 13-14 Regional IPM Partnership Program Report (Our Water, Our World)

Section 12: Copper Controls

Appendix 12-1: Collection of Street Sweeping Data- Co-permittees

- Summary of Street Sweeping Activities for FY 2013-2014
- Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Copper and Nickel - FY 2013-2014
- Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Lead and Zinc - FY 2013-2014

Appendix 12-2: Brake Pad Partnership FY13-14 Summary Report

Section 14: Exempted and Conditionally Exempted Discharges

Appendix 14-1: SCVURPPP January 29, 2014 response letter to Regional Water Board

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 1-1

Updated Confirmation Statements from Saratoga, San Jose, Sunnyvale, Palo Alto, Mountain View, Santa Clara Valley Water District, Milpitas, Los Gatos, Cupertino, and Santa Clara County designating a Management Committee representative and/or alternate

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: July 1, 2013

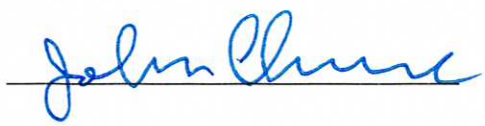
Name of Co-Permittee: City of Saratoga

Name of Management Committee Representative: John Cherbone

Name of Management Committee Alternate (if any): Kelly Carroll

Alternate#2: Mainini Cabute

This is confirm that the above referenced individuals have been officially designated and duly authorized to vote in their capacities as representative and alternate representative to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVUPPP) Management Committee, and that such prior designations and authorizations extend to casting votes to direct the SCVURPPP Program Manager to provide certain reports to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) on behalf of the above referenced co-permittee as required by NPDES permits adopted by the Regional Water Board and in compliance with the signatory and certification for such reports in the manner required as specified by the Regional Water Board with respect to municipal stormwater permit programs in the San Francisco Bay Area.

Signature of Appropriately Delegated Supervisor: 

Title of Appropriately Delegated Supervisor: Director of Public Works

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: July 10, 2013

Name of Co-permittee: City of San Jose

Name of Management Committee Representative: Napp Fukuda

Name of Management Committee Alternate (if any): Sharon Newton

This is to confirm that the above referenced individuals have been officially designated and duly authorized to vote in their capacities as representative and alternate representative to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Management Committee, and that such prior designations and authorizations extend to casting votes to direct the SCVURPPP Program Manager to provide certain reports to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) on behalf of the above referenced co-permittee as required by NPDES permits adopted by the Regional Water Board and in compliance with the signatory and certification for such reports in the manner required as specified by the Regional Water Board with respect to municipal stormwater permit programs in the San Francisco Bay Area.

Signature of Appropriately Delegated Supervisor: _____

Title of Appropriately Delegated Supervisor: Director, Environmental Services

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

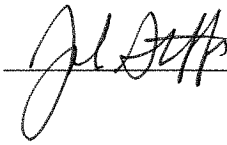
Date: **July 18, 2013**

Name of Co-permittee: **City of Sunnyvale**

Name of Management Committee Representative: **Melody Tovar, Regulatory Programs Division Manager**

Name of Management Committee Alternate (if any): **Elaine Marshall, Environmental Programs Manager**

This is to confirm that the above referenced individuals have been officially designated and duly authorized to vote in their capacities as representative and alternate representative to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Management Committee, and that such prior designations and authorizations extend to casting votes to direct the SCVURPPP Program Manager to provide certain reports to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) on behalf of the above referenced co-permittee as required by NPDES permits adopted by the Regional Water Board and in compliance with the signatory and certification for such reports in the manner required as specified by the Regional Water Board with respect to municipal stormwater permit programs in the San Francisco Bay Area.

Signature of Appropriately Delegated Supervisor: 

Title of Appropriately Delegated Supervisor: **John Stufflebean, Director of Environmental Services**

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

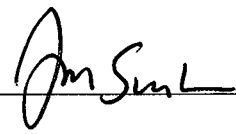
Date: July 22, 2013

Name of Co-permittee: City of Palo Alto

Name of Management Committee Representative: Joe Teresi

Name of Management Committee Alternate (if any): Kirsten Struve

This is to confirm that the above referenced individuals have been officially designated and duly authorized to vote in their capacities as representative and alternate representative to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Management Committee, and that such prior designations and authorizations extend to casting votes to direct the SCVURPPP Program Manager to provide certain reports to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) on behalf of the above referenced co-permittee as required by NPDES permits adopted by the Regional Water Board and in compliance with the signatory and certification for such reports in the manner required as specified by the Regional Water Board with respect to municipal stormwater permit programs in the San Francisco Bay Area.

Signature of Appropriately Delegated Supervisor: 

Title of Appropriately Delegated Supervisor: Director of Public Works

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: 8/14/13

Name of Co-permittee: Mountain View

Name of Management Committee Representative: Eric Anderson

Name of Management Committee Alternate (if any): Carrie Sandahl

This is to confirm that the above referenced individuals have been officially designated and duly authorized to vote in their capacities as representative and alternate representative to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Management Committee, and that such prior designations and authorizations extend to casting votes to direct the SCVURPPP Program Manager to provide certain reports to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) on behalf of the above referenced co-permittee as required by NPDES permits adopted by the Regional Water Board and in compliance with the signatory and certification for such reports in the manner required as specified by the Regional Water Board with respect to municipal stormwater permit programs in the San Francisco Bay Area.

Signature of Appropriately Delegated Supervisor:

Title of Appropriately Delegated Supervisor: Fire Marshal

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: August 16, 2013

Name of Co-permittee: Santa Clara Valley Water District

Name of Management Committee Representative: Liang Lee

Name of Management Committee Alternate (if any): Brett Calhoun

This is to confirm that the above referenced individuals have been officially designated and duly authorized to vote in their capacities as representative and alternate representative to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Management Committee, and that such prior designations and authorizations extend to casting votes to direct the SCVURPPP Program Manager to provide certain reports to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) on behalf of the above referenced co-permittee as required by NPDES permits adopted by the Regional Water Board and in compliance with the signatory and certification for such reports in the manner required as specified by the Regional Water Board with respect to municipal stormwater permit programs in the San Francisco Bay Area.

Signature of Appropriately Delegated Supervisor: Norma Camacho

Title of Appropriately Delegated Supervisor: Chief Operating Officer, Watersheds

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: Oct 14, 2013

Name of Co-permittee: City of Milpitas

Name of Management Committee Representative: Steven Machida

Name of Management Committee Alternate (if any): Paramjit Uppal

This is to confirm that the above referenced individuals have been officially designated and duly authorized to vote in their capacities as representative and alternate representative to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Management Committee, and that such prior designations and authorizations extend to casting votes to direct the SCVURPPP Program Manager to provide certain reports to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) on behalf of the above referenced co-permittee as required by NPDES permits adopted by the Regional Water Board and in compliance with the signatory and certification for such reports in the manner required as specified by the Regional Water Board with respect to municipal stormwater permit programs in the San Francisco Bay Area.

Signature of Appropriately Delegated Supervisor: Mary J. Nichol, Jr.
Jeff Moneda

Title of Appropriately Delegated Supervisor: Associate Civil Engineer

Public Works Director/City Engineer

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: December 3, 2013

Name of Co-Permittee: Town of Los Gatos

Name of Management Committee Representative: Matt Morley

Name of Management Committee Alternate (if any): Kelly Carroll

Alternate #2: Tim Kawasaki

This is confirm that the above referenced individuals have been officially designated and duly authorized to vote in their capacities as representative and alternate representative to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVUPPP) Management Committee, and that such prior designations and authorizations extend to casting votes to direct the SCVURPPP Program Manager to provide certain reports to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) on behalf of the above referenced co-permittee as required by NPDES permits adopted by the Regional Water Board and in compliance with the signatory and certification for such reports in the manner required as specified by the Regional Water Board with respect to municipal stormwater permit programs in the San Francisco Bay Area.

Signature of Appropriately Delegated Supervisor: Matt Morley

Title of Appropriately Delegated Supervisor: Director of Parks & Public Works

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: 1/15/14

Name of Co-permittee: City of Cupertino

Name of Management Committee Representative: Cheri Donnelly

Name of Management Committee Alternate (if any): Roger S. Lee

This is to confirm that the above referenced individuals have been officially designated and duly authorized to vote in their capacities as representative and alternate representative to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Management Committee, and that such prior designations and authorizations extend to casting votes to direct the SCVURPPP Program Manager to provide certain reports to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) on behalf of the above referenced co-permittee as required by NPDES permits adopted by the Regional Water Board and in compliance with the signatory and certification for such reports in the manner required as specified by the Regional Water Board with respect to municipal stormwater permit programs in the San Francisco Bay Area.

Signature of Appropriately Delegated Supervisor: _____

Timm Borden

Title of Appropriately Delegated Supervisor: Director of Public Works

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: 2/19/14

Name of Co-permittee: Santa Clara County

Name of Management Committee Representative: Greg Van Wassenhove

Name of Management Committee Alternate (if any): Darrell Wong

This is to confirm that the above referenced individuals have been officially designated and duly authorized to vote in their capacities as representative and alternate representative to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Management Committee, and that such prior designations and authorizations extend to casting votes to direct the SCVURPPP Program Manager to provide certain reports to the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) on behalf of the above referenced co-permittee as required by NPDES permits adopted by the Regional Water Board and in compliance with the signatory and certification for such reports in the manner required as specified by the Regional Water Board with respect to municipal stormwater permit programs in the San Francisco Bay Area.

Signature of Appropriately Delegated Supervisor:

Title of Appropriately Delegated Supervisor: Director Planning & Development

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 2-1

Rural Roads Maintenance Training Workshop – November 12 and 13, 2013

- Workshop Announcement
- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Rural Roads Maintenance Training Workshop

November 12 and 13, 2013

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Rural Roads Maintenance Training Workshop

Tuesday, November 12, 2013
8:00 am –1:00 pm

Wednesday, November 13, 2013
8:00 am –1:00 pm

Location: To Be Determined

Note: Same workshop will be offered on both days

Who Should Attend: Staff responsible for maintaining rural roads and their supervisors.

Workshop Agenda: This workshop teaches practical, effective best management practices (BMPs) for road maintenance that are also protective of water quality. Topics include identifying existing and potential erosion control problems, selecting effective BMPs and installing and maintaining BMPs. The workshop also includes a field portion to install and critique field BMPs.

*There will be **no charge** to agency staff for the workshop. Continental breakfast and box lunch will be provided. Please pass this flyer to appropriate staff within your organization.*

REGISTRATION FORM (Please indicate the date you would like to attend)

Name: _____

Title: _____

Agency: _____

Phone: _____

Email: _____

☐ **Tuesday, November 12**

☐ **Wednesday, November 13**

Please complete and email to Lori Baumgartner at <LoriB@eoainc.com> or fax to the Santa Clara Valley Urban Runoff Program office (fax no. 408- 720-8812) no later than Wednesday, November 6, 2013.
Questions? Call Lori at 408-720-8811 ext 2

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Campbell • Cupertino • Los Altos • Los Altos Hills • Los Gatos • Milpitas • Monte Sereno • Mountain View • Palo Alto
San Jose • Santa Clara • Saratoga • Sunnyvale • Santa Clara County • Santa Clara Valley Water District

Rural Roads Workshop

Tuesday, November 12, 2013 and Wednesday, November 13, 2013

8:00 a.m. – 1:00 p.m.

Classroom: Santa Clara Valley Water District Administration Building, 5750 Almaden Expressway, San Jose
Field Exercise: 5830 - 5898 Camden Avenue, San Jose

WORKSHOP AGENDA

Registration and Refreshments	8:00 – 8:30
Welcoming Remarks *Brett Calhoun, Santa Clara County Water District*	8:30 – 8:35
Stormwater/ Erosion Control *Kathy Moley/Tara Zuroweste,* Pacific Watershed Associates (PWA)	8:35 – 8:50
Effects of Uncontrolled Stormwater Kathy Moley/Tara Zuroweste, *PWA*	8:50– 9:00
Types of Erosion – Intro to Field Assessments Kathy Moley/Tara Zuroweste, *PWA*	9:00 – 9:20
The BMP Tool Bag Kathy Moley/Tara Zuroweste, *PWA*	9:20 – 9:35
Hands on BMPs Kathy Moley/Tara Zuroweste, *PWA*	9:35– 10:00
Break – Travel to Field Segment	10:00 – 10:20
Field Segment – Hands on BMPs and Field Assessment Kathy Moley/Tara Zuroweste, *PWA*	10:20 – 12:00
Lunch and BMP Discussion	12:00-12:45
Closing Remarks	12:45-1:00

SCVURPPP
Rural Roads Workshop FINAL ATTENDANCE
Tuesday, November 12, 2013

Last Name	First Name	Title	Municpality	Phone Number	E-Mail
Alao	Scott	Resident Construction Inspector	SCVWD	408-568-8833	salao@valleywater.org
Alcantar	Tony		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Arellano	Oswaldo	Maintenance Worker II	Town of Los Altos Hills	650-823-3362	jasfour@losaltoshills.ca.gov
Barron	Brian	Building Inspector	County of Santa Clara	408-299-5712	brian.barron@pln.sccgov.org
Bettencourt	Darcy		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Carroll	Kelly	Program Manager	WVCWP	408-354-4597	kcarroll@wvcwp.org
Conta	Dennis	Building Inspector	County of Santa Clara	408-299-5714	dennis.conta@pln.sccgov.org
Contreras	Joe Ray		County of Santa Clara		
Dunn	Curt	Park Ranger	City of Palo Alto	650-329-2423	curt.dunn@cityofpaloalto.org
Ellenberger	Ted		County of Santa Clara		
Flagg	Gary		County of Santa Clara		
Forestieri	Mike		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Fujimoto	Chris	Stormwater Investigator	City of Palo Alto	650-329-2430	christopher.fujimoto@cityofpaloalto.org
Gervais	Susan		SCVWD		
Gonzalez	Johnny	Maintenance Worker	Town of Los Altos Hills	650-948-9044	jasfour@losaltoshills.ca.gov
Imamura	Scott	Resident Construction Inspector	SCVWD	408-309-7432	simamura@valleywater.org
Luna	John	Resident Construction Inspector	SCVWD	408-529-3823	jluna@valleywater.org
McHugh	John		SCVWD		
Melvin	David	Inspector	County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Mendes	Jeff		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Miller	Marilyn		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Minshull	Bob	Building Inspector	County of Santa Clara	408-299-5723	bob.michsull@pln.sccgov.org
Ortega	Anthony	Program Staff	WVCWP	408-354-5385	aortega@wvcwp.org
Props	Jason	Inspector	County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Rivera	Martin	Resident Construction Inspector	SCVWD	408-483-7569	mrivera@valleywater.org
Sanchez	Tony	Building Inspector	County of Santa Clara	408-299-5722	anthony.sanchez@pln.sccgov.org
Schaer	Julie	Program Staff	WVCWP	408-354-5385	jschaer@wvcwp.org
Schaut	Michael	Inspector	County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Scott	David	Park Ranger	City of Palo Alto	650-329-2423	david.scott@cityofpaloalto.org
Takacs	Joe	Building Inspector	County of Santa Clara	408-299-5711	joe.takacs@pln.sccgov.org
Vargas	Rene		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org

SCVURPPP
Rural Roads Workshop FINAL ATTENDANCE
Tuesday, November 12, 2013

Last Name	First Name	Title	Municpality	Phone Number	E-Mail
Vega	Jose		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Zhang	Jinga	Inspector	County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org

SCVURPPP
Rural Roads Workshop FINAL ATTENDANCE
Wednesday, November 13, 2013

Last Name	First Name	Title	Municpality	Phone Number	E-Mail
Angotti	Matt		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Asfour	Jacob	Maintenance Superintendent	Town of Los Altos Hills	650-823-4947	jasfour@losaltoshills.ca.gov
Ayon	Reed		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Bicknell	Jill		EOA, Inc.		jcbicknell@eoainc.com
Boyd	David R.	Associate Civil Engineer	County of Santa Clara	408-573-2450	david.boyd@rda.sccgov.org
Bullock	Nigel	Residential Construction Inspector	SCVWD	408-204-4533	nbullock@valleywater.org
Calhoun	Brett		SCVWD		
Eydam	Albert	Inspector	County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Fortino	Danny		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Gaska	David R.		County of Santa Clara		
George	Richard		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Gizaw	Ermias	Junior Civil Engineer	County of Santa Clara	(408) 573 2487	Ermias.Gizaw@rda.sccgov.org
Gonzales	Jim	Maintenance Worker II	City of Milpitas	408-586-2633	jgonzales@ci.milpitas.ca.gov
Grahm	Jason		SCVWD		
Grant	Mike		County of Santa Clara		
Grove	Chris	Building Inspector	County of Santa Clara	408-299-5731	chris.grove@pln.sccgov.org
Grover	Neil	Building Inspector	County of Santa Clara	408-299-6710	neil.grover@pln.sccgov.org
Guevara	Jerry	Supervising Construction Inspector	County of Santa Clara	408-299-6868	jerry.guevara@pln.sccgov.org
Gutierrez	Gabe		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Gutierrez	Thomas		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Harris	Chuck		County of Santa Clara		
Ho	Tran	Inspector	County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Huerta	Hector Jr.	Maintenance Worker II	Town of Los Altos Hills	650-948-9044	jasfour@losaltoshills.ca.gov
Hughes	Don	Senior Building Inspector	County of Santa Clara	408-299-5719	don.hughes@pln.sccgov.org
Johnson	Fritz		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Leik	Clara	Clean Water Coordinator	County of Santa Clara	408-299-5737	clara.leik@pln.sccgov.org
Marquis	Ken		County of Santa Clara		
McNulty	Dan		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Mekala	Sindhi	Assistant City Engineer	City of Monte Sereno	408-354-7635	sindhi@cityofmontesereno.org
Molina	Gabriel		County of Santa Clara		
Nguyen	Ted	Inspector	County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Serrano	Isaac		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org

SCVURPPP
Rural Roads Workshop FINAL ATTENDANCE
Wednesday, November 13, 2013

Last Name	First Name	Title	Municpality	Phone Number	E-Mail
Siu	Courtney		EOA, Inc.		
Soltero	Paul	Inspector	County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Sterling	Juvoni	Building Inspector	County of Santa Clara	408-299-5720	juvoni.sterling@pln.sccgov.org
Vo	Khoa		County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Vogel	Ed		County of Santa Clara		
Wardell	Daren				
Wilson	Steve	Inspector	County of Santa Clara	408-494-1329	khoa.vo@rda.sccgov.org
Zozaya	Eric	Residential Construction Inspector	SCVWD	408-531-7213	ezozaya@valleywater.org

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Evaluation Form Summary

Rural Roads Workshop
Tuesday, November 12, 2013

Number of Attendees: 33
Number of Evaluations: 21

What Did You Think of the Following Presentations and Activities?

CLASSROOM SESSION

1. **Stormwater / Erosion Control** - *PWA*

   13 very helpful **8** somewhat helpful **0** not helpful

2. **Effects of Uncontrolled Stormwater** - *PWA*

   14 very helpful **7** somewhat helpful **0** not helpful

3. **Types of Erosion – Intro to Field Assessment** – *PWA*

   12 very helpful **9** somewhat helpful **0** not helpful

4. **The BMP Tool Bag** – *PWA*

   14 very helpful **6** somewhat helpful **0** not helpful

5. **Hands on BMPs** – *PWA*

   11 very helpful **5** somewhat helpful **0** not helpful

General Comments:

- BMP descriptions would be helpful for inspectors
- I recommend this class to roads & airports S.C.C.
- I'm fairly new to stormwater program so all info was very informative to me
- Good presenters, easy to listen to

Please submit at the end of the workshop. ***Thank You for Your Comments!***

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Evaluation Form Summary

Rural Roads Workshop
Tuesday, November 12, 2013

Number of Attendees: 33
Number of Evaluations: 8

What Did You Think of the Following Presentations and Activities?

FIELD SESSION

1. **Field Segment – Hands on BMPs** - *PWA*

   6 very helpful **2** somewhat helpful **0** not helpful

2. **Field Segment –Field Assessment** – *PWA*

   7 very helpful **1** somewhat helpful **0** not helpful

Did this workshop meet your expectations? **8** Yes **0** No

What parts of the workshop were most useful to you?

- Materials
- Geogrids
- BMP hands-on installation
- BMP's
- Field work
- Product presentation
- The various types of straw wattles
- The soil nails - useful for future projects

What would have made this workshop more useful?

- Whiteboard with information
- See water put on the exercise
- Water/more shade
- Nothing, it was well presented

What topics would you recommend for a future workshop?

- Stations with photo
- Soil types
- Hydroseed demonstration with inlet examples
- Slope stability using the soil nail product

Please submit at the end of the workshop. ***Thank You for Your Comments!***

General Comments:

- Great!
- Need to get planners and engineers to attend
- Good topic overall

Please submit at the end of the workshop. ***Thank You for Your Comments!***

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Evaluation Form Summary

Rural Roads Workshop
Wednesday, November 13, 2013

Number of Attendees: 40
Number of Evaluations: 4

What Did You Think of the Following Presentations and Activities?

CLASSROOM SESSION

1. **Stormwater / Erosion Control** - *PWA*

   4 very helpful **0** somewhat helpful **0** not helpful

2. **Effects of Uncontrolled Stormwater** - *PWA*

   4 very helpful **0** somewhat helpful **0** not helpful

   Comments:
   - Our departments can maintain our jurisdiction, but property owners need to be involved more.

3. **Types of Erosion – Intro to Field Assessment** – *PWA*

   4 very helpful **0** somewhat helpful **0** not helpful

4. **The BMP Tool Bag** – *PWA*

   4 very helpful **0** somewhat helpful **0** not helpful

5. **Hands on BMPs** – *PWA*

   4 very helpful **0** somewhat helpful **0** not helpful

General Comments:
- Good presentation, I stayed interested
- These are great reminders and tools for county maintained roadways. My questions relate to privately maintained roadways, trails and firebreaks is “Is the public being educated about erosion/sediment BMP controls? Outreach?”

Please submit at the end of the workshop. ***Thank You for Your Comments!***

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Evaluation Form Summary

Rural Roads Workshop
Wednesday, November 13, 2013

Number of Attendees: 40
Number of Evaluations: 22

What Did You Think of the Following Presentations and Activities?

FIELD SESSION

1. **Field Segment – Hands on BMPs** - *PWA*

21 very helpful **1** somewhat helpful **0** not helpful

- Very well presented
- Good job

2. **Field Segment –Field Assessment** – *PWA*

21 very helpful **1** somewhat helpful **0** not helpful

- Well presented
- Good job
- Very informative

Did this workshop meet your expectations? **22** Yes **0** No

What parts of the workshop were most useful to you?

- Hands on
- All helpful
- Erosion control practice
- The two speakers from PWA
- Demonstration and examples
- Seeing all the BMPs
- Field exercise
- Discussions regarding different system installation

What would have made this workshop more useful?

- Nothing, keep it the same
- More time
- Q & A
- Have the workshop on a day that it is raining
- Different soil types on the location to do installs (it was very rocky here)

Please submit at the end of the workshop. ***Thank You for Your Comments!***

What topics would you recommend for a future workshop?

- More hands-on
- General construction permit
- Introduce more BMPs

General Comments:

- Useful
- Good job
- Good training
- Restrooms were too far away, no water or restrooms to wash up
- Thank you
- Great workshop
- Kathy and Tara are great

Please submit at the end of the workshop. ***Thank You for Your Comments!***

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 3-1

Stormwater Treatment System Inspection Workshop – December 16, 2013

- Workshop Announcement
- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Stormwater Treatment System Inspection Workshop

December 16, 2013

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Stormwater Treatment System Inspection Workshop

This workshop is for:
- ✓ Municipal Engineers
- ✓ Municipal Inspectors

Cupertino City Hall, Community Room
10300 Torre Ave, Cupertino, CA

Monday, December 16, 2013
8:00 am – 3:00 pm

*There will be **no charge** to agency staff for the workshop. Continental breakfast and box lunch will be provided. Please pass this flyer to appropriate staff within your organization.*

Workshop Highlights:

- What's Required by the Stormwater Permit
- Overview of Stormwater Treatment Measures
- What to Inspect during Construction and during 45 day Inspections
- Post-Occupancy O&M Inspections and Issues
- Vector Control Considerations

REGISTRATION FORM

Name: _____

Title: _____

Agency: _____

Phone: _____

Email: _____

Please complete and send to Lori Baumgartner by email <LoriB@eoainc.com> or fax (408-720-8812) no later than Tuesday, December 10th, 2013. Questions? Call Lori at 408-720-8811 ext 2.

A similar workshop is being conducted for the San Mateo Countywide Pollution Prevention Program on Wednesday, December 4th, in Foster City. Limited space is available for SCVURPPP attendees. If you prefer to attend on that date, please contact Lori at the phone number above.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

INSPECTOR WORKSHOP:

"Improving Your Stormwater Treatment System Construction and O&M Inspections"

December 16, 2013

Cupertino City Hall, Community Room

WORKSHOP AGENDA

8:00	Registration and Continental Breakfast	
8:30	Welcome and Introduction	Jill Bicknell *SCVURPPP*
8:35	Why Do We Do Inspections? – A Review of Stormwater Permit Requirements	Jill Bicknell *SCVURPPP*
8:50	What Are We Inspecting? – An Overview of Stormwater Treatment Measure Type, Design, and Maintenance Required	Jill Bicknell *SCVURPPP*
9:20	What Do We Look For During Construction? Key Elements to Inspect and Common Issues	Peter Schultze-Allen *SCVURPPP*
9:45	What Do We Look For During a "45 Day" Inspection? Key Elements to Inspect at Completed Facilities	Peter Schultze-Allen *SCVURPPP*
10:15	**Break**	
10:30	What Do We Look For During Routine O&M Inspections? Common Problems and Solutions	Peter Schultze-Allen *SCVURPPP*
11:00	Panel – Experience from the Field	Jared Hart, San José Julie Choun, Sunnyvale Eric Anderson, Mountain View Chris Fujimoto, Palo Alto
12:00	**Lunch**	
12:30	Mosquito Breeding and Stormwater Treatment Measures	José Colomé Santa Clara County Vector Control District
1:30	Data Collection and Management, and Tools for Compliance	Jill Bicknell *SCVURPPP*
2:00	Group Exercise – How Would You Handle These Inspection Situations?	Peter Schultze-Allen *SCVURPPP*
3:00	Adjourn	

SCVURPPP Inspector Workshop - FINAL ATTENDANCE
December 16, 2013
8:00 a.m. - 3:00 p.m.

Last Name	First Name	Title	Municpality	Phone Number	E-Mail
Abeyta	Dorothy		City of San Jose		dorothy.abeyta@sanjoseca.gov
Alarcon	Mauro		City of San Jose		mauro.alarcon@sanjoseca.gov
Amador	Gerardo	Building Inspector	City of Milpitas	408-586-3242	gamador@ci.milpitas.ca.gov
Anderson	Eric	Environmental Safety Coordinator	City of Mountain View	650-903-6225	eric.anderson@mountainview.gov
Apple	Bryan	Associate Environmental Services Specialist	City of San Jose	408-793-4384	bryan.apple@sanjoseca.gov
Arnold	Scott	Principal Construction Inspector	City of San Jose	408-621-2292	scott.arnold@sanjoseca.gov
Atre	Vishakha		EOA, Inc.		
Avalos	José	Senior Inspector	City of San Jose	408-392-3687	javalos@sjc.org
Baggese	David	Senior Construction Inspector	City of San Jose	408-876-0123	dave.baggese@sanjoseca.gov
Bagsik	Ed		SCC Vector Control		Ed.Bagsik@isd.sccgov.org
Beams	Steve	Senior Construction Inspector	County of Santa Clara	408-299-6867	steve.beams@pln.sccgov.org
Bicknell	Jill		EOA, Inc.		
Bjurman	Brad	Principal Construction Inspector	City of San Jose	408-364-5642	brad.bjurman@sanjoseca.gov
Blancher	Gordon	Senior Building Inspector	City of Sunnyvale	408-730-7448	gblancher@sunnyvale.ca.us
Bocalan	Michelle	Junior Engineer	City of Los Altos	650-947-2602	mbocalan@losaltosca.gov
Bozorginia	Maziar	Associate Civil Engineer	Town of Los Gatos	408-395-3460	mbozorginia@losgatosca.gov
Bui	Dan	Public Works Inspector	City of Milpitas	408-586-3252	dbui@ci.milpitas.ca.gov
Caldera	Sergio	Building Inspector	City of Milpitas	408-586-3249	scaldera@ci.milpitas.ca.gov
Carlet	Shari	Engineer	City of Palo Alto	650-329-2456	shari.carlet@cityofpaloalto.org
Carroll	Kelly	Program Manager	WVCWP	408-354-5385	kcarroll@wvcwp.org
Celevante	Dario	Public Works Inspector	City of Milpitas	408-586-3248	dcelevante@ci.milpitas.ca.gov
Chen	Victor	Associate Engineer	City of Los Altos	650-947-2623	vchen@losaltosca.gov
Choun	Julie	Environmental Compliance Inspector	City of Sunnyvale	408-730-7260	jchoun@sunnyvale.ca.gov
Colomé	José		SCC Vector Control		
Colosky	Mike	Senior Construction Inspector	City of San Jose	408-975-7434	mike.colosky@sanjoseca.gov
Cruz	Tony Robert	Associate Construction Inspector	City of San Jose	408-205-0512	tony.cruz@sanjoseca.gov
Damey	Mark	Construction Manager	City of San Jose	408-975-7249	mark.damey@sanjoseca.gov
Dhanota	Tito	Construction Inspector	City of San Jose		tito.dhanota@sanjoseca.gov
Duffy	Greg	Construction Inspector	City of San Jose	408-221-2854	greg.duffy@sanjoseca.gov

SCVURPPP Inspector Workshop - FINAL ATTENDANCE
December 16, 2013
8:00 a.m. - 3:00 p.m.

Last Name	First Name	Title	Municpality	Phone Number	E-Mail
Dutton	Jim	Building Inspector	City of Milpitas	408-586-3258	jdutton@ci.milpitas.ca.gov
Edlund	Sven	Laboratory/Field Technician	City of Sunnyvale	408-730-7260	sedlund@sunnyvale.ca.gov
Erkel	Brent	Principal Construction Inspector	City of San Jose	408-203-4808	brent.erkel@sanjoseca.gov
Fairman	Aida	Associate Civil Engineer	City of Los Altos	650-947-2603	afairman@losaltosca.gov
Fitch	Jennifer	Associate Environmental Engineer	Stanford University	650-723-3494	jcfitch@stanford.edu
Fujimoto	Chris	Investigator	City of Palo Alto	650-329-2430	christopher.fujimoto@cityofpaloalto.org
Guevara	Jerry G.	Supervising Construction Inspector	County of Santa Clara	408-299-6868	jerry.guevara@pln.sccgov.org
Gulan	Brett	Code Enforcement Technician	City of Santa Clara	408-615-3093	bgulan@santaclaraca.gov
Gutirrez	Bob	Senior Construction Inspector	City of San Jose	408-975-7334	bob.gutierrez@sanjoseca.gov
Hansen	Patrick	Environmental Inspector II	City of San Jose	408-793-5334	patrick.hansen@sanjoseca.gov
Hart	Jared	Supervising Environmental Services Specialist	City of San Jose	408-793-4383	jared.hart@sanjoseca.gov
Harvancik	Iveta	Senior Engineer	City of Saratoga	408-868-1274	iharvancik@saratoga.ca.us
Hernandez	Jaime	Environmental Inspector II	City of San Jose	408-793-5344	jaime.hernandez@sanjoseca.gov
Hernandez	Chris	Senior Construction Inspector	City of San Jose	408-623-0517	chris.hernandez@sanjoseca.gov
Hess	Pat	Construction Inspector	City of San Jose	408-390-9844	patrick.hess@sanjoseca.gov
Ho	Raymond	Associate Engineer	City of San Jose	408-794-1949	ray.ho@sanjoseca.gov
Hom	Alan	Senior Construction Inspector	City of Campbell	408-866-2168	alanh@cityofcampbell.com
Huang	Jin	Environmental Compliance Inspector	City of Sunnyvale	408-730-7260	jhuang@sunnyvale.ca.gov
Jones	Arion T.	Senior Construction Inspector	City of San Jose	408-762-8111	arion.jones@sanjoseca.gov
Krukar	Paul	Construction Inspector Supervisor	City of San Jose	408-975-7402	paul.krukar@sanjoseca.gov
Laporte	Marty	Associate Director	Stanford University	650-725-7864	martyl@bonair.stanford.edu
Lee	Eric		City of San Jose		eric.lee@sanjoseca.gov
Lehman	Rob	Building Inspector	City of Milpitas	408-586-3256	rlehman@ci.milpitas.ca.gov
Lothian	Mike	Laboratory/Field Technician	City of Sunnyvale	408-730-7260	mlothian@sunnyvale.ca.gov
Manuel	Lane	Combination Inspector	City of Santa Clara	408-615-2408	lmanuel@santaclaraca.gov
Mariano	Mike	Building Inspector	City of Milpitas	408-586-3268	mmariano@ci.milpitas.ca.gov
Marshall	Elaine	Environmental Programs Manager	City of Sunnyvale	408-730-7720	emarshall@sunnyvale.ca.gov
Martin	Rick	Construction Inspector	City of San Jose	408-205-7351	rick.martin@sanjoseca.gov
Mazzone	Jim	Public Works Inspector	City of Santa Clara	408-615-3068	jmazzone@santaclaraca.gov achakalian@santaclaraca.gov

SCVURPPP Inspector Workshop - FINAL ATTENDANCE
December 16, 2013
8:00 a.m. - 3:00 p.m.

Last Name	First Name	Title	Municpality	Phone Number	E-Mail
McCormack	Zack	Environmental Inspector	City of San Jose	408-793-5334	zack.mccormack@sanjoseca.gov
McMillan	Tim	Combination Inspector	City of Santa Clara	408-615-2406	tmcmillan@santaclaraca.gov
Mekala	Sindhi	Assistant City Engineer	City of Monte Sereno	650-867-0741	sindhim@csgengr.com sindhi@cityofmontesereno.org
Meltzer	John	Construction Inspector	City of San Jose		john.meltzer@sanjoseca.gov
Moeller	Randy	Environmental Compliance Inspector	City of Sunnyvale	408-730-7260	rmoeller@sunnyvale.ca.gov
Moreno	Frank	Senior Construction Inspector	City of San Jose	408-858-8829	frank.moreno@sanjoseca.gov
Murdock	Terry	Engineering Tech/Inspector	City of Los Altos	650-947-2627	tmurdock@losaltosca.gov
Navarro	Frank	Senior Engineer	CSG Consultants	925-575-0417	frankn@csgengr.com
Newton	Matt	Senior Construction Inspector	City of San Jose	408-930-0589	matt.newton@sanjoseca.gov
Newton	Eric	Construction Inspector	City of San Jose		eric.newton@sanjoseca.gov
Ng	Wency	Senior Civil Engineer	County of San Mateo		wng@smcgov.org
Nichols	Allen		City of San Jose		allen.nichols@sanjoseca.gov
Nussbaum	Julia	Senior Environmental Engineer	Stanford University	650-723-9747	juliann@stanford.edu
Ortega	Anthony	Program Staff	WVCWP	408-354-5385	aortega@wvcwp.org
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Pagan	Steven	Senior Civil Engineer	City of San Jose	408-975-7435	steve.pagan@sanjoseca.gov
Parissenti	Jim	Principal Engineer	City of Santa Clara	408-615-3061	jparissenti@santaclaraca.gov achakalian@santaclaraca.gov
Petersen	Lisa	Senior Civil Engineer	City of Campbell	408-866-2190	lisap@cityofcampbell.com
Pletsch	Steve	Construction Inspector	City of San Jose	408-838-3997	steve.pletsch@sanjoseca.gov
Preston	Lorin	Building Inspector	City of Milpitas	408-586-3241	lpreston@ci.milpitas.ca.gov
Quai Hoi	Doris C.	Assistant Engineer	City of Campbell	408-866-2157	dorisQH@cityofcampbell.com
Queirolo	Rob	Senior Building Inspector	City of Milpitas	408-586-3250	rqueirolo@ci.milpitas.ca.gov
Rieden	Kevin	Inspector	City of Cupertino		kevinr@cupertino.org
Rose	Pat	Public Works Inspector	City of Santa Clara	408-615-3065	prose@santaclaraca.gov achakalian@santaclaraca.gov
Sandahl	Carrie	Water EnvironmentSpecialist	City of Mountain View	650-903-6224	carrie.sandahl@mountainview.gov
Sangha	Gary	Principal Construction Inspector	City of San Jose	408-219-6532	gary.sangha@sanjoseca.gov
Scheidt	Sarah	Senior Environmental Compliance Inspector	City of Sunnyvale	408-730-7260	sscheidt@sunnyvale.ca.gov
Schultze-Allen	Peter		EOA, Inc.		
Shaer	Julie	Program Staff	WVCWP	408-354-5385	jschaer@wvcwp.org

SCVURPPP Inspector Workshop - FINAL ATTENDANCE
December 16, 2013
8:00 a.m. - 3:00 p.m.

Last Name	First Name	Title	Municpality	Phone Number	E-Mail
Silva	Gabe	Construction Inspector	City of San Jose	408-975-7418	gabriel.silva@sanjoseca.gov
Sinclair	Jeff	Environmental Services Specialist	City of San Jose	408-793-5358	jeff.sinclair@sanjoseca.gov
Singh	Barinder	Associate Construction Inspector	City of San Jose	408-975-7419	barinder.singh@sanjoseca.gov
Sivasankar	Malu		SCC Vector Control		Malu.Sivasankar@isd.sccgov.org
Souza	Steve	Senior Engineering Inspector	Town of Los Gatos	408-395-3430	ssouza@losgatosca.gov
Stagi	Jeremiah	Associate Construction Inspector	City of San Jose	408-857-5527	jeremiah.stagi@sanjoseca.gov
Struve	Kirsten	Env. Control Manager	City of Palo Alto	650-329-2421	kirsten.struve@cityofpaloalto.org
Thach	Scott	Senior Engineer	City of Santa Clara	408-615-3064	sthach@santaclaraca.gov achakalian@santaclaraca.gov
Toribio	Chris	Associate Construction Inspector	City of San Jose	408-975-7322	christian.toribio@sanjoseca.gov
Tott	Bill	Senior Inspector	City of Santa Clara	408-615-2407	btott@santaclaraca.gov
Tovar	Melody	Regulatory Programs Division Manager	City of Sunnyvale	408-730-7260	mtovar@sunnyvale.ca.gov
Tripiano	Frank	Public Works Inspector	City of Sunnyvale	408-730-7425	ftripiano@sunnyvale.ca.gov
Viray	Ildefonso Jr.	Senior Construction Inspector	City of San Jose	408-219-0839	jun.viray@sanjoseca.gov
Welch	Tom	Construction Inspector	City of San Jose	408-315-6930	tom.welch@sanjoseca.gov
Wier	Elliott	Code Enforcement Technician	City of Santa Clara	408-615-3092	ewier@santaclaraca.gov
Williams	Yvonne	Construction Inspector	City of San Jose	408-975-7415	yvonne.williams@sanjoseca.gov
Wormuth	Marty	Construction Inspector	City of San Jose	408-975-7436	martin.wormuth@sanjoseca.gov
Wykoff	Alex	Senior Code Enforcement Officer	City of Cupertino	408-777-3255	alexw@cupertino.org
Yang	Jean		SCC Vector Control	408-918-3497	Jean.Yang@isd.sccgov.org
Yee	Poh	Building Inspector	City of Milpitas	408-586-3205	pyee@ci.milpitas.ca.gov
Zacarias	Jose	Senior Construction Inspector	City of San Jose	408-621-8041	jose.zacarias@sanjoseca.gov
Zavala	Alma	Environmental Inspector	City of San Jose	408-793-5338	alma.zavala@sanjoseca.gov

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Evaluation Form Summary

INSPECTOR WORKSHOP:

"Improving Your Stormwater Treatment System Construction and O&M Inspections"

Cupertino City Hall, Community Room *Monday, December 16, 2013*

Number of Attendees: 109
Number of Evaluations: 69

1. **Why Do We Do Inspections? – A Review of Stormwater Permit Requirements** - Given by Jill Bicknell, *EOA*

   Very Useful 43 **Somewhat Useful** 25 **Not useful** 1

   Comments:

   - Not riveting but necessary and a good reminder.
   - For new people, this was very useful. In the past, this portion was optional, why did this change?
   - Good review.
   - Could use more detail on permit requirements and special project credits impacts if these facilities weren't there. Example: creek erosion.
   - Good to know the background.
   - It is important to understand why we need to inspect these installations.

2. **What Are We Inspecting? – An Overview of Stormwater Treatment Measure Type, Design, and Maintenance Required** - Given by Jill Bicknell**,** *EOA*

   Very Useful 49 **Somewhat Useful** 19 **Not useful** 1

   Comments:

   - For new people, this was very useful. In the past, this portion was optional, why did this change?
   - Good review.
   - Good information.

3. **What Do We Look For During Construction? Key Elements to Inspect and Common Issues** - Given by Peter Schultze-Allen, *EOA*

Very Useful 44 **Somewhat Useful** 22 **Not useful** 2

Comments:

- Pictures could have been a little clearer but good presentation/content. Recommend not including pictures in handouts, they do not print out well.
- Seemed redundant to previous sections. Maybe these similar sections can be broken up throughout the day.
- New, very good.
- I only inspect post-installations.
- Very interesting and important with only scenarios and problems.
- Photo slides are very useful.
- Good practical example.

4. **What Do We Look For During a "45 Day" Inspection? Key Elements to Inspect at Completed Facilities California** - Given by Peter Schultze-Allen, *EOA*

Very Useful 44 **Somewhat Useful** 22 **Not useful** 2

Comments:

- Pictures could have been a little clearer but good presentation/content. Recommend not including pictures in handouts, they do not print out well.
- Seemed redundant to previous sections. Maybe these similar sections can be broken up throughout the day.
- New, very good.
- Lots of information on what to look for in poor design.
- My group does not perform these but still important to see what to inspect for.

5. **What Do We Look For During Routine O&M Inspections? Common Problems and Solutions** - Given by Peter Schultze-Allen, *EOA*

Very Useful 39 **Somewhat Useful** 23 **Not useful** 2

Comments:

- Enjoyed the pictures.
- I am not involved much with O&M portion.
- Photo samples were very useful, especially drawing on the screen.

6. **Panel – Experience from the Field**

Very Useful 40 **Somewhat Useful** 26 **Not useful** 2

Comments:

- Interesting to see differences/similarities between different cities.
- Each presenter somewhat covered the same issue. A little variety would be better.
- Good, but speakers could be livelier.
- I did not know any of the mosquito information before.
- A little repetitive. The Q&A panel was interesting.
- More slides of field examples.
- Good variety.

7. **What About Mosquitos? - Vector Control Considerations** - Given by José Colomé, *Santa Clara County Vector Control District*

Very Useful 45 **Somewhat Useful** 18 **Not useful** 3

Comments:

- Good information. We definitely encounter a lot of mosquitoes so it is great to have the information and references.
- Resources, contact information and iPhone app were very useful.
- This was a nice new addition to the program. Important and different!
- New, very informative.
- Work on the Android SCC Vectors app.
- Great inclusion!

8. **Data Collection and Management, and Tools for Compliance** - Given by Jill Bicknell**,** *EOA*

Very Useful 35 **Somewhat Useful** 29 **Not useful** 3

Comments:

- Jill always brings a good perspective and insight from her extensive experience.
- Wow! Too many forms/approaches.
- Variety of forms used…very useful, as we are trying to design forms.
- Maybe go through an example of filling out a form.
- I may use forms provided for next FY inspection.
- Provided base data collection sheet for department modification.

9. **Group Exercise – How Would You Handle These Inspection Situations?** - Given by Peter Schultze-Allen, *EOA*

Very Useful 33 **Somewhat Useful** 26 **Not useful** 4

Comments:

- Good scenarios. Probably could use 2-3 sets of scenario pictures/tables and the overhead projector, not necessary for everyone to have a set of pictures. Maybe print less, higher quality pictures.
- Need to have each table responsible for a question rather than volunteer.
- Good way to end the workshop…on a high note.
- Good insight.
- Not enough information about problem and site.
- Interesting to see different opinions and ideas.
- Practice scenarios were very good.

GENERAL COMMENTS

Did this workshop meet your expectations? (circle one) **Yes** 59 **No** 2

What parts of the workshop were most useful to you?

- All of it was useful.
- Scenario solutions worked well.
- Learning about what issues arise from implementation of stormwater measures.
- All was useful, especially 45-day and O&M inspections.
- All the pictures and examples.
- Vector control.
- Good pictures.
- Great presentations.
- The panel.
- Peter's presentations.
- Various types of TCMs.
- Examples of inspections.
- O&M inspections.
- Overview of the permit requirements was especially useful.
- What to look for during construction and after the 45-day inspection period.
- Photos of the good and bad installations and maintenance issues.
- New methods of construction were useful.
- Inspection requirements.
- Review of applicable forms for inspection and documentation.
- Understanding the purpose of stormwater O&M inspections and 45-day inspections.

What would have made this workshop more useful?

- Clearer, larger handouts.
- The challenge of this workshop is to keep things interesting. Subject doesn't change much and can become redundant.
- I liked the agency SOP ideas.
- More forms.
- More group exercises.
- Simple model demo.
- Identify resources.
- N/A
- More idea sharing between groups or technique sharing.
- A field visit to stormwater facilities.
- Repeat the question before giving the answer.
- Introductions of attendees/information about the people in the audience and their respective programs.
- More pictures and maybe a field trip to a nearby bioretention system.
- Putting different methods to the test to see if they do work.
- More examples of industry practices.
- O&M inspection details after construction and 45-day inspection periods.
- Give us more detail on the practical exercise.

What topics would you recommend for a future workshop?

- Scheduling during construction inspections - frequency, stages, verification, etc.
- N/A
- Integrate information with landscape plans and planners.
- Roof runoff, condensate drainage.
- Maybe a section on new technology.
- Would any vendors (like Kristar) be interested in presenting their products and go through the proper installation and maintenance?
- Panel on communication process.
- Some type of video clips.
- More construction related topics.
- Field visit.
- Reasons for C.3 requirements and impacts before C.3 requirements.
- Methods for infiltration testing.
- System design and installation ideas for bioretention systems.
- Rainwater/discharge sampling, reporting and input.
- Non-point source inspection issues and enforcement.

General Comments?

- All of the pictures in the presentations were very helpful and instructive. It would be helpful if the slides of pictures were highlighted to point out pertinent features such as inlets and outlets, etc. Sort of how Peter did during his presentations, but have those highlights pointed out on the handouts.
- Good timing and pace of presentations.

- Very useful! Excellent workshop!
- Good organization and materials.
- The temperature of the room was too cold.
- Good class.
- If handouts are being used, color would be nice for the photos.
- Great refresher course. Very useful in my contract inspection duties.
- Good workshop!

Santa Clara Valley
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Appendix 3-2

Annual C.3 Stormwater Workshop: "Current Trends in Low Impact Development and Green Street Implementation" – June 4, 2014

- Workshop Announcement
- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Annual C.3. Stormwater Workshop
"Current Trends in Low Impact Development and Green Street Implementation"

June 4, 2014

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

SANTA CLARA BASIN WMI WATERSHED MANAGEMENT INITIATIVE

Present

ANNUAL C.3. STORMWATER WORKSHOP:

"Current Trends in Low Impact Development and Green Street Implementation"

Wednesday, June 4, 2014
8:00/9:00 am – 3:30 pm**

Campbell Community Center
Orchard Room
1 W. Campbell Ave
Campbell, CA

8:00 a.m. start time for "Basic Training"** (for staff with little prior stormwater experience).**9:00 a.m. start time for main workshop!

Who should attend this workshop: Municipal stormwater program coordinators, and planning and public works staff who:

- Review and approve private development projects
- Plan, design and construct public projects, including transportation projects
- Oversee stormwater treatment measure inspection programs

Workshop agenda: This full-day workshop will include regulatory updates on the Municipal Regional Permit Provision C.3, results of the 2014 Site Design Awards, presentations on implementing LID at local new development and redevelopment projects, and an afternoon session on planning and implementing green street projects.

Also included: AICP Certification Maintenance Credits (Pending)

*There will be **no charge** for the workshop. Continental breakfast & box lunch will be served.*
Please pass this flyer to appropriate staff within your organization.

REGISTRATION FORM

Name: _____

Title: _____

Agency/Company: _____

Phone: _____ **Email:** _____

What do you plan to attend? (Choose all that apply)

☐ **Pre-workshop Basic Training**

☐ **Main Workshop**

Please complete and email to Melissa@eoainc.com or fax to 510-832-2856 no later than Wednesday, May 28, 2014.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

SANTA CLARA BASIN WMI WATERSHED MANAGEMENT INITIATIVE

ANNUAL C.3. STORMWATER WORKSHOP:

"Current Trends in Low Impact Development and Green Street Implementation"

Wednesday, June 4, 2014

Campbell Community Center, Orchard Banquet Hall
1 West Campbell Avenue, Campbell, CA

WORKSHOP AGENDA

8:00 AM	Early Registration for Basic Training (and Refreshments)	
8:15 AM	**Pre-Workshop Basic Training** – Stormwater Controls for Development Projects	Jill Bicknell *SCVURPPP*
9:00 AM	Registration (for registrants not attending Basic Training)	
9:30 AM	**Main Workshop** -- Welcome and Introduction	
	• Update on Current and Future Stormwater Permit Requirements	Jill Bicknell *SCVURPPP*
	• Site Design for Protecting Water Quality – 2014 Award Winning Projects	Vishakha Atre *SCVURPPP*
10:10 AM	Experiences Reviewing Stormwater Control Plans and Conducting Treatment Measure Inspections	Caitlin Gilmore/Robin Lee *Schaaf & Wheeler*
10:50 AM	**Break**	
11:00 AM	Panel Presentation – Implementation of Low Impact Development (LID) Requirements in Local Projects	
	• Commodore Park, San Jose	Ron Cheung *City of San Jose*
	• San Jose Flea Market: A Regional Approach to Urban Village Stormwater Management	Mike Campbell *HMH Engineering*
	• Vendor Presentations	

WORKSHOP AGENDA, CONTINUED

12:00 PM	**Lunch and Vendor Exhibits**	
1:00 PM	GreenPlan Bay Area	Jing Wu/David Senn *SFEI*
1:30 PM	Green Streets/Infrastructure Planning: A Tale of Two Cities: San Mateo and Emeryville	Peter Schultze-Allen *SCVURPPP*
2:00 PM	Green Streets and Infrastructure Funding in the Bay Area	Peter Schultze-Allen *SCVURPPP*
2:15 PM	Green Streets Projects: Funding and Implementation Challenges	Jared Hart *San Jose*
	Panel Presentation: Green Street Projects in the South Bay	
2:30 PM	Hacienda Avenue Green Street Improvement Project, Campbell	Roland Neufeld *City of Campbell*
2:50 PM	Southgate Neighborhood Green Street Project, Palo Alto	Shari Carlet *City of Palo Alto*
3:10 PM	San Jose Green Street Retrofit Projects	Bryan Apple *City of San Jose*
3:30 PM	Adjourn	

SCVURPPP Annual C.3 Stormwater Workshop
FINAL ATTENDANCE June 4, 2014

Last Name	*First Name*	*Municipality*	*Email Address*	*Phone*	*Basic Training/Main Workshop*
Aly	Ahmed	City of Milpitas	aaly@ci.milpitas.ca.gov		Both
Antonio	Reina	City of Campbell	reinaa@cityofcampbell.com	408-866-2161	Both
Apple	Bryan	City of San Jose	bryan.apple@sanjoseca.gov	408-793-4384	Main only
Atre	Vishakha	SCVURPPP			Staff
Baker	Jason	Town of Los Gatos	jbaker@losgatosca.gov	720-737-5489	Both
Balingit	Jose	City of San Jose	jose.balingit@sanjoseca.gov	408-535-8349	Main only
Berry	Whitney	City of San Jose	whitney.berry@sanjoseca.gov	408-535-7829	Both
Bhagat	Payal	City of Santa Clara	pbhagat@santaclaraca.gov	408-615-2450	Main only
Bicknell	Jill	SCVURPPP			Staff
Bocalan	Michelle	City of Los Altos	mbocalan@losaltosca.gov	650-947-2602	Main only
Caceres	Bernadine	Santa Clara County	Bernadine.Caceres@rda.sccgov.org	(408) 573-2486	
Caliva-Lepe	Noren	City of Sunnyvale	ncaliva-lepe@sunnyvale.ca.gov	408-730-7659	Both
Campbell	Mike	HMH Engineers			Speaker
Carlet	Shari	Palo Alto			Speaker
Carroll	Kelly	WVCWP	kcarroll@wvcwp.org	408-354-4734	Main only
Chau	John	Town of Los Altos Hills	jchau@losaltoshills.ca.gov	650-947-2510	Main only
Chen	Victor	City of Los Altos	vchen@losaltosca.gov		
Cheung	Ron	City of San Jose	ron.cheung@sanjoseca.gov	408-535-8361	Main only
Choun	Julie	City of Sunnyvale	jchoun@sunnyvale.ca.gov	408-730-7282	Main only
Crawford	Renee	Hatch Mott McDonald	renee.crawford@hatchmott.com	408-876-6078	
Custodio	Jake	City of San Jose	jacob.custodio@sanjoseca.gov	408-535-8406	Both
Dhanki	Eric	WVCWP	intern@wvcwp.org	408-354-4734	Both
Donnelly	Cheri	City of Cupertino	cherid@cupertino.org	408-777-3242	Main only
Duazo	Ed	Santa Clara County	ed.duazo@pln.sccgov.org	408-299-5733	Main only
Etessam	Lili	City of San Jose	lili.etessam@sanjoseca.gov		
Ezeokeke	Joe	City of Milpitas	jezeokeke@ci.milpitas.ca.gov	408-586-3316	Both
Fairman	Aida	Cit of Los Altos	afairman@losaltosca.gov	650-947-2603	Both
Fatolahzadeh	Tala	City of San Jose	tala.fatolahzadeh@sanjoseca.gov	408-535-8345	Both
Fong	Ryan	Santa Clara County	ryan.fong@pln.sccgov.org	408-299-5716	Main only
Freitas	Chris	Santa Clara County	Chris.Freitas@pln.sccgov.org	408-299-5732	Main only
Fujimoto	Chris	City of Palo Alto	christopher.fujimoto@cityofpaloalto.org	650-329-2430	Main only
Gilmore	Caitlin	Schaaf & Wheeler			Speaker
Harrison	Ryan	City of Mountain View	ryan.harrison@mountainview.gov	650-903-6815	Main only
Hart	Jared	City of San Jose	jared.hart@eoainc.com	408-793-4383	Main only
Hathaway	Paul	Pacific Interlock Pavingstone			Vendor
Heydari	Fariborz	City of Milpitas	fheydari@ci.milpitas.ca.gov	408-586-3303	Both
Hom	Alan	City of Campbell	alanh@cityofcampbell.com	408-866-2168	Main only
Hung	Jin	City of Sunnyvale	jhuang@sunnyvale.ca.gov		
Ishijima	Momoko	City of Sunnyvale	mishijima@sunnyvale.ca.gov	408-730-7532	Both
Jensen	Carrie	Harvey Ecology	cjensen@harveyecology.com	408-458-3234	
Jeyaprakash	Mary	City of Sunnyvale	mjeyaprakash@sunnyvale.ca.gov		
Jordanova	Tania	City of San Jose	tania.jordanova@sanjoseca.gov	408-535-7896	
Kimball	Michelle	City of San Jose	michelle.kimball@sanjoseca.gov	408-535-6830	Both
Kimura	Josephine	City of San Jose	josephine.kimura@sanjoseca.gov	408-793-6905	
Koki	Elizabeth	City of San Jose	elizabeth.koki@sanjoseca.gov	408-535-8324	Main only
Kruger	Curt	Contech Engineered Solutions, LLC	ckruger@conteches.com	415-897-8587	Vendor
Le	Steve	City of Santa Clara	sle@santaclaraca.gov	714-728-0804	Both
Lee	Eric	City of San Jose	eric.lee@sanjoseca.gov	408-535-5663	Both
Lee	Robin	Schaaf & Wheeler			Speaker
Lieberman	Elise	City of Sunnyvale	elieberman@sunnyvale.ca.gov	408-730-7443	Both
Lillo	Sue	Oldcastle - KriStar			Vendor
Louie	Candace	City of San Jose	candace.louie@sanjoseca.gov	408-535-5658	Both
Machida	Steven	City of Milpitas	smachida@ci.milpitas.ca.gov	408-586-3355	Both
Maier	Timothy	City of Sunnyvale	tmaier@sunnyvale.ca.gov	408-730-7257	Both

SCVURPPP Annual C.3 Stormwater Workshop
FINAL ATTENDANCE June 4, 2014

Last Name	*First Name*	*Municipality*	*Email Address*	*Phone*	*Basic Training/Main Workshop*
Marhenke	Mike	Calstone			Vendor
Martin	Catherine	City of Palo Alto	Catherine.Martin@cityofpaloalto.org	650-329-2261	Both
Mastrodicasa	Chris	City of San Jose	chris.mastrodicasa@sanjoseca.gov	408-535-8416	
McCormick	Cynthia	City of Saratoga	cmccormick@saratoga.ca.us	408-868-1230	Both
Mejia	Eli	City of Palo Alto	eli.mejia@cityofpaloalto.org	650-566-4572	Both
Mekala	Sindhi	City of Monte Sereno	sindhim@csgengr.com	650-867-0741	Main only
Mendrin	Shaunn	City of Sunnyvale	smendrin@sunnyvale.ca.gov	408-730-7429	Both
Mosley	Chad	City of Cupertino	chadm@cupertino.org	408-777-7604	Main only
Murphy	Jared	Hatch Mott MacDonald	jared.murphy@hatchmott.com	408-572-8798	Both
Neufeld	Roland	City of Campbell			Speaker
Nguyen	Hung	City of Palo Alto	hung.nguyen@cityofpaloalto.org	650-329-2548	Main only
Nussbaum	Julia	Stanford University	juliann@stanford.edu	650-723-9747	Main only
Pacheco	Hayde	City of San Jose	hayde.pacheco@sanjoseca.gov	408-793-4166	Main only
Palajac	Jan	City of San Jose	jan.palajac@sanjoseca.gov	408-535-8408	Main only
Palomar	Stacey	City of San Jose	stacey.kwok-palomar@sanjoseca.gov	408-535-8409	Main only
Petersen	Craig	Santa Clara County	craig.petersen@rda.sccgov.org	408-573-2490	Main only
Prada-Baez	Lina	City of Santa Clara	lpradabaez@santaclara.gov	408-615-3085	Both
Price	Teresa	Santa Clara County	Teresa.Price@pln.sccgov.org	408-299-5736	Main only
Pruitt	Mike	City of San Jose	mike.pruitt@sanjoseca.gov	408-535-8439	Main only
Quai Hoi	Doris	City of Campbell	dorisqh@cityofcampbell.com	408-866-2157	Both
Qwan	Gregory	City of Santa Clara	gsciara@santaclara.gov	408-615-2450	Both
Rhoades	Michael	David J. Powers & Associates	mrhoades@davidjpowers.com	408-454-3427	Main only
Rieden	Kevin	City of Cupertino	kevinr@cupertino.org	408-777-3104	Both
Rivas	Manuael	Santa Clara County	Manuel.Rivas@rda.sccgov.org	(408) 573-2476	
Roberts	Rachel	DeepRoot Green Infrastructure			Vendor
Roncal	Barni	Santa Clara County	Barni.Roncal@rda.sccgov.org	(408) 573-2494	
Rose	Pat	City of Santa Clara	prose@santaclaraca.gov	408-615-3065	Main only
Salonga	Averill	City of San Jose	averill.salonga@sanjoseca.gov	408-535-5670	Main only
Sandahl	Carrie	City of Mountain View	carrie.sandahl@mountainview.gov	650-903-6224	Main only
Schaer	Julie	WVCWP	jschaer@wvcwp.org	408-354-4734	Main only
Schillinger	Hal	Oldcastle - KriStar	slillo@oldcastle.com	707-975-0738	Vendor
Schuller	Elizabeth	City of San Jose	elizabeth.schuller@sanjoseca.gov	408-535-6862	Both
Schultze-Allen	Peter	SCVURPPP			Staff
Sciara	Gloria	City of Santa Clara	gsciara@santaclara.gov	408-615-2450	Main only
Sherrin	Sue	Santa Clara County	sue.sherrin@aem.sccgov.org	408-282-3187	Both
Simvoulakis	Lea	City of San Jose	lea.simvoulakis@sanjoseca.gov	408-535-7837	
Sinclair	Jeff	City of San Jose	jeff.sinclair@sanjoseca.gov	408-793-5358	Main only
Soria	Sergio	City of San Jose	sergio.soria@sanjoseca.gov	408-535-8353	Both
Struve	Kirsten	City of Palo Alto	kirsten.struve@cityofpaloalto.org	650-329-2421	Main only
Tam	Valerie	City of Palo Alto	valerie.tam@cityofpaloalto.org	650-329-2397	Both
Tegegne	Solomon	Santa Clara County	Solomon.Tegegne@rda.sccgov.org	(408) 573-2495	
Teresi	Joe	City of Palo Alto	joe.teresi@cityofpaloalto.org	650-329-2129	Main only
Testa	Peter	City of San Jose	peter.testa@sanjoseca.gov	408-535-8435	Main only
Thach	Xuong Scott	City of Santa Clara	sthach@santaclaraca.gov	408-615-3064	Main only
Uppal	Paramjit	City of Milpitas	puppal@ci.milpitas.ca.gov		Both
Van Wassenhove	Greg	Santa Clara County	greg.vanwassenhove@aem.sccgov.org	408-282-3165	Both
Vo	Khoa	Santa Clara County	Khoa.Vo@rda.sccgov.org	(408) 494-1329	
Wong	Darrell	Santa Clara County	darrell.wong@pln.sccgov.org	408-299-5735	Main only
Woo	Vency	City of Los Altos	vwoo@losaltosca.gov		
Wu	Jane	City of San Jose	jane.wu@sanjoseca.gov	408-535-3539	Both
Wu	Jing	SFEI			Speaker
Yan	Jason	City of San Jose	jason.yan@sanjoseca.gov	408-793-5399	Both
Zulueta	Rosemarie	City of Sunnyvale	rzulueta@sunnyvale.ca.gov	408-730-7437	Both

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Evaluation Form Summary

Number of Attendees: 108
Number of Evaluations: 55

ANNUAL C.3. STORMWATER WORKSHOP: "Current Trends in Low Impact Development and Green Street Implementation"

Orchard Banquet Hall, Campbell Community Center *Wednesday, June 4, 2014*

1. **Basic Training - Stormwater Controls for Development Projects** - Given by Jill Bicknell, *SCVURPPP*

   Very Useful 26 **Somewhat Useful** 11 **Not useful** 0

   Comments:

   - Try to cover more standard requirements than basic knowledge.
   - Minimize acronyms/abbreviations for basic training.
   - Jill is great. Makes issues very understandable.
   - As I am new to stormwater arena, this was very useful and easy to understand.
   - Good starting base for future training.
   - It would be great to extend this segment to include reminders about treatment sizing and design parameters and guidelines.
   - Good background information. Would have liked to hear more details about visuals used on slides, sometimes it is not easy to assume what the visual aid is trying to convey.

2. **Update on Current and Future Stormwater Permit Requirements** - Given by Jill Bicknell**,** *SCVURPPP*

   Very Useful 45 **Somewhat Useful** 9 **Not useful** 1

   Comments:

   - Introducing the C.3 stormwater design manual will be more helpful.
   - Good to hear about future permit requirements.
   - Nice to know about potential requirement change but is it too early to discuss?
   - Too long.
   - It is always good to know the updates.
   - These were useful and important details so we can be prepared for what's in the future.
   - Always useful to be informed of what changes may come in the future.
   - Helpful to learn what may be required in near future.
   - Nice update and summary of potential changes.
   - Good to stay updated.

3. **Site Design for Protecting Water Quality - 2014 Award Winning Projects** - Given by Vishakha Atre, *SCVURPPP*

Very Useful 20 **Somewhat Useful** 31 **Not useful** 4

Comments:

- Nice to see example of what you are looking for.
- Presentation was good, great job Vishakha, but information was not very useful.
- Good to know that we are recognizing quality projects.
- Nice presentation.
- Interesting to see current projects in the area.
- Informative but not necessary for my specific need.
- History of award was useful.

4. **Experiences Reviewing Stormwater Control Plans and Conducting Treatment Measure Inspections** - Given by Caitlin Gilmore and Robin Lee, *Schaaf & Wheeler*

Very Useful 39 **Somewhat Useful** 16 **Not useful** 0

Comments:

- The images and specific scenarios are very helpful for designers with limited construction management experience.
- Very helpful to hear from outside firm on what they look for on plans and in the field.
- Most exciting presentation so far.
- A bit complex for a planner, but good information.
- Very good topic! Useful to learn about the inspection and certification processes.
- I liked the practical information provided.
- It was nice to know what they are looking for.
- Good presentation about third party review. Useful and informational.
- Interesting to see photos from field. I just wish it was a bit less of an advertisement for their services.
- Good presentation.
- Good reminders for our own review/inspection.
- Great to have the consultant's perspective.
- Really liked the inspection section of the presentation. It would be nice to incorporate more site design examples on the next presentation.
- Great presentation. Very engaging and knowledgeable speakers.

5. **Commodore Park, San Jose -** Given by Ron Cheung, *City of San Jose*

Very Useful 19 **Somewhat Useful** 29 **Not useful** 1

Comments:

- Love 100% self-treating example.
- Interesting project.
- Would be more interesting if presenter talks more about design of it.
- Text on slides hard to read.
- Good feedback on what they would do differently.
- Wide variety of LID solutions used.
- Microphone issues.
- Cool use of pervious and permeable surfaces.
- Good example.

6. **San Jose Flea Market: A Regional Approach to Urban Village Stormwater Management** - Given by Mike Campbell, *HMH Engineers*

Very Useful 38 **Somewhat Useful** 16 **Not useful** 0

Comments:

- Excellent!
- Cool project.
- Great presentation.
- Very impressive project and concept for regional treatment.
- Great idea of combining local site to regional/multiple sites.
- Very interesting project. Good speaker.
- With many large, planned communities coming through the pipeline in San Jose, it is helpful to have a pilot project, such as this one, to piggy-back off of.
- Good example of regional treatment.
- Good presentation. Would be nice to know SCVURPPP's opinion on the project approach.

7. **GreenPlan Bay Area** - Given by Jing Wu, *SFEI*

Very Useful 13 **Somewhat Useful** 28 **Not useful** 12

Comments:

- Would like to review an example about this model.
- It was hard to hear the speaker. Maybe speak louder or improve the sound system.
- Background info abstract.
- The process for developing the analysis tools is good to know but how the result will apply to actual capital improvement projects is more important.
- Speaker is very knowledgeable and professional.

- Slides were confusing, hard to see information.
- Could have talked about more technical issues. Were there any obstacles along the way?
- Difficult to understand presenter.
- Need handout to follow along because I was unable to understand what presenter was saying.
- Very interesting and will be a good resource for municipalities - will be interesting to see how municipalities use the research.
- Too technical. I wasn't quite sure what the presentation was about.
- Good topic but too detailed and long.
- Lacking content; applicability.
- It would be nice to know how a CIP manager can incorporate the tool on a typical 1-mile project for instance.
- I found this presentation too technical for my knowledge but the tool sounds very interesting.

8. **Green Streets/Infrastructure Planning: A Tale of Two Cities: San Mateo and Emeryville** - Given by Peter Schultze-Allen, *SCVURPPP*

Very Useful 33 **Somewhat Useful** 15 **Not useful** 3

Comments:

- Very complete information. Great presentation!
- Clear presentation.
- Interesting.
- As a city employee in development services, the information discussed wasn't as relevant to me for my every day work. However, it was interesting.
- Not as applicable to my job but very interesting, especially the discussion of funding, and good speaker.
- As more green street projects get completed, providing similar presentations with successful examples would be very beneficial in addition to showing metrics for evaluating successfulness.
- Good example projects.
- Old information.
- Great information!

9. **Green Streets and Infrastructure Funding in the Bay Area** - Given by Peter Schultze-Allen, *SCVURPPP*

Very Useful 25 **Somewhat Useful** 20 **Not useful** 3

Comments:

- Not as applicable to my job but very interesting, especially the discussion of funding, and good speaker.
- My work is design based and not typically involved with the funding of projects.
- Additional detail on process would help.
- Great information!

10. **Green Streets Projects: Funding and Implementation Challenges –** Given by Jared Hart, City of San Jose

Very Useful 22 **Somewhat Useful** 22 **Not useful** 2

Comments:

- A bit repetitive.
- Nice to know some challenges.
- Informational.
- As a City of San Jose employee, I enjoyed hearing about how we are implementing stormwater treatment in public rights of way (ROWs).
- My work is design based and not typically involved with the funding of projects.
- Additional detail on project selection would be useful.

11. **Hacienda Avenue Green Street Improvement Project, Campbell** - Given by Roland Neufeld, *City of Campbell*

Very Useful 34 **Somewhat Useful** 11 **Not useful** 0

Comments:

- Excellent program.
- Good case study.
- Specific examples and the background of the project are very helpful. Graphics bring project to life.
- Good presenter. Concise, helpful presentation.
- Very interesting project.
- Great presentation - quite informative.
- Interesting material. Unique project. Good funding overview.
- Awesome.
- Interesting project that showed importance of coordination with other departments.
- Seems like a lot of thought was put into determining what street to implement green infrastructure. Made more sense for a main thoroughfare, whereas San Jose seemed to choose small streets.
- Great presentation. Good at depicting real life application of what we learned today.

12. **Southgate Neighborhood Green Street Project -** Given by Shari Carlet, *City of Palo Alto*

Very Useful 30 **Somewhat Useful** 11 **Not useful** 1

Comments:

- Good presenter. Concise, helpful presentation.
- Informative.

- Interesting.
- Great balance between technical information and project overview.
- Great real life examples of concepts learned today.

13. **San Jose Green Street Retrofit Projects** - Given by Bryan Apple, *City of San Jose*

Very Useful 25 **Somewhat Useful** 15 **Not useful** 0

Comments:

- Interesting.
- Good overview of what is going on in San Jose.
- Interesting projects. Would like to hear more about them after construction completion.
- Great overview; good purpose, context, and detail.
- Great real life example of green streets.

GENERAL COMMENTS

Did this workshop meet your expectations? (circle one) **Yes** 46 **No** 1

What parts of the workshop were most useful to you?

- Update on current and future stormwater permit requirements.
- Innovative designs and materials.
- Regional approach to Urban Village stormwater management.
- Basic training.
- Vendor information.
- Experiences reviewing control plans and conducting treatment measure inspections.
- Hacienda Green Street.
- Everything.
- Refresher on MRP requirements, new requirements, examples of treatment options.
- Information directly related to implementing projects.
- The examples were good and informative.
- O & M.
- The first two presentations and examples of implementation in other cities.
- Presentations 2, 3, and 7 - 9.
- Vendor presentations were surprisingly useful. Maybe give them more time for presentations and have them include costs on completed projects.
- Case studies. Projects in the Bay Area.
- First half.

- Southgate.
- Commodore Park presentation.
- Basic C.3 specifications.
- Bioretention discussion.
- As a planner who manages development permit applications, Jill's two presentations were the most useful because I am a new employee.
- Feedback and questions from other agencies.
- BASMAA white paper.
- Real life applications of green streets.

What would have made this workshop more useful?

- Field trip.
- More vendors present.
- Asking speakers to repeat audience questions before answering. It was difficult to hear the questions.
- Planners' perspective - reviewing preliminary SWMP's.
- All of the Green Streets presentations were a bit repetitive, except for Peter's, that presentation was useful and thorough but seemed a bit repetitive.
- Add "lessons learned" from constructed sites in the area and nationwide.
- More coverage of information during C.3 basic training (from 8am - 9am).
- More information on special projects.
- More of a focus on bioretention and sizing calculations.
- With so much cumulative stormwater knowledge in one room, I think that it would be very interesting to have hands-on activities/example projects at different tables with project managers to facilitate discussion of stormwater measures.
- Maybe more time on vendor presentations of applications of products at different sites, i.e., permeable pavement on steep slopes.
- More review of C.3 and less Green Streets.
- Reorder Green Street presentations to discuss projects first, funding second.

What topics would you recommend for a future workshop?

- Current new project and permit compliance. If not enough new topics consider a half-day workshop.
- Synthetic turf - specifications to look for (large scale - i.e., softball fields).
- Swale safety for pedestrians.
- Inspection.
- Practice C.3 review with small groups to explore different methods/designs for compliance. Maybe use city projects that have been audited by RWQCB as examples.
- Cost savings for C.3 implementation. These are big budget items.
- Maintenance and disposal of pollutants caught within systems.

- Challenges encountered with enforcement/inspection and maintenance.
- Bioretention in the right of way.
- Additional case studies.
- More hands-on rather than all lectures. Have the different speakers with example projects at different stations to allow for more interaction and less hours of pure lecture.
- Any innovative or new methods of treatment.
- Updates on the next permit.
- Updates on lessons learned from newly installed green street projects.
- BMP sizing example.
- More construction details.
- Trash capture.
- More on landscaping plants (Bay Friendly) and advantages for beautification projects.

General Comments?

- Great workshop. Jill does an excellent job coordinating it!
- I don't believe the vendor presentation was appropriate at this forum.
- Thanks for having us!
- Although not everything was applicable to me as a city employee, I think it was a good balance for private and municipalities.
- Great speakers in the afternoon but unfortunately a lot of people left physically or mentally after lunch. Consider hands-on stations where we can see full-size sets of plans and have more dialogue with each implementation project speaker. If unable to change format, decrease the number of speakers.
- Need better parking.
- Good combination of projects seeing as bioretention is so common.
- Too many speakers before lunch.
- A short 5-10 minutes break after lunch in between talks would have been nice. Talks were too interesting to leave the room but I could have used a minute to stretch. Morning portion - breaks were great in terms of timing and length. Overall, great workshop!

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 4-1

Industrial and Commercial Inspector Stormwater Training – May 20, 2014

- Workshop Announcement
- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Industrial and Commercial Inspector Stormwater Training

May 20, 2014

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Presents the Following Training

Industrial and Commercial Inspector Stormwater Training

Tuesday, May 20, 2014
Quinlan Community Center
10185 N. Stelling Road
Cupertino
12:00 pm – 3:00 pm

Who should attend this training: Inspectors who perform stormwater inspections for their agency's stormwater program; Local Program Coordinators.

Training agenda will include information on: Stormwater permitting basics, the newly adopted Industrial General Permit; tips for conducting inspections and field scenarios.

*There will be **no charge** for the training. Box lunch will be served.*
Please pass this flyer to appropriate staff within your organization.

REGISTRATION FORM:

Name/Title: _____

Agency/Company:_____

Address:_____

_____

Phone:_____**Fax:**_____**Email:**_____

Please complete and fax to EOA, Inc.
(fax no. 510-832-2856) no later than Monday, May 12, 2014
Questions? Call Melissa Morgan at 510-832-2852 or email to melissa@eoainc.com

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Campbell • Cupertino • Los Altos • Los Altos Hills • Los Gatos • Milpitas • Monte Sereno • Mountain View • Palo Alto
San Jose • Santa Clara • Saratoga • Sunnyvale • Santa Clara County • Santa Clara Valley Water District

IND/IDDE TRAINING ROUNDTABLE

Industrial and Commercial Stormwater Inspections

May 20, 2014

Quinlan Community Center Cupertino, CA

AGENDA

Noon	Registration and Lunch	
12:20 PM	Welcome and Introductions	Lori Pettegrew, *SCVURPPP*
12:25 PM	Regulatory Refresher	Lori Pettegrew, *SCVURPPP*
12:40 PM	Identifying Pollutants of Concern Source Areas	Chris Sommers, *SCVURPPP*
1:00 PM	Documenting Inspections and Investigations	John Pedersen, *Santa Clara County District Attorney's Environmental Protection Unit*
1:30 PM	Inspection Scenarios	Group Exercise - Everyone
2:55 PM	Summary Remarks, Adjourn	Lori Pettegrew, *SCVURPPP*

SCVURPPP IND/COM Inspector Workshop
Quinlan Community Center, Cupertino
Tuesday, May 20, 2014
FINAL ATTENDANCE

Last Name	First Name	Municipality	Email	Phone
Arellano	Jessica	City of San Jose		
Baker	Richard	SCCFD	richard.baker@cnt.sccgov.org	408-341-4433
Baker	Jason	Town of Los Gatos		
Baumgartner	Lori	EOA, Inc.	lorib@eoainc.com	408-720-8811
Benjamin	Michael	SCCFD	michael.benjamin@cnt.sccgov.org	408-341-4427
Carroll	Kelly	WVCWP	kcarroll@wvcwp.org	408-354-5385
Cervantes	Michael	Santa Clara County	michael.cervantes@deh.sccgov.org	408-918-3455
Chan	Bill	City of San Jose		
Chen	Victor	City of Los Altos		
Choun	Julie	City of Sunnyvale	jchoun@sunnyvale.ca.gov	408-730-7282
Colunga	Erica	City of San Jose		
Dahkni	Eric	WVCWP	aortega@wvcwp.org	408-354-5385
Donaldson	Chris	City of San Jose	chris.donaldson@sanjoseca.gov	
Edlund	Sven	City of Sunnyvale	jchoun@sunnyvale.ca.gov	408-730-7282
Fairman	Aida	City of Los Altos	afairman@losaltosca.gov	650-947-2603
Fern	Adam	Stanford		
Fernandez	Nerry	City of Milpitas	nfernandez@ci.milpitas.ca.gov	408-586-3255
Fujimoto	Chris	City of Palo Alto	christopher.fujimoto@cityofpaloalto.org	650-329-2430
Ghofraniha	Bahar	City of San Jose		
Gluchowski	David	City of Sunnyvale	jchoun@sunnyvale.ca.gov	408-730-7282
Gulan	Brett	City of Santa Clara		
Halepeska	Rex	Santa Clara County	rex.halepeska@prk.sccgov.org	408-225-6740
Hara	Robert	City of Palo Alto	kirsten.struve@cityofpaloalto.org	650-329-2421
Harrison	Ryan	City of Mountain View	ryan.harrison@mountainview.gov	650-903-6815
Hildebrand	Steven	City of San Jose		
Hoang	Dominic	City of Palo Alto	kirsten.struve@cityofpaloalto.org	650-329-2421
Hoang-Mendoza	Cathy	City of San Jose		
Hong	Josh	City of Milpitas	jhong@ci.milpitas.ca.gov	408-586-3350
Jackson	Kort	City of San Jose		

SCVURPPP IND/COM Inspector Workshop
Quinlan Community Center, Cupertino
Tuesday, May 20, 2014
FINAL ATTENDANCE

Jeyaprakash	Mary	City of Sunnyvale	jchoun@sunnyvale.ca.gov	408-730-7282
Jillo	Mahmoud	City of San Jose		
Jones	Brian	City of Palo Alto	kirsten.struve@cityofpaloalto.org	650-329-2421
Jones	Dave	Santa Clara County	dave.jones@faf.sccgov.org	408-918-2713
Komatsu	Jim	City of San Jose		
Lake	David	Santa Clara County	david.lake@prk.sccgov.org	408-355-2277
Lam	Dave	City of San Jose		
Le	Ca	Santa Clara County	Ca.Le@faf.sccgov.org	408-993-4637
Markel	Laura	City of San Jose		
Massey	Brandon	City of San Jose		
McClendon	Steve	Santa Clara County	steve.mcclendon@prk.sccgov.org	408-225-6740
McClendon	John	Santa Clara County		
McCormack	Zack	City of San Jose		
Merry	Drew	Santa Clara County	Drew.Merry@prk.sccgov.org	408-918-7991
Morse	Mary	City of San Jose	mary.morse@sanjoseca.gov	
Mumper	Cameron	City of San Jose		
Ortega	Anthony	WVCWP	aortega@wvcwp.org	408-354-5385
Pedersen	John	Santa Clara County		
Perez	Lorenzo	SCCFD	lorenzo.perez@cnt.sccgov.org	408-341-4439
Petrie	Ejan	City of San Jose		
Pettegrew	Lori	EOA, Inc		
Ramos	Rich	Santa Clara County		
Reger	Jon	City of San Jose		
Roubineau	Pascal	City of San Jose		
Sanchez	Anthony	Santa Clara County	Anthony.sanchez@prk.sccgov.org	408-356-2036
Sandahl	Carrie	City of Mountain View	carrie.sandahl@mountainview.gov	650-903-6224
Santiago	George	Santa Clara County	george.santiago@prk.sccgov.org	408-355-2282
Sedaghatpour	Shara	City of San Jose		
Shallenberger	Linc	Santa Clara County	lincoln.shallenberger@prk.sccgov.org	408-355-0038
Sherrin	Sue	Santa Clara County	sue.sherrin@aem.sccgov.org	408-282-3187

SCVURPPP IND/COM Inspector Workshop
Quinlan Community Center, Cupertino
Tuesday, May 20, 2014
FINAL ATTENDANCE

Sommers	Chris	EOA, Inc.	csommers@eoainc.com	
Struve	Kirsten	City of Palo Alto	kirsten.struve@cityofpaloalto.org	650-329-2421
Stuart	James	City of Palo Alto	kirsten.struve@cityofpaloalto.org	650-329-2421
Tracey	Joanne	Santa Clara County		
Van Wassenhove	Greg	Santa Clara County	greg.van.wassenhove@aem.sccgov.org	408-287-3165
Velasquez	Ingrid	City of Cupertino	ingridv@cupertino.org	408-963-8358
Villa	Joshua	City of San Jose		
Wier	Elliot	City of Santa Clara	ewier@santaclaraca.gov	408-615-3092
Wykoff	Alex	City of Cupertino	alexw@cupertino.org	408-777-3255
Zavala	Alma	City of San Jose		
Zittle	Margaret	City of Palo Alto	margaret.zittle@cityofpaloalto.org	650-329-2514

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Evaluation Form Summary

IND/IDDE STORMWATER TRAINING
Update on Stormwater Inspections of Industrial and Commercial Facilities

May 20, 2014

What Did You Think of the Following Presentations and Activities?

1. **Regulatory Refresher –** Lori Pettegrew, SCVURPPP Program Staff

Very Useful 22 **Somewhat Useful 15** **Not useful**

I'm new to all this so having this as an opening presentation is helpful for new people and perhaps to those with experience. Some of the items in this presentation were familiar.
Good overview, but limited focus.
Take home handouts are always good.
MRP 2.0 system.
More details on key differences between current and newly issued permits.
Useful to see how MRP Guides inspections and how inspections are used to show our compliance.
Great reminders for why we do this!
Good refresher.

2. **Identifying Pollutants of Concern Source Areas –** Chris Sommers, SCVURPPP Program Staff

Very Useful 26 **Somewhat Useful 12** **Not useful**

I learned new acronyms and information. Again, some things were familiar.
As a FOG inspector the information was not directly applicable to my duties but the information was to good to have in general.
Hg; Naturally occurring cinnabar mines, artifacts from Au-rush.
Did not receive a handout on this portion, kind of hard to retain.
Current project – helpful background.
Hot spots, maps helpful.
Good overview – Thank you.
Might be useful to summarize what other SCVURPPP and MRP Co-Permittees are doing with the intersection of PCB (C.11) and IND (C.4).
Very informative! Great presenter.
Good information on the PCB program.

3. **Documenting Inspections and Investigations –** John Pedersen SSC District Attorney's Office

Please submit at the end of the workshop. ***Thank You for Your Comments!***

Very Useful 29 Somewhat Useful 8 Not useful

This presentation was very helpful; especially the bits about consent during inspections and the 7 Elements of Inspection Reports.
Have more examples.
Very knowledgeable individual, great presenter, captivated audience.
Give more time.
Enforcement topics helpful.
Great training! I really like the examples & scenario.
Very good examples of cases encountered. Very detailed explanations of key elements or cases and component.
Excellent and useful information. Should have annual refresher on these topics.
It was great to hear the DAs perspective! Work with the end in mind.
Good reminder to make detailed response. Went a little long. Good short refresher from previous class – some material didn't apply.
Lots learned from John.

4. **Inspection Scenarios**

Very Useful 26 Somewhat Useful 8 Not useful

Some speakers were more detailed than others. Also, the group I was in was detailed, but not very good at explaining "why" for someone who is new to this.
Limited time on this activity, every scenario is different and often open to a judgement call on level of enforcement.
Give more difficult examples.
Procedures, SOPs helpful.
It is always good to hear how other agencies handle similar incidents.
Good job presenters!
It might be more productive to cover scenarios with a trainer teaching MRP regs and use the scenarios as examples as part of their training.
See how different cities respond/structure their responses and possible uniformity of enforcement response scale.
Great discussions.
Maybe we could use case studies to be presented. Then discussed as a group. Really odd ball cases are a crowd pleaser.
See how other cities etc respond.

Did this training meet your expectations? _35_ Yes __ No

Which topics/activities were most beneficial?

I found the presentations to be most helpful. The scenarios were so-so.
The round table discussion scenarios.
Inspections/investigations, scenarios.
Which topics/activities were least beneficial?
n/a

Please submit at the end of the workshop. ***Thank You for Your Comments!***

Documenting inspections and investigations. Have examples of when things go wrong response, and how to prevent in the future.
Hg & PCB's are politically driven at this time. Impact to storm system was not discussed, hazards to human health were not discussed removal vs. remediation/treatment were not discussed.
Documentation, Inspection and Investigation, and Inspection Scenario
Documenting Inspection and Investigation
Session may have been too short. Every speaker went past their allotted time. This left very little time for inspection scenarios.
Documenting inspections.
Topic #3 was very helpful; Topic #2 was informative.
The most beneficial topic was documenting and investigations.
Procedures, MRP update.
All were beneficial.
Application/Enforcement measures. Interpretation of MRP...Updates, etc. How to clearly utilize the varying permits in an efficient fashion – This would continue to be helpful.
Item 3 above was most beneficial. The PCB info was also helpful. The scenarios were interesting to see how other agencies respond to situations.
Documenting inspections and investigations were helpful. The sandwich was also beneficial and much appreciated!
Documenting Inspectors/Investigative
Inspection Scenarios.
Mr. Pedersen's presentation!
#2 and #4 followed up by #5.
Exceeded expectations! Well done!
Documentation of Inspection.
Documenting inspections and investigations.

Which topics/activities were least beneficial?

The least beneficial topics are none because I like them all.
"Strongest Key Points" to cite from MRP for industrial inspections on facilities both old/new.
Lunch
Scenarios. I think it may be more beneficial to have a trainer showing pictures, teaching, and asking for peoples input before giving the answers.
n/a

Would you be interested in attending a training next year? _29_ Yes _1_ No

What is your position (i.e., primary function as it relates to stormwater)?

I often enter IND&IDDEs into the City's system. I also go on ride alongs. I sometimes work directly with inspectors to document exactly what happen. I'm an intern.
FOG Inspector
Inspector IND inspections

Please submit at the end of the workshop. ***Thank You for Your Comments!***

FOG/IND
Environmental, Inspector II, FOG section.
Clean water program
Inspector
Inspector
Env. Compliance Insp.
Environmental Inspector
Inspector
Supervisor
WVCWP (Stormwater agency)
C4/C5/C6 C12 compliance
Sampling – if discharge in-fact occurs and pending the type, amount, threat, etc.
Facility manager
Construction Inspector
Sr. Park maintenance worker. ID's reporting and inspection for my unit.
Code Enforcement Technician.
Inspector
Site Inspection
Industrial waste inspector

Does your agency hold internal meetings for stormwater staff?: _24_ Yes _5_ No

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 6-1

Construction Site Stormwater Compliance: "Training for Municipal Inspectors" – April 22, 2014

- Workshop Announcement
- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Construction Site Stormwater Compliance: Training for Municipal Inspectors

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April 22, 2014

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Construction Site Stormwater Compliance:

Training for Municipal Inspectors

Attention:

- **Do you inspect construction sites for stormwater compliance?**
- **Do you need training on:**
  - **Construction BMPs?**
  - **Permit requirements?**
  - **Enforcement of violations?**

Tuesday, April 22, 2014
Sunnyvale Community Center – Community Room
550 East Remington Drive, Sunnyvale
8:30 a.m. to 3:00 p.m.

This training workshop is for municipal staff who inspect construction sites for compliance with stormwater requirements. Workshop topics include:

- ✓ Regulatory refresher of Municipal Regional Stormwater Permit (MRP) requirements for construction site inspections,
- ✓ Review of the statewide Construction General Permit and its relationship to the MRP,
- ✓ Construction BMPs and recognizing issues,
- ✓ Field exercise for hands on installation and critique of field BMPs.

Registrations Due April 16!

Email or fax this RSVP to Lori Baumgartner, lorib@eoainc.com, fax: 408.720.8812, by ***Wednesday, April 16, 2014***. For additional information, contact Lori at 408.720.8811 ext. 2.

Name:_____ **Agency:**_____

Phone:_____ **Email:**_____

Please pass this flyer along to appropriate staff within your organization.
This training is FREE and will include a lunch.
You will be sent a confirmation, including an agenda and directions, one week prior to the workshop.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

CONSTRUCTION SITE STORMWATER COMPLIANCE WORKSHOP

Implementing the requirements in Provision C.6
of the Municipal Regional Stormwater Permit (MRP)

Tuesday, April 22, 2014

Sunnyvale Community Center – Community Room
550 East Remington Drive, Sunnyvale

WORKSHOP AGENDA

8:30 AM	**Registration and Refreshments**	Vendors
9:00 AM	Overview of Requirements in Provision C.6 of the MRP	Kristin Kerr *Program Staff*
9:30 AM	Statewide Construction General Permit: What Does Municipal Staff Need to Know	Kristin Kerr *Program Staff*
9:50 AM	Meeting MRP and CGP Inspection Requirements: Who, What, When, Where and Why	Jared Hart *City of San Jose*
10:05 AM	**Break**	Vendors
10:15 AM	Temporary Best Management Practices (BMPs) for Construction Sites	David Franklin *EnviroTech NPDES Services*
11:45 AM	**Lunch**	Vendors
12:45 PM	Temporary Control Measures: Field Demonstrations	David Franklin *EnviroTech NPDES Services*
2:15 PM	**Adjourn**	

*** Attendance at this workshop is acceptable for 4 PDUs toward maintaining CPESC, CESSWI and/or CPSWQ certifications. ***

SCVURPPP Construction Site Stormwater Compliance: Training for Municipal Inspectors Workshop
April 22, 2014
Final Attendance

	Last Name	***First Name***	***Municipality***
1	Hom	Alan	Campbell Public Works
2	Rieden	Kevin	City of Cuptertino
3	Bocalan	Michelle	City of Los Altos
4	Chen	Victor	City of Los Altos
5	Fairman	Aida	City of Los Altos
6	Murdock	Terrance	City of Los Altos
7	Woo	Vency	City of Los Altos
8	Uppal	Paramjit	City of Milpitas
9	Mekala	Sindhi	City of Monte Sereno
10	Sandahl	Carrie	City of Mountain View
11	Fujimoto	Chris	City of Palo Alto
12	Melo	Leo	City of Palo Alto
13	Alao	Bryan	City of San Jose
14	Alarcon	Mauro	City of San Jose
15	Apple	Bryan	City of San Jose
16	Arnold	Scott	City of San Jose
17	Avalos	Jose	City of San Jose
18	Balingit	Jose	City of San Jose
19	Campos	Jose	City of San Jose
20	Carreon	Adelmo	City of San Jose
21	Castro	Ray	City of San Jose
22	Colosky	Michael	City of San Jose
23	Colunga	Erica	City of San Jose
24	Cruz	Tony	City of San Jose
25	DeCastro	Fidel	City of San Jose
26	Duffy	Greg	City of San Jose
27	Erkel	Brent	City of San Jose
28	Fatolahzahdeh	Tala	City of San Jose
29	George	Osuna	City of San Jose
30	Hart	Jared	City of San Jose
31	Hernandez	Chris	City of San Jose
32	Ho	Kevin	City of San Jose
33	Krukar	Paul	City of San Jose
34	Lapina	Fortune	City of San Jose
35	Mastrodicasa	Chris	City of San Jose
36	Neuton	Matt	City of San Jose
37	Pletsch	Steve	City of San Jose
38	Singh	Barinder	City of San Jose
39	Sommers	Randy	City of San Jose
40	Welch	Tom	City of San Jose
41	Williams	Yvonne	City of San Jose

SCVURPPP Construction Site Stormwater Compliance: Training for Municipal Inspectors Workshop
April 22, 2014
Final Attendance

	Last Name	*First Name*	*Municipality*
42	Wormath	Martin	City of San Jose
43	Wu	Jane	City of San Jose
44	Sangha	Gary	City of San Jose Public Works
45	Revere	Forrest	City of San Jose, Materials Testing Lab
46	Drew	Kenneth	City of San Jose, Public Works
47	Toribio	Christian	City of San Jose, Public Works
48	McCormack	Zack	City of San Jose-ESD
49	Zavala	Alma	City of San Jose-ESD
50	Gulan	Brett	City of Santa Clara
51	Wier	Elliot	City of Santa Clara
52	Reed	Patrick	City of Saratoga
53	Ballard	Michael	City of Sunnyvale
54	Choun	Julie	City of Sunnyvale
55	Fernandez	Toby	City of Sunnyvale
56	Koebel	Chris	City of Sunnyvale
57	Stemmerding	Jeff	City of Sunnyvale
58	Dutra	Gerry	County of Santa Clara
59	Thompson	Mitch	County of Santa Clara
60	Frederick	Mark	County of Santa Clara - Parks & Recreation
61	Eydam	Albert	County of Santa Clara Roads and Airports Department
62	Parks	David	County of Santa Clara Roads and Airports Department
63	Props	Jason	County of Santa Clara Roads and Airports Department
64	Schaut	Michael	County of Santa Clara Roads and Airports Department
65	Yamaichi	George	County of Santa Clara Roads and Airports Department
66	Marr	Chris	ESI Resource Services
67	Anderson	Eric	Mountain View
68	Guerra	Robert	San Jose Airport
69	Gervais	Susan	Santa Clara Valley Water District
70	McHugh	John	SCVWD
71	Mousli	Zak	SCVWD
72	Nussbaum	Julia	Stanford University
73	Kern	Adam	Stanford University - Utilities Services
74	Alba	Roy	Town of Los Gatos
75	Ortega	Anthony	WVCWP

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Evaluation Form Summary
Attendance: 75

CONSTRUCTION SITE STORMWATER INSPECTOR WORKSHOP

Sunnyvale, CA Tuesday, April 22, 2014

CLASSROOM SESSION 37 Evaluations (49% of attendees)

1. **Overview of Requirements in Provision C.6 of the MRP –** Given by Kristin Kerr, SCVURPPP Program Staff

   Very Useful 26 **Somewhat Useful 11** **Not useful 0**

   Comments:

   - Good job. Appropriate level of information. Most have heard this before but good summary.
   - An annual refresher is very useful. Access to the Powerpoint online would be good too, in order to pass on to others in the organization.
   - Low level overview.
   - Good refresher.
   - Great refresher.
   - Necessary but boring component. :)

2. **Statewide Construction General Permit: What Does Municipal Staff Need to Know -** Given by Kristin Kerr, SCVURPPP Program Staff

   Very Useful 25 **Somewhat Useful 12** **Not useful 0**

   Comments:

   - Good job. Appropriate level of information. Most have heard this before but good summary.
   - Explaining difference between MRP and CGP was very useful.
   - Low level.
   - Good refresher.
   - Great refresher.

3. **A City's Experience Complying with the Statewide Construction General Permit and MRP -** Given by Jared Hart, City of San Jose

Very Useful 18 **Somewhat Useful 17** **Not useful 2**

Comments:

- City does things different then most other agencies so not very useful.
- Maybe pick a city that does not have the personnel to have segmented departments. How does a small city accomplish the same goals?
- Good look at what San Jose does.
- Would like some example of how San Jose handles real projects. Are there any obstacles?
- Good example.

4. **Temporary Best Management Practices (BMPs) for Construction Sites -** Given by David Franklin, EnviroTech NPDES Services

Very Useful 31 **Somewhat Useful 6** **Not useful 0**

Comments:

- Good info and knowledgeable speaker.
- David is entertaining and always good to see what has worked and not worked and why. David is very knowledgeable with much field experience.
- Very long – Good presenter. 5 minute break would have kept people engaged.
- Great info.
- Long, could have been more interactive with group.
- Presentation is very practical. Very good presentation.
- Please invite David to every workshop! The best common sense presentation EVER!
- This presentation can be of a faster pace. With the amount of materials to be covered, David can jump directly to point. This presentation seems a little too long and dragging.
- Did not finish due to too many tangents.
- Very, very useful, more time to cover everything next time.
- Good presenter. The company he works for has great instructors. I recommend more speakers from there, less municipal staff speakers.
- Combining the first two presentations would be nice > similar material. Having enough time allotted for the last BMP presentation would have been better since this presentation consisted of practical applications in the field.

General Comments for Classroom Session

- Great presentation.
- Not an ideal facility. Small screen.
- Earth Day is hectic, we would prefer future workshops not be scheduled on Earth Day.

- More opportunities to interact. More information on treatment system inspections. How are other cities in our county dealing with the same issues?
- Please supplement slides with other information.
- Need more time to cover all items. Need to show Good BMP--------Bad BMP picture.
- I'm glad we spoke of BMPs and the demolition of construction site. When we use them and proper up-keep.
- BMP installation information was helpful.
- Need a larger screen.

FIELD SESSION 24 Evaluations (32% of attendees)

1. **Temporary Control Measures: Field Demonstration –** Given by David Franklin, EnviroTech NPDES Services

   Very Useful 20 Somewhat Useful 4 Not useful 0

   Comments:

   - Good time of year to do this, not too hot, but lots of standing.
   - Good examples and practical reminder.
   - David is a very entertaining inspector.

   Did this training meet your expectations? Yes: 24 No: 0

   Similar approach as the Rural Roads workshop.

   What parts of the training were most useful to you?

   - Ability to ask specific questions and receive informative answers.
   - Visual installs.
   - Different types of BMPs and their use.
   - New products.
   - Seeing examples.
   - All of it.
   - Great to see the BMPs first hand.
   - Everything.
   - He's very practical and down to earth.
   - Different products for BMPs.
   - BMPs.
   - New products.
   - Presenter had a high level of expertise.
   - Product brands and types.
   - The products used for erosion control.

- Field.
- The first two speakers. A great refresher.
- Erosion and sediment control devices for different applications and their proper installation.
- David's slide show on BMPs.
- BMP presentation/discussion.
- Field demonstration.

What would have made this training more useful?

- More variety of BMPs. More time outside in field.
- More field time.
- Watch some of the BMPs being installed.
- Better classroom.
- Hands on.
- Mock inspection of a site. It was good to see well performing BMPs, but do what poor performers look like or how to tell when something will fail before it does.
- None.
- Shade. To be more comfortable to listen.
- Canopy for the attendees.
- More on permit requirements.
- More focus on sediment control and chemical pollutants (cement/stucco, paint, etc.)

What topics would you recommend for a future training?

- Concrete washout/dewatering.
- BMPs for construction exit.
- Visit on going project.
- Construction entrance material.
- Treatment facility inspections: If I'm not the PW inspector or engineer, what should I look for if my site has a treatment facility.
- None.
- More examples of BMPs (construction entrances, etc.).
- Permit.

General Comments?

- It would be nice to continue having field components.
- Good training, have him at more workshops.
- For field exercise: ask inspectors for an actual site issue then recreate it for discussion purposes. More discussions about precautions near a creek bank.
- I enjoyed it. Very informative.

- Thank you.
- Good training.
- Informative/helpful training.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-1

FY 13-14 Watershed Watch Campaign

- FY 13-14 Watershed Watch Campaign Work Plan
- FY 13-14 Watershed Watch Media Plan
- FY 13-14 Watershed Watch Campaign Annual Campaign Report; July 2013 – June 2014

FY 13-14 Watershed Watch Campaign Work Plan - DRAFT

BACKGROUND

The primary goals of the Watershed Watch Campaign (Campaign) are to:

1. Change behaviors that negatively impact the watershed.
2. Encourage behaviors that protect, preserve and restore the watershed.
3. Inform audiences about activities that impact the watershed.
4. Build awareness of watershed issues in general.

In fiscal year FY 12-13, the Watershed Watch consultant AdManor, Inc.:

- Implemented the FY 12-13 Watershed Watch Campaign work plan
- Maintained and developed partnership relationships that benefit the Program
- Maximized campaign resources through value-added development and effective media implementation
- Coordinated campaign activities in consultation with the Watershed Education and Outreach Ad Hoc Task Group (WEO AHTG)
- Developed a new IPM campaign for television and radio in English & Spanish; implemented first message productions
- Developed new editorial assets in the form of produced segments and interviews

The Campaign's FY 12-13 media buys balanced radio, broadcast television, outdoor/transit and online advertising. Messages included problem-specific IPM, Green Gardener program, anti-litter messages and event-specific messages for car wash promotions. Brief pollution prevention reminders and tips, plus event and promotions announcements were delivered through social networking media and radio.

Each year, the campaign effectiveness has been measured through

- Hits on the www.MyWatershedWatch.org website
- Inquiries on the phone hotline
- Requests for information on the hotline and website
- Media gross impressions
- Attendance at Watershed Watch promotional and community events
- Added-value resources obtained through partnerships

In FY 13-14, the Program will conduct a public opinion survey to further evaluate the Campaign's effectiveness, relative to FY 09-10 survey results.

FY 13-14 Watershed Watch Campaign Work Plan

The FY 13-14 Work Plan is based on a campaign budget of approximately $154,000. If additional funds become available, they will be allocated according to the prioritized needs of the Campaign and feedback from the WEO AHTG.

To meet the requirements in the Municipal Regional Permit (MRP), the current priorities of the Campaign include public education on pollution potential from pesticides, alternatives to conventional pesticides, anti-litter messages and general storm drain awareness. Additional or secondary messages include proper disposal of items containing mercury, car wash / automotive maintenance messages, proper discharge of pool and spa water, and water conservation.

The Campaign will help the Program and Co-permittees comply with the following MRP Provisions:

- C.7.b. Advertising Campaign
- C.7.c. Media Relations – Use of Free Media
- C.7.d. Stormwater Point of Contact
- C.7.e. Public Outreach Events
- C.9.h.iii. Pest Control Contracting Outreach (outreach to residents who use or contract for structural or landscape pest control)
- C.15.b.iv. Individual Residential Car Washing Discharge
- C.15.b.iv. Swimming Pool, Hot Tub, Spa, and Fountain Water Discharges
- C.15.b.vi.a. Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering (messages on promoting water conservation, proper irrigation, use of less-toxic pesticides, and use of drought tolerant, native vegetation).

Where applicable, Campaign activities will be coordinated with activities of other local and regional outreach programs (e.g., the BASMAA Regional Ad Campaign, Bay Protection and Behavior Change campaign, Santa Clara County Household Hazardous Waste Program, BASMAA Media Relations, and Zero Litter Initiative) to promote the goals of the Campaign while maximizing regional campaign resources.

AdManor Inc. ("consultant") will adapt this Work Plan as needed upon the development and release of information about these other programs. After evaluating their strategies and creative, the consultant will recommend effective ways to support them and align Watershed Watch strategies and tactics with them, in order to benefit SCVURPPP. Adaptations and implementations may impact the Campaign's creative, website, partnerships, media and social networking.

Campaign activities will be evaluated on an ongoing basis, and changes made as required for effectiveness. Additional information on effectiveness evaluation is included under each task.

In FY 13-14, the consultant will implement the following tasks to achieve the goals of the Campaign.

TASK 1: Creative Development

This task includes revisions to existing messages, and the implementation/production of the remaining new less-toxic pest control campaign messages developed in FY 12-13. Other creative needs will be determined by the WEO AHTG as dictated by the priorities of the Campaign (e.g. media selection and applicable production, other new messages needed to fuilfill outreach messaging requirements, key messages identified by the Zero Litter Initiative).
Creative needs may also be impacted by:

- Bay Protection and Behavior Change (BPBC) and "Got Ants?" campaign creative, and SCVURPPP's desires to integrate or localize those creative developments into the Watershed Watch Campaign.
- Opportunities for free media or alternative messaging, such as putting campaign messages on public agency utility trucks, public access TV, window displays, etc.

TASK 1 DELIVERABLES:

Final deliverables are contingent upon media plans and WEO AHTG agreement about the message focus for each campaign flight. Deliverables *may* include (but are not limited to) creative materials for:

- Transit media (production of bus board posters, vehicle wraps)
- Radio (recorded messages, public service announcements, updates to class schedules for Green Gardener recruitment)
- Collateral (point-of-purchase displays/prompts, materials for distribution)
- New media (internet, social media, mobile, etc.) advertisements
- Discount Card revisions and printing

TASK 1 EFFECTIVENESS EVALUATION

The following measures will be used to measure effectiveness:

- Number of outreach pieces developed
- Number of outreach pieces requested on the website, events and by partners
- Tracking download data on the website
- Tracking website visits following the media placement of an outreach piece.

TASK 1 BUDGET: $10,000

TASK 2: Media Advertising

The FY 13-14 media plan will be developed thorough review of media options and proposals from local radio, television, transit and digital media / new media companies.

The consultant will develop media partnerships, schedules / flight plans and budget allocations in a comprehensive media plan. In developing these plans, the consultant will work with the WEO AHTG to clearly identify and define their media goals and preferences, and obtain their approval.

Requests for proposals (RFPs) will be developed to educate the media regarding the goals of the campaign, the prospective media schedule(s)/plan, budget levels, and the criteria on which proposals will be judged.

RFPs will be distributed to media serving the geographic target area, defined as Santa Clara County geographic area, also known as the area of dominant influence (ADI). San Francisco media may also be invited to prepare proposals, with the condition that comparative data is based on coverage of Santa Clara County audiences.

Media Allocation

The consultant will allocate the media budget proportionate to language/population of the target audiences, and the media's effectiveness in delivering audiences and added-value to the campaign.

The consultant will create an appropriate balance based on the goals, budget for the campaign, any timely circumstances and/or other campaign partner activities relevant to Watershed Watch goals and messages.

Media Selection

Measured results of the FY 12-13 campaign (such as media impacts on website activity, responses to direct-response media), trends in audience media usage, changes in the media market, and relevant activities in other regional advertising/outreach campaigns may impact media selection.

Media will also be evaluated for its: effective reach in the ADI (ratings); efficiency based on cost per point, reach & frequency to target audience(s), added value, partnership opportunities, and overall appropriateness of the proposal.

Media will be selected to create a desirable balance of reach and frequency; limited duplication in programming and formats for maximum reach to targeted audiences; maximum impact weighing rating points and impressions; and adequate frequency to create impact.

Selection will consider the proportion of media in English and Spanish relative to the population, effectiveness in delivery of the message, the messages the Campaign wants to deliver (appropriate to any medium), partnerships and value-added media and promotions.

In FY 11-12 and FY 12-13 broadcast television advertising and partnership with KNTV NBC 11 generated more meaurable impact and direct response than Cable television did in previous years. Added-value interview segments on both KNTV have also expanded the Campaign's messaging capabilities. Broadcast television partnerships should continue to be explored.

The media budget has been increased this year, so the consultant will present options for the WEO AHTG to compare opportunities this budget may afford.

Media Schedule

The FY 13-14 media schedule will strive for continuous presence of pollution prevention messages throughout the year, and support for Campaign events and special interests such as car wash partnership promotions, Santa Clara Valley Green Gardener Program, etc.

The consultant will present the recommended detailed media plan to the WEO AHTG for approval. The media plan will be revised as needed based on comments received. The plan includes a calendar to indicate the media placement and flow, messages, and events (when known); updated to reflect any changes as the year progresses.

Upon approval of the media plan, the consultant will confirm schedules with the media and secure contracts, including written commitments of added value and promotions. All creative materials and traffic instructions/insertion orders will be distributed to the media to ensure deadlines and Campaign goals are met.

Message Scheduling

Messages in summer and spring will focus on Integrated Pest Management as alternative to toxic pesticides and chemicals that can contribute to urban runoff pollution and harm the watershed. Messages regarding automotive pollutants and car washing messages will accompany promotional car wash events scheduled in spring and summer.

Messages in fall and winter will focus on litter prevention, and general storm drain awareness messages, and some specific IPM messages as appropriate with weather-related issues/reminders.

Green Gardener recruiting and promotional messages will be integrated as needed to fill class sessions and promote hiring Green Gardeners (usually in the late summer).

Messages may also promote the Watershed Watch website and social networking opportunities as a means to develop new social media audiences, thus expanding our direct-messaging audience(s).

Task 2 DELIVERABLES:

- RFP to Media (Media Negotiation)
- Media Recommendations
- Media Plan
- Media Buy/Placement
- Traffic (creative and scheduling instructions)
- Billing / Reconciliation / Documentation
- Media Campaign Summary (Report)

TASK 2 EFFECTIVENESS EVALUATION

The following measures will be used to measure effectiveness:

- Measuring impressions made by advertising
- Measuring added-value resources provided by the media.

Task 2 BUDGET: $94,500

Task 3: Partner Development and Coordination

Developing partners has proven successful in expanding campaign resources and generating incentives for the public. Partners have distributed Watershed Watch materials and messages through targeted events, educational and promotional activities, website links, and other added-value resources. The consultant will continue to work with past and existing partners so that the list of partners continues to grow each year.

The consultant will target like-minded businesses and organizations in development of additional partnerships that present opportunities to increase audience reach, awareness and messaging impact, such as:

- Community and neighborhood organizations
- Outdoor (especially water-related) events, recreational venues, and retailers
- Home improvement
    - Hardware, garden and home improvement retailers
    - Home service providers (pest control, permeable paving, rain harvesting, lawn substitution, landscape design and maintenance)
- Gardening / IPM programs and groups, including Green Gardeners who wish to expand their relationships with the Campaign
- Automotive – retailers, oil change / service centers, car washes in northern and

eastern areas of the County

The consultant will distribute partnership tools to all new partners and potential partners, which present partnership benefits and opportunities, provide ways to display their support of WW, and thank them for their partnership. In pursuing new partners, when appropriate, the consultant will develop customized proposals with specific benefits and creative partnering opportunities, developing mutually beneficial relationships and activities.

The support of these relationships includes coordinating outreach materials or messages, promoting the partner's interests that are shared with the Program, participating in key activities and events, and suggesting or developing win-win opportunities.

Partnerships will be promoted through social networking activities and on the Campaign website, at minimum.

The Watershd Watch Discount Card offers will be further developed as well as Card distribution options (distribution by other partners, media and through Campaign events and outreach), and the Campaign will promote the offers and partnerships using the Campaign website, social media, etc. If needed, Card layout and production may be expanded (to accommodate more partners/offers).

If needed, the consultant will help the WEO AHTG review other local and regional campaigns (e.g., the BASMAA Regional Ad Campaigns, Bay Area branding), and provide feedback.

TASK 3 EFFECTIVENESS EVALUATION

The following measures will be used to measure effectiveness:

- Documenting the number of new and continuing partners
- Documenting added-value resources provided by partners
- Documenting discounts provided by partners to people using the Watershed Watch discount card.

Task 3 DELIVERABLES:

- Ongoing contact with partners; work with existing partners and renew previous partners
- Watershed Watch Discount Card offer expansion and enhancement;
- Partnership tools (ongoing; currently sent via email instead of hard copy)
- Maintain updated contact data and partnership details
- Development of new creative partnership opportunities / scenarios
- Monthly written report of results or activities
- 2 new community/business partnerships

Task 3 BUDGET: $5,000

Task 4: Development of Value-Added Resources

The media offers excellent value added opportunities. The consultant will negotiate with the media for added media exposure (including news and editorial opportunities), requesting innovative partnerships and sponsorship opportunities with the media and their advertisers.
Existing and new partnerships (non-media) will also be explored for added-value opportunities. Opportunities include but are not limited to:

- Donations of merchandise or services to be used as incentives for increased participation, impact and awareness among audience
- Discount Card offers
- Signs or space to provide prompts, distribute Campaign materials
- Public Service Announcements / donated airtime, space and impressions
- Events; in-kind Campaign participation in events, promoting the Campaign as a sponsor/participant for added exposure, and on-site hosting for Campaign events
- Media programming or content sponsorships
- Cross-promotions, contests
- Web links and online features; social networking
- News and editorial opportunities (e.g., interviews)

Task 4 DELIVERABLES:

- Value-added as negotiated with media and partners
- Monthly written report of results or activities
- Three third-party or partnership promotions, e.g. car wash promotions, community event sponsorship, contest, etc.

TASK 4 EFFECTIVENESS EVALUATION

The following measures will be used to measure effectiveness:

- Documenting added-value resources provided by the media.
- Comparing added-value with actual funds spent on media buys.

Task 4 BUDGET: $5,000

Task 5: Website Maintenance & Social Networking

The consultant will maintain the Watershed Watch website on an ongoing basis, encouraging partners to provide updates, and creating more ways and reasons for the public to frequent the site via inbound marketing.

The consultant will update it regularly and frequently (English & Spanish) with the latest news/ articles, creative, partnership links, and events/announcements, including removal of expired or past events and news in a timely manner.

The consultant will track web activity and comment on any potentially relevant trends observed, trouble-shoot any issues, and develop new content as needed to meet Campaign goals and promote Campaign events, partnerships and programs, and promote public interaction.

Depending on outcomes of FY 12-13 troubleshooting for download tracking via Google Analytics, an alternate (possibly paid subscription-based) tracking method may be engaged.

New Media / Social Networking

The consultant will continue to implement the Campaign's social networking outreach strategy, develop timely new messages, monitor and share partner postings and related campaign posts, and regularly evaluate and adjust the social networking strategy as needed. The current strategy includes weekly postings to Facebook and Twitter, outreach to promote social media followers, and social networking message development.

Task 5 DELIVERABLES:

- Ongoing and on-demand maintenance to website
- Translation of new material to Spanish
- Frequent messaging through social media
- Monthly written report of results or activities

TASK 4 EFFECTIVENESS EVALUATION

The following measure will be used to measure effectiveness:

- Measuring website visits and downloads. Specifically, the consultant will keep track of website visits and document any increase following a media campaign or outreach event.

Task 5 BUDGET: $8,000

Task 6: Outreach Events

The consultant will work with the Program to develop, support and implement the Campaign annual outreach event plan. The consultant will strive to present a variety of community event opportunities in Santa Clara Valley that reach a large number and broad demographic range of SCVURPPP target audiences. The consultant will also seek targeted message-aligned events, such as:

- Earth Day events
- Garden Tours (featuring native and drought-resistant plantings, run-off prevention, organic gardening/IPM practices)
- Santa Clara County Parks & Recreation events and venues
- Outdoor events/activities that take place in a watershed recreation area
- Family and/or student related events and activities

Events that support the "Be the Street" youth-targeted anti-litter campaign will be

integrated as needed in Santa Clara Valley, depending on BTS campaign objectives for FY 13-14.

The consultant, Program staff and Co-permittees will provide staffing for the community events. Program staff will coordinate the staffing schedule, compile outreach materials for distribution, and prepare the post-event summary report.

For public information, a calendar of Campaign and Campaign Partner events will be published online through the Campaign website.

Task 6 DELIVERABLES:

- Event calendar development and maintenance (website).
- Coordination of events with Program staff (applications and registration fees).
- Staffing the Watershed Watch booth at events (equivalent to 5 days).

TASK 6 EFFECTIVENESS EVALUATION

The following measure will be used to measure effectiveness:

- Documenting the number of outreach materials distributed
- Documenting the number of children playing the bean bag game
- Staff feedback
- Event attendance
- Increased traffic to website immediately following the event

Task 6 BUDGET: $7,000

Task 7: Media and Public Relations

Public and press relations, both proactive and reactive, will be utilized to increase audience awareness and understanding of current events and activities that affect the watersheds. The consultant will implement the following tasks:

- The Santa Clara Valley Green Gardener Program will be promoted through media outreach, in addition to paid advertising.

- The consultant will solicit earned media and utilize community calendars in internet, print, TV and radio for no-cost announcements of events, programs and activities.

- When needed, the consultant will conduct local media relations to promote the press releases/PSAs developed by the BASMAA Media Relations Committee.

- If applicable (as it was in FY 12-13), schedule and coordinate added-value editorial news opportunities with the media, develop stories and talking points, provide props when relevant.

Task 7 DELIVERABLES:

- Localized PR support for two BASMAA Media Relations press releases or other

local stories as determined by the Program.

- Ongoing maintenance of press contact data.
- Media relations effort to publicize the Green Gardener class and certified Green Gardeners, and other Program activities.

TASK 6 EFFECTIVENESS EVALUATION

The following measure will be used to measure effectiveness:

- Number of press releases developed/modified
- Number of media placements/mentions

Task 7 BUDGET: $4,000

Task 8: FY 14-15 Work Plan Development

The consultant will compile and submit monthly, mid-year and year-end campaign activity reports for all applicable tasks. Details will include descriptions of deliverables by task, messages, measurable results of campaign activities and estimated added-value amounts.

The consultant will develop the FY 14-15 Work Plan and Media Plan adapting to the measured results of the FY 13-14 campaign, and accounting for the formal market study/market research and Campaign evaluation scheduled for FY 13-14.

Task 8 DELIVERABLES:

- FY 14-15 Work Plan
- FY 13-14 mid-year and year-end reports
- Monthly reports

Task 8 BUDGET: $5,500

Task 9: Evaluation

The consultant will contribute to the review and development of the formal market evaluation survey (questions), methodology, and target audience.

Upon the review of the market research firm's findings and recommendations, the Consultant will suggest how the results can be interpreted (if anything additional or different from the market research firm findings) and how knowledge gained can be implemented to improve the effectiveness of the Campaign.

Task 9 DELIVERABLES:

- Review of the market survey approach and specifics
- Review of the results
- Recommendations to implement findings into FY 14-15 Work Plan

Task 9 BUDGET: $1,000

BUDGET SUMMARY:

BUDGET SUMMARY:

TASK 1 Creative Development	$10,000
TASK 2 Media Advertising	$94,500
TASK 3 Partnership Development	$5,000
TASK 4 Added-Value Development	$5,000
TASK 5 Website Maintenance and Development	$8,000
TASK 6 Event Coordination	$7,000
TASK 7 Media/Public Relations	$4,000
TASK 8 FY 14-15 Work Plan	$5,500
TASK 9 Evaluation	$1,000
TOTAL CONSULTANT BUDGET	$140,000
EOA Mark Up	$14,000
TOTAL CAMPAIGN BUDGET	**$154,000**

AdManor inc
Multimedia Marketing

Watershed Watch
Protect Our Creeks And Bay

FY 13-14 Media Plan

Final Draft

INTRODUCTION

The following media plan outlines the media selections based on direction from the SCVURPPP Watershed Education and Outreach Ad Hoc Task Group (WEO AHTG) and the potential to effectively help the Campaign achieve its strategic communication goals.

The total media budget for the fiscal year is $94,500:

- $23,000 allocated to Spanish-language media (goal of 25% based on population and language preferences)
- $71,500 allocated to general market media

The scheduling strategy is to achieve a consistent presence with the audience, timed to support seasonal messages such as IPM and gardening, and Campaign sponsored car wash events.

The general creative strategy is to utilize existing creative, and develop new creative (e.g. IPM messages in progress, and new productions sponsored by media) to support permit requirements, Campaign goals and branding. The Campaign will also intergrate regional "Be the Street" Campaign creative and "Got Ants" creative.

The following is the final negotiated media offerings for the Campaign, including added-value opportunities.

GENERAL MARKET (ENGLISH) MEDIA

General market media is targeted to the primary desired audience of Santa Clara Valley Basin college educated homeowners aged 35+. The secondary target audience is all other adults (18+). Wherever available, efficiency data is based on the 35+ (or 35-54) age demographic.

TRANSIT ADS

Transit ads, sold in 4-week periods, provide a large number of impressions with a limited message. Costs this year include production as added value, installation and maintenance for the paid taillights. The Campaign has been given 5 additional

taillights as added value, but production and installation costs are not included.

VTA TAILLIGHTS

70-inches (5.8 feet wide) by 21-inches (1.75-feet) tall on the tail of the bus.

- 20 buses paid + 5 added value = 25 total tails
- 2x 4-week periods (2 months)
- 2,770,394 gross impressions per period
- 5,540,788 total gross impressions
- $4,400 per month
- $8,800 annual total
- 5 added value taillights deliver $2,200 media value (based on discounted contract rate); production/installation (237.50 cost) not included.
- Overrides will be granted as available.

RADIO

Primary benefits of radio are our abilities to target audiences, while achieving a relatively broad reach. Loyal listening audiences often respond to radio personalities making a call to action. These stations also provide us promotional support for our community events.

KBAY 94.5 FM Radio

Top ranked in South Bay with target audience of homeowners 35+!

- 7 weeks on air
- 42 spots per week
    - 12x :60-second spots in prime + weekend
    - 5x :15-second spots in a.m. / p.m. prime drive
    - 5x :60-second spots in rotation
    - 10x :15-second Planet KBAY “Green Tips” per scheduled week
    - 10x PSAs per scheduled week

- 1x email per on-air week to 22,000 subscribers
- Budgeted $2,355 per week; $16,485 total
- 52.6% total reach at 3.9x frequency delivers 1,988,400 gross impressions

Added value:

- 10x :15-second Planet KBAY "Green Tips" per scheduled week (included above)
- 10x PSAs per scheduled week (included above)
- 2 Car Wash Events with talent, street team, music and prizes. Each event includes:
    - 10x promotional announcements
    - 2x call-ins from event
- Online logo and link as Planet KBAY sponsor
- Watershed Watch Discount Card distribution

KRTY "San Jose Hot Country" 95.3 FM (PLAN 1)

Highly ranked unique station format in South Bay for adults 35+ with loyal listeners.

- 5 weeks on air and online
- 87 spots per week includes:
    - 6x 10-second billboards
    - 28x 60-second prime spots
    - 28x 60-second PSAs in rotation
    - 25x 60-second spots streaming online
- Reaches 20.9% of target audience at 10.6x frequency for 2,166,661 gross impressions
- $3,015 per week; $15,075 total budget

Added value:

- 28x per week 60-second PSAs in rotation (included above)
- One month Watershed Watch tips on air/online
    - 80x twenty-second announcements
    - Website link

- Car Wash Event
  - 25x 20-second live announcements
  - 5x 60-second live call-ins from event
  - Web exposure
- 2x KRTY E-blasts
- KLIV web banner for 2 months

KNTV NBC 11

Gross impressions are based on adults 35+.

"Press:Here" is a popular Bay Area program hosted by Scott McGrew, targeting a conscious audience and featuring influential guests. Planned 1st quarter schedule starting January 5, 2014 will be interrupted by the 2014 Winter Olympics in Sochi (February 7-23), and will resume to complete our 13-week sponsorship.

- 13-weeks "Press:Here" Sundays, 9a - 9:30a
  - 1x 60-seconds per show (may be substituted for our 30-second spots)
  - Sponsorship billboard
  - $1,775 per week; $23,075
- NBCBayArea.com
  - January 1-April 30, 2014
  - Press:Here, Green News & Bay Area Proud sections (25% share)
    - Page Skins, video pre-roll, 300x250 display ad, 728x90 leaderboard, presenting logo
  - Homepage Takeovers (4 total) – 260k impressions
    - 970x66/418 Expandable Marquee, 300x250 display ad, 728x90 leaderboard, presenting logo
  - Run of site :30 Video Pre-Roll – 50k impressions
  - 1x E-Blast Newsletters to NBCBayArea.com subscribers, 10-13k reach
  - 310,000 total impressions plus 25% share of view and 3x e-blasts; $7,500 total budget
  - Pending confirmation: Press:Here Mobile (50% SOV) + NBC Bay Area Mobile - 50k

Added value:

- 3x 60-second segment / spot production if needed
- Pending confirmation: BAY AREA PROUD
    - "Bay Area Proud" community page listings for Fall and Spring Cleanups (targeting Coastal Cleanup and National River Cleanup Days)
    - "Bay Area Proud" PSAs outreach for volunteers for Cleanup Days (10x per event, 20x total)
    - Production of "Bay Area Proud" PSAs (2)

SPANISH LANGUAGE MEDIA

Spanish language media is targeted to the audience of Spanish-speaking adults 18+ (or 18-49), but we selected programming on KDTV that also ranks highly with adults 35+.

RADIO

KVVF "Latino Mix" 105.7 FM
Spanish variety hits format, this station is #2 in the market (behind KSOL) for Spanish listeners 18-49.

- 6 weeks of scheduled paid radio
- 25x :30-second prime + weekend spots
- 25x :30-second rotation spots
- 342,500 gross impressions
- 7 weeks of :30-second PSA spots scheduled adjacent to paid schedules, 10x per week (total of 70 spots with media value of $7,000)
- $5,000

TELEVISION

KDTV – Univision TV 14
Univision is the top dog in Bay Area Spanish television media. Schedule is based on targeting adults 35+.

- 13 weeks on air 30-second spots

- M-F “Al Despertar” 6a-7a locally produced morning news program
- Sponsor “Health Segment” with :05 billboards 6a-7a in “Al Despertar”
- M-F “Despierta America”
- 4x 2-minute interviews with Watershed Watch Spokesperson* during “Al Despertar”
- Weekend early evening news
- Daytime rotation
- Average 8 spots per week in recurring positions to build frequency
- Delivers 2,267,000 impressions
- Total budget $18,000
- Added value 26x PSAs (average 2 per week)
- Collateral Distribution available at Univision local events 2013-2014
    - Dia de los Muertos-Oakland in October
    - Univision Health Fair-Milpitas in October
    - Cinco de Mayo- San Jose in May

**Santa Clara Valley Water District and Ricardo Barajas have agreed for Ricardo to serve as our Spanish spokesperson for these interviews. Interview schedules will be based on Ricardo’s availability corresponding with our on-air schedule.*

MEDIA DATA AND SCHEDULE

The following pages are the media buy statistics and budget at a glance, and the annual media and events calendar.

Watershed Watch Campaign
13-14 Fiscal Year Media

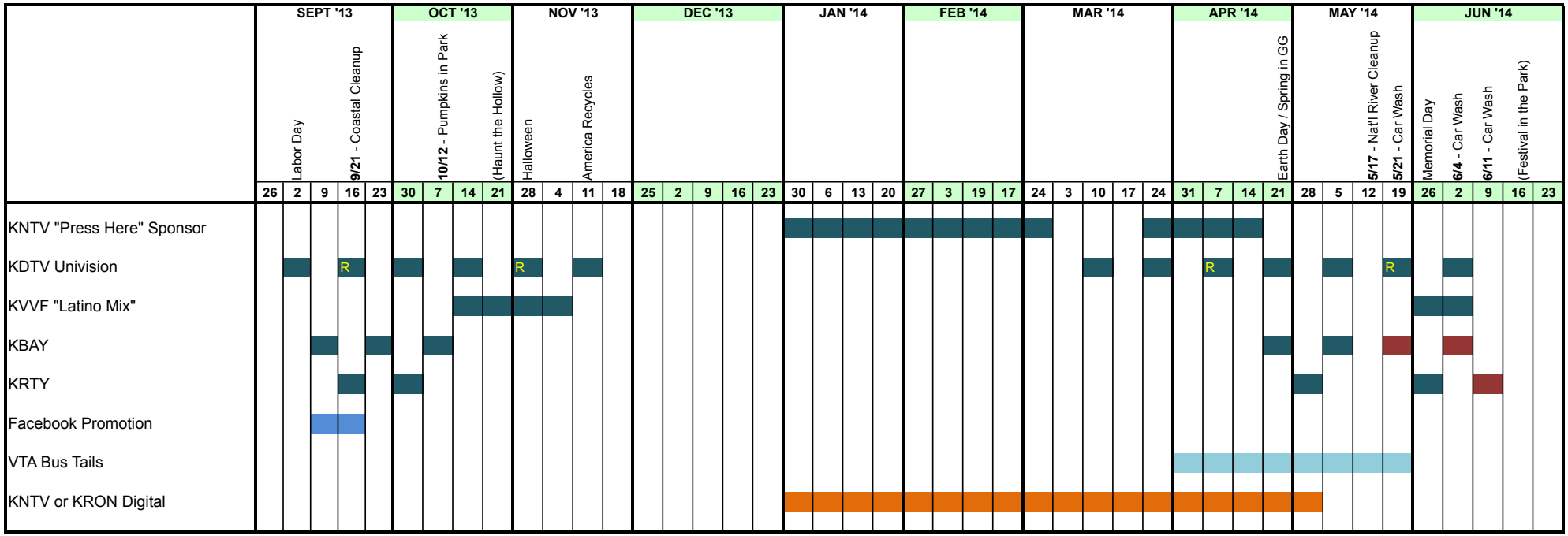
SPANISH
Univision Radio & TV

Station		Weeks	Spots/ Week	Sponsor/ PSA's	Total Spots	Week Freq.	Total Freq.	Cost Week	GI's Week	GI's Total	CPM	Total Cost
Television									18-49			
Univision KDTV 14	30's Al Desp, S-Su news	13	6	2	108			$ 1,385	174,385	2,267,000	$ 7.94	$ 18,000
Radio												
KVVF "Latino Mix" 105.7 FM	30s	5	10	14	120			$ 1,000	68,500	342,500	$ 14.60	$ 5,000
Spanish Total		**18**			**120**					**2,609,500**	**$ 8.81**	**$ 23,000**

ENGLISH
KNTV Press Here, Radio, VTA & KRON online

Station		Weeks	Spots/ Week	Sponsor/ PSA's	Total Spots	Week Freq.	Total Freq.	Cost Week	GI's Week	GI's Total	CPM	Total Cost
Television									**35+**			
KNTV NBC 11	Press Here; 60s, 5s	13	1	1	26	2.1	4.7	$ 1,775	52,000	676,000	$ 34.13	$ 23,075
Radio									**35+**			
KBAY 94.5	On air, email	7	32	10	294	1.8	3.7	$ 2,355	263,800	1,846,600	$ 8.29	$ 16,485
KBAY 94.5 Events	Events, on air	2		12	24	1.2	1.3	$ -	70,900	141,800	$ -	$ -
KRTY 95.3 FM	10s+60s On air, online	5	59	28	435	4.5	10.6	$ 3,015	426,897	2,134,485	$ 7.06	$ 15,075
KRTY 95.3 FM Event/Added Value					110						$ -	$ -
Transit / Outdoor Media		*4-week*							*All*			
VTA Bus Tails / LAMAR	**Taillights**	2	20	5				$ 4,400	2,770,394	5,540,788	$ 1.59	$ 8,800
Internet Media		Weeks										
Facebook	post promotion	1		0	0		0	$ 565		500,000	$ 1.13	$ 565
KNTV digital | nbcbayarea.com	e-mail / online	13		0	0		0	$ 577		1,265,000	$ 5.93	$ 7,500
English TOTAL		**49**			**889**					**12,104,673**	**$ 5.91**	**$ 71,500**

Grand Total Media FY 13-14	**14,714,173**	**$ 6.42**	**$ 94,500**



IPM - HIRE AN IPM PCO
IPM - DIY
IPM - HIRE A GREEN GARDENER

New IPM

Begin rotation when approved

Rotation of IPM Productions

May also include rotation of KARMA litter awareness spot that helps make the storm drain connection to creeks

KARMA - Litter Prevention

TBD

TBD

FACEBOOK Caption Contest

BUS TAIL MESSAGE TBD

CAR WASH EVENTS

DIGITAL MESSAGE(S) TBD

R = Ricardo Interview

Suggested topics; final TBD

Dates pending RB availability

Cleanup

Litter/Halloween

IPM Gardening

Car Wash/Auto

PR / Release Topics TBD

IPM / Ants

Litter/Halloween

IPM / Gardening

Car Wash/Auto

AdManor, Inc.
(866) 444-2623

AdManor Inc
Multimedia Marketing

July 23, 2014

To: **Jill Bicknell, SCVURPPP**
Vishakha Atre, SCVURPPP

From: **Sandi Manor**

Re: **FY 13-14 Watershed Watch Campaign**
Annual Campaign Report

Campaign Summary

In FY 13-14, the consultant worked with SCVURPPP to implement the current Watershed Watch Campaign (Campaign) Work Plan, including partnership development, negotiating and executing the media plan, creative production, social networking, and website updates, while staffing events, attending meetings, advising on regional campaigns, and providing ongoing reporting and support as needed.

A wide range of pollution prevention messages were implemented in the multi-media campaign, scheduled for seasonality and to achieve the messaging goals for using less toxic pest control, hiring IPM-trained professionals, promoting the Green Gardener program, proper disposal of household hazardous waste, preventing litter, and using a commercial car wash. The frequency-based media plan helped to keep the Campaign messages continually present with local audiences.

Negotiated added-value media opportunities provided additional outreach platforms to promote cleanup events, general watershed and storm water awareness messages.

This report summarizes completion of tasks, activities, and effectiveness of the campaign year of July 2013 through June 2014.

Summary of Tasks

Task 1: Creative Development

Existing “Karma” litter TV spot was utilized in Spanish for Univision TV, and in English on KNTV NBC 11.

Existing “Watch Out” radio ads were used to promote general storm drain/water pollution prevention awareness, and annual Car Wash events/commercial car washing in English. Existing “Watch Out” radio ads promoting Mercury (HHW) disposal and Integrated Pest Management (IPM) in Spanish.

The consultant worked with Program staff and the Scripts Review Work Group to develop the following new creative:

NEW TELEVISION / VIDEO PRODUCTION

New production was implemented for a series of three 30-second TV commercials to address IPM messages including: Hiring an IPM-trained pest control company, hiring a Green Gardener, and choosing/using less-toxic pest control. Spots were produced in English and Spanish.

NEW RADIO PRODUCTION

New production was completed for a series of three 60-second radio commercials to complement the new TV IPM messages including: Hiring an IPM-trained pest control company, hiring a Green Gardener, and choosing/using less-toxic pest control. Spots were produced in English.

The existing Robertsville Classic Car Wash event :60 spot was revised to alter the disclaimer upon the request of Classic Car Wash (to exclude a new discounted service they offer).

WW EVENT DISPLAY

The theme for the display is based on the "You are the Solution to Water Pollution" brochure, with a general information center panel, and interchangable side panels targeted to event audiences (IPM for garden/home events, litter for family/kid events, automotive for car wash events). The center board and IPM panels were produced in FY 12-13, and the litter and auto/car wash messages were printed, laminated and delivered in FY 13-14.

RADIO TIPS

To utilize the added value of "Planet KBAY" (KBAY) and KRTY tips sponsorships, the consultant provided timely tips on IPM (ants, pre-rain refrain and general "choose less toxic"), Coastal Cleanup Day, volunteerism, preventing litter, National River Cleanup Day, and 50% off car wash events. Tips were recorded by on-air talent, and also included on KRTY.com concurrently with the KRTY radio schedule.

WATERSHED WATCH DISCOUNT CARDS

The consultant updated the cards to change partner offers per their requests, add new partner offer, and new expiration date for 2014. Cards were printed and distributed at events and to fulfill requests received via the WW website contact form.

VTA TRANSIT/OUTDOOR

Existing "What happens here…" storm drain-to-creek litter message and artwork was revisited to incorporate a "cause" or origin of litter (overflowing public trash can) component for the 2014 bustail advertising campaign. Similar creative with a commercial dumpster "cause" was implemented to support ZLI outreach. Projects included custom photography.

DIGITAL MEDIA

FACEBOOK PROMOTIONS

Utilizing added-value tickets to Santa Cruz Beach Boardwalk, a short-run sponsored post promotion of a contest to encourage volunteering for Coastal Cleanup events was implemented in September. The Campaign promoted posts that announced each of the three 50% off Car Wash events in May and June. An additional promoted post featured one of our Twitter contests at the end of May.

KNTV NBC 11

The consultant worked with KNTV's digital team to develop IPM messages using ant images like our TV spot, and "What happens here…" artwork from the 2011-2012 IPM transit campaign. Ads ran in Mobile, online banners (animated/flash), and in an E-blast for Earth Day. KNTV provided production as added value. All ads linked directly to the "Less Toxic Pest Control" page of the Watershed Watch website.

Mobile:

4-22-14 E-Blast:

KBAY E-BLASTS

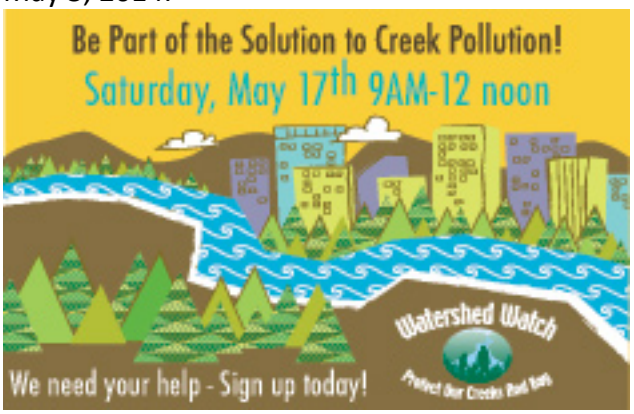
The consultant developed JPGs using existing art where possible, and short copy that was included in KBAY's e-news, emailed to their subscribers each week we were on the air. Messages included: Pre-Coastal Cleanup Day (sign up!), Post-Coastal Cleanup Day (thanking volunteers, encouraging other volunteer opportunities), Hire an IPM PCO, Sign up for National River Cleanup Day, Make Every Day Earth Day/choose less toxic pest control, and Clean Cars/Clean Creeks promoting 50% off Car Wash Events. The graphic portion of each e-blast is provided below:

September 13, 2013:

September 25, 2013:

October 9, 2013 & April 21, 2014:

May 5, 2014:



May 19, 2014 & May 26, 2014:

KBAY SUMMER MADE SIMPLE

KBAY contacted the Consultant to offer a last minute spot in a Home & Garden feature promotion on their Summer Made Simple digital campaign (supported by radio announcements, e-blasts, webpage features, etc.) to be featured as added-value for the week of May 5, 2014. The consultant provided an IPM editorial, Watershed Watch logo tile, IPM image, and a “coupon” that featured a 50% off car wash event.

Logo Tile:

Featured Article and Image (currently remains on the site):
http://summermadesimple.com/home-garden/healthy-gardens-for-healthy-families/

Coupon:

TWITTER CAMPAIGN

A Twitter Campaign was launched to coincide with the VTA bus tail campaign April-May that invited audiences to "Follow me to be litter-free" along with our *@watershed_watch* handle. Creative included refreshing the Twitter profile, writing tweets and 2 contests.

A Watershed Watch image (like Summer Made Simple Logo Tile) was used on customized Amazon.com gift certificates that were provided to two contest winners via email.

OTHER CREATIVE SERVICES

"BE THE STREET" REGIONAL ANTI-LITTER / YOUTH CAMPAIGN

The consultant reviewed creative and strategy, and provided comments regarding BASMAA's Regional "Be the Street" campaign.

Task 2: Media

The FY 13-14 media plan included broadcast television, broadcast radio, transit, e-mail and online advertising.

Campaign audiences include the primary target audience of college-educated Santa Clara County homeowners aged 35-54, with secondary audiences of Spanish adults aged 18-49, and general market audiences of all ages.

MEDIA BUDGET

The total media budget for Watershed Watch Campaign was $94,500.

MEDIA SELECTIONS

Media buys included:

- KBAY 94.5 FM general market (English language) adult-contemporary format radio and digital, with added value media and partnership support.

- KRTY 95.3 FM general market (English language) country-format radio with added value media.

- KVVF "Latino Mix" 105.7 / 100.7 FM Spanish adult-contemporary format radio.

- KSOL "Estero Sol" 98.9 / 99.1 FM Mexican regional format radio (substitution for KVVF after KVVF changed format to English in Spring 2014).

- KDTV Univision 14 TV Spanish broadcast television, including PSAs.

- Facebook.com Paid promotion of posts featuring contest/ticket giveaways and Car Wash Events.

- KNTV NBC 11 broadcast TV sponsorship of *Press:Here* community affairs and local current events program, 1 e-blast (email news), and online ad rotation on the www.nbcbayarea.com news site and *Press:Here* page.

- Santa Clara County Valley Transportation Authority (VTA) bus tail advertising in April and May on 25 bus tails.

- Facebook.com – Paid promotion of Posts including contest and 3 Car Wash Events.

- Twitter.com – Paid promotion of contests and Car Wash Event posts, and promotion of Twitter account to garner more followers.

MEDIA SERVICES

Media services provided by the consultant include the following:

- Developed and maintained a media calendar with planned media dates and corresponding creative messages
- Received and reviewed media proposals, ratings data and contracts
- Negotiated final media buys and added-value
- Sent traffic orders and all creative to fulfill media buy according to the approved plan
- Received, reconciled, processed and paid invoices
- Resolved issues and schedule changes (make goods) as needed

MEDIA MESSAGES

INTEGRATED PEST MANAGEMENT

- 30-second Spanish radio ads promoting the use of IPM practices ran on KVVF and KSOL
- 15-second radio tips and 2 e-blasts promoting IPM practices and hiring an IPM PCO ran on KBAY, and Planet KBAY web page
- 10-second tips ran on KRTY and KRTY.com
- 60-second English radio ads promoting hiring an IPM PCO, choosing less toxic pest control, and hiring a Green Gardener ran on KBAY and KRTY
- 30-second Spanish TV ads promoting hiring an IPM PCO, choosing less toxic pest control, and hiring a Green Gardener ran on KDTV
- 30-second English TV ads promoting hiring an IPM PCO, choosing less toxic pest control, and hiring a Green Gardener ran on KNTV
- IPM and "Got Ants?" campaign messages posted on Facebook and Twitter
- IPM messages ran on NBCBayArea.com banner ads, mobile and 4-22-14 e-blast

LITTER

- 15-second radio tip Halloween anti-litter / pick up litter message ran on KBAY radio
- 15-second radio tips promoting Coastal Cleanup Day and National River Cleanup Day ran on KBAY radio
- 10-second radio tips promoting Coastal Cleanup Day and litter-free tip ran on KRTY radio and KRTY.com
- 30-second English "Karma" TV Litter messages ran KNTV NBC 11
- 30-second Spanish "Karma" TV Litter messages ran KDTV Univision 14
- Be the Street anti-litter campaign promoted on Facebook postings
- Litter/storm drain awareness posters ran on VTA bus tails (25 per month) April & May
- Twitter campaign focused on litter awareness and litter prevention April & May (frequent tweets and related retweets)

STORMDRAIN / CREEK CONNECTION PSA

- 60-second radio spots promoting awareness that pollution / runoff travels through storm drains to creeks and the Bay ran on KBAY and KRTY; includes mention of IPM tip (use baits) and using a commercial car wash as simple solutions

MERCURY / FLUORESCENT LIGHT BULB and HHW DISPOSAL

- 30-second Spanish radio spots aired on KSOL

CAR WASHING / PREVENTING POLLUTION FROM CARS

- 60-second radio spots promoting three different Car Wash Events aired on KRTY and KBAY
- Clean Cars / Clean Creeks 50% off Car Wash Event posts on Facebook and Twitter

<u>SUMMARY OF MEDIA DELIVERED</u>

The paid media schedule delivered included the following:

387 Radio ads:

- 163 paid spots on KBAY
- 174 paid spots on KRTY
- 25 paid spots on KVVF
- 25 paid spots on KSOL

73 broadcast Spanish television ads and sponsorships:

- KDTV Univision 14
  - 57 paid 30-second spots
  - 16 paid 5-second "brought to you by" sponsorship billboards w/logo and audio

21 broadcast English television ads and sponsorships:

- KNTV NBC 11
  - 21 paid 30-second spots

Digital Media:

- Facebook.com – Paid post promotion for Coastal Cleanup Day / Santa Cruz Beach Boardwalk ticket giveaway
  - September 18-23
  - 40,283 reach at 1.26x frequency
  - 50,740 impressions
  - 445 clicks/post engagements
- Facebook.com – Paid post promotions for 50% off Car Wash Events
  - May 19-June 10
  - 53,641 reach at 1.33x frequency
  - 71,191 impressions
  - 590 clicks/post engagements
- Facebook.com – Paid post promotion for "Post a photo of your favorite Litter Free zone" contest
  - May 29-30
  - 24,671 reach at 1.05 x frequency
  - 25,880 impressions
  - 36 clicks/post engagements
- KRTY.com Streaming Radio Player
  - 125 Streaming :60 radio commercials
- KBAY E-blasts – 7 total delivered to 24,000 people each
  - Coastal Cleanup Day – promote registrations
  - Volunteer – thank Coastal Cleanup Day volunteers, encourage broad volunteer opportunities
  - Hire an IPM PCO

  - Choose less toxic pest control
  - Volunteer for National River Cleanup Day
  - (2) 50% off Car Wash Events
- KNTV E-blast (1)
  - April 22, 2014 - Choose less toxic pest control (IPM) with direct link to Less Toxic Pest Control web page
  - Delivered to 15,021 subscribers, opened by 1,553
  - WW ad received 31 clicks
- NBCBayArea.com
  - Included one day home page takeover, video pre-roll and banner ads on news
  - Choose less toxic pest control (IPM) banners and tiles with direct link to Less Toxic Pest Control
- NBC Bay Area Mobile App
  - Choose less toxic pest control (IPM) banners with direct link to Less Toxic Pest Control
- Twitter.com – Follow WW on Twitter
  - April 9-June 30
  - 458,822 impressions
  - 593 engagements
- Twitter.com – Trash Can Question / Contest
  - April 25-May 1
  - 52,923 impressions
  - 431 engagements
- Twitter.com – Litter-Free Photo / Contest
  - May 29-June 5
  - 27,631 impressions
  - 196 engagements
- Twitter.com – 3 Car Wash Events (combined)
  - May 19-June 11
  - 46,151 impressions
  - 366 engagements

Added-value advertisements and promotions that the Campaign received *free* from the Campaign's media partners include the following:

- KBAY
  - 7 weeks of Watershed Watch logo and website address on www.kbay.com Planet KBAY and KBAY Cares pages
  - 35 :15-second tips (scripts provided by the Campaign) on KBAY's "Planet KBAY" weekday green living feature
  - 50 :60-second PSAs on KBAY
  - SummerMadeSimple.com article w/ image, logo tile ad, and car wash "coupon" promoting 50% off event week of May 5 (article w/image remains on the site).

Coupon was sent to all contest entries for that week; 233 people. Of those 233, 95 opted-in to receive more information from Watershed Watch. The list of 95 contacts was provided to the Campaign for future outreach / promotional use.

  - 2 event promotions including
    - on-air announcements
    - call-ins during the event
    - prizes for participants who spin the wheel, plus enter-to-win contest
    - Facebook posts / social promotion by the station, talent and sales rep
- KRTY
  - 5 weeks of Watershed Watch logo on www.krty.com home page
  - 140:60-second PSAs on KRTY
  - 1 event promotion including
    - promotional spots
    - call-ins during the event
    - enter to win contest
    - Website posting
    - E-newsletter
- KDTV
  - 31 :30-second PSAs
  - 2 :05 PSA Billboards
- KNTV
  - 12 :30-second PSAs
  - 13 5-second "brought to you by" sponsorship billboards w/logo and audio

The following shows estimated gross impressions for the campaign year:

KBAY	Adults 35+	2,013,400
KRTY	Adults 35+	2,134,485
KVVF	Adults 18-49	205,500
KSOL	Adults 18-49	327,000
KDTV 14	Adults 18-49	2,241,384
KNTV 11	Adults 35+	421,600
VTA / Lamar	All persons	5,540,788
NBC Digital		748,873
Twitter (paid)	interests + geo target	585,527
Facebook (paid)	16+ geo-target	135,386
Total Gross Impressions		**14,553,943***

** Figure does not include unverified gross impressions on KBAY and KRTY websites, or organic social impressions on Facebook and Twitter.*

The following table describes the media costs and conservative estimated value-added obtained from media advertising.

Media Buy

MEDIA	TOTAL COST	ADDED VALUE (minimum)	TOTAL VALUE
KBAY 94.5 FM	$ 16,485	$ 18,552	$ 35,037
KRTY 95.3 FM	$ 16,015	$ 16,960	$ 32,975
KVVF 100.5/107.5 FM	$ 2,500	$ 0	$ 2,500
KSOL 98.9 / 99.1 FM	$ 2,500	$ 0	$ 2,500
KDTV Univision 14	$ 14,600	$ 8,100	$ 22,700
KNTV NBC 11	$ 23,075	$ 6,600	$ 29,675
VTA Transit / Lamar	$ 8,800	$ 2,200	$ 11,000
NBC Digital	$ 7,500	$ 1,000	$ 8,500
Facebook.com	$ 600.63	$ 0	$ 600.63
Twitter.com	$ 2,209.63	$ 0	$ 2,209.63
TOTAL	**$ 94,285.26**	**$ 53,452**	**$ 147,737**

Creative messages breakdown:

	IPM	IPM PCO	IPM GG	HHW	Car Wash	Litter	Watershed / Other	Total
Radio - Paid	88	94	16	13	61	3	112	387
Radio - PSA	46	58	8		39		76	227
Digital ** Paid	23	27	10		28	1	57	146
Digital – PSA								
TV - Paid	12	22	14			30	16	94
TV – PSA/PR	6	19	4			14	15	58
Transit - Paid						40		40
Transit - PSA						10		10
Total	**175**	**220**	**52**	**13**	**128**	**98**	**276**	**962**

** E-blasts, banner/tile ads, mobile ads, sponsored social posts and radio streaming spots are counted as 1 each. Does not include media partner social media postings, and logos/links on media websites.

Task 3: Partner Development & Coordination + Task 4: Added-Value
Existing partners were contacted and new partnerships were explored. The consultant worked at maintaining relationships with existing partners, creating new partnerships, and updated and maintained partner contact information.

Existing partnership and related added-value activities for the year included:

- Happy Hollow Park & Zoo
    - Provided free "Haunt the Hollow" Halloween event booth space and event promotion with Watershed Watch as a sponsor.
    - Provided $2 per person admission discount with WW Discount Card
    - Hosts Watershed Watch display within the Zoo (removed in spring 2014 for repairs).
    - Campaign promoted event on our Facebook page.
- KBAY

  In addition to added-value ads, KBAY provided the following resources:
    - Partnership coordination with Jiffy Lube
    - Production of tips and online features, social media mentions (estimated value $1,200)
    - *Summer Made Simple* featured article for Home & Garden week of May 5; promoted on Facebook, online, on-air; included logo tile/link, article with image and links, plus coupon to promote May 21 Car Wash event ($1,500 value)
    - (2) Car Wash events with on-air promotion, on-site crew w/on-air talent and prizes May 21 and June 4 ($7,500 value)
- KRTY

  In addition to added-value ads, KRTY provided the following resources:
    - Production of tips and website features (estimated value $1,000)
    - Car Wash event with on-air promotion, on site crew w/on-air talent June 11, 2014.
- KDTV

  In addition to added-value ads, KDTV provided the following resources:
    - Production of sponsorship billboards (estimated value $350)
- KNTV / NBCBayArea.com

  In addition to added-value ads, KNTV provided the following resources:
    - Production of sponsorship billboards (estimated value $350)
    - Production of all web, mobile and e-blast ads ($1,000 value)

- Yamagami's Nursery
    - Web link on "helpful links" page on Yamagamisnursery.com.
- Capitol Premier Car Wash
    - Provided ongoing discounts to customers with the WW Discount Card.
    - 44 car washes given at 50% off Car Wash Event ($440 value)
- Pacific Car Wash
    - Provided ongoing $3 discounts to customers at two locations with the WW Discount Card.
- Classic Car Wash
    - Provided ongoing discounts to customers with the WW Discount Card**.** 565 discounts at $4 each provided to cardholders ($2,260 value).
    - 91 car washes given 50% off during June 4th event at Delta Queen ($910 value)
    - 93 car washes given 50% off during June 11th event at Robertsville ($930 value)
- Creek Connections Action Group
    - Campaign promoted Coastal Cleanup Day event by posting information on the Watershed Watch website, KBAY e-blasts, KBAY and KRTY radio, posted on website, social media.
    - Campaign promoted National River Cleanup Day posting on website, KBAY e-blast, social media, and pitched story and provided images resulting in posting on NBCBayArea.com "Bay Area Proud" community web page.
- Mel Cotton's Sporting Goods
    - Provided ongoing 10% discounts to customers with the WW Discount Card.
    - Campaign promoted the discount on our Facebook page.
- Guadalupe River Park Conservancy
    - Provided free booth space/equipment rental and sponsorship positioning with Pumpkins in the Park event in exchange for ZunZun performance sponsorship by the Program. Watershed Watch was credited as a sponsor in all Pumpkins in the Park event advertising: GRPG.org website, social media and email newsletters; KNTV 11 NBC; *San Jose Mercury News;* and 25,000 flyers distributed to school children. $95 booth, plus undetermined sponsorship media value ($1,000 ZunZun trade).
- Jiffy Lube – Offered $10 off Signature Oil Change service with WW Discount Card.
- Rainsavers
    - Participation includes a 10% off standard installation of rain harvesting system with the WW Discount Card.

  - Campaign promoted their discount and events on our Facebook page.
- Pacific Interlock Paverstone – Logo/link to Campaign website on their "links" page, and distributes the Solutions Brochure at their Cupertino showroom.
- TeamWorks – Employment empowerment organization has several Green Gardener Program graduates; links to Watershed Watch on their website.
- History San Jose
  - Campaign promoted "Shaped By Water" exhibit on website .
  - "Watching Our Watersheds" (Google Earth) program was featured in interactive display the exhibit (through September).
  - Watershed Watch provided Discount Cards, Solutions Brochures for distribution.
- Chinook Book Mobile
  - Silicon Valley / Resources section features Watershed Watch logo and content for Gardening chapter
- SuperGreen Solutions
  - Provides a 10% discount on LED lights with Watershed Watch Discount Card.
  - Provides OWOW IPM Fact Sheets alongside their EcoSmart product line display.
  - Campaign added them to the retail locator for IPM products on our website; promoted as new partner on website and Facebook.

New partnership:

- SprinklerTimes.com
  - Provides $4 discount on annual subscription with Watershed Watch Discount Card / code.

Pending partnerships in development:

- Lozano's Car Wash
  - 2 locations in Sunnyvale and Mountain View
  - Consultant has met in person with the General Manager who expressed interest in proceeding with a partnership, followed up with more information and event invitations. More follow up will continue until we secure the agreement.

Minimum measurable 12-month estimated value-added provided to the Campaign from media and community partners is $58,992.

Task 5: Website Maintenance & Social Media Management

The consultant performed ongoing updates and fine-tuning to the website to keep information current and applicable to the new creative, partnerships and Co-permittee news and events.

The website was promoted in television, radio and online, as well as on Campaign materials and promotional items handed out at community events.

The consultant reported monthly on page views (gross impressions) as well as visitors (people visiting the site). The site had 11,520 visitors to the site, resulting in 18,771 page views (average of 51 page views per day).

Total Visits: 11,520; compared to FY 12-13 11,100 (+3.78%)
Unique Visitors: 9,765; compared to FY 12-13 9,208 (+6.05%)
California Visits: 4,381; compared to FY 12-13 4,864 (-9.93%)
Total Page Views: 18,711; compared to FY 12-13 20,283 (-7.45%)

Of the total 11,520 visits 38% were from California. Shown in top 10 ranking order, California visitors came from:

1. San Jose
2. Sunnyvale
3. San Francisco
4. Santa Clara
5. Cupertino
6. Santa Cruz
7. Los Angeles
8. Oakland
9. Palo Alto
10. Aptos

Other SCVURPPP areas:

11. Mountain View
13. Campbell
14. Los Gatos
16. Milpitas
19. Saratoga
31. Los Altos

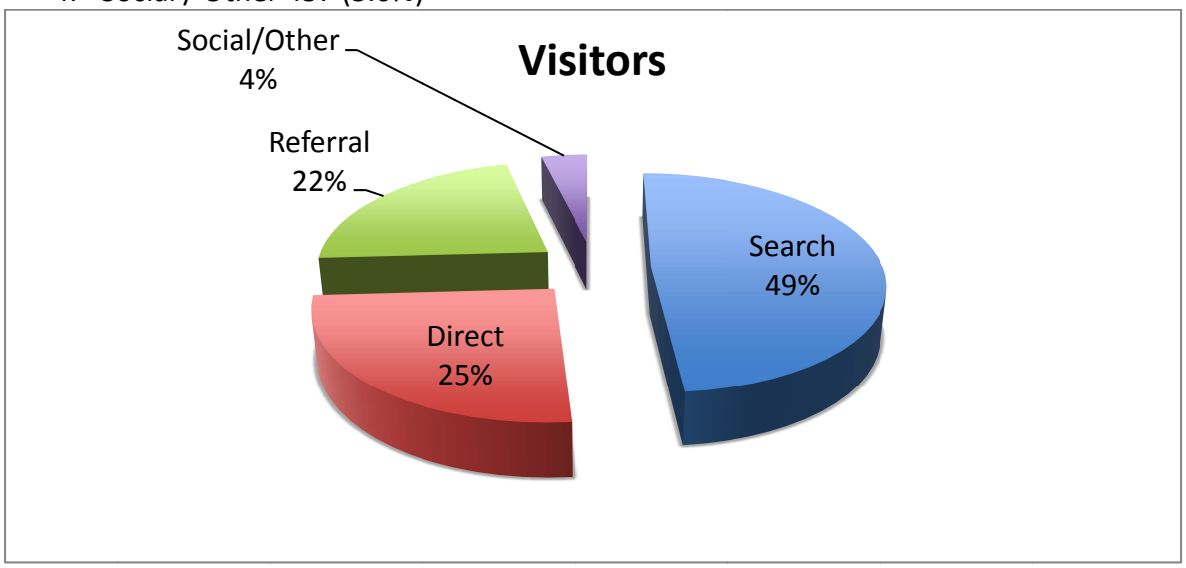
Visitors arrive to the site via three different ways:

1. Direct traffic – entering the URL directly into their browsers
2. Referring sites – links to www.mywatershedwatch.org from other sites, online ads, mobile applications and emails
3. Search engines – key word searches resulting in hits to the site

Sources of traffic / visitors to site:

1. Search Engines / Organic Search 5,599 (48.6%)
2. Direct Traffic 2,938 (25.5%)
3. Referral 2,546 (22.1%)

4. Social / Other 437 (3.6%)



Top search engines:

1. Google (48.05%)
2. Yahoo
3. Bing
4. Ask

Top search terms / key words:

1. mywatershedwatch.org / www.mywatershedwatch.org
2. watershed watch / my watershed watch
3. advanced green gardener
4. water wizard show & coyote creek clean-up
5. where does your watershed / where does your water shed / where does my watershed
6. how to prevent garbage pollution / how to stop garbage pollution / how to prevent trash pollution / what can we do to get the garbage out of our watersheds
7. free bay area school assemblies
8. http://mywatershedwatch.org/pollutiontips.html
9. donde va el agua de los desagues (where the water flows/drains)
10. creek pollution

Top 10 referring sites were:

1. nbcbayarea.com (resulting from advertising on site)
2. scvurppp-w2k.com
3. mastergardeners.org
4. bayareaecogardens.com
5. sanjoseca.gov
6. nbcstations.com

7. moodle2.kpbsd.k12.ak.us (Kenai Peninsula Borough School District, AK)
8. moodle.oakland.k12.mi.us (Oakland schools, MI)
9. valleywater.org
10. bs.serving-sys.com (mediamind™ digital ad server system)

Top 10 pages:

1. **mywatershedwatch.org/lesstoxicgarden.html** (Less toxic gardening IPM)
2. **mywatershedwatch.org/** (Home page)
3. **mywatershedwatch.org/SPpollutiontips.html** (Spanish Pollution Prevention Tips)
4. **mywatershedwatch.org/SPpreventmercury.html** (Spanish Mercury Pollution and Poisoning Prevention)
5. **mywatershedwatch.org/pollutiontips.html** (Pollution Prevention Tips)
6. **mywatershedwatch.org/findgardener.html** ("Find a Green Gardener" list of Green Gardeners)
7. **mywatershedwatch.org/ggclasses.html** (Upcoming Green Gardener Classes)
8. **mywatershedwatch.org/index.html** (Back to Home page from any other page)
9. **mywatershedwatch.org/wherewatergoes.html** (Explains difference between storm drains and sanitary sewer)
10. **mywatershedwatch.org/SPstormpollution.html** (Spanish stormwater pollution)

70% of the top 10 pages were English, 30% were Spanish.

Total downloads: 765

Top 10 downloads:

1. Watershed Watch Discount Card
2. "Where Does Your Water Go" image
3. Green Gardener List
4. Trash Sources & Pathways
5. Watershed Watch Brochure
6. IPM Fact Sheet – ANTS
7. Soak it Up Fact Sheet
8. Public Participation Opportunities (Volunteer)
9. ZunZun Flyer
10. Pools Brochure

Campaign Event Impacts on Web Activity

Activity may have been stimulated by Car Wash events in May and June (also correlates to media campaign).

With few exceptions, the site activity generally tends to peak mid-week (Tuesday-Thursday) each week, and slows on weekends.

Media Campaign Impacts on Web Activity
The site experienced an increase in activity immediately after it began the media campaign and outreach events in October (radio, TV and digital media from radio).

The NBCBayArea.com web and mobile digital campaign generated notable increases in web activity from February 26 – April 30.

- Peak days were Friday, March 14 with 154 visits, and Saturday, April 5 with 147 visits.
- The direct link on our ads featuring IPM messages to the Less Toxic Pest Control page **www.mywatershedwatch.org/lesstoxicgarden.html** resulted in it being the most visited page on our site this year.

Web activity also coincided with the Car Wash event promotions, so the events and/or the promotions may have increased visits to the website.

Site Structure and Function
The Consultant's team began the process of converting the site into CSS (Cascading Sheet Style) on a Wordpress platform. This will enable the site to adjust / adapt content to all digital devices for maximum legibility, as well as keep content management separate from the site structure for faster and easier content updates.

This is important because more than 15% of visitors to the site used a mobile phone or tablet to access the site during the fiscal year, which reflects a 36.6% increase in visits via mobile and 8.25% increase in visits via tablet over the previous year.

Mobile users had the lowest time spent on the site (00:57 average compared to 01:35 for desktop users) and fewest pages per visit (1.43 vs. 1.65 for desktop users). As more visitors come via mobile, a CSS site will make the experience more rewarding and encourage more content consumption.

The look of the site will remain the same except for the home page and navigation, plus higher resolution graphics/images. Work will be completed in early fall 2014.

Social Media Campaign
Posts to Facebook and Twitter included events, links to news, partner and regional campaign updates, Discount Card, IPM tips, contests, rebates and media (videos, photos).

The Campaign made 76 posts on the Watershed Watch page wall, plus additional comments and likes to other page posts (such as "Be the Street" and Campaign Partners).

Facebook
The Campaign Facebook page is www.facebook.com/mywatershedwatch.

- 577 Fans (net gain 45 new likes for FY 13-14)

Facebook page activity highlights
- 76 posts to the page (by the Campaign)
- 147,668 reach (people who have seen content associated with our Page)
- 169,296 total impressions
- 1,538 clicks on our posts

Fan / Page Demographics:
- Male 46% / Female 52%
- Age breakdown is:

  13-17 11%
  18-24 42%
  25-34 17%
  35-44 12%
  45-54 10%
  55+ 7%

- 53% of our fan base is under the age of 25; 70% is under the age of 35.
- The largest segment of our fan base is currently males 18-24 who make up a total of 21.2% of our Facebook fans; second largest segment is females 18-24 (20.1% of fans) .
- Our fan demographics are relatively consistent with all of Facebook, though we're higher than the norm with number of fans aged 18-24, and lower than the norm with ages 25-34 and 13-17.

Twitter
@watershed_watch currently has 422 followers (net gain 350 followers since end of FY 12-13).

We tweeted 116 times during the fiscal year (posts to Facebook automatically post to Twitter). Impression and engagement data is not available prior to November 19, so data from November 13-June 30 indicate our tweets received:
- 11,892 organic impressions
- 150 engagements

Our paid campaigns (between April 9 and June 30) delivered an additional:
- 583,822 impressions
- 1,584 engagements

Our followers are most interested in:
47% Science news 44% Politics and current events

42% Green solutions
41% Music
31% Biology
17% National Parks
11% Fishing

Task 6: Outreach Events

The consultant sought new partnership events and registered for approved events. Two events from previous years were cancelled this year: Spring in Guadalupe Gardens, and NVIDIA's Earth Day event. The Watershed Watch Campaign booth was present at the following events:

Pumpkins in the Park –
Guadalupe River Park & Gardens (GRPG) at Discovery Meadow, Saturday, October 12, 2013

- Watershed Watch had a booth for the event.
- Consultant staffed the event in the morning.
- The Program sponsored two ZunZun performances for the event.
- GRPG conducted a ZunZun performance evaluation survey.
- Attendance was estimated at 13,000-15,000 families with children.

Haunt the Hollow –
Happy Hollow Park & Zoo, San Jose, Sunday, October 27, 2013

- Watershed Watch had a booth for the event inside the Zoo.
- Attendance at this event was estimated at 5,000 families with children.

Mission College Eco Fair –
Mission College, Santa Clara, Thursday, April 17, 2014

- Watershed Watch had a table for the event featuring the "prevent litter" display.
- The Consultant staffed the event, including set up and breakdown.
- Attendance at this event was estimated at 500-1000 high school and college students, Mission College faculty and staff.

Watershed Watch 50% Off Car Wash Event –
Capitol Premier Car Wash, San Jose, Wednesday, May 21, 2014

- Watershed Watch sponsored and promoted this event with KBAY Radio.
- Watershed Watch had a table featuring the car care to prevent pollution display.
- The Consultant staffed the event, including set up and breakdown.
- Attendance at this event was estimated at 50 auto owners.

Watershed Watch 50% Off Car Wash Event –
Delta Queen Car Wash, Campbell, Wednesday, June 4, 2014

- Watershed Watch sponsored and promoted this event with KBAY Radio.
- Watershed Watch had a table featuring the car care to prevent pollution display.
- The Consultant staffed the event, including set up and breakdown.
- Attendance at this event was estimated at 100 auto owners.

Watershed Watch 50% Off Car Wash Event –
Robertsville Car Wash, San Jose (Almaden), Wednesday, June 11, 2014

- Watershed Watch sponsored and promoted this event with KRTY Radio.
- Watershed Watch had a table featuring the car care to prevent pollution display.
- The Consultant staffed the event, including set up and breakdown.
- Attendance at this event was estimated at 100 auto owners.

Festival in the Park –
Hellyer Park, San Jose, Saturday, June 7, 2014

- Watershed Watch had a booth at this event.
- Watershed Watch provided a Gardening raffle prize for the event.
- Attendance at this event was families with children, estimated at 3,500-4,000 total.

Materials distributed at these events included Our Water Our World fact sheets, magnets and pocket guides; flyswatters; branded note pads; tattoos; "10 Most Wanted" brochure; Watershed Watch "You are the Solution" brochures (English and Spanish); Green Gardener lists; Clean Cars Clean Creeks brochures; and Watershed Watch Discount Cards.

Task 7: Public Relations
Public Relations (PR) efforts are described below:

- KNTV "Bay Area Proud"
  - Promotion of National River Cleanup Day
  - KNTV promotes Bay Area Proud on-air and encourages citizens to take action
- BASMAA "OWOW on Chinook Book Mobile App" Press Release
  - Pitched localized story to media
- Watershed Watch Car Washing Media Alert
  - Pitched event coverage and news story to regional media
    Article published in Silicon Valley Community Newspapers:
    http://www.ifoldsflip.com/i/325620/10
  - Posted Car Wash events on blogs and event listings
    Sample event listing: http://events.nbcbayarea.com/sanjose_ca/events/50-off-car-wash-event-watershed-watch-campaign-/E0-001-070866908-3
- The Consultant reviewed BASMAA news release plan and proposed corresponding Watershed Watch news release plan.
- Patch.com – Brad Kava posted news about the Facebook / Cleanup promotion.

Task 8: FY 14-15 Work Plan Development
The consultant

- Performed final adjustments to current year annual media plans for implementation.
- Updated media calendar (ongoing) and established creative plan for media implementation.

- Participated in reviews and provided feedback of current year “Be the Street” work plan and creative.

Task 9: Evaluation
The consultant provided data to the Program for reporting and presentation regarding evaluating campaign effectiveness.

For the 5-year market study, the consultant reviewed the survey questions related to media and offered suggestions prior to the survey, and reviewed the outcomes of the survey.

Toward evaluation of the partner participation and understanding strategic goals, the consultant drafted a partner survey (to be implemented FY 14-15).

Task 10: Meetings & Communications
The consultant attended and/or participated in WEO AHTG meetings as needed. Time was not billed for attendance or travel/expenses; participation was donated to the campaign as added-value.

The consultant provided monthly activity reports, media summaries, invoices, partnership updates, and web statistics, FY 12-13 annual report with recommendations; participated in a ZLI meeting.

Current Campaign Evaluation:
The following is a summary of the measurable results of the FY 13-14 Campaign:

- Media advertising delivered a minimum of **14,553,943** in targeted and general audience gross impressions.
- The media partners provided a minimum added value package of benefits and resources of $53,452 in addition to the $94,285 spent on advertising.
- Total (measured/realized) Value Added Resources from media and community partners: $58,992.
- Number of WW Discount Cards used at Classic Car Wash: **565** discounted car washes ($2,260 value).

WEBSITE ACTIVITY

- Total Visits: **11,520**; compared to FY 12-13 11,100 (+3.78%).
- Unique Visitors: **9,765**; compared to FY 12-13 9,208 (+6.05%).
- California Visits: **4,381**; compared to FY 12-13 4,864 (-9.93%).

- Total Page Views: **18,711**; compared to FY 12-13 20,283 (-7.45%)
- Total downloads: **765**
- WW requests on the website (brochure, discount card, etc.): **21**
- Number of IPM or other queries via the website: **13**

Recommended for FY 14-15

- Encourage continued and increased partnership participation through ongoing communication about benefits we provide and opportunities to expand.
  - Develop new partnerships, targeting:
    - Pet-related businesses and organizations for IPM messages.
    - Gardening related businesses and organizations.
    - Car wash partners in northern areas of the County.
  - Conduct a Partner Evaluation Survey to gauge progress toward achieving strategic goals.

- Continue building social networking opportunities.
  - Share/post more information on Facebook geared toward young adult audiences 18-34
  - Conduct contests on Facebook and Twitter to boost interaction/engagement and increase reach.
  - Integrate Facebook and Twitter into other creative where possible.

- Events
  - Seek new events to replace the events discontinued in 2014; explore all SCVURPPP cities.

- Schedule PR stories and interviews.
  - Promote Green Gardener Training Program registration, graduation.
  - Craft a story regarding "first flush" issues timed with impending El Nino season.

- Website
  - Promote site on social media when launched (possibly with a contest).

- Media
  - Increase digital-focused media outreach and promotions options in lieu of one or more traditional medium (recommend replacing Transit) to drive more direct incoming web traffic – a key measure for the Campaign and opportunity to educate and serve the audience.

- Increased paid and organic social media
- Sponsored searches
- Digital ad campaigns on popular sites, geo-targeting users / interests / key words; develop specific messages / creative and flight campaigns seasonally

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-2

FY 13-14 Watershed Watch Partner Report

AdManor, Inc.
Watershed Watch Campaign
Fiscal Year 13-14

PARTNER	CONTACT	RESULTS
Capitol Premier Car Wash	Chuck Brassfield 408-979-7811x12	Provided ongoing discounts via Discount Card. Hosted the May 21 50% off car wash event.
KRTY / KLIV Empire Broadcasting	Jan Bell 408-961-0443 jbell@empirebroadcasting.com	KRTY provided PSAs, web page and home page logo/link as added value. Provided Car Wash Promotion for 6/11 event. Provided production/reads for all :10 tips.
KEZR / KBAY	Janna Hathaway janna@kbay-kezr.com	KBAY provided Summer Made Simple online opportunity for week of May 5. Provided added value Planet KBAY tips, PSAs and web feature. Car wash promotions for 6/4 + 6/11. events. Provided production for all :30 and :15 tips (Planet KBAY).
Yamagami's Nursery	Carolyn Villa-Scott carolyn@yamagamisnursery.com (408) 252-3347	Links to Watershed Watch in their HELPFUL LINKS http://yamagamisnursery.com/helpful_links.php
Don Edwards SF Bay Wildlife Refuge at Alviso	Genie Moore 408-262-5513 x100 Genie_Moore@fws.gov	SCVURPPP supports education at the Wildlife Refuge. WW refers individuals to the Refuge for volunteer opportunities and promotes events and activities at the Refuge on the Campaign website. Consulted with Alviso team regarding media, promotions and public relations to build event participation.
Guadalupe River Park & Gardens	Phil Cornish 408-298-7657 phil@grpg.org	Posted / shared Facebook news. Co-sponsorship of 2013 Pumpkins in the Park event w/2 ZunZun performances, booth space and all equip.
Classic Car Wash (corporate)	Marty Jensen (408) 371-2414 x 216	$4 discounts at all locations throughout the year, with tracking/reporting. Consultant revised car wash radio disclaimer for the 6/11 event. Hosted June 4 and June 11 50% off events.
Creek Connections Action Group	Kate Slama	Campaign promoted cleanup events on facebook page, twitter, WW website, KBAY tips, KRTY tips, KBAY e-blast, and KNTV "Bay Area Proud."
Santa Clara County HHW Program (co-permittee)	Rob D'Arcy (408) 918-1967 Rob.Darcy@deh.sccgov.org	Campaign promoted hhw.org for proper disposal of pesticides / household hazardous waste to KSOL radio listeners. Mercury / fluorescent bulb disposal is a popular page in Spanish on the website.
BASMAA	Geoff Brosseau geoff@brosseau.us	Consultant provided feedback on BTS campaign. Issued localized release of OWOW mobile app press release. Campaign promoted BTS and Got Ants? Posts on social media.
Childrens Discovery Museum	Sandy Derby (408) 298-5437x261 sderby@cdm.org	Distributes Solution to Water Pollution brochures at the museum. Sandy Derby and BioSITE Program are featured in 2-minute video on website.
Santa Clara County Parks and Recreation Dept.	Tamara Clark-Shear (408) 355-2215 tamara.shear@park.sccgov.org	Campaign participated in Festival in the Park; free exhibit space.
Happy Hollow Park & Zoo	Vanessa Rogier (408) 794-6404 vanessarogier@sanjoseca.gov	Provides $2 per person admission discount on WW Discount Card; Watershed Watch participated in October 27 Haunt the Hollow event; no cost for event. Consultant working with HHPZ regarding WW display at Happy Hollow (work in progress).
Mel Cotton's Sporting Goods	China (Chris) (408) 287-5994 china@melcottons.com Glen / Fish Dept (408) 287-5994	Offers a 10% discount on purchases with the Discount Card.
Heavenly Greens	Troy Scott troy@heavenlygreens.com 866.518.7888	Third party KPIX effort to engage Heavenly Greens with WW again, to pitch a mention of WW in a new production KPIX is doing for Heavenly Greens.
Univision Television KDTV 14	Karina Nava karinanava@univision.net (415) 538-8091	Station provided free spots for one week as added value; plus PSAs. Upgraded KVVF schedule in May/June to KSOL as KVVF changed formats to English.
RainSavers	Brad Daniel rainsavers@comcast.net (408) 728-5809	Provides ongoing installation discount with WW Discount Card. Hosts our website link on their resources web page and exchanged Likes on Facebook page.
Pacific Interlock Pavingstone, Inc.	Paul Hathaway jphath@gmail.com (831) 637-9163	WW information appears on their "links" page. They distribute Watershed Watch "Solutions to Water Pollution" brochure in their Cupertino showroom.
TEAMWORKS	David Moore dsmathers@teamworks.coop (650)248-3415	Posted to our Facebook page and has a link to Watershed Watch on their website. Consultant requested promotion to their members for the Fall Green Gardener classes.
Pacific Car Wash	Helen Tang helentang88@yahoo.com (408) 489-5939	Offers discounts with WW Discount Card $3 off. Campaign promotes on website, social networking and on Discount Cards.
KNTV NBC 11	Sandy Relova 408.432.4455 sandy.relova@nbcuni.com	Provided PSAs and production of digital ads as added-value. Provided :05 billboards in Press Here sponsorship (on-air) including air time and production. Provided FY 13-14 year end recap for annual report.
GreenTown Los Altos		Kit worked with Program to acquire outreach materials for their World Water Monitoring Day event.

PARTNER	CONTACT	RESULTS
Jiffy Lube	Third party sponsor through KBAY/KEZR	Provides $10 off Signature LOF service with Discount Card.
Lamar Transit	Cheri Thornley (408) 966-8749 cthornley@lamar.com	Provided bus tails as added value (5 per month for 2 months), plus additional days / early installation. Discounted rates for the FY 13-14 media buy with free production/installation.
Chinook Book	Shaun Beall (510) 550-8280 shaun.beall@chinookbook.net	Watershed Watch continues to be featured on Chinook mobile app Gardening Resources, Silicon Valley version. Campaign promoted OWOW (Home & Garden resources sponsor/content) on website and Facebook page.
Premier Car Washes	Stephanie (408) 944-9258 stephanie@premiercarwashes.com	Consultant visited Premier Montague; Stephanie not there. Delivered materials and followed up by phone and email to invite Stephanie to a 50% off event. Although they have expressed interest, they have yet to commit.
History San Jose	Barbara Johnston (408) 918-1047 bjohnston@historysanjose.org	Updated content for the partnership page. Promoted Haunted History on website. Promoted Shaped by Water exhibit and events.
Von Kaenel Real Estate **Keller Williams Realty**	Mark von Kaenel Phil Lopez 408.356.8009	Consultant proposed "new owner" / "new tenant" packages; Mark receptive to a proposal to providing these. Will prepare a sample kit / run by Program.
Silicon Valley Bicycle Coalition	Colin Heyne (408) 287-7259 colin@bikesiliconvalley.org	Requires follow up to preliminary proposal regarding partnership opportunities.
Valley Verde	Raffaella Cerruti (650) 644-6706 raffaellac@valleyverde.org	Promoted their news on Facebook/social media. Requires follow up to proposal regarding partnership opportunities incl. social media sharing, IPM info distribution, volunteer opportunities, etc.
SuperGreen Solutions	Belinda Vega (408) 244-2887 bvega@supergreensolutions.com	Included in IPM store locator on the WW website. Offers10% off LED lights with Discount Card, and distributes Fact sheets. Posted partnerhip and discount on Facebook
Humane Society Silicon Valley	Mark (408) 262-2133x130 pr@hssv.org	Left several messages and sent preliminary proposal regarding partnership opportunities. Suggested education / outreach regarding IPM for new pet owners as the main relevant connection to SPCA. Consultant followed up with phone call "calling on behalf of City of Milpitas".
KDTV Univision 14	Karina Nava	
Sprinkler Times *SprinklerTimes.com*	Jessica Hauptman (510)353-6030 admin@sprinklertimes.com	Offers $1.99 ($4 off regular $5.99 price) on 1-year subscription to SprinklerTimes.com customized sprinkler timer programming - issued promotional code for WW Discount Card. Updated website and Discount Card to reflect the SprinklerTimes.com offer
Lozano's Car Washes	Richard (General Manager) (2 locations) lozanocarwash21@yahoo.com	Consultant visited both locations; met Richard at Mt. View and introduced the Partner program. Left materials with him and followed up by email as he requested. Invited him to 50% off event. Although he expressed genuine interest, has yet to commit to a partnership.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-3

FY 13-14 Watershed Watch Web Statistics

FY 13-14 Watershed Watch Web Stats

Date	Avg. Page Views/ Day	Total Visits / CAVisits	Top pages	No. of Top Pages	Top Search Engine Referrals	Most Downloaded Pages	Contact Form	Comments
July 13	29	Total Visits: 459 Visits from California: 191	/ (home page) /SPpreventmercuryhtml /index.html (home page) /findgardener.html /pollutiontips.html /SPpollutiontips.html /aboutwatersheds.html /greengardener.html /discounts.html /ggclasses.html	English -8 Spanish -2	Google Yahoo Verizon.net 30.1% direct 11.8% referral 58.2% search engines Referral sites: KRTY.com Mastergardeners.org Sanjoseca.gov	Green Gardener List WW Discount Card IPM FS Ants EPA FS Mercury Construction/Concrete Construction/Overwatering Construction/Sediments WW Solutions Brochure Rose ad Fluorescent Disposal Sites	Requests for Information/ Comments: English –0 Spanish – 0 Requests for Discount card/brochure: English - 1 Spanish – 0	Traffic down by about half from previous month; no media or events this month.
Aug 13	29	Total Visits: 483 Visits from California: 243	/ (home page) /findgardener.html /SPpollutiontips.html /SPpreventmercuryhtml /greengardener.html /pollutiontips.html /index.html (home page) /SPstormpollution.html /aboutwatersheds.html /becomegreengardener.html	English -7 Spanish -3	Google Yahoo 23% direct 14.7% referral 62.3% search engines Referral sites: Mastergardeners.org scvurppp-w2k.com r.duckduckgo.com krty.com	WW Discount Card Green Gardener List IPM FS Ants Car Wash Brochure EPA Mercury FS IPM FS Aphids Construction/Concrete ZunZun Flyer Fluorescent Disposal Sites Mercury FS Residential	Requests for Information/ Comments: English –0 Spanish – 0 Requests for Discount card/brochure: English - 4 Spanish – 0	

Date	Avg. Page Views/ Day	Total Visits / CAVisits	Top pages	No. of Top Pages	Top Search Engine Referrals	Most Downloaded Pages	Contact Form	Comments
Sept 13	44	Total Visits: 746 Visits from California: 319	/ (home page) /SPpreventmercuryhtml /findgardener.html /pollutiontips.html /wherewatergoes.html /SPpollutiontips.html /SPstormpollution.html /ggclasses /index.html (home page) /greengardener.html	English -7 Spanish -3	Google Yahoo Bing 24.5% direct 7% referral 68.5% search engines Referral sites: Mastergardeners.org scvurppp-w2k.com Green-Gardener.org	Green Gardener List Where Does Your Water Go WW Discount Card SP WW Discount Card ZunZun Flyer Volunteer Opportuntiies GG Flyer Construction Landsc.Maint. Pools Brochure Trash Sources/Pathways	Requests for Information/ Comments: English –2 Spanish – 0 Requests for Discount card/brochure: English - 1 Spanish – 0	KBAY and KRTY radio campaign, plus KDTV Univision TV campaigns ran in Sept; page views up 51%; visits up 54%
Oct 13	44	Total Visits: 815 Visits from California: 303	/ (home page) /SPpreventmercuryhtml /pollutiontips.html /wherewatergoes.html /SPpollutiontips.html /aboutwatersheds.html /findgardener.html /ggclasses /SPstormpollution.html /index.html (home page)	English -7 Spanish -3	Google Ask Yahoo 24.5% direct 7% referral 68.5% search engines Referral sites: scvurppp-w2k.com Moodle.oakland.k12.mi.us	Where Does Your Water Go WW Discount Card Volunteer Opportuntiies Solutions Brochure Bus Tail – litter Rain Garden Fact Sheet Water Use Efficiency Landscape Watering Green Gardener List Pools Brochure Litter ad 2010	Requests for Information/ Comments: English –1 Spanish – 0 Requests for Discount card/brochure: English - 0 Spanish – 0	KBAY radio campaign, plus KDTV Univision TV and KVVF radio campaigns ran in Oct. Events 10/12 and 10/27

Date	Avg. Page Views/ Day	Total Visits / CAVisits	Top pages	No. of Top Pages	Top Search Engine Referrals	Most Downloaded Pages	Contact Form	Comments
Nov 13	48	Total Visits: 826 Visits from California: 204	/aboutwatersheds.html /pollutiontips.html / (home page) /SPpreventmercuryhtml /SPpollutiontips.html /whyimportant.html /index.html (home page) /ggclasses /findgardener.html /SPstormpollution.html	English -7 Spanish -3	Google Ask Yahoo 33% direct 5.8% referral 61.3% search engines Referral sites: Moodle2.kpbsd.k12ak.us scvurppp-w2k.com Facebook	Where Does Your Water Go Trash Sources/Pathways WW Green Gardener List Discount Card ZunZun Flyer Ants Fact Sheet Pools Brochure Landscape Design Fact Sheet Water Use Efficiency Landscape Watering Bus Tail – litter	Requests for Information/ Comments: English –1 Spanish – 0 Requests for Discount card/brochure: English - 1 Spanish – 0	Planet KBAY radio tips, plus KDTV Univision TV and KVVF radio campaigns
Dec 13	46	Total Visits: 813 Visits from California: 183	/aboutwatersheds.html / (home page) /whyimportant.html /SPpreventmercuryhtml /pollutiontips.html /SPpollutiontips.html /findgardener.html /faqs.html /wherewatergoes.html /ggclasses	English -8 Spanish -2	Google Bing 52.3% direct 8.5% referral 39.1% search engines Referral sites: Moodle2.kpbsd.k12ak.us scvurppp-w2k.com Sanjoseca.gov	Discount Card Where Does Your Water Go WW Brochure IPM store locator Mercury fact sheet Litter ad 2010 Litter ad (Worth Protecting) IPM products list (by pest) Bus Tail – litter Green Gardener List	Requests for Information/ Comments: English –1 Spanish – 0 Requests for Discount card/brochure: English - 2 Spanish – 0	KDTV Univision TV

Date	Avg. Page Views/ Day	Total Visits / CAVisits	Top pages	No. of Top Pages	Top Search Engine Referrals	Most Downloaded Pages	Contact Form	Comments
Jan 14	48	Total Visits: 837 Visits from California: 342	/ (home page) /aboutwatersheds.html /pollutiontips.html /wherewatergoes.html /findgardener.html /ggclasses.html /SPpollutiontips.html /discountcard.html /SPpreventmercuryhtml /fieldtrips.html	English -8 Spanish -2	Google Bing 28% direct 10% referral 62% search engines Referral sites: scvurppp-w2k.com mastergardeners.org nbcstations.com	Where Does Your Water Go Discount Card Soak it Up HHW bulb drop locations Trash Sources/Pathways Construction FS Engine Degreasing Pools Brochure WW Brochure Cars Pollute ad (Worth Protecting) Litter ad (Worth Protecting)	Requests for Information/ Comments: English –1 Spanish – 0 Requests for Discount card/brochure: English - 6 Spanish – 0	KNTV NBC "Press Here" sponsorship began
Feb 14	52	Total Visits: 801 Visits from California: 381	/ (home page) /lesstoxicgarden.html /pollutiontips.html /ggclasses.html /aboutwatersheds.html /findgardener.html /SPpreventmercuryhtml /SPpollutiontips.html /greengardener.html /aboutwatersheds.html /renewggcard.html	English -8 Spanish -2	Google Yahoo 19/% direct 25% referral 55% search engines Referral sites: Nbcbayarea.com mastergardeners.org scvurppp-w2k.com	Green Gardener List Discount Card GG 2014 Recertification WW Brochure Soak it Up Trash Sources/Pathways Volunteer Opps IPM Pesticide bus tail Landscape Dispersion FS Where Does Your Water Go	Requests for Information/ Comments: English –0 Spanish – 0 Requests for Discount card/brochure: English - 2 Spanish – 0	KNTV NBC "Press Here" sponsorship continued; KNTV digital began 2/26 and instantly bumped traffic

Date	Avg. Page Views/ Day	Total Visits / CAVisits	Top pages	No. of Top Pages	Top Search Engine Referrals	Most Downloaded Pages	Contact Form	Comments
Mar 14	89	Total Visits: 2066 Visits from California: 742	/lesstoxicgarden.html / (home page) /SPpollutiontips.html /SPpreventmercuryhtml /pollutiontips.html /findgardener.html /SPstormpollution.html /aboutwatersheds.html /ggclasses.html /greengardener.html	English -7 Spanish -3	Google Yahoo 26/% direct 46% referral (88% NBC) 28% search engines Referral sites: Nbcbayarea.com Bayareaecogardens.org mastergardeners.org	Where Does Your Water Go Trash Sources/Pathways Green Gardener List TenTips Waterwise Garden HHW CFL Dropoff Location Discount Card HHW Business FS IPM Ants FS IPM Weeds FS IPM Yellow Jackets FS	Requests for Information/ Comments: English –0 Spanish – 0 Requests for Discount card/brochure: English - 1 Spanish – 0	KNTV digital response to IPM ads directly evident in visits and new top page
Apr 14	76	Total Visits: 1656 Visits from California: 670	/lesstoxicgarden.html / (home page) /SPpollutiontips.html /findgardener.html /pollutiontips.html /SPpreventmercuryhtml /index.html (return home) /SPstormpollution.html /aboutwatersheds.html /currentpart.html	English -7 Spanish -3	Google Yahoo 25.5% direct 43.1% referral (79% NBC) 31.3% search engines Referral sites: Nbcbayarea.com Bayareaecogardens.org mastergardeners.org	Discount Card Where Does Your Water Go IPM Ants FS Soak It Up Pervious Paving FS Green Gardener List Volunteer Opportunities Auto Fluids Info Card Trash Sources/Pathways IPM Rats/Mice FS	Requests for Information/ Comments: English –1 Spanish – 0 Requests for Discount card/brochure: English - 0 Spanish – 0	KNTV digital response to IPM ads evident in referrals and top page

Date	Avg. Page Views/ Day	Total Visits / CAVisits	Top pages	No. of Top Pages	Top Search Engine Referrals	Most Downloaded Pages	Contact Form	Comments
May 14	55	Total Visits: 1067 Visits from California: 422	/ (home page) /SPpollutiontips.html /SPpreventmercuryhtml /pollutiontips.html /events.html /findgardener.html /aboutwatersheds.html /lesstoxicgarden.html /discountcard.html /SPstormpollution.html	English -7 Spanish -3	Google Yahoo 21% direct 13% referral 63% search engines 3% social Referral sites: Bayareaecogardens.org m.facebook.com summermadesimple.com	Discount Card Trash Sources/Pathways Less toxic products list Solutions Brochure IPM Ants FS IPM Store List 10 Tips Water-wise garden Soak It Up IPM Cockroaches FS IPM Snails/Slugs FS	Requests for Information/ Comments: English –4 Spanish – 0 Requests for Discount card/brochure: English - 1 Spanish – 0	Big decline in referral traffic – KNTV online campaign ended
June 14	54	Total Visits: 951 Visits from California: 381	/ (home page) /SPpollutiontips.html /SPpreventmercuryhtml /pollutiontips.html /findgardener.html /events.html /SPstormpollution.html /aboutwatersheds.html /discountcard.html /index.html	English -7 Spanish -3	Google Yahoo Bing 19.9% direct 11.6% referral 65.5% search engines 3% social Referral sites: Facebook.com Bayareaecogardens.org	Discount Card Trash Sources/Pathways Where Water Goes Contractor FS-stormdrains Green Gardener List 10 Tips Water-wise garden Solutions Brochure HHW CFL drop-off locations Volunteer Opportunities IPM Ants FS	Requests for Information/ Comments: English –2 Spanish – 0 Requests for Discount card/brochure: English - 2 Spanish – 0	

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-4

2014 SCVURPPP Public Opinion Survey

Watershed Watch
2014 Public Opinion Survey

Prepared for:

Santa Clara Valley
Urban Runoff
Pollution Prevention Program
(SCVURPPP)

SUMMARY REPORT

May 2014

EMC Research, Inc.
436 14th Street, Suite 820
Oakland, California 94612
(510) 844-0680

Table of Contents

Introduction.....3

Methodology 4

Executive Summary.....5

Detailed Survey Findings 6

I. Methodology 7
II. Key Findings 8
III. General Issue Environment 9
IV. Watershed Issues 14
V. Pollution Behaviors 30
VI. Demographics & Communication..... 48
VII. Short & Long Term Goals 57
VIII. Conclusions 74

Questionnaire with Results 77

Crosstabs 95

INTRODUCTION

EMC Research, Incorporated (EMC) conducted a telephone survey of Santa Clara County residents on behalf of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) and the Watershed Watch Campaign. The primary objectives of this survey were as follows:

- Measuring Short Term Goals from the SCVURPPP Watershed Education and Outreach Strategy.
- Measuring Long Term Goals from the SCVURPPP Watershed Education and Outreach Strategy.
- Resident attitudes and opinions about water pollution, water quality, the watershed, and related issues.
- Tracking and new data on resident behaviors with respect to specific actions to be taken to prevent pollution of local creeks, wetlands, and the San Francisco Bay.
- Attitudes and opinions on water issues and pollution prevention behaviors among local high school students.

METHODOLOGY

This survey report is based on the results of 565 interviews conducted among residents ages 15 and older living in the Santa Clara Basin. Respondents were selected at random using Random Digit Dial methodology, and interviewed by telephone by trained professional interviewers during the weekend and evening hours of March 27 – April 9, 2014. The margin of error for the overall results is ± 4.12 points at the 95% confidence interval. The margins of error for demographic and attitudinal subgroups vary and will be larger, depending on the size of the subgroup. The sample for this random digit dial telephone survey was drawn from ZIP Codes in the 13 cities encompassed by the Program.[1]

When appropriate, results have been compared to previous surveys with similar populations:

- 2009 EMC Research survey among Santa Clara Basin residents ages 15 and older.
- 2003 EMC Research survey among Santa Clara Basin residents ages 15 and older.
- 2002 EMC Research survey in the Santa Clara Water Pollution Control Plant Service Area among respondents ages 18 and older.
- 1999 Fairbank/Maslin/Maullin & Associates (FMMA) survey among Santa Clara Basin residents ages 16 and older.
- 1996 Fairbank/Maslin/Maullin & Associates (FMMA) survey among Santa Clara Basin residents ages 16 and older.
- 1994 Fairbank/Maslin/Maullin & Associates (FMMA) survey among City of San José residents ages 18 and older.
- 1991 Sievers Research Company survey among Santa Clara County residents ages 18 and older.

[1] The 13 cities included in the Santa Clara Basin are: Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San José, Santa Clara, Saratoga, and Sunnyvale.

EXECUTIVE SUMMARY

Overall, the results show that an increasing number of Sana Clara Valley Basin residents are taking pollution prevention actions, and residents continue to understand how their actions impact the watershed. While the 2014 survey results indicate minimal progress has been made towards reaching SCVURPPP Watershed Education and Outreach Strategy goals, the results do give reason to be optimistic for the future. Although the progress made in the past five years did not necessarily achieve the desired results, the data suggests that the present climate may be conducive to making further progress. Results also indicate that substantial progress has been made among young residents, which could pave the way for future gains.

Some of the key findings from the 2014 survey include:

- Residents are more optimistic now than at any point in the last 12 years.
- Watershed Watch has managed to maintain or improve ratings and pollution prevention behaviors, which is an accomplishment given the challenging economic times between 2009 and now.
- Santa Clara Valley Basin residents continue to understand that their actions impact local water quality, and they continue to value pollution prevention and watershed protection actions.
- Many pollution prevention actions show gains in participation rates, including using re-usable shopping bags, oil changes, sweeping instead of hosing driveway, and taking waste, fluorescent lamps and bulbs to a household hazardous waste facility.
- Pollution of local creeks, the Bay and the quality of drinking water are much less of a concern to residents now than in previous years.
- Young residents are becoming increasingly aware of their impact on the watershed, and are making more educated choices about behaviors that impact the watershed.

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Santa Clara Valley Urban Runoff Pollution Prevention Program

Telephone Survey of Santa Clara Valley Basin Residents

Methodology

- Random Digit Dialing Survey of Santa Clara Valley Basin Residents
- 565 interviews
  - 37 High School
  - 528 Adults
- Overall margin of error ±4.12 percentage points
- Conducted by trained, professional interviewers
- Conducted March 27 – April 9, 2014
- Where applicable results have been compared to:
  - 2009 data from EMC Santa Clara Valley Basin survey
  - 2003 data from EMC Santa Clara Valley Basin survey
  - 1999 Fairbank/Maslin/Maullin & Associates, (Santa Clara Basin residents), May 1999, ages 16 and older
  - 1996 Fairbank/Maslin/Maullin & Associates, (Santa Clara Basin residents), March 1996, ages 16 and older

As with any opinion research, the release of selected figures from this report without the analysis that explains their meaning would be damaging to EMC. Therefore, EMC reserves the right to correct any misleading release of this data in any medium through the release of correct data or analysis.

Please note that due to rounding, percentages may not add up to exactly 100%

Key Findings

- Santa Clara Valley Basin residents continue to understand that their actions impact local water quality, and they continue to value pollution prevention and watershed protection actions
- Many pollution prevention actions show gains in participation rates, including using re-usable shopping bags, oil changes, sweeping instead of hosing driveway, and taking waste, fluorescent lamps and bulbs to a household hazardous waste facility.
- Residents are more optimistic now than at any point in the last 12 years.
- Pollution of local creeks, the Bay and the quality of drinking water are much less of a concern to residents now than in previous years.
- There has been little change in terms of goal measurements.

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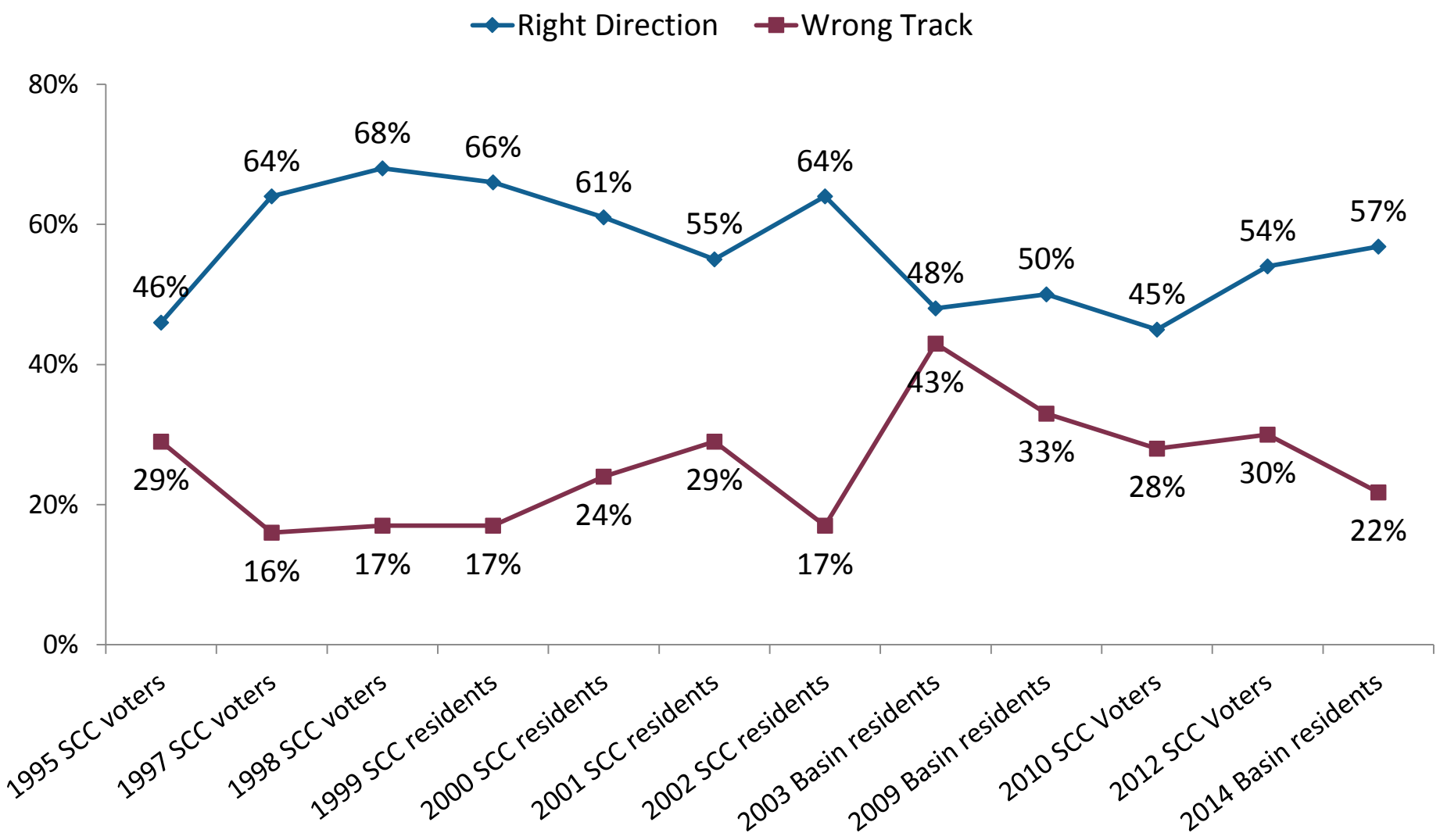
General Issue Environment

Direction of Santa Clara County

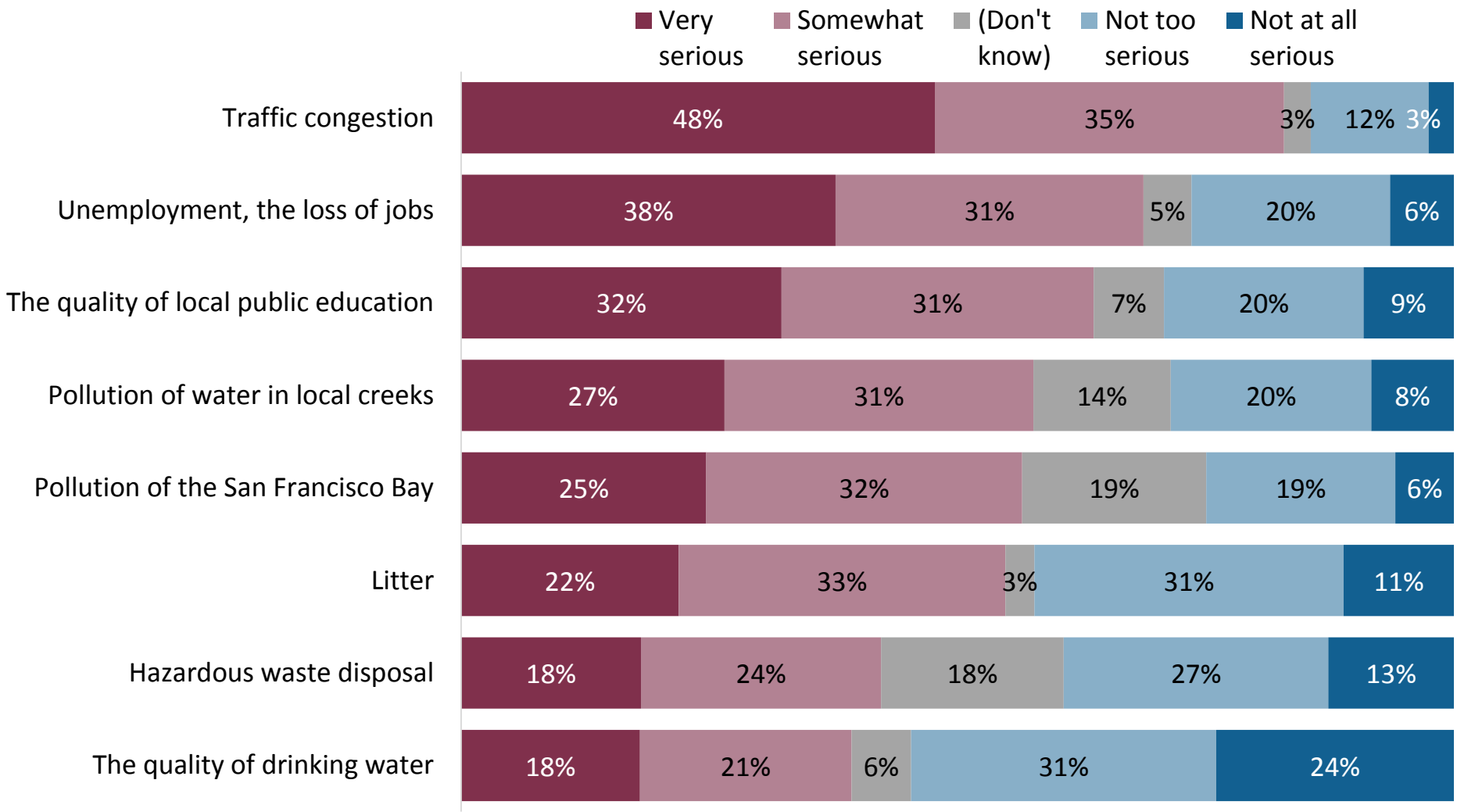
Resident optimism is as its highest point since 2002.



Q8. Do you feel that things in Santa Clara County are generally going in the right direction or do you feel things have gotten pretty seriously off on the wrong track?

Problems Facing Santa Clara Valley Region

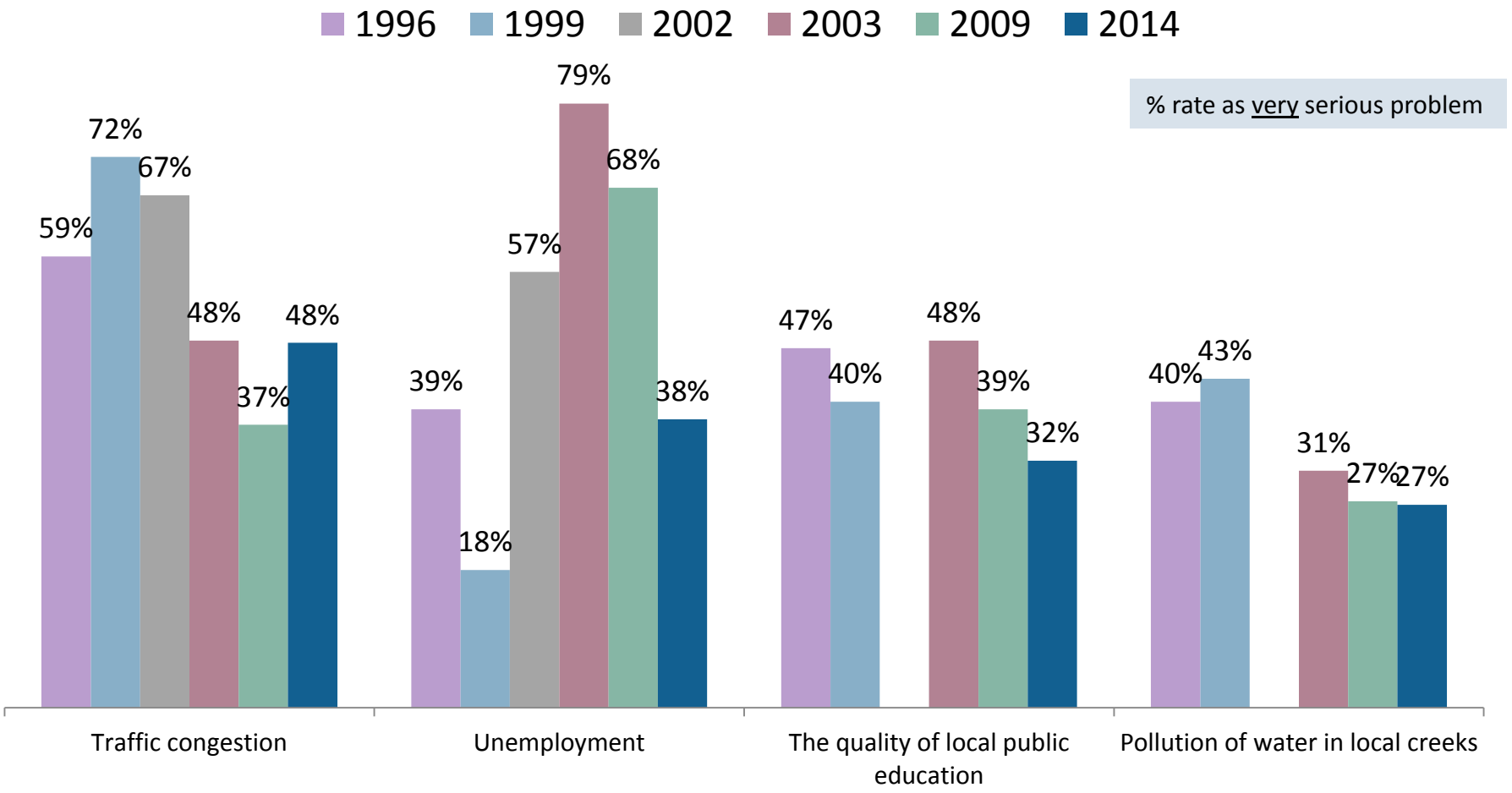
More than in 8 out of 10 residents find traffic congestion to be a problem.



Q9-Q16. Please tell me if you feel each of the following is a very serious problem facing the Santa Clara Valley region, is a somewhat serious problem, a not too serious problem or not a very serious problem at all in this region.

Problems Rated as Very Serious

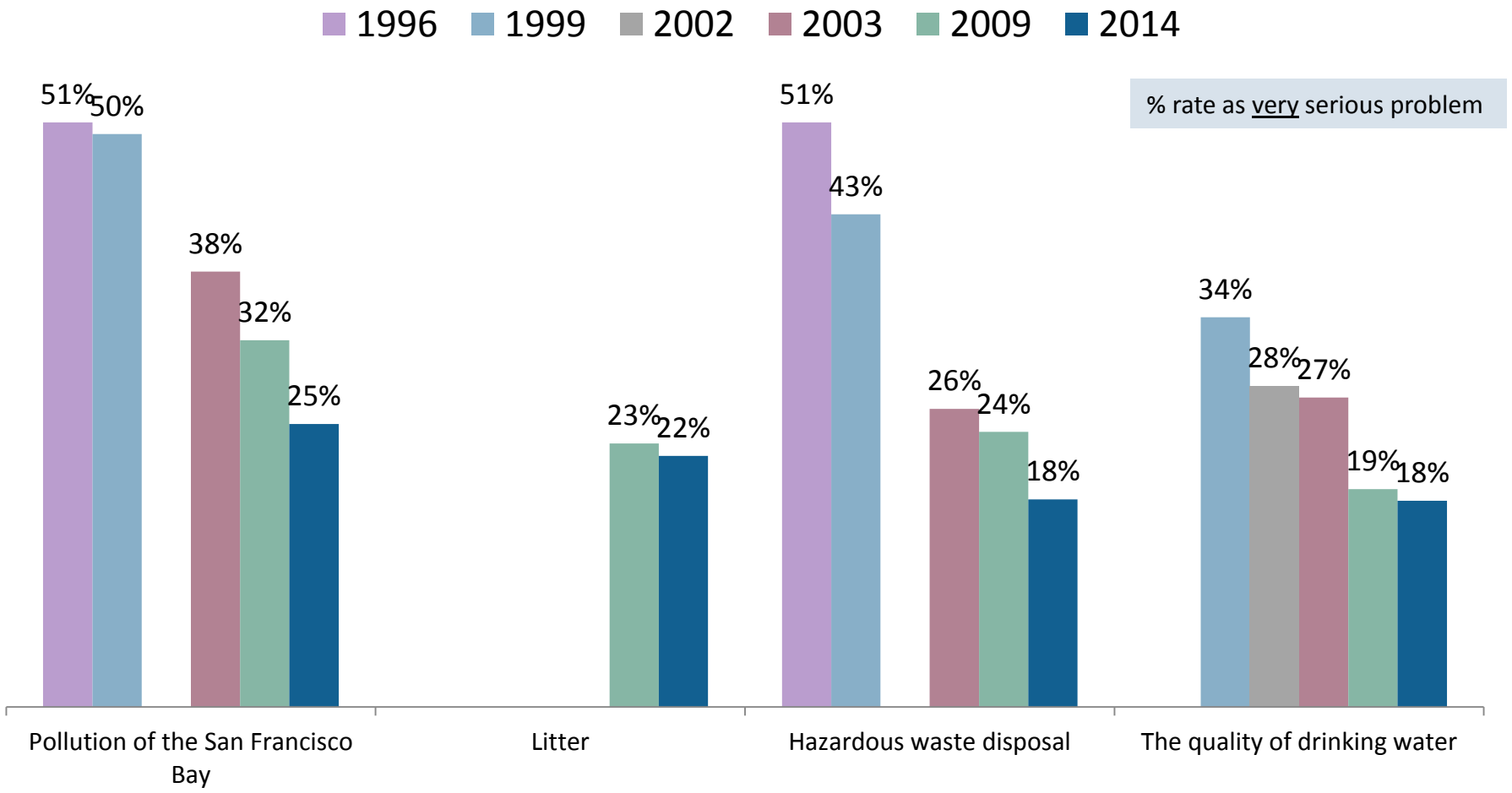
Traffic congestion and unemployment continue to be top concerns in the region, although far fewer rate unemployment as a serious problem today compared to 2003.



Q9-Q16. Please tell me if you feel each of the following is a very serious problem facing the Santa Clara Valley region, is a somewhat serious problem, a not too serious problem or not a very serious problem at all in this region.

Problems Rated as Very Serious

The percentage of people who say Bay pollution and the quality of drinking water are serious problems has gone down in recent years.



Q9-Q16. Please tell me if you feel each of the following is a very serious problem facing the Santa Clara Valley region, is a somewhat serious problem, a not too serious problem or not a very serious problem at all in this region.

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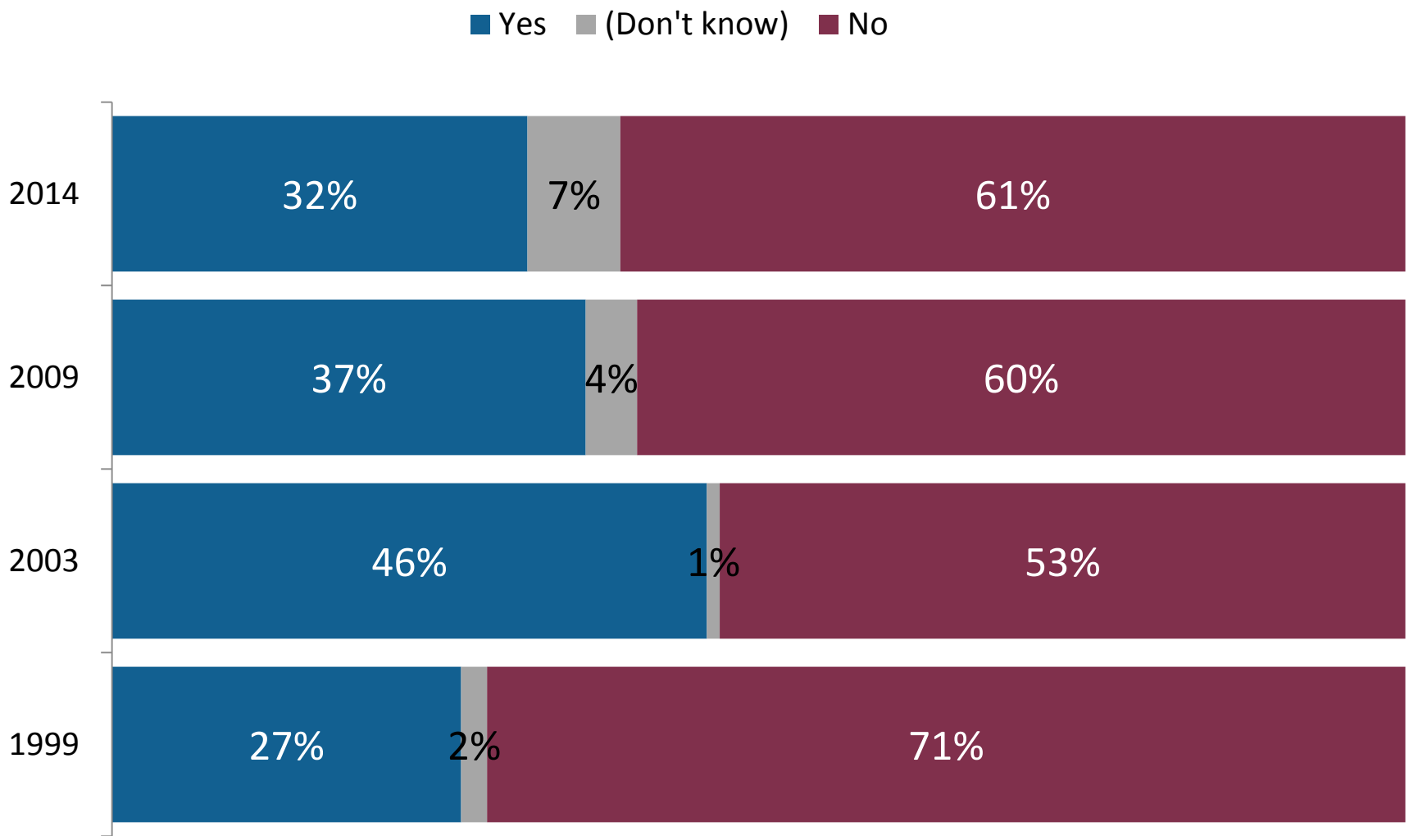
Watershed Issues

Watershed Recall

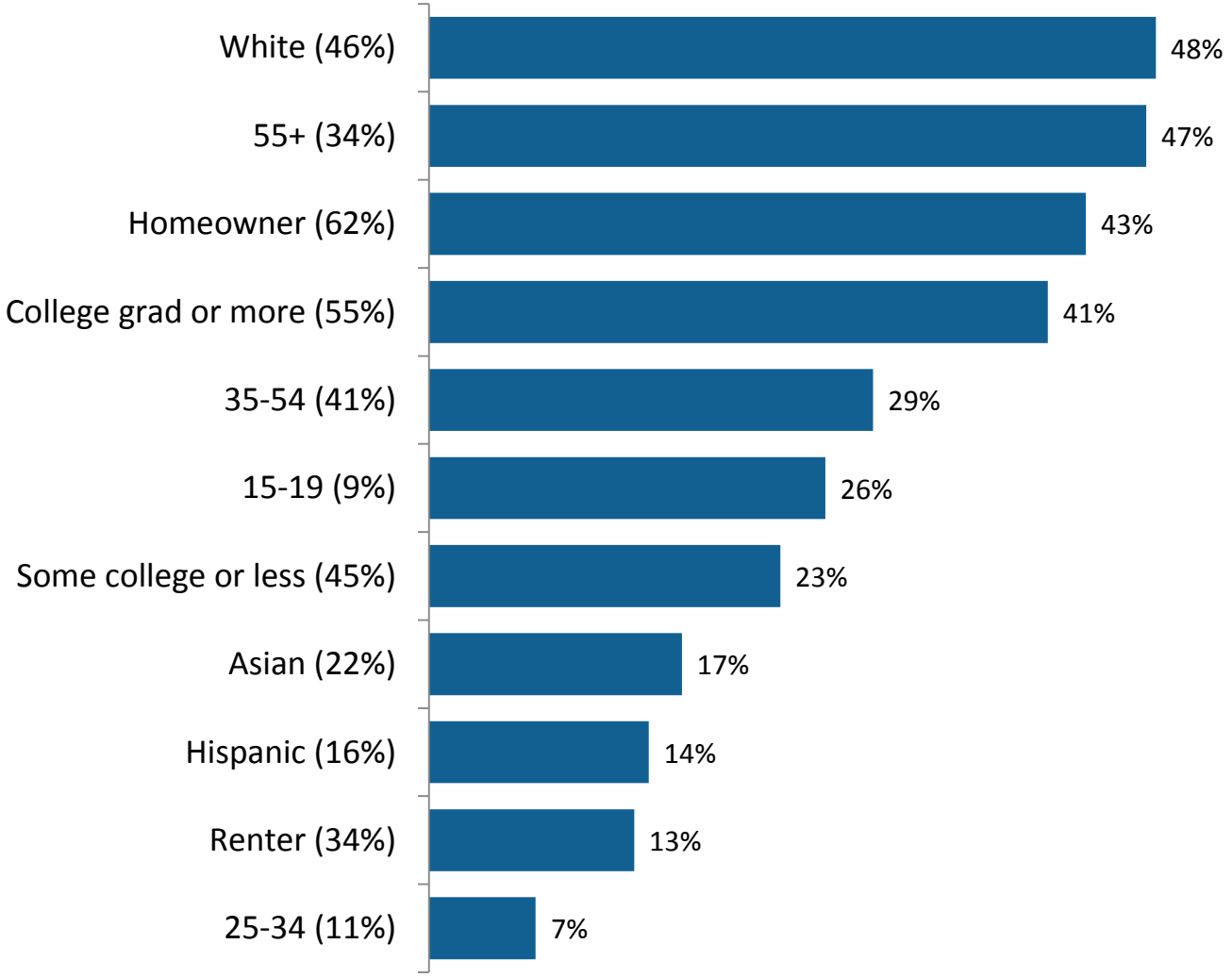
Recall of watershed messaging is slightly lower than it was in 2009.



Q17. Now, do you recall ever seeing or hearing anything about watersheds?

Recall Among Various Demographic Groups

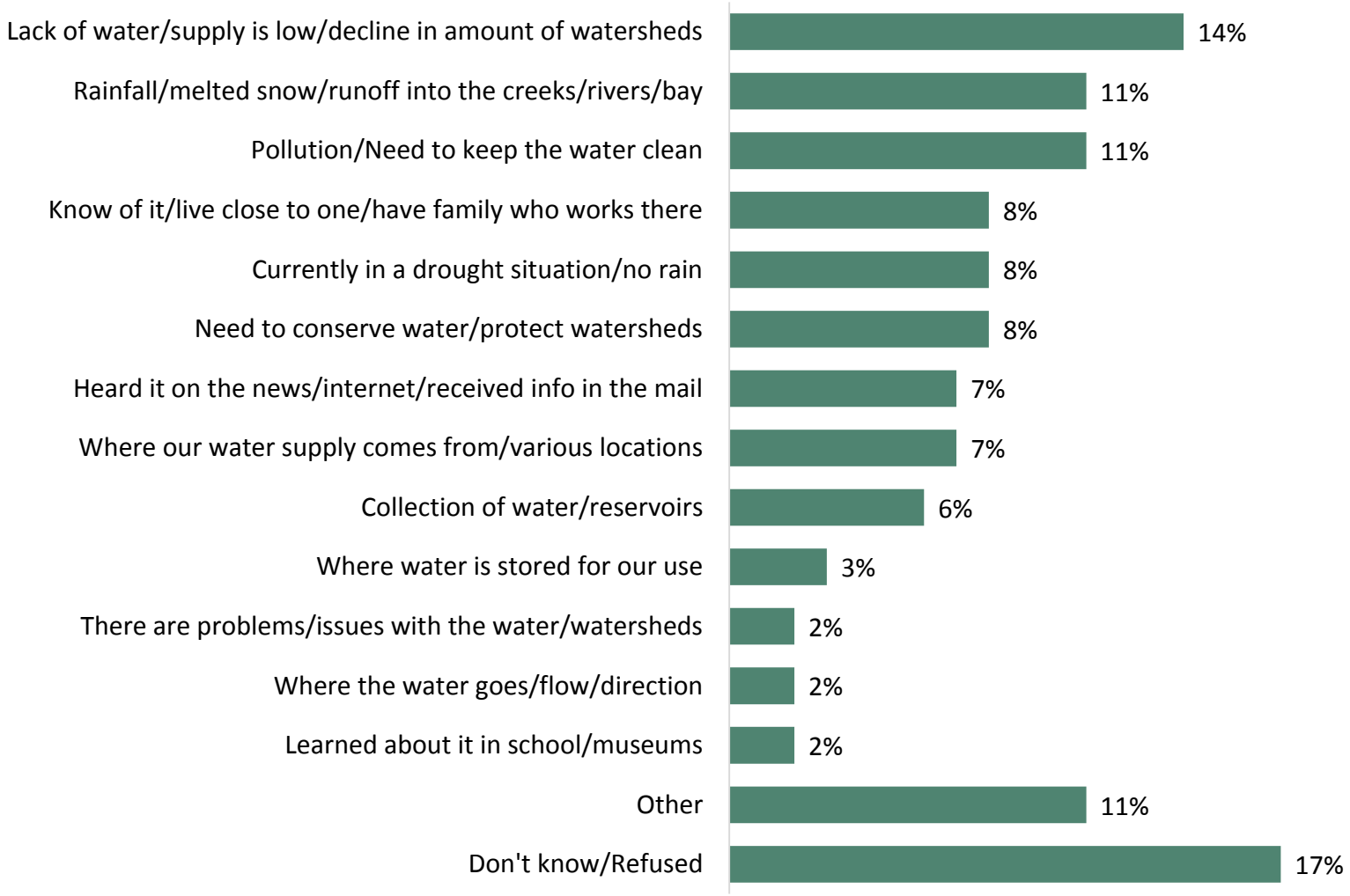
Whites, residents age 55+, homeowners, and college grads are the most likely to report having seen or heard something about watersheds.



Q17. Now, do you recall ever seeing or hearing anything about watersheds? - ***% Yes***

Heard or Saw about Watersheds

The low water supply is the most common thing residents have heard.



Q18. Can you tell me in a few words what you heard or saw? (N=194)

Watershed Definition

The percentage of residents that understand the watershed concept remains unchanged from 1999.

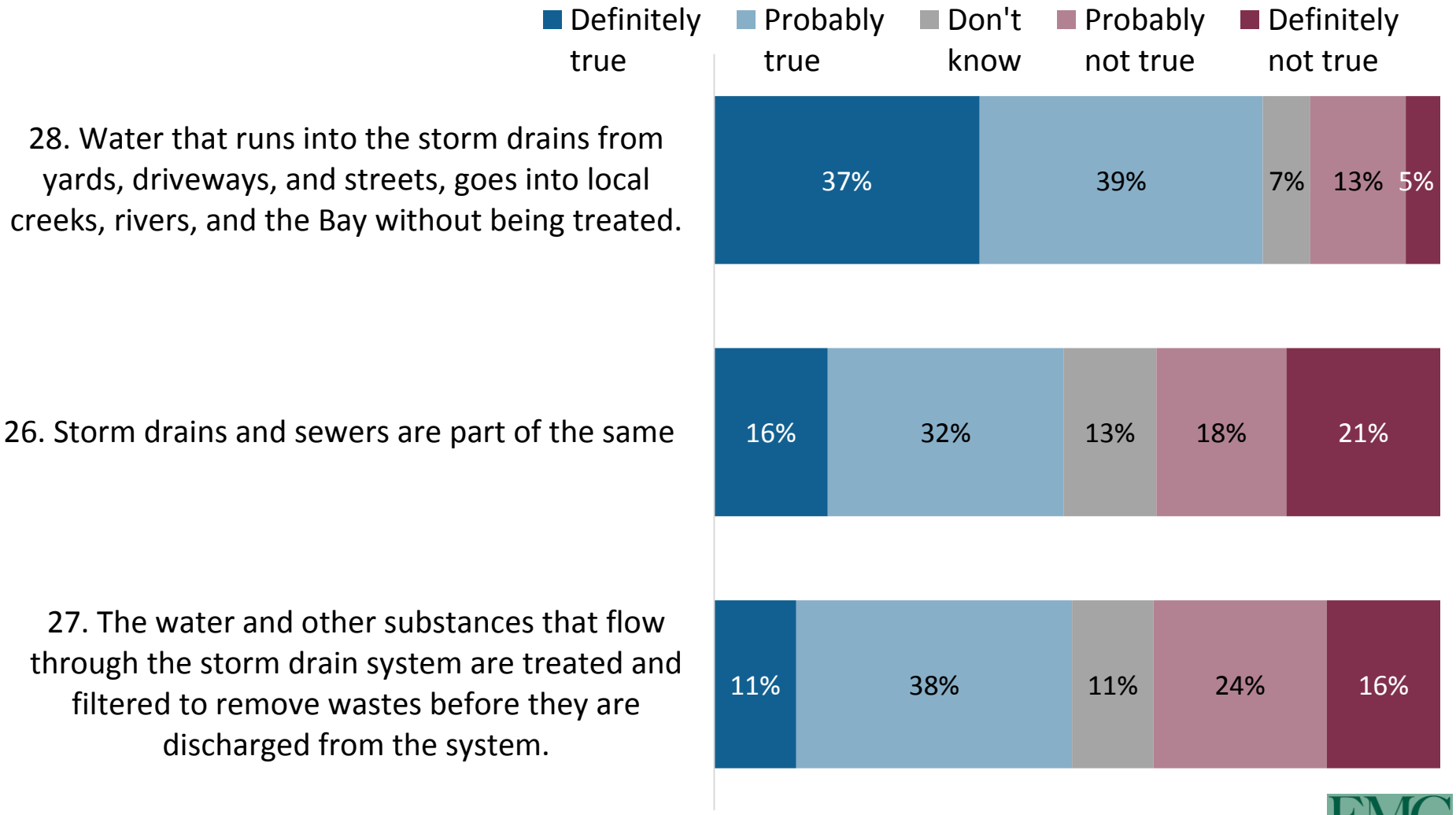
Residents' Responses were Combined into the Following Watershed Definitions	1999	2003	2009	2014
Area where water collects and then drains to lower elevation	27%	20%	27%	27%
A structure or building for holding or keeping water	26	27	14	16
An overhang that shades water	1	2	1	1
(Other)	6	24	10	19
Don't Know/No answer	39	27	48	41

"Other" responses
Storing water/reservoirs
Preserving/protecting water
Underground water/aquifer
Overhang that shades water
Not enough water
Wasting water
Channeling water/irrigation
Wasting water
Distribution/how it's used
Keeping the water clean
Drinking water

Q19. In your own words, can you tell me what the term "watershed" means to you?

Storm Drain Knowledge

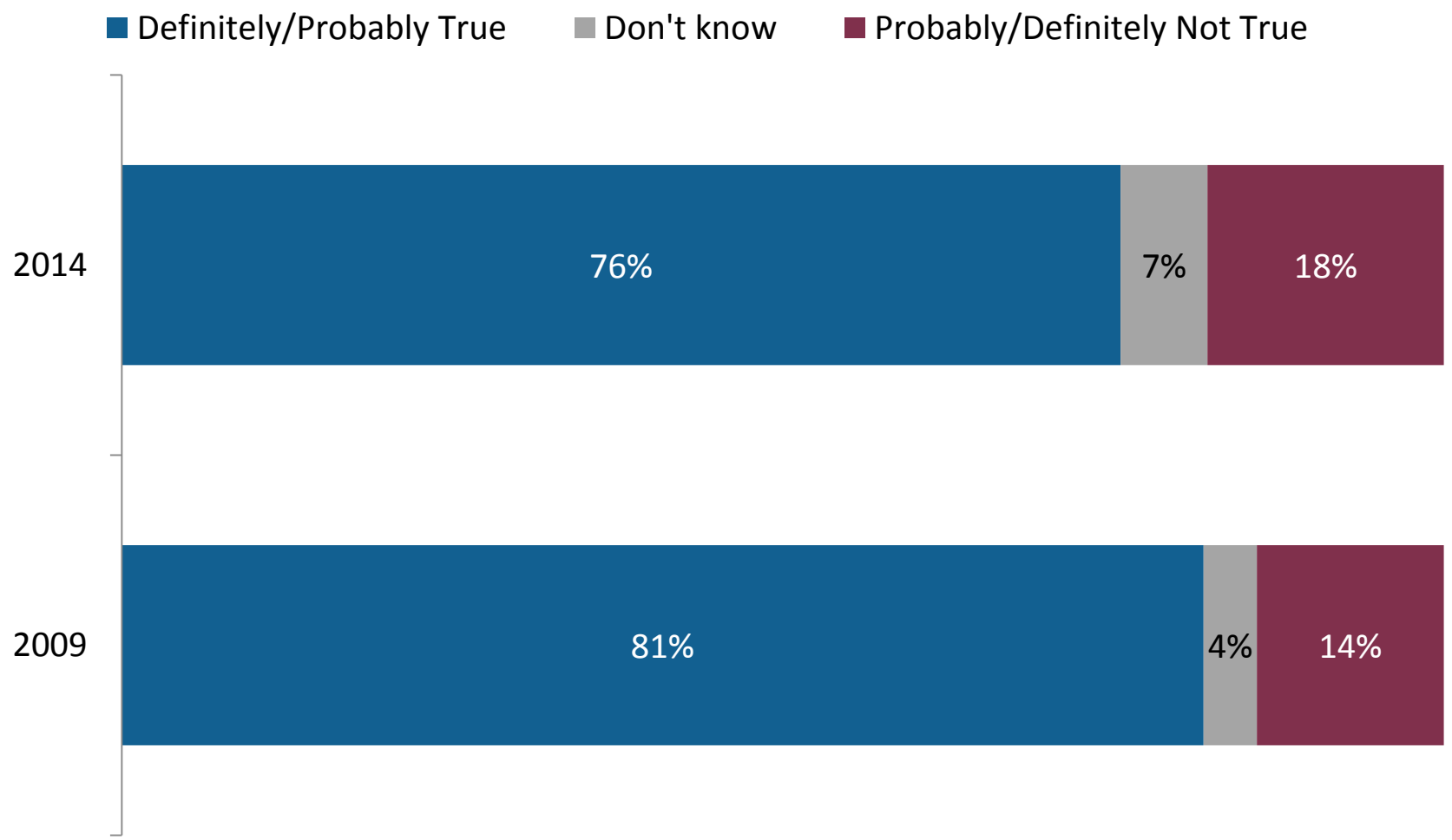
More than 3 in 4 residents know that runoff goes into local creeks, rivers, and the Bay without being treated.



Q26-Q28. Are the following statements definitely true, probably true, probably not true, or definitely not true?

Runoff Knowledge

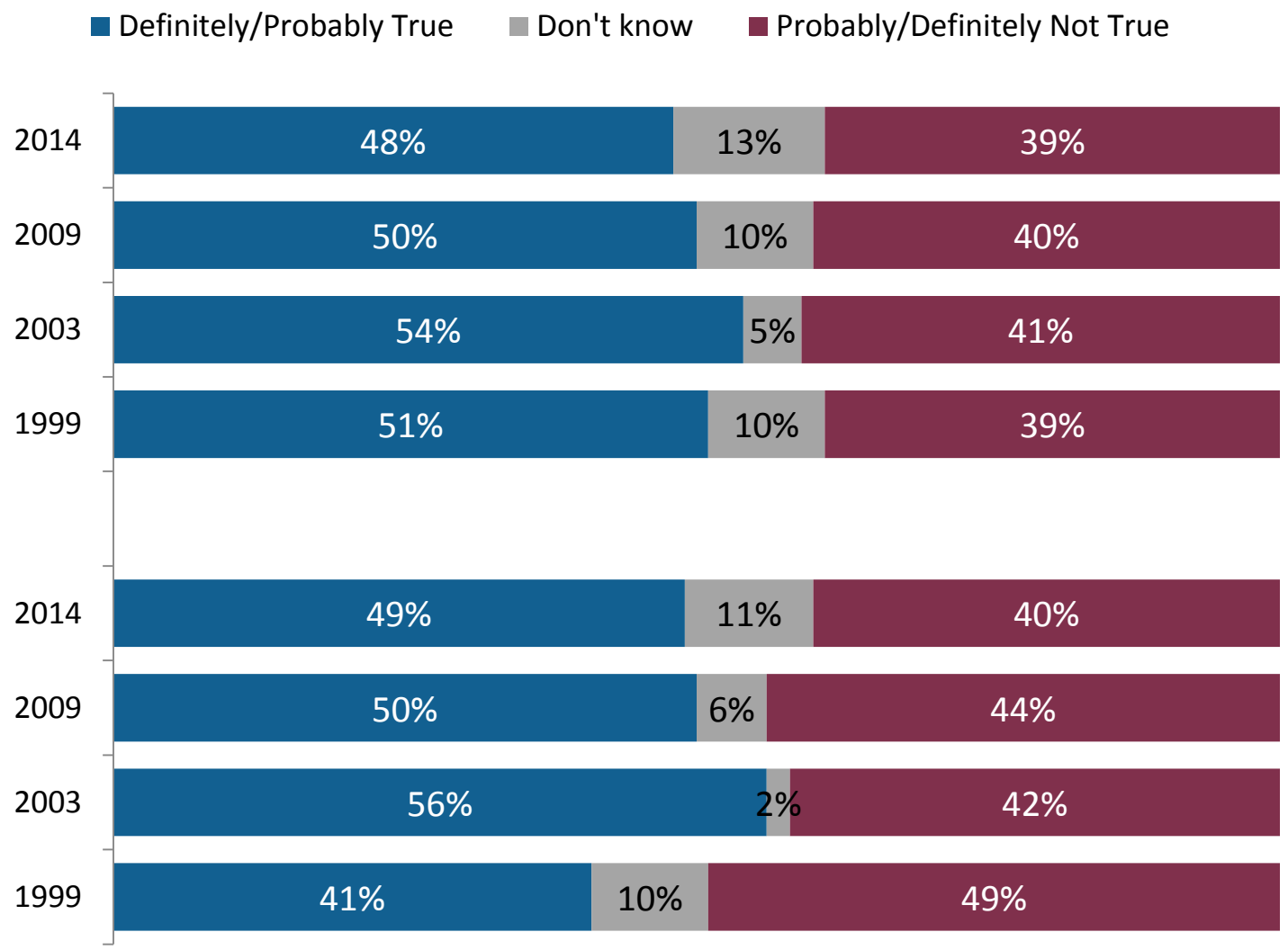
Knowledge of runoff and drainage remains high.



Q28. Water that runs into the storm drains from yards, driveways, and streets, goes into local creeks, rivers, and the Bay without being treated. Do you believe that is definitely true, probably true, probably not true or definitely not true?

Impact Ratings on the Watershed

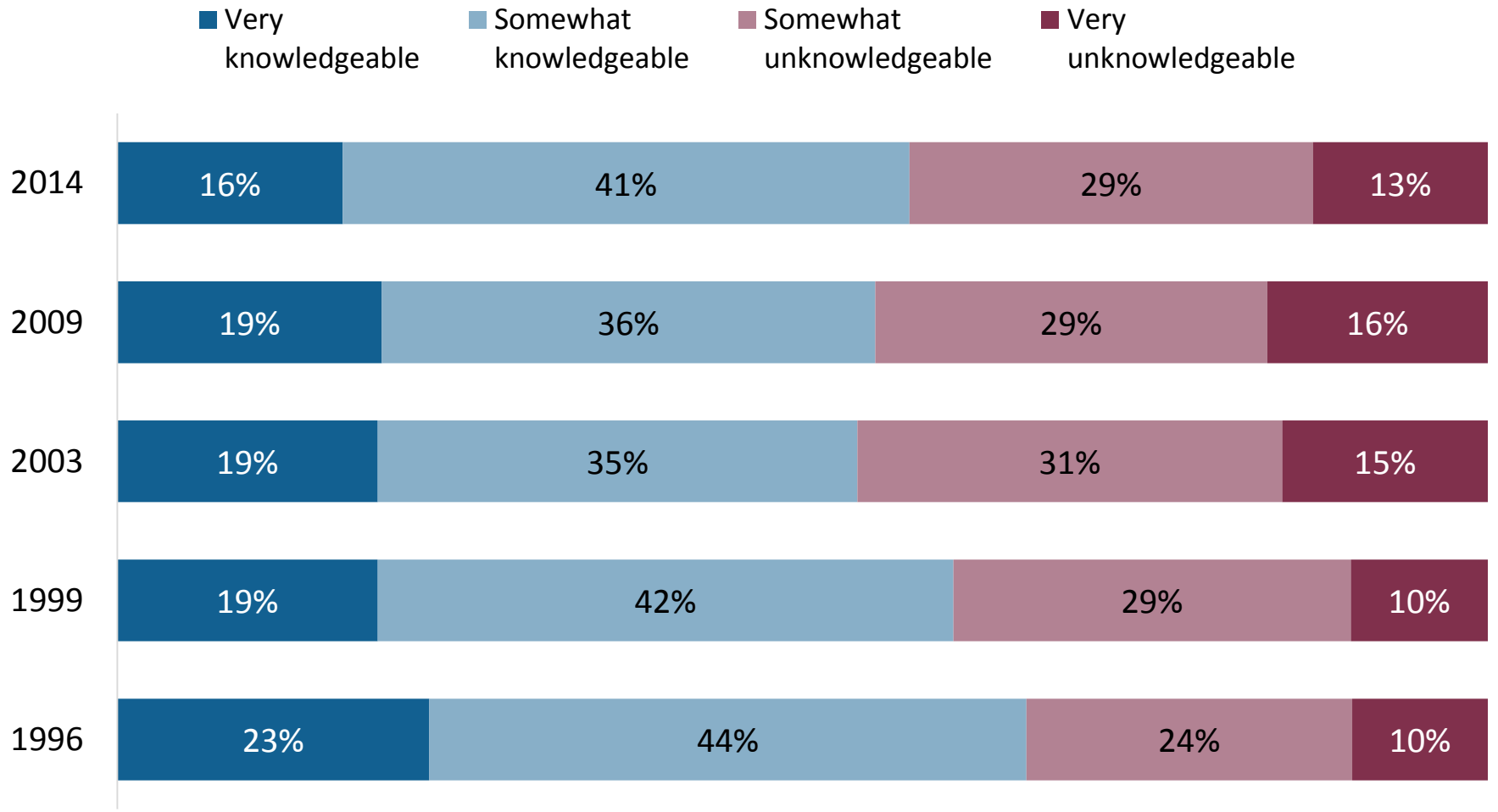
Overall knowledge of storm drains has decreased slightly since 2009.



Q26-Q28. Are the following statements definitely true, probably true, probably not true, or definitely not true?

Storm Drain Knowledge

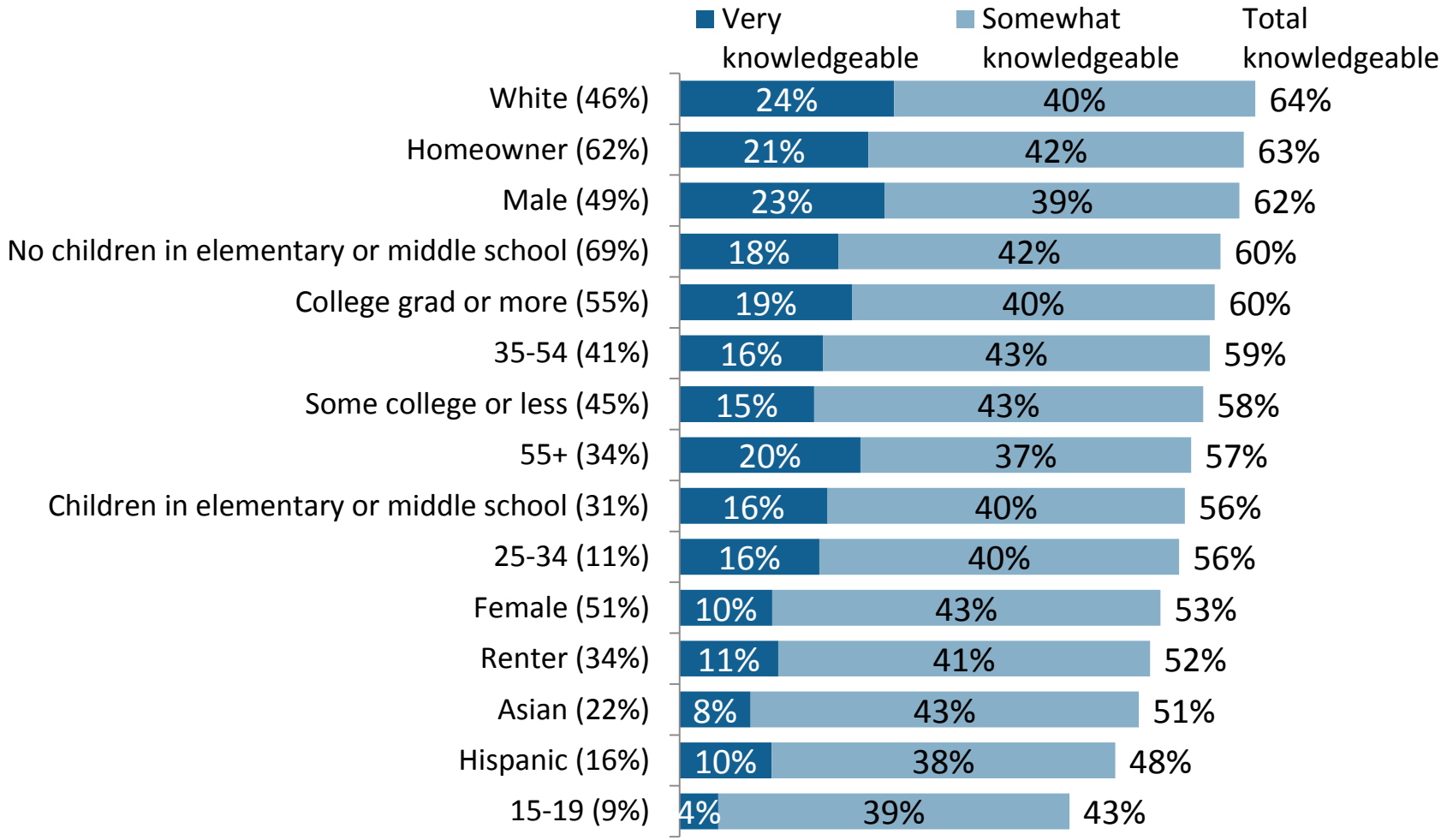
While the "very knowledgeable" ratings have declined, the percentage of residents who are at least somewhat knowledgeable of storm drains has increased since 2003.



Based on responses to questions:
Q26. Storm drains and sewers are part of the same underground system.
Q27. The water and other substances that flow through the storm drain system are treated and filtered to remove wastes before they are discharged from the system.

Knowledge Among Various Demographic Groups

Whites, homeowners, and men are the most likely to be very knowledgeable about storm drains.



Based on responses to questions:
Q26. Storm drains and sewers are part of the same underground system.
Q27. The water and other substances that flow through the storm drain system are treated and filtered to remove wastes before they are discharged from the system.

Type of Pollutants

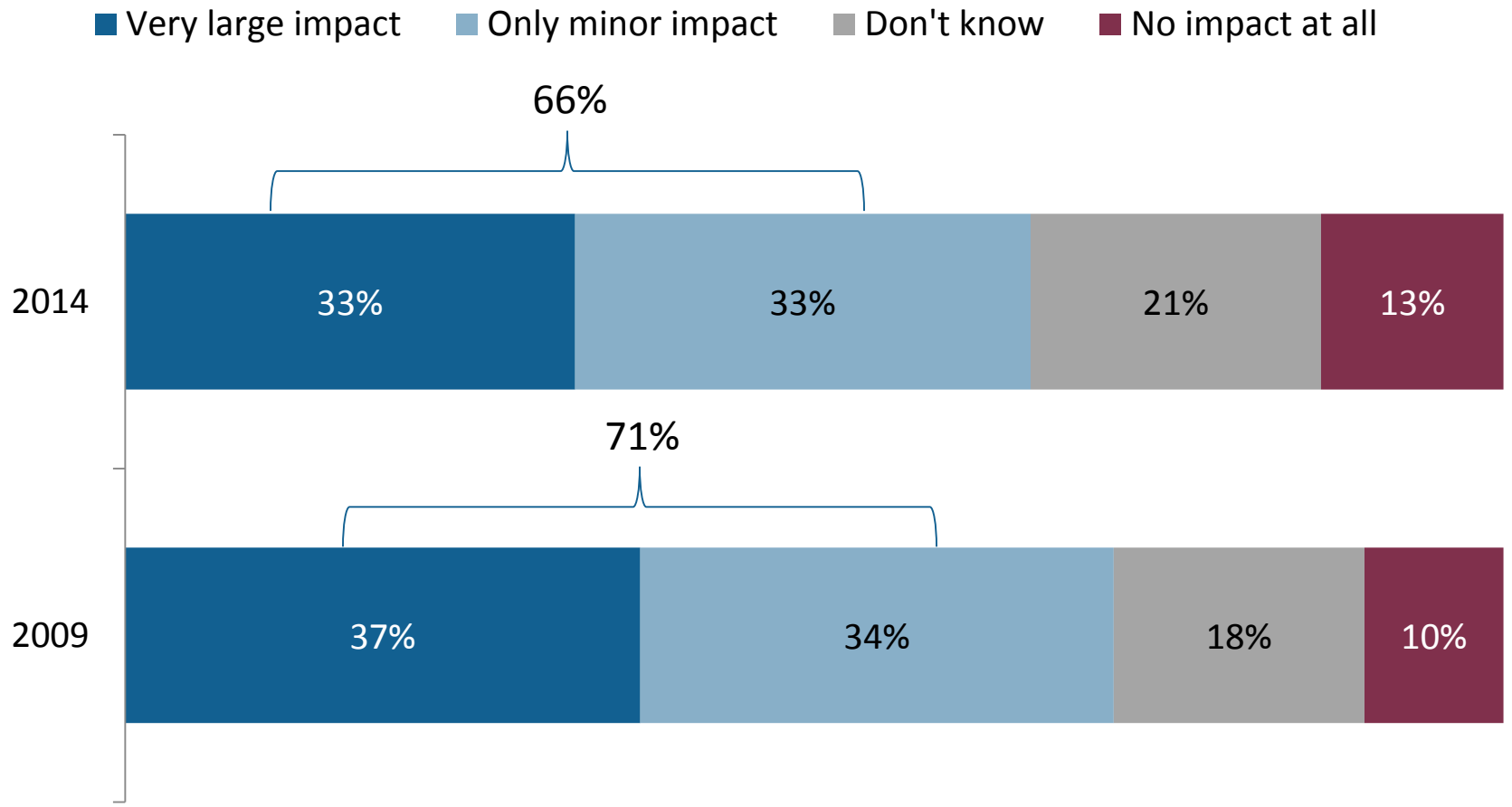
Oil/grease from automobiles remains the most commonly named pollutant.

	2003	2009	2014
Oil/grease from automobiles that leaks or is spilled/disposed of in storm drains	44%	43%	35%
Chemicals	25	27	28
Garbage/trash	16	19	20
Pesticides, herbicides, and fertilizer from lawns, gardens, farms, etc.	19	18	19
Industrial wastes	14	13	12
Biological contaminants from litter, organic matter, and animal wastes	4	8	8
Sewage	8	3	6
Hazardous wastes/carcinogens	6	2	5
Oil from ships/boats	3	1	5
Medical/hospital waste	0	1	3
Metals found in vehicle exhaust, weathered paint, metal plating, tires, etc.	7	2	2
Mercury	-	1	2
Soil erosions from lawns, hillsides, and construction activities	2	2	2
Other mentions	12	6	3
Don't Know	7	12	16

Q29. What type of pollutants do you think enter the bay and affect its water quality? (Accept up to two responses)

Impact Ratings on the Watershed

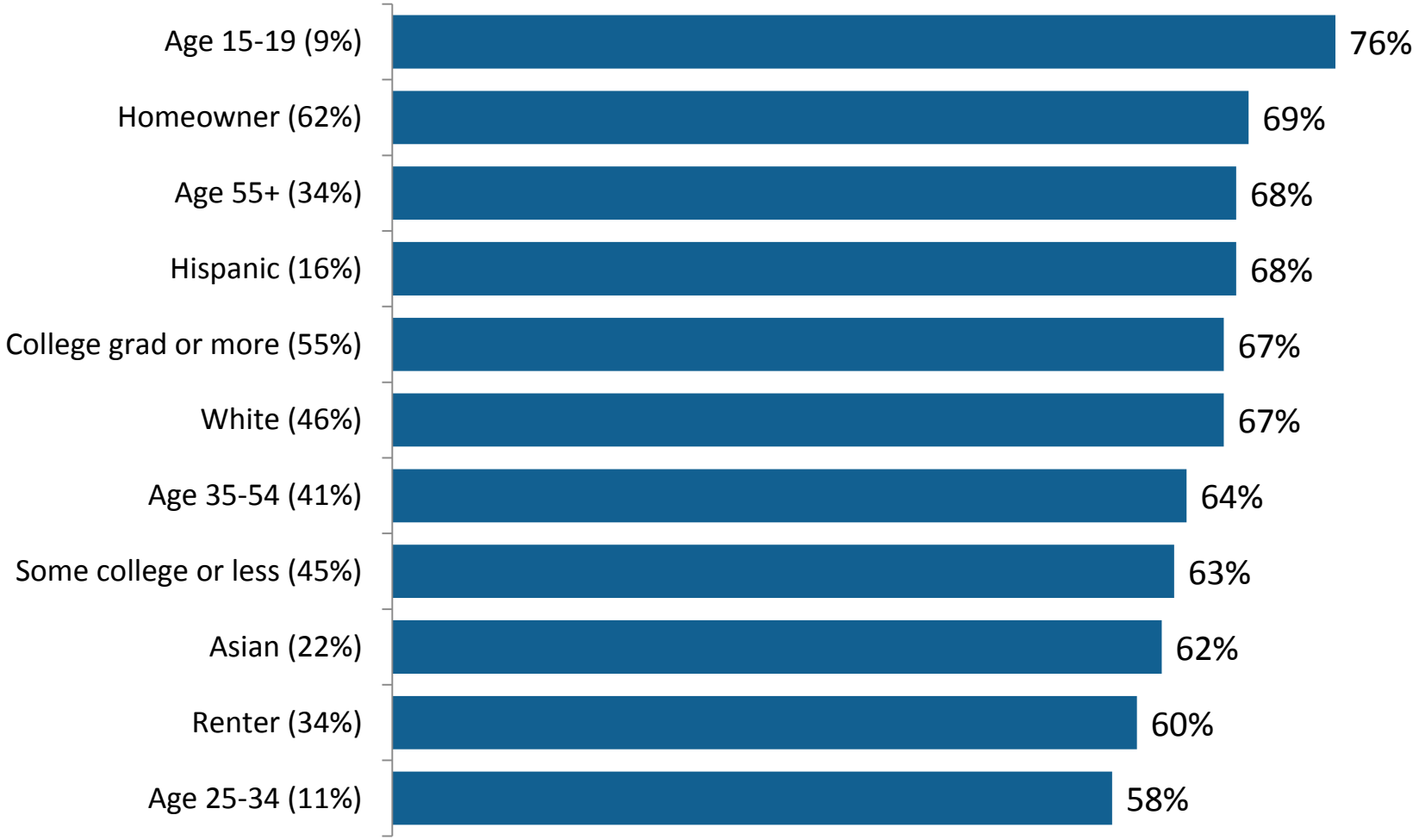
Two-thirds of residents believe the personal choices of families and individuals have an impact on the quality of water in the watershed.



Q20. In general, would you say the personal choices of families and individuals have a very large impact, only a minor impact, or no impact at all on the quality of water in the watershed?

Impact Ratings by Various Demographics

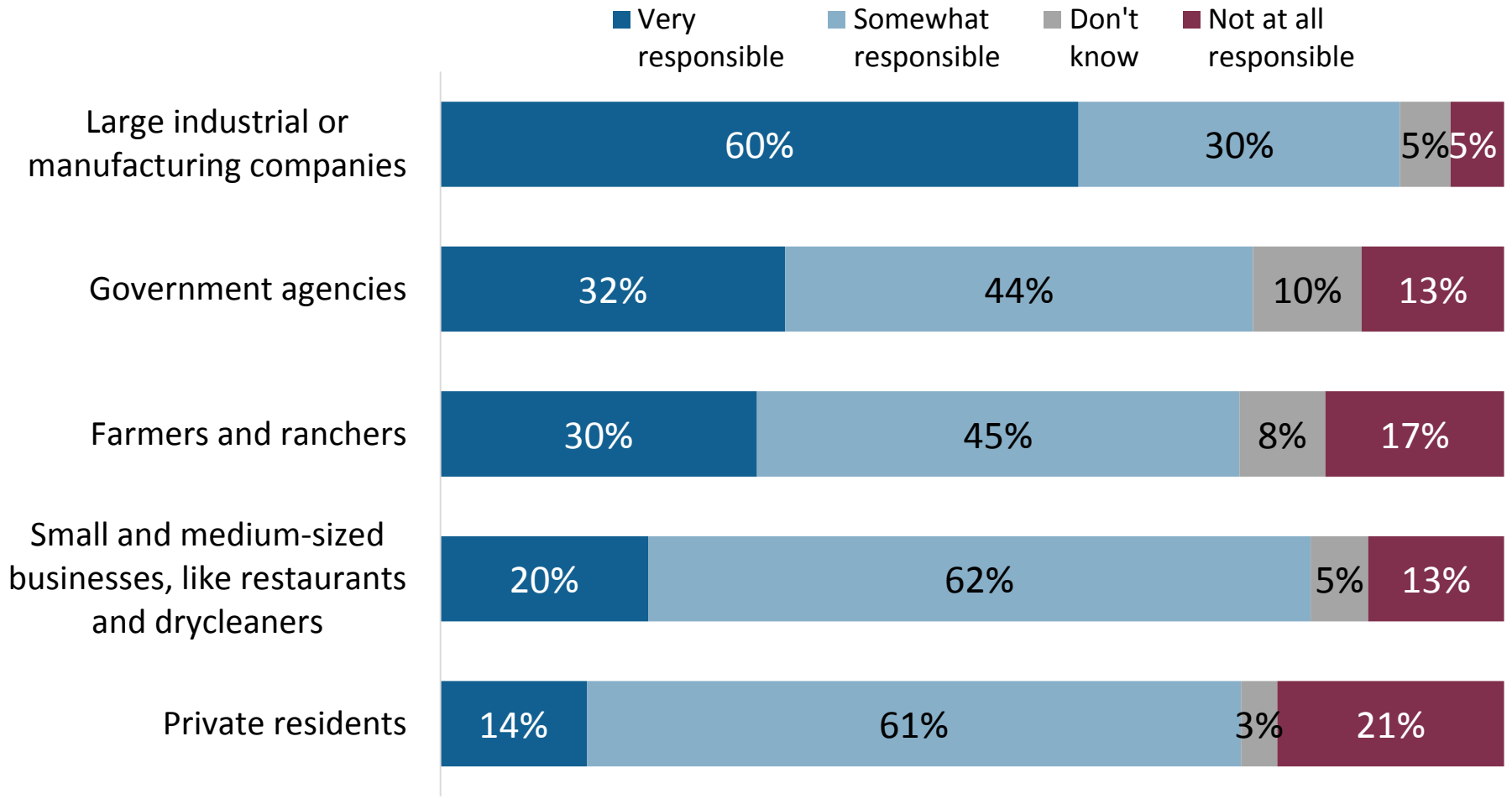
Residents under age 20 have the highest understanding of the impact that families and individuals have on the watershed.



Q20. Would you say the personal choices of families and individuals have a very large impact, only a minor impact, or no impact at all on the quality of water in the watershed? - ***% Very Large + Only Minor***

Water Pollution Responsibility

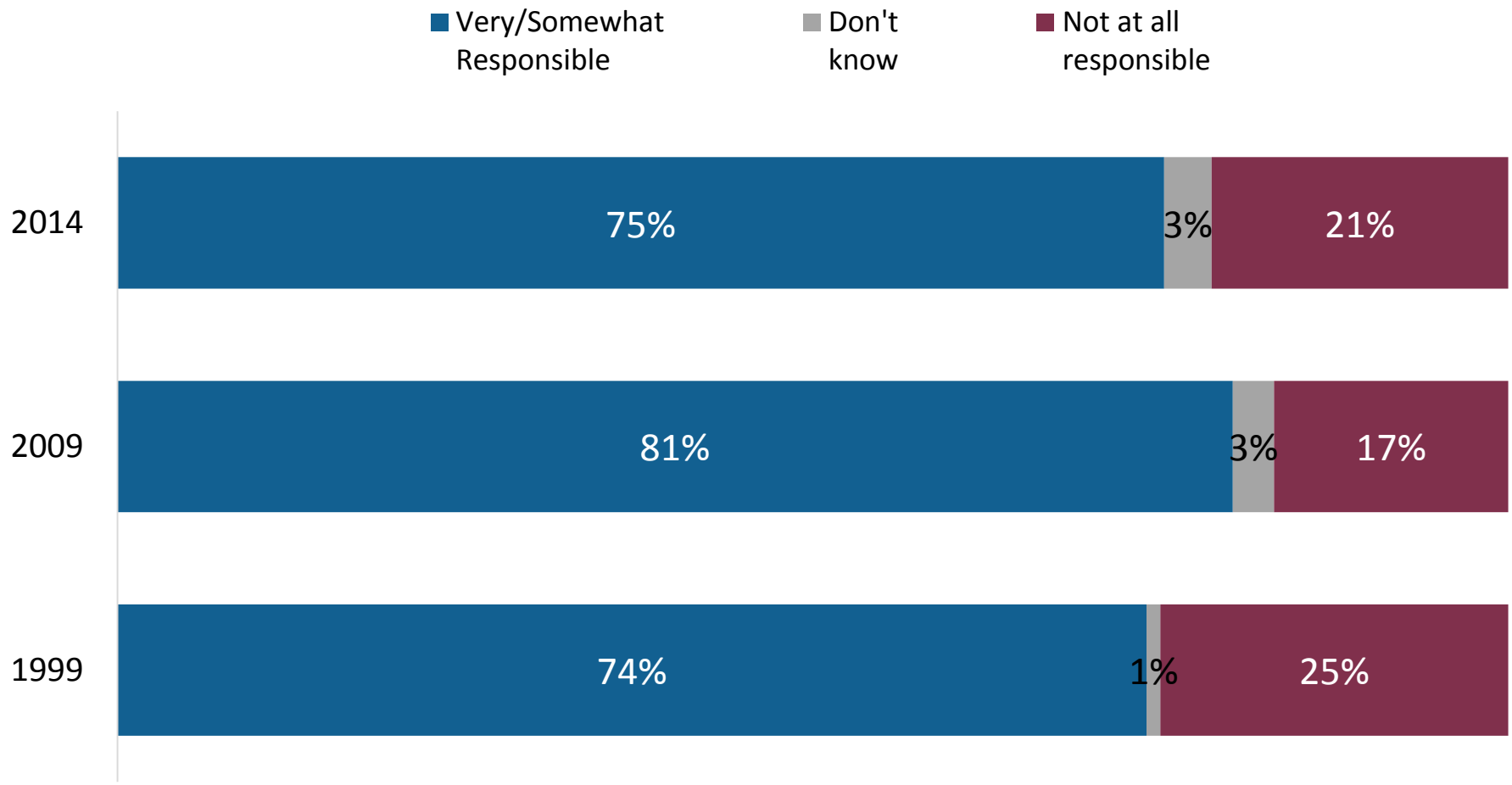
Residents find large industrial or manufacturing companies most responsible for causing water pollution.



Q21-25. Now I'm going to mention some people and groups of people that may be responsible for causing water pollution. For each one I mention, please tell me whether you personally believe that group are very responsible, somewhat responsible, or not at all responsible for causing water pollution.

Private Resident Responsibility

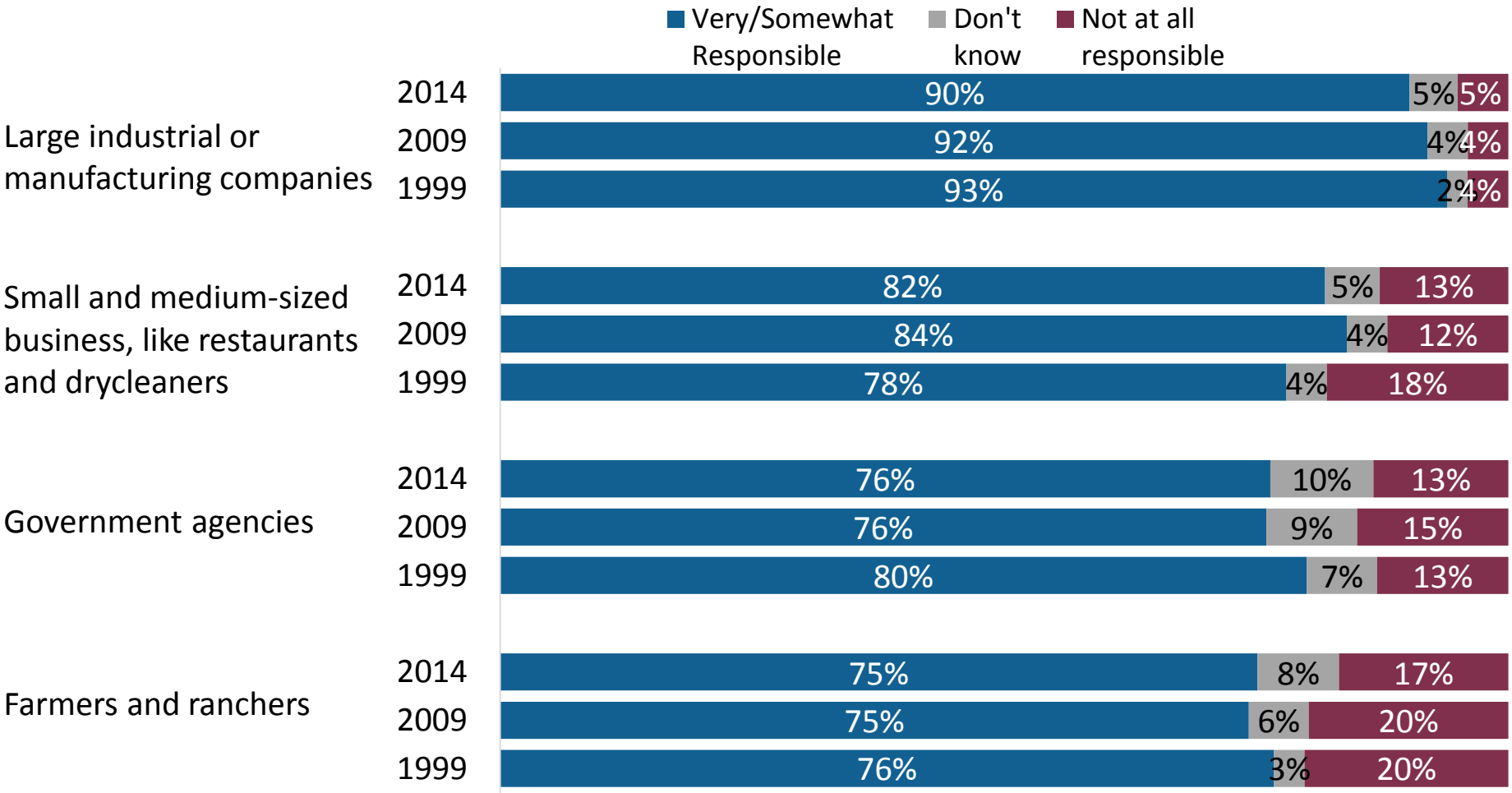
The percentage who believe private residents are responsible for water pollution has decreased in the last five years.



Q24. Please tell me whether you personally believe that Private Residents are very responsible, somewhat responsible, or not at all responsible for causing water pollution.

Water Pollution Responsibility

Responsibility among groups has been consistent since 1999.



Q21-25. Now I'm going to mention some people and groups of people that may be responsible for causing water pollution. For each one I mention, please tell me whether you personally believe that group are very responsible, somewhat responsible, or not at all responsible for causing water pollution.

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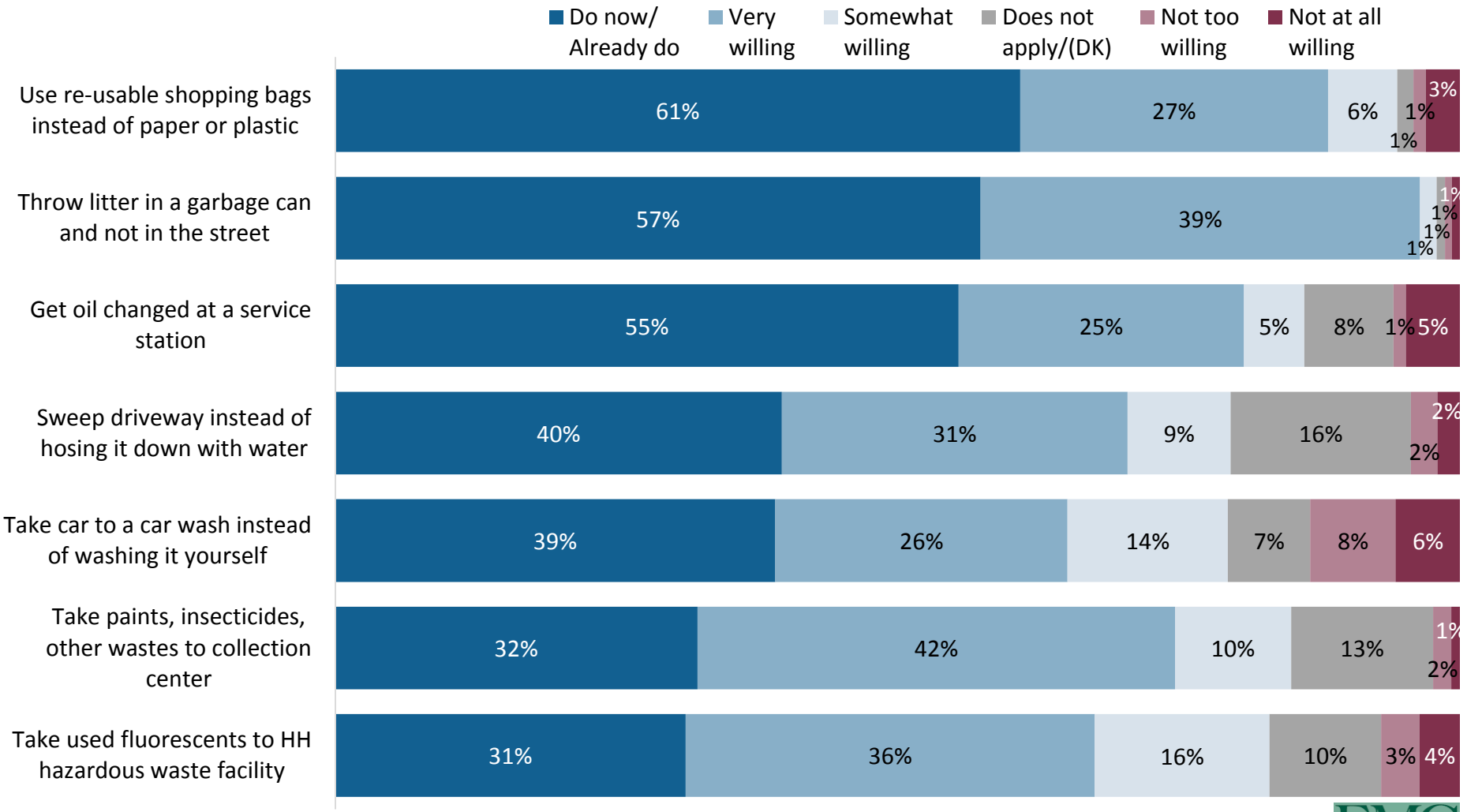
Pollution Behaviors

Pollution Prevention Activity

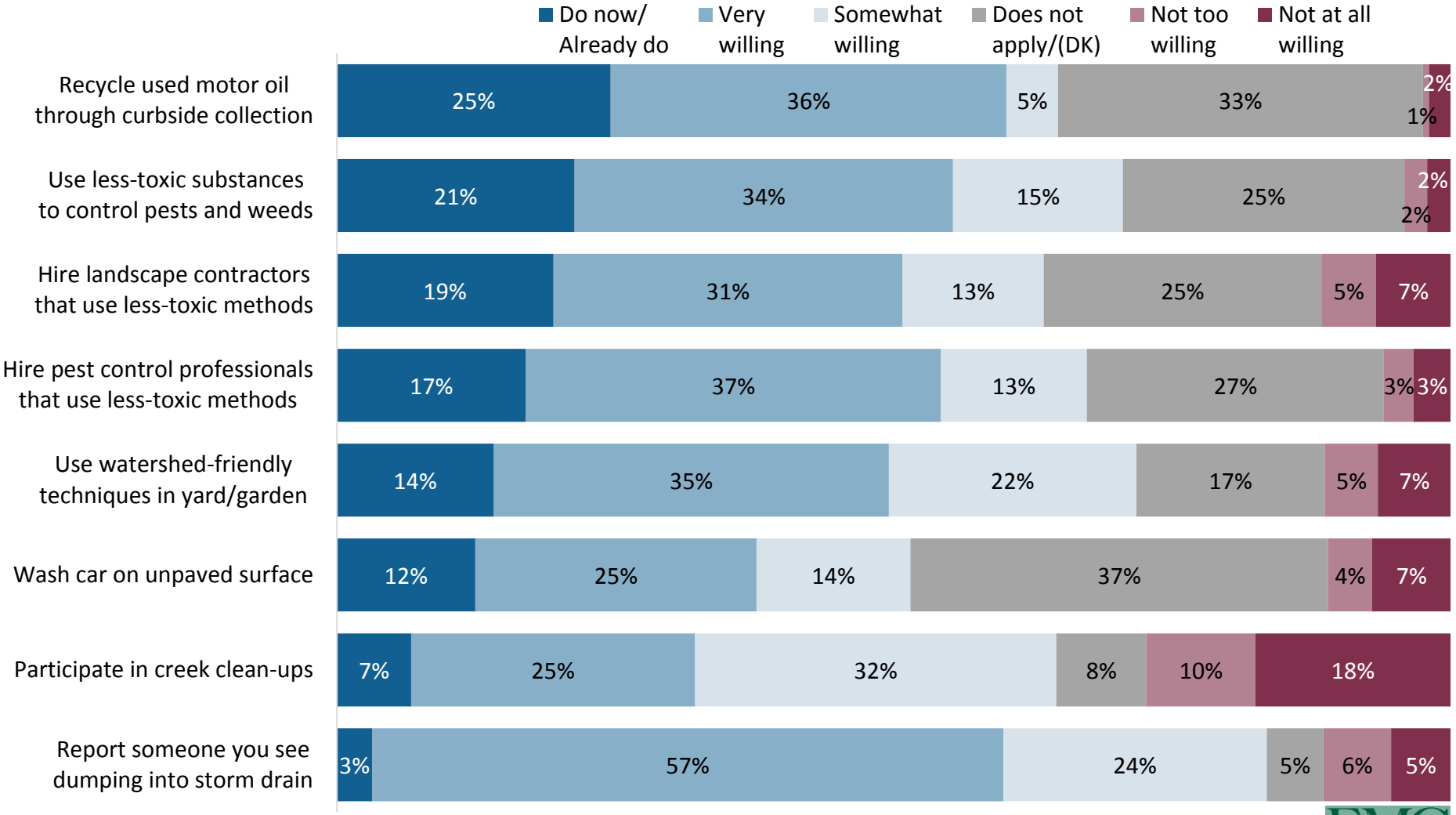
More than 9 out of 10 residents either already do or are very willing to throw litter in a garbage can and not in the street.



Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

Pollution Prevention Activity

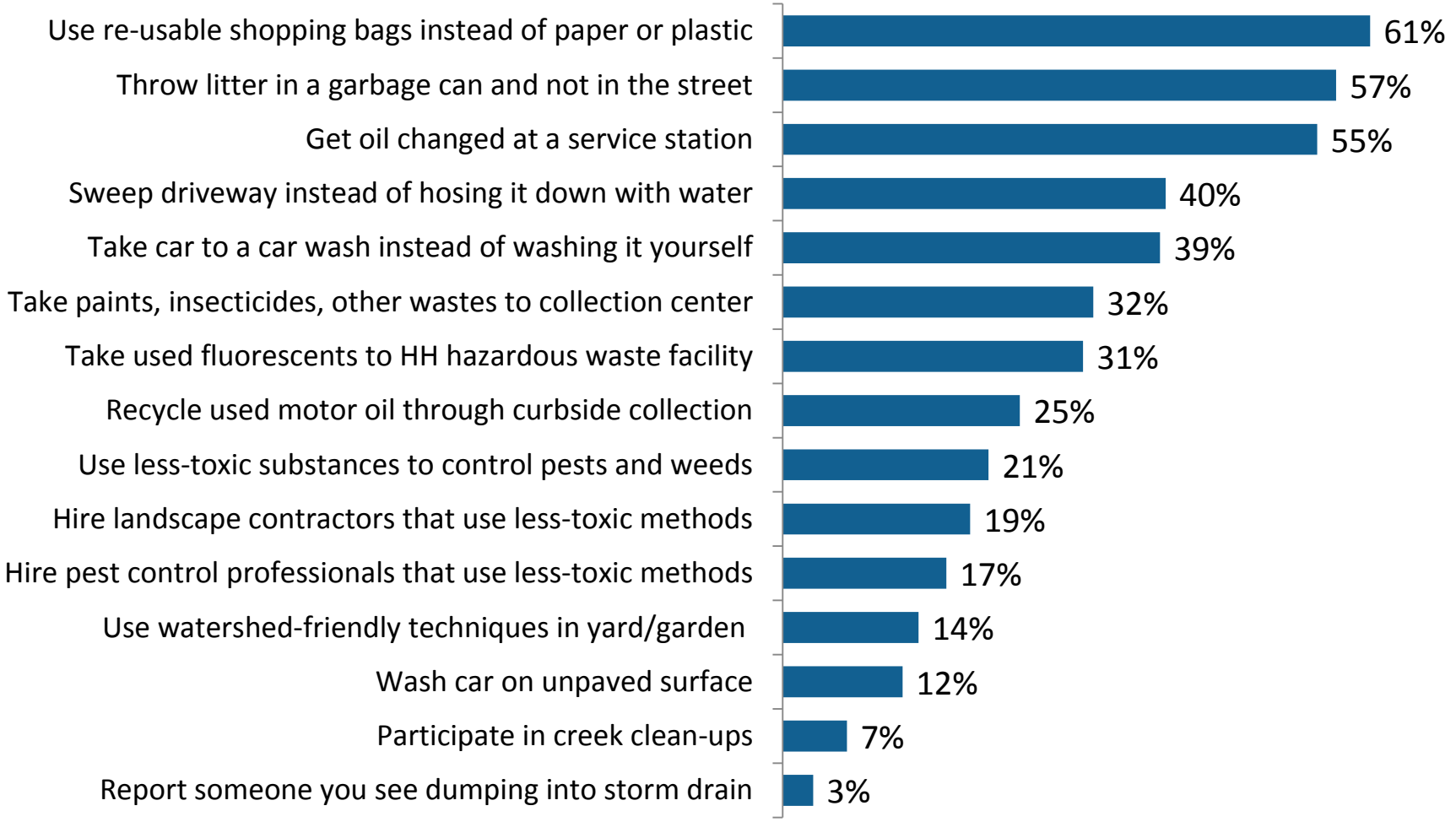
Only three percent of residents report someone they see dumping harmful substances into a storm drain, but nearly sixty percent are very willing to do so.



Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

Pollution Prevention Activity

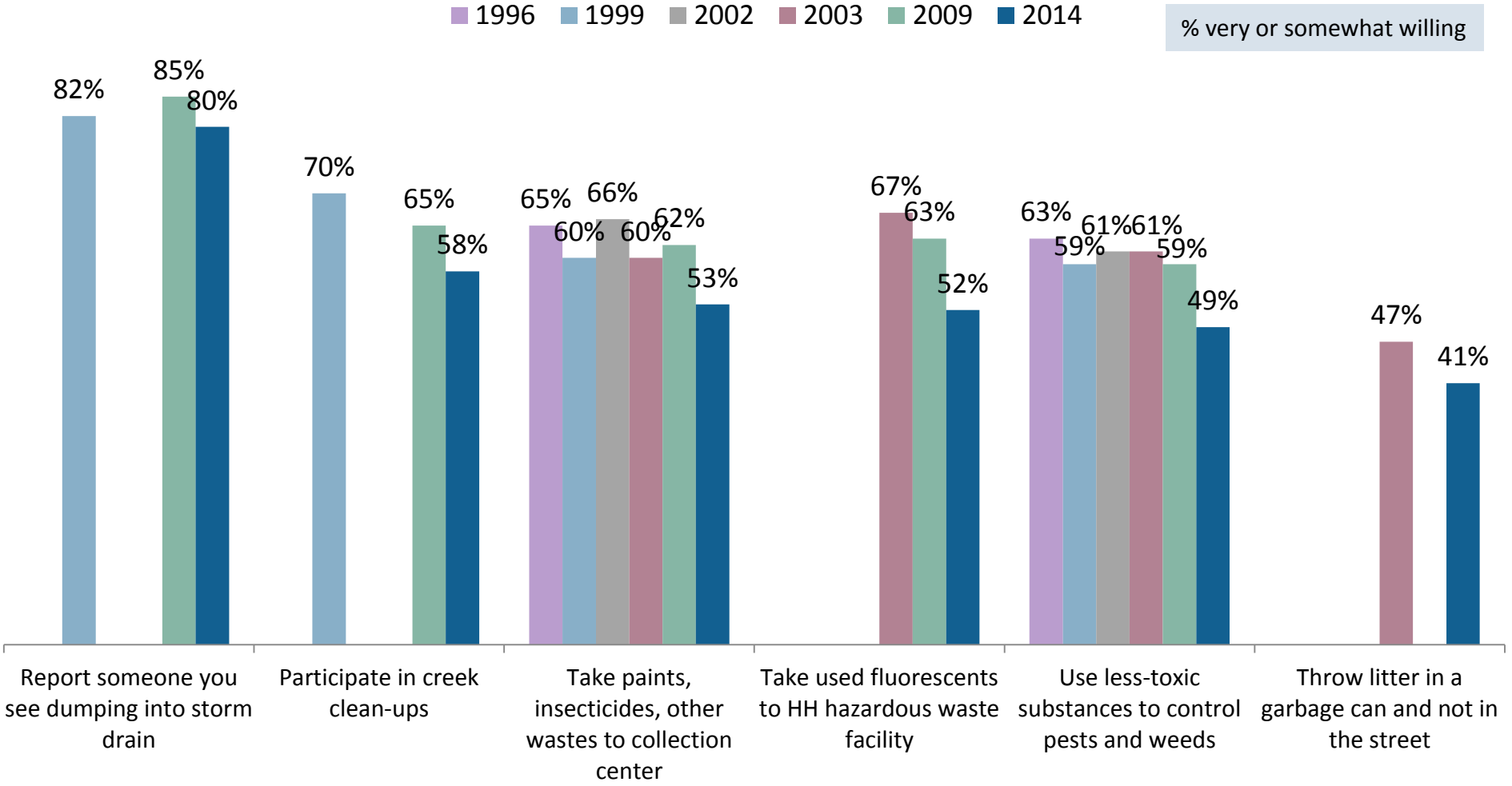
Majorities report using re-usable shopping bags, throwing litter in trash cans, and getting oil changed at a service station.



Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too. - ***% who do it now.***

Pollution Prevention Activity

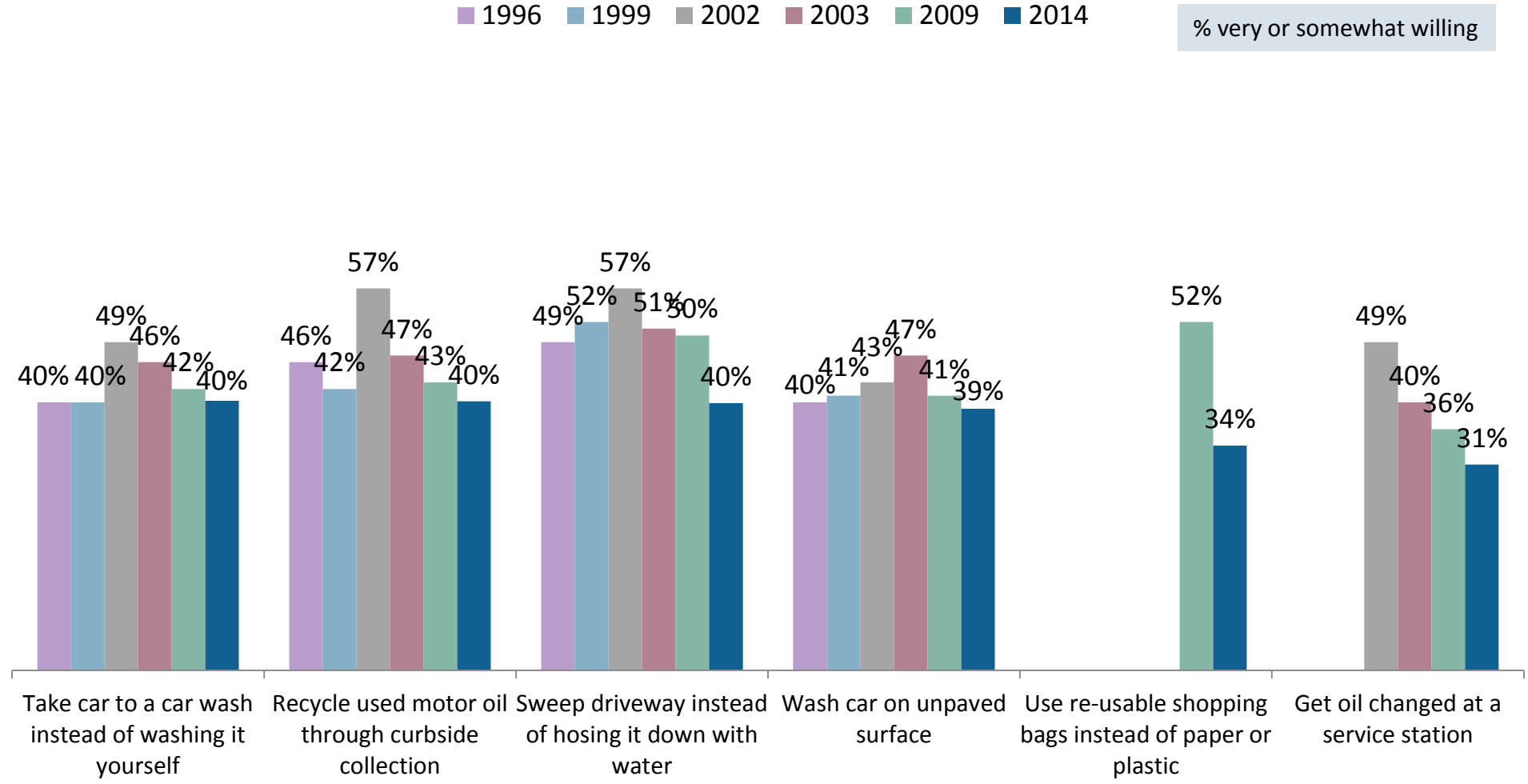
A majority of residents remain willing to report someone they see dumping into a storm drain and participate in creek clean-ups.



Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

Pollution Prevention Activity

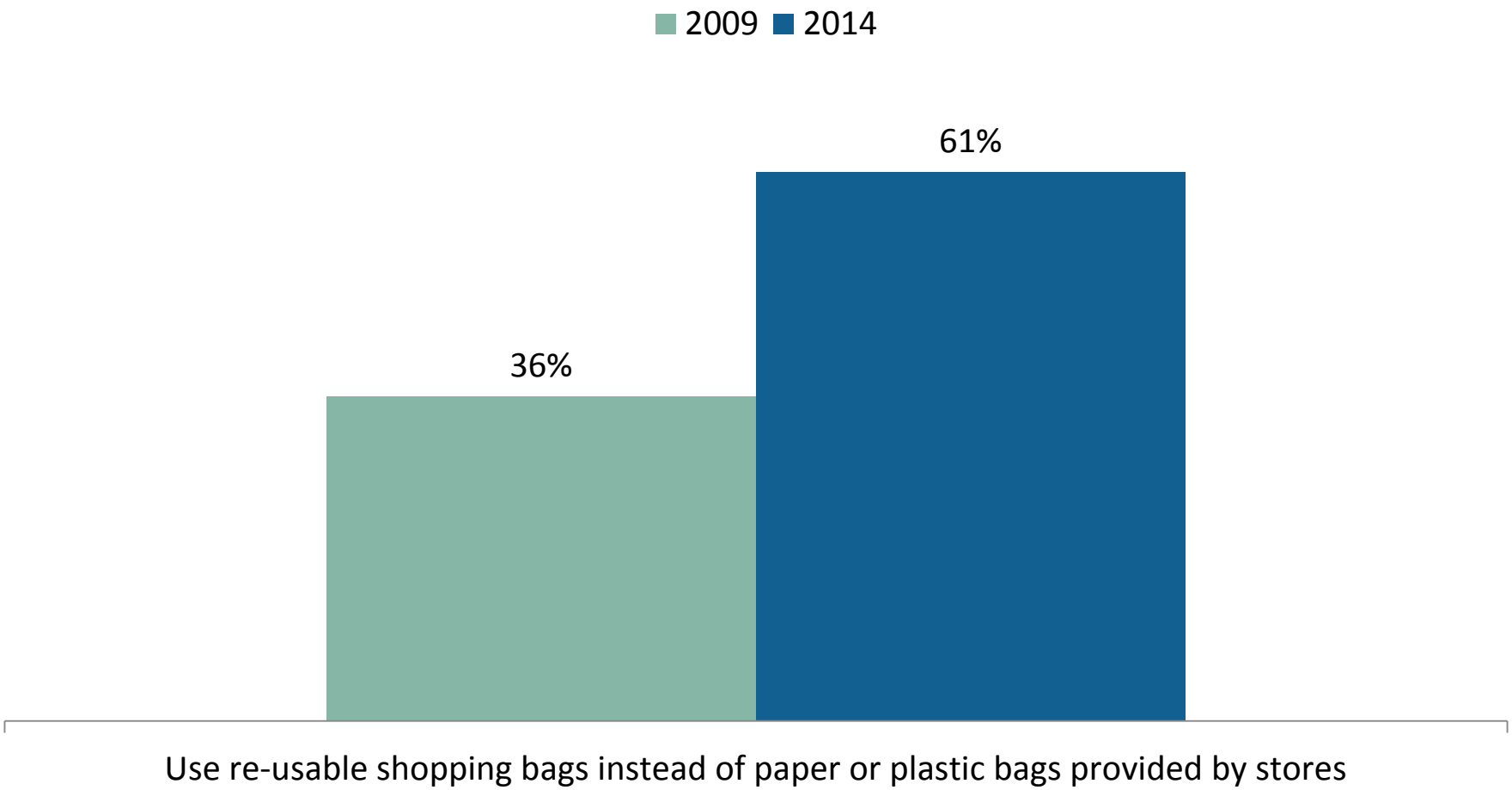
There has been a decrease in the percentage of residents reporting they are willing to sweep their driveway and get their oil changed at a service station.



Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

Pollution Prevention Activity

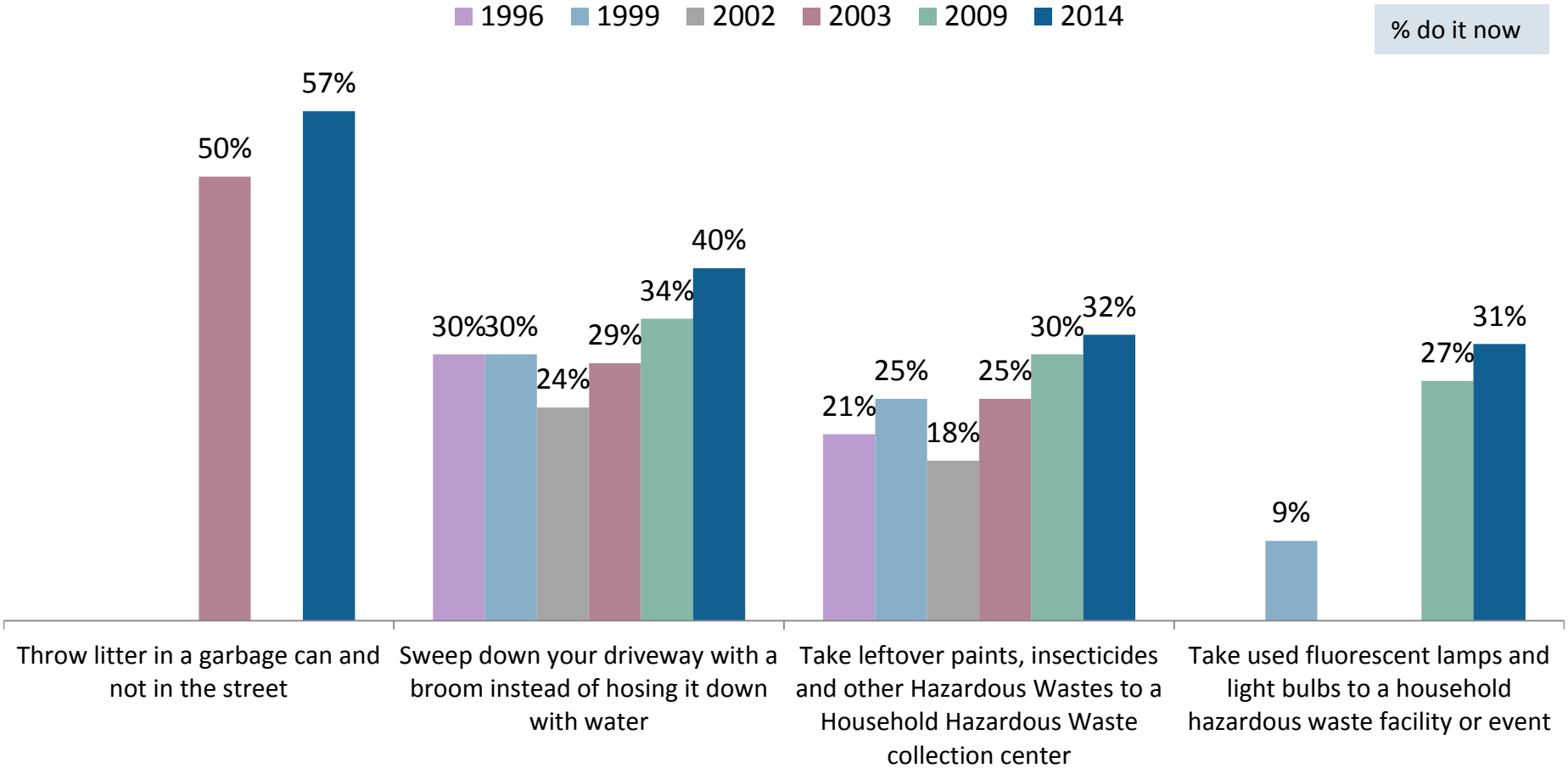
There has been a dramatic increase in the percentage of residents using re-usable shopping bags compared to 2009.



Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

Pollution Prevention Activity

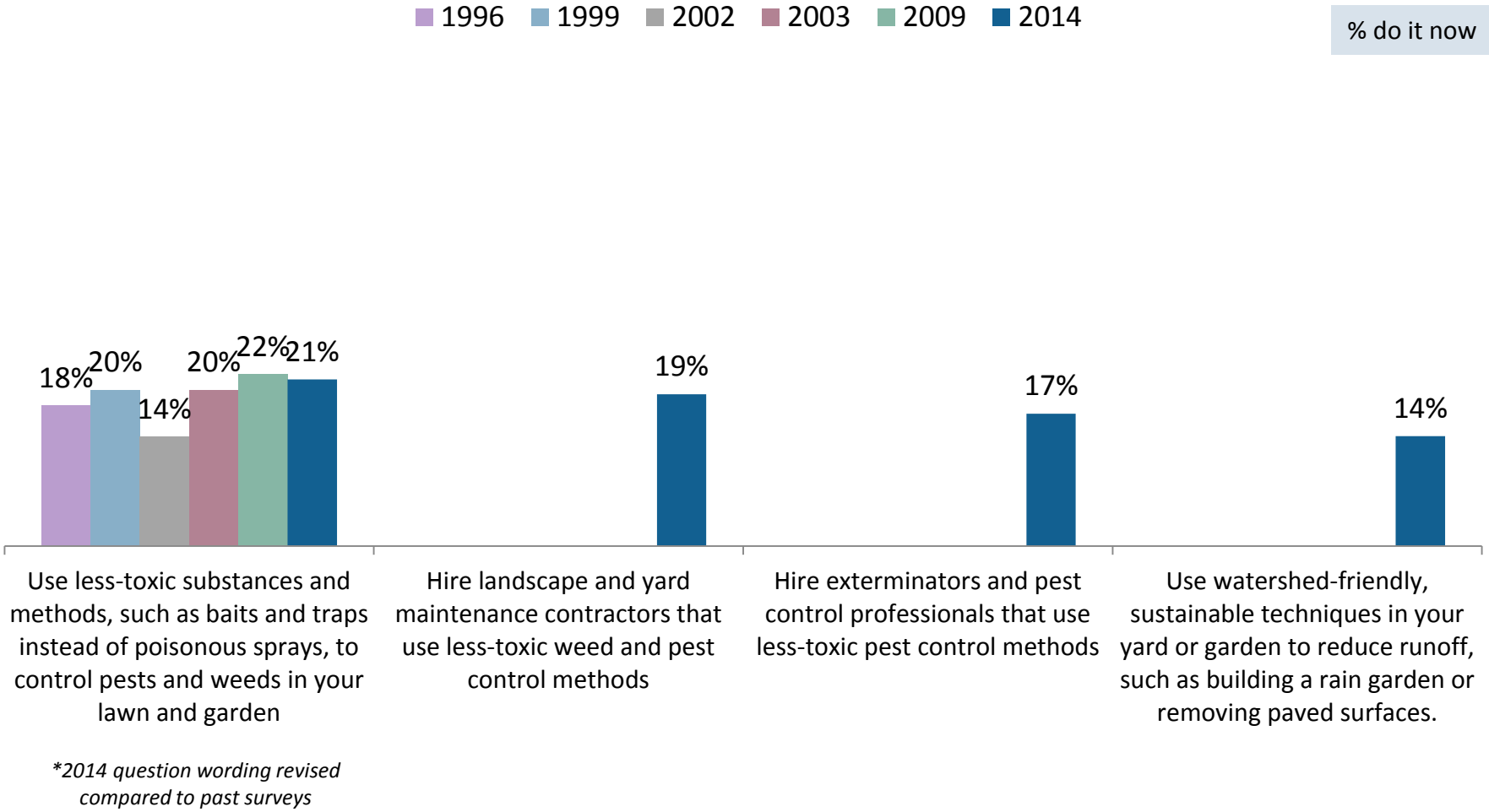
There has been an increase in the percentage of residents reporting that they throw litter into trash cans, sweep driveways, and take hazardous wastes to collection facilities.



Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

Pollution Prevention Activity

Twenty-one percent of respondents indicate they currently use less-toxic substances to control pests and weeds in their lawn or garden.

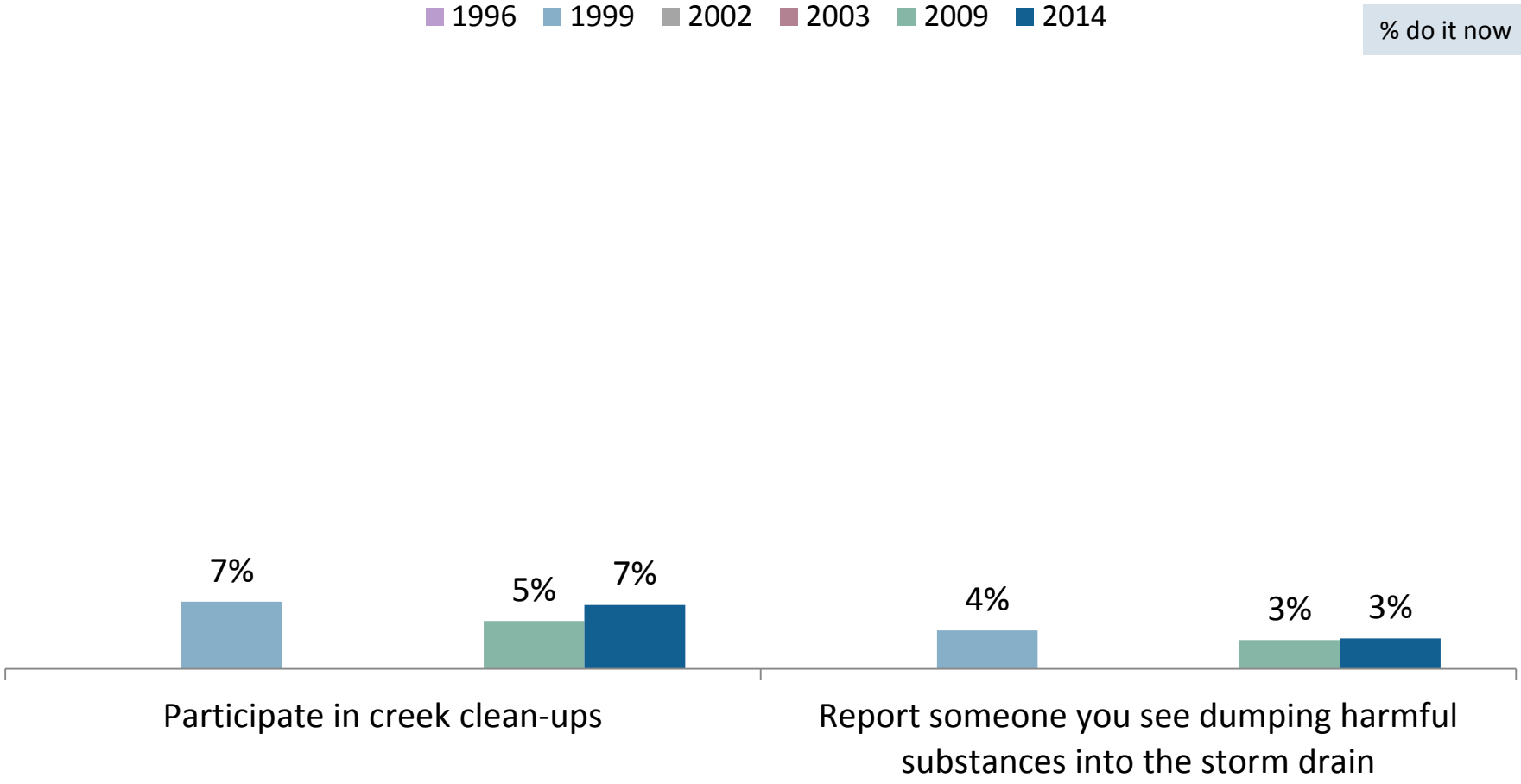


**2014 question wording revised compared to past surveys*

Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

Pollution Prevention Activity

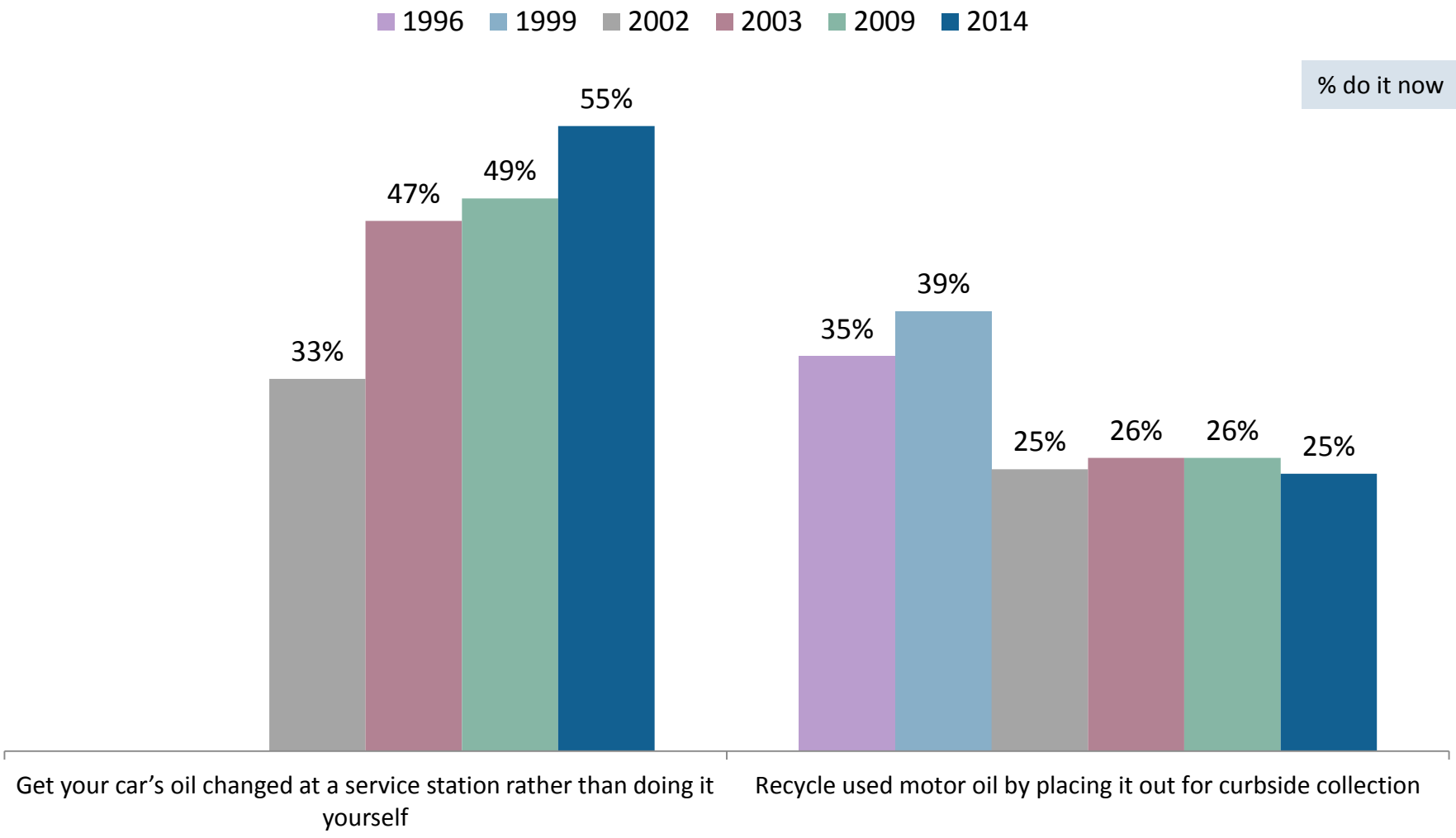
Participation in creek clean-ups and the reporting of people dumping things down the storm drain remain low.



Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

Pollution Prevention – Oil Change

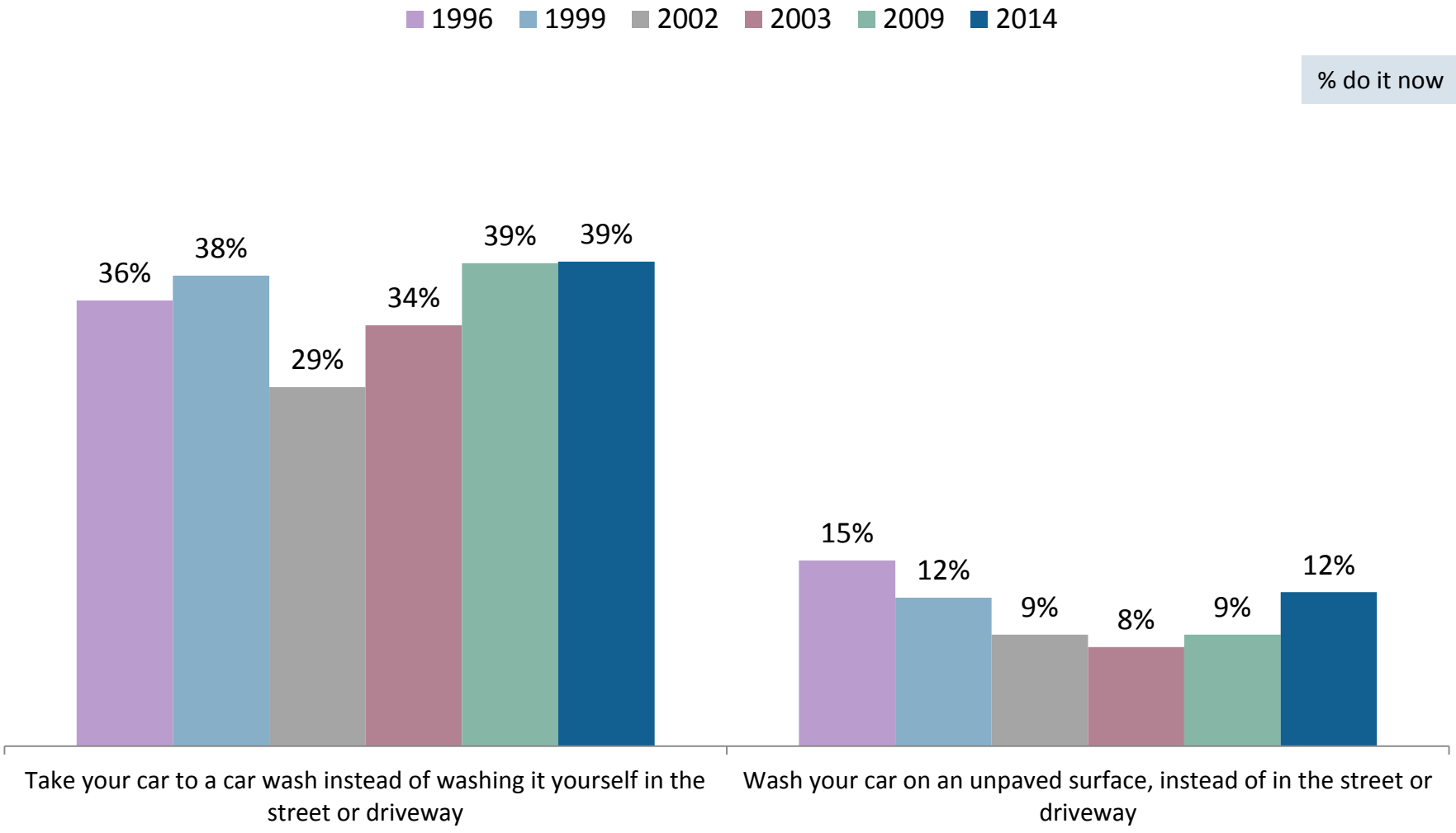
More than half of residents report getting their oil changed at a service station.



Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

Pollution Prevention – Car Wash

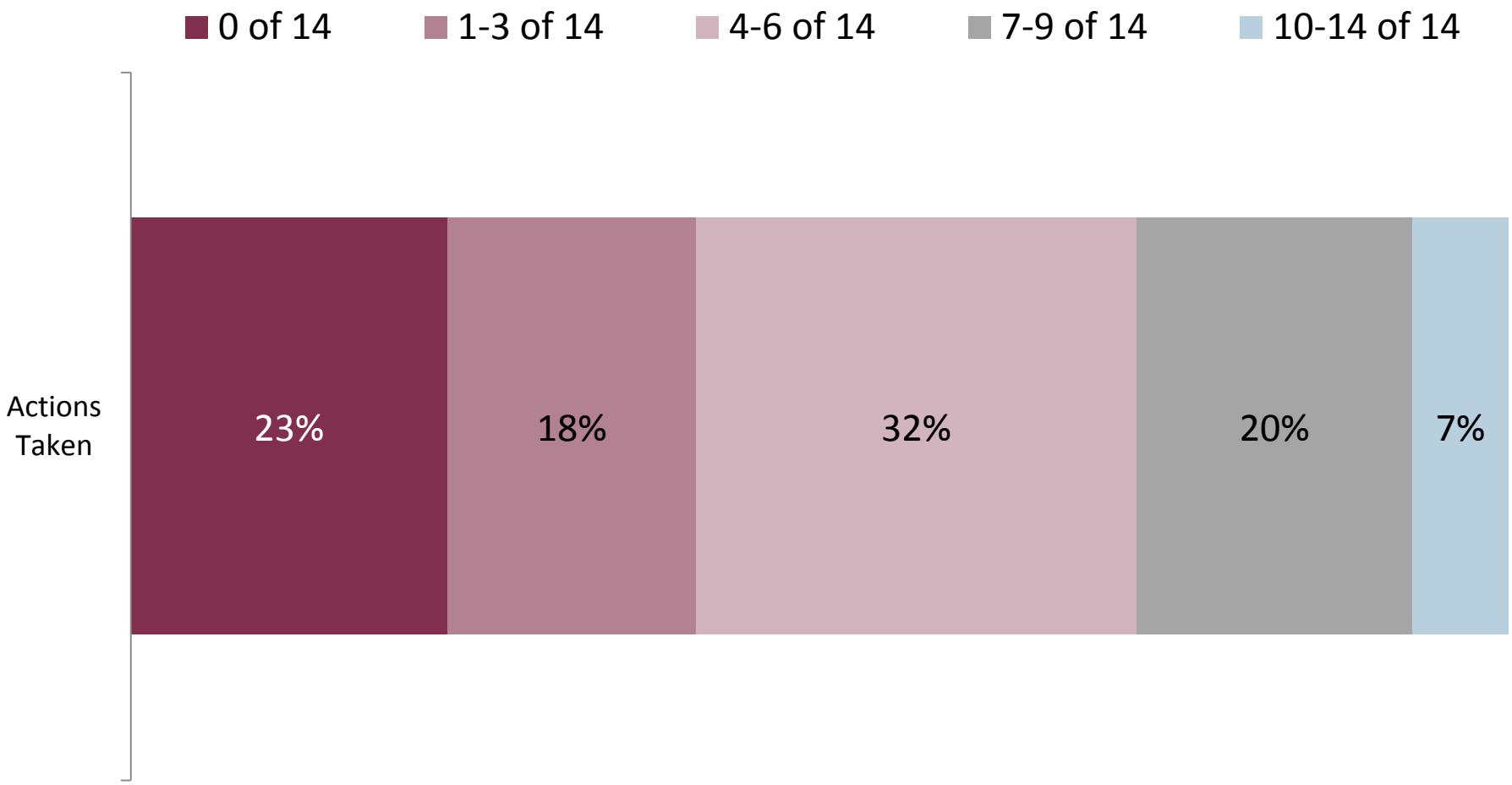
Car wash behavior has remained relatively consistent.



Q32-Q46. For each one I mention, please tell me how willing you would be to take that action. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

Number of Actions

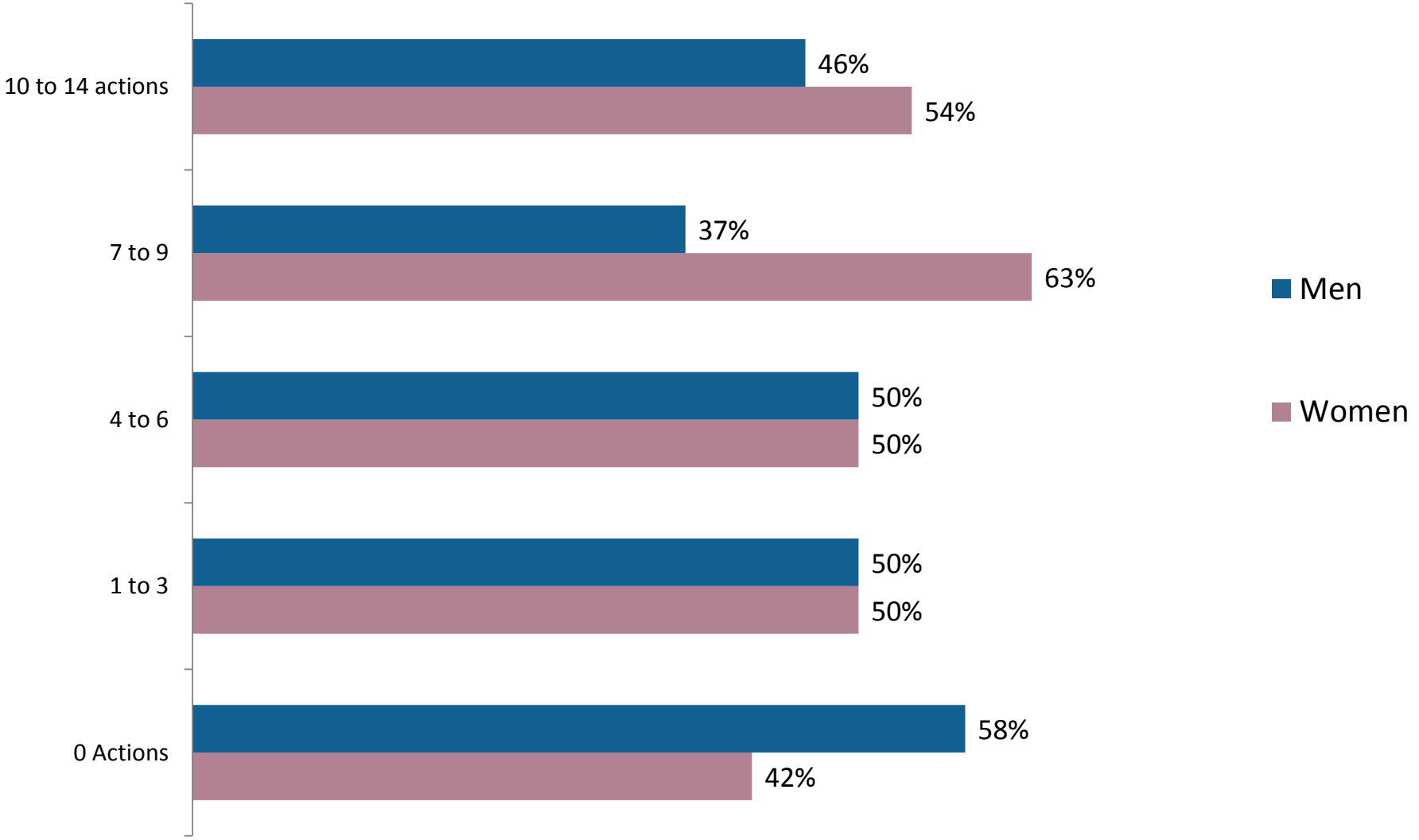
One-third of residents report taking 4 to 6 of the 14 actions; just under ¼ take 0 actions.



The number of actions residents are taking to prevent water pollution. – ***All 14 actions tested.***

Number of Activities – By Gender

Those reporting that they take 7 to 9 actions are much more likely to be women.



Number of actions taken, by gender – 14-point scale.

Pollution Prevention Scale

A 6-point scale showing the number of pollution prevention activities respondents already do was created using the following questions (*used to track Short Term Goal 1*):

32. Recycle used motor oil by placing it out for curbside collection

34. Take leftover paints, insecticides and other Hazardous Wastes to a Household Hazardous Waste collection center

35. Use less-toxic substances and methods, such as baits and traps instead of poisonous sprays, to control pests and weeds in your lawn and garden

    - **Previous surveys used the following question wording: "Use non-toxic substances rather than pesticides and herbicides to control pests and weeds in your lawn and garden."*

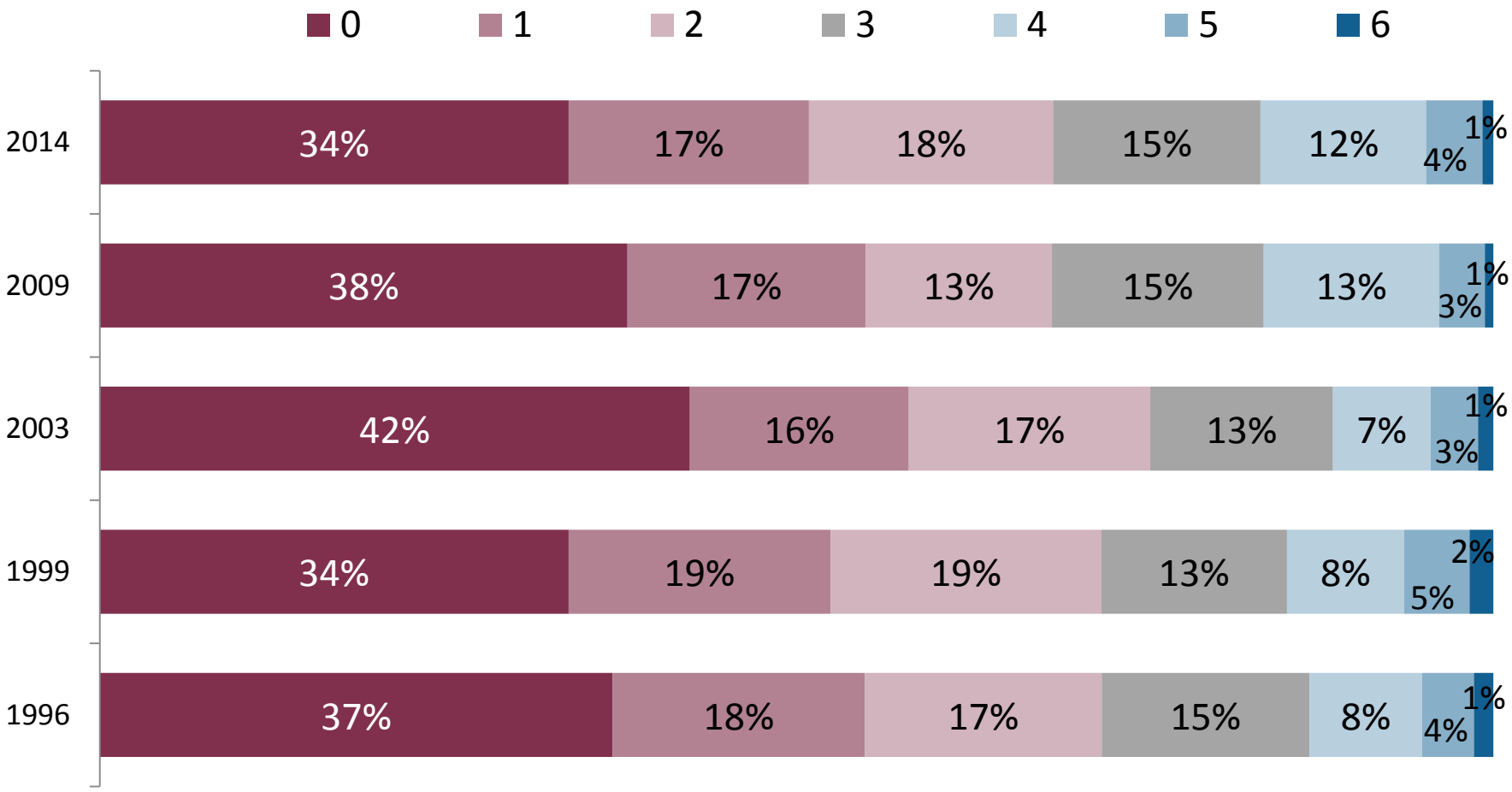
36. Sweep down your driveway with a broom instead of hosing it down with water

37. Take your car to a car wash instead of washing it yourself in the street or driveway

38. Wash your car on an unpaved surface, instead of in the street or driveway

Number of Activities by Year

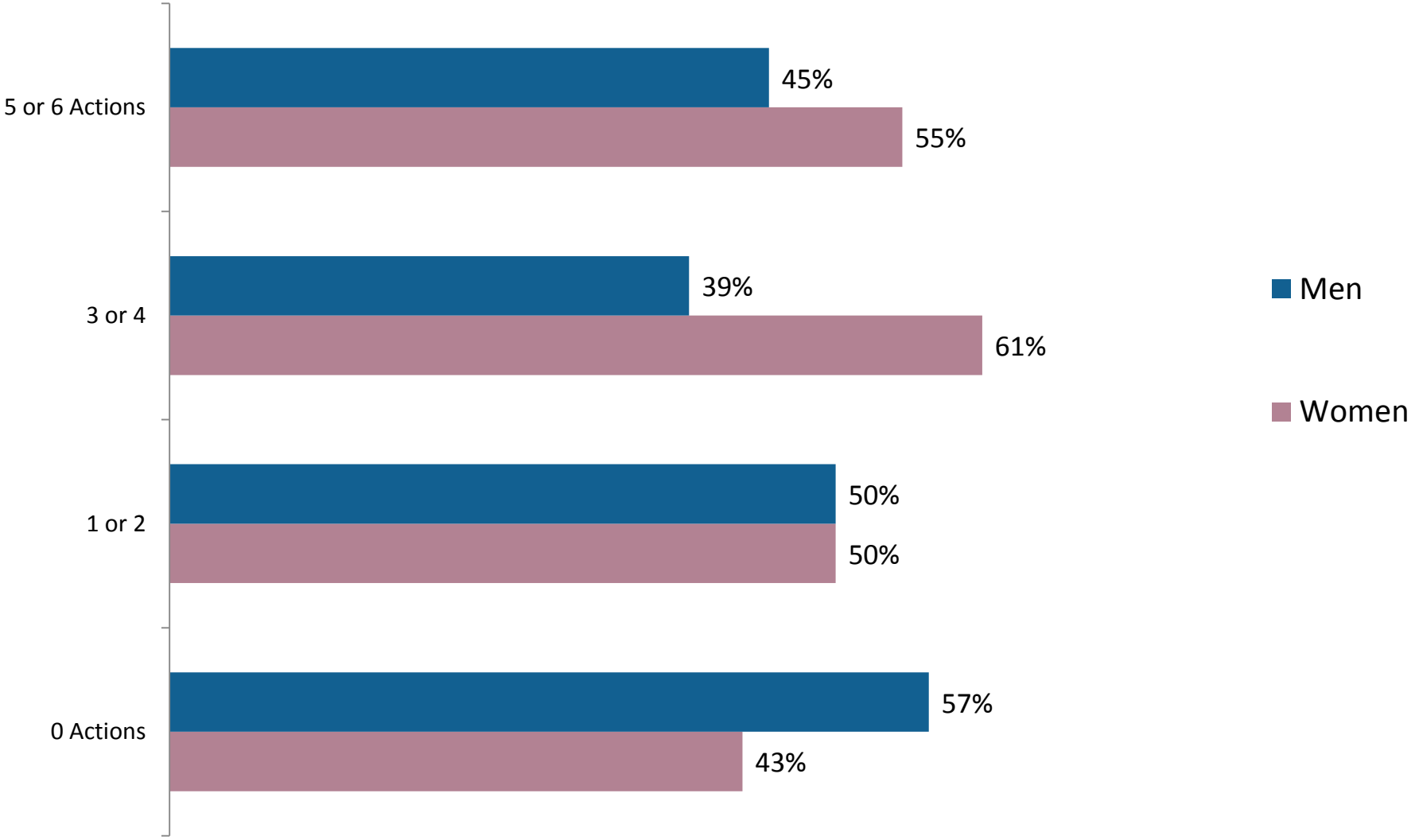
The percentage of residents reporting that they take 0 of the 6 actions has declined steadily since 2003.



The number of activities residents are taking to prevent water pollution.

Number of Activities – By Gender

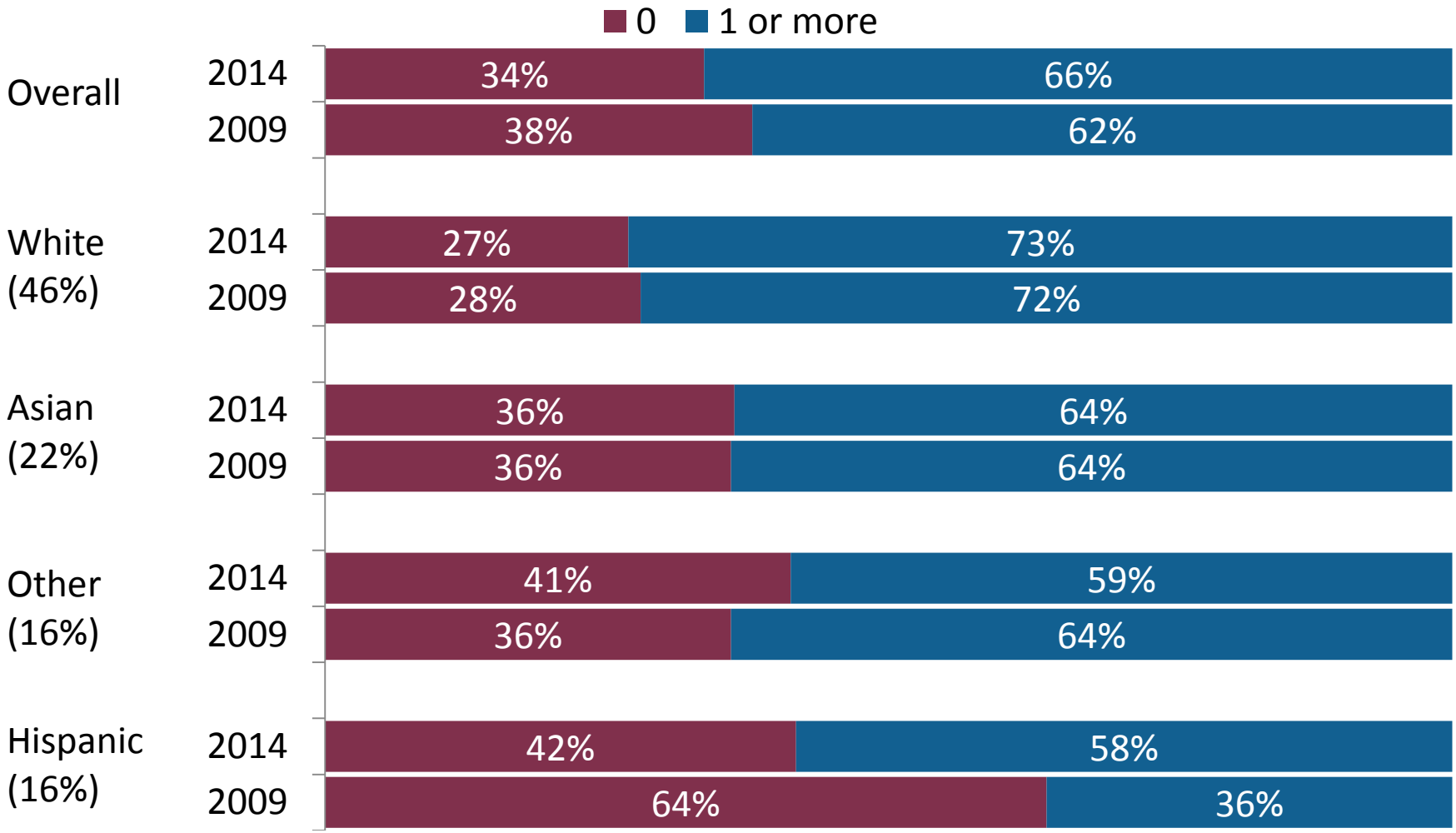
Those reporting that they take 0 actions are much more likely to be men.



Number of actions taken, by gender – 6-point scale.

Number of Activities - By Ethnicity

The percentage of Hispanic residents performing at least one pollution prevention activity has increased significantly since 2009.



The number of activities residents are taking to prevent water pollution by ethnicity.

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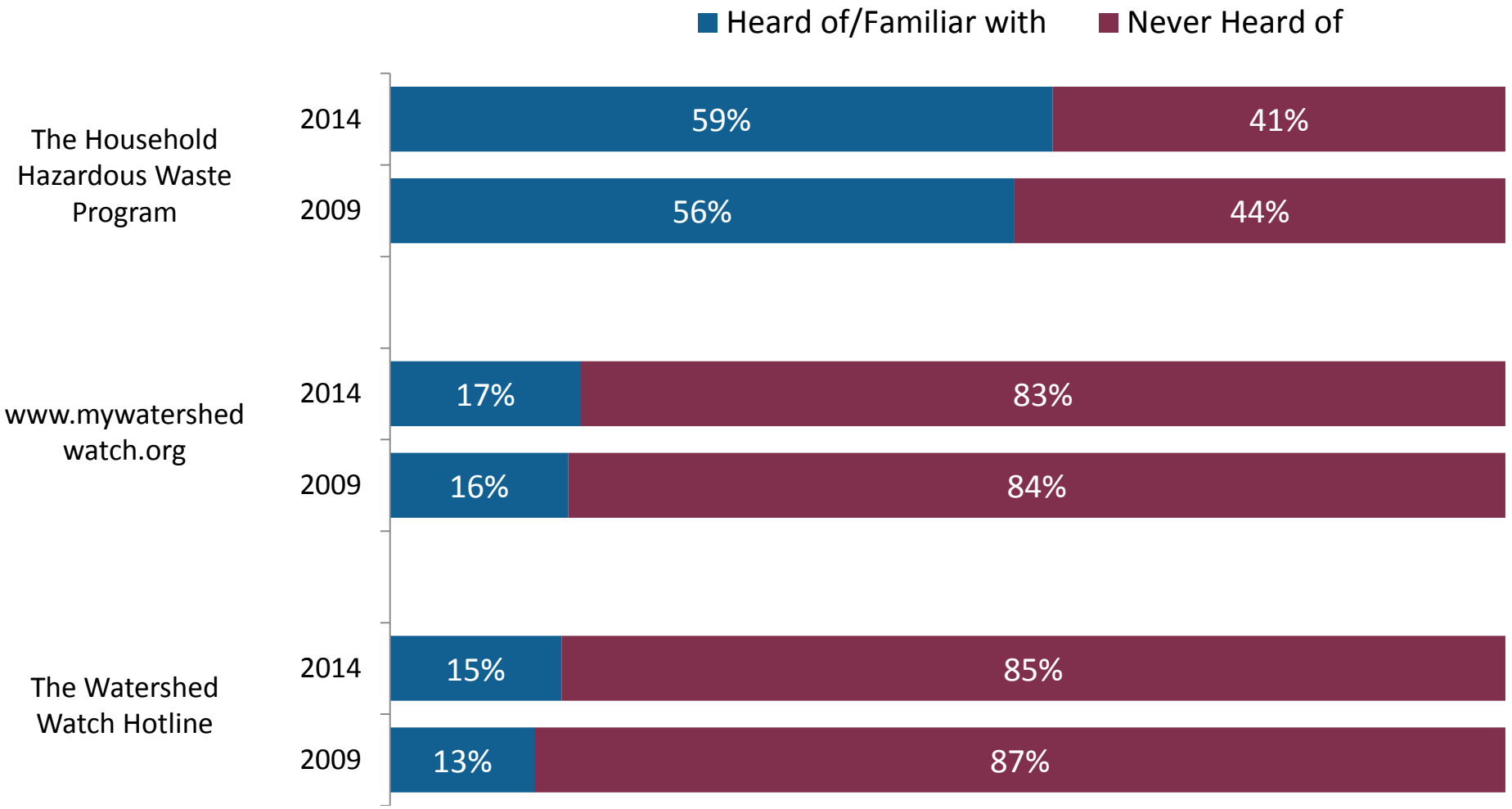
Demographics & Communication

Watershed Organization Awareness

There has been a small gain in awareness of the Household Hazardous Waste Program, mywatershedwatch.org, and the watershed watch hotline.



Q47-49. Please tell me if you have a favorable or unfavorable opinion of each of the following. If you have never heard of one, please say so.

Preferred Methods of Messaging

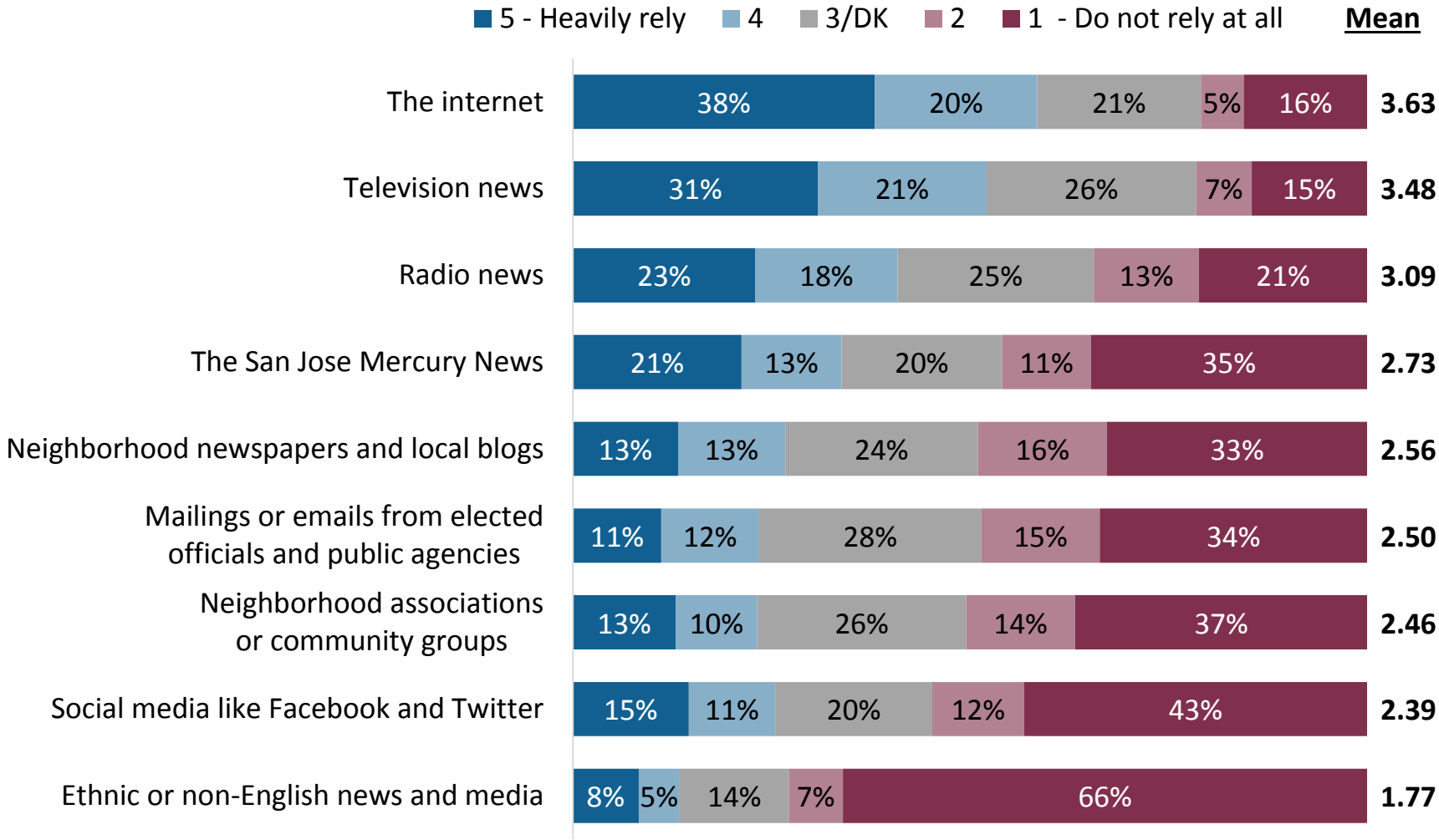
Mail, flyers and door hangers continue to be the preferred method for receiving environmental messaging.

	2009	2014
Mail/flyers/door hangers	34%	29%
Email	22	23
Television	17	15
The internet/Online/The web	11	9
The newspaper	8	7
Phone call	2	3
Text message	0	1
Blogs	-	0
Other	1	3
Don't want/care to received environmental messages	2	4
Don't know/Refused	3	5

What is your preferred method for receiving environmental messaging and other related information?

Local News Sources

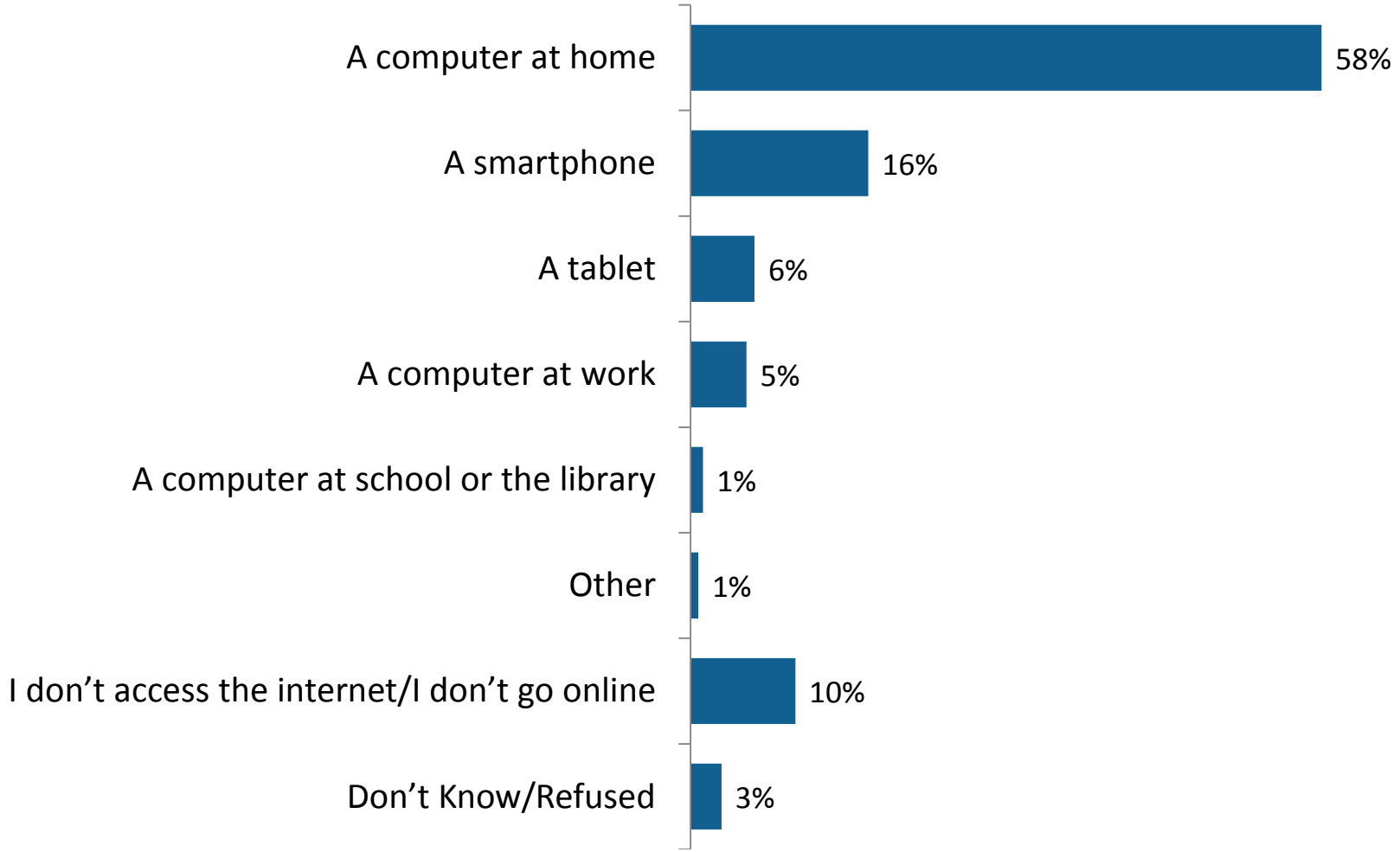
The internet, television news, and radio news are the sources residents rely on most for receiving local news and information.



Q51-Q59. On a scale of one to five, how much do you rely on each of the following sources to receive your local news and information, where one means you do not rely on the source at all, and a five means you rely on the source very heavily.

Internet Access

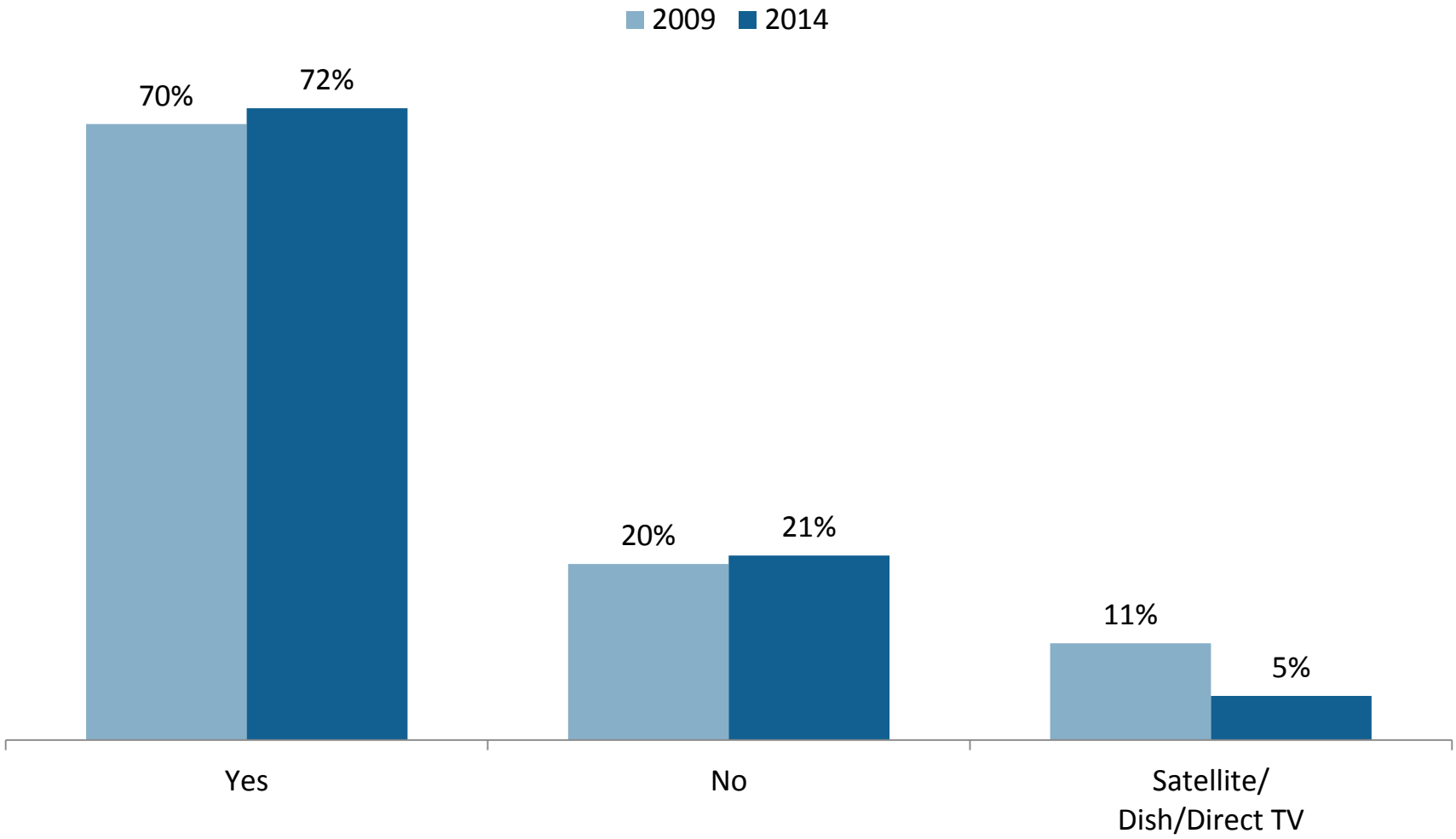
Residents most often use their home computer to access the internet.



Q60. What type of equipment or device do you primarily, or most often use, to access the internet for general browsing, information searches, or other online activity?

Cable Access

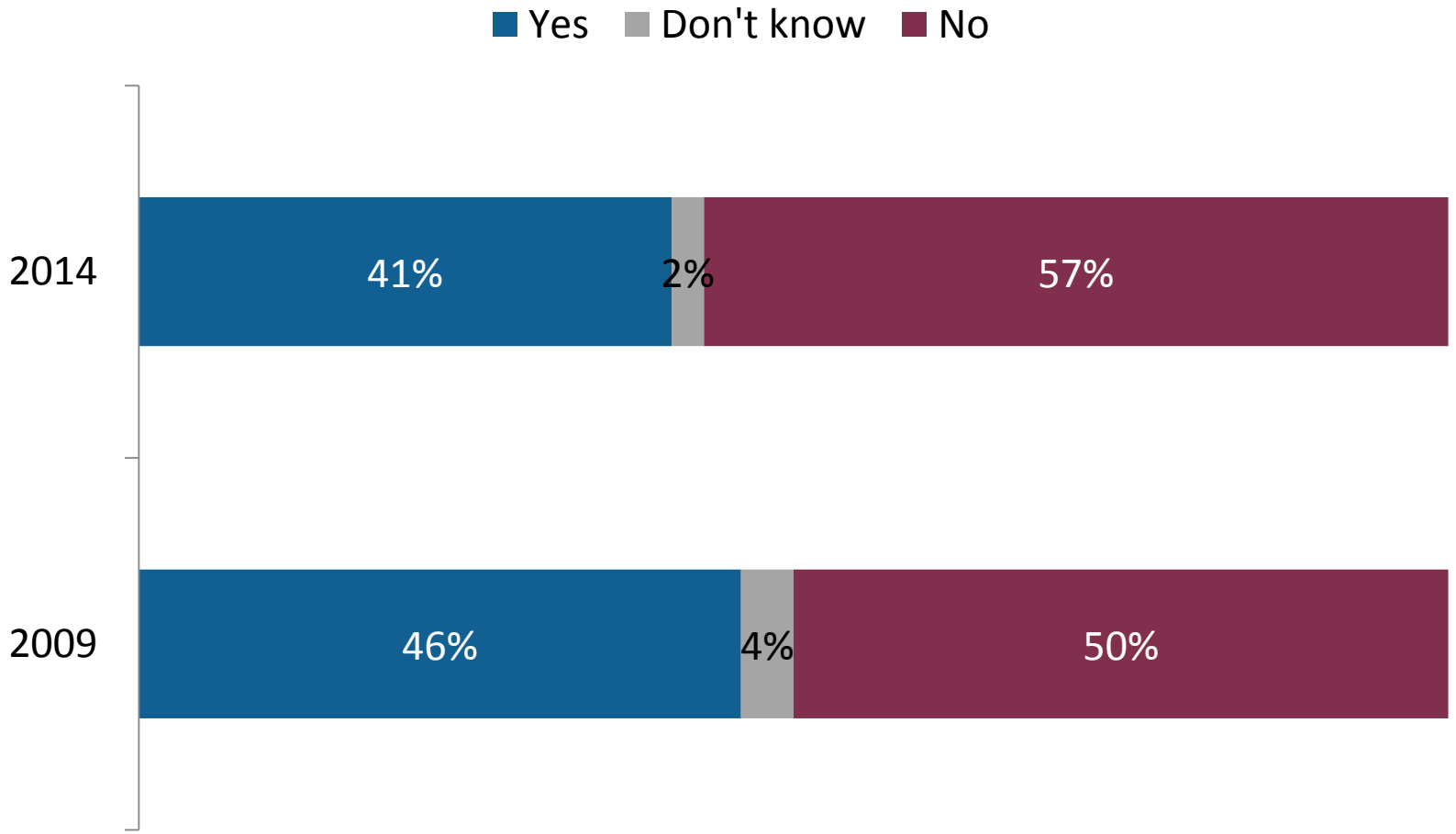
The vast majority of residents have cable TV service in their home.



Q62. Do you have cable TV in your home?

Community Newspaper Readers

The percentage of residents that regularly read their neighborhood or community newspaper has declined since 2009.

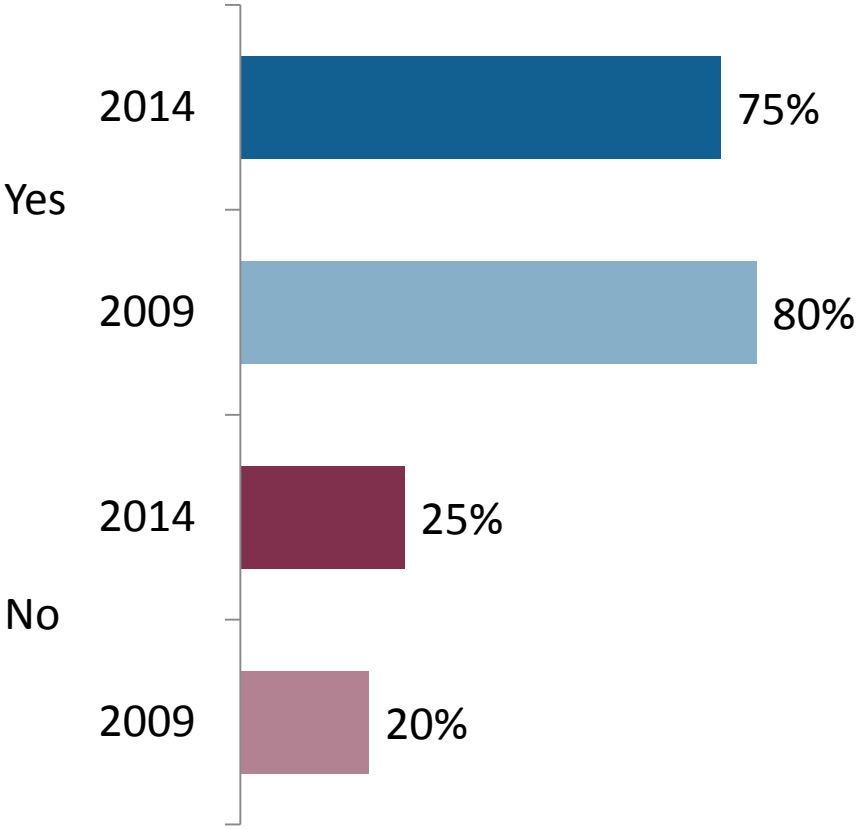


Do you read your neighborhood or community newspaper regularly?

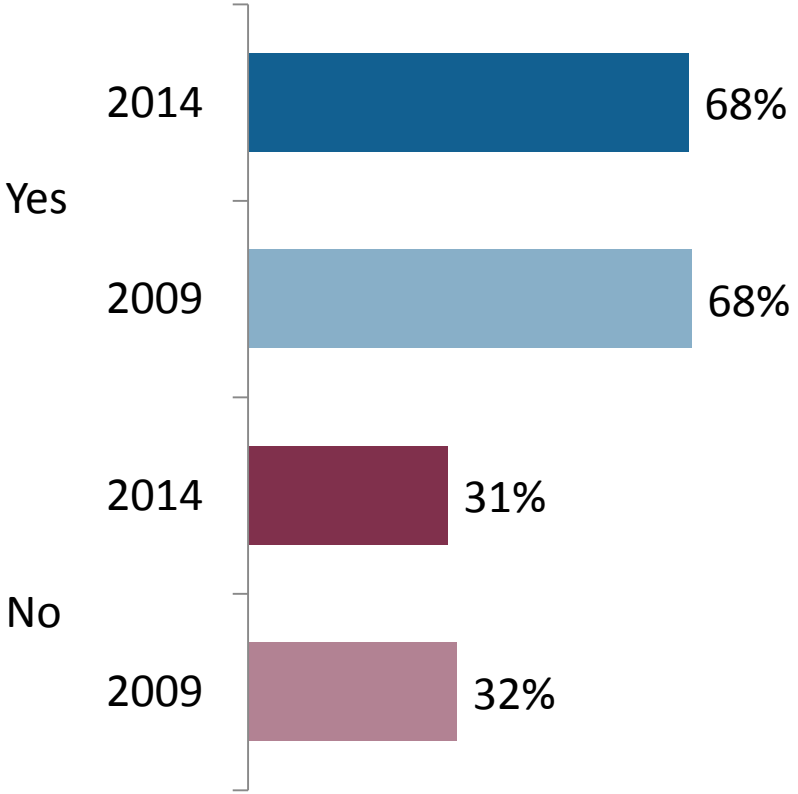
Have a Yard or Garden

The majority of residents have a garden and maintain it themselves.

Do you have a yard or garden?



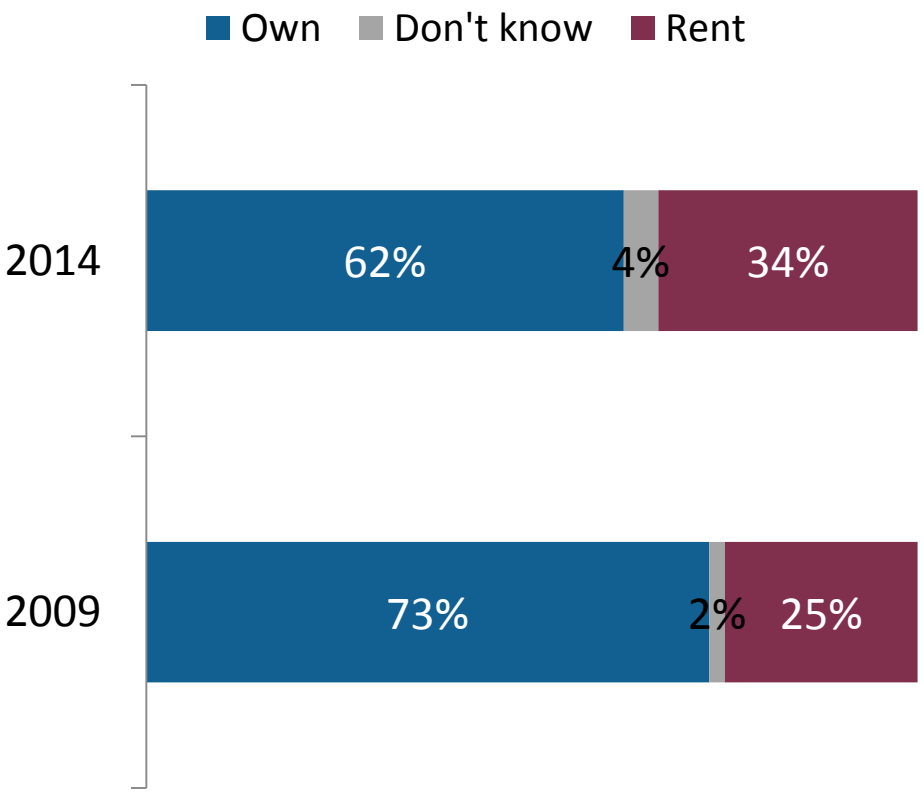
Of those with a yard, maintain it themselves? (n=464)



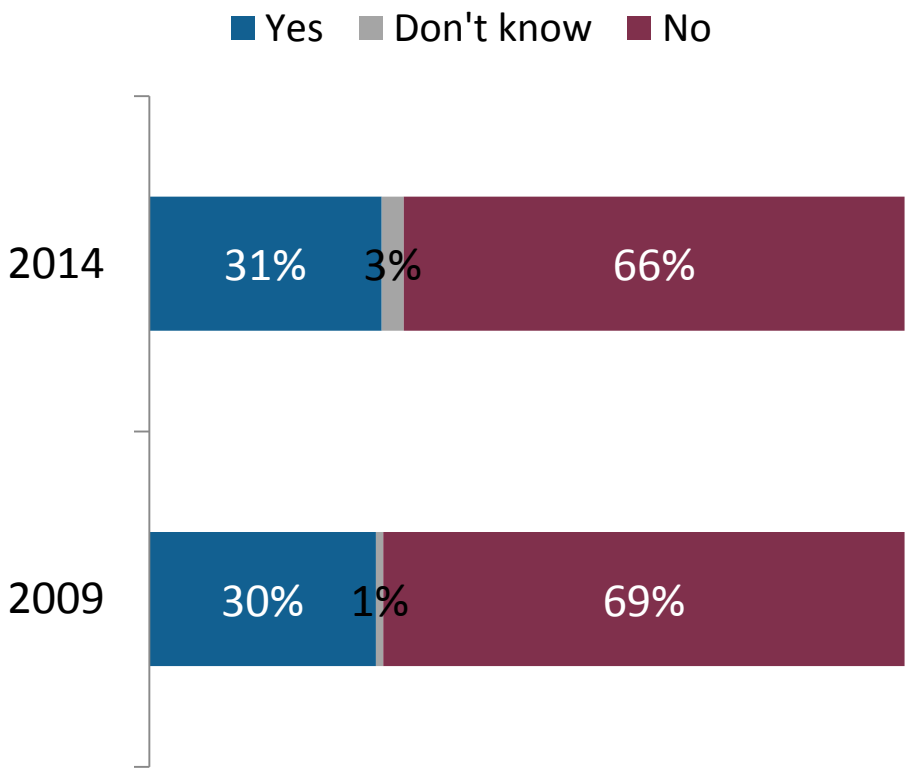
Housing Situation & Parents

Nearly three quarters of residents are homeowners; slightly less than one-third have children in elementary or middle school.

Q66. Do you own or rent your apartment or home?



Q63. Do you have any children in elementary or middle school?



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Short & Long Term Goals

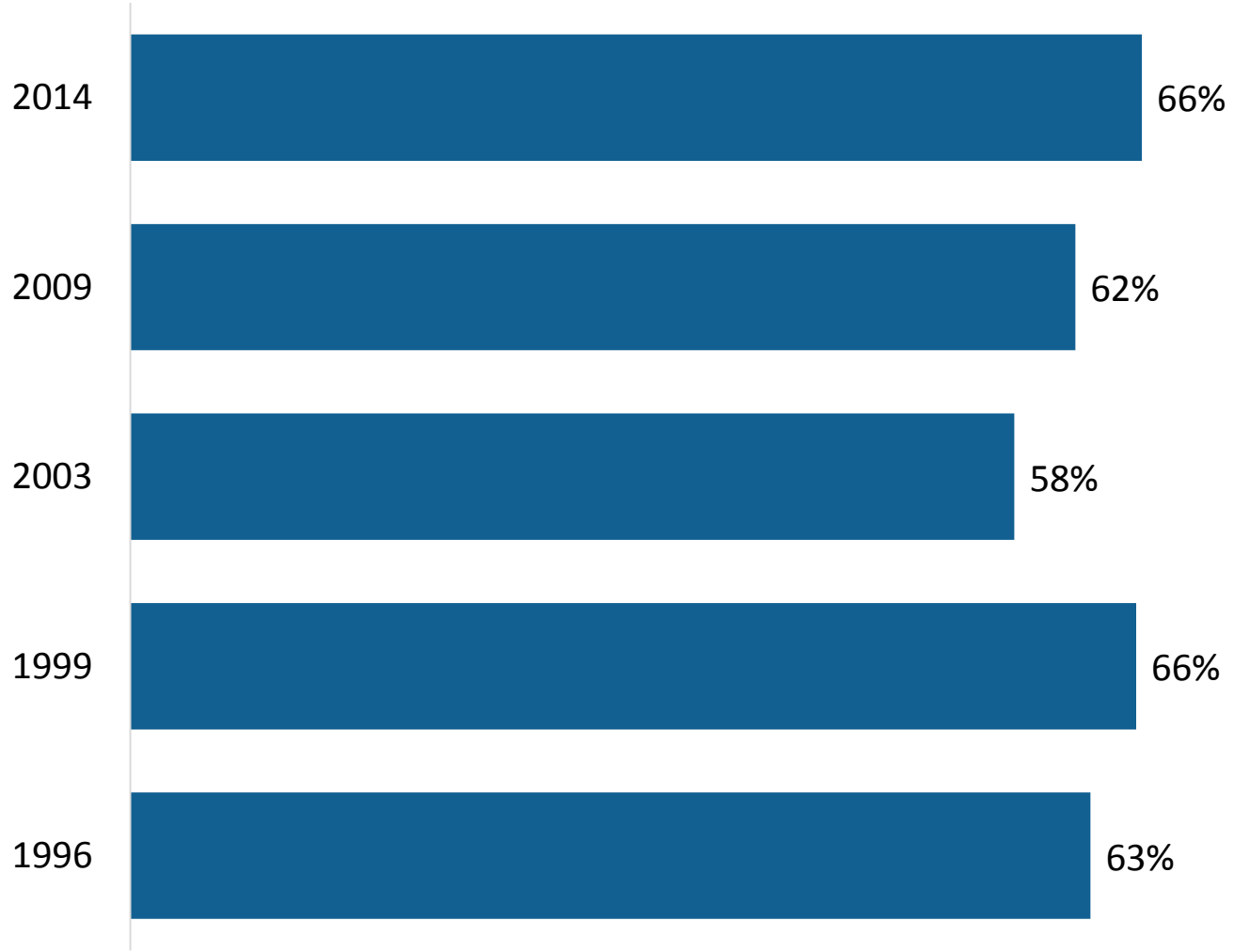
Goal Summary – Short Term Goal 1

While there has not been a 10-point increase since 1999, there has been steady improvement since 2003, and two-thirds now report taking at least one action.

- **Short Term Goal 1:** Change behaviors that negatively impact the watershed.
  - *By 2009 there will be an increase of 10 points based on the 1999 survey in the percentage of residents that take selected pollution prevention actions.*
    - **2014 Measurement = 66%**
    - **2009 Measurement = 62%**
    - **2003 Measurement = 58%**
    - **1999 Measurement = 66%**

Short Term Goal 1

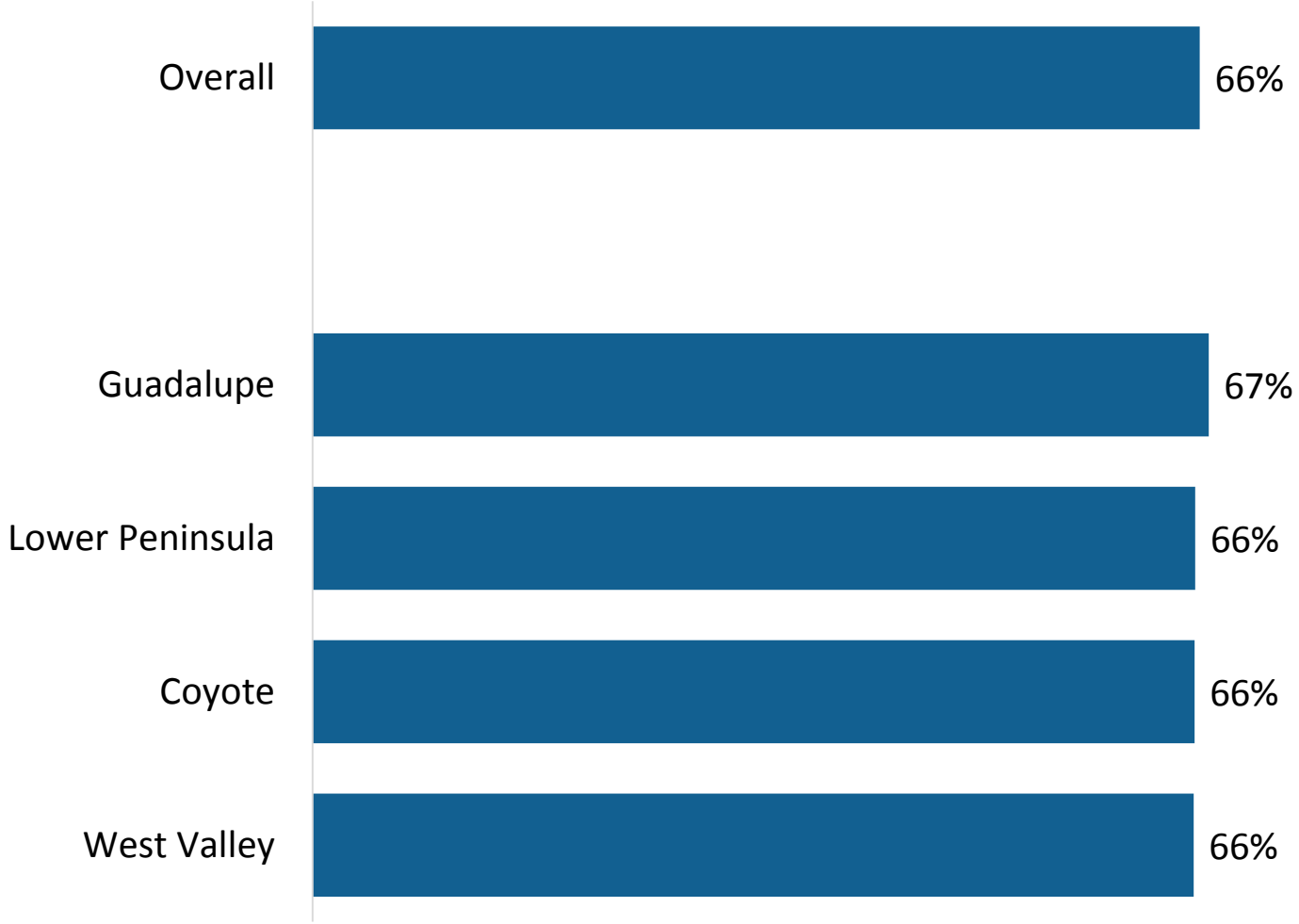
The percentage of residents taking at least one action to prevent water pollution has increased steadily since 2003, returning to the two-thirds level recorded in 1999.



Percentage of residents who do at least one activity to prevent water pollution

Short Term Goal 1 by Watershed

Activity to prevent water pollution is consistent throughout all watersheds.



Percentage of residents who do at least one activity to prevent water pollution, by watershed.

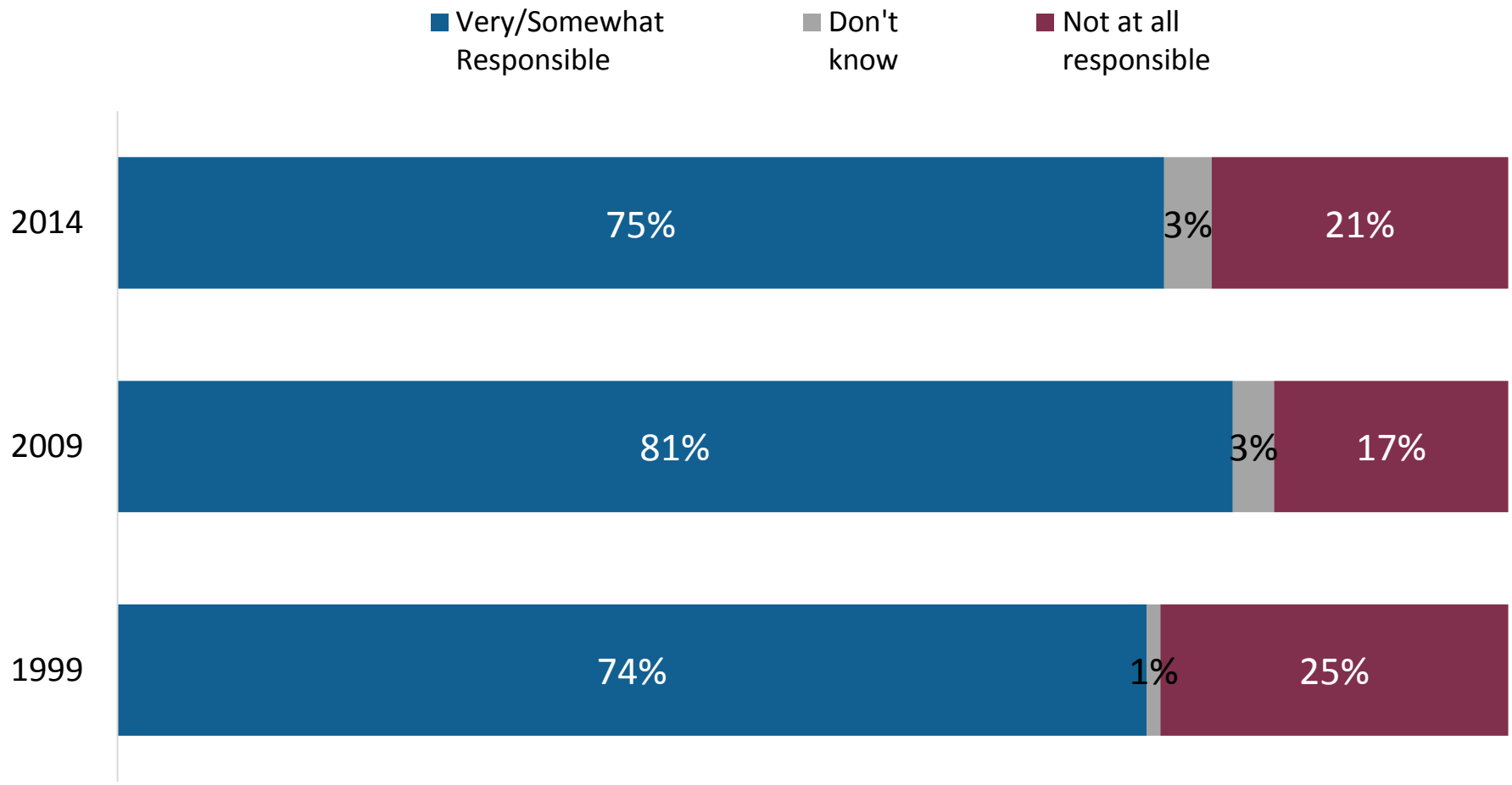
Goal Summary – Short Term Goal 3

The percentage of residents who recognize that their actions contribute to water pollution has declined since 2009.

- **Short Term Goal 3:** Inform audience that indoor and outdoor daily activities impact our watershed.
  - *By 2009, there will be a 10-point increase based on the 1999 survey in the number of residents that recognize their daily actions contribute to water pollution*
    - **2014 Measurement = 75%**
    - **2009 Measurement = 81%**
    - **1999 Measurement = 74%**

Short Term Goal 3

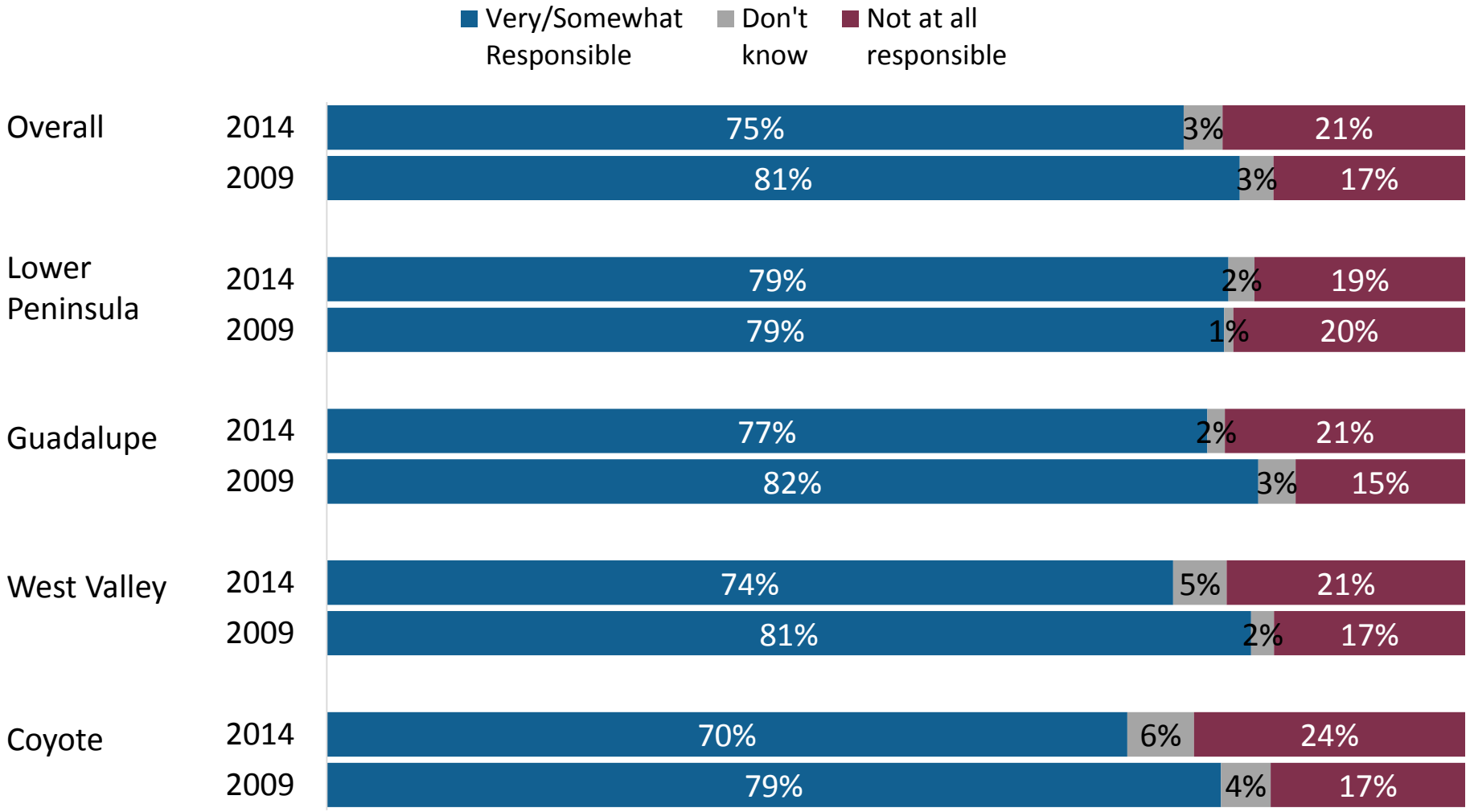
The percentage who believe private residents are responsible for water pollution has decreased in the last five years.



Q24. Please tell me whether you personally believe that Private Residents are very responsible, somewhat responsible, or not at all responsible for causing water pollution.

Short Term Goal 3

Lower Peninsula residents are the most likely to believe private residents are responsible for water pollution.



Q24. Please tell me whether you personally believe that Private Residents are very responsible, somewhat responsible, or not at all responsible for causing water pollution.

Goal Summary – Long Term Goal 1A

There has been no movement in residents' ability to define a watershed.

- **<u>Long Term Goal 1:</u>** Build resident awareness of watershed issues and support for sound watershed decision making.
  - *Goal 1A: By 2014, 50% of residents will understand the watershed concept.*
    - **2014 Measurement = 27%**
    - **2009 Measurement = 27%**
    - **2003 Measurement = 20%**
    - **1999 Measurement = 27%**

Long Term Goal 1A

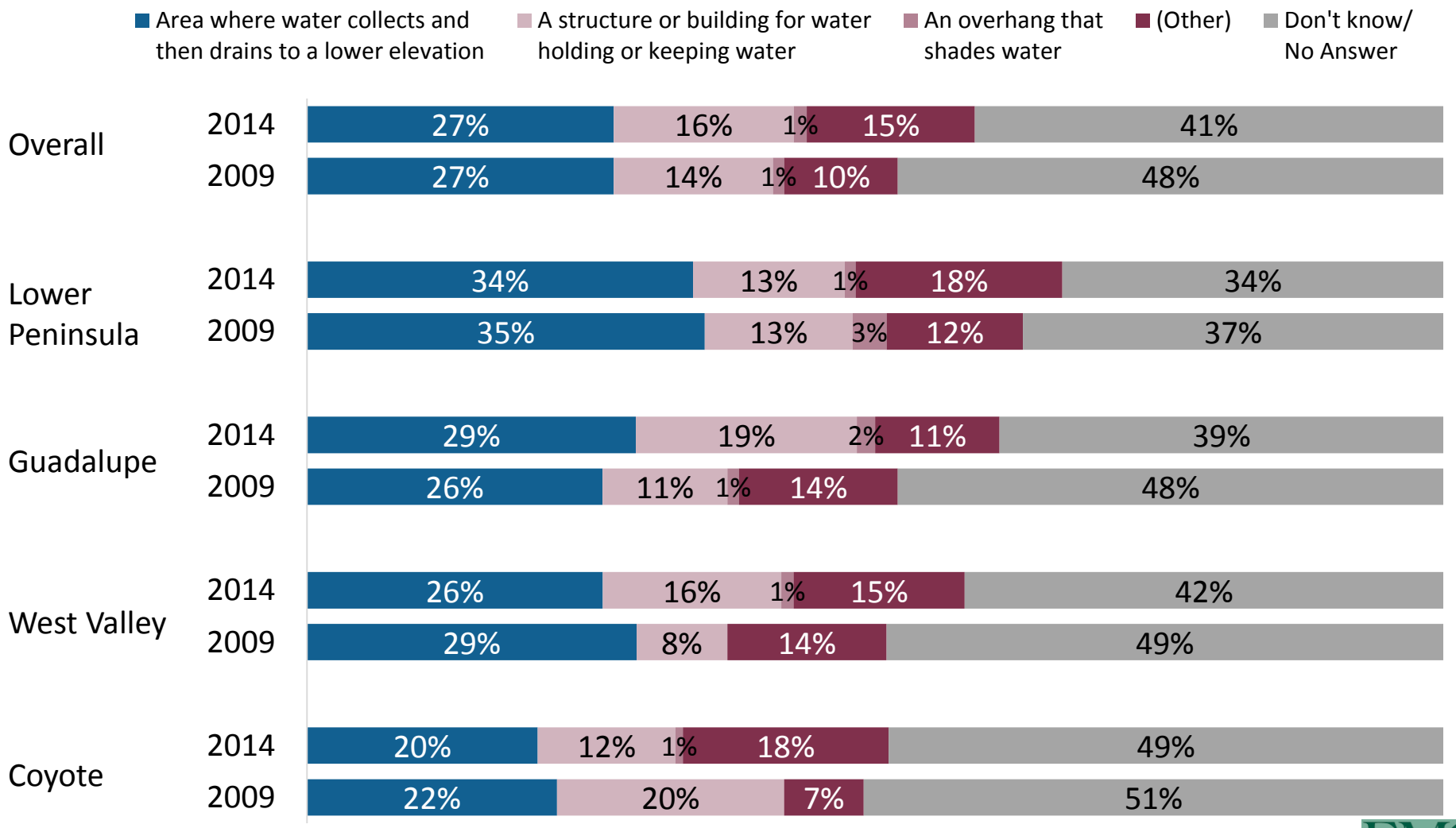
The percentage of residents that can accurately define the watershed concept has remained very consistent.

Residents' Responses were Combined into the Following Watershed Definitions	1999	2003	2009	2014
Area where water collects and then drains to lower elevation	27%	20%	27%	27%
A structure or building for holding or keeping water	26	27	14	16
An overhang that shades water	1	2	1	1
(Other)	6	24	10	19
Don't Know/No answer	39	27	48	41

Q19. In your own words, can you tell me what the term "watershed" means to you?

Long Term Goal 1A

Lower Peninsula residents continue to have the highest understanding of watersheds.



Q19. In your own words, can you tell me what the term "watershed" means to you?

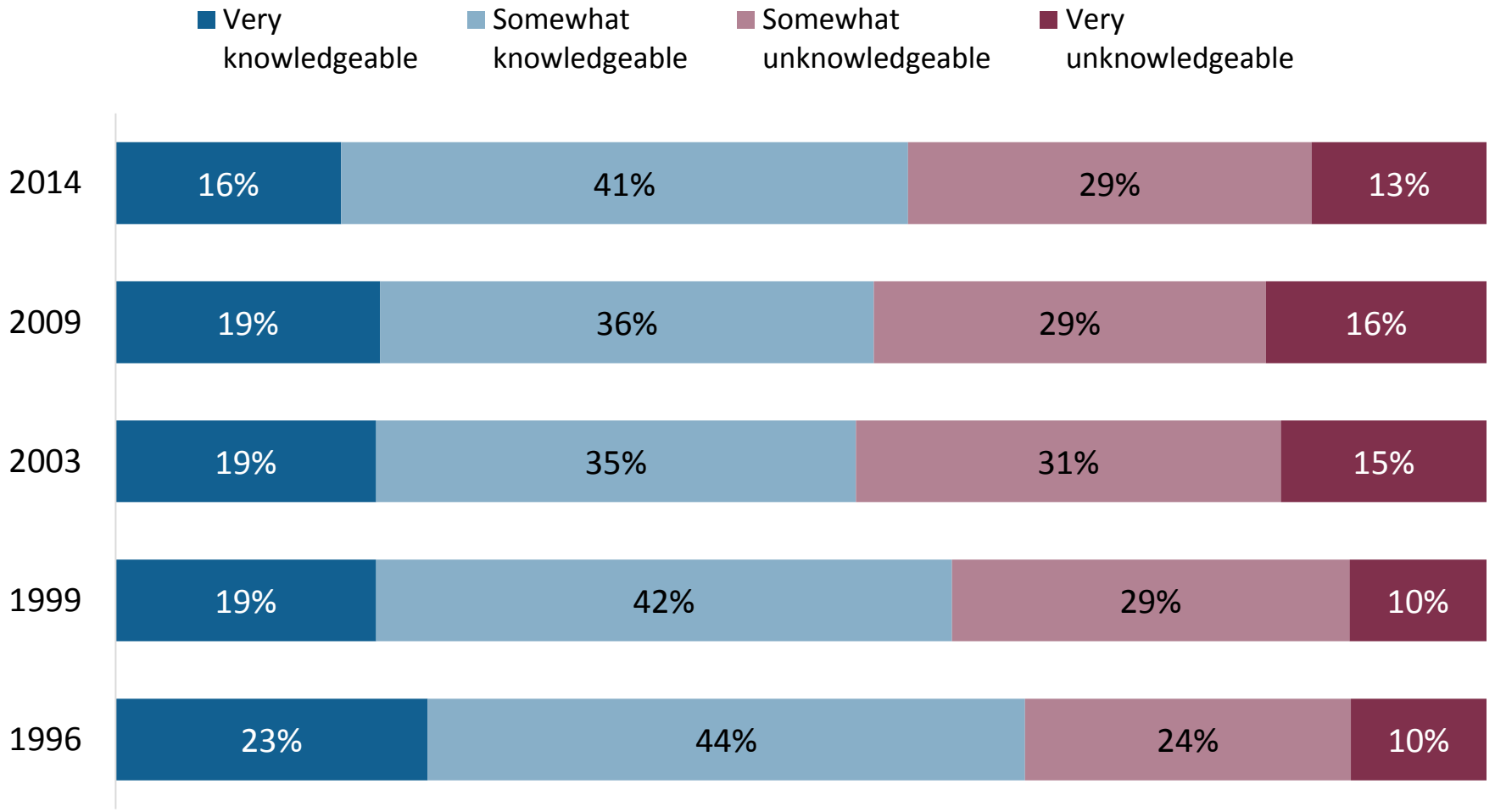
Goal Summary – Long Term Goal 1B

Residents' understanding of the storm drain and sanitary sewer systems has declined slightly.

- **Long Term Goal 1:** Build resident awareness of watershed issues and support for sound watershed decision making.
  - *Goal 1B: By 2014, 50% of residents will know the difference between the storm drain and sanitary sewer systems.*
    - **2014 Measurement = 16%**
    - **2009 Measurement = 19%**
    - **2003 Measurement = 19%**
    - **1999 Measurement = 19%**

Long Term Goal 1B

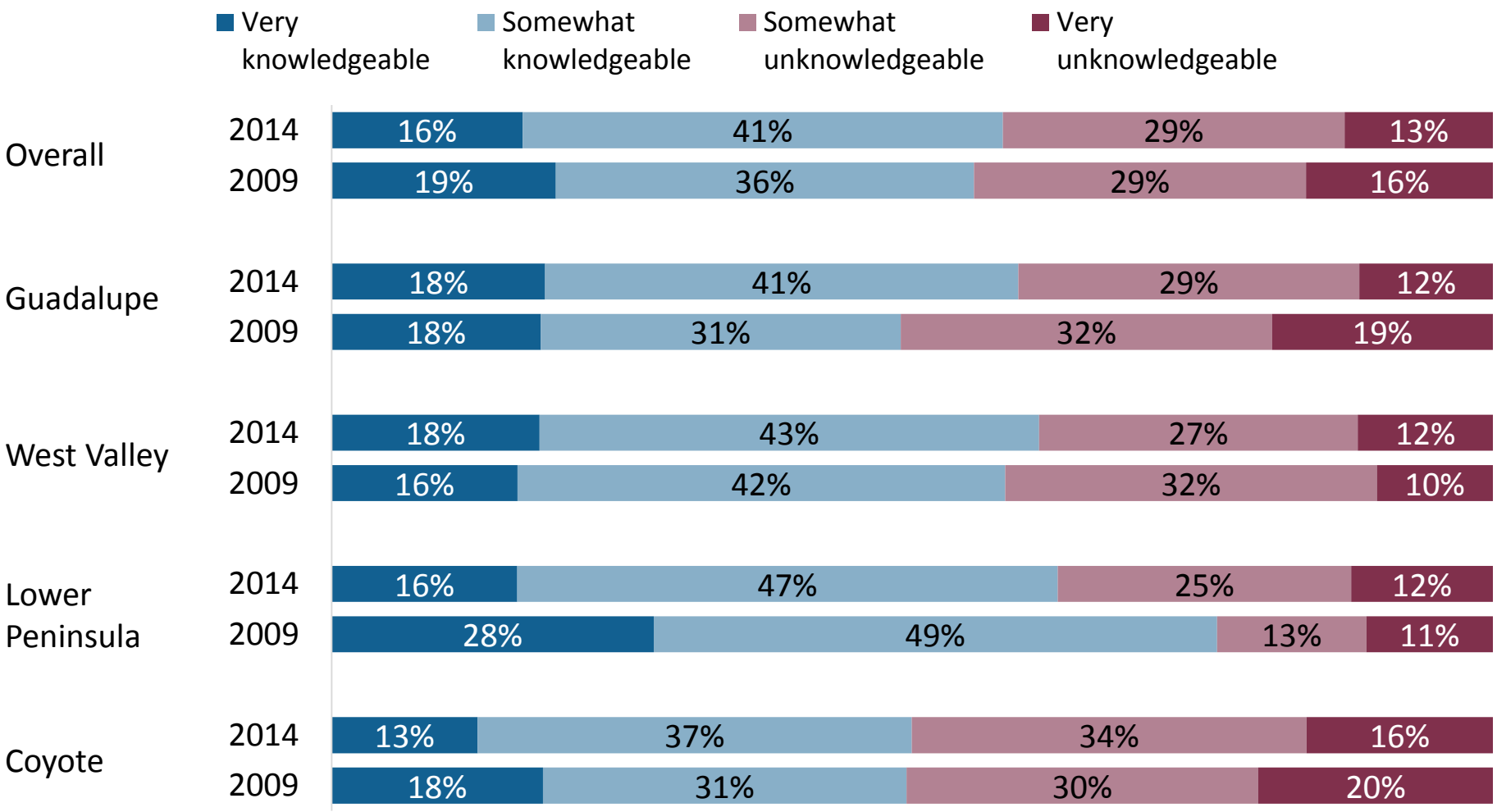
While the "very knowledgeable" ratings have declined, the percentage of residents who are at least somewhat knowledgeable of storm drains has increased since 2003.



Based on responses to questions:
Q26. Storm drains and sewers are part of the same underground system.
Q27. The water and other substances that flow through the storm drain system are treated and filtered to remove wastes before they are discharged from the system.

Long Term Goal 1B

Guadalupe and West Valley residents are the most knowledgeable on storm drains.



Based on responses to questions:
Q26. Storm drains and sewers are part of the same underground system.
Q27. The water and other substances that flow through the storm drain system are treated and filtered to remove wastes before they are discharged from the system.

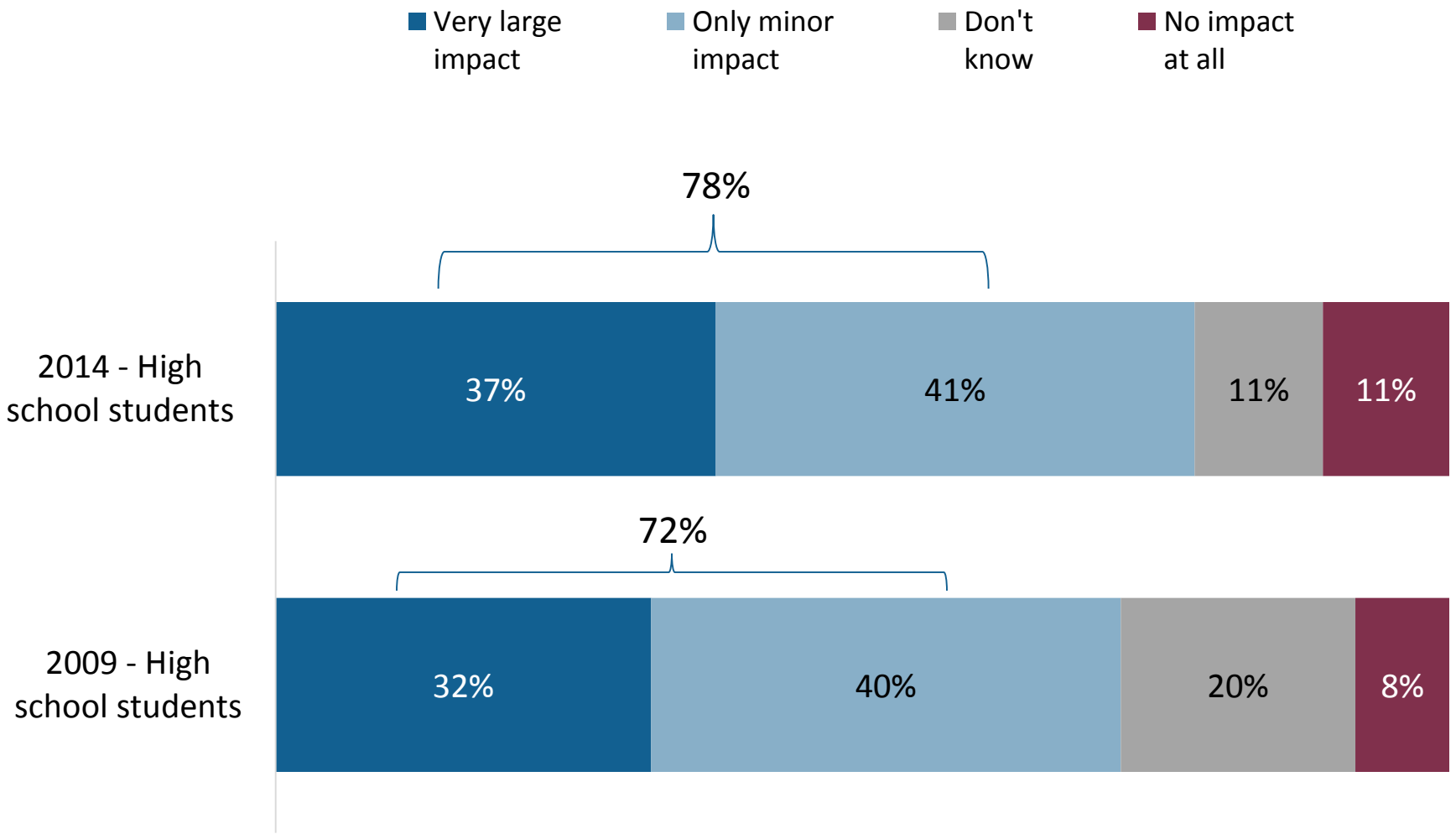
Goal Summary – Long Term Goal 3

High school students' understanding of how their personal choices affect the watershed has continued to increase.

- **<u>Long Term Goal 3:</u>** High school students will understand that their personal choices affect the watershed.
  - *By 2014, 75% of high school students will understand that their personal choices affect the watershed.*
    - **2014 Measurement = 78%**
    - **2009 Measurement = 72%**

Long Term Goal 3

More than three-out-of-four high school students understand the impact their personal choices have on the watershed.



Q20. In general, would you say the personal choices of families and individuals have a very large impact, only a minor impact, or no impact at all on the quality of water in the watershed?

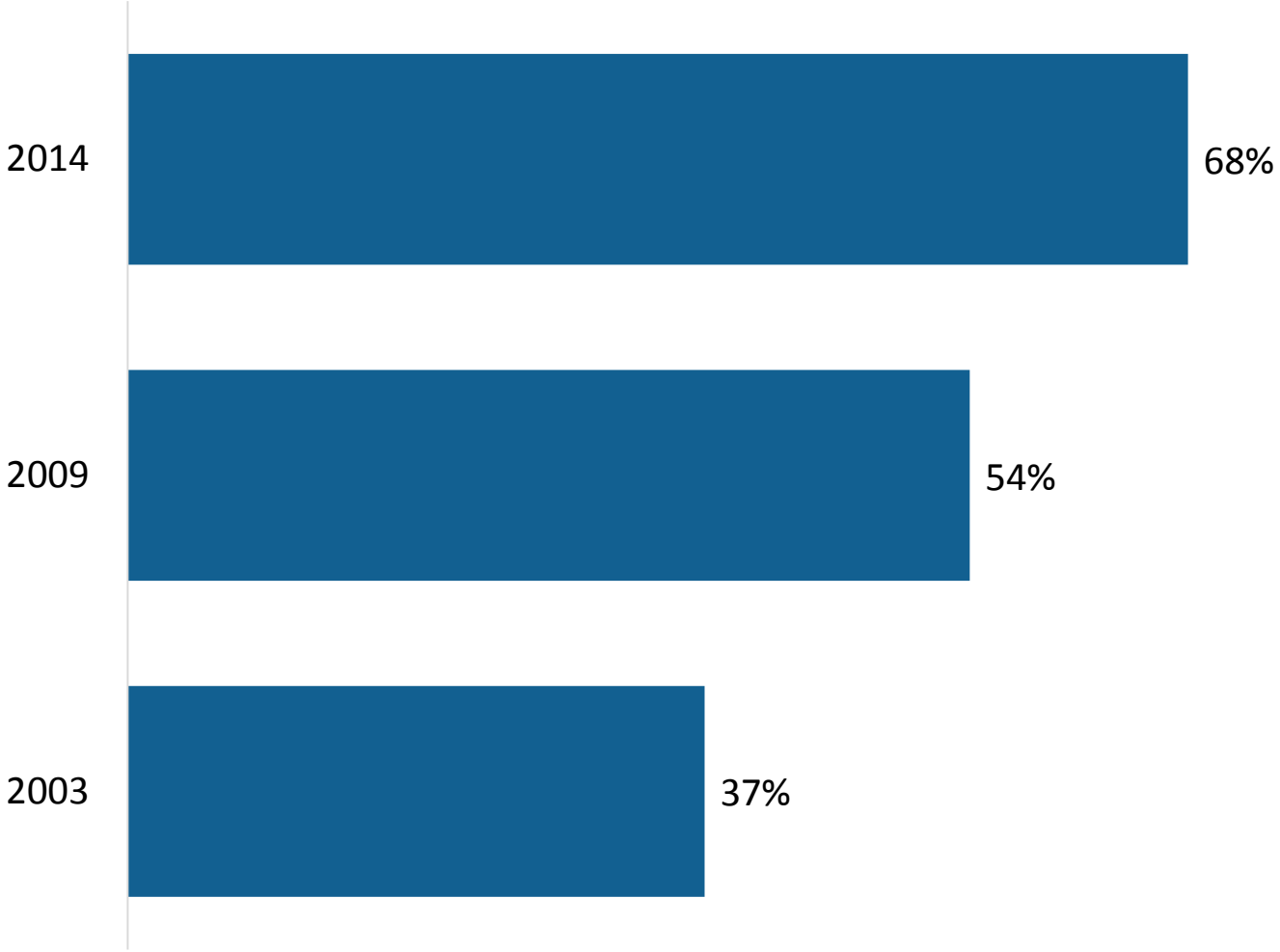
Goal Summary – Long Term Goal 4

Although short of the 75% goal, there continues to be gains made with high school students with respect to their pollution prevention behaviors.

- **Long Term Goal 4:** High school students will make educated choices about behaviors that benefit the watershed.
  - *By 2014, 75% of high school students will take at least one watershed pollution prevention action.*
    - **2014 Measurement = 68%**
    - **2009 Measurement = 54%**
    - **2003 Measurement = 37%**

Long Term Goal 4

More than two-thirds of high school students now report taking at least one action to prevent water pollution.



Percentage of high school students who do at least on activity to prevent water pollution

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Conclusions

Conclusions

- Watershed Watch has managed to maintain or improve ratings and pollution prevention behaviors, which is an accomplishment given the challenging economic times between 2009 and now.
- People continue to understand that their personal actions and choices affect local water quality, and they are generally willing to take action to prevent pollution.
- Young residents are becoming increasingly aware of their impact on the watershed, and are making more educated choices about behaviors that impact the watershed.
- There has been improvement in several key areas of resident knowledge and behavior, including the number of pollution prevention actions residents are taking. Actions that have shown gains include using re-usable shopping bags, sweeping instead of hosing driveway, oil changes, and taking waste, fluorescent lamps and bulbs to a household hazardous waste facility.

Recommendations

- Re-examine the goals and determine whether there may be a different and potentially better way to measure progress.
- Given that the overall mood of residents is improving and people once again are feeling optimistic, they may be more receptive to pollution prevention messaging. This may be an effective time to increase communication.

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610 SW Alder Street
Suite 521
Portland, OR 97205
(503) 444-6000

EMCresearch.com

Survey of Santa Clara Valley Basin Residents
Conducted for: Santa Clara Valley Urban Runoff Pollution Prevention Program
March 27 – April 9, 2014
n=565; MoE ± 4.12 percentage points
EMC Research #14-5188

Where applicable, results are compared with the previous surveys:

- *2009 EMC survey (SCVURPPP), ages 15+*
- *2003 EMC survey (Santa Clara Water Pollution Control Plant Service Area), ages 15+*
- *2002 EMC survey (Santa Clara Water Pollution Control Plant Service Area), ages 18+*
- *1999 FM3 survey, (Santa Clara basin residents), ages 16+*
- *1996 FM3 survey (Santa Clara basin residents), ages 16+*

All numbers in this document represent percentage (%) values, unless otherwise noted. Please note that due to rounding, percentages may not add up to exactly 100%.

Hello, my name is _____, and I work for EMC Research. I'm conducting a survey to find out how people in the Santa Clara Valley feel about some local issues facing them. We are not trying to sell anything and your responses are completely confidential.

---

1. May I please speak with the youngest MALE in the household who is:
   (when quota for Q7 NOT filled: 15 years of age or older?
   when quota for Q7 filled: 18 years of age or older?)

Yes, respondent on the phone → **CONTINUE**	74
Yes, coming to the phone → **CONTINUE**	1
No, not available → **Schedule callback**	14
No, no males in household → **(SKIP TO Q2)**	11

2. **(ASK ONLY IF Q1=4**); Can I speak to the youngest adult FEMALE at home who is:
   (when quota for Q7 NOT filled: 15 years of age or older?
   when quota for Q7 filled: 18 years of age or older?)

Yes, respondent on the phone → **CONTINUE**	98
Yes, coming to phone → **CONTINUE**	2
No, not available → **Schedule callback**	-
Refused → **TERMINATE**	-

		9/03	2/09	4/14
3.	Sex			
	Male	51	51	49
	Female	49	49	51
4.	To verify that I am calling in the right area, do you live in Santa Clara County?			
	Yes → CONTINUE	100	100	100
	No → **TERMINATE**	-	-	-
	Don't Know/Refused → **TERMINATE**	-	-	-
5.	And what is your zip code? (see provided list)			
	If zip on list → CONTINUE	100	100	100
	Not on list → **TERMINATE**	-	-	-
	Don't Know/Refused → **TERMINATE**	-	-	-

6. What is your age? **(READ CODES IF NECESSARY)**

	3/96	5/99	2/02	9/03	2/09	4/14
15-17 → ASK Q7 (TERMINATE WHEN QUOTA FILLED)	-	-	-	5	5	6
18-19 → ASK Q7	-	-	-	3	3	3
20-24 → SKIP TO Q8	10	12	10	9	7	5
25-29 → SKIP TO Q8	10	10	12	11	7	6
30-34 → SKIP TO Q8	11	13	12	12	11	5
35-39 → SKIP TO Q8	14	10	10	12	8	8
40-44 → SKIP TO Q8	11	10	10	11	14	12
45-49 → SKIP TO Q8	11	9	10	9	8	13
50-54 → SKIP TO Q8	8	7	10	8	10	8
55-59 → SKIP TO Q8	6	6	6	6	7	9
60-64 → SKIP TO Q8	6	6	5	4	5	8
65+ → SKIP TO Q8	10	15	12	10	13	15
(REFUSED) → SKIP TO Q8	3	2	3	1	1	2

7. Are you currently enrolled in high school?

	9/03	2/09	4/14
Yes → **CONTINUE** (quota = 75); **IF Q6=1 AND QUOTA FILLED TERMINATE. IF Q6=2 AND QUOTA FILLED CONTINUE**	5	83	81
No → IF Q6=1 and Q7=2: **TERMINATE**; IF Q6=2 AND Q7=2: **CONTINUE**.	95	17	19

(RESUME ASKING EVERYONE)

8. Do you feel that things in Santa Clara County are generally going in the right direction or do you feel things have gotten pretty seriously off on the wrong track?

	9/03	2/09	4/14
Right direction	48	50	57
Wrong track	43	33	22
(Don't know)	9	17	21

Please tell me if you feel each of the following is a very serious problem facing the Santa Clara Valley region, is a somewhat serious problem, a not too serious problem or not a very serious problem at all in this region. **(REPROMPT IF NEEDED:** Do you feel that **<Qx>** is a very serious problem, a somewhat serious problem, a not too serious problem or not a very serious problem at all in this region?**)**

** FMMA 1996 and 1999 surveys used a scale of "very serious, somewhat serious, and not serious"*

SCALE:	Very serious	Somewhat serious	Not too serious	Not at all serious	(Don't know)
(RANDOMIZE)					
9. Traffic congestion					
4/14	48	35	12	3	3
2/09	37	36	19	6	2
9/03	48	38	13	2	-
2/02	67	23	6	3	1
5/99	72	23	4		1
3/96	59	32	8		1
10. Unemployment, the loss of jobs					
4/14	38	31	20	6	5
2/09	68	25	5	1	2
9/03	79	17	3	-	1
2/02	57	26	11	2	4
5/99	18	34	43		4
3/96	39	34	12		4

SCALE:	Very serious	Somewhat serious	Not too serious	Not at all serious	(Don't know)
11. The quality of local public education					
4/14	32	31	20	9	7
2/09	39	26	17	10	7
9/03	48	29	13	5	5
5/99	40	31	14		15
3/96	47	29	12		12
12. Pollution of the San Francisco Bay					
4/14	25	32	19	6	19
2/09	32	36	14	6	12
9/03	38	39	13	3	7
5/99	50	31	10		9
3/96	51	32	9		8
13. Pollution of water in local creeks					
4/14	27	31	20	8	14
2/09	27	31	21	11	10
9/03	31	37	19	5	7
5/99	43	32	14		11
3/96	40	37	14		8
14. The quality of drinking water					
4/14	18	21	31	24	6
2/09	19	20	27	31	3
9/03	27	31	29	11	2
2/02	28	26	29	13	4
5/99	34	31	31		5
15. Hazardous waste disposal					
4/14	18	24	27	13	18
2/09	24	23	22	15	16
9/03	26	33	24	8	8
5/99	43	27	16		14
3/96	51	28	13		8
16. Litter					
4/14	22	33	31	11	3
2/09	23	32	31	14	0

		5/99	9/03	2/09	4/14
17.	Now, do you recall ever seeing or hearing anything about watersheds?				
	Yes → **ask Q18**	27	46	37	32
	No → **skip to Q19**	71	53	60	61
	(Don't Know) → **skip to Q19**	2	1	4	7

18. Can you tell me in a few words what you heard or saw? **(ONE Response)**

Lack of water/supply is low/decline in amount of watersheds	14
Rainfall/melted snow/runoff into the creeks/rivers/bay	11
Pollution/Need to keep the water clean	11
Know of it/live close to one/have family who works there	8
Currently in a drought situation/no rain	8
Need to conserve water/protect watersheds	8
Heard it on the news/internet/received info in the mail	7
Where our water supply comes from/various locations	7
Collection of water/reservoirs	6
Where water is stored for our use	3
There are problems/issues with the water/watersheds	2
Where the water goes/flow/direction	2
Learned about it in school/museums	2
Other (specify)	11
Don't know/Refused	17

(RESUME ASKING EVERYONE)

19. In your own words, can you tell me what the term "watershed" means to you? **(ONE Response; DO NOT READ LIST)**

	5/99	2/09	4/14
Area where water collects and then drains to lower elevation	27	27	27
A structure or building for holding or keeping water	26	14	16
Storing water/reservoirs	-	-	4
Preserving/protecting/conserving water	-	-	2
Underground water/aquifer	-	-	2
An overhang that shades water	1	1	1
Not enough water/loss of water	-	-	1
Wasting water	-	-	1
Channeling the water/irrigation/flow	-	-	1
Distribution/how it is used	-	-	1
Keeping the water clean	-	-	1
Drinking water	-	-	1
Other	6	4	4
Don't Know/Refused	39	48	41

20. In general, would you say the personal choices of families and individuals have a very large impact, only a minor impact, or no impact at all on the quality of water in the watershed?

	2/09	4/14
Very large impact	37	33
Only minor impact	34	33
No impact at all	10	13
(Don't Know)	18	21

Now I'm going to mention some people and groups of people that may be responsible for causing water pollution. For each one I mention, please tell me whether you personally believe that group are very responsible, somewhat responsible, or not at all responsible for causing water pollution.
(REPROMPT IF NEEDED: Do you believe that **<Qx>** is very responsible, somewhat responsible, or not at all responsible for causing water pollution?**)**

SCALE:	Very responsible	Somewhat responsible	Not at all responsible	(Don't know)
(RANDOMIZE)				
21. Large industrial or manufacturing companies				
4/14	60	30	5	5
2/09	62	30	4	4
5/99	68	25	4	2
22. Government agencies				
4/14	32	44	13	10
2/09	29	47	15	9
5/99	40	40	13	7
23. Small and medium-sized businesses, like restaurants and drycleaners				
4/14	20	62	13	5
2/09	26	58	12	4
5/99	24	54	18	4
24. Private residents				
4/14	14	61	21	3
2/09	18	63	17	3
5/99	19	55	25	1
25. Farmers and ranchers				
4/14	30	45	17	8
2/09	28	47	20	6
5/99	30	46	20	3

For each of the following statements please tell me if you believe it is definitely true, probably true, probably not true or definitely not true.
(REPROMPT IF NEEDED: Do you believe that is definitely true, probably true, probably not true or definitely not true?**)**

SCALE:	Definitely true	Probably true	Probably not true	Definitely not true	(Don't know)

(RANDOMIZE)

26. Storm drains and sewers are part of the same underground system.

4/14	16	32	18	21	13
2/09	22	27	16	24	10
9/03	13	41	19	22	5
2/02	19	30	13	17	21
5/99	15	36	18	21	10

27. The water and other substances that flow through the storm drain system are treated and filtered to remove wastes before they are discharged from the system.

4/14	11	38	24	16	11
2/09	17	34	21	22	6
9/03	13	43	24	19	2
2/02	16	36	16	16	16
5/99	11	30	25	24	10

28. Water that runs into the storm drains from yards, driveways, and streets, goes into local creeks, rivers, and the Bay without being treated.

4/14	37	39	13	5	7
2/09	45	36	11	3	4

(END RANDOMIZE)

29. What type of pollutants do you think enter the bay and affect its water quality? **(DO NOT READ LIST) (Accept up to TWO Responses)**

	9/03	2/09	4/14
Oil/grease from automobiles that leaks or is spilled/disposed of in storm drains	44	43	35
Chemicals	25	27	28
Garbage/trash	16	19	20
Pesticides, herbicides, and fertilizer from lawns, gardens, farms, etc.	19	18	19
Industrial wastes	14	13	12
Biological contaminants from litter, organic matter, and animal wastes	4	8	8
Sewage	8	3	6
Hazardous wastes/carcinogens	6	2	5
Oil from ships/boats	3	1	5
Medical/hospital waste	0	1	3
Metals found in vehicle exhaust, weathered paint, metal plating, tires, etc.	7	2	2
Mercury	-	1	2
Soil erosions from lawns, hillsides, and construction activities	2	2	2
Other mentions	12	6	3
Don't Know	7	12	16

30. Do you have a yard or garden?

	9/03	2/09	4/14
Yes → **ask Q31**	76	80	75
No → **skip to Q32**	24	20	25
(Don't know/Don't remember) → **skip to Q32**	-	-	-

31. Do you maintain your landscaping or garden yourself?

	9/03	2/09	4/14
Yes	69	68	68
No	31	32	31
Don't have yard or garden	-	-	1
(Don't know)	-	-	-

(RESUME ASKING EVERYONE)

In the Santa Clara Valley, the storm drain system is separate from the sewer system. The storm drain system empties into local creeks and wetlands and into the San Francisco Bay. The mixture of water, trash and everything else that ends up in storm drains is not treated or filtered before it is discharged. What flows through the storm drains pollutes local creeks, wetlands and the bay.

Here are some actions people can take to keep pollution out of storm drains so it won't harm local creeks, wetlands, and the San Francisco Bay. For each one I mention, please tell me how willing you would be to take that action, using a scale of very willing, somewhat willing, not too willing, or not at all willing. If it is something you already do, or it really doesn't apply to you, you can tell me that too.

(REPROMPT IF NEEDED: Would you be very willing, somewhat willing, not too willing, or not at all willing to **<Qx>** if you knew it would keep pollutants that harm local creeks, wetlands and the Bay out of local storm drains?**)**

SCALE:	Very willing	Somewhat willing	Not too willing	Not at all willing	Do now/ Already do	Does not apply	(Don't know)
(RANDOMIZE)							
32. Recycle used motor oil by placing it out for curbside collection							
4/14	36	5	1	2	25	32	1
2/09	39	4	0	1	26	29	0
9/03	42	4	0	-	26	27	0
2/02	50	7	2	1	25	13	2
5/99	40	2	1	1	39	16	1
3/96	44	2	1	0	35	16	1
33. Get your car's oil changed at a service station rather than doing it yourself							
4/14	25	5	1	5	55	8	0
2/09	29	7	4	5	49	6	-
9/03	32	8	3	5	47	5	-
2/02	40	9	7	6	33	4	1
34. Take leftover paints, insecticides and other Hazardous Wastes to a Household Hazardous Waste collection center							
4/14	42	10	2	1	32	11	2
2/09	49	13	1	2	30	5	1
9/03	49	12	5	2	25	8	-
2/02	52	14	3	3	18	8	2
5/99	50	10	3	1	25	11	1
3/96	58	7	2	1	21	11	1

SCALE:	Very willing	Somewhat willing	Not too willing	Not at all willing	Do now/ Already do	Does not apply	(Don't know)
35.	Use less-toxic substances and methods, such as baits and traps instead of poisonous sprays, to control pests and weeds in your lawn and garden*						
4/14	34	15	2	2	21	24	2
2/09	41	18	2	3	22	13	1
9/03	43	18	3	3	20	14	-
2/02	45	16	6	4	14	13	3
5/99	43	16	4	1	20	15	1
3/96	51	12	2	2	18	14	2
36.	Sweep down your driveway with a broom instead of hosing it down with water						
4/14	31	9	2	2	40	16	0
2/09	40	10	1	2	34	12	0
9/03	33	18	3	3	29	14	0
2/02	41	16	5	3	24	10	2
5/99	39	13	3	1	30	12	1
3/96	40	9	3	3	30	13	1
37.	Take your car to a car wash instead of washing it yourself in the street or driveway						
4/14	26	14	8	6	39	7	0
2/09	28	14	4	9	39	5	0
9/03	24	22	9	6	34	6	0
2/02	32	17	8	6	29	6	2
5/99	28	12	7	6	38	7	1
3/96	29	11	8	7	36	9	1
38.	Wash your car on an unpaved surface, instead of in the street or driveway						
4/14	25	14	4	7	12	36	2
2/09	28	13	4	8	9	38	1
9/03	28	19	8	8	8	28	2
2/02	29	14	10	9	9	25	3
5/99	28	13	8	6	12	32	1
3/96	30	10	6	9	15	28	2
39.	Take used fluorescent lamps and light bulbs to a household hazardous waste facility or event						
4/14	36	16	3	4	31	8	2
2/09	47	16	3	3	27	3	1
9/03	49	18	7	3	9	13	1

SCALE:	Very willing	Somewhat willing	Not too willing	Not at all willing	Do now/ Already do	Does not apply	(Don't know)
40. Report someone you see dumping harmful substances into the storm drain							
4/14	57	24	6	5	3	3	2
2/09	68	17	3	5	3	3	1
5/99	62	20	6	2	4	2	3
41. Participate in creek clean-ups							
4/14	25	32	10	18	7	6	2
2/09	35	30	11	14	5	3	1
5/99	31	39	11	8	7	2	1
42. Use re-usable shopping bags instead of paper or plastic bags provided by stores							
4/14	27	6	1	3	61	1	0
2/09	34	18	5	5	36	1	1
43. Throw litter in a garbage can and not in the street							
4/14	39	1	1	1	57	1	0
9/03	45	2	-	1	50	3	0
44. **(ASK IF Q30=1)** Hire landscape and yard maintenance contractors that use less-toxic weed and pest control methods							
4/14	31	13	5	7	19	23	2
45. Hire exterminators and pest control professionals that use less-toxic pest control methods							
4/14	37	13	3	3	17	24	3
46. **(ASK IF Q30=1)** Use watershed-friendly, sustainable techniques in your yard or garden to reduce runoff, such as building a rain garden or removing paved surfaces.							
4/14	35	22	5	7	14	12	5

(END RANDOMIZE)

*Tracking data from previous surveys used the following question wording: "Use non-toxic substances rather than pesticides and herbicides to control pests and weeds in your lawn and garden."

I'm going to read you a list of items. Please tell me if you have a favorable or unfavorable opinion of each one. If you have never heard of one, please say so. **[NOTE: If respondent says "Don't Know," "No opinion," or something similar that is not Favorable/Unfavorable, probe for Can't Rate or Never Heard: "Would you say that you have heard of (QX) but cannot rate (QX) or have you never heard of (QX)?"]**
(REPROMPT IF NEEDED: Do you have a favorable or unfavorable opinion of **<Qx>**?**)**

SCALE:	Favorable	Unfavorable	(Can't Rate)	Never Heard

(RANDOMIZE)

47. the Watershed Watch Hotline

4/14	9	3	3	85
2/09	7	2	5	87

48. the Household Hazardous Waste Program

4/14	50	3	6	41
2/09	48	2	6	44

49. the website my watershed watch dot org

4/14	10	3	4	83
2/09	7	2	6	84

(END RANDOMIZE)

Now I'd like to ask you a few questions for statistical purposes only.

50. What is your preferred method for receiving environmental messaging and other related information? **(DO NOT READ LIST – One Response)**

	2/09	4/14
(Television)	17	15
(The newspaper)	8	7
(The internet/Online/The web)	11	9
(Blogs)	-	0
(Email)	22	23
(Phone call)	2	3
(Text message)	0	1
(Mail/flyers/door hangers)	34	29
(Other)	1	3
(Don't want/care to receive environmental messages)	2	4
(Don't know/Refused)	3	5

On a scale of one to five, how much do you rely on each of the following sources to receive your local news and information, where one means you do not rely on the source at all, and a five means you rely on the source very heavily.
(REPROMPT IF NEEDED: On a scale of one to five, where one means you do not rely on the source at all and five means you rely on the source very heavily, how much do you rely on **<Qx>** to receive your local news and information?**)**

		Do not rely at all				Heavily rely	(Don't know/	
	SCALE:	**1**	**2**	**3**	**4**	**5**	**Refused)**	**Mean**
(RANDOMIZE)								
51.	The San Jose Mercury News	35	11	15	13	21	5	**2.73**
52.	Social media like Facebook and Twitter	43	12	14	11	15	6	**2.39**
53.	Ethnic or non-English news and media	66	7	9	5	8	5	**1.77**
54.	Radio news	21	13	22	18	23	3	**3.09**
55.	Television news	15	7	24	21	31	2	**3.48**
56.	Neighborhood newspapers and local blogs	33	16	19	13	13	5	**2.56**
57.	Mailings or emails from elected officials and public agencies	34	15	24	12	11	4	**2.50**
58.	Neighborhood associations or community groups	37	14	21	10	13	5	**2.46**
59.	The internet	16	5	16	20	38	5	**3.63**

(END RANDOMIZE)

		9/03	2/09	4/14
60.	What type of equipment or device do you primarily, or most often use, to access the internet for general browsing, information searches, or other online activity? **(READ 1-5)**			
	A computer at home			58
	A computer at work			5
	A computer at school or the library			1
	A smartphone, or			16
	A tablet			6
	(Other)			1
	(I don't access the internet/I don't go online)			10
	(Don't Know/Refused)			3
61.	Do you have cable TV in your home?			
	Yes	75	70	72
	No	20	20	21
	(Satellite/Dish/Direct TV)	6	11	5
	(Don't Know)	0	-	2
62.	Do you read your neighborhood or community newspaper regularly?			
	Yes		46	41
	No		50	57
	(Don't Know)		4	2
	(IF Q6=1 (AGE 15-17) SKIP TO Q67)			
63.	Do you have any children in elementary or middle school?			
	Yes		30	31
	No		69	66
	(Don't Know)		1	3

		3/96	5/99	2/02	9/03	2/09	4/14
64.	What is the last grade you completed in school?						
	Some grade school	1	2	4	1	1	3
	Some high school	3	7	7	8	7	6
	Graduated High School	22	20	17	15	12	10
	Technical/Vocational	-	2	2		1	3
	Some College	23	23	22	26	22	19
	Graduate College (including Bachelor's degree, BA, BS, etc.)	31	30	31	31	28	32
	Graduate/Professional (including Masters, MA, MBA, PhD, JD, etc.)	15	16	14	20	26	23
	(Don't Know/Refused)	1	1	1	-	2	4
65.	In terms of your current job status, are you employed, unemployed but looking for work, retired, a student or a homemaker?						
	Employed	-	-	61	56	63	53
	Unemployed	-	-	12	13	9	8
	Retired	-	-	15	15	17	21
	Student	-	-	3	6	2	5
	Homemaker	-	-	6	8	7	7
	(Other)	-	-	2	3	1	2
	(Don't Know)	-	-	1	1	1	3
66.	Do you own or rent your apartment or home?						
	Own/buying	-	-	60	62	67	62
	Rent	-	-	38	35	31	34
	(DK/Refused)	-	-	2	3	2	4

(RESUME ASKING EVERYONE)

	3/96	5/99	2/02	9/03	2/09	4/14
67. Would you classify yourself as African-American, white, Hispanic, Vietnamese, Chinese, Korean, Filipino, or something else:						
Afr-Amer/Black	5	4	3	3	2	2
White	60	57	48	58	51	46
Hispanic/Latin-Am	16	19	21	14	20	16
Vietnamese	2	1	4	4	4	4
Chinese	3	4	4	5	5	4
Korean	-	-	0	-	1	1
Filipino	-	-	2	2	3	2
Other Asian	7	7	7	2	2	11
(Something else/Multi-racial)	-	-	2	3	6	5
(Other)	4	4	4	6	3	2
(Refused)	4	5	4	4	3	7
68. What city do you live in? **(Do not read list)**						
Campbell	-	-	3	2	2	2
Cupertino	4	3	4	3	3	5
Los Altos	-	2	0	2	2	2
Los Altos Hills	6	1	0	-	-	0
Los Gatos	6	2	2	2	2	2
Milpitas	4	4	3	4	5	2
Monte Soreno	-	-	-	-	0	0
Mountain View	11	5	0	5	5	2
Palo Alto	7	4	0	4	4	4
San Jose	32	59	76	60	60	57
Santa Clara	11	7	8	7	6	12
Saratoga	-	-	4	2	1	2
Sunnyvale	16	9	0	9	8	7
Unincorporated Santa Clara County	3	-	0	1	0	2

THANK YOU!

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-5

BASMAA Media Relations Campaign

- Final Report FY 2013-2014
- Watershed Watch Campaign Car Wash Press Release

BASMAA
Media Relations Campaign
Final Report FY 2013-2014

Submitted by O'Rorke Inc
June 27, 2014

During the fiscal year 2013-2014, O'Rorke Inc. continued to serve as BASMAA's media relations contractor.

Early in the year O'Rorke worked directly with project manager Sharon Gosselin and the PIP committee to brainstorm pitch topics. The result was six planned pitches and distributing radio/online public services announcements on key stormwater issues as well as monitoring of breaking news opportunities and adding to and utilizing the photo library started in FY12-13. Additionally, O'Rorke provided localized templates of many of the press releases developed for the regional campaign as a way to assist local programs with their own media efforts.

In FY 2013-14 six pitches were done that resulted in fifty total media placements (stories and PSAs). The report that follows gives a synopsis of each pitch and the number and type of placements each garnered. Coverage reports for the year are attached.

Green Streets
O'Rorke developed a pitch copy and, working from a report about Green Streets projects in the region, conducted targeting pitches to environmental writers about the upswing in Green Streets projects as a trend story. Unfortunately, the story was not covered despite numerous pitches and follow-up.

Ants/Pesticides
This pitch focused on ant invasions during rainy season and tips on preventing/controlling them. The story was carried in 52 Patches, on KCBS-AM, and in Southern Region IPM News and the City of Brisbane blog.

Holiday Pitch
O'Rorke wrote a press release dealing with various holiday water pollution prevention issues, including not burning gift wrap and setting out trees for post-Christmas recycling sans flocking. The release was carried in forty-one Patches.

IPM Advocates/DPR Award
O'Rorke worked with contractor Annie Joseph to develop a press release about the IPM advocates program winning an Innovator award from the Department of Pesticide Regulation. The story was picked up by forty-four Patches and KBAY-FM.

Our Water, Our World App
This pitch focused on the launch a new app designed by Chinook Book to make it easier for consumers to find stores near them that sell less-toxic products. O'Rorke developed a release and did extensive pitching. The story ran in forty-three Patches and received some acknowledgment on Twitter.

Trash
O'Rorke put together a multi-faceted pitch to address this important pollutant of concern. We developed an op-ed for Geoff Brosseau's byline and submitted it to all Bay Area daily newspapers and conducted extensive follow-up; as of this writing, the Oakland Tribune was interested in publishing it.

The other elements of the pitch included development of radio PSA copy, which was carried on air by KCBS, KLLC, KITS, KMVQ and online by KBLX and KOIT. As of this writing the PSA distribution had also resulted in scheduled interviews with KFOG and KEAR. These stations represent some of the highest-rated stations in the region.

O'Rorke also developed an article on summer litter prevention tips in a template format for use by local programs. The article was distributed to the PIP committee.

Recommendations for FY 2014-15

- Weave social media into the plan for the coming year. Given the vastly changing landscape for media, O'Rorke strongly recommends the development of a BASMAA Facebook page and Twitter account. These can be used to help disseminate information, provide tips and drive more traffic to BayWise.org. While O'Rorke absolutely anticipates a slow start for fans and followers, we do believe this is an important step for BASMAA as an organization.

- Continue to look to new local/regional studies as a jumping off point for pitching.

- Continue to pitch and post materials to Patch sites; these were an important source of coverage in FY 13-14.

- Utilize BayWise.org in pitches as a resource; have homepage and content updated as needed to keep site relevant to media relations efforts.

O'RORKE, INC.

LITTER PSA COVERAGE

BAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION

JUNE 27, 2013

The following stations are airing the PSA:

Radio

- KCBS
- KLLC (Alice)
- KITS (Live 105 Hits)
- KMVQ
- KFOG*
  - Scheduling an interview
- KEAR*
  - Recorded an interview on 6/27 that will air on their *Community Involvement* program

Online

- KBLX (link to come)
- KOIT (link to come)

PATCHES

The Gardening Application release was published in the following PATCHES (all links available):

- Alameda
- Albany
- Belmont
- Benicia
- Berkeley
- Burlingame-Hillsborough
- Capitola-Soquel
- Concord
- Cupertino
- Danville
- Dublin
- Foster City
- Half Moon Bay
- Healdsburg
- Hercules-Pinole
- Lamorinda
- Larkspur-Corte Madera
- Livermore
- Los Altos
- Los Gatos
- Menlo Park
- Mill Valley
- Millbrae
- Milpitas
- Mountain View
- Napa Valley
- Newark
- Novato
- Palo Alto
- Petaluma
- Piedmont
- Pleasanton
- Redwood City
- Rohnert Park
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GOT ANTS GET S.E.R.I.O.U.S. COVERAGE

BAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION

NOVEMBER 13, 2013

PATCHES

The Got Ants Get S.E.R.I.O.U.S. release was published in the following PATCHES:

- Alameda
- Albany
- Belmont
- Benicia
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- Castro Valley
- Clayton
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- Martinez
- Menlo Park
- Mill Valley
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- Milpitas
- Mountain View
- Napa
- Newark
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- Petaluma
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- Pleasanton
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- San Mateo
- San Rafael
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- Santa Cruz
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- South San Francisco
- Union

Online

- Southern Region IPM News
  http://ipmsouthnews.com/2013/11/08/got-ants-get-s-e-r-i-o-u-s/
- City of Brisbane (Blog)
  http://www.ci.brisbane.ca.us/news/2013-10-15/got-ants?page=3

Radio

- KCBS

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HOLIDAY PITCH COVERAGE

BAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION

DECEMBER 18, 2013

PATCHES

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- Half Moon Bay
- Healdsburg
- Hercules-Pinole
- Lamorinda
- Larkspur-Corte Madera
- Livermore
- Los Altos
- Los Gatos
- Menlo Park
- Mill Valley
- Millbrae
- Milpitas
- Mountain View
- Napa Valley
- Newark
- Palo Alto
- Petaluma
- Piedmont
- Pleasanton
- Redwood City
- Rohnert Park
- San Bruno
- San Leandro
- San Rafael
- Santa Cruz
- Sonoma
- South San Francisco
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Other Patch Coverage (same article published in both)

http://castrovalley.patch.com/groups/holidays/p/give-the-gift-of-clean-water--air-this-holiday-season_c00866ea

- Castro Valley
- San Leandro

O'RORKE, INC.

IPM DPR AWARD COVERAGE

BAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION

JANUARY 24, 2014

PATCHES

The IPM Award release was published in the following PATCHES (all links available):

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- Healdsburg
- Hercules-Pinole
- Lamorinda
- Larkspur-Corte Madera
- Livermore
- Los Altos
- Los Gatos
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- Millbrae
- Milpitas
- Mountain View
- Napa Valley
- Newark
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- Petaluma
- Piedmont
- Pleasanton
- Redwood City
- Rohnert Park
- San Bruno
- San Leandro
- San Rafael
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- South San Francisco
- Union City
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RADIO

KBAY

Watershed Watch returns to Classic Car Wash

By Leeta-Rose Ballester

Watershed Watch Wednesday is back at Robertsville Classic Car Wash.

The car wash company has teamed with the Santa Clara County public education group to bring awareness to watershed protection—and to offer a 50 percent discount for a regular car wash from 7 to 9 a.m. on June 11.

Marty Jensen, general manager of Classic Car Wash, said the partnership was struck about 10 years ago and has taken off.

"We're getting busier and busier every year," he said.

Drawing an audience is just what Watershed Watch had hoped for, said Vishakha Atre, program manager.

"When anyone washes at home, it goes down the storm drain," Atre said. "Either we want the water the soak into the ground—like on a lawn—or take the car to a commercial wash."

PHOTOGRAPH BY JACQUELINE RAMSEYER

Robertsville Classic Car Wash has teamed with the Santa Clara County Public Education Group to bring watershed protection awareness.

The average garden hose uses 10 gallons of water per minute, according to Watershed Watch, whereas commercial car washes are using recycled water.

Atre said Watershed Watch will be at Robertsville Classic Car Wash, 5005 Almaden Expressway, providing information about how to conserve water and also save money during the dry season.

Local radio station KRTY-95.3 FM will also be there with entertainment and prizes.

"It gets the message out," Atre said.

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Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-6

Program Contact Lists

- Management Committee Representatives/Attendees
- Construction, Illegal Discharge, and Industrial Inspection Contacts

Santa Clara Valley Urban Runoff Pollution Prevention Program (Management Committee Representatives*/Alternates)

Organization	Contact	Address	Phone/Fax	E-mail
Campbell	*Bill Helms	70 North First Street Campbell, CA 95008-1423	tel 408-866-2153 fax 408-376-0958	billh@cityofcampbell.com
Cupertino	*Cheri Donnelly Roger Lee	10300 Torre Avenue Cupertino, CA 95014	tel 408-777-3242 fax 408-777-3333	cherid@cupertino.org RogerL@cupertino.org
Los Altos	*Aida Fairman	One North San Antonio Road Los Altos, CA 94022-3087	tel 650-947-2603 fax 650-947-2732	afairman@losaltosca.gov
Los Altos Hills	*Richard Chiu John Chau	26379 Fremont Road Los Altos Hills, CA 94022	tel 650-941-7222; John X238 fax 650-941-3160	rchiu@losaltoshills.ca.gov jchau@losaltoshills.ca.gov
Los Gatos	*Matt Morley Jim Harbin	41 Miles Ave or P.O. Box 949 Los Gatos, CA 95031	tel 408-399-5770 tel 408-399-5776 fax 408-354-8529	mmorley@losgatosca.gov JHarbin@losgatosca.gov
Milpitas	*Steven Machida Paramjit Uppal	455 East Calaveras Boulevard Milpitas, CA 95035	tel 408-586-3355 tel 408-586-3351 fax 408-586-3305	smachida@ci.milpitas.ca.gov puppal@ci.milpitas.ca.gov
Monte Sereno	*Brian Loventhal	18041 Saratoga-Los Gatos Rd. Monte Sereno, CA 95030	tel 408-354-7635 fax 408-395-7653	bloventhal@cityofmontesereno.org
Mountain View	*Eric Anderson Carrie Sandahl	500 Castro Street, City Hall, 4th Floor Mountain View, CA 94041	tel 650-903-6225 fax 650-903-6122	eric.anderson@mountainview.gov carrie.sandahl@mountainview.gov
Palo Alto	*Joe Teresi Kirsten Struve	250 Hamilton Ave., 6th Floor, Palo Alto, CA 94301 City of Palo Alto, PO Box 10250, Palo Alto, 94303 2501 Embarcadero Way, Palo Alto, CA 94303	tel 650-329-2129 fax 650-329-2299 tel 650-329-2421	joe.teresi@cityofpaloalto.org Kirsten.Struve@cityofpaloalto.org
San José	*Napp Fukuda Sharon Newton	Environmental Services Department Watershed Protection, City of San Jose 200 East Santa Clara Street, 7th Floor San Jose, CA 95113	tel 408-793-5353 tel 408-793-5351 fax 408-271-1930	napp.fukuda@sanjoseca.gov sharon.newton@sanjoseca.gov
Santa Clara	*Dave Staub Karin Hickey	CSC Street Corp. Yard 1700 Walsh Avenue Santa Clara, CA 95050	tel 408-615-3086 tel 408-615-3097 fax 408-988-0237	dstaub@santaclaraca.gov kahickey@santaclaraca.gov
Santa Clara County	*Michael Rhoades Darrell Wong	Clean Water Program 1553 Berger Drive, Bldg. 1 San Jose, CA 95112	tel 408-282-3165 fax 408-286-2460 tel 408-299-5735 fax 408-279-8537	Michael.Rhoades@aem.sccgov.org darrell.wong@pln.sccgov.org
Santa Clara Valley Water District	*Liang Lee Brett Calhoun	5750 Almaden Expressway San José, CA 95118	tel 408-630-2927 fax 408-979-5618	llee@valleywater.org jcalhoun@valleywater.org
Saratoga	*John Cherbone Mainini Cabute	13777 Fruitvale Avenue Saratoga, CA 95070	tel 408-868-1241 tel 408-868-1258 fax 408-868-1281	jcherbone@saratoga.ca.us mcabute@saratoga.ca.us
Sunnyvale	*Melody Tovar Elaine Marshall	City of Sunnyvale P.O. Box 3707 Sunnyvale, CA 94088	tel 408-730-7808 tel 408-730-7720 fax 408-747-1139	mtovar@sunnyvale.ca.gov emarshall@sunnyvale.ca.gov
West Valley Communities	*Kelly Carroll	West Valley Clean Water Program 18041 Saratoga Los Gatos Road Monte Sereno, CA 95030	tel 408-354-4734 dir 408-318-4093 fax 888-5456-6297	kcarroll@wvcwp.org

* Current Voting Members

F:\SCVURPPP\ADDRESS\MC Contact List_8-14

SCVURPPP Construction, Illegal Discharge, and Industrial Inspection Contacts

Agency	Construction Inspection	Illegal Discharge	Industrial Inspection
Campbell	**Alan Hom** Hotline: 408-865-2150 408-866-2168 alanh@ci.campbell.ca.us **Bill Helms** 408-866-2153 (direct) 408-866-2150 (Joy @ PW) billh@cityofcampbell.com **Susan Morgado-Gray** Code Enforcement 408-866-2760 Susang@cityofcampbell.com **Bill Bruckart** Building Official 408-866-2130	**Anthony Ortega** West Valley Clean Water Program 408-354-5385 office aortega@wvcwp.org **Bill Helms** 408-866-2153 (direct) 408-866-2150 (Joy @ PW) billh@cityofcampbell.com **Susan Morgado-Gray** Code Enforcement 408-866-2760 Susang@cityofcampbell.com	**Anthony Ortega** West Valley Clean Water Program 408-354-5385 office aortega@wvcwp.org **Lorenzo Perez** SCC FD, Haz Mat 408-378-4010 408-241-4439 cell lorenzo.perez@cnt.sccgov.org **Michael Cervantes** Food Facilities – West Valley 408-918-3455 (918-3400 hotline) michael.cervantes@deh.sccgov.org
Cupertino	**Kevin Rieden** 408-777-3104 KevinR@cupertino.org **Cheri Donnelly** 408-777-3242 CheriD@cupertino.org	**Manuel Barragan** 408-472-9907 MannyB@cupertino.org **Chris Mertens** (Maint. Supervisor) ChrisM@cupertino.org **Cheri Donnelly** 408-777-3242 CheriD@cupertino.org	**Alex Wykoff** 408-777-3255 AlexW@cupertino.org **Cheri Donnelly** 408-777-3242 cherid@cupertino.org
Los Altos Hills	**John Chau** 650-941-7222 jchau@losaltoshills.ca.gov	**John Chau** 650-941-7222 jchau@losaltoshills.ca.gov	**Los Altos Hills does not have any industrial or commercial sites**

SCVURPPP Construction, Illegal Discharge, and Industrial Inspection Contacts

Agency	Construction Inspection	Illegal Discharge	Industrial Inspection
Los Altos	**Kirk Ballard** 650-947-2634 kirk.ballard@losaltosca.gov **Aida Fairman** 650-947-2603 afairman@losaltosca.gov	**Aida Fairman** 650-947-2603 afairman@losaltosca.gov	**Aida Fairman** 650-947-2603 afairman@losaltosca.gov
Los Gatos	**Mike Machado** CBO 408-354-6815 mmachado@losgatosca.gov **Mark Glendinning** Building Inspector 408-354-6870 mglendinning@losgatosca.gov **Steve Souza** Engineering Inspector 408-395-3430 ssouza@losgatosca.gov	**Anthony Ortega** West Valley Clean Water Program 408-354-5385 office aortega@wvcwp.org **Steve Souza** Engineering Inspector 408-395-3430 (M-F) ssouza@losgatosca.gov ***Parks & Public Works General Line*** 7am-4pm Mon thru Fri 408-399-5770	**Anthony Ortega** West Valley Clean Water Program 408-354-5385 office aortega@wvcwp.org **Michael Benjamin** SCC FD, Haz Mat 408-378-4010 benjamin@cnt.sccgov.org **Michael Cervantes** Food Facilities – West Valley 408-918-3455 (918-3400 hotline) michael.cervantes@deh.sccgov.org
Milpitas	**Shelton Sawyer** 408-586-3407 ssawyer@ci.milpitas.ca.gov **Dorsey Wiseman** 408-586-3246 dwiseman@ci.milpitas.ca.gov.	**Paramjit Uppal** 408-586-3351 puppal@ci.milpitas.ca.gov	**Patti Joki** 408-586-3370 pjoki@ci.milpitas.ca.gov

SCVURPPP Construction, Illegal Discharge, and Industrial Inspection Contacts

Agency	Construction Inspection	Illegal Discharge	Industrial Inspection
Monte Sereno	**Mo Sharma** City Engineer & PW Director 408-354-7635 **Sindhi Mekala** Grading & Drainage Inspections; PW 408-354-7635 (Mon & We Only) sindhi@montesereno.org **Howard Bell** Building Official 408-354-2805	**Anthony Ortega** West Valley Clean Water Program 408-354-5385 office aortega@wvcwp.org **Mo Sharma** City Engineer & PW Director 408-354-7635 **Sindhi Mekala** Grading & Drainage Inspections; PW 408-354-7635 (Mon & Wed Only) sindhi@montesereno.org	**City of Monte Sereno does not have any industrial or commercial sites**
Mountain View	**Eric Anderson** 650-903-6378 main 650-903-6225 direct eric.anderson@mountainview.gov **Carrie Sandahl** 650-903-6378 main 650-903-6224 direct carrie.sandahl@mountainview.gov	**Eric Anderson** 650-903-6378 main 650-903-6225 direct eric.anderson@mountainview.gov **Carrie Sandahl** 650-903-6378 main 650-903-6224 direct carrie.sandahl@mountainview.gov	**Eric Anderson** 650-903-6378 main 650-903-6225 direct eric.anderson@ci.mtnview.ca.us **Carrie Sandahl** 650-903-6378 main 650-903-6224 direct carrie.sandahl@mountainview.gov **Scott Heyworth** 650-903-6378 scott.heyworth@mountainview.gov
Palo Alto	**Chris Fujimoto** 650-329-2430 christopher.fujimoto@cityofpaloalto.org **Kirsten Struve** 650-329-2421 kirsten.struve@cityofpaloalto.org	**Chris Fujimoto** 650-329-2430 christopher.fujimoto@cityofpaloalto.org **Kirsten Struve** 650-329-2421 kirsten.struve@cityofpaloalto.org	**Chris Fujimoto** 650-329-2430 christopher.fujimoto@cityofpaloalto.org **Kirsten Struve** 650-329-2421 kirsten.struve@cityofpaloalto.org

SCVURPPP Construction, Illegal Discharge, and Industrial Inspection Contacts

Agency	Construction Inspection	Illegal Discharge	Industrial Inspection
San Jose	**Steven Osborn** 408-945-3000 ESD 408-793-5352 steven.osborn@sanjoseca.gov **Cathy Hoang-Mendoza** 408-793-5324 catherine.hoang-mendoza@sanjoseca.gov **Jared Hart** 408-793-5352 jared.hart@sanjoseca.gov	**Steven Osborn** 408-945-3000 ESD 408-793-5352 steven.osborn@sanjoseca.gov **Cathy Hoang-Mendoza (or Mary)** 408-793-5324 catherine.hoang-mendoza@sanjoseca.gov **No Dumping Hotline** 408-945-3000 http://ca-sanjose.civicplus.com/FormCenter/Environment-13/Storm-Drain-Discharge-Complaint-Form-71	**Steven Osborn** 408-945-3000 ESD 408-793-5352 steven.osborn@sanjoseca.gov **Chris Donaldson** 408-793-5374 Chris.Donaldson@sanjoseca.gov **Mary Morse (restaurants only-FOG)** 408-793-5300 (hotline) Mary.Morse@sanjoseca.gov
Santa Clara	**Elliot Wier** 408-615-3092 ewier@santaclaraca.gov	**Elliot Wier** 408-615-3092 ewier@santaclaraca.gov	**Elliot Wier** 408-615-3092 ewier@santaclaraca.gov
Santa Clara County	**Darrell Wong** 408-299-5735 darrell.wong @pln.sccgov.org	**DEH/Solid/Medical Waste:** 408-918-3400 **Darrell Wong** Department of Planning & Development 408-299-5735 darrell.wong @pln.sccgov.org	**DEH, Hazardous Materials Control Division:** 408-918-3400 **Jim Blamey** HMCD Program Manager 408-918-3400 jim.blamey@deh.co.santa-clara.ca.us **Viet Dao** Food Facilities - North County 408-918-3490 Viet.Dao@deh.sccgov.org **Michael Cervantes** Food Facilities – South West 408-918-3455 michael.cervantes@deh.sccgov.org

SCVURPPP Construction, Illegal Discharge, and Industrial Inspection Contacts

Agency	Construction Inspection	Illegal Discharge	Industrial Inspection
			Rochelle Gaddi Food Facilities, Pools – Central District 408 918-3479 rochelle.gaddi@deh.sccgov.org
SCVWD	**George Malekos** 408-265-2607, X2487 gmalekos@valleywater.org **Pollution Hotline** 1-888-510-5151	**George Malekos** 408-265-2607, X2487 gmalekos@valleywater.org **Pollution Hotline** 1-888-510-5151	**Not Applicable**
Saratoga	**Skylar McLean** Grading / Land Development Inspections 408-868-1237 skyelarm@saratoga.ca.us	**Anthony Ortega** West Valley Clean Water Program 408-354-5385 office aortega@wvcwp.org **Mainini L. Cabute** Public Works Analyst 408-868-1258 mcabute@saratoga.ca.us **Rick Torres** Streets Maintenance Supervisor 408-868-1244 408-857-6545 cell rtorres@saratoga.ca.us	**Anthony Ortega** West Valley Clean Water Program 408-354-5385 office aortega@wvcwp.org **Richard Baker** SCC FD, Haz Mat 408-378-4010 richard.baker@cnt.sccgov.org **Michael Cervantes** Food Facilities – West Valley 408-918-3455 (918-3400 hotline) michael.cervantes@deh.sccgov.org
Sunnyvale	**Gordon Blancher** 408-730-7448 gblancher@sunnyvale.ca.gov	**Mary Jeyaprakash** 408-730-7737 mjeyaprakash@sunnyvale.ca.gov	**Mary Jeyaprakash** 408-730-7737 mjeyaprakash@sunnyvale.ca.gov
Caltrans	**Dragomir Bogdanic** 510-622-0716 510-867-6007 dragomir_Bogdanic@dot.ca.gov	**Hardeep Takhar** 510-286-7182 hardeep_s_takhar@dot.ca.gov	**Not Applicable**

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-7

Going Native Garden Tour 2014- Summary Report

Fremontodendron californicum

Going Native Garden Tour

GOING NATIVE GARDEN TOUR 2014
SUMMARY REPORT

July 23rd, 2014

California Native Plant Society
Santa Clara Valley Chapter

Highlights

This report describes the GNGT committee's achievements during the past year (July 2013 through June 2014). The document also provides details about tour weekend, when hundreds of volunteers share their time, expertise and gardens to ensure that the thousands of tour visitors enjoy both days and receive inspiration for their own gardens.
Table 1 lists some tour highlights.

Date	**April 26 & 27, 2014**
Time	**10am-4pm**
Number of gardens	**56**
Number of registrants	**5693**
Number of garden visits	**9834**
Number of volunteers	**343**
Volunteer-hours on tour weekend	**1020**
Steering committee hours	**733**
Number of Sponsors	**12**
Number of Supporters	**13**
Ongoing efforts to ensure a quality tour	• **Volunteer orientation meeting** • **Web-based volunteer signup** • **Enhanced web-based registration to cooperate with ISP anti-Spam filters.** • **Custom designed t-shirts and pins for volunteers.** • **Plant labeling info on website** • **Invasive plants list on website** • **Native plant sales featured at 9 tour gardens.** • **Automation of garden webpage generation and cross-references** • **Tour continued with two day format after positive response the last two years** • **Publicity in print and web based media as well as flyer distribution at various venues**

Table 1: Tour Highlights

The 12th annual Going Native Garden Tour took place on Saturday and Sunday, April 26 & 27, 2014 from 10am to 4pm. The 5693 registrants who signed up for the tour made 9834 visits to the open gardens. There were 343 volunteers participating on tour day, serving as docents and greeters at the 56 open gardens.
Once again this year, various initiatives enhanced the tour experience for registrants and volunteers. Volunteers received either a custom-designed organic cotton t-shirt or a pin featuring this year's original art-work. Our 7 nursery sponsors conducted 9 native plant sales at selected tour gardens. Participants supplied many positive comments about the tour and the plant sales.

Presenting Organizations

The Going Native Garden Tour Steering Committee is a recognized part of the California Native Plant Society, Santa Clara Valley Chapter. The tour is presented in association with the UCCE Master Gardeners of Santa Clara County.

Insurance and fiscal management is provided by the California Native Plant Society, Santa Clara Valley Chapter, a non-profit 501(c)(3) organization. Donations to the tour are tax deductible.

Sponsors and Supporters

This year's tour was **sponsored** by the following 14 organizations:
Almaden Valley Nursery
BAWSCA
Bay Natives Nursery
California Nativescapes
East Bay Wilds Nursery
SCVURPPP
Master Gardeners of Santa Clara County
Gold Rush Nursery
Mediterranean Garden Society
Middlebrook Gardens Nursery
Native Revival Nursery
Santa Clara Valley Water District

Sponsors paid for the following: Tour fliers, mailing, copying, orientation meeting and website expenses, and volunteer t-shirts.

The tour was **supported** by the following 13 organizations:
-Acterra
-Azureheart
-Bay Nature Magazine
-Don Edwards San Francisco Bay National Wildlife Refuge
-Neighborhood Development Center (City of San Jose)
-Our City Forest
-Santa Clara Valley Audubon Society
-Sierra Club (Loma Prieta Chapter)
-Western Horticulture Society

Supporters provided assistance in the following areas:
- Soliciting gardens and volunteers
- Publicizing the tour to their members
- Linking their website to the tour website
- Distributing tour fliers at events

Sponsor and supporter information was publicized on the GNGT website, through tour literature, fliers, and press releases. Host garden sign-in tables displayed 4" x 17" rectangular signs that featured logos and graphics of sponsors and supporters, as shown in **Figure 1**.

Figure 1: Garden sign graphic 2014

Steering Committee

Table 2 lists the steering committee members and their roles.

Role	Core Member	Additional Contributor
Garden Selection/Descriptions/-Directions/Plant Lists	Renate Kempf, Madeline Morrow, Debbie Loeb	Peigi Duvall, Agi Kehoe, Deva Luna, Carol Halloran
Website	Krzysztof Kozminski	
Volunteer Coordination	Nella Henninger	
Garden Previews	Ingrid Graeve	
Publicity	Committee	
Sponsor Liaison/Development	Penny Pollock	
Supporter Liaison/Development	Nella Henninger/Carol Halloran	
CNPS Treasurer	Dee Wong	
Visitor Materials (maps, descriptions, etc.)	Krzysztof Kozminski	
Coordination	Penny Pollock	

Table 2: Steering Committee members

The steering committee itself logged over 700 volunteer-hours during the past year. The *Don Edwards San Francisco Bay National Wildlife Refuge* at the Environmental Education Center in Alviso (San Jose) provided meeting space. Some meetings occurred at committee members' homes. The committee met on the first Sunday of each month (varied as necessary).

Volunteers

This year the tour drew a total of 343 volunteers who logged 1029 volunteer-hours working at gardens on tour weekend. Some volunteers who were knowledgeable about native plants worked as docents. Docents answered plant-related questions and conducted guided tours of gardens. Others worked as greeters. Greeters welcomed visitors, encouraged them to sign the guest book, pointed out donation jars at most gardens and answered general questions. In addition to contributing their time on tour weekend, garden owners worked hard readying their gardens for the tour.

The tour has been designated a project by UCCE Master Gardeners of Santa Clara County so that volunteer hours for the tour would count toward the Master Gardener volunteer service requirement. As a result, 84 of the tour weekend docents were Master Gardeners.

Funding

Our sponsors supplied both monetary donations and donations of signage and flier production. In addition to signage and fliers, production of volunteer t-shirts is a primary tour expense. Other expenses included insurance, supplies for the Orientation meeting and mailing expenses. Our insurance expenses have increased from $550 in 2010 and 2011 to $1070 this year. We have cut expenses by reducing the number of T shirts and button ordered this year. Donations from registered tour visitors are also an important source of funding, totaling $1153 this year compared to a little over $700 last year.

Garden Selection

The garden selection committee moved up the submission deadline for this year's gardens, so that all the related preparations were under less deadline pressure for the tour. This worked quite well, although there were some last-minute requests from previous garden owners who had overlooked the submission deadline.

The committee decided to continue the two-day tour format. The tour was divided geographically with 23 northern gardens open on Saturday and 33 southern gardens open on Sunday. Plant sales were featured at four gardens on Saturday and five on Sunday. A book signing was available at one garden on each day, featuring Helen Popper, author of the new book: California Native Gardening, A Month-by-Month Guide. Talks were offered at selected gardens on both days. Among the topics were:

- Storm water runoff pollution prevention
- Honey bee and other pollinators in the Native Plant Garden
- Edible California native plants
- 10 top steps for successful native gardens

The tour featured 56 gardens. Of these, 17 gardens (31%) were on the tour for the first time. This year, 10 public native gardens and 1 school garden were included in the tour. Most of the gardens were located in Santa Clara County, and a few gardens were in southern San Mateo County. The southern most gardens were in Los Gatos and south San Jose. The Garden Selection Committee evaluated a total of 21 gardens and prepared garden descriptions for the 17 selected gardens.

Figure 2 depicts an area map showing the approximate locations of gardens selected for the 2014 tour. Green markers indicate gardens open on Saturday. The CNPS held a plant sale on Saturday at one of the northern gardens. Yellow markers indicate gardens open on Sunday.

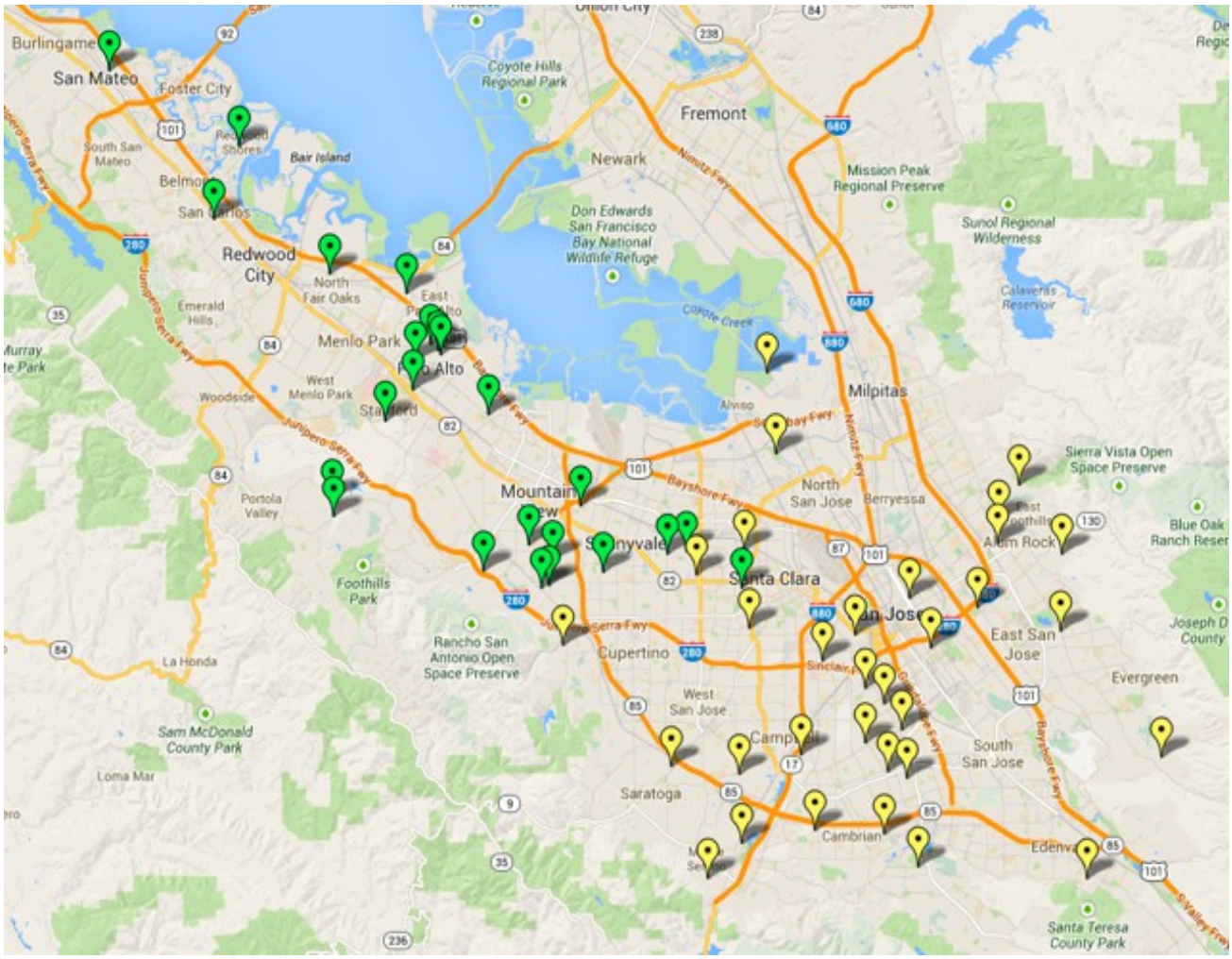


Figure 2: 2014 Tour Gardens

Figure 3 lists the tour gardens and their visitor counts for the day.

Garden number	Garden Name	Visitors
Total GNGT	Note: gardens #14 and #50 were withdrawn; 56 gardens total.	**9834**
1	Silva Garden	102
2	Harry & Nancy's Garden	120
3	Zeh Garden	93
4	Sullivan's Garden	107
5	Bellehaven Home Native Garden	131
6	Master Gardeners Demo Garden	298
7	Channing Avenue Garden	291
8	McClenny-Holmlund Garden	273
9	Lincoln Avenue Garden	404
10	Portola Avenue Garden	210
11	San Juan Street Garden	164
12	Maxwell/Hanrahan Garden	214
13	Creek Park Drive Garden	212
15	Middlefield Native and Edible Gardens	118
16	Foxborough Garden	228
17	Hilltop Drive Garden	301
18	Polk Court Garden	203
19	Church Welcome Garden	163
20	Richardson Avenue Garden	251
21	Miguel Garden	314
22	Stern Backyard Sanctuary	238
23	Percolating Pond Native Garden	147
24	Wolfe Road Garden	174
26	Las Brisas Native California Garden	104
28	Natural Front Yard	69
25	Schoenenberger Garden	39
29	Don Edwards San Francisco Bay National Wildlife Refuge Environmental Education Center	17
30	Ulistac Natural Area	50
31	Morrow-Rumbaugh Garden	361
27	Matt & Val's Native Garden	141
32	Slatebrook Garden	250
33	Near Vasona Garden	333
34	Bel Estos Drive Garden	232
35	Pat & Frank Nichols' Garden	320
36	Edith Morley Park Native Garden	78
37	Urban Native Garden	60
38	El Jardin Feliz	171
39	ELSEE (The Environmental Laboratory for Sustainability and Ecological Education)	208
40	J&J's Burbank Garden	171
41	Manter Garden	237
42	Nevada Avenue Garden	238
43	Jensen's Cottage Garden	184
44	Laurelwood Drive Garden	313
45	Blackstone Monarch Habitat	183
46	Hacienda Environmental Science Magnet	359
47	Dent Avenue Native Habitat Garden	125
48	CA Native Plant Berms, J. Fontana Park	30
49	Moselle Court Garden	49
51	Meadowlands Garden	82
52	Kumar-Jethanandani Garden	62
53	Native Garden Wheel at Emma Prusch Farm Park	43
54	Fleming ave garden	113
55	Cedar Lane Garden Sanctuary	107
56	Staples Avenue Garden	102
57	Alum Rock Garden	102
58	Salem Avenue Garden	145

Garden Previews

As a way to attract and retain volunteers, the tour committee offers a Garden Preview program for volunteers (inspired by the Garden Soirees organized by the East Bay Bringing Back the Natives Tour). Under this program, volunteers receive invitations to visit private native gardens throughout the year. This is a reward for their volunteer efforts, and a chance to see gardens they would otherwise miss due to their volunteer duties on tour day. Many appreciate the opportunity to see native gardens at different times of the year. Under this program, a total of 9 garden previews were arranged between July 2013 and June 2014, attracting from 7 to 20 visitors to any one garden with an average of 13 visitors.

Other Volunteer Benefits

This year all volunteers were offered custom designed t-shirts. Myra Saylor designed the T-shirt art. She is an artist on paper, canvas and gourds and lives part time in Yuma, AZ and part time in California. She is a Master Gardener in Arizona and a great proponent of native landscaping. Her design for this year's shirt featuring *Fremontodendron Californicum,* Flannel Bush, is on the front page of this report. This image was also printed on large pins to give to those volunteers who eschew t-shirts.

Tour Orientation

Tour organizers once again offered a well-received volunteer orientation program three weeks before tour day. All volunteers and garden hosts were invited to attend a Saturday afternoon meeting. A short presentation covered greeter, docent, and garden owner tasks and benefits followed by a question and answer session. Over 150 volunteers and garden owners attended the orientation. This also allowed owners and volunteers to meet if they didn't already know each other.

A presentation about minimizing runoff was again featured this year: Peter Schultze-Allen, Senior Scientist of EOA Inc., spoke for about 15 minutes describing watershed-friendly designs, why we need them, and what we can do to make our gardens more watershed-friendly.

Tour materials and signs were distributed and refreshments were served. The meeting provided the opportunity for attendees to talk with members of the steering committee and meet other like-minded volunteers.

Publicity

The publicity this year targeted print media, gardening and environmental groups, colleges/academics, broadcast media, city business bureaus, water companies, nurseries, special interest groups and neighborhood associations. Both the Santa Clara Valley Chapter of CNPS and the Masters Gardeners of Santa Clara County helped coordinate publicity.

PRESS RELEASE: Hard copy press releases were mailed to selected media outlets. The release was emailed to more than 200 local media contacts.
The tour received coverage in the following publications:

Avocet (Santa Clara County Audubon newsletter)

CNPS Santa Clara Valley Chapter newsletter
CNPS Yerba Buena Chapter newsletter
Los Altos Town Crier
Palo Alto Weekly
San Jose Mercury News
San Francisco Chronicle
Santa Clara County Master Gardener newsletter
Sierra Club Loma Prietan Newsletter
Mediterranean Garden Society newsletter
Native plant nursery newsletters

FLIER DISTRIBUTION: Thousands of fliers were mailed to nurseries, local college horticulture , local botanic gardens, and garden owners; 1200 were mailed to chapter members as part of the bimonthly newsletter *Blazing Star*; the rest were distributed at public meetings organized by CNPS as well as Master Gardeners of Santa Clara County.

Registrants identified many varied sources for learning about the GNGT. The post-tour survey indicated the following major categories:

email	41%
San Jose Mercury/News	26%
CNPS	19%
friend	15%
Master Gardeners	13%
internet	13%

Now entering its thirteenth year, the tour has established a loyal base of adherents, and a reputation and following among the gardening public.

Website

The tour website is located at www.goingnativegardentour.org and can be also accessed at www.gngt.org.

Steering Committee volunteers have spent about 75 hours implementing significant website enhancements for the 2014 Tour:

- The website pages now have a consistent appearance.
- The garden pages are now all generated dynamically, using a database with garden information provided by the garden owners and designers. The list of gardens can be grouped by city or by designer, and sorted by garden age or garden size. This database will be used in the future to create a cross-referenced system for selecting gardens based on topics of interest. For example, a website visitor will be able to find and browse all gardens that have rain capture/containment features, or all gardens with meadows.
- Garden owners and designers can use a special page to upload garden photographs and submit corrections to the garden descriptions.
- Garden owners can also generate an accurate plant list using the new native plant database, current with the latest version of the Jepsen manual.

- The online registration for the tour has been simplified and made easier by reusing the information provided by the registrants in the past years to reduce the amount of typing needed to re-register.
- Registered visitors can select garden they want to visit and mark them as "favorites", then print descriptions and directions to the favorite gardens only, minimizing the use of paper.
- Registered visitors can access Google™ maps with garden locations and use all features provided on these maps, such as download to a PDA.

The garden submission form is online. All gardens featured this year applied through this automated form, which is live 365 days of the year. Additional improvements to the garden submission form are planned for the 2015 Tour.

The number of web pages increased with the addition of information about this year's gardens. The showcase feature of each garden is described along with other garden attractions, wildlife value, years gardening at this location, and lot size. Website visitors can view up to ten pictures from each garden. Where available, plant lists are provided online. Addresses of public gardens are available year-round to all website visitors. To protect privacy, addresses of private gardens are shown only to registered visitors, and only during the two weeks immediately preceding the tour. These web pages, along with pages from previous years' tours, are available year-round, serving as a valuable resource for people searching for great native garden ideas.

Descriptions for making various styles of labels are on the website. Clear labeling helps answer many of the garden visitors' questions, so that docents have more time to discuss other aspects of the gardens.

With the permission of Cal-IPC, a summary list of plants considered invasive in California natural areas was extracted from their documents (California Invasive Plant Inventory, Feb. '06, and Cal-IPC News Spring 2007). This list is available on the GNGT website. A link to their full database allows interested visitors to access more details about these invasive plants. Note that this list focuses on plants that imperil natural areas – there are other cultivated plants that can be quite invasive in the home garden.

Volunteer sign-ups are now automated on the website, with information going directly to a database that allows for easier coordination on tour weekend.

iPhone app

The iPhone app was not available this year due to problems with personnel changes in the Steering Committee and new personnel working on the app. We are not sure if we have enough volunteer-hours available to re-institute it for next year.

2014 Registrations

Table 4 shows that Santa Clara County supplied 4432 registrations (77.9% of the total), and San Mateo County supplied 873 registrations (15.3% of the total).

County	Total	Percent
Total GNGT	5690	100%
Santa Clara	4432	77.9%
San Mateo	873	15.3%
Alameda	181	3.2%
Santa Cruz	69	1.2%
Contra Costa	38	0.7%
San Benito	30	0.5%
San Francisco	30	0.5%
Monterey	9	0.2%
San Diego	5	0.1%
Los Angeles	5	0.1%
Tuolumne	4	0.1%
Sonoma	4	0.1%
Sacramento	2	0.0%
Marin	2	0.0%
Yolo	2	0.0%
San Joaquin	2	0.0%
Solano	2	0.0%
Nevada, NV	2	0.0%
Santa Barbara	1	0.0%

Table 5 shows that San Jose supplied 878 (31.7 % of the total) of the 5693 registrants, followed by Palo Alto, Sunnyvale, Mountain View, Los Altos and Los Gatos.

City	Total	Percent
Total GNGT	5693	100%
San Jose	1807	31.7%
Palo Alto	432	7.6%
Sunnyvale	378	6.6%
Los Altos	265	4.7%
Mountain View	263	4.6%
Los Gatos	226	4.0%
Cupertino	216	3.8%
Saratoga	199	3.5%
Santa Clara	197	3.5%
Campbell	189	3.3%
Menlo Park	162	2.8%
Redwood City	153	2.7%
Portola Valley	111	1.9%
San Mateo	99	1.7%
Fremont	84	1.5%
San Carlos	74	1.3%
Morgan Hill	68	1.2%
Los Altos Hills	54	0.9%
Milpitas	49	0.9%
Belmont	43	0.8%
Gilroy	42	0.7%
Burlingame	36	0.6%
San Francisco	30	0.5%
Hillsborough	29	0.5%
Monte Sereno	28	0.5%
Other cities	459	8.1%

Tour Materials

Links to web-based tour materials were emailed to all registrants two weeks before the tour. These materials were designed to allow tour visitors to plan which gardens to visit and work out their route. The tour materials consisted of garden addresses and detailed descriptions, photos, plant lists and directions as well locations of plant sales and gardening talks.

Each garden on the tour received the following materials:

- Guest book for visitor sign-in
- Tour Garden Sign (durable, weather-proof, and should last for a long time) and 2 stakes
- Rectangular poster depicting logos of sponsors and supporters (see Figure 1)
- Garden Etiquette (description of procedures on tour day)
- Small sign requesting donations

- Gardens also received a variety brochures and literature from Tour Sponsors to distribute, and some gardens provided plant lists and garden write-ups.

Tour Weekend

Saturday started with flurry of emails to committee members as the result of a website crash. Fortunately the vast majority of participants had already planned their day and the two or three dozen who hadn't received a PDF of garden addresses. The website was back up by noon on Saturday.
Tour weekend weather threatened rain on Saturday but both days turned out to dry and pleasant. The tour traffic was higher in the northwest/central part or the tour. Once again the southeastern locations received fewer visitors than the gardens that are further up the peninsula. A total of 9834 visits were logged, which is a slight underestimate as not every visitor signs the guest book. Lincoln Ave garden in Palo Alto recorded 404 visitors on Saturday, the highest visitor count. Lower garden numbers tend to be located to the northwest (San Mateo, Redwood City), and higher garden numbers southeast (Santa Clara, San Jose). Garden #1 is in San Mateo and Garden #58 is in Alum Rock area of San Jose. Gardens #1 through #24 were open on Saturday, gardens #25 through #58 were open on Sunday.

Visitor Feedback – On-Line Survey

After skipping last year GNGT conducted an on-line survey using 'surveymonkey.com'. A random drawing was offered for participation in the survey, with t-shirts, 2 copies of Helen Popper's book and a1 -hour design consultations offered as prizes. 401 people submitted the survey, rating various aspects of the tour. For 35% of the respondents this was their first time attending the GNGT and average party size was 2 people. 56% visited gardens on Saturday and 57% visited on Sunday.

Here are some of the ratings and feedback supplied by survey participants:

Overall rating of tour:	65% Excellent, 31% Good, 3% adequate, 1% poor
Registration process:	95% good to excellent
Website ease of use:	80% good to excellent
Website Content:	91% good to excellent
Tour maps & Materials:	85% good to excellent
Quality of gardens:	93% good to excellent
Docents and greeters:	97% good to excellent
Quality of garden talks	92% good to excellent
Plant sale influenced garden visit	42%

Participants familiarity with native plants gardening was: beginner 29%, some knowledge 58% and old hand, 13%.

Visitor Feedback – Guest Books

Here are a few of the comments entered in the guest books by visitors. It's not surprising that many of the comments written in the guest books are brief, as the visitors are rushing to see gardens in the time allowed.

Garden #	Comments
#4	Great way to use water during a drought unlike water hogging lawns.
#4	Love how it is carved into different "rooms" with different vantage points to enjoy the garden. And so much habitat value for birds, pollinators +lizards. Love it
#5	The pictures of out-of-season blooms are very nice.
#18	Nice design. Learned about the permeable pavement stones.
#24	Thank you!! This garden was so well labeled and organized. The educational value rivals its beauty.
#31	Love the opportunity to buy natives
#47	I want natives in my yard – soon!
#52	So inspirational to see what you've been able to do in a small space. Thank you for your generosity.
#57	Really lovely garden! The labels on the plants were extremely helpful, as well as the informative literature binder.

Future Plans

We are looking into changing of website host and our webmaster has several possibilities to look into. We are looking for a web host that is able to handle the increased bandwidth need during the month of the tour as well as the ability to send bulk emails without difficulty.

The garden selection committee plans to continue with an early garden submission deadline for next year so that all the related preparations are under less pressure close to tour days.

The Saturday Orientation was a success and we will continue that next year.

We will continue the online survey after the tour and perhaps reintroduce the iPhone App.

Summary

Table 6 compares some key statistics for the last eight tours.

Year of Tour	2007	2008	2009	2010	2011	2012	2013	2014
Number of gardens	45	42	53	67	69	58	62	56
Number of registrants	3,120	3523	5090	4,673	5,250	4305	3209	5693
Number of garden visits	6,688	7,137	12,824	12,447	9,916	7754	6553	9834
Number of volunteers	200	220	265	262	300	250	262	343
Volunteer hours on tour day	690	741	800	1,163	1,200	1,100	1163	1029

Table 6: Tour statistics, 2007 through 2014

This year's Going Native Garden Tour featured 56 gardens over two days. Registration was up 77% from last year, and there were 50% more garden visits. We feel the worsening drought may have increased interest in water conserving nativescapes.

There was a slightly different mix of sponsors and supporters this year but our core sponsors continued their support. Our donations from the tour gardens were up 40% from last year.

The continued success of the Going Native Garden Tour demonstrates that our community has a sustained interest in growing California native plants in home gardens and in environmentally conscious gardening practices.

Appendix A

Here are a few of the many photos posted of GNGT participating gardens on the garden websites at www.gngt.org

Alum Rock Garden

Heatherdale Ave Garden

Round's Hill Garden

Round's Hill Garden

Lassen Avenue Garden

Hilltop Drive Garden

Channing Avenue Garden

Woodside Library Garden

Zeh House Garden

Flemming Avenue Garden

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-8

Watershed Watchers: Keeping Our Waterways Clean: FY 13-14 Fourth Quarter Report including end-of-year Summary

WATERSHED WATCHERS:
Keeping Our Waterways Clean

FY13-14
4th Quarter Report
April – June 2014

Volunteers from the Packard Foundation help pull nonnative mustard throughout the Refuge.

Prepared for:
Santa Clara Valley Urban Runoff Pollution Prevention Program
San Francisco Bay Wildlife Society

Don Edwards San Francisco Bay National Wildlife Refuge

A. Program Title and General Focus:

This partnership program between the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), also the Watershed Watchers program, the U.S. Fish and Wildlife Service's Don Edwards San Francisco Bay National Wildlife Refuge Environmental Education Center (EEC), and the San Francisco Bay Wildlife Society (SFBWS) provides services and programming that interpret the message of the Watershed Watchers program. The purpose of the Watershed Watchers program is to increase the surrounding communities' knowledge of urban runoff pollution and how to reduce its harmful effects through personal behavior changes.

B. Program Team:

- Julie Kahrnoff is a graduate of the University of California Santa Barbara with a B.S. in Environmental Studies and Psychology. She is currently working on her graduate certificate in Art Gallery and Museum Studies at Cal State East Bay. Julie's experience includes watershed outreach, creek restoration, water quality testing, and naturalist work with many cities and organizations. As Program Coordinator, Julie works to develop curricula, partnerships, and unique learning opportunities that will strengthen the Watershed Watchers Program.

- Edward Lee is the Citizen Science intern for Watershed Watchers. He is a graduate of the University of California Santa Barbara with a B.S. in Environmental Studies. His focus is development for the California Phenology Project, eBird, and the Going Native Garden Tour.

- Allison Shell is the Interpretive intern for Watershed Watchers. Currently she is working on her masters in Zoology and has experience as an interpreter for the Ohio Zoo. For Watershed Watchers she is providing outreach at the local libraries and organizing Bird Fest.

- Genie Moore is the Environmental Education Center Director. She brings her experiences of coordinating the "Wetland Round-Up" and "Trekking the Refuge" field trip programs, and the Common Murre Restoration Project for the Visitor Center in Fremont.

- San Francisco Bay Wildlife Society, established in 1987, is a non-profit cooperating association that has supported education, interpretation and other public use programs at the Don Edwards San Francisco Bay National Wildlife Refuge. The San Francisco Bay Wildlife Society administers the Watershed Watchers Program.

- Volunteers are vital and are often very involved with the Watershed Watchers Program by assisting with interpretive programs, field trips, and special events.

C. Highlights

Library Programs

This quarter Watershed Watchers visited 13 libraries in the San Jose public library system. This outreach effort was a great way to advertise the free weekend programs and bird fest. It also provided watershed watchers messaging and encouraged people to visit the Refuge. The programs lasted 45 minutes and included learning about bird adaptations, reading time on trash and recycling, and a take home craft.

South Bay Bird Fest

The theme for 2014's International Migratory Bird Day was "Why Birds Matter" and the South Bay Bird Fest focused on how birds could be considered super heroes. Children were able to make their own bird superhero masks as well as build their own birds by deciding what special abilities they wanted them to have, whether it be wings for long distance flights versus speed and agility, or feet made for swimming versus sharp talons for grabbing prey. The Santa Clara Valley Audubon Society even helped kids make their own binoculars out of recycled toilet paper rolls.

(Left) Intern Allison helps library visitors with their owl craft.

(Left) Bird Fest Visitors learn about the Pacific Flyaway. (Right) Bird Fest visitors are hoping to win the raffle with prizes donated by the Los Gatos Bird Watcher.

D. Fourth Quarter Summary (April-June)

Total Number of Programs Summary

Program Type	# of Programs Proposed	# of Programs Offered	# of Programs Conducted	Proposal Met?
Wildlife in Our Watershed	6	6	4	Met
Our Role in Preventing Urban Runoff Pollution	5	12	10	Exceeded
Gardening Without Chemicals	2	8	6	Exceeded
Outreach Programs	1	12	12	Exceeded
Summer Camp	n/a	n/a	n/a	n/a
Special Events	1	1	1	Met
TOTAL	15	39	33	Exceeded

Total Number of Participants Summary

Program Type	Pre K	Elem	Middle	High	Adult	Total #
Wildlife in Our Watershed		30	2		47	79
Our Role in Preventing Urban Runoff Pollution		33	57	5	70	165
Gardening Without Chemicals	25		29	1	51	106
Outreach Programs	0	604	0	50	25	804*
Summer Camp						n/a
Special Events						238*
TOTAL	25	667	88	56	193	1392

*separate age groups were not noted for some events

E. Program Details:

Public Program – Wildlife in Our Watershed Depends on You

A series of guided nature walks, hands-on science, and/or nature activities that focus on how individual behaviors cause or prevent urban runoff pollution and affect wildlife habitat in the watershed. (See Appendix A for programs offered this quarter)

Goal – 5 programs

Date	Programs	Pre K	Elem	Middle	High	Adult	Total # of Attendee
4/5/14	**Jr. Refuge Ranger**						**Canceled***
4/13/14	**Wildflower Drawing**		**8**			**12**	**20**
4/19/14	**Night Sky Party**		**10**	**2**		**14**	**26**
5/3/14	**Drawbridge**					**17**	**17**
6/7/14	**Flumes with Jose**		**12**			**4**	**16**
6/21/14	**Water Water Everywhere**						**Canceled***
Offered: 6 Conducted: 4			**30**	**2**		**47**	**79**

* programs canceled due to weather or low signups

Proposal: __X_Met ___Not Met __Exceeded

(Above) Volunteer Bob Havner talks about the wonders of the solar system.

Group Programs – Our Role in Preventing Urban Runoff Pollution

Presentation and walk focusing on each individual's role in preventing urban runoff pollution, including examples of alternative behaviors. (See Appendix A for program descriptions)

Goal – 4 programs

Date	Programs	Pre K	Elem	Middle	High	Adult	Total # of Attendee
4/4/14	**Webelos Naturalist Badge**		**6**			**4**	**10**
4/5/14	**Daisies**		**12**			**4**	**16**
4/11/14	**Mission College Marine Bio**					**21**	**21**
4/12/14	**Jr.Girl Scouts**						**Canceled***
4/12/14	**Brownies WOW!**		**15**			**8**	**23**
4/18/14	**Behavior School Group**			**10**	**5**	**10**	**25**
4/23/14	**Mission College Marine Bio**					**19**	**19**
5/3/14	**Webelos Naruralist Badge**						**Canceled***
6/17/14	**Boys & Girls Club**			**12**		**1**	**13**
6/19/14	**Boys & Girls Club**			**10**		**1**	**11**
6/24/14	**Boys & Girls Club**			**13**		**1**	**14**
6/25/14	**Boys & Girls Club**			**12**		**1**	**13**
Offered: Conducted:	**12** **10**		**33**	**57**	**5**	**70**	**165**

Proposal: ___Met ___Not Met _X_Exceeded

(Left) Intern Allison Shell shows a troop of brownies the importance of our watershed while on a Habitat Hike in the new Chicago Marsh.

(Above Right) Intern Sarah Mendez works with the Jr. Refuge Rangers Boys & Girls club on their nature journals.

Stewardship Programs – Gardening Without Chemicals

Workshops and garden workdays are both included in this category. Workshops highlight California native plans, emphasizing their benefits to native animals and demonstrate how to garden without chemicals. The workshops focus on how chemicals entering the watershed compromise the integrity of our waterways and are harmful to wildlife. Garden workdays illustrate chemical-free gardening techniques. (See Appendix A for specific program details)

Goal – 2 programs

Date	Programs	Pre K	Elem	Middle	High	Adult	Total # of Attendee
4/19	**Earth Day Community Service**						**Canceled***
4/23/14	**IBM**					**19**	**19**
5/3/14	**Citizen Science**						**Canceled***
5/13/14	**Kindergarteners**	**25**				**13**	**38**
5/15/14	**McAfee**					**8**	**8**
5/20/14	**Packard Foundation**					**6**	**6**
5/31/14	**I-CERV**			**13**	**1**	**3**	**17**
6/25/14	**CDM – Summer of Service**			**16**		**2**	**18**
Offered: 8 Conducted: 6		**25**		**29**	**1**	**51**	**106**

Proposal: ___Met ___Not Met _X_Exceeded

(Above) A group of kindergardners are learning the value of stewardship by pulling invasive spurge from the Refuge demonstration garden.

Outreach Programs

Take information about the program to offsite events in order to attract new participants to weekend programs and special events.

Outreach
Goal – 1 program

Date	Programs	Pre K	Elem	Middle	High	Adult	Total # of Attendee
4/3/14	**Alum Rock Library**		**6**			**2**	**8**
4/4/14	**Bascom Library**		**16**			**10**	**26**
4/8/14	**George Maybe Science Fest**		**70**				**70**
4/15/14	**Vineland Library**		**8**			**4**	**12**
4/16/14	**CDM**		**70**				**70**
4/17/14	**Mission College Eco Fair**						**125***
4/18/14	**Pearl Library**		**27**			**4**	**31**
4/22/14	**Pioneer High Earth Day**				**50**		**50**
4/22/14	**Tully Library**		**12**			**4**	**16**
4/29/14	**Joyce Ellington**		**2**			**1**	**3**
5/5/14	**George Mayne – Bird Fest**		**105**				**105**
5/8/14	**George Mayne – Bird Fest**		**122**				**122**
5/13/14	**George Mayne – Bird Fest**		**166**				**166**
Offered: Conducted:	**12** **12**	**0**	**604**	**0**	**50**	**25**	**804**

*separate age groups were not noted

Proposal: ___Met ___Not Met _X_Exceeded

Summer Camp
Marsh-In Summer Camp is offered for elementary school-age children, for one week in August. Participate as a camp coordinator and activity leader. Assist in program development, implementation, execution, and cleanup.

Summer Camp
Goal – n/a

Proposal: _X_Met ___Not Met ___Exceeded

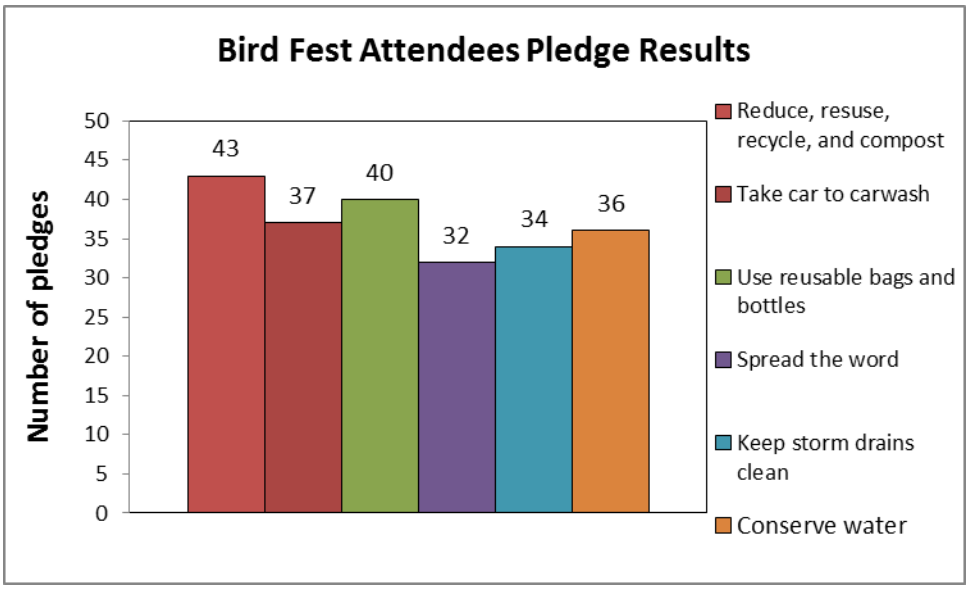
Special Events
Special events are offered twice a year and are designed to attract at least 200 people to the EEC for various activities educating participants about urban runoff pollution prevention.

Special Events
Goal – 1

Date	Programs	Pre K	Elem	Middle	High	Adult	Total # of Attendee
5/12/12	**South Bay Bird Fest**						**238**
Offered: Conducted:	**1** **1**						**238**

*separate age groups were not recorded

Proposal: _X_Met ___Not Met ___Exceeded



F. Public Outreach – The Audience and How it was Reached

This project involves public outreach encompassing a wide variety of groups and individuals in Santa Clara County. The audience varies in age, ethnicity, interest, occupations, and income levels. The following programs offer an opportunity for public outreach:

•The Environmental Education Center in Alviso offers trails and access to wildlife viewing for the public to gain first-hand knowledge of the value of our Bay habitats. Visitors who tour the Environmental Education Center have an opportunity to use the interactive kiosk with Watching Our Watershed and other interesting modules, speak with the interpretive specialist about the salt marsh, have access to "things to see," as well as learn about current threats to wildlife of the salt marsh. The "audience" is as diverse as the population in the Bay Area, including people from varied ethnic backgrounds and socioeconomic status.

•The Watershed Watchers programs are primarily held at the Environmental Education Center. Santa Clara County residents attending these programs are given informational flyers produced by SCVURPPP, including "Grow-It" and "You are the Solution to Water Pollution". The program is continually trying to reach new and different audiences, the goals for the next quarter is to continue widespread outreach to local libraries, create new interpretive displays for the EEC on trash, and develop more scout programs.

G. Outreach Materials Produced

Quarterly flyers for weekend programs are attached. These materials are distributed at outreach opportunities and they are distributed as noted below.

H. Making the Project Known to the Community at Large

Programs are advertised in the following media:

Tideline (the Refuge newsletter with over 17,000 subscribers)
Don Edwards San Francisco Bay National Wildlife Refuge website
Bay Area Parent Online
Flyers (located at the Refuge, schools, and South Bay libraries, Central YMCA, Learning Rainbow Teacher Supply Store, Hicklebee's Children's Bookstore)
Lyceum publication and website
Los Gatos Birdwatcher
Santa Clara Valley Unified School District Middle and High Schools
San Jose Unified School District Middle and High Schools
Tri-City Voice
Girl Scouts of America Yearly Newsletter

I. Coordinating Refuge Volunteers

Volunteers are instrumental in providing programs at the EEC. In order to organize and recruit new volunteers for Watershed Watchers the Watershed Watchers Coordinator has created a new volunteer program started in January 2014 that includes orientations, trainings, and volunteer enrichment. This helps to best match volunteers with their skills and abilities while offering enrichments for them to gain knowledge and become better interpreters of the SCVURPPP and Refuge message.

Watershed Watchers continues to contact volunteers to lead programs, maintain relationships with volunteers, and schedule volunteers to work on special events.

Activities for volunteers this quarter are as follows:

Date	Programs	Pre K	Elem	Middle	High	Adult	Total # of Attendee
4/8/14	**Volunteer Orientation**					**1**	**1**
4/16/14	**Volunteer Update**					**3**	**3**
4/19/14	**Volunteer Orientation**					**1**	**1**
5/6/14	**Volunteer Orientation**						**Canceled***
5/21/14	**Drawbridge Van Excursion**					**5**	**5**
5/31/14	**Volunteer Orientation**					**1**	**1**
6/11/14	**Antioch Field Trip**					**8**	**8**
6/11/14	**Volunteer Orientation**					**3**	**3**
6/24/14	**Salt Pond Tour**					**13**	**13**
6/24/14	**Volunteer Social Event**					**21**	**21**
6/29/14	**Volunteer Orientation**					**8**	**8**
6/30/14	**Devils Slide Trip**					**25**	**25**
Offered: Conducted:	**12** **11**						**84**

* programs canceled due to weather or low signups

(Left Refuge Volunteers visit Devils Slide)

J. Project Feedback

How the project has changed specific behaviors which adversely affect water quality and increase the understanding and appreciation of streams and the Bay.

Participants in the Watershed Watchers programs provided feedback as to how the program has increased their awareness of urban runoff pollution. The following statements are actual written comments taken from surveys and represent behavioral changes survey respondents are willing to make to minimize storm drain pollution:

- Remove garden leaves
- Don't dump oil near a storm drain
- Use waste collection facility for things like oil to dispose of

2013 – 2014 Thank You's

I wanted to drop a note of thanks to the Environmental Education Center staff and Ceal Craig for the outstanding tour on Drawbridge Saturday. I found it really interesting and informative, and went ahead and profiled it in my blog:

http://flourishingedge.wordpress.com/2014/05/05/of-salt-ponds-libertarian-ghosts-raw-sewage-and-hope/

I hope you enjoy it and I'd like to stay involved with your work. Please add me to your mailing lists.

Thanks so much,

Brenna Silbory
www.flourishingedge.com

Hi Julie,
We left so quickly I didn't get a chance to say goodbye and thanks! It was a great program today. The students saw and did so much in the few hours we were there. I really appreciate being able to bring them for a visit. Thanks especially for staying late for us.

Jean

Dear Julie:

Our 6th annual Eco Fair event at Mission College today was a great success thanks to your involvement! On behalf of the MC Sustainability Committee, we want to thank you for your participation, whether it be in attending the fair, providing informational literature, or being a volunteer or contact person. We also appreciate the feedback given, and the committee will use the input to making next year's event even more successful. We are very grateful that you committed your

time, and it sounds like many of you enjoyed yourself! We hope you had so much fun that you will return next year as we aim to continue the tradition of celebrating Earth Day at Mission College.

With much appreciation,

Theresa Tran and Bob Miller

Co-Chairs, Eco Fair and MC Sustainability Committee

Hi, Julie,

I'm sorry I forgot to get back to about the Ano Nuevo tour. It was great! We saw some elephant seals up-close and that was exciting. Our tour guides were wonderful and even though we've been there before we learned more about the seals. We will go back earlier in the season next winter and take the van tour again. What fun! Thank you for arranging everything.

Mary

Hi Julie,
Thank you so much for nominating me for Youth Volunteer of the Year. It means so much to me! I was really sad that I couldn't make it for the Volunteer Banquet. I really like the refuge sweatshirt!
I enjoy helping out at the refuge and working with everyone. You have done so much to help support and grow the Jr. Refuge Ranger program. I can't wait to get it off the ground; it wouldn't have been able to happen without all of your guidance.

Lynnea

Dear Julie,

Thanks for taking care of the banquet invitation. I appreciate all that you do.

Stew

Julie,

I'd like to send a big thank you for your participation in the 2014 University of Scouting Midway. The feedback that I have received so far shows that the Midway was an awesome experience for our University of Scouting participants. I hope that it was also a great success for your organization.

Thanks again,

-John Craig-

Hi Julie,

Thank you once again for doing a superlative job of presenting the "Living Wetlands" to our John Muir girls!

Our volunteers learned a lot, too, and your slide presentation gave us a virtual tour of the refuge. I almost felt like we were on a "field trip"!

Hope Congress opens because the refuge is a vital part of our ecosystem and we need people like you!

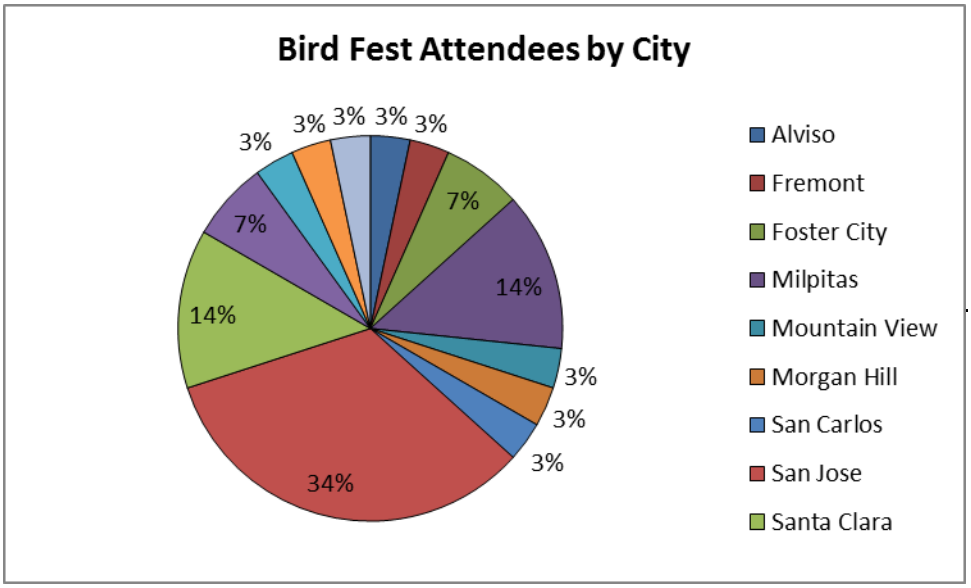
Thanks,

Edna Robison
Chair. Tech Excellence, 2013-2014
AAUW San Jose Branch
1165 Minnesota Avenue
San Jose, CA 95125
Cell (408) 569-1038

K. Visitor Survey

A voluntary Visitor Survey is used to determine visitor demographics, effectiveness of publicity, and effectiveness of the Watershed Watchers programs. Each survey represents an entire family, typically composed of 2 adults and 2 children.

Visitor Demographics



L. Watershed Watchers: Grant Year in Review

Program Numbers

Program	# Proposed	# Conducted	# of Participants
Wildlife in Our Watershed	22	23	237
Our Role in Preventing Urban Runoff Pollution	18	26	749
Gardening Without Chemicals	6	16	160
Outreach	4	29	2095
Summer Camp	4	4	134
Special Events	2	2	435
TOTAL	56	99	3809

Participant Numbers

Quarter	Pre K	Elem	Middle	High	Adult	Mixed	Total #
Quarter 1	4	180	4	40	78	86	392
Quarter 2	0	397	3	0	93	197	690
Quarter 3	95	179	33	13	265	750	1335
Quarter 4	25	667	88	56	193	363	1392
TOTAL	124	1423	128	109	629	1345	3809

2013 – 2014 Highlights

■ Watershed Watchers Reached 3,809 people and exceed all program goals

■ The Girl Scouts program overhaul has been a great success and is now relevant to the new journey program.

■ The new Volunteer program has been received with high regard from current and new volunteers now looking forward to learning more and becoming a bigger part or Watershed Watchers and the Community.

■ The new Citizen Science programs eBird and Phenology are now established and adapted for the Common Core Standards and the Next Generation Science Standards. They also help teach the Watershed Watchers message on a changing climate and how storm water pollution effects the wetlands.

■ Interns from West Valley College developed new educational materials for the native plant demonstration garden and planted milkweed and other native plants to attract butterflies. In addition, they set up the drip irrigation system.

■ Started the new Jr. Refuge Ranger weekend program to create young stewards of the land. It has now grown into a two moth program for the Alviso Boys and Girls Club this summer.

M. Attachments:

- Appendix A: Program Descriptions
- Appendix B: Watershed Watchers Proposed Work Plan for July 2013 – June 2014
- Weekend Program Flyers
- Event Flyers
- Tideline
- Visitor Survey

Appendix A: Program Descriptions

Boys & Girls Club of Alviso
The Boys & Girls Club of Alviso are the newest stewards for the Refuge. They will spend 2 months learning not only how to be stewards of the land but also the importance of keeping our Wetlands healthy. At the end of the program they will complete the Jr. Refuge Ranger program and become advocates for their community.

Cub Scouts
Ranger and volunteer Jose Garcia uses fossils and flumes to describe the changing bay and its many historical aspects. He then plays a game showing the importance of levees and salt marsh habitat. Cub scouts learn how salt marshes can filter pollutants from urban runoff and why it is important to protect the wetlands that still exist. Scouts then take an interpretive habitat hike and make a pledge on what they can do to protect their watershed and wetlands.

Daisys
Learn about food chains, wildlife specific to their local area, and use binoculars to study wild animals. This is accomplished through the use of several games, hands on activities, taking a hike around the EEC studying habitats and looking for birds. Prior to the walk, the Daisys make bird field guides which they use on their walk. Each participant states to the group an action they will take to help protect wildlife.

Drawbridge
Ceal Craig, a volunteer, gives a presentation about the historic town of Drawbridge. Urban runoff pollution is mentioned as one reason people abandoned the town. On a drive out to the viewing point, Refuge wildlife and habitats are discussed. People are reminded that urban runoff starts at their homes and techniques to reduce runoff pollution are suggested.

Get Moving! JR Girl Scouts Journey
On this Journey girl scouts make recycled paper, take a habitat hike of the Refuge, and add up their own personal water usage. They learn ways to reduce their water energy use outdoors and indoors. They then create a plan to fix a water energy problem in their community related to storm water and/or urban runoff.

Mission College Marine Biology
Mission College students come out to the Refuge for a tour and to learn about plankton and water quality. Their goal is to discover the diverse species that live among our waters and discover the different between human altered habitats. They then take a conservation pledge on what they will do to take action in their everyday lives.

Night Sky Party
Amateur astronomers come to the EEC to educate and entertain visitors with a casual astronomy talk, fun activities, and a telescope viewing of the night sky. During the program, hot chocolate is served and the urban runoff pollution prevention box is discussed.

Summer of Service
Partnership program between various youth groups and SCVURPPP position at the EEC. Kids spend a day at the EEC; they work in the gardens in the morning and explore the Refuge in the afternoon. Urban runoff pollution prevention ideas are discussed. They finish up by designing their own environmentally friendly tote to take home.

Team Citizen Scientists! – Community Service
Stewardship activities including citizen science and service projects encourage and inspire visitors to create wildlife habitats and use chemical-free garden techniques in their own backyards.

Volunteer Orientation
Provided twice monthly to recruit new Refuge volunteers for interpretive programs, the gardens, and front desk volunteers to assist with coverage of the facility in order to perform more weekend interpretive programs.

Water Water Everywhere
Ed Kantack's program is all about H_2O. This program covers the water cycle, including a working model used to demonstrate evaporation, condensation, precipitation, and runoff. Next, watersheds are addressed and participants get to observe the watershed model and learn about sources of urban runoff pollution. Everyone gets to make their own watershed model to take home.

Webelos Naturalist Badge
Webelos earn their Naturalist Badge by visiting the Refuge and learning about food chains, wildlife specific to their local area, and using binoculars to study wild animals. This is accomplished through the use of several games, hands on activities, taking a hike around the EEC studying habitats and looking for birds. Prior to the walk, the scouts make bird field guides which they use on their walk. The program also covers actions they can take at home to prevent urban runoff. Each participant states to the group an action they will take to help protect wildlife.

Wildflower Drawing
Wildflower drawing was introduced by volunteer Kathy Kleinsteiber in order to give participants, especially those who are scared at the idea of drawing, a comprehensive and easy way to approach drawing. With natural items as example, she teaches proper technique and also allows budding artists to be creative and have fun.

WOW! Wonders of Water Brownie Girl Scout Journey
This journey discusses the water cycle, runoff, and wetlands. It establishes personal responsibility on how the scouts can take action by discovering how to love water, save water, and share water.

Appendix B: Watershed Watchers Proposed Work Plan for July 2013 – June 2014

WATERSHED WATCHERS PROGRAM TITLE AND GOALS JULY 2013 – JUNE 2014	METHODS AND OBJECTIVES OF PROGRAMS
Public Programs at the EEC- Wildlife in our Watershed Depends on You **Goal:** Interpretive programs offered to the public, focusing on how individual behaviors cause urban runoff pollution and affect wildlife habitat in our watershed.	Offer a variety of programs for adults, children, and families. These programs can include but are not limited to nature walks, hands-on activities, puppet shows, holiday programs, and other interpretive programs. These programs change frequently. **Objective:** Participants will state various ways they can protect the refuge
Group Programs at the EEC- Our Role in Preventing Urban Runoff Pollution **Goal:** Interpretive programs focusing on each individual's role in preventing urban runoff pollution, including examples of alternate behaviors.	These programs will be conducted for senior groups, youth groups, birthday parties, special interest clubs, college groups, day care, after school programs, and other local organizations. These programs will be reserved in advance by the group. **Objective:** Participants will state two examples of actions they will try at home to prevent urban runoff pollution
Special Events **Goal:** These all day events are designed to attract at least 200 people to the EEC for various activities educating about urban runoff pollution prevention.	These two events include Shark Day in October and International Migratory Bird Day (IMBD) in May. Planning for these two events begins 3-6 months in advance. Thus much of the prep work for Shark Day will be in the first Quarter and prep work for IMBD will be in the third Quarter.
Outreach **Goal:** Participating in outreach activities helps spread the word about the urban runoff pollution prevention program and provides opportunities for people to learn about how to prevent urban runoff pollution in the watershed.	Outreach activities include festivals, fairs, watershed clean-ups, or off site interpretive programs.
Stewardship at the EEC- Gardening without chemicals and Coastal Cleanup **Goal:** Stewardship activities encourage and inspire visitors to create wildlife habitats and use chemical-free garden techniques in their own backyards. Coastal Cleanup also helps participants connect their trash habits with the effects on the environment and wildlife.	These stewardship activities include garden work days emphasizing chemical-free gardening techniques and garden workshops that guide visitors through various native plant demonstration gardens around the EEC, while discussing chemical-free gardening techniques used in the gardens and implementation methods for the home garden. Coastal cleanup involves volunteers seeing the effects of urban runoff trash on coastal environments and wildlife. Trash is now the largest source of urban runoff pollution.

WATERSHED WATCHERS PROGRAM TITLE AND GOALS JULY 2013 – JUNE 2014	METHODS AND OBJECTIVES OF PROGRAMS
Informal Indoor Visitor Contact **Goal:** Includes interaction with visitors at the EEC, answering questions over the phone and in person.	Assist visitors over the telephone and in person. Provide excellent customer service to all visitors.
Distribution of Specified Programs to Local Media **Goal:** Contact and distribute informational fliers, press releases, and other programmatic information about the urban runoff pollution prevention program to local media such as, Bay Area Parent, Mercury News, as well as local newsletters and websites.	Create and distribute a listing of programs on a regular basis to provide to Bay Area Parent, online calendars, websites, local newsletters and newspapers. Write press releases and informational fliers to distribute for special events. Conduct follow-up calls to ensure information is posted.
Developing and Maintaining Partnerships with Local Community Organizations **Goal:** Maintain and create partnerships with local community organizations via phone calls, emails, and in person meetings to groups such as San Jose Community Gardens, the San Francisco Bay Bird Observatory, Audubon, Guadalupe River Parks and Gardens, Nortel Networks, Intel, etc.	This takes place throughout the year, however, the key time for working directly with these groups is for International Migratory Bird Day (IMBD) in May and for the chemical-free garden stewardship projects. During the rest of the year, relationships are maintained through the exchange of information and collaboration on issues related to urban runoff pollution prevention and wildlife.
Coordinating Refuge Volunteers for Interpretive Programs/ Gardens **Goal:** Work with and maintain ongoing relationships with volunteers at the Refuge. Work with volunteers that: lead programs; maintain the chemical – free gardens; and assist with special events.	Work with the Volunteer Coordinator to recruit, meet with and provide on the job training for volunteers that have an interest in leading programs and working to maintain the chemical-free gardens. Work directly with and maintain relationships with long-term volunteers who lead programs and work in the gardens.
Marsh-In Summer Camp **Goal:** This week long camp is designed to provide opportunities for young campers to learn about and connect with the wetland habitats, animals and plants, and to introduce them to how individual behaviors cause urban runoff pollution and affect wildlife habitat in our watershed.	This includes acting as a leader and assisting in program planning for the one week annual summer camp that encourages participation of students from the local elementary school in Alviso.

WATERSHED WATCHERS PROGRAM TITLE AND GOALS JULY 2013 – JUNE 2014	METHODS AND OBJECTIVES OF PROGRAMS
Program Activity Kits **Goal:** Continue to develop self-contained Activity Kits in durable plastic storage containers to improve overall program efficiency.	Many programs and activities have been developed over the years and they are offered on a regular basis. The supplies and equipment used for each program are gathered each time the program is offered. This takes time. It would improve overall efficiency to have all supplies and equipment needed for each program or activity stored in a labeled plastic storage tub. These programs and activities are used for Public Programs, Group Programs, Special Events, Outreach, Volunteers, and Summer Camp. **Objective:** For each activity, determine equipment and materials needed, acquire storage tubs and necessary supplies so each activity is completely self-contained and ready to go off the shelf. Develop scripts as needed.
Program Research and Development **Goal:** Research and development time necessary for the creation of new urban runoff pollution prevention programs and learning new information to supplement and expand existing programs. This also includes time spent planning and scheduling future programs.	Time spent reviewing historical program offerings and analyzing the results of evaluations to plan future programs to maximize attendance and the variety of programs. This includes researching programs, and participating in free program development trainings (in house or local) to expand knowledge of the subject, create and develop new ideas for programs. As well as time spent learning information for specific programs by reading and researching topics, and communicating with knowledgeable staff and volunteers for additional information related to the program topic.
Mercury Outreach **Goal:** Provide information for the public in regards to mercury poisoning.	Provide information for the public in regards to mercury poisoning by incorporating the information in existing programming. Provide handouts and guides to eating fish and shellfish in the San Francisco Bay.

PROGRAM TITLE AND GOALS	QUARTER 1 JULY – SEPTEMBER 2013 OBJECTIVES	QUARTER 2 OCTOBER - DECEMBER 2013 OBJECTIVES	QUARTER 3 JANUARY - MARCH 2014 OBJECTIVES	QUARTER 4 APRIL - JUNE 2014 OBJECTIVES
Public Programs at the EEC - Wildlife in our Watershed Depends on You	6 programs	5 programs	5 programs	6 programs
Group Programs at the EEC - Our Role in Preventing Urban Runoff Pollution	5 programs	4 programs	4 programs	5 programs
Special Events	Conduct planning for special event	1 special event conducted	Conduct planning for special event	1 special event conducted
Outreach	1 outreach opportunity	1 outreach opportunity	1 outreach opportunity	1 outreach opportunity
Stewardship at the EEC- Gardening without Chemicals, Coastal Cleanup	2 programs (possibly 1 coastal cleanup)	2 programs	2 programs	2 programs
Informal Indoor Visitor Contact	Ongoing Activity	Ongoing Activity	Ongoing Activity	Ongoing Activity
Distribution of Specified Programs to Local Media	Ongoing Activity	Ongoing Activity	Ongoing Activity	Ongoing Activity
Developing and Maintaining Partnerships with Local Community Organizations	Ongoing Activity	Ongoing Activity	Ongoing Activity	Ongoing Activity
Coordinating Refuge Volunteers for Interpretive Programs/ Gardens	Ongoing Activity	Ongoing Activity	Ongoing Activity	Ongoing Activity
Marsh-In Summer Camp	Implemented this quarter	N/A	N/A	N/A
Program Research and Development	Ongoing Activity	Ongoing Activity	Ongoing Activity	Ongoing Activity

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-9

Zun Zun School Assemblies for Watershed Watch – FY 13-14

- ZunZun Assembly Programs for Watershed Watch- Final Report 2013-2014 School Year, July 11, 2014
- Memorandum- FY 13-14 Teacher Evaluation of the School Assembly Program

ZunZun Assembly Programs for Watershed Watch
FINAL REPORT 2013-2014 School Year
July 11, 2014

OVERVIEW
ZunZun performed forty-eight assemblies at 23 schools and two festivals in Watershed Watch's service area, during the 2013-2014 school year. ZunZun performed 48 assemblies rather than the usual 50[1]. ZunZun visited a total of **13,613** young people and approximately **550** educators and parents this year. Through these performances, we shared information about the Santa Clara Valley watershed—what it is, where students are in their watershed, estuary definition, San Francisco Bay ecology, how to keep it clean, how to protect the watershed, recycling, waste reduction, clean ups and what to do to have their families practice watershed pollution prevention. As always, we have had a waiting list of schools wishing to have the ZunZun Watershed Watch assemblies.

Included in this final report are the following:

- Outreach
- Supplemental Materials
- State Standards
- Performances
- Evaluations
- Litter Reduction Pledge Form Ideas and Plans for Next Year

Enclosed with this report, please find:

- Sample Newsletter Article
- Vocabulary Sheets
- ZunZun Follow-Up Activities

OUTREACH

Using the list of target schools provided by Watershed Watch, ZunZun advertised this year's program to the principals and assembly coordinators at eligible elementary schools. ZunZun emailed a flyer to the school contact person and then followed up to answer questions and book assemblies. Schools booked directly with ZunZun and a performance update was sent to SCVURPPP as schools

[1] Due to a tracking error, ZunZun performed at 52 assemblies in FY 12-13. Therefore, to balance the budget, 48 assemblies were performed in FY 13-14

booked. Like past years, we ended up with more interest than there was room for, and therefore we created a waiting list. Also, we tried to make sure and do outreach to cities and towns that had not had an assembly the previous year.

Prior to each scheduled assembly, we emailed a confirmation letter and sent the vocabulary lists and a newsletter article to the school contact person. At least one week before the scheduled performance, we called the school to confirm show times and location. Every school received three confirmations.

SUPPLEMENTAL MATERIALS

Prior to each assembly, supplemental materials to aid in retention of the assembly information were sent to each school. A **vocabulary list** for grades K-2 and another for grades 3-6 were emailed to each assembly coordinator for distribution to teachers for use before and after the performances. At the assembly, ZunZun provided WW brochures, evaluation postcards, and post-assembly activity sheets to every teacher.

A newsletter article about the performance was also sent to help inform students' families of the presentation and to encourage parents to ask questions about what the students learned about watershed pollution prevention. The parent newsletter article facilitates discussions at home about Watershed Watch's message, the ZunZun show, provides information on how to prevent pollution at home and ideas on how to get involved.

We also continued to use the follow-up sheet, developed with the Program and Co-permitted staff last year, to provide ideas for grade level-appropriate activities that integrate the lessons learned in the assemblies into the classroom. These activity sheets were distributed to teachers at each assembly along with Watershed Watch brochures and evaluation postcards.

STATE STANDARDS

This year schools in California are busy implementing Common Core, so we are continuing to update our content to meet common core curriculum goals. As Common Core standards are designed to encourage critical thinking and holistic learning, they are a greatly addressed in the water assemblies provided.

In addition to being an extremely fun water education experience, ZunZun assemblies cover a large number of California State Content Standards for grades K-8. Because we use music and musical instruments, they meet many **Visual and Performing Arts Standards.** As the assemblies are about water issues, they cover

Science Content Standards. Students are learning new vocabulary and words, so they are meeting many **Language Arts and English Language Development Standards.** We introduce instruments from around the world, which meets many standards in **History- Social Science Standards.** Finally, we use both Spanish and English which meets **English Language Development Standards** and **World Language Content Standards.** Most importantly, the assemblies are designed to help students feel empowered to make changes in their daily lives and the lives of their families that help prevent wasting water and prevent pollution. ***The assemblies encourage pro-activity.***

A few specific examples of State Content Standards in **Science, Language Arts, and Visual and Performing Arts** met in our shows are as follows**:**

Science: Water education for all grade levels is included in every assembly. (i.e.: Grade 3 physical science 1.e, 1.f.; Grade 5, earth sciences 3a, 3b, 3c) Education standards regarding water on earth, evaporation, properties of a solid, liquid and a gas, water present in the form of salt and fresh water, etc. is addressed.

Language Arts: Use of rhythm and rhyme to remember a concept. Learning new words such as "runoff" and "drought" and seeing/ hearing a description while repeating a rhyme that reiterates the definition. (See CA Content Standards, Reading Standards- Craft and Structure, Key Ideas and Details Integration and Knowledge of Ideas. Also, Speaking and Listening Standards for grades K-6).

Visual and Performing Arts: As students sing and perform with us in the assembly, they are not only hearing music (All grades, Music Standards 1.1-1.5), but performing it (Grade 2, Music Standards, 2.1, 2.2 for example).
Because all students learn differently, ZunZun strives to use as many different types of learning tools as possible in the assemblies, so students are learning *visually, musically, physically, scientifically, mathematically,* and *verbally*. Students are thinking things through, using movements and singing throughout. So many standards are contained in the assemblies it would be a very long list to include them all here.

PERFORMANCES

As always, we design our assembly segments to be interactive and to appeal to the many learning styles of the students. Always included are the following elements: visuals, call and response, movement, comedy, and lots of fun informative facts. We have incorporated an activity with 8 languages, so children can be excited to see different home languages as part of the assembly. All assemblies are performed in English and Spanish, with a greater

emphasis on Spanish whenever needed. Each assembly is 45 minutes in length and introduces students to the topic of watershed. Performance segments included in this year's program are as follows:

1) **Water Words- (Content Standards: language arts, reading, foreign language, geography, and fine arts.)** Performed on clay and wood water bottles from Nigeria, we talk about different ways people get water (water pipes, or walking to wells, streams, rivers and lakes) and how water is necessary for survival so every language has a word for water. We sing a song (call and response) where students learn 8 different words for water, and then we bring up 8 kids to hold up signs, which spell out the words and show where the words originate. The words are Agua (Spanish and Portuguese), Vatten (Swedish), Amanzi (Zulu), Su (Turkey), Mizu (Japanese), Apa (Romanian), Wai (Hawaiian), Pani (Hindi).
This activity celebrates language, and geography along with the essential need to access clean, safe water around the world.

2) Watershed Instruments from Around the World- (Content Standards: language arts, Earth Science, foreign language, physics, geography, and fine arts.)
The segment begins by introducing water instruments from around the world that represent watershed sounds, while we explain how important and precious clean, safe water is all over the world. We show instruments from North and South America, Africa, and Asia that represent the sounds of rain, storms, water in rivers and streams, and finally the ocean. This "water music" segment serves as a great jumping off point to explain what water flowing to the watershed is and to show how cultures worldwide depend on their watersheds. Also, because the instruments are from Asia, Africa, South America and North America many children are excited to see their culture of origin represented.

3) Watershed Saving Dances (Content Standards: fine arts, language arts, language retention)
This segment was designed to inspire the whole audience (including the teachers!) to dance. After hearing all of the instruments representing a watershed, we introduce the watershed dances. The music played is performed on berimbau and students sing, "Doing the water dance! Protect the water when you've got the chance!" The dances we do are "the jellyfish", "the car wash", and "the rainbow".

We use "the jellyfish" to discuss plastic bags entering the watershed and ways to prevent this (mainly **bring your own bag**, recycle plastic bags, tie used and dirty bags in a knot before throwing away so they cannot fly).

The second dance is "the car wash," during which students pretend to wash a car. This segment shows the audience the difference between a storm drain and

the sewer. We show a sink and then explain how a sewer system works and how it is different than a storm drain. Many students live with adults who do not know the difference between a sewer drain and a storm drain, and this simple explanation can help a whole family learn the difference, and keep soap and other toxins out of the storm drain. We explain that it is best to wash vehicles at a commercial car wash because they use less water and the dirty water drains to "the sewer", to treatment facilities that remove pollutants. If students must wash their vehicles at home, the first thing they should do is use a rag to wipe brake dust off of wheels. Then, use a hose with a nozzle to conserve water and to wash over a lawn, dirt or gravel so that the dirty water will not run to the storm drain. When washing is done, dirty soapy water should be dumped into the toilet or onto landscaping. We say soap is a thumbs-up inside, it gets us clean, but outside, soap is thumbs-down- it is no longer clean; it is pollution.

We use "the rainbow" to invite teachers to dance (always a highlight!) and then to remind students about oil from cars going down the storm drain when the rains come. After the dance, we explain that we love seeing rainbows in the sky, but when you see a rainbow on top of water, it is usually oil that has leaked from a car. Then we go on to help audience members to think of ways to prevent oil from going into the watershed.

4)Polluted Water-(Content Standards: fine arts, language arts, earth science, water science)

This is a call and response song during which we invite students to come up front while the audience sings the call and response. The whole audience sings "Polluted water, down the storm drain, goes to a creek which reaches the sea where the fish are swimming. They start to feel sick, the poor, poor fish, it makes you think."
The song is repeated three times as the students dance faster and faster.

5) "Hour After Hour", 2,500,000 Bottles- (Content Standards: math, language arts, fine arts)

Sometimes we performed the "so many bottles thrown away" segment. We show how many plastic water bottles are thrown away every hour in the U.S. using a place value activity. Initially, three students join us in performance area and hold the numbers 2, 5 and 0 (two hundred and fifty). We say, "Is that it? No, there is more! We need another volunteer!" By adding a zero each time another child joins in, the number grows and grows until we reach 2,500,000. This is the number of bottles estimated to be thrown away, not recycled, every hour in the U.S. We use this segment to reiterate the importance of keeping the watershed clean (not throwing the bottles away, recycling them) and also to encourage families to use tap water. We explained how tap water is clean and safe to drink, and that it costs fractions of what people pay for bottled

water. This activity is appropriate for older grades, 3rd and up, who have studied or are studying place value.

6) High Tide/ Low Tide Limbo- (Content Standards: earth science, geography, fine arts)
Using steel pan and marímbula, two instruments from the Caribbean made from recycled things, we celebrate our bay getting cleaner because of the actions of the audience. This segment allows us to define the San Francisco Bay as an estuary where fresh water drains from our towns and cities and mixes with salty water from the Pacific Ocean. We teach students that there are two high tides and two low tides per day. During low tide, mudflats, which are a rich habitat and space where egrets, herons, and other animals find food, are exposed. Students then come up front for the limbo and act as though they are fish under a high tide with lots of water and under a low tide. The segment is a celebration of a clean watershed, recycling, and wetland and tidal flat ecology.

7) We're All Connected – (Content Standards: language arts, fine arts, Earth science)
Our last call and response song has all the of excited assembly attendees sing a call and response with a rhythm: "We're all connected, you and me. From where we live down to the sea." We then end our assembly by thanking Watershed Watch and reminding teachers about evaluations and the fun follow up activities and brochures they have.

EVALUATIONS

ZunZun distributes Watershed Watch evaluation postcards to the teachers at each assembly. Evaluations are then sent directly to Watershed Watch for review.

Onsite feedback was very positive this year. Incorporating instruments and languages from around the world has been very popular with educators. Schools are very appreciative of a free assembly program, especially one that incorporates music, since Arts programs have been cut or reduced from so many school budgets. Students often ran out immediately and began picking up litter on their playground. There was also a lot of onsite feed back about the watershed pollution prevention message. Many teachers expressed gratitude at having the opportunity to have their students understand watershed pollution prevention.

The evaluation report from Watershed Watch postcards was complied and results are with SCVURPPP staff.

POSSIBILITIES FOR NEXT YEAR

LITTER PICK UP PLEDGE SHEETS: We have begun work with SCVURPPP staff to set up a new system for next year **that encourages litter pick up at the schools**. Using a sign up sheet for teachers and educators, we ask students to take a pledge to pick up trash for a week.

We tried bringing the pledges to our last school this year, in April, Barron Park Elementary in Palo Alto. Unfortunately the school was having a giant science day and most kids came to the assemblies with parent volunteers, not with their teachers, so the surveys were lost in the shuffle of a chaotic, busy, non-traditional school day. To top things off, we had rain that day and all the events were shuffled around so teachers were struggling just to keep the event going, so it was a bad day to try and start anew project for them. When we called the school to follow up about the survey sheets we did not hear back. We know this is because Barron Park had the science day when we were there and it was the end of the school year. **This was an exceptional situation, not at all normal for our assembly presentations, which usually are an event all to themselves.**

Also, assemblies late in the year are typically not as focused and organized, and we tend to do most Watershed Watch assemblies in September-December which is a better time to set up the school clean up pledges. We make an effort to program the Watershed Watch assemblies early in the year in an effort to reach educators when they are not overwhelmed and have time to incorporate watershed activities into their curriculum.

We think we can make the pledges even more effective if we add the following:

1) **Props!** We want to hold up props of what the classes can win: maybe a pizza my heart pizza box and the garden stool (we can buy one) so everyone can see them and go "oooh, aaaaah" and feel compelled to take the pledge! Sad, but true, people love prizes and swag, so we think this will help a lot.

2) **Common Core Activities Related to Clean Ups:** we are researching common core and giving some related writing and math activities (chart making etc) so teachers can use the clean up as a method of building academic skills as well. This might give them more reason to use the pledge sheets!

3) **Follow Up:** We will make sure to follow up every week with the schools to try and get the pledge sheets back. If you think of anything small we can give every class that turns it in, that might be effective.

We will find a way to fine tune the pledge sheets and have effective litter clean up results.

WIRELESS MICROPHONES: We are buying wireless microphones for use in the assemblies.

SCHOOL STAFF OUTREACH: If Watershed Watch is interested, we would be happy to hand out information about storm drain pollution prevention to the janitorial staff at each school or program we visit.

We always look forward to input from Watershed Watch on what they would like us to emphasize in the assemblies. We have been focusing on outdoor litter, car washes, oil, and other household pollutants but we look forward to new information to share.

FINAL PERFORMANCE SCHEDULE 2013-14

Date	School	Contact	No. Of Shows	Time	# Of students	City
8/30/13	Sherman Oaks	Donna Tonry	2	8:50 & 10:05	490	Campbell
9/3/13	Nixon	Melissa Wilkinson	1	9:00	425	Palo Alto
9/4	Oak Ridge	Deborah Torrens	2	8:45 & 9:45	600	San Jose
9/10	Whaley	Armando Lara	2	9:00 & 10:00	692	San Jose
9/11	Blue Hills	Fran Williams	2	9:30 & 10:00	500	Saratoga
9/12	Lyndale	Deborah McDowell	2	9:00 & 10:00	609	San Jose
9/13	Montgomery	Petula Poon	2	9:00 & 10:00	665	San Jose
9/17	College Prep Academy	Daniel Lairon	2	1:00 & 2:00	530	Mountain View
9/18	Stonegate	Kim Sheffield	2	8:45 & 9:45	690	San Jose
9/25	J F Smith	Maureen McClintock	2	8:30 & 9:30	812	San Jose
9/25	Fairwood	Sarah Tellez	1	1:00 PM	247	Sunnyvale
9/27	Schallenberger	Ruth Smith	2	9:15 & 10:25	574	San Jose
10/1	Ponderosa	Preena Sheeth	2	9:30 & 10:45	545	Sunnyvale
10/10	Majestic Way	Mya Duong	2	8:30 & 9:25	531	San Jose
10/11	Laurelwood	Linda Mora	2	8:45 & 10:00	415	San Jose
10/12	Pumpkins in the park	Phil Cornish	2	1:35 & 3:05	450	San Jose
10/16	Lincoln	Jackie Browning	2	10:15 & 11:30	706	Cupertino
10/29	Sedgwick	Julie Lin	3	91510101125	600	Cupertino
11/5	Castlemont	Alicia Stapes	2	9:00 & 10:00	771	Campbell
11/26	Alexander Rose	Nanci Pass	2	8:45 & 9:50	464	Milpitas
1/7	Marshall Lane	Teri Tarshis	2	10:25 & 1:15	589	Saratoga
1/17	Weller	Raquel & Liz Medina	2	9:00 & 10:00	446	Milpitas
3/13	Bullis Charter School	Aumi Wesley	2	1:00 & 2:00	467	Los Altos
4/25	Arbor Day	Karen Hickey	1	11:15	400	Santa Clara
4/25	Barron Park	Magdalena	2	8:30 & 9:10	395	Palo Alto
		TOTAL	48		13,613	

YOUR SCHOOL IS ELIGIBLE FOR A FREE ASSEMBLY IN THE 13-14 SCHOOL YEAR!

Funded by the Santa Clara Valley Urban Runoff Pollution Prevention Program:
A coalition of local government agencies.

Watershed Watch has again partnered with ZunZun, the award-winning children's performing arts group, to perform "The H2O Show" at area elementary schools.

This interactive, musical and energetic show teaches about watershed awareness and clean water. Students learn what they can do to protect our waterways!

Appropriate for K-6 grades.
Bi-lingual shows available!
(Spanish-English)

Meets State Science, Math, and Fine Arts Content Standards.

"Fun, fun, fun while being educational!"

"The best assembly our school has ever had!"

"Outstanding!"

"Excellent program. Totally creative!"

BOOKING NOW FOR 2013-14!

Call 831.426.0684
or email
zunzun@zunzuntunes.com

For more information, please visit:

www.zunzuntunes.com
www.mywatershedwatch.org

The Musical Watershed

Hey there! The musical duo ZunZun came to your school [insert date], and presented a musical assembly about watersheds. Did you know that no matter where you live, you are in a watershed? It's true! Our foothills, homes, yards, driveways and streets and storm drains are all part of a watershed. All the rain and yard water drains directly into local creeks and the San Francisco Bay. This means that keeping pollutants and yard waste out of the storm drain helps keep our creeks, Bay and the ocean clean. Ask your kids what they learned at this assembly. They might remember "a fish flying" or "people playing garbage instruments" or "someone catching a plastic bag while fishing in a creek". Ask them why those things happened in the show!

"The MusicalWatershed" is sponsored by Watershed Watch (www.MyWatershedWatch.org), a public outreach and education campaign of the Santa Clara Valley Urban Runoff Pollution Prevention Program and performed by ZunZun (www.zunzuntunes.com).

You can follow up with your kids too: check out the watershedwatch.net website. Or, go on a storm drain walk in your neighborhood and try to guess which creeks and rivers your storm drains run to. Or go enjoy the great outdoors in one of the beautiful bayside parks where you can see wetlands, birds, and all kinds of wildlife who depend on a clean watershed. Some parks are: Don Edwards San Francisco Bay Wildlife Refuge at Alviso and Coyote Hills.

Hello!

We are so excited to come perform a Watershed Watch assembly at your school!

Our show is an interactive and very lively celebration of Watershed in which we educate while having lots of fun!

We bring in many instruments and ask students (and teachers) to come up and sing and dance while learning and celebrating our Watershed.

In our assembly we will be using as many as possible of the Watershed vocabulary words on the following lists. Although we don't always get each word, we do use all of the concepts.

Please pass these lists on to your teachers so they can introduce these terms and ideas to their students and get everyone excited to learn and celebrate Watersheds!

We are looking forward to seeing you soon!

ZunZun

Vocabulary List for Grades K-2

Bay: *A body of water near the ocean that is almost totally surrounded by land but still touches the ocean.*

Contaminate: To make dirty.

Conservation: Careful protection or wise use of something.

Estuary: A body of water on the coast where fresh water from rivers mixes with salt water from the ocean.

Fertilizer: Something added to soil that gives plants food they need to grow.

Hazardous: The chance of being injured or harmed is possible. OR Something that can hurt us.

Pesticide: A poison used to get rid of bugs or weeds

Runoff: Water (for example from rain and watering lawns) that runs off the land and into storm drains, creeks and the Bay.

Sanitary sewer system: A network of drains and underground pipes that collects and sends wastewater from indoor uses to waste water treatment plants for cleaning.

Storm Drain System: All the curbside drains and underground pipes that collect rain water and carry it to the nearest creek.

Used Motor Oil: Oil taken from a car after it is no longer useful.

Wastewater: Water that has been used inside the house (for example, in toilets, sinks, showers, and washing machines). This water is collected and cleaned at a wastewater treatment plant and then sent to creeks, the Bay or ocean.

Waste water treatment plant: A place built to clean wastewater before it is returned to the environment.

Watershed: A watershed is a land area that drains water into a creek, river, lake, wetland, bay, or groundwater aquifer. In the Santa Clara Valley, all the water from rain and irrigation which flows over the land surface (called runoff) goes into storm drains, creeks, and rivers that flow directly to San Francisco Bay. You live in a watershed that flows to a local creek, and all of the runoff from your home, yard and neighborhood flows to that creek.

Wetlands: A land area that is sometimes covered with water. Wetlands can be found near the coast, lakes, ponds, rivers, and streams. They can be salt water, fresh water, or a mix of salt and fresh waters, called brackish water. Wetlands get rid of pollutants from water, reduce the damage caused by floods, and are a special habitat for many plants and animals.

Vocabulary List for Grades 3-6

Bay: A body of water with a small opening through which ocean water freely flows in and out.

Contaminate: To harm or damage by contact. OR To make dirty.

Conservation: Careful protection or wise use of something OR the protection, maintenance, and care of natural resources for now and the future.

Estuary: A semi-enclosed body of water on the coast where fresh water from rivers and creeks mixes with salt water from the ocean.

Fertilizer: Something added to soil that gives plants nutrients they need to grow.

Hazardous: Something that can cause damage or harm due to its nature, content, or properties.

Pesticide: A chemical, often a poison used to destroy pests.

Runoff: Water (for example, from rain and watering lawns) that runs off the land and into storm drains, creeks and the Bay.

Sanitary sewer system: A network of drains and underground pipes that collects and sends wastewater from indoor uses to treatment plants.

Storm Drain System: A network of above ground openings (drains) and underground pipes that collect and deliver storm water and runoff, to local waterways. Storm drain systems do not treat the water.

Used Motor Oil: Oil taken from any vehicle or engine driven machine after it is no longer useful.

Wastewater: Water that has been used inside the house (for example, in toilets, sinks, showers, and washing machines). This water is collected and cleaned at a wastewater treatment plant and then sent to creeks, the Bay or ocean.

Wastewater treatment plant: A place built to clean wastewater before it is returned to the environment.

Watershed: A watershed is a land area that drains water into a creek, river, lake, wetland, Bay or underground. In the Santa Clara Valley, all the water from rain and irrigation which flows over the land surface (called runoff) goes into storm drains, creeks, and rivers that flow directly to San Francisco Bay. You live in a watershed that flows to a local creek, and all of the runoff from your home, yard and neighborhood flows to that creek

Wetlands: A land area that is sometimes covered with water, such as a swamp or marsh. Wetlands can be found near the coast, lakes, ponds, rivers, and streams. They can be salt water, fresh water, or a mix of salt and fresh waters, called brackish water. Wetlands filter pollutants from water, reduce the damage caused by floods, and are a special habitat for many plants and animals.

ZunZun Follow-up Activities: Explore Your Watershed!

www.mywatershedwatch.org

Basura Batucada Band (For all grades)
Your class can create a band from recycled materials just like ZunZun! Visit www.zunzuntunes.com and click on the "Kid Zone" to find a list of instruments and the recycled materials that were used in their construction.

Explore Your Watershed (For all grades)
Visit the Don Edwards National Wildlife Refuge in San Jose with your class for your next field trip. It's fun, it's interesting, and your students will remember what they learn at the refuge for years to come. For more information about this and other field trips, visit http://mywatershedwatch.org/fieldtrips.html

Mapping Storm Drains (For grades K-2)
Take a "field trip" to visit your school storm drains. Walk around the school campus and identify storm drains. Help the class draw a map showing school buildings, grounds, play yard, trash cans and storm drains.

Mapping Storm Drains and Identifying Pollutant Sources on Campus (For grades 3-5)
Complete the activity above. For each storm drain, identify sources of runoff (i.e., rain, roof downspouts, sprinklers or garden hose) and possible pollutants (e.g., litter, leaking oil from cars, pesticides, chemicals used for cleaning, soapy water, overflowing trash cans).

The Big Picture Map (For grades 3-5)
For this activity you will need a map of your city or watershed. Have students find the school on the map and identify the creek or river to which the school storm drains probably flow. Have students mark how water and pollutants can flow from the school storm drains to the San Francisco Bay. Students can also find their own house on the map and identify the names of nearby creeks. Discuss the impact of everyday activities on local creeks and the Bay and steps that can be taken to prevent storm water pollution.

TIP: Contact your local city to get a "Creek and Watershed" map. These maps, developed by the Oakland Museum, provide detailed watershed features including the location of creeks and large storm drains. You can view the maps at http://www.scvurppp-w2k.com/museum_maps.shtml

Storm Drain Monitoring (For grades 3-5)
Perform an audit on your school's storm drains and monitor the litter that collects around them throughout the year. Have the class record the types of litter (plastic, paper, leaves, etc.). Create graphs to display the types of litter found, storm drains with the most litter, and peak months of litter collection. Discuss ways to prevent litter. (Remember to clean up litter too!) Storm drain monitoring can be a class activity, or a specific classroom job that is rotated every month.

ZunZun assemblies and the Watershed Watch Campaign are funded by the Santa Clara Valley Urban Runoff Pollution Prevention Program, a coalition of local government agencies.

Local Stormwater Education Contacts

Contact your local city's stormwater education program for assistance with these follow-up activities and to find out about other educational opportunities for your class.

City	Contact
Campbell, Los Gatos, Monte Sereno, and Saratoga	West Valley Clean Water Program 408-354-5385
Cupertino	Environmental Programs environmental@cupertino.org 408-777-3354
Los Altos, Los Altos Hills, Mountain View, and Palo Alto	Regional Water Quality Control Plant Maree Doden maree.doden@cityofpaloalto.org 650-329-2495
Milpitas	Leslie Stobbe lesliestobbe@ci.milpitas.ca.gov 408-586-3352
San Jose	Environmental Services Stormwater Hotline 408-945-3000
Santa Clara	Karin Hickey kahickey@santaclaraca.gov 408-615-3097
Sunnyvale	Environmental Outreach wpcp@ci.sunnyvale.ca.us 408-730-7717

The Santa Clara Valley Water District also offers a wide range of educational programs for teachers and students. These are available to all elementary schools in Santa Clara County.

Santa Clara Valley Water District
School Outreach Program
Kathy Machado
408-265-2607 ext. 2331

Santa Clara Valley Water District
Adopt-A-Creek Program and
Countywide Creek Cleanup Events
Kate Slama
408-265-2607 ext. 2739

I Pledge to Keep My School Clean!

Sign below to show you picked up trash today, or threw trash in the trash can or recycling bin

School Name -

Student First Name	Monday	Tuesday	Wednesday	Thursday	Friday
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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24.					
25.					
26.					
27.					
28.					
29.					
30.					

Please take a picture of the completed form and e-mail it to watershedwatch2010@gmail.com OR fax to 1-408-720-8812

MEMORANDUM

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Campbell • Cupertino • Los Altos • Los Altos Hills • Los Gatos • Milpitas • Monte Sereno • Mountain View • Palo Alto
San José • Santa Clara • Saratoga • Sunnyvale • Santa Clara County • Santa Clara Valley Water District

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TO: Schools and Youth Outreach Work Group

FROM: Vishakha Atre and Jill Bicknell, Program staff

CC:

DATE: July 21, 2014

SUBJECT: End-of-Year Evaluation of the FY 13-14 School Assembly Program

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In FY 13-14 the school education assembly program completed its twelfth year of implementation. Each year, the Schools and Youth Outreach Work Group develops a target list of schools for ZunZun to contact. During FY 13-14, ZunZun conducted 48 assemblies at 23 elementary schools in 9 cities. This includes two performances at the Pumpkins in the Park event and one at the Santa Clara Arbor Day event. The assemblies reached approximately 13,613 students and their teachers in grades K-6. The list of schools where assemblies have been booked is provided at the end of this memo.

ZunZun continued to fax the vocabulary lists (one for students from grades K-2 and another for grades 3-6) to each school before the assembly. Teachers were requested to familiarize the students with the vocabulary words. Schools were also e-mailed a short write-up about the assembly for inclusion in the parent newsletter. In addition, teachers were provided the Watershed Watch brochures and handouts with follow-up activities for teachers and students. ZunZun also continued distributing the postage-paid survey cards to teachers attending the assemblies. In FY 13-14, 117 cards were received. Of these, 47 cards were from grades K-2 teachers and 55 from grades 3-6 teachers. There were also 15 cards where the grade was not indicated. Results are presented as “Grades K-2”, “Grades 3-6” and “overall”.

Results of the survey, along with comments and suggestions received from teachers are listed below:

Survey Results

1. What percentage of your students know what a watershed is? (Circle one)

	25%	50%	75%	100%
Grades K-2 results	28%	28%	21%	17%
Grades 3-6 results	7%	20%	35%	38%
Grades not marked	20%	33%	40%	7%

2. What percentage of your students can name a way to prevent pollution in the watershed? (Circle one)

	25%	50%	75%	100%
Grades K-2 results	11%	17%	23%	47%
Grades 3-6 results	0%	2%	25%	73%
Grades not marked	0%	0%	40%	60%

3. How would you characterize the content of the assembly? (Circle One)

	Educational	Balanced	Entertaining	Neither
Grades K-2 results	13%	77%	10%	0%
Grades 3-6 results	18%	76%	4%	0%
Grades not marked	0%	100%	0%	0%

Sampling of Comments:

Grades K-2

- Very entertaining mix of music, watershed education, and fun!
- I thought this assembly was educational and kept the kids' attention. Lively and visual. Thank you.
- It held the interest of my special needs students! Thank you.
- Great informative assembly.
- Our class loved the assembly.
- Very informative, interesting and fun!
- Thought it was great! Educational, creative, and engaging.
- Excellent assembly!
- Kids loved it. Great content.
- It was a wonderful presentation.
- We loved the multicultural music, moving around and message provided today.
- Kids enjoyed interactivity, music, and presenters but pace was too fast without sufficient repetition to retain information.
- It was awesome. I am the sure the song will last a long time.
- Loved it…again!!
- Wonderful.
- It was a little too entertaining for most 1st graders to get the important message.
- Loved the show and I am so happy you inspired my shyest student to dance the limbo!
- This was my 3rd time seeing this. It was excellent!
- Very good pacing - active vs. quiet
- Great visuals. Great music. Great presenters. Our school loved it!
- Love this assembly. Because it was done earlier in the school year, my Kindergarteners didn't absorb the information as well, but in years past, this wasn't an issue.
- Loved the music!
- Great movement and action for the kids.
- Great way to empower young kids to care for our planet.
- Great, engaging presentation.
- It was enjoyable and got the message across of ways to protect the watershed.
- Loved the music, wanted to hear more. Good lesson too! Just play some music for us a longer period of time to enjoy.
- The performers had great energy and were extremely engaging.
- It was very engaging, kids learned a lot.
- We really enjoyed it. Thanks.
- Kids loved it and learned a lot and could tell me what they learned in great detail.
- I was particularly impressed with how well the presenter integrated the musical instruments with the message. What a wonderful multi-cultural experience!
- Really well done. Simple enough for Kindergarteners. Thank you.
- Very engaging for my students. We would love to have you again.

Grades 3-6

- Great presenters. Thank you for coming to our school.
- My students (3rd grade) loved it! Very engaging, educational, and entertaining. Thanks!
- Thank you for coming to Sedgwick. The kids and I enjoyed your show.
- Very well done.
- Thank you. Great mix of education and arts.
- Awesome! I loved this assembly as did students. So much information and fun in one hour! Bravo! p.s. come back!
- Great job! Thanks for coming.
- Great assembly! Got the kids moving!
- My students came back singing/humming your fun songs. They said it was the best assembly ever!
- The performers managed the students very well.
- Great interactive and engaging assembly.
- Excellent assembly!
- Very talented musician! Lots of fun.
- Wonderful assembly!!
- The plastic city and spray bottle of rain still is the best example, but for small groups.
- Fun for students, yet good management. Informative. Students enjoyed.
- Well done, experienced, entertaining and informative for students. Thanks for a wonderful musical assembly.
- We loved all the fun and different instruments. High energy and entertaining.
- Loved the music! Kids were singing the songs after the program.
- A great follow up to Santa Clara Valley Water District classroom presentations.
- We would love to have you return.
- It was really fun!
- You guys are awesome!
- Thank you. This was a wonderful use of our time today.
- I enjoyed the audience participation and the positive message about S.F. Bay recovery.
- Easy to understand and we loved the songs.
- This is important info we don't often think about - thanks.
- I wish you could make a CD available that had your environmental songs on it that my students could learn. I also wish you could come back every week. What you gave us all was positively wonderful. I thank you from the bottom of my heart. I will look your organization up on the internet. - Loretta Halter, Daniel Lairon College Prep
- The students really enjoyed it!
- The music was beautiful! I was waiting to hear "El Condor Pasa!" What a fun and informative assembly. Great info to help kids know what they can do to keep our watershed clean and healthy.
- This relates directly to our curriculum.
- Excellent interactive and engaging assembly sending an important message about watersheds.
- Thank you. Our kids loved it!
- Students enjoyed the participation very much.
- Great assembly! 5th graders loved it, very relevant to our curriculum while being engaging and appropriate.

Suggestions

- Plan for traffic so you arrive on time and the assembly is not shortened.
- Have the kids' attention before you speak to make sure they are listening.
- Could students use the instruments?
- Could students ask questions about the instruments and/or watershed at some point?
- More songs, throw more fish, and give more reference to the water cycle.

Comments from cards with grades not marked

- Students loved the music, dancing, instruments and limbo. Some of the concepts (such as watershed) weren't understood.
- Great! I enjoyed the assembly. The students also had a great time while learning.
- Enjoyable - got the message across.
- Kids were very engaged. Performers and music greatly enhanced the content.
- So much fun! Kids have a great time while learning.
- The class loved the assembly. They sang the song for the rest of the day.
- Kids said it was, "awesome and catchy".
- Great way to teach our children.

FY 13-14 List of Schools

No.	Date	Elementary School/Event	No. of Shows	No. of Students	City
1	8/30/13	Sherman Oaks Community Charter	2	490	Campbell
2	9/3/13	Lucille M. Nixon	1	425	Stanford/Palo Alto
3	9/4/13	Oak Ridge	2	600	San Jose
4	9/10/13	O.B. Whaley	2	692	San Jose
5	9/11/13	Blue Hills	2	500	Saratoga
6	9/12/13	Lyndale	2	609	San Jose
7	9/13/13	John J. Montgomery	2	665	San Jose
8	9/17/13	Daniel Lairon College Prep	2	530	San Jose
9	9/18/13	Stonegate	2	690	San Jose
10	9/25/13	J F Smith	2	812	San Jose
11	9/25/13	Fairwood	1	247	Sunnyvale
12	9/27/13	Schallenberger	2	574	San Jose
13	10/1/13	Ponderosa	2	545	Sunnyvale
14	10/10/13	Majestic Way	2	531	San Jose
15	10/11/13	Laurelwood	2	415	San Jose
16	10/12/13	Pumpkins in the Park	2	450	San Jose
17	10/16/13	Lincoln	2	706	Cupertino
18	10/29/13	Sedgwick	3	600	Cupertino
19	11/5/13	Castlemont	2	771	Campbell
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22	1/17/14	Joseph Weller	2	446	Milpitas
23	3/13/14	Bullis Charter	2	467	Los Altos
24	4/25/14	Arbor Day	1	400	Santa Clara
25	4/25/14	Barron Park	2	395	Palo Alto
		Total	48	13,613	

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-10

BASMAA Regional Advertising Campaign

- Be the Street FY 2013-2014 Summary

BASMAA Final Be the Street Evaluation Report

August 27

2014

This report describes the results and findings of the three year litter abatement program **Be the Street** targeted at Bay Area youth.

Funding provided by:
Alameda Countywide Clean Water Program
Fairfield-Suisun Urban Runoff Management Program
San Mateo Countywide Water Pollution Prevention Program
Santa Clara Valley Urban Runoff Pollution Prevention Program
Vallejo Sanitation and Flood Control District

TABLE OF CONTENTS

TABLE OF CONTENTS 2
EXECUTIVE SUMMARY 3
INTRODUCTION 4
SURVEY ANALYSIS 6
ENGAGEMENT DATA 16
RECOMMENDATIONS FOR FUTURE OUTREACH 17
CONCLUSION 19
APPENDIX 20

1. Be the Street infographic
2. Baseline Survey Report
3. Baseline Survey Topline Data
4. Sample Survey
5. Follow-up Survey Topline Data
6. Be the Street User Guide
7. Be the Street CASQA Award Submission

EXECUTIVE SUMMARY

Prior to the launch of the Be the Street® litter abatement program, a detailed survey was conducted to assess littering behavior and perceived social norms of Bay Area youth. The data collected with this survey was established as a baseline against which follow-up survey data could be measured to determine the overall impact of the Be the Street program.

A follow-up survey was conducted during the summer of 2014 through Facebook (the primary outreach vehicle for the program) and through intercept outreach. The survey was designed to mirror the baseline survey conducted in 2011 to ensure data comparability. Only respondents who fit the target demographic of the program, 14-24 years of age and living in Bay Area zip codes, were included in the analysis. A total of 60 responses were collected.

The survey focused on littering habits and opinions of the target demographic. The subsequent analysis and comparison to the baseline data revealed many key findings that both demonstrate the effectiveness of the overall Be the Street program and provide recommendations for future outreach efforts. Key findings are described below.

Throughout this analysis the following terminology is used.

- Baseline. Baseline refers to the data collected prior to the start of the Be the Street program.
- Exposed. Exposed refers to respondents captured in the follow-up survey who reported being aware of the Be the Street program. The goal of the program is to demonstrate that individuals exposed to Be the Street have adopted preferred behaviors and opinions towards recycling when compared against the Baseline and Unexposed.
- Unexposed. Unexposed refers to respondents captured in the follow-up survey who reported being unfamiliar with the Be the Street program. The difference between Unexposed and Exposed demonstrates the impact of the program. In addition, we anticipate that the Unexposed should be more similar to the Baseline.

KEY FINDINGS

- Exposed are nearly 3x as likely to pick up litter. 90% of exposed respondents reported that they were 'very likely' or 'likely' to pick up someone else's litter while only 38% of unexposed respondents reported the same.
- Exposed are nearly 2x as likely to disapprove of friends littering. 94% of exposed respondents reported the 'strongly disapprove' or 'disapprove' of their friends littering while only 52% of unexposed reported the same.
- Exposed are nearly 1.5x as likely to voice that disapproval. 70% of exposed respondents reported that they were 'very likely' or 'likely' to voice disapproval when their friends litter while only 48% of unexposed respondents reported the same.
- Exposed are more than 2x as likely to disapprove of their own littering. 58% of exposed respondents reported the 'strongly disapprove' or 'disapprove' of their own behaviors when they have littered in the past while only 29% of unexposed reported the same.
- Unexposed are nearly 2x as likely to litter in the future. 19% of unexposed respondents reported that they were 'very likely,' 'likely,' or 'somewhat likely' to litter in the next month while only 10% of exposed respondents reported the same.
- Unexposed littler more than 2x as often. 8% of unexposed respondents reported littering at least a few times a week while only 4% of exposed respondents reported the same.

INTRODUCTION

Be the Street is a regional litter abatement program developed by the Bay Area Stormwater Management Agencies Association (BASMAA). The program primarily targeted 14-24 year old Bay Area youth who had been identified as a key polluting demographic. The program focused heavily on social media and innovative outreach strategies with the end goal of promoting peer-to-peer interactions regarding littering and raising awareness of its environmental impacts. Whenever possible, the program involved the target audience themselves and invited them to recast the messaging in their own words. In this way, the content remained fresh, relatable, and the target audience felt the program was talking "with them," not "at them."

Be the Street was carefully branded to connect with its target audience. The brand was developed to be youthful, vibrant, and engaged. Under this brand, the state of the "street" is a reflection of the youth who use it. By exploring problems and solutions related to community and environmental issues, street-by-street, participants are rewarded with the pride, and the fun, of having created the kind of "street" they have always wanted to live on.

Be the Street engaged with the target population primarily through social media (e.g. Facebook and Instagram) to deliver inspirational and educational content. An innovative set of outreach strategies included a YouTube video contest with a live stream award show, interactive photo booths, a meme contest, and the development of a mobile app that gamified environmental awareness and sent users into the streets to complete challenges, win points, and get prizes.

Be the Street was an unqualified success as demonstrated both through raw engagement statistics and survey data. Those who interacted with the program were substantially more likely to take pro-environmental behaviors around litter, going so far as to be three-times as likely to pick up litter, one-and-a-half times as likely to voice disapproval to their friends when they litter, and litter half as much. Whether those behaviors were directly the result of Be the Street or whether Be the Street managed to attract the environmentally minded, they came together to build a community where more than 5,300 Facebook fans produced more than 100 memes and 50 YouTube user-created videos that went on to be the PSAs of the program.

The core goals of Be the Street were achieved. Through innovative social media strategies, Bay Area youth were able to share beliefs, thoughts, and craft messages in their own words to take ownership of their communities and Be the Street. This messaging was shared peer-to-peer and those involved with the campaign were substantially more likely to take pro-environmental behaviors.

GOALS

Be the Street sought to change behavior. The overarching goal of the campaign was to develop and deliver a set of targeted messages that not only increased the audience's awareness of trash as a pollutant but that also actually reduced their littering frequency. The campaign sought to walk the target audience up the path to behavior change by first raising awareness through a general advertising campaign, then producing engagement through innovative outreach strategies, and finally changing behaviors by delivering consistent and actionable messages.

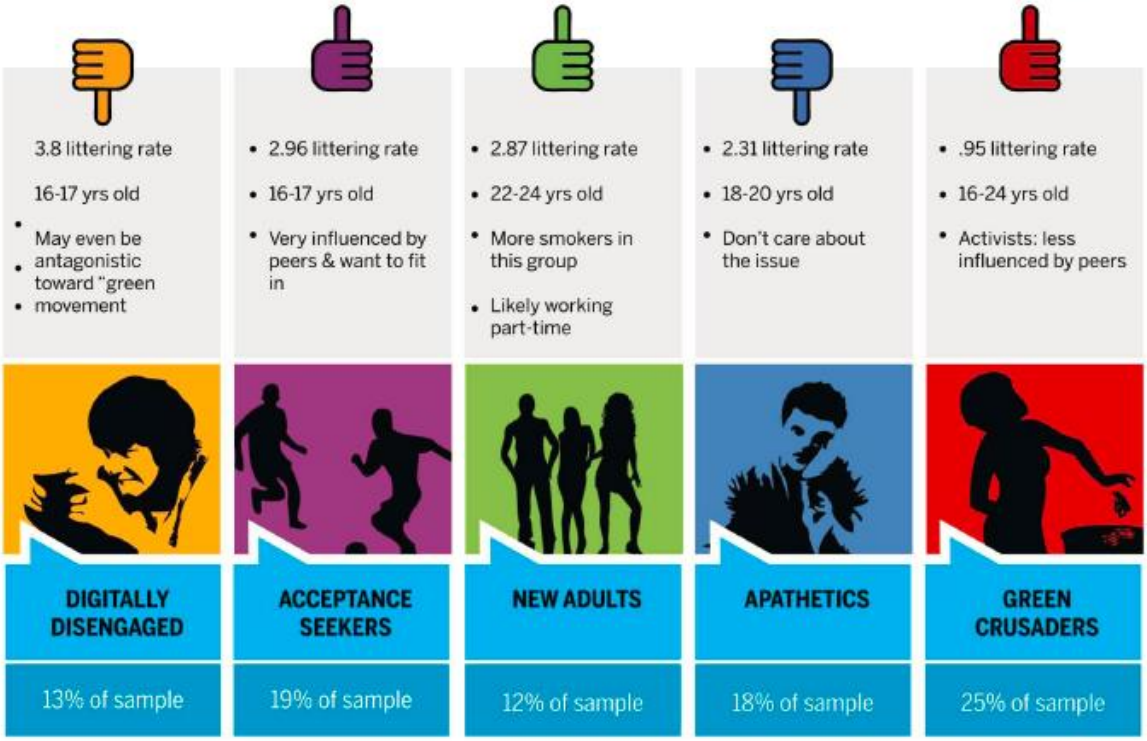
In addition to changing the behaviors of Bay Area youth in the short term, Be the Street sought to maintain engagement with the target audience to continue providing pro-environmental messaging and

widen the net of interactions. Over time, this long term relationship would help the program grow Bay Area youth into environmentally minded adults, home owners, and community members.

STRATEGIES

Be the Street was built upon the principals of Community-Based Social Marketing (CBSM). CBSM recognizes that awareness of an issue is often not sufficient to initiate behavior change and so more is required than to simply provide people with information. CBSM uses tools and findings from social psychology to discover the perceived barriers to behavior change and ways of overcoming these barriers. Program elements like identifying specific, end-state actions for the target audience to take, the use of commitments and pledges, and peer-to-peer messaging are all CBSM tools that increase the likelihood of sustained behavior change.

The program began with an exhaustive study and literature review designed to get at who was littering and why they were doing it. The study identified five unique sub-populations distinct with respect to their attitudes, beliefs, general characteristics, and propensity to littering. Each group was segmented and strategies to target them were considered. If they could be targeted efficiently (thumbs up), they were a target for Be the Street. If not (a thumbs down), they would be targeted by their peers as the messaging they created flowed across their social media networks.



An overarching strategy was also to focus on the brand. It was unclear exactly what channels and resources Be the Street would need to achieve its goals, so the brand was developed to be dynamic, engaging, and flexible. A Facebook page had to feel tied to an Instagram page which had to fit in with a tabling held at a community event.

All strategies were aimed at promoting a social norm as the primary motivator in encouraging behavior change. For the identified target audiences, "fitting in" and "being cool" are prime motivators. By

establishing that littering is "something that kids do" and supporting that belief with a very visible network of peers all professing to be anti-litter, the social norm made picking up after yourself the mature, cool, and right thing to do.

TACTICS

The program contemplated many tactics at the outset of the program. For reasons discussed in Recommendation for Future Outreach, many of those tactics were ultimately cancelled as additional research and learning demonstrated them to be unsuccessful. However, seven key tasks operated as the core of the program. Each is discussed in turn. Numerical data on the results of the various tactics is included in the Engagement Data section.

- Website. The Be the Street website was originally contemplated as the hub of the program but was displaced by the activity that occurred on the Facebook page.
- Facebook. The Facebook page was the true core of the campaign. Content was added to the Facebook page daily and garnered over 11,000 engagements. Each time a fan liked or shared content produced on the Facebook page, that reach of that content increased as it was shared on the Facebook feed of the fan and exposed to non-fans. This was the strategy discussed above to target and reach the non-target audience members (the thumbs downs).
- Instagram. Closely linked to the Facebook page was a partner Instagram page. Content from Facebook was mirrored on Instagram and fans were redirected.
- Photobooth events. A mobile photo booth was created that allowed staff to attend local community events and engage the target audience by inviting them to take a picture in the booth. The picture was then hosted on Facebook and served to reinforce the social norm by demonstrating that local Bay Area youth really were engaged. This reduced the barrier of feeling vulnerable to publicly supporting environmental issues.
- Video Contests. Two major contests were conducted. The first was a video contest where users were asked to make their very own PSA. Fans were allowed to vote on which video they liked the best and the winning PSA was broadcast on television. The PSA, along with the other paid media elements, generated an estimated three million impressions. All of the videos were made available on the YouTube channel and have garnered more than 42,000 views to date.
- Meme Contest. The second major contest was a meme contest where fans were invited to create their own visual pro-environmental memes. The memes were hosted on Facebook and Instagram and once again served to reinforce the social norm. Fans promoted their own memes on their social networks to try and garner votes, further spreading the reach of the program.
- Mobile App. Created late in the project cycle, the mobile app sought to bring gamification to behavior change. Different levels, introduced by a comic strip, pitted challenges to the player that, when completed, earned them points they could use to purchase real world items such as In-n-Out Burger gift cards. Completing the challenges required the player to document and prove they undertook pro-environmental behaviors.

SURVEY ANALYSIS

PURPOSE AND OVERVIEW

The purpose of the follow-up survey was to assess littering behavior and perceived social norms among youth living in the Bay Area. The survey was designed to mirror the baseline survey conducted before the Be the Street program kicked off. Comparing the baseline with the follow-up survey, as well as comparing the results of the exposed versus the unexposed respondents, provides an indicator of the net impact of the Be the Street program.

In analyzing the survey results, findings were categorized into four general categories: Attitudes, Actions, Beliefs, and Willingness. These four categories afforded a retrospective look at how respondents felt (Attitudes) and what they did (Actions) and a prospective look at why they feel the way they do (Beliefs) and what they might do in the future (Willingness).

Throughout the survey findings, many questions were framed such as "When I see my friend littering, I _____ of their behavior." Respondents were asked to reply with responses of 'Strongly Disapprove,' 'Disapprove,' 'Somewhat Disapprove,' 'Neither Approve or Disapprove,' 'Somewhat Approve,' 'Approve,' or 'Strongly Approve.' Results were recorded and the survey advanced to the next question.

SURVEY ADMINISTRATION AND METHODOLOGY

The follow-up survey was conducted during the summer of 2014 through two different collection methods. The first collection method was through Facebook which was the primary outreach vehicle for the program. The surveys collected via Facebook were classified as those "exposed" to the program. Additional surveys were collected through intercept and conducted face-to-face. These individuals had not interacted with the program and were the "unexposed" respondents in the following analysis. The alternate collection method was necessary as it would be impossible to collect a survey from an individual who had not interacted with the program through the program's Facebook page.

The collection of surveys from those not exposed to the program provided a secondary data point to measure impact of the program in addition to the baseline survey conducted in 2011. This secondary data point served to further demonstrate the impact of the program and address structural differences between the administration of the baseline and follow-up surveys.

The follow-up survey was designed to mirror the baseline survey to ensure data comparability. Although the questions mirrored the prior survey, the collection methods differed. The 2011 survey was made available online and respondents were driven to the survey through a partnership made with schools within the BASMAA region. Some schools provided students with extra credit to complete the survey, potentially biasing the collection sample. Conversely, the follow-up survey was collected as described above, both promoted on the campaign Facebook page and collected in person.

A secondary difference between the baseline and follow-up survey is the sample size. A total of 353 completed surveys were submitted for the baseline survey. The follow-up survey sample size is 60. Although this sample size is substantially smaller, the data remains comparable at a 95% confidence interval with a margin of error of approximately 0.5 points to each Likert Scale response. That means, in interpreting the answers the margin of error allows for roughly half-a-step on the spectrum of results. Despite the small sample size, the pronounced differences between the exposed and unexposed populations (often two- to three-times more likely to undertake the desired behavior or on opposite sides of the spectrum) are substantially larger than the margin of error.

Finally, throughout this analysis the core comparisons made are between the exposed and unexposed collected in the follow-up survey. However, it should be pointed out that the unexposed and the baseline survey trend in the same direction. This further supports the accuracy of the survey findings and reinforces the comparison of the two surveys.

Only respondents who fit the target demographic of the program, 14-24 years of age and living in Bay Area zip codes, were included in the analysis. The survey assessed littering behavior, contextual factors

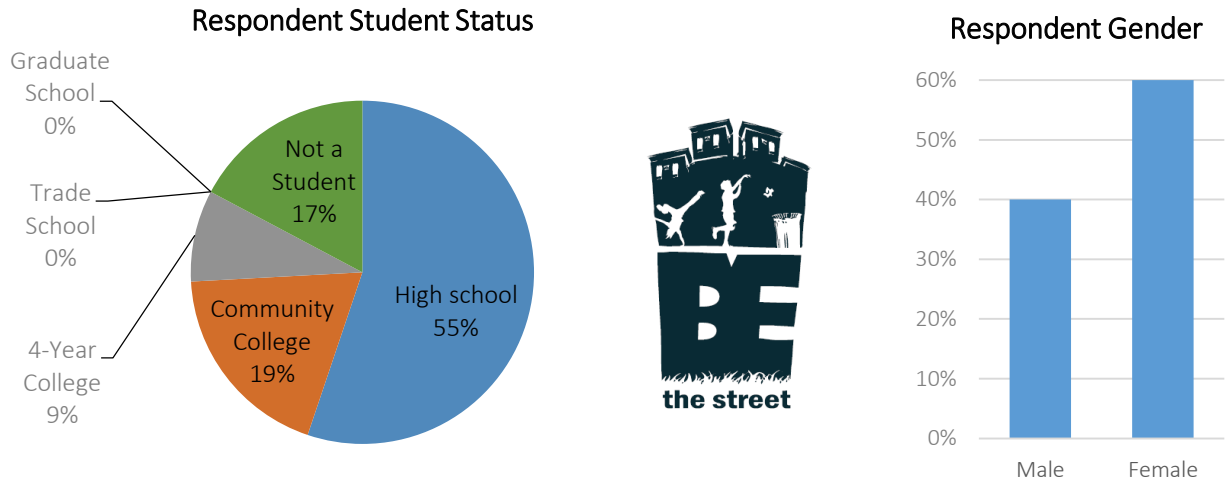
related to littering, peer-to-peer interactions about littering, and willingness to participate in volunteer activities.

DEMOGRAPHICS

A total of 60 respondents met the administrative criteria to be included in the survey results as respondents. The sample included more females (60%) than males (40%) but did not deliberately target any gender. Surprisingly, this 60/40 ratio was the same ratio achieved by the 2011 survey despite that survey also not targeting a specific gender.

The mean age of respondents was approximately 17 years of age (SD = 2.52) with the majority identifying as high school students (55%). The remaining respondents were community college students (19%), 4-year college students (9%), or not enrolled in school (17%). No respondents reported being in graduate school or trade school. These findings are reported in **Figure 1**.

Figure 1. Demographic characteristics of sample (N=60).



ATTITUDES

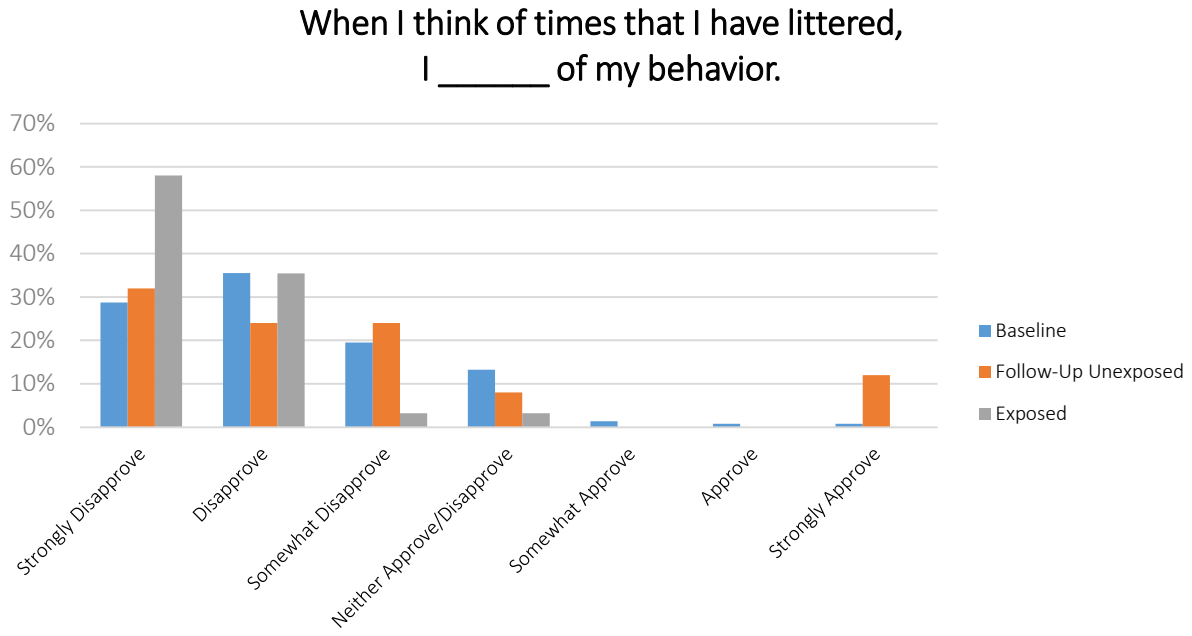
The first analysis category was to evaluate respondents' attitudes. These questions tended to be retrospective in nature and ask the respondent to consider a time when something happened in the past.

Personal Littering

Respondents were asked, "When I think of times that I have littered, I _____ of my behavior." Exposed respondents (58%) were substantially more likely to 'strongly disapprove' of their own littering than either the baseline (29%) or the unexposed (32%). More than 94% of exposed respondents reported disapproval when expanded to include 'strongly disapprove' and 'disapprove,' as compared to 64% of baseline and 56% of unexposed respondents.

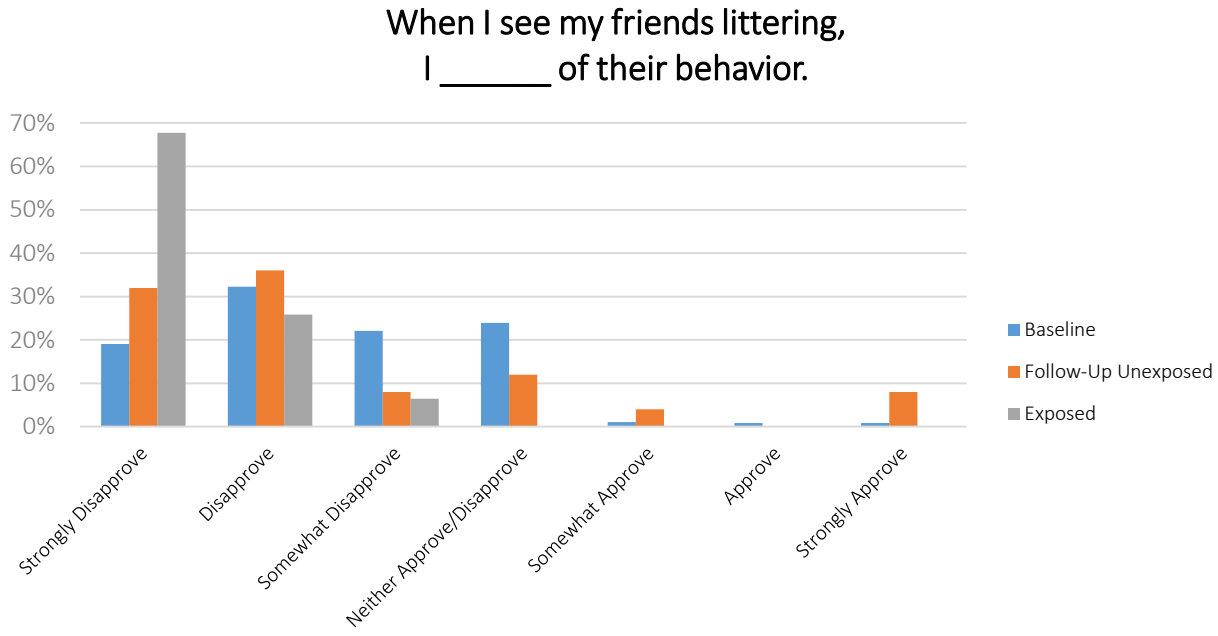
The analysis also shows a correlation between the baseline and unexposed respondents, reinforcing the significance of the change demonstrated in the exposed respondents as impact of the Be the Street program. These findings are reported in **Figure 2**.

Figure 2. Respondent Attitude towards personal littering (N=60).



The findings of respondents' attitudes to their personal littering closely mirrored their attitudes of their friends' littering. Exposed respondents expressed even greater disapproval of their friends' littering with every exposed respondent reporting some level of disapproval. More than 93% of exposed respondents reported they would 'strongly disapprove' or 'disapprove' as compared to 51% of the baseline and 68% of unexposed respondents. These findings are reported in **Figure 3**.

Figure 3. Respondent Attitude towards littering by friends (N=60).



ACTIONS

The survey demonstrated that respondents exposed to the Be the Street campaign were clearly more likely to take pro-environmental behaviors and were substantially less likely to litter than those unexposed to the campaign. The relationship that exposure to the Be the Street campaign correlated with preferred behaviors held true in all 10 action categories surveyed.

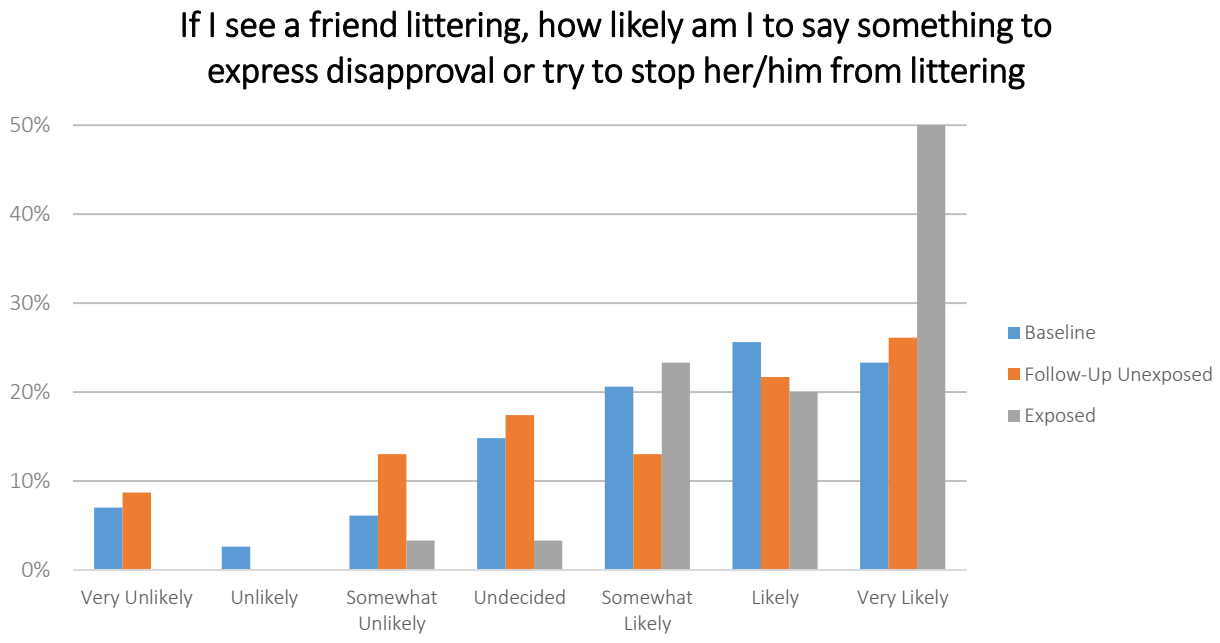
In placing these findings in context, it is important to identify that the unexposed reported finding environmental issues important at roughly equal rates. Fully 81% of unexposed respondents responded "somewhat agree" or higher when asked to respond to the statement "Environmental issues are important to me." Those exposed to the program answered the same at 88%.

Following on asking the respondent about their attitudes towards the littering of their peers, the survey sought to ask if they would express disapproval to a friend that they observed littering. Encouraging others to adopt pro-environmental behaviors through expressing disapproval of littering is the ideal goal of any outreach campaign.

Exposed respondents were one-and-a-half times more likely than unexposed and baseline respondents to voice disapproval. More than 70% of exposed respondents reported that they were 'very likely' or 'likely' to voice disapproval when their friends litter while only 49% of baseline and 48% of unexposed respondents reported the same.

Only 3% of exposed respondents said they would be unlikely to speak up (and only 'somewhat unlikely,' at that) while 16% of baseline and 22% of unexposed respondents would be unlikely to express disapproval. Exposed respondents were 5-7x more likely to become advocates of pro-environmental behaviors. These findings are reported in **Figure 4**.

Figure 4. Respondent likelihood to express disapproval of peer littering (N=60).



Respondents were also asked a series of 10 action questions. These questions followed the format of "In the past month, how often have you littered _____." In every instance, respondents who were exposed to the campaign were more or substantially more likely to report "Never" as shown in the following table.

Object of Litter	Exposed (N = 30)	Unexposed (N = 25)	Net Change
Food	90% never	48% never	+32%
Chewing gum	80% never	72% never	+8%
Bottles, Cans, Cups, or Cartons	83% never	44% never	+39%
Straws	60% never	44% never	+16%
Bottle Caps	83% never	68% never	+15%
Disposable utensils	90% never	84% never	+6%
Food packaging	60% never	48% never	+12%
Non-food items	90% never	60% never	+30%
Plastic or paper bags	90% never	76% never	+14%
Cigarette butts	70% never	68% never	+2%

Respondents were also asked a similar series of questions around what sort of events or context led to littering. Once again, those respondents exposed to the campaign were less likely to litter in all contexts. The questions was asked in the format of "People may or may not litter in different situations. Please indicate how frequently you litter in each of the following situations: _____."

Context or Event	Exposed (N = 31)	Unexposed (N = 25)	Net Change
Prior to or after eating/drinking	61% never	44% never	+17%
In a vehicle	71% never	48% never	+23%
At school	71% never	48% never	+23%
While putting out a cigarette	61% never	52% never	+9%
At home	93% never	60% never	+31%
At work	81% never	60% never	+21%

In addition, respondents were asked how many times in the past month they had picked up a piece of litter that was not their own and properly disposed of it. Those unexposed to the campaign were 8x more likely to reply "Never" at 24% as compared to only 3% of exposed. In addition, fully 94% of those exposed to the campaign reported picking up someone else's litter at least a few times per week as compared to only 28% of unexposed. That is, those exposed to the campaign reported actively picking up after others at rates nearly 4x greater than those unexposed.

BELIEFS

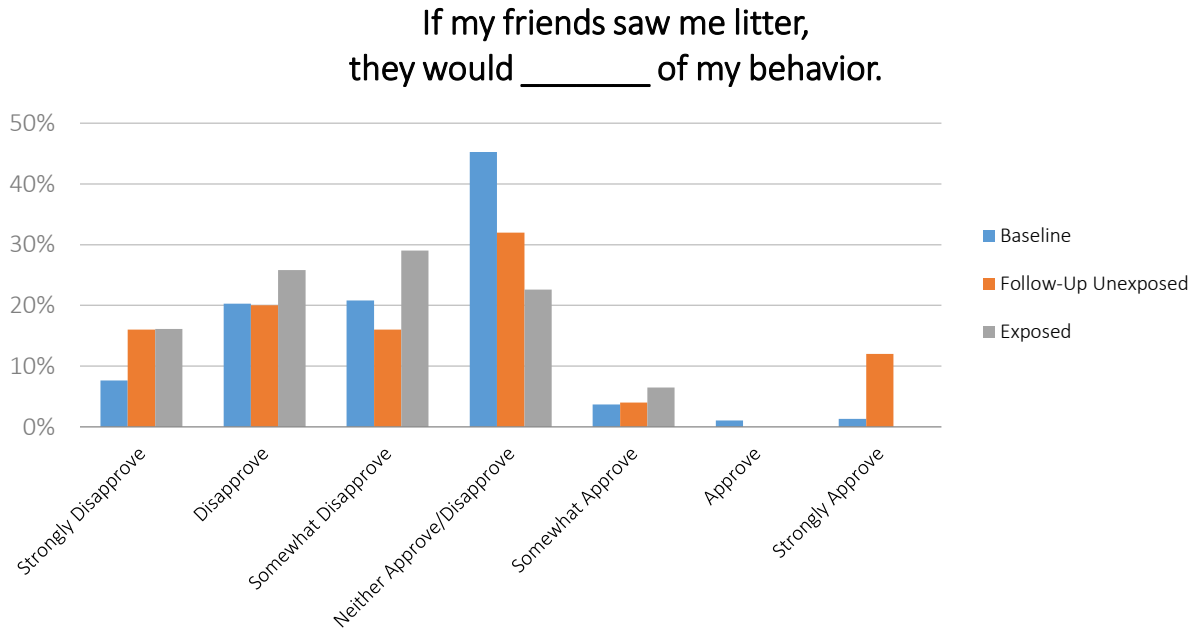
The survey also sought to gauge respondents' beliefs around littering and environmental behaviors. Understanding respondents' beliefs helps provide insight into how they are likely to behave in the future.

Perception of Peer Perception

Respondents were asked, "If my friends saw me litter, they would _____ of my behavior." Exposed respondents (71%) were more likely to believe their friends would disapprove of seeing them litter than baseline (48%) or unexposed respondents (52%).

Surprisingly, the rates of approval and disapproval bear little similarity to the results reported in **Figure 3** demonstrating the respondents' perception of their friend littering. This suggests that respondents do not belong to peer groups with substantial mutuality of beliefs—that is, if an individual disapproves of their friends littering, we would anticipate that their friend would similarly disapprove of their littering. However, respondents tended to weight their own conviction much higher ('strongly disapprove') and their peers' convictions much weaker ('somewhat disapprove'). These findings are reported in **Figure 5**.

Figure 5. Respondent likelihood to express disapproval of peer littering (N=60).



Importance of Environmental Issues

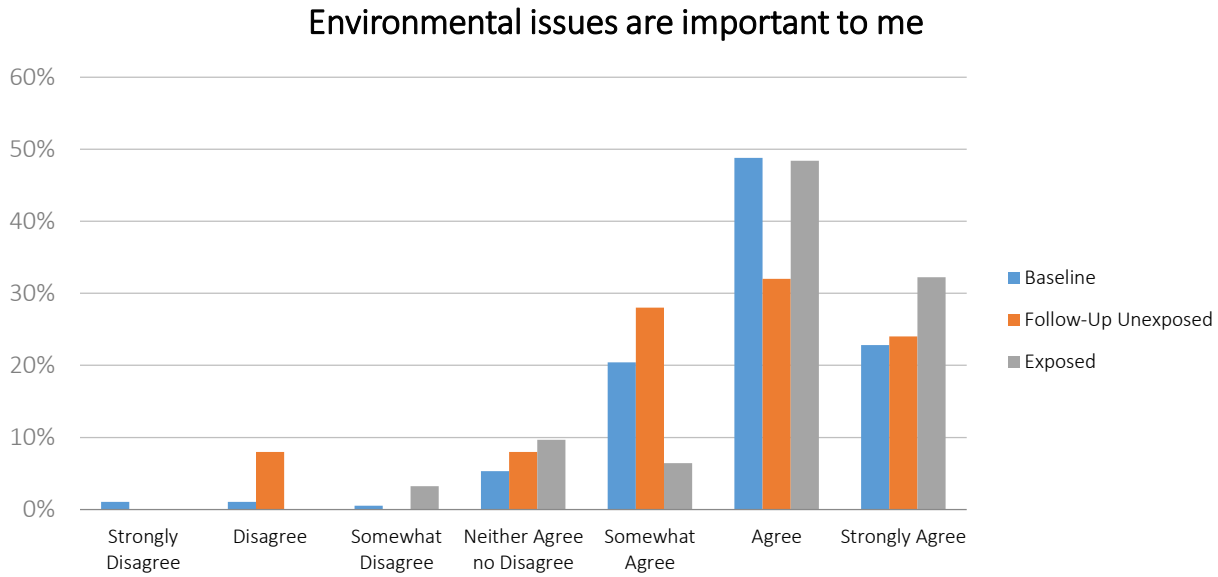
Respondents were asked to respond to the statement, "Environmental issues are important to me." Exposed respondents (32%) were more likely to report that they 'strongly agree' than either baseline (23%) or unexposed respondents (24%). In addition, exposed respondents (81%) were more likely to agree in general ('strongly agree' and 'agree') than baseline (71%) or unexposed respondents (56%). However, when broadened to 'somewhat agree' or higher the relationships leveled out.

Being exposed to the Be the Street program increased both the likelihood and the conviction of the belief that environmental issues were important to the respondent. It should be noted, however, that it cannot be said with certainty that exposure to Be the Street caused the belief to be held in all persons. It is possible that Be the Street attracted fans and respondents who already held these beliefs. If that were demonstrated to be true, then Be the Street's core value with regards to those individuals who already held pro-environmental beliefs would be the program's ability to capture, engage, and retain those individuals while putting them into contact with like-minded peers and allowing them to advocates to others. These fans then become a key component of demonstrating the social norm, allowing the campaign to reach more fans, and helping those newer fans to adopt the same beliefs which have been shown to lead to pro-environmental behaviors and actions.

The results of the question that environmental issues are important to the respondent most closely resemble the results (albeit reversed) presented in **Figure 2** and **Figure 3**. **Figure 2**, asking for the

respondent's attitude toward their own past littering, and **Figure 3**, asking for the respondent's attitude toward the littering of their peers, appear to be closely linked to the respondent's belief that they hold environmental issues as important. These findings are reported in **Figure 6**.

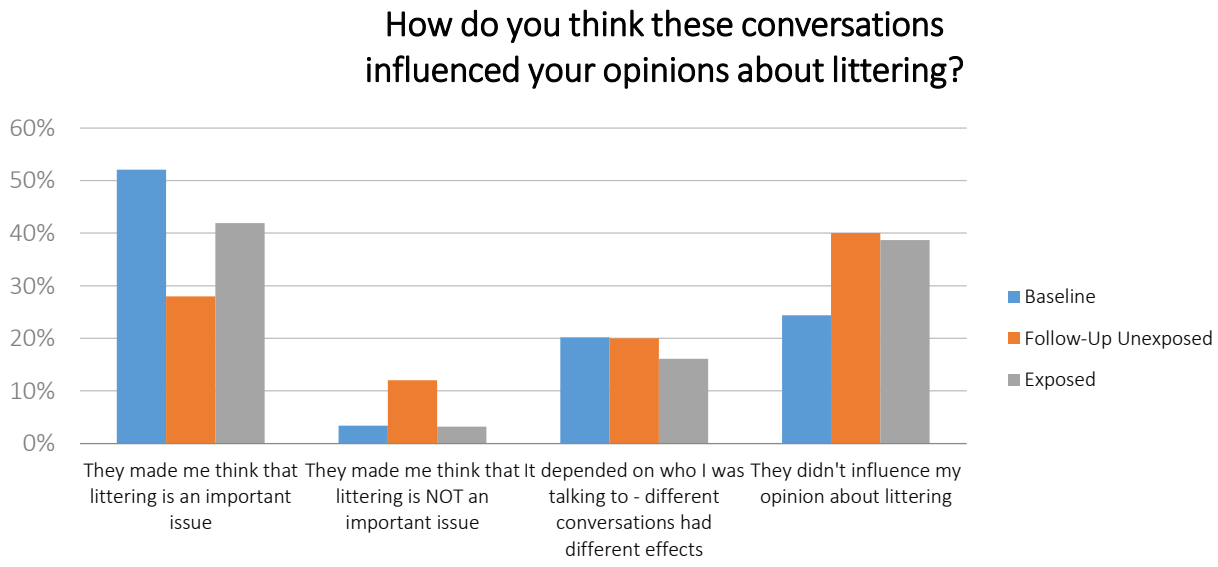
Figure 6. Respondent's belief that environmental issues are important (N=60).



Impact of Conversations on Importance of Littering

One of the goals of the Be the Street campaign was to encourage and promote peer-to-peer interactions regarding littering. At the end of the survey, respondents were asked to assess the frequency with which they had conversations about littering and the impact of those conversations on their views of littering. There was not a substantial difference between groups in how conversations impacted belief. These findings are reported in **Figure 7**.

Figure 7. Respondent's belief on the impact of discussing littering with peers (N=60).



WILLINGNESS

The final category of questions investigated in this analysis revolved around asking the respondent to consider their willingness or likelihood of taking some future action. These questions helped place into context the respondent's current attitudes towards littering behavior, but also provided insights in how future outreach efforts could be shaped to utilize that willingness.

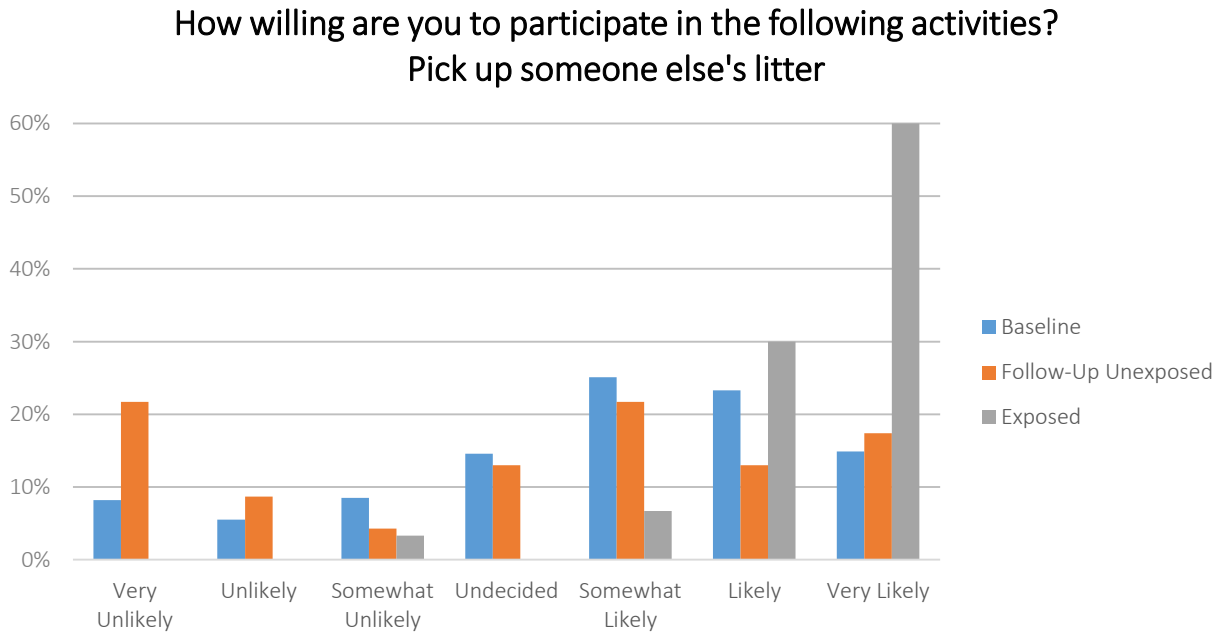
Willingness to Pick up Someone Else's Litter

Respondents were asked how willing they would be to pick up someone else's litter they observed on the ground. More than 90% of exposed respondents reported that they were 'very likely' or 'likely' to pick up someone else's litter while only 38% of baseline and 30% of unexposed respondents reported the same.

The results at the other end of the spectrum are even more pronounced. While 22% of baseline and 35% of unexposed respondents reported that they would be some level of unlikely to pick up someone else's trash, only 3% of exposed reported any unwillingness and that percentage was only 'somewhat unlikely.'

Finally, while 15% of baseline and 13% unexposed were undecided on whether or not they would be willing to pick up someone else's litter, no exposed were undecided. Engagement with Be the Street demonstrates a marked increase in decisiveness of the respondent and a marked increase in willingness to be proactive in cleaning up the streets. These findings are reported in **Figure 8**.

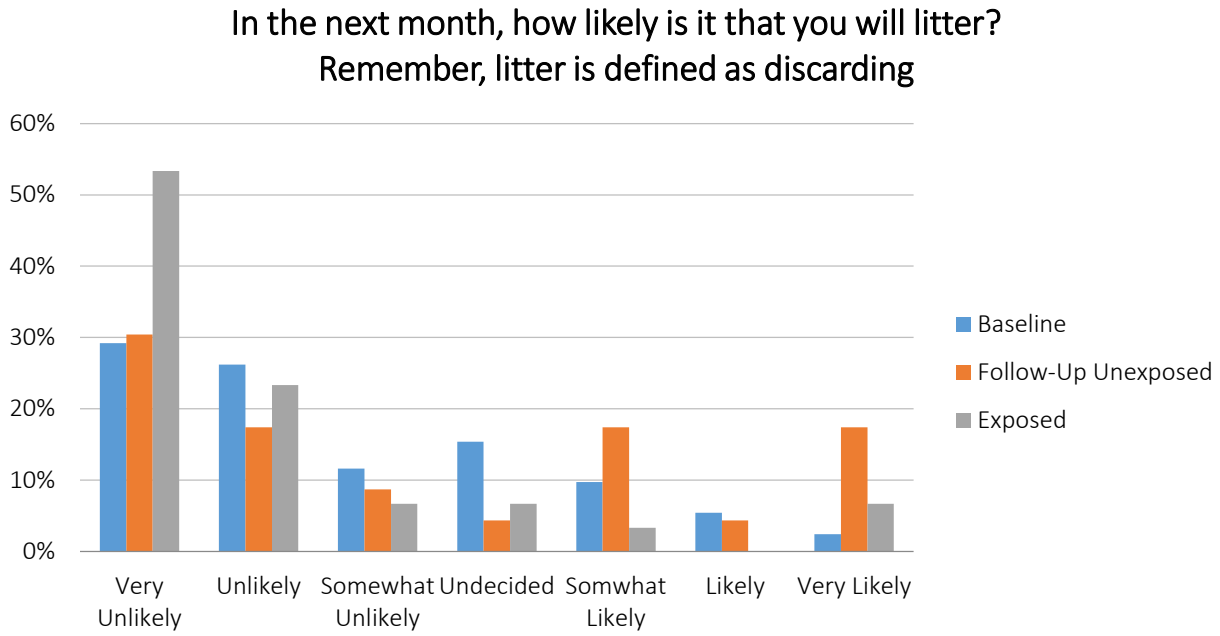
Figure 8. Respondent's willingness to pick up someone else's litter (N=60).



Likelihood to Litter

Respondents were also asked about the likelihood that they would litter in the future. Only 10% of exposed reported any willingness to litter in the future while 18% of baseline and 39% of unexposed reported the same. Respondents exposed to the Be the Street program were two to four times less likely to litter in the future than those who were not exposed. These findings are reported in **Figure 9**.

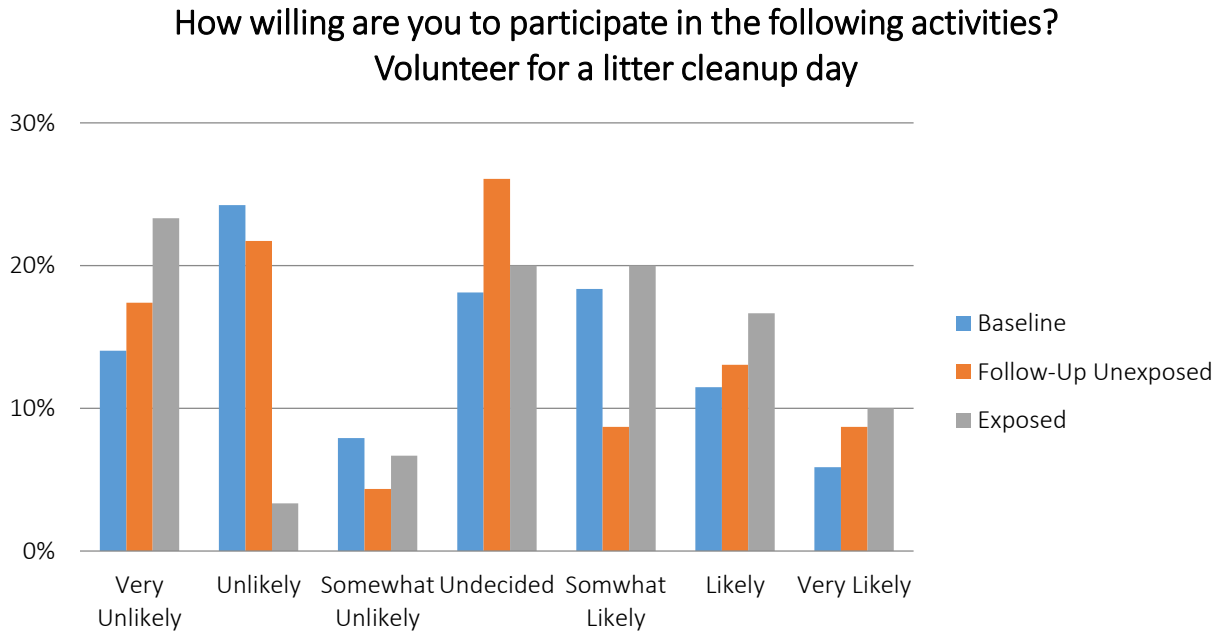
Figure 9. Respondent's willingness to litter in the future (N=60).



Willingness to Volunteer

Respondents were finally asked about their willingness to volunteer for a litter cleanup day. Exposed respondents (47%) were roughly one-and-a-half times more likely to be willing to volunteer than baseline (36%) or unexposed respondents (30%). However, exposed respondents also reported the highest 'very unlikely' response at 23%. These findings are reported in **Figure 10**.

Figure 10. Respondent's willingness to participate in volunteer cleanups (N=60).



ENGAGEMENT DATA

In addition to the statistical differences demonstrated above, the Be the Street program has significant levels of engagement. The levels of engagement demonstrated by Be the Street are unparalleled by any other public education outreach program.

Highlights include:

- Facebook. More than 11,000 engagements including 5,475 current likes. In the two years since its creation, the Be the Street page has achieved 150% the likes of the similarly situated SF Environment Facebook page. The Facebook engagement far exceeded the initial goals and this success was due in large part to it being placed as the strategic heart of the campaign.
- Meme Contest. The program initiated a meme contest in early 2014 that took place on Facebook. The meme contest asked the target audience to develop visual jokes or memes with pro-environmental messaging. A total of 104 user memes (from a goal of 100) were created and entered into a contest. More than 683 votes were case and thousands of views and referrals were driven to the Facebook page as users promoted their memes to their friends and social networks.
- Instagram. More than 1,626 interactions with fans and 113 followers across 185 posts. Of all of the outreach channels used, Instagram proved the most successful in encouraging peer-to-peer conversations. While many Facebook posts received comments, Instagram was the channel most likely to develop long, sustained conversations between fans.
- YouTube. A total of 56 videos published on the Be the Street YouTube channel including 52 fan-submitted videos for the anti-litter video contest. This competition received more than 4,800 votes cast and had 593 unique views of the 25-minute wards show. At the conclusion of the video competition, the channel had received a total of nearly 16,000 views. Since then, total views on the channel have risen to more than 42,000, a 260% increase. The channel has 38 subscribers.
- Mobile app. A first of its kind, recently completed mobile app allows Be the Street to make direct asks of the target audience through gamification. The mobile app has users complete challenges by going "into the field" and taking pictures of various BMPs. These photos earn the users points which they can use to secure prizes from the app store. In addition, the mobile app allows the program to use push notifications to send messages, new challenges, and notifications directly to the users. The program had a goal to achieve 100 active players but to date the app only has 47. This shortfall is attributed to development of the app taking longer than anticipated leaving an insufficient amount of time for promotion.
- Photo booths. The program developed a mobile photo booth that could be sent out to community events and allow fans to take pictures that were shared on Facebook. More than 750 photos were taken and shared on Facebook. The photos reinforced the social norm aspect of the campaign and literally "put a face to the campaign."
- Website. The Be the Street website was recently updated to a fully responsive, mobile-friendly platform. The website has received more than 40,000 page views despite not being a key platform for communication with the target audience (i.e. traffic was predominantly driven to Facebook and Instagram).
- Media Purchase. BASMAA and the Permitees' ongoing efforts to promote and raise awareness around for the campaign led to an estimated three million impressions.

RECOMMENDATIONS FOR FUTURE OUTREACH

Several key findings from the program shape recommendations for future outreach. The first set of findings discuss early program initiatives that were ultimately dropped or cancelled and speculate as to why those initiatives may not have succeeded. The second set of findings discuss successes on the program and explores what made them succeed.

UNSUCCESSFUL PROGRAM INITIATIVES

Four unsuccessful program initiatives are discussed in turn.

Youth Resource Council

A key goal of the program was to promote peer-to-peer communication and ensure that Bay Area youth were well represented throughout the program. To that end, the program sought to develop a Youth Resource Council to assist in implementation of the program. The thought was that by giving Bay Area youth a larger and legitimate role in shaping Be the Street, the program would not only be improved but buy-in would increase. As an added benefit, it would free up program resources to be used elsewhere.

The Youth Resource Council was ultimately disbanded because it proved too costly to support in terms of time commitment. Identifying the right champions, training them up to understand the issues and the program, and then collecting their feedback took considerable time. Unfortunately, by the time that cycle was completed, the students on the Youth Resource Council would depart due to other obligations, graduation, or the school year would end. Achieving a sustained payout after an initial training period was structurally impossible.

In addition, the geographic distance of a countywide program introduced challenges. The value of a Youth Resource Council was in their ability to meet, talk, and share ideas. Transportation made this difficult to achieve countywide representation.

ENewsletter

The program originally envisioned an eNewsletter. From the literature review, it was already known that email is a less popular channel for youth and so the eNewsletter was planned as a secondary mode of communication. It was quickly discovered that young people were unenthusiastic about signing up today for emails that they would receive over the coming weeks or months, preferring more immediate feedback such as that they get through social media where clicking “Like” immediately tells my social network something about me.

Website Blog

The campaign’s website was originally envisioned as the hub of the program. As traffic grew, the website was to develop a blog that would eventually host fan created content and more robust environmental messaging. Three structural changes to the program lead to this being cancelled. First, Facebook emerged as the hub of the program and the website received relatively low traffic. Second, as with the Youth Resource Council, the investment required to secure the content failed to justify the expense. Third, as with the eNewsletter, youth preferred a more immediate (and short) set of interactions and did not react favorably to a blog.

Bay Area Youth Database

A second early project was to develop a database of Bay Area youth that would grow into a pool of data that BASMAA could draw upon to conduct analyses, send out emails to activate for local events, and track

so that engagement could be built upon. Originally, this was viewed as a "value add" that could be easily developed just through the routine administration of the campaign. As the role of email was reduced, the collection of emails and information became more challenging. The data that could be collected (e.g. interaction data through Facebook and other social media) was already being collected by those platforms.

SUCCESSFUL PROGRAM INITIATIVES

Facebook emerged as the most powerful tool for youth oriented public education outreach. Facebook allowed the message to be delivered to the target audience at a time and in a way that was most convenient for them. It made the messaging extremely social and helped rapidly promote the social norm. Every Bay Area youth that visited the page was shown that more than 5,000 of their peers had already checked the place out and approved.

However, it was important to use the right tool for the job. Facebook was a powerful platform for sharing content (admittedly, that's what Facebook is intended to do), but a less powerful platform to get the target audience to take action (admittedly, Facebook is often used to "kill time," not to find an activity to undertake). For example, many of the memes were created at community events when staff directly engaged Bay Area youth and told them about the meme contest. Once created, though, the meme creators were eager to engage on Facebook, promote the campaign to their friends, and "like" or vote on their favorites.

The two outreach modes supported each other. Localized community events generated deep engagement with the target audience which could then be translated into a willingness to "lightly" engage with the campaign via Facebook. Engaged fans were willing to view and share content on Facebook, but Facebook alone likely wasn't enough to get them to change behavior. Despite that, their light engagement on Facebook helped promote the campaign, support the social norm, and allowed the program to more readily reach and activate them for community events.

In addition to better understanding how to use the various tools of the program, a number of key insights emerged around what type of messaging best resonated with the target audience:

- Short. Short, direct messages worked better than longer messages. For simple concepts such as "don't litter" this was not an issue, but could present a challenge for how to deliver more complex information.
- Food. The target audience reacts strongly to food. Images of In-n-Out Burger had immediate and positive reactions.
- Inspirational. Somewhat surprisingly, the target audience reacted very strongly to inspirational content. Optimistic messages about the future and a belief that anything is possible resonate with Bay Area youth.

SPECIFIC RECOMMENDATIONS FOR FUTURE OUTREACH

- Length of the relationship is important. The Facebook community grew at an exponential rate. It is easier to get fans once you already have fans, both because new visitors to the page are more likely to trust an established program and because of the underlying algorithms used by social media to determine what content to display. Be the Street is well positioned as a topic-neutral environmental brand and so could carry with it the community from one pollutant to another. The Be the Street branding that worked for a litter abatement campaign is equally applicable to any youth-oriented environmental program.

- Numbers show the social norm, not the behavior change. Demonstrating behavior change remains a challenge. The target audience was eager and willing to engage on social media, lend their name and voice to the movement, and click buttons. They were reluctant, though, to take the very substantial next step and document themselves undertaking a desired behavior. During community events where the audience interacted with staff, they were less reluctant to take that additional step and document their actions. Future outreach should not seek to achieve documented behavior change through social media platforms or should consider what types of behavior changes can be reasonably solicited through social media. Community events should be utilized to achieve documented behavior changes.

CONCLUSION

The Be the Street program had a simple and direct goal: to change the attitudes and behaviors about littering of the target population. Be the Street was effective in achieving its goal, routinely demonstrating differences in key attitudes and behaviors upwards of 200% compared to the population baseline. Those differences were often the most pronounced in key categories such as likelihood to litter in the future, willingness to engage others to promote pro-environmental behaviors, and willingness to become environmental stewards and pick up the litter of others.

Throughout the analysis, the results of the baseline survey (conducted before the start of the Be the Street program) and the unexposed respondents included in the follow-up survey followed similar patterns. These patterns further validate the important differences demonstrated by the respondents exposed to the program.

The success of the program was due in large part to the scale of the undertaking. As a regional outreach program, the target audience was of a sufficient size that critical mass could be achieved. Through social media, the “likes” of thousands of similarly situated youth vouched for the program and helped it spread. When supported by local in-person events, a robust community was developed capable of engaging both online and offline with the end result of a true peer-to-peer network sharing environmental messages in their own words.

APPENDIX

The appendix contains the following items:

1. Be the Street infographic created to promote the program.
2. Baseline Survey Report
3. Baseline Survey Topline Data
4. Sample Survey
5. Follow-up Survey Topline Data
6. Be the Street User Guide – the style guide created to be shared with partners to help them consistently promote the brand
7. Be the Street CASQA Award Submission – the application submitted to CASQA the resulted in Be the Street being recognized as the 2014 Outstanding Stormwater News, Information, Outreach, and Media Award.

Be the Street Post Campaign Survey Topline Results

Question: What is your birthday?	Count (%) N =60		Campaign Awareness			
			Exposed N=31		Unexposed N=27	
1990	2	3.3%	1	3.2%	1	3.7%
1991	4	6.7%	1	3.2%	3	11.1%
1992	3	5.0%	2	6.5%	1	3.7%
1993	2	3.3%	0	0.0%	2	7.4%
1994	3	5.0%	2	6.5%	1	3.7%
1995	10	16.7%	4	12.9%	4	14.8%
1996	12	20.0%	4	12.9%	8	29.6%
1997	6	10.0%	4	12.9%	2	7.4%
1998	9	15.0%	7	22.6%	2	7.4%
1999	8	13.3%	5	16.1%	3	11.1%
2000	1	1.7%	1	3.2%	0	0.0%

Question: What is your gender?	Count N=60		Campaign Awareness			
			Exposed N=31		Unexposed N=27	
Male	24	40.0%	12	38.7%	10	37.0%
Female	36	60.0%	19	61.3%	17	63.0%

Question: What is your home zipcode?	Count N=58		Campaign Awareness			
			Exposed N=31		Unexposed N=27	
94043	1	1.7%	1	3.2%	0	0.0%
94044	2	3.4%	0	0.0%	2	7.4%
94061	2	3.4%	1	3.2%	1	3.7%
94063	4	6.9%	1	3.2%	3	11.1%
94070	1	1.7%	1	3.2%	0	0.0%
94086	1	1.7%	0	0.0%	1	3.7%
94096	1	1.7%	0	0.0%	1	3.7%
94116	1	1.7%	0	0.0%	1	3.7%
94303	3	5.2%	1	3.2%	2	7.4%
94402	1	1.7%	0	0.0%	1	3.7%
94503	1	1.7%	1	3.2%	0	0.0%
94533	1	1.7%	0	0.0%	1	3.7%
94539	1	1.7%	0	0.0%	1	3.7%
94541	2	3.4%	1	3.2%	1	3.7%
94551	1	1.7%	1	3.2%	0	0.0%
94565	1	1.7%	0	0.0%	1	3.7%
94590	1	1.7%	1	3.2%	0	0.0%
94591	2	3.4%	2	6.5%	0	0.0%
94607	1	1.7%	1	3.2%	0	0.0%
94610	4	6.9%	4	12.9%	0	0.0%
94612	2	3.4%	2	6.5%	0	0.0%
94618	2	3.4%	2	6.5%	0	0.0%
94621	1	1.7%	0	0.0%	1	3.7%
94712	2	3.4%	2	6.5%	0	0.0%
95014	1	1.7%	1	3.2%	0	0.0%
95020	1	1.7%	0	0.0%	1	3.7%

95037	1	1.7%	0	0.0%	1	3.7%
95050	2	3.4%	1	3.2%	1	3.7%
95051	1	1.7%	1	3.2%	0	0.0%
95055	1	1.7%	1	3.2%	0	0.0%
95101	1	1.7%	0	0.0%	1	3.7%
95108	1	1.7%	0	0.0%	1	3.7%
95119	1	1.7%	1	3.2%	0	0.0%
95122	2	3.4%	1	3.2%	1	3.7%
95127	1	1.7%	0	0.0%	1	3.7%
95132	1	1.7%	0	0.0%	1	3.7%
95136	1	1.7%	1	3.2%	0	0.0%
95141	1	1.7%	0	0.0%	1	3.7%
95148	1	1.7%	0	0.0%	1	3.7%
95150	2	3.4%	2	6.5%	0	0.0%

Question: What is your status?	Count N=58		Campaign Awareness			
			Exposed N=31		Unexposed N=27	
I am a high school student	32	55.2%	20	64.5%	12	44.4%
I am a community college student	11	19.0%	5	16.1%	6	22.2%
I am a student at a four year university	5	8.6%	3	9.7%	2	7.4%
I am a student at a trade school	0	0.0%	0	0.0%	0	0.0%
I am a graduate student	0	0.0%	0	0.0%	0	0.0%
I am not a student	10	17.2%	3	9.7%	7	25.9%

Question: Environmental issues are important to me.	Count N=58		Campaign Awareness			
			Exposed N=31		Unexposed N=27	
Strongly Disagree	1	1.7%	0	0.0%	1	3.7%
Disagree	2	3.4%	0	0.0%	2	7.4%
Somewhat Disagree	1	1.7%	1	3.2%	0	0.0%
Neither Agree nor Disagree	5	8.6%	3	9.7%	2	7.4%
Somewhat Agree	9	15.5%	2	6.5%	7	25.9%
Agree	23	39.7%	15	48.4%	8	29.6%
Strongly Agree	17	29.3%	10	32.3%	7	25.9%

Question: Have you seen that logo before?	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Yes	24	42.9%	24	77.4%	0	0.0%
No	32	57.1%	7	22.6%	25	100.0%

Question: In the past month how often have you littered food?	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	39	70.9%	27	90.0%	12	48.0%
Maybe 1-2 Times	11	20.0%	3	10.0%	8	32.0%
About 1 time per week	1	1.8%	0	0.0%	1	4.0%
A few times per week	0	0.0%	0	0.0%	0	0.0%
About 1 time per day	2	3.6%	0	0.0%	2	8.0%
Multiple times every day	2	3.6%	0	0.0%	2	8.0%

Question: In the past month how often have you littered chewing gum?	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	42	76.4%	24	80.0%	18	72.0%
Maybe 1-2 Times	9	16.4%	5	16.7%	4	16.0%
About 1 time per week	1	1.8%	0	0.0%	1	4.0%
A few times per week	1	1.8%	0	0.0%	1	4.0%
About 1 time per day	1	1.8%	1	3.3%	0	0.0%
Multiple times every day	1	1.8%	0	0.0%	1	4.0%

Question: In the past month how often have you littered Beverage bottles, cans, cups, and/or cartons?	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	36	65.5%	25	83.3%	11	44.0%
Maybe 1-2 Times	12	21.8%	4	13.3%	8	32.0%
About 1 time per week	2	3.6%	0	0.0%	2	8.0%
A few times per week	2	3.6%	1	3.3%	1	4.0%
About 1 time per day	1	1.8%	0	0.0%	1	4.0%
Multiple times every day	2	3.6%	0	0.0%	2	8.0%

Question: In the past month how often have you littered straws?	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	29	52.7%	18	60.0%	11	44.0%
Maybe 1-2 Times	16	29.1%	10	33.3%	6	24.0%
About 1 time per week	4	7.3%	1	3.3%	3	12.0%
A few times per week	2	3.6%	0	0.0%	2	8.0%
About 1 time per day	2	3.6%	1	3.3%	1	4.0%
Multiple times every day	2	3.6%	0	0.0%	2	8.0%

Question: In the past month how often have you littered bottle caps?	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	42	76.4%	25	83.3%	17	68.0%
Maybe 1-2 Times	6	10.9%	2	6.7%	4	16.0%
About 1 time per week	1	1.8%	1	3.3%	0	0.0%
A few times per week	1	1.8%	0	0.0%	1	4.0%
About 1 time per day	2	3.6%	2	6.7%	0	0.0%
Multiple times every day	3	5.5%	0	0.0%	3	12.0%

Question: In the past month how often have you littered disposable utensils?	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	48	87.3%	27	90.0%	21	84.0%
Maybe 1-2 Times	3	5.5%	2	6.7%	1	4.0%
About 1 time per week	1	1.8%	0	0.0%	1	4.0%
A few times per week	0	0.0%	0	0.0%	0	0.0%
About 1 time per day	1	1.8%	1	3.3%	0	0.0%
Multiple times every day	2	3.6%	0	0.0%	2	8.0%

Question: In the past month how often have you littered wrappers/bags/food packaging?	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	30	54.5%	18	60.0%	12	48.0%
Maybe 1-2 Times	14	25.5%	10	33.3%	4	16.0%
About 1 time per week	5	9.1%	1	3.3%	4	16.0%
A few times per week	3	5.5%	1	3.3%	2	8.0%
About 1 time per day	1	1.8%	0	0.0%	1	4.0%
Multiple times every day	2	3.6%	0	0.0%	2	8.0%

Question: In the past month how often have you littered packaging from non food/beverage items?	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	42	76.4%	27	90.0%	15	60.0%
Maybe 1-2 Times	8	14.5%	2	6.7%	6	24.0%
About 1 time per week	2	3.6%	0	0.0%	2	8.0%
A few times per week	0	0.0%	0	0.0%	0	0.0%
About 1 time per day	2	3.6%	1	3.3%	1	4.0%
Multiple times every day	1	1.8%	0	0.0%	1	4.0%

Question: In the past month how often have you littered packaging from plastic/paper bags?	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	46	83.6%	27	90.0%	19	76.0%
Maybe 1-2 Times	6	10.9%	3	10.0%	3	12.0%
About 1 time per week	1	1.8%	0	0.0%	1	4.0%
A few times per week	0	0.0%	0	0.0%	0	0.0%
About 1 time per day	0	0.0%	0	0.0%	0	0.0%
Multiple times every day	2	3.6%	0	0.0%	2	8.0%

Question: In the past month how often have you littered packaging from cigarette butts?	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	38	69.1%	21	70.0%	17	68.0%
Maybe 1-2 Times	6	10.9%	4	13.3%	2	8.0%
About 1 time per week	4	7.3%	3	10.0%	1	4.0%
A few times per week	4	7.3%	2	6.7%	2	8.0%
About 1 time per day	2	3.6%	0	0.0%	2	8.0%
Multiple times every day	1	1.8%	0	0.0%	1	4.0%

Question: In the past month, how often have you picked up a piece of litter that was not yours and disposed of it?	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Never	7	12.5%	1	3.2%	6	24.0%

Maybe 1-2 times	12	21.4%	1	3.2%	11	44.0%
About 1 time per week	1	1.8%	0	0.0%	1	4.0%
A few times per week	15	26.8%	9	29.0%	6	24.0%
About 1 time per day	11	19.6%	11	35.5%	0	0.0%
Multiple times every day	10	17.9%	9	29.0%	1	4.0%

Question: People may or may not litter in different situations. Please indicate how frequently you litter in each of the following situation: Prior to/after eating or drinking.	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Never	30	53.6%	19	61.3%	11	44.0%
Maybe 1-2 times	20	35.7%	11	35.5%	9	36.0%
About 1 time per week	5	8.9%	1	3.2%	4	16.0%
A few times per week	0	0.0%	0	0.0%	0	0.0%
About 1 time per day	1	1.8%	0	0.0%	1	4.0%
Multiple times every day	0	0.0%	0	0.0%	0	0.0%

Question: People may or may not litter in different situations. Please indicate how frequently you litter in each of the following situation: When I am in a vehicle.	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Never	34	60.7%	22	71.0%	12	48.0%
Maybe 1-2 times	13	23.2%	8	25.8%	5	20.0%
About 1 time per week	7	12.5%	1	3.2%	6	24.0%
A few times per week	1	1.8%	0	0.0%	1	4.0%
About 1 time per day	1	1.8%	0	0.0%	1	4.0%
Multiple times every day	0	0.0%	0	0.0%	0	0.0%

Question: People may or may not litter in different situations. Please indicate how frequently you litter in each of the following situation: At school.	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Never	34	60.7%	22	71.0%	12	48.0%
Maybe 1-2 times	11	19.6%	5	16.1%	6	24.0%
About 1 time per week	6	10.7%	2	6.5%	4	16.0%
A few times per week	1	1.8%	0	0.0%	1	4.0%
About 1 time per day	1	1.8%	0	0.0%	1	4.0%
Multiple times every day	3	5.4%	2	6.5%	1	4.0%

Question: People may or may not litter in different situations. Please indicate how frequently you litter in each of the following situation: When I have to put out my cigarette.	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Never	32	57.1%	19	61.3%	13	52.0%
Maybe 1-2 times	5	8.9%	3	9.7%	2	8.0%
About 1 time per week	9	16.1%	6	19.4%	3	12.0%

A few times per week	3	5.4%	0	0.0%	3	12.0%
About 1 time per day	0	0.0%	0	0.0%	0	0.0%
Multiple times every day	7	12.5%	3	9.7%	4	16.0%

Question: People may or may not litter in different situations. Please indicate how frequently you litter in each of the following situation: When I'm at home.	Count N=55		Campaign Awareness			
			Exposed N=30		Unexposed N=25	
Never	43	78.2%	28	93.3%	15	60.0%
Maybe 1-2 times	8	14.5%	2	6.7%	6	24.0%
About 1 time per week	2	3.6%	0	0.0%	2	8.0%
A few times per week	1	1.8%	0	0.0%	1	4.0%
About 1 time per day	1	1.8%	0	0.0%	1	4.0%
Multiple times every day	0	0.0%	0	0.0%	0	0.0%

Question: People may or may not litter in different situations. Please indicate how frequently you litter in each of the following situation: At work.	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Never	40	71.4%	25	80.6%	15	60.0%
Maybe 1-2 times	7	12.5%	3	9.7%	4	16.0%
About 1 time per week	2	3.6%	2	6.5%	0	0.0%
A few times per week	1	1.8%	0	0.0%	1	4.0%
About 1 time per day	1	1.8%	0	0.0%	1	4.0%
Multiple times every day	5	8.9%	1	3.2%	4	16.0%

Question: What prevents you from littering? Select all that apply.	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Trash cans/recycling/compost bins nearby	42	75.0%	25	80.6%	17	68.0%
There are anti-litter signs posted	8	14.3%	3	9.7%	5	20.0%
When an area is already litter free	13	23.2%	7	22.6%	6	24.0%
When I feel that I want to keep a certain area clean	22	39.3%	13	41.9%	9	36.0%
Friends, family, or others would complain about my behavior if I littered	14	25.0%	8	25.8%	6	24.0%
I know there is no clean-up crew for a given area	14	25.0%	9	29.0%	5	20.0%
I would feel guilty if I littered	26	46.4%	15	48.4%	11	44.0%

Question: How often do you think your friends litter?	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Never	5	8.9%	2	6.5%	3	12.0%
Rarely	15	26.8%	11	35.5%	4	16.0%
Sometimes	20	35.7%	12	38.7%	8	32.0%
Frequently	10	17.9%	4	12.9%	6	24.0%
All the time	6	10.7%	2	6.5%	4	16.0%

Question: When I see my friends littering, I _____ of their behavior.	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Strongly Disapprove	29	51.8%	21	67.7%	8	32.0%
Disapprove	17	30.4%	8	25.8%	9	36.0%
Somewhat Disapprove	4	7.1%	2	6.5%	2	8.0%
Neither Approve/Disapprove	3	5.4%	0	0.0%	3	12.0%
Somewhat Approve	1	1.8%	0	0.0%	1	4.0%
Approve	0	0.0%	0	0.0%	0	0.0%
Strongly Approve	2	3.6%	0	0.0%	2	8.0%

Question: If my friends saw me litter, they would _____ of my behavior.	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Strongly Disapprove	9	16.1%	5	16.1%	4	16.0%
Disapprove	13	23.2%	8	25.8%	5	20.0%
Somewhat Disapprove	13	23.2%	9	29.0%	4	16.0%
Neither Approve/Disapprove	15	26.8%	7	22.6%	8	32.0%
Somewhat Approve	3	5.4%	2	6.5%	1	4.0%
Approve	0	0.0%	0	0.0%	0	0.0%
Strongly Approve	3	5.4%	0	0.0%	3	12.0%

Question: If my friends saw me litter, they would _____ of my behavior.	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Strongly Disapprove	26	46.4%	18	58.1%	8	32.0%
Disapprove	17	30.4%	11	35.5%	6	24.0%
Somewhat Disapprove	7	12.5%	1	3.2%	6	24.0%
Neither Approve/Disapprove	3	5.4%	1	3.2%	2	8.0%
Somewhat Approve	0	0.0%	0	0.0%	0	0.0%
Approve	0	0.0%	0	0.0%	0	0.0%
Strongly Approve	3	5.4%	0	0.0%	3	12.0%

Question: In the past month, have you spoken with friends about littering?	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
Yes	14	25.0%	5	16.1%	9	36.0%
No	42	75.0%	26	83.9%	16	64.0%

Question: How do you think these conversations influence your opinions about littering?	Count N=56		Campaign Awareness			
			Exposed N=31		Unexposed N=25	
They made me think that littering is an important issue	20	35.7%	13	41.9%	7	28.0%
They made me think that littering is NOT an important issue	4	7.1%	1	3.2%	3	12.0%
It depended on who I was talking to - different conversations had different effects	10	17.9%	5	16.1%	5	20.0%
They didn't influence my opinion about littering	22	39.3%	12	38.7%	10	40.0%

Question: In the next month, how likely is it that you will litter? Remember, litter is defined as discarding, placing, throwing, or dropping any waste item in a public or private area and not immediately removing it. This includes waste items large and small which were discarded intentionally or accidentally.	Count N=53		Campaign Awareness			
			Exposed N=30		Unexposed N=23	
Very Unlikely	23	43.4%	16	53.3%	7	30.4%
Unlikely	11	20.8%	7	23.3%	4	17.4%
Somewhat Unlikely	4	7.5%	2	6.7%	2	8.7%
Undecided	3	5.7%	2	6.7%	1	4.3%
Somwhat Likely	5	9.4%	1	3.3%	4	17.4%
Likely	1	1.9%	0	0.0%	1	4.3%
Very Likely	6	11.3%	2	6.7%	4	17.4%

Question: How willing are you to participate in the following activities? Volunteer for a litter cleanup day.	Count N=53		Campaign Awareness			
			Exposed N=30		Unexposed N=23	
Very Unlikely	11	20.0%	7	23.3%	4	16.0%
Unlikely	6	10.9%	1	3.3%	5	20.0%
Somewhat Unlikely	3	5.5%	2	6.7%	1	4.0%
Undecided	12	21.8%	6	20.0%	6	24.0%
Somwhat Likely	10	18.2%	6	20.0%	4	16.0%
Likely	8	14.5%	5	16.7%	3	12.0%
Very Likely	5	9.1%	3	10.0%	2	8.0%

Question: How willing are you to participate in the following activities? Pick up someone else's litter.	Count N=53		Campaign Awareness			
			Exposed N=30		Unexposed N=23	
Very Unlikely	5	9.4%	0	0.0%	5	21.7%
Unlikely	2	3.8%	0	0.0%	2	8.7%
Somewhat Unlikely	2	3.8%	1	3.3%	1	4.3%
Undecided	3	5.7%	0	0.0%	3	13.0%
Somwhat Likely	7	13.2%	2	6.7%	5	21.7%
Likely	12	22.6%	9	30.0%	3	13.0%
Very Likely	22	41.5%	18	60.0%	4	17.4%

Question: How willing are you to participate in the following activities?-If I see a friend littering, say something to express disapproval or try to stop her/him from littering.	Count N=53		Campaign Awareness			
			Exposed N=30		Unexposed N=23	
Very Unlikely	2	3.6%	0	0.0%	2	8.0%
Unlikely	0	0.0%	0	0.0%	0	0.0%
Somewhat Unlikely	4	7.3%	1	3.3%	3	12.0%
Undecided	5	9.1%	1	3.3%	4	16.0%

Somwhat Likely	12	21.8%	7	23.3%	5	20.0%
Likely	11	20.0%	6	20.0%	5	20.0%
Very Likely	21	38.2%	15	50.0%	6	24.0%

Have you seen either or both of these videos?	Count N=53		Campaign Awareness			
			Exposed N=28		Unexposed N=25	
Yes	16	30.2%	16	57.1%	0	0.0%
No	37	69.8%	12	42.9%	25	100.0%

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 9-1

IPM Store Partnership Program

- Store Employee Trainings – FY 13-14 Final Report
- SCVURPPP Pesticide User Outreach - Store Employee Training Evaluations, FY 13-14 Evaluation Form Summary
- List of Stores in the IPM Store Partnership Program and Training Dates

SCVURPPPP STORE EMPLOYEE TRAININGS

FY 13-14 FINAL REPORT

Ann Joseph Consulting

Since FY 02-03, SCVURPPP has been using the services of Ann Joseph to provide training to store employees on IPM and selling less-toxic products. This report summarizes the work done by the consultant to complete this project. IPM Advocate Suzanne Bontempo helped conduct eleven of the fourteen trainings in FY 13-14. Greener Pesticides for Cleaner Waterways (GPCW) Grant funds were used to fund IPM Advocate David Perkin's work at SummerWinds Mountain View. David Perkins will maintain the SummerWinds Mountain View store until October 2014.

Store Employee Trainings: 105 employees trained at 14 trainings
*** Note:** SCVURPPP funding: 13 trainings conducted; 100 employees trained
GPCW funding: 1 training conducted; 5 employees trained

The 1 to 2-hour employee trainings cover topics such as IPM, current pest problems in Santa Clara County, information on available less-toxic products for dealing with pest problems, water quality problems due to pesticides with a focus on pyrethroids, problems with nutrient runoff of chemical fertilizers, how to read a pesticide label, beneficial insects' role in pest management and what products can put beneficial insects at risk. Additional information has been included upon request of the store staff (i.e., Light Brown Apple Moth, Colony Collapse Disorder, Giant Whitefly, Citrus Leaf Miner, Spider Mites, Spotted Winged Fruit Fly, and Citrus Greening Disease. Information about the OWOW web site, the 'Ask Our Expert" feature, and the UCIPM web site was also included.

The trainings also educate employees on how to recognize beneficial insects in their adult and larval forms. Store staff appreciates learning that pesticides can have a detrimental effect on the "good bugs". The continued focus on the detrimental effect of pyrethroids on beneficial insect populations helps reinforce the need for water quality protection and good bug protection.

Based on a list developed by SCVURPPP staff, Ann and Suzanne focused on getting those stores trained that have not received trainings in recent years. The following stores declined to receive the training:

- OSH San Carlos, San Jose - Declined the training because they are moving to a new location. However, they would like a training if offered in July or the fall.

- Home Depot De Anza Blvd, San Jose - Suzanne visited the store four times to conduct the training. It kept getting rescheduled, and was eventually cancelled.

- Peninsula Hardware, Palo Alto - Declined to receive training.

- Payless Nursery, San Jose - Declined to receive training.

Many OSH stores and Home Depots were included this year; and even though the number of employees trained was small, these stores needed the training due to high employee turnover.

This year continued to be a challenge because of the cut backs in employees and employee hours. Many stores reduced the number of department supervisors and expanded employee responsibilities to becoming an "opener" or a "closer", which gave less time for the employees to attend the trainings.

The consultants provided food for most of the trainings. This was important because many of the trainings were held during the lunch hour.

The following trainings were conducted in FY 13-14

1. **SummerWinds, Mountain View, 11/21/13 (Greener Pesticides for Cleaner Waterways Grant funded)**
   Trained 5 employees
   Trainers: David Perkins and Ann Joseph
   The employees were trained by David Perkins (IPM Advocate). The store manager Susan attended and loved the training. She had a problem scheduling employees so only five were able to attend the training.

2. **Yamagami's Nursery, Cupertino, 1/21/14**
   Trained 10 employees
   Trainers - Suzanne Bontempo and Ann Joseph
   Attendees asked for information on additional resources that are available to them and how to offer alternatives to the systemic pesticides.

3. **Home Depot Monterey Road, San Jose, 3/14/14**
   Trained 9 employees
   Trainer - Suzanne Bontempo
   Attendees were very enthusiastic about the training. They would like more OWOW visits during the year to continue the educational support.

4. **Home Depot Story Road, San Jose, 4/08/14**
   Trained 10 employees
   Trainer - Suzanne Bontempo
   Attendees were particularly interested in how less-toxic products work and wanted more details. Suzanne went over how the Sweeney's Mole and Gopher repellent with castor oil works. Attendees also wanted to know more about the beneficial insects, and how to exclude rats and mice from structures.

5. **Home Depot Blossom Hill Road, San Jose, 4/25/14**
   Trained 10 employees
   Trainer - Suzanne Bontempo
   Suzanne focused on how less- toxic products work. Attendees were very enthusiastic and wanted her to provide more information on how Neem, Terro Ant Bait, Amdro Ant Bait, and boric acid work.

6. **OSH Cottle Road, San Jose, 5/14/14**
   Trained 8 employees
   Trainer - Suzanne Bontempo
   The associates were very excited about the training. Even the manager joined in and commented on how valuable this type of product knowledge is. Suzanne focused on lawn care in a drought and how to properly water a garden to maximize water conservation and still keep the plants thriving.

7. **Common Ground Nursery, Palo Alto, 5/15/14**
   Trained 5 employees
   Trainer - Suzanne Bontempo
   This group had a lot of questions about less-toxic products that they can add to their mix. Suzanne also gave them a lot of information about less toxic mole and gopher products and how to help their customers with rat solutions that are less toxic.

8. **Home Depot, Campbell, 5/15/14**
   Trained 8 employees
   Trainer - Suzanne Bontempo
   Attendees had questions about bed bugs, how effective are beneficial nematodes for treating lawn grubs. They were happy to learn about the beneficial insects that they sell online.

9. **OSH, Sunnyvale 5/20/14**
   Trained 4 employees
   Trainer - Suzanne Bontempo
   This was a small but good group. They had many questions on bed bugs, beneficial insects and how to encourage them to stay in the yard. They wished more associates had attended the training and felt the information Suzanne presented was invaluable.

10. **SummerWinds San Antonio Road, Palo Alto 6/5/14**
    Trained 4 employees
    Trainer - Suzanne Bontempo
    Attendees discussed watering during a drought, mulching to conserve water and reduce weeds, rat controls in the garden. This group was very knowledgeable and supportive of the IPM message.

11. **SummerWinds Cupertino 6/11/14**
    Trained 6 employees
    Trainer – Ann Joseph
    Attendees were very receptive to the training. They were happy to learn about the beneficial insects the store carries, how their less- toxic products work, and alternatives to systemic pesticides to protect the honey bees. Four of the six attendees were new to the store and were not aware of OWOW so this was a good opportunity to bring them up to speed. The manager Lawrence was very happy that his group had the opportunity to attend the training.

12. **Ace Hardware Lincoln Avenue, San Jose, 6/20/14**
    Trained 13 employees
    Trainer - Suzanne Bontempo
    The garden lead Devin asked Suzanne about best less-toxic products to recommend to customers. He also asked Suzanne about products that would be good to add to their product mix. They had

a lot of questions about beneficial nematodes and how they work. Good group that was very receptive to Suzanne's training.

13. **OSH Blossom Hill Road, San Jose, 6/23/14**
    Trained 6 employees
    Trainer - Suzanne Bontempo
    Suzanne provided a lot of information about how to water appropriately during a drought. She also provided information on using beneficial nematodes for grub control and helped the staff feel more comfortable recommending them for grub control.

14. **SummerWinds Nursery, Sunnyvale, 6/26/14**
    Trained 7 employees
    Trainer - Suzanne Bontempo
    This group had good questions about Spinosad and how to water properly during a drought. They also had questions on the best less- toxic controls they carry for powdery mildew and about low water use plants. Suzanne directed them to plant lists online.

Conclusions:
The biggest challenge was getting the stores to commit to receiving the training. Once the stores experienced the training they wanted more information, more OWOW resources, and more frequent store support. Most of the stores were not aware of the Santa Clara County Household Hazardous Waste management program and were very happy to receive this information. This may be because for many employees this was their first exposure to the OWOW training.

We thank you for this opportunity to work with all of your stores. We really appreciate it!

SCVURPPP PESTICIDE USER OUTREACH – Store Employee Training
FY 13-14 Evaluation Form Summary

Attendees: 105
Evaluations: 94

	Agree	Neutral	Disagree	Comments
The instruction was well organized and interesting.	**94**	**0**	**0**	• Great job. • Presentation flowed and was well paced.
The information changed my attitude about pesticides.	**71**	**22**	**1**	• I am already anti-pesticide. • I already try to sell less-toxic products. • Already pro eco-friendly solutions, but I appreciate learning more details. • I was already aware of the dangers. • Confirmed a lot.
The information was useful.	**92**	**0**	**0**	• Very much. • Very useful. • This opened up my perspective more.
The information will help me sell less-toxic products.	**90**	**4**	**0**	• Made me think of more creative solutions. • Good information for growing number of green customers. • Or offer more informed alternatives. • I already sell less-toxic products. • I was taught why they are safer. • The information was informative. • Depends on customer wants. • This is my second time and I got more out of it.
The instructor was responsive to questions.	**91**	**2**	**0**	• Very knowledgeable. • Lots of information to get through. Hard to find the time to ask questions. • Excellent.

	Agree	Neutral	Disagree	Comments
The level of detail was appropriate.	**91**	**3**	**0**	• We're all at different levels so it's hard to have one "right" level. • Super helpful.
Visual aids were effective.	**91**	**3**	**0**	• I learn visually so all of the visuals helped. • Seeing the product in my hand helped. • Always use visuals.
Written materials were effective.	**84**	**8**	**0**	• I appreciate the packet. • Will need to go over the materials later. • Haven't read them yet. • It is very nice to get a folder to keep.
I would recommend the training to co-workers.	**93**	**0**	**0**	• Useful knowledge for all to apply to their lives. • Will be helpful to have more employees familiar with garden products. • To all of them!

What part of the training was most useful?

- Gophers and rats.
- The training was fantastic. So informative.
- Learning about what bugs are good for the garden.
- Pesticides and what products to use properly.
- Information about additional resources.
- How presented information related to Home Depot products.
- The watering part.
- The part about mouse traps.
- Pesticide topic was interesting and educational.
- Being taught about pesticides that don't harm the environment.
- Learning new products.
- Organic vs. non-organic.
- Learning which chemicals are less-toxic to use.
- Diatomaceous earth for bed bugs.
- Duct tape to repel bugs in outside garden.
- Learning about insecticides.
- List of alternatives.
- The Q & A.
- Thinking more sustainably about pest problems.

- Non-hazardous information.
- The various sources of information.
- Bedbug repellants.
- The different and more eco-friendly pesticides.
- Insecticides and eco-friendly products (Natria & Bonide).
- Indicators for discarding hazmat.
- Knowing effective ways to prevent pests.
- Learning the proper use of each product.
- Product/environment information.
- All of it was useful.
- Water pollution.
- Information about lawns.
- Using less-toxic products.
- New studies are interesting.
- Learning more about runoff.
- Resource links.
- The presentation.
- List of resources to answer further questions.
- Easy to understand organics stressed.
- The overall information.
- Pesticides.
- Knowing about certain bugs and how they come into the garden.
- The written information I received.
- Useful reading material.
- Which products to use.
- The ten tips for water-wise gardening.
- The beneficial garden bugs.
- All information was new to me.
- The examples of where/when to use products.
- Learning about safe ways to use the products we have.
- Determining which products are eco-friendly.
- To me everything was useful. It opened up my eyes.
- Bed bugs.
- Nematodes.
- The detail in why and how the products are safe/hazardous.
- Explaining/comparing products.
- Learning what products are safe to use.
- Difference in natural vs. pesticides.
- About the different stuff we put in our planet.
- Learning organic ways to treat pests.
- Majority of it was a great update.
- Learning about bark as a slug/snail repellant.

What part of the training was least useful?

- I didn't find any part of the training un-useful.
- More discussion on all programs.
- Ways to remove bugs.
- It all helped.
- More knowledge is always useful.
- None. Everything was helpful.
- It was all useful.
- Rats.
- How the products worked.
- All of the training was useful.
- Spider photos.
- Fertilizers.

When this training is held again, what changes do you suggest?

- More discussion on all programs.
- I suppose I'd highlight the bedbug information.
- More information/pictures on pests and diseases.
- Nothing. Everything went well.
- I would maybe like to see some of the YouTube videos on IPM.
- More information if possible.
- It is working very well as is.
- Make it a whole day.
- Bigger room with fewer interruptions (not in the manager's office).
- More focus on the agency itself.
- Maybe include a bit larger focus on disposing of hazardous chemicals.
- More information for customers.
- It was a great presentation. I would just keep it the same or add more products to talk about.
- Maybe slightly bigger picture.
- I learned a lot so no changes needed.
- Going into more information about pests and why they invade homes.
- Maybe more visual illustrations.
- Could go a little faster.
- Hold training a little later.
- Given 60 minute time limit, I would allot time better between sections.
- Group training.
- More about water.
- Shy away from pesticides.
- Show more pictures.
- More customer tips.
- A little more time and more associates.
- Wish we had more time. She knows so much.
- More insect ID.
- That the instructor shows handouts as she talks about it. We spent time looking and may not hear what she is saying.

How much of today's information was new to you? All **31** Some **63** None **2**

Comments:

- Went more in-depth than my existing knowledge.
- The paper information is great.
- Speak with ease. You do not have to rush.
- Thank you so much.
- I would like another training for new staff soon.
- I work in plumbing so all of the information was new to me but helpful to know.
- Thank you for your time. I learned a lot!
- Keep up the good work.
- Great information.
- Widened my knowledge on our products.
- I like that she suggested different types of care for different issues.
- You are very knowledgeable.
- I learned a lot.
- Projector was broken.
- Great reinforcements.
- Very useful information.
- I enjoyed the training program.
- Excellent information. Recommend it for all associates.
- It was a great class. Good visual aids.
- Great and interesting class. Great trainer.
- I try to stay informed.
- Very informative.
- I liked it.
- Annie was very thorough and pleasant.
- I learned that systemics are not the greatest thing.
- Great work.
- Loved it.
- I love all the information I got.
- I have done outside reading and training as a Department Manager.
- Very good refresher plus new information was great.
- I liked the YouTube information on UC Davis.
- Information on pesticides was interesting.
- This was much better. I've been at the nursery a while so now I can get what it explained.
- My knowledge of pesticides was enhanced.

For store managers - Will you continue to provide this training to new employees yourself?

Yes **19** No **0** I will use a trainer **7**

List of Stores in the SCVURPPPP IPM Store Partnership Program and Training Dates

City	Store Name	Address	FY03-04 Training	FY04-05 Training	FY05-06 Training	FY06-07 Training	FY07-08 Training	FY08-09 Training	FY09-10 Training	FY10-11 Training	FY11-12 Training	FY12-13 Training	FY13-14 Training	Comments
Campbell														
1	Home Depot	480 E Hamilton Ave								1/31/11			5/15/14	
2	SummerWinds Nursery	2460 S Winchester Blvd	2/18/04	2/2/05	1/31/06	6/5/07	2/5/08	2/3/09, 6/1/09		2/1/11 & 2/2/11	9/19/11	6/26/13		
Cupertino														
3	SummerWinds Nursery	1491 S De Anza Blvd	2/18/04	2/2/05	1/31/06	6/5/07	4/23/08	2/3/09, 5/20/09		2/1/11 & 2/2/11	6/25/12		6/11/14	
4	Yamagami's Nursery	1361 S De Anza Blvd	6/2/04		2/1/06	5/2/07	3/5/08	2/10/09	3/2/10	11/23/10	1/24/12		1/21/14	
Los Altos														
5	Los Altos Nursery	245 Hawthorne Ave							4/5/10					Scheduled for September 2014
Los Gatos														
6	Ace Los Gatos Hardware	15300 Los Gatos Blvd								3/17/11				
Milpitas														
7	Home Depot	1177 Great Mall Drive								2/10/11				
8	Orchard Supply Hardware	125 N Milpitas Blvd		5/11/06	5/11/06						4/16/12			
Mountain View														
9	Blossom True Value Hardware	1297 W El Camino Real												Does not want training
10	Orchard Supply Hardware	2555 Charleston Rd									11/17/11	5/5/13		
11	SummerWinds Nursery	805 Yuba Dr	2/19/04	7/20/05	1/31/06	5/22/07	2/6/08	2/3/09		2/1/11 & 2/2/11	2/16/12	11/13/12	11/21/13	
Palo Alto														
12	Palo Alto Ace Hardware	875 Alma Street		2/3/05	5/4/06	1/30/07	5/21/08	5/26/09		6/16/11				
13	Peninsula Hardware	2676 Middlefield Rd												Does not want training
14	Common Ground Organic Garden Supply	559 College Ave									3/2/12		5/15/14	
15	SummerWinds Nursery	725 San Antonio Rd	5/23/04	2/2/05	2/1/06	6/27/07	4/23/08	2/4/09, 6/1/09	6/17/10	2/1/11 & 2/2/11	6/8/12		6/5/14	
Santa Clara														

City	Store Name	Address	FY03-04 Training	FY04-05 Training	FY05-06 Training	FY06-07 Training	FY07-08 Training	FY08-09 Training	FY09-10 Training	FY10-11 Training	FY11-12 Training	FY12-13 Training	FY13-14 Training	Comments
16	Home Depot	2435 Lafayette St									2/23/12			
17	Orchard Supply Hardware	3615 El Camino Real			5/25/06							4/25/13		
18	SummerWinds Nursery	2931 El Camino Real								2/1/11 & 2/2/11	3/20/12	5/15/13		
San Jose														
19	Ace Hardware	2253 Lincoln Ave					5/21/08	5/21/09					6/20/14	
20	Almaden Valley Nursery	15800 Almaden Exwy	5/19/04		5/2/06	5/16/07	3/20/08	4/8/09	6/23/10	6/29/11	6/29/12	6/28/13		
21	Home Depot	2181 Monterey Road							4/13/10				3/14/14	
22	Home Depot	2855 Story Road							5/4/10				4/8/14	
23	Home Depot	635 W Capitol Expy							1/11/10			2/24/13		
24	Home Depot	1855 Hillsdale Ave							4/6/10			5/8/13		
25	Home Depot	975 De Anza Blvd								1/25/11				
26	Home Depot	920 Blossom Hill Rd							5/12/10				4/25/14	
27	Orchard Supply Hardware	720 W San Carlos St									3/21/12			
28	Orchard Supply Hardware	3000 Alum Rock Ave			5/5/06				1/20/10			1/30/13		
29	Orchard Supply Hardware	1130 Branham Ln / 1375 Blossom Hill				5/9/07					6/19/12		6/23/14	
30	Orchard Supply Hardware	1751 E Capitol Expwy										5/20/13		
31	Orchard Supply Hardware	5651 Cottle Rd							5/19/10		6/12/12		5/14/14	
32	Orchard Supply Hardware	5365 Prospect Rd					4/30/08							

City	Store Name	Address	FY03-04 Training	FY04-05 Training	FY05-06 Training	FY06-07 Training	FY07-08 Training	FY08-09 Training	FY09-10 Training	FY10-11 Training	FY11-12 Training	FY12-13 Training	FY13-14 Training	Comments
San Jose (cont.)														
33	Payless Nursery	2927 S King Rd			5/9/06	3/14/07								Does not want training
34	SummerWinds Nursery	4606 Almaden Expwy	7/11/04	2/2/2005	2/1/06	6/5/07	4/23/08	2/4/09, 6/2/09		2/1/11 & 2/2/11	5/17/12	5/30/13		
Sunnyvale														
35	Home Depot	680 Kifer Rd							1/13/10					
36	Orchard Supply Hardware	777 Sunnyvale-Saratoga Rd								1/27/11			5/20/14	
37	SummerWinds Nursery	861 E. El Camino Real	7/7/04	2/2/05	2/1/06	5/22/07	2/5/08	2/4/09, 6/2/09		2/1/11 & 2/2/11	4/24/12		6/26/14	

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 9-2

FY 13-14 Green Gardener Training Program

- Santa Clara Valley Green Gardener Training Program – FY 13-14 Activities
- Green Gardener English Class Evaluations
- Green Gardener Spanish Class Evaluations
- Spring 2014 Re-Certification Class Flyer – English
- Spring 2014 Re-Certification Class Flyer – Spanish
- Green Gardener List

Santa Clara Valley *Green Gardener* Training Program
FY 13-14 Activities

Background

In FY 07-08, the Program piloted the first Santa Clara Valley Green Gardener training. The Green Gardener program is an educational initiative that brings quality training to professional landscapers, gardeners and landscape maintenance workers on how to "garden green".

The Green Gardener Program is offered at two levels, Basic and Advanced. Each training level consists of ten, 2-hour sessions on sustainable landscaping topics. Students must attend at least 80 percent of the classes and pass a final examination to be placed on the Green Gardener list promoted to the public. To maintain their status as Green Gardeners, individuals must meet annual continuing education requirements.

From FY 07-08 to FY 12-13, the Program conducted Basic Green Gardener trainings. In FY 13-14, for the first time, the Program conducted the Advanced Green Gardener training. Students that had previously completed the Basic Training were contacted and encouraged to attend. The Advanced Training was conducted in collaboration with the Sunnyvale-Cupertino Adult Community Education (ACE) and the Master Gardeners of Santa Clara County.

Santa Clara Valley Advanced Green Gardener Training

The Program conducted two Advanced Green Gardener training sessions in FY 13-14. The training in English was held on Wednesdays, Sep 18 to Nov 20, 2013, and the training in Spanish was held on Thursdays, Sep 19 to Nov 21. The Program provided funds toward student fees, guest speaker fees, Spanish teacher fees, and supplies (binders, handouts, and "bug-blasters").

In addition, the Program held two two-hour bilingual (English and Spanish) classes on Drip Irrigation as an opportunity for Green Gardeners to re-certify. These were held on February 26, 2014 and March 6, 2014. Both classes were taught by Richard Bean from Lane Irrigation.

The Program contacted current Santa Clara Valley Green Gardeners to encourage them to attend the Advanced Training. Outreach to residents was also done to inform them about the availability of trained Green Gardeners. Outreach efforts included the following:

- Advertising on radio;
- Developing an article about upcoming classes and distributing to local media outlets;
- Posting training announcements on the Watershed Watch website, Facebook, and Twitter;
- Distributing flyers at outreach events; and
- Posting the list of trained Green Gardeners on the Watershed Watch website;

Evaluation of Effectiveness

A total of 25 individuals completed the Program's Advanced Green Gardener training; 10 took the training in English and 15 in Spanish.

A summary of the evaluations from the Advanced Green Gardener training is included in Appendix 9-2. It indicates that attendees found the class very useful and will be making changes to their landscape

management practices based on what they learned at the trainings. Attendees were required to take a final test to receive the certificate of completion. This ensured that they understood the curriculum and will be able to implement the practices at their client locations.

31 Green Gardeners attended the two re-certification classes offered by the Program. In addition, 6 Gardeners re-certified using other options, such as submitting self-assessments or attending other classes.

Currently, the Santa Clara Valley *Green Gardener* List includes 105 *Green Gardeners*. Of these, 70 are professional landscape maintenance contractors and 35 are individuals that do not provide professional services. The list of Green Gardeners in distributed at outreach events and is available online at http://www.mywatershedwatch.org/findgardener.html.

New Career Training Classes

Hospitality

Hospitality Orientation
Tuesday, August 27, 2013
5:30-6:30 pm in Room 11

Why a Hospitality Program?

According to the California's Department of Transportation Santa Clara County leisure and hospitality sectors will have large increases in employment opportunities.

The Hospitality Industry includes travel and tourism, lodging, food and beverage services, event and conference planning, gaming, theme parks, sports and entertainment. It is also a growing industry with its key elements performed on site, not subject to off-shoring.Students will learn the differences between leadership and management and why both are essential to the development and growth of an enterprise. Students will be able to demonstrate the differences between service and hospitality, delivering a memorable experience that meets or exceeds guest expectations.

Our Hospitality Course and Certification

This course will include an introduction to the hospitality industry as well as train and prepare students for the Guest Service Gold Certification through the American Hotel and Lodging Education Institute.

To ensure that our graduates meet the rigorous standards of a hospitality professional, each candidate will submit a short application and be subsequently interviewed prior to admission.

Admission Requirements:
Minimal student qualifications include the ability to speak English fluently and have a commitment to complete the training program. Basic computer and word processing skills

Interested students must:
1. Attend orientation Tue, Aug 27, 2013, 5:30 pm ACE/Rm 11 (257099)
2. Bring a resume to orientation.
3. Participate in an oral interview which will be scheduled after resume submittal.
The textbook will be discussed at orientation.

Instructor: Schmidt **15 sessions**
Reg Fee: $214 **Location: ACE/ Rm 11**
169001 Lev 1 Tu 5:30-8pm 9/17-1/7

Green Gardener Program Adv. (English)

Meet the demand for Green Gardening practices and expand your business prospects! This ten week series of classes is designed to provide advanced training on sustainable landscape design and maintenance to **Certified Green Gardeners.** Topics include green design, advanced irrigation techniques, and using integrated pest management techniques to manage weeds, insects and plant diseases.

Scholarships of up to $60 are available upon request for Certified Green Gardeners who work for or own landscape management businesses. For more information or to sign up for class, contact Elena Gonzalez: 408.522.2713 or elena_gonzalez@fuhsd.org. Sponsored by: Santa Clara Valley Urban Runoff Pollution Prevention Program, Master Gardeners of Santa Clara County, and ACE. www. MyWatershedWatch.org.

Instructor: Hamma **10 sessions**
Reg Fee: $120 **Location: ACE / Rm 14**
257010 W 4-6pm 9/18-11/20

Green Gardener Program Adv. (Spanish)

Satisface la demanda de prácticas de Jardinería Verde y amplié sus perspectivas de negocio. Estas diez semanas de clases están diseñadas para proporcionar formación avanzada en el diseño del paisaje sostenible y el mantenimiento para los Jardineros Verdes ya certificados. Los temas incluyen diseño verde, avanzadas técnicas de riego, y utilizando técnicas de manejo integrado de plagas para controlar las malas hierbas, insectos y enfermedades de las plantas. Becas de hasta $60 están disponibles a petición para los Jardineros Verdes ya certificados que trabajan de jardinería o quienes son dueños de sus propias empresas de paisaje. Para mas información o para inscribirse en las clases, llama a Elena Gonzalez: 408-522-2713 o elena_gonzalez@fuhsd.org

Patrocinado por: Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), Master Gardeners of Santa Clara County, and ACE. www. MyWatershedWatch.org.

Instructor: Hamma **10 sessions**
Reg Fee: $120 **Location: ACE / Rm 14**
257012 Th 4-6pm 9/19-11/21

Career & Technology Training: New Courses

Adult School Q1 2013

From: Lori Baumgartner [lorib@eoainc.com]
Sent: Tuesday, July 16, 2013 1:25 PM
To: lorib@eoainc.com
Subject: ADVANCED Green Gardener Training Announcement - Fall 2013

Hello Green Gardeners!

Exciting news! The Santa Clara Valley Green Gardener Program will offer Advanced Green Gardener Training this Fall. This 10 week class is designed to provide advanced training on sustainable landscape design and maintenance to Certified Santa Clara Valley Green Gardeners. Topics include green design, advanced irrigation techniques, soil management, and using integrated pest management techniques to manage weeds, insects and plant diseases.

There will be two training sessions, one in English and one in Spanish. Here are the details:

Training in English: Wednesdays, Sep 18 to Nov 20, 4:00 PM - 6:00 PM
Training in Spanish: Thursdays, Sep 19 to Nov 21, 4:00 PM - 6:00 PM
Cost: $120 (Scholarships for up to $60 are available for Certified Santa Clara Valley Green Gardeners)
Location: Sunnyvale-Cupertino Adult Community Education (ACE), 591 West Fremont Avenue, Sunnyvale, CA 94087
To register: Call Sunnyvale-Cupertino Adult Community Education (ACE) at 408-522-2713 or email Elena_gonzalez@fuhsd.org.

Space is limited, so sign up today!

Thanks,
Lori B.

Lori Baumgartner
Santa Clara Valley
Green Gardener Program
www.mywatershedwatch.org/greengardener.html
Tel 408-720-8811 ext. 2
Fax 408-720-8812

Santa Clara Valley Green Gardner: Final Evaluation
English Class - Advanced FALL 2013

Total Number of Graduates = 10[1]

1. What was your overall impression of the class?

Class Topic	Poor	Fair	Good	Excellent
Green Design & Comparison of Landscape Models	0	0	9	5
Successful Plant Installation	0	0	4	3
Irrigation Scheduling	0	3	2	5
Irrigation Design	0	0	3	6
Soil Food Web	0	2	1	5
IPM - Weeds	0	1	2	4
IPM - Biology	0	0	4	5
Abiotic Disorders	0	1	4	2

2. Please rate the main speaker

Class Topic	Poor	Fair	Good	Excellent
Green Design & Comparison of Landscape Models	0	0	3	11
Successful Plant Installation	0	0	5	4
Irrigation Scheduling	0	3	2	5
Irrigation Design	0	0	1	8
Soil Food Web	0	0	3	5
IPM - Weeds	0	1	2	4
IPM - Biology	0	0	4	5
Abiotic Disorders	0	1	3	3

3. Will the information help in your landscaping work?

Class Topic	Yes	No	Undecided
Green Design & Comparison of Landscape Models	13	0	2
Successful Plant Installation	7	0	0
Irrigation Scheduling	9	0	1
Irrigation Design	9	0	0
Soil Food Web	8	0	0
IPM - Weeds	7	0	0
IPM - Biology	9	0	0
Abiotic Disorders	7	0	0

[1] The number of evaluations received is different from the number of graduates because some students moved from the English training to the Spanish training after the first few classes.

4. Were the handouts useful?

Class Topic	Yes	No	Undecided
Green Design & Comparison of Landscape Models	14	0	0
Successful Plant Installation	8	0	0
Irrigation Scheduling	8	0	1
Irrigation Design	9	0	0
Soil Food Web	6	0	1
IPM - Weeds	7	0	0
IPM - Biology	7	0	2
Abiotic Disorders	7	0	0

5. What was your favorite part of the class?

Class Topic	Comments
Green Design & Comparison of Landscape Models	• Basic guidelines and exercise practical application • The analysis • Handouts • Guest speaker • Exercises • Landscape plan exercise
Successful Plant Installation	• The discussion with class participants • Guest speaker • Handouts • Class discussion • Talk of pesticide application • The guest speakers knowledge and interaction
Irrigation Scheduling	• Loved Richard's audit section. Looking forward to cost/benefit • Discussion
Irrigation Design	• Going through the problems & determining process & how it connects • Involvement - using our heads • Practical irrigation use/explanation • Working out irrigation needs • Doing formulas
Soil Food Web	• Laura's enthusiasm for soil • Zebra manure
IPM - Weeds	• Janet recapping the Pest Control book • Discussing different ways of handling weeds, like what other students use • Hands on • Interaction, applied practices, and samples
IPM - Biology	• Hearing about the new pests • Hands-on pest ID with the loop • Pictures and discussion • Looking at the leaves • Visuals
Abiotic Disorders	• Discussion • Seeing examples

6. How much of today's information was new to you?

Class Topic	All	Some	None
Green Design & Comparison of Landscape Models	1	13	1
Successful Plant Installation	0	5	1
Irrigation Scheduling	0	8	2
Irrigation Design	2	7	0
Soil Food Web	0	8	0
IPM - Weeds	0	6	0
IPM - Biology	0	9	0
Abiotic Disorders	1	5	1

7. List other topics that you would like to see included.

Class Topic	Comments
Green Design & Comparison of Landscape Models	• Organic gardening • Irrigation design
Successful Plant Installation	• More in depth topics to find out what everyone else is doing
Irrigation Scheduling	• Grass
Irrigation Design	• No comments
Soil Food Web	• Drip irrigation
IPM - Weeds	• No comments
IPM - Biology	• More on tactics
Abiotic Disorders	• No comments

8. Other comments?

Class Topic	Comments
Green Design & Comparison of Landscape Models	• Heidi is always well prepared • More time for information/handouts • Better time management
Successful Plant Installation	• Provide an online forum to find out what other people are doing • Wonderful class • Manage class discussion to stay on topic within time limits • Great job keeping class on track, especially as the class gets more familiar/interactive
Irrigation Scheduling	• Yet again, a great speaker. Excellent to have those in the field share relevant real-world information/experience • Time management is a consistent problem • Great information from Richard and class
Irrigation Design	• This was rich with critical information. Great to have 2 thorough classes, as saving water is the rest of our commitment and response to our clients • The handouts were numerous and a bit confusing shuffling back and forth…maybe split into 3 irrigation classes • Hands-on demonstration of practices and principals discussed today would have been very helpful

Soil Food Web	• Great to incorporate design placement for compost • I will echo the idea of working design into most topics. Goes with educating the client/homeowner
IPM - Weeds	• There should be more emphasis on drip system • I appreciate the timing of the class • Great class that I will promote • I have been thinking about worm composting. Very worthwhile. Consider encouraging alternatives to folks with no room for bins • Invite the “Worm Dude”
IPM - Biology	• Recommended reading list • Laura’s collection of real world challenges - stellar books/guides
Abiotic Disorders	• Good class

Santa Clara Valley Green Gardner: Final Evaluation
Spanish Class - Advanced FALL 2013

Total Number of Graduates: 15[1]

1. What was your overall impression of the class?

Class Topic	Poor	Fair	Good	Excellent
Green Design & Comparison of Landscape Models	0	0	4	4
Successful Plant Installation	0	0	6	6
Irrigation Scheduling	1	1	2	7
Irrigation Design	0	1	5	8
Soil Food Web	0	0	1	10
IPM - Weeds	0	1	2	8
IPM - Biology	0	0	3	7
Abiotic Disorders	0	0	5	5

2. Please rate the main speaker

Class Topic	Poor	Fair	Good	Excellent
Green Design & Comparison of Landscape Models	0	0	2	6
Successful Plant Installation	0	0	3	9
Irrigation Scheduling	1	1	2	7
Irrigation Design	0	1	5	8
Soil Food Web	0	0	1	10
IPM - Weeds	0	1	1	9
IPM - Biology	0	0	5	5
Abiotic Disorders	0	0	4	6

3. Will the information help in your landscaping work?

Class Topic	Yes	No	Undecided
Green Design & Comparison of Landscape Models	8	0	0
Successful Plant Installation	12	0	0
Irrigation Scheduling	10	1	0
Irrigation Design	14	0	0
Soil Food Web	11	0	0
IPM - Weeds	11	0	0
IPM - Biology	9	0	0
Abiotic Disorders	9	0	0

[1] The number of evaluations received is different from the number of graduates because some students moved from the English training to the Spanish training after the first few classes.

4. Were the handouts useful?

Class Topic	Yes	No	Undecided
Green Design & Comparison of Landscape Models	8	0	0
Successful Plant Installation	11	0	0
Irrigation Scheduling	10	0	0
Irrigation Design	11	0	0
Soil Food Web	11	0	0
IPM - Weeds	11	0	0
IPM - Biology	9	0	0
Abiotic Disorders	9	0	0

5. What was your favorite part of the class?

Class Topic	Comments
Green Design & Comparison of Landscape Models	• Todo, pero, sobre todo la informacion de las plantas (all, but especially the information on plants) • La udicacion de plantas en lugares correctos (right plant, right place)
Successful Plant Installation	• No comments
Irrigation Scheduling	• El calcule de tiempo según la precipitación de los aspersores (calculating run time according to sprinkler output) • Irrigation system
Irrigation Design	• Programacion de riego (irrigation programming)
Soil Food Web	• Las maestros (the teachers) • Un suelo saludable (a healthy soil)
IPM - Weeds	• Malas yerbas (weeds)
IPM - Biology	• Las plagas (the pests) • El gusano de manzana (coddling moth)
Abiotic Disorders	• Las enfermesas y problemas de plantas (the diseases and plant problems) • The outside site visit

6. How much of today's information was new to you?

Class Topic	All	Some	None	Comments
Green Design & Comparison of Landscape Models	3	5	0	• Ya habia estado en esta clases (already taken this training)
Successful Plant Installation	8	4	0	
Irrigation Scheduling	5	5	0	
Irrigation Design	11	2	1	
Soil Food Web	9	2	0	
IPM - Weeds	6	5	0	
IPM - Biology	7	2	1	
Abiotic Disorders	6	4	0	

7. List other topics that you would like to see included.

Class Topic	Comments
Green Design & Comparison of Landscape Models	• Mas sobre grupos de plantas que pueda uno conjuntar (more on groups of plants that one can combine) • Nativos de California (California natives) • Nombres de las plantas (names of plants) • Irrigation system class
Successful Plant Installation	• Poda de arboles frutales (pruning fruit trees) • Enfermedades en arboles frutales (diseases of fruit trees) • Insectos y las plagas (insects and diseases)
Irrigation Scheduling	• Irrigation hydrozones (irrigation hydrozones) • Mas sobre plantas (more about plants) • Aprender más sobre el galonaje de las diferentes nozlez (learn more about the gallon output of different nozzles) • Tree service
Irrigation Design	• ET on different plants • Diseño de sprinklers riego (design of irrigation sprinklers) • Run time formulas
Soil Food Web	• Mas sobre plantas, diseño mas especifico (more about plants, more specific design) • Podriamos hacer un ejercicio sobre te de abono (can we do an exercise on compost tea) • Pest management • Irrigation and formulas
IPM - Weeds	• Irrigation and pests
IPM - Biology	• Estudiar el tipo de plagas un poco mas (study the types of pests a little more) • Pruning • Nombres de las plantas (names of the plants)
Abiotic Disorders	• Aprender mas de cuando sprayer o atacar las plagas (to learn more about when to spray and attack pests) • Materiales de irrigacion que salen nuevos, la tecnologica (new irrigation materials that come out, the technology)

8. Other comments?

Class Topic	Comments
Green Design & Comparison of Landscape Models	• Great job
Successful Plant Installation	• Thank you
Irrigation Scheduling	• Good job
Irrigation Design	• Great job
Soil Food Web	• Thank you
IPM - Weeds	• Bueno (good)
IPM - Biology	• No comments
Abiotic Disorders	• No comments

Re-certification Classes for Santa Clara Valley Green Gardeners

"DOs AND DON'Ts OF DRIP IRRIGATION"

Wednesday, February 26, 2014 **4:30 – 6:30 pm** **Senior Center Building, Laurel Room** **Sunnyvale Community Center** **550 East Remington Avenue** **Sunnyvale, CA**	**Thursday, March 6, 2014** **4:30 – 6:30 pm** **Senior Center Building, Laurel Room** **Sunnyvale Community Center** **550 East Remington Avenue** **Sunnyvale, CA**

The same re-certification class will be offered on both days.

Trainer: Richard Bean (Lane Irrigation)

Classes will be bilingual (English and Spanish)

Attending any one of these classes will help you meet the Green Gardener Program's continuing education requirement. Your Green Gardener card will be extended by one year.

The classes are FREE for Green Gardeners!

REGISTRATION FORM

Name: _____

Company: _____

Phone: _____ **Fax:** _____

Email: _____

Please indicate the date you would like to attend:

☐ **Wednesday, February 26, 2014**

☐ **Thursday, March 6, 2014**

Please complete and email to Lori Baumgartner at <LoriB@eoainc.com> or fax to the Santa Clara Valley Urban Runoff Program office (fax no. 408- 720-8812) no later than Monday, February 24, 2014.
Questions? Call Lori at 408-720-8811 ext 2

For more information visit http://MyWatershedWatch.org/greengardener.html

Is Your Gardener a Green Gardener?

Got a Smart Phone?

Find this list online by scanning the code below

Hire a Santa Clara Valley *Green Gardene*r to maintain your garden using sustainable landscape maintenance practices.

Santa Clara Valley Green Gardeners have received training to:

- Use resources wisely, conserve water, protect the soil, and reduce waste.
- Improve the health, appearance and value of landscapes.
- Reduce urban runoff and stormwater pollution from landscape maintenance activities

These Santa Clara Valley *Green Gardeners* provide professional landscape design, construction and/or maintenance services throughout Santa Clara County.

Green Gardener Name	Business Name	Landscape Service Type: (Design, Construction, Maintenance)	Phone Number
Alfredo Acosta	Acosta Landscaping	Maintenance	510-887-8066
Ruben Acosta Vazquez	Ruben Acosta Gardening Service	Maintenance	408-246-5205
Moises Aguayo	Common Ground Landscaping	Maintenance	408-858-3590
Juan Alcantar	Jesus Alcantar Landscaping	Maintenance	408-594-1136
Jesus Alvarado	M M Landscape Services, Inc.	Design, Construction & Maintenance	510-304-3400
Cesar Arellano	AB Landscaping, Inc.	Design, Construction & Maintenance	408-362-9251
Diana Bebbington	db Fine Gardening	Design & Maintenance	650-269-7990
Janet Bell	Janet Bell & Associates	Design, Construction & Maintenance	650-369-3400
Patti Berryhill	Berryhill Designs & Fine Gardening	Design & Maintenance	650-868-4262
Jose Berumen	BG Landscaping Services	Maintenance	408-706-8792
Alejandro Bravo	Alex Bravo Garden's	Maintenance	408-569-5364
Bonnie Brock	Bonnie Brock Landscape Design	Design & Maintenance	650-465-9073
Miguel Castro Avalos	Miguel C. Garden	Maintenance	408-375-3301
Jesús Chagolla	Chagolla Gardening Service	Maintenance	408-942-8782
Nate Crosby	Crosby Landscaping	Design & Maintenance	408-417-5137
Juan Dávila	Team Works Sustainable Landscapes	Maintenance	408-250-8619
Mike Davis	Mike Davis Landscaping	Design, Construction & Maintenance	408-980-1723
Marian Duncan	Duncan Landscaping	Design & Maintenance	650-804-5652
Leonel Farnes	L & M Landscaping	Design & Maintenance	408-687-6568
Israel Fonseca	F&H Landscaping & Maintenance	Maintenance	408-201-2984
Filiberto Fonseca	Allied Landscape Services	Maintenance	408-310-8476
Steve J. Gill	Steve Gill Landscaping	Design, Construction & Maintenance	408-569-9963

Green Gardener Name	Business Name	Landscape Service Type: (Design, Construction, Maintenance)	Phone Number
Adelfo Ginez Hernandez	Adelfo Ginez Landscaping	Maintenance	408-472-0936
Juan C. Gonzalez	Miranda's Landscaping	Maintenance	408-509-6435
Arnoldo Guevara	Gachina Landscape Management	Maintenance	408-806-9049
Susan P. Harris	Bluebird Design & Plant Care	Design & Maintenance	408-568-4973
Adoram Hernandez	Common Ground Landscape	Maintenance	408-210-7174
Avimael Hernandez	Maranatha Landscaping	Design, Construction & Maintenance	408-348-0655
Jaime Hernandez	Maranatha Landscaping	Design, Construction & Maintenance	408-348-0655
Robert Hernandez	B&R Landscape Management	Maintenance	408-258-8922
Antolin Jimenez	JJJ Landscape Services	Construction & Maintenance	408-739-1015
Heidi K. Johnson	HKJohnson & Associates, Landscape Design & Consultation	Design	408-863-0236
Jason Karklins	Jason Karklins	Maintenance	408-340-3624
Gretchen Klein	Seven Scapes	Design, Construction & Maintenance	650-996-9366
Dominique Lala	Dominique Lala	Design & Maintenance	408-279-1993
Ryan G. Lauber	Janet Bell & Associates	Design, Construction & Maintenance	614-420-1450
Byddi Lee	Eco Gardening Coach	Design	408-306-8695
Peggy Lin Hung	Peggy Lin Hung Landscape Design	Design	650-949-3639
David Lopez	Lopez Gardening	Maintenance	408-506-0907
Linda Luntsford	Linda Luntsford Fine Gardening	Fine Pruning & Gardening	650-438-6435
Christopher Mahan	Mahan & Sons, Inc.	Construction & Maintenance	408-761-0028
Diane Mahan	Mahan & Sons, Inc.	Construction & Maintenance	408-761-8480
Daniel Mahan	Mahan & Sons, Inc.	Construction & Maintenance	408-688-7415
Tomas Martinez	Mendez Landscape	Construction & Maintenance	650-576-5281
Mark McCabe	Mark R. McCabe Landscape	Construction	408-978-2965
Miguel Medina	Maniglia Landscape Services, Inc.	Maintenance	408-727-2555
Jose Luis Melendez	Janet Bell & Associates	Design, Construction & Maintenance	650-369-3400
Lauro Mendez	Lauro's Gardening	Construction & Maintenance	408-218-6045
Hassan Merzaq	Adam's Landscaping	Design, Construction & Maintenance	408-591-7791
John Morrissey	JPA Landscape & Construction, Inc.	Construction & Maintenance	925-960-9602 ext 13
Agustin Munoz	Team Works Sustainable Landscapes	Maintenance	408-250-8619
Antonio Ocegueda	Greener Maintenance Service	Maintenance	408-729-6097
Rodolfo Ochoa	Blue Sky Landscape and Flora	Maintenance	408-592-8815
Ben Palmer	B&R Landscape Management	Maintenance	408-259-8922
Arturo Perez	Arturo Perez Handyman	Maintenance	408-824-2929
Victor Prosak	Avery Construction Co.	Construction & Maintenance	408-209-6007

Green Gardener Name	Business Name	Landscape Service Type: (Design, Construction, Maintenance)	Phone Number
Maryanne Quincy	Q-Gardens Landscape Design	Design	408-739-5493
Edwin Rivera	Gachina Landscape Management	Maintenance	510-938-3019
Miguel Moreída Rosales	Garden Wood Designs	Design, Construction & Maintenance	650-306-9374
Edward Sanchez	ESD Landscape	Maintenance	408-377-6977
Osiel Sanchez	Osiel Sanchez Gardening	Construction & Maintenance	408-835-2481
Cruz Sandoval	Sandoval Garden Service	Maintenance	408-272-8806
Sal Serrano	Clorofila Gardening Service	Maintenance	408-750-7207
Dirk Thiele	Environmental Improvement Service	Design, Construction & Maintenance	408-738-0300
Honorio Valdovinos	H. Valdovinos Landscaping	Maintenance	408-592-9325
Eric Valencia	JPA Landscape	Construction & Maintenance	925-525-3082
Miguel Vazquez	Vazquez Landscaping	Maintenance	408-702-0699
Feliciano Zacarias	Zacarias Landscaping	Maintenance	650-556-5195
Ignacio Zarate	Seven Scapes	Design, Construction & Maintenance	650-996-9366
Juan M. ZaZuete	Yellow Petal	Maintenance	415-401-5774

The following individuals have taken our *Green Gardener* training but do not provide professional services.

José Pena Avalos	Brian Gathers	Laura Monczynski
Juan Fernando Ayard	Rosalio Gonzalez	John Orton
Sherry Baham	Javier C. Hernandez	Jose Pena
Raul A. Bueno	Janet Hamma	Rafael Ponce
Abe M. Cariaga	Javier C. Hernandez	Terri Ramirez
Linda Castaldi	Angel Lopez, Jr.	Raul Salazar
Jose Cruz	Rosa M. Luna	Andrew Schmitt
Jose Delgado	Chi Ma	Denise Smith
Jose Delgado	Alyce Maclise	Sheila Strand
Marian Duncan	Cindy Martinez	Paul Tognetti
Brian Gathers	José Martinez	Francisco Villa Gomez
Marian Duncan	Homa Mojgani	

Congratulations Graduates!

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 9-3

Preventing Urban Pesticide Pollution in Stormwater: CASQA Pesticide Subcommittee Annual Report, FY 13-14

Alameda Countywide
Clean Water Program

Contra Costa
Clean Water Program

Fairfield-Suisun
Urban Runoff
Management Program

Marin County
Stormwater Pollution
Prevention Program

Napa County
Stormwater Pollution
Prevention Program

San Mateo Countywide
Water Pollution
Prevention Program

Santa Clara Valley
Urban Runoff Pollution
Prevention Program

Sonoma County
Water Agency

Vallejo Sanitation
and Flood
Control District

B A S M A A

Bay Area

Stormwater Management

Agencies Association

P.O. Box 2385

Menlo Park, CA 94026

510.622.2326

info@basmaa.org

September 12, 2014

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

Subject: FY 2013-14 Annual Report: MRP Provision C.9.e - Track and Participate in Relevant Regulatory Processes

Dear Mr. Wolfe:

This letter and attachments are submitted on behalf of all 76 municipalities subject to the requirements of the Municipal Regional Stormwater NPDES Permit (MRP).

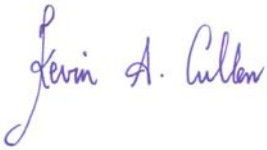
The essential requirements of provision C.9.e (text attached) are to track U.S. Environmental Protection Agency (USEPA) and California Department of Pesticide Regulation (DPR) actions related to urban-uses of pesticides and actively participate in the shaping of regulatory efforts currently underway. This provision allows for cooperation among Permittees through the California Stormwater Quality Association (CASQA), BASMAA, and/or the Urban Pesticide Pollution Prevention Project (UP3 Project) – an approach the Permittees have engaged in for a number of years. Recognizing this approach is the most likely to result in meaningful changes in the regulatory environment, Permittees elected to continue on this course in FY 2013-14 to achieve compliance with this provision. Oversight of this provision is the purview of the BASMAA Board of Directors.

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. FY 2013-14 was another productive year for the Subcommittee. The CASQA Pesticides Subcommittee's annual report for FY 2013-14 (attached) 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.

We certify under penalty of law that this document was prepared under our direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our 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 our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

James Scanlin, Alameda Countywide Clean Water Program

Tom Dalziel, Contra Costa Clean Water Program



Kevin Cullen, Fairfield-Suisun Urban Runoff Management Program

Matt Fabry, San Mateo Countywide Water Pollution Prevention Program

Adam Olivieri, Santa Clara Valley Urban Runoff Pollution Prevention Program

Lance Barnett, Vallejo Sanitation and Flood Control District

Attachments

MRP Provision C.9.e

Preventing Urban Pesticide Pollution in Stormwater; Pesticides Subcommittee Annual Report 2013-2014; California Stormwater Quality Association; August 2014

MRP Provision C.9.e states:

C.9.e Track and Participate in Relevant Regulatory Processes (may be done jointly with other Permittees, such as through CASQA or BASMAA and/or the Urban Pesticide Pollution Prevention Project)

i. Task Description

(1) The Permittees shall track USEPA pesticide evaluation and registration activities as they relate to surface water quality, and when necessary, encourage USEPA to coordinate implementation of the Federal Insecticide, Fungicide, and Rodenticide Act and the CWA and to accommodate water quality concerns within its pesticide registration process;

(2) The Permittees shall track California Department of Pesticide Regulation (DPR) pesticide evaluation activities as they relate to surface water quality, and when necessary, encourage DPR to coordinate implementation of the California Food and Agriculture Code with the California Water Code and to accommodate water quality concerns within its pesticide evaluation process;

(3) The Permittees shall assemble and submit information (such as monitoring data) as needed to assist DPR and County Agricultural Commissioners in ensuring that pesticide applications comply with water quality standards; and

(4) As appropriate, the Permittees shall submit comment letters on USEPA and DPR re-registration, re-evaluation, and other actions relating to pesticides of concern for water quality.

ii. Reporting – In their Annual Reports, the Permittees who participate in a regional effort to comply with C.9.e. may reference a regional report that summarizes regional participation efforts, information submitted, and how regulatory actions were affected. All other Permittees shall list their specific participation efforts, information submitted, and how regulatory actions were affected.

Preventing Urban Pesticide Pollution in Stormwater

Pesticides Subcommittee
Annual Report
2013 – 2014

CASQA
CALIFORNIA STORMWATER
QUALITY ASSOCIATION®

Preface

The California Stormwater Quality Association (CASQA) is comprised of stormwater quality management organizations and individuals, including cities, counties, special districts, industries, and consulting firms throughout California. CASQA's membership provides stormwater quality management services to more than 23 million people in California. This report was funded by CASQA to provide CASQA's members with focused information on its efforts to prevent pesticide pollution in urban waterways.

This report was prepared by Stephanie Hughes, assisted by Jamie Hartshorn, under the direction of the CASQA Pesticides Subcommittee Co-Chairs Dave Tamayo and Delyn Ellison-Lloyd. The Co-Chairs, along with Kelly Moran of TDC Environmental, provided essential documents, guidance, and careful review.

Disclaimer

Neither CASQA, its Board of Directors, the Pesticides Subcommittee, any contributors, nor the authors make any warranty, expressed or implied, nor assume any legal liability or responsibility for any third party's use of this report or the consequences of use of any information, product, or process described in this report. Mention of trade names or commercial products, organizations, or suppliers does not constitute an actual or implied endorsement or recommendation for or against use, or warranty of products.

Cover Photo: The Russian River through the town of Guerneville. Photo taken by Stephanie Hughes.

Photo in Figure 1 and 4 of spraying pesticide along a garage was taken by Les Greenberg, UC Riverside.

www.stephaniehughes.net

Abbreviations Used in this Report

BACWA – Bay Area Clean Water Agencies
BMPs – Best Management Practices
CASQA – California Stormwater Quality Association
CVRWQCB – Central Valley Regional Water Quality Control Board
CWA – Clean Water Act
DPR – California Department of Pesticide Regulation
EPA – United States Environmental Protection Agency
FY – Fiscal Year (July 1 through June 30)
MS4 – Municipal Separate Storm Sewer System
OPP – U.S. EPA Office of Pesticide Programs
OW – U.S. EPA Office of Water
PPDC – Pesticide Program Dialogue Committee
PSC – CASQA Pesticides Subcommittee
RA – Risk assessment
SETAC – Society of Environmental Toxicology and Chemistry
SFBRWQCB – San Francisco Bay Regional Water Quality Control Board
TMDL – Total Maximum Daily Load (regulatory plan for solving a water pollution problem)
UP3 Partnership – Urban Pesticides Pollution Prevention Partnership
Water Boards – California State Water Resources Control Board together with the California Regional Water Quality Control Boards

Preventing Urban Pesticide Pollution in Stormwater
Annual Report FY 2013-2014

California Stormwater Quality Association
Pesticides Subcommittee

Table of Contents

Preface i
Executive Summary 1
Section 1: Introduction 2
Importance of CASQA's Efforts to Improve Pesticide Regulation 2
Section 2: Results of CASQA 2013-2014 Efforts 4
2.1 Updated Pesticide Watch List 4
2.2. Results of Efforts Addressing Near-Term Regulatory Concerns 6
2.3 Long-Term Change in the Pesticides Regulatory Structure 11
2.4 A CASQA Success Story – DPR's Urban Modeling Research 15
Section 3: CASQA's Approach Looking Ahead 16
3.1 CASQA's Continuing Approach 16
3.2 FY 2015 Activities 19
Section 4: Envisioning the Future 23
Appendix 25

List of Tables

Table 1. Pesticide Watch List developed by the PSC and the UP3 Partnership is regularly updated to prioritize regulatory concerns..... 5
Table 2. Results of FY 2013-14 Efforts Communicating Near-Term Regulatory Concerns..... 8
Table 3. Results of FY 2013-14 Efforts Seeking Long-Term Regulatory Change..... 11
Table 4. Types of Activities Undertaken to Address Immediate Pesticide Concerns and Long-term Regulatory Change..... 16
Table 5. Action Items Anticipated to be Taken Up by CASQA and UP3 Partnership in 2014-2015..... 20
Table 6. Highlights of Recent Regulatory Achievements by CASQA as part of the UP3 Partnership..... 25

List of Figures

Figure 1. Our current pesticide regulator system does not adequately protect urban waterways..... 3
Figure 2. EPA's New Pesticide Registration Process..... 6
Figure 3. EPA's Registration Review – process to review registered pesticides at a minimum of every 15 years..... 6
Figure 4. CASQA envisions an effective regulatory system to identify whether urban uses of a pesticide pose a threat to water quality and then restrict or disallow those uses proactively so that water quality impacts are avoided..... 23

Executive Summary

To address the problems caused by pesticides in urban waterways in California, CASQA has collaborated with the Water Boards in a coordinated statewide effort, which we refer to as the Urban Pesticides Pollution Prevention (UP3) Partnership. By working with the Water Boards and other water quality organizations, we address the impacts of pesticides efficiently and proactively through the statutory authority of DPR and EPA's Office of Pesticide Programs (OPP). More than a decade of collaboration with UP3 partners, as well as EPA and DPR staff, has resulted in significant changes in pesticide regulation in the last four years. CASQA's 2013-14 activities and results are described in Section 2, including the following highlights:

- CASQA reviewed scientific literature in order to update and prioritize the Pesticide Watch List. CASQA's priority pesticides are **pyrethroids** (20 chemicals) and **fipronil**, followed by twelve other pesticide families, including **indoxacarb** and **cyantraniliprole.**
- CASQA prepared comment letters for 9 registration reviews letters and participated in numerous meetings and conference calls, focused on priority pesticides and long-term regulatory structure.
- CASQA provided presentations to DPR and professional associations; served on EPA, DPR, and Water Board policy and science advisory committees; and prepared and delivered public testimony.
- *As a result of requests by CASQA* and other agencies for better **urban runoff modeling**, DPR has devoted significant resources toward urban runoff model development and provided research funding to U.C. Davis and UC Riverside. **(See Section 2.4 for details.)**
- *In direct response to a joint CASQA and Water Board request based on CASQA's fipronil monitoring data*, DPR initiated an effort to address **fipronil** water pollution in California urban areas.
- *In direct response to CASQA and Water Board comments*, EPA modified its work plan for review of the **indoxacarb** to include urban uses.
- *As a result of requests by CASQA* and other agencies, DPR initiated development of procedure improvements to address three key scientific gaps in DPR's scientific reviews of new pesticide registration applications.
- *As a result of requests by CASQA* and other agencies, DPR and the Water Boards' expanded their partnership to monitor sediment toxicity and high priority urban pesticides (currently **pyrethroids and fipronil**) in representative California urban watersheds.

In 2014-15, CASQA will undertake numerous activities to continue to address near-term pesticide concerns and seek long-term regulatory change. Future near-term and long-term tasks are identified in Section 3.

Section 1: Introduction

This report by the Pesticides Subcommittee (PSC) of the California Stormwater Quality Association (CASQA) describes CASQA's activities related to the goal of preventing pesticide pollution in urban waterways from July 2013 through June 2014. The PSC works in collaboration with the California State and Regional Water Boards (Water Boards) and other stakeholders *to bring about change in how pesticides are regulated* by the United States Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation (DPR), with the goal of ensuring that currently registered pesticides do not impair urban receiving waters. This collaborative effort is referred to as the UP3 Partnership.[1]

Importance of CASQA's Efforts to Improve Pesticide Regulation

For decades now, the uses of certain pesticides in urban areas – even when applied in compliance with pesticide regulations – have adversely impacted urban water bodies. Under the Clean Water Act, when water bodies are impacted by pesticides, local agencies may be held responsible for costly monitoring and mitigation efforts. To date, some California municipalities[2] have incurred substantial costs to comply with Total Maximum Daily Loads (TMDLs) and additional permit requirements. In the future, more municipalities throughout the state could be subject to similar requirements, yet local agencies have no authority to restrict or regulate when or how pesticides are used[3] in order to proactively prevent pesticide pollution and avoid these costs.

Instead, pesticides are regulated by the EPA and DPR, which in some cases have not adequately protected urban water bodies from unreasonable adverse effects. Indeed, in 2013, CASQA compiled water and sediment sampling data that bears this out: pollution from some of the newer pesticides – pyrethroids and fipronil – is now present throughout urban water bodies in California at concentrations above the EPA chronic Aquatic Life Benchmarks for aquatic invertebrates in water.[4]

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[1] The UP3 Partnership collaborations are generally through information sharing, coordination of communications with pesticide regulators, and contributing staff time and other resources in support of the shared goal. The UP3 Partnership is an outgrowth of the UP3 *Project*, which shared a common goal. The former UP3 Project was a broader effort that included activities such the Urban Pesticides Committee and the UP3 Project website, which are no longer actively supported.

[2] For example, Sacramento-area municipalities spent more than $75,000 in the 2008-2013 permit term on pyrethroid pesticide monitoring alone; Riverside-area municipalities spent $617,000 from 2007 to 2013 on pyrethroid pesticide chemical and toxicity monitoring.

[3] Local agencies in California have authority over their own use of pesticides, but are pre-empted by state law from regulating pesticide use by consumers and businesses.

[4] Ruby, Armand. 2013. Review of Pyrethroid, Fipronil and Toxicity Monitoring from California Urban Watersheds. Available at https://www.casqa.org/LinkClick.aspx?fileticket=t%2btwBGMxunc%3d&tabid=194&mid=995.

Clearly, if we continue to conduct business as usual, more receiving waters will become impaired by urban pesticide use, and more local agencies will face increased monitoring, TMDLs, and permit requirements for pesticides. (Figure 1).

For years, CASQA members have creatively tried to work around their lack of regulatory authority over pesticide use by pioneering award-winning public outreach and integrated pest management programs that encourage less-toxic alternatives. Local agencies also conduct collection events for banned pesticide products at their own cost. These "source control" efforts have established an extremely important and growing movement toward less-toxic alternatives; however, these activities fail to compensate sufficiently for the root problem: as currently implemented, pesticide regulatory actions at the state and federal levels do not adequately account for and mitigate potential water quality impacts from urban pesticide uses. With each new urban pesticide problem, local agencies face the potential of greater monitoring and source control requirements, neither of which promises to reduce pesticide-related toxicity locally or statewide.

Figure 1. Our current pesticide regulator system does not adequately protect urban waterways.

Section 2: Results of CASQA 2013-2014 Efforts

To prevent urban water quality impacts from registered pesticide uses, CASQA employs a two-pronged approach:

- Address near-term regulatory concerns
- Seek long-term changes in the pesticide regulatory structure

Given that at any given time there are dozens of pesticides with current or pending actions from the EPA or DPR, CASQA prioritizes regulatory tracking and communication efforts using the pesticide "Watch List" created by the PSC and the UP3 Partnership (Section 2.1). This prioritization aids CASQA and the UP3 Partnership in their prioritization of near-term efforts (Section 2.2).

Meanwhile, CASQA and the UP3 Partnership are also working on a parallel effort to effect long-term change in the regulatory process. By identifying the inadequacies and inefficiencies in the pesticide regulatory process, and persistently working with EPA and DPR to improve the overall system of regulating pesticides, CASQA and the UP3 are gradually achieving results (Sections 2.3 and 2.4).

2.1 Updated Pesticide Watch List

CASQA, working through the UP3 Partnership, tracks new scientific information about pesticides water pollution. In 2010, the UP3 published its Priority Pesticide List (also called the "Watch List"), which listed pesticides used in urban areas that are harming or threatening to harm surface water quality and provided a methodology to update this list. Based on this methodology, the PSC updates this list throughout the year, reviewing new scientific literature and monitoring studies as they are published. The PSC tracks this pesticides "Watch List," along with other pesticide groups used outdoors in urban areas, presented in Table 1.

Table 1. Pesticide Watch List developed by the PSC and the UP3 Partnership is regularly updated to prioritize regulatory concerns

Priority	Basis for Priority Assignment	Pesticides	
1	Monitoring data exceeding benchmarks; linked to toxicity in surface waters; urban 303(d) listings	Pyrethroids (20 chemicals[5]) Fipronil	
2	Monitoring data approaching benchmarks; modeling predicts benchmark exceedances; very high toxicity and broadcast application on impervious surfaces; urban 303(d) listing for pesticide, degradate, or contaminant that also has non-pesticide sources	Carbaryl Chlorantraniliprole Chlorothalonil (dioxins) Copper pesticides Creosote (PAHs) Cyantraniliprole	Dacthal (dioxins) Indoxacarb Malathion Pentachlorophenol (dioxins) Polyhexamethylenebiguanide Zinc pesticides
3	Pesticide contains a Clean Water Act Priority Pollutant; 303(d) listing for pesticide, degradate, or contaminant in watershed that is not exclusively urban	Arsenic pesticides Chlorpyrifos Chromium pesticides Diazinon Diuron	Naphthenates Simazine Silver pesticides Tributyltin Trifluralin
4	High toxicity and urban use pattern associated with water pollution; synergist for higher tier pesticide; on DPR or Central Valley Water Board priority list	Abamectin Acetamiprid Chlorinated isocyanurates DIDAC Dithiopyr Halohydantoins Hydramethylnon Imidacloprid Mancozeb MGK-264 Novaluron	Oxadiazon Oxyfluorfen Pendimethalin Phenoxy herbicides[6] Piperonyl butoxide Pyrethrins Spinosad/ Spinetoram Thiophanate-methyl Triclopyr Triclosan
5	Frequent questions from members	Glyphosate, Metaldehyde	
None	No tracking trigger	Most of the 1,000 existing pesticides	
Unknown	Lack of information. No systematic screening has ever been completed for urban pesticides.	Unknown	

[5] Allethrins, Bifenthrin, Cyfluthrin, Cyhalothrin, Cypermethrin, Cyphenothrin, Deltamethrin, Esfenvalerate, Etofenprox, Flumethrin, Imiprothrin, Metofluthrin, Momfluothrin, Permethrin, Prallethrin, Resmethrin, Sumethrin [d-Phenothrin], Tau-Fluvalinate, Tetramethrin, Tralomethrin.
[6] MCPA and salts, 2,4-D, 2,4-DP, MCPP, dicamba

2.2. Results of Efforts Addressing Near-Term Regulatory Concerns

Immediate pesticide concerns may arise from regulatory processes undertaken at DPR or EPA. For example, when EPA receives an application to register a new pesticide, there may be two opportunities for public comment that are noticed in the Federal Register, as depicted in green in Figure 2 (below). EPA's process usually takes less than a year while DPR typically evaluates new pesticides or major new uses of active ingredients within 120 days. While EPA must consider water quality in all of its pesticide registration decisions, numerous pesticide registration applications are not routed by DPR for surface water review (see sidebar)

Figure 2. EPA's New Pesticide Registration Process

Another regulatory process, "Registration Review," depicted below in Figure 3, is meant to evaluate currently registered pesticides about every 15 years, to account for new data available since initial registration. In general, it takes EPA 5-8 years to complete the entire process. EPA regularly updates its schedule for approximately 50 pesticides that will begin the review process in a given year.[7] In 2013-2014, CASQA wrote comment letters for 9 registration reviews, requiring an estimated 200 hours of work.

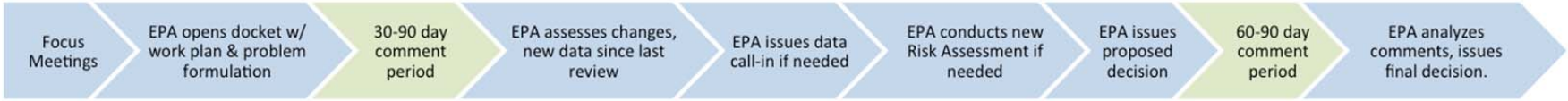

Figure 3. EPA's Registration Review – process to review registered pesticides at a minimum of every 15 years.

[7] See http://www.epa.gov/oppsrrd1/registration_review/schedule.htm for schedule information.

DPR also has an ongoing, but informal review process (called continuous evaluation) that can address pesticides water pollution. If it needs to obtain data from manufacturers, DPR can initiate a formal action, called "Reevaluation." DPR reviews of pyrethroids and fipronil in urban runoff have occurred in response to CASQA and Water Board requests. These have involved ongoing communication with CASQA and the UP3 Partnership.

Table 2 presents a summary of recent activities and their associated results to address near-term regulatory concerns. The many positive outcomes in Table 2 reflect the success of CASQA's teamwork in the UP3 Partnership. Much of this work occurs during formal public comment periods. To accomplish this, CASQA monitors the Federal Register and DPR's website for notices of regulatory actions related to new pesticide registrations and registration reviews. CASQA watches for pesticides that appear to have any of the following characteristics: proposed urban, outdoor uses with direct pathways for discharge to storm drains, high aquatic toxicity, or containing a priority pollutant. Note that participating in these regulatory processes can take many years to complete.

Pesticides Not Routed by DPR for Surface Water Review

During meetings with DPR in 2013-14, CASQA learned that within DPR's formal routing procedure, it does not route pesticides for surface water review in the following categories that are of interest with respect to urban water quality:

- Antimicrobial products (e.g., silver, copper, tributyltin)
- Indoor products (potential for subsequent sewer discharges)
- New uses of currently registered pesticides except for aquatic, rice, fipronil, and marine antifouling coating products (therefore new uses of pyrethroids, indoxacarb, copper, and similar pesticides are not reviewed)

As can be seen in the Table 2, CASQA has had considerable success in working with DPR and the Water Boards. Our mixed results with EPA indicate that there are opportunities for further communications and discussions.

Table 2. Results of FY 2013-14 Efforts Communicating Near-Term Regulatory Concerns[8]

Regulatory Action or Concern	CASQA Efforts			Partner Support	Results and notes
	Letter(s)	Call(s)	Mtg(s)		
DPR					
Fipronil water pollution		✓	✓	SFBRWQCB CVRWQCB State Board BACWA	***Success!*** DPR acknowledged importance of this issue, and committed to develop an action plan to address fipronil water pollution. Informal outline provided to CASQA, pending DPR communication with registrant.
New Fipronil product registration application				State Board	***Success!*** DPR agreed to route this registration application to its surface water program for review and disclosed that DPR has decided to conduct surface water reviews of all fipronil product registration applications.
New Metofluthrin product registration application	✓				***Success!*** DPR agreed to route this registration application to its surface water program for review. (Per the sidebar on page 8, such reviews are not currently conducted automatically.)
Cupron Antifungal Fibers & Pro Fibers and Cliniweave (PHMB) Registration Applications				BACWA	***Success!*** DPR agreed to route this registration application to its surface water program for review. (Per the sidebar on page 8, such reviews are not currently conducted automatically.)
Cyantraniliprole products proposed registration	✓	✓	✓	CVRWQCB SFBRWQCB	*Pending.* (Asked DPR to avoid registration unless mitigation measures ensure they will not pollute urban runoff.)
Trelona - Novaluron - Product Registration Application	✓				***Success!*** DPR agreed to route this registration application to its surface water program for review. (Per the sidebar on page 8, such reviews are not currently conducted automatically.)
Pathshield Antimicrobial Filter Media Registration Application[9]	✓	✓			***Success!*** DPR agreed to route this registration application to its surface water program for review. (Per the sidebar on page 8, such reviews are not currently conducted automatically.)

[8] Color coding in this table is meant to reflect the "Watch List" prioritization color coding in Table 2.
[9] Active ingredient is 3-(Trihydroxysilyl)propyl dimethyl octadecyl ammonium chloride

Regulatory Action or Concern	CASQA Efforts			Partner Support	Results and notes
	Letter(s)	Call(s)	Mtg(s)		
EPA					
Metofluthrin Registration Review Work Plan	✓	✓		CVRWQCB SFBRWQCB	Result: CASQA and the Water Boards provided input to OPP on its metofluthrin review work plan, because OPP did not propose to examine water quality risks. OPP instead proposed to terminate its review. Terminating metofluthrin's review opens the door to continued increases in use without measures to prevent water pollution. Ending its Registration Review also prevents OPP from requiring metofluthrin products to implement mitigation measures required in the future for other pyrethroids.
Momfluorothrin Registration Application	✓			SFBRWQCB	Pending (anticipated October 2014)
Indoxacarb Registration Review Work Plan	✓	✓		CVRWQCB SFBRWQCB	***Success!*** EPA will modify its work plan to address urban uses, substantially expand data requirements to obtain environmental fate and aquatic toxicity data for indoxacarb and its stable, toxic degradates, and will require development and validation of chemical analysis methods.
Cyantraniliprole products proposed registration	✓	✓		SFBRWQCB	Result: Decision appeared to sidestep most comments, arguing that benefits outweigh risks. EPA did not modify label to minimize use on impervious surfaces because registrant did not agree to do so.
Copper sulfate antimicrobial registration application	✓			SFBRWQCB	Pending.
Cuprous Iodide (cupron fabric) Registration Application				BACWA	Pending.
Silver/Zinc marine antifouling paint registration application				State Board and multiple regions	Pending.
Halohydantoins Registration Review Work Plan	✓			BACWA	Result: U.S. EPA thanked CASQA and BACWA for their comments and affirmed its commitment to continuous improvement of its procedures.
2,4-DP Registration Review Work Plan				CVRWQCB SFBRWQCB	*Partial Success.* EPA will evaluate the common toxic degradate of 2,4-DP and other phenoxy herbicides, 2,4-DCP, but will not require toxicity data on degradate because there are some literature data, which it may supplement with ECOSAR modeling and any data supplied by the registrant. It will qualitatively assess toxicity of mixtures of phenoxy herbicides.

Regulatory Action or Concern	CASQA Efforts			Partner Support	Results and notes
	Letter(s)	Call(s)	Mtg(s)		
Triclosan Registration Review	✓			BACWA CVRWQCB SFBRWQCB	*Little Success*. In response to comments on the preliminary work plan, the work plan clarified that chronic, spiked-sediment benthic invertebrate testing for two freshwater and one estuarine/marine species was already required. Largely disregarded other requests such as to modify the proposed ecological risk assessment to address transport via urban runoff to surface waters, because it has elected to assess only pesticidal triclosan uses, which EPA believes to represent less than one percent triclosan use; therefore "contribution of triclosan from pesticidal uses that would lead to storm water releases is negligible relative to the releases from all non-pesticidal uses."
MCPA Registration Review Work Plan				CVRWQCB	Pending (anticipated August 2014)
Thiophanate methyl and Carbendazim Registration Review Work Plan				CVRWQCB	Pending (anticipated August 2014)
Water Boards					
Proposed TMDL for Toxicity and Pesticides in the Santa Maria Watershed	✓	✓	✓		***Mostly success!*** On July 2, 2014, the State Board approved the TMDL, the first California Water Board pyrethroids TMDL. There was clear recognition among State Board members that pesticides are an urban issue and that municipalities do not have the ability to regulate pesticides. The Board staff's response to comments also firmly supported CASQA's recommended approach to pesticides management, noting that "...this collaborative approach may be the most effective way to address impairments driven from urban pesticide use." The TMDL implementation plan relies on toxicity targets that will likely be achieved through DPR's pyrethroids regulations, but it references target water concentrations that are likely unattainable without an EPA or DPR pyrethroids sales ban, which is unlikely to occur.

2.3 Long-Term Change in the Pesticides Regulatory Structure

CASQA envisions a future in which the pesticide regulatory structure is used proactively to restrict pesticide uses that have the potential to cause urban water quality problems. There are several processes currently under way at both EPA and DPR that will move us closer to that future. Many of these processes were prompted by the persistent work of CASQA and the UP3 Partnership to educate EPA and DPR staff on the problems with current approaches. Table 3 presents a summary of major actions undertaken and results achieved in FY 2013 – 2014 toward long-term changes in how pesticides are regulated. More than a decade of collaboration with UP3 partners, as well as EPA and DPR staff, has resulted in significant changes in pesticide regulation in the last four years. Table 6 in the Appendix highlights some of the most important achievements in which CASQA and the UP3 Partnership played a key role in advocating for and shaping the final regulation or policy change.

Table 3. Results of FY 2013-14 Efforts Seeking Long-Term Regulatory Change

Activity	Results and Notes
DPR	
Methodology for Evaluating Pesticide Registration Applications for Surface Water Protection	***Success!*** DPR successfully implemented the first version of a procedure to evaluate the first pesticide registration applications for most of the types of pesticides that CASQA for potential water quality impacts. In 2013-2014, DPR denied registration applications. For several approved products, DPR required registrants to provide chemical analysis methods suitable for use by surface water monitoring programs. DPR also began updating the scientific methods behind the review procedures to improve evaluation of building perimeter sprays.
Monitoring effectiveness of and compliance with DPR Surface Water Regulations	***Success!*** DPR has taken the leading role in conducting monitoring to evaluate the effectiveness and level of compliance with the regulations. DPR has begun presenting its initial monitoring results to stakeholders.[10] DPR is working with Agricultural Commissioners and structural pest control industry to evaluate and improve level of compliance.
Urban Runoff Modeling	***Success!*** Recognizing the deficiencies in OPP's pesticide registration process,[11] DPR is developing an urban runoff modeling tool. As part of that effort, in 2013-14 they published peer-reviewed papers regarding the modeling of pesticide washoff from impervious surfaces. **For details, see Section 2.4.**

[10] For a sample presentation, see "Pyrethroid Detections in Urban surface Waters Post Regulations," by Mike Ensminger and Robert Budd, DPR, January 2014 at http://cdpr.ca.gov/docs/emon/surfwtr/presentations/ensminger_2014_jan_13_pyrethroid_trends.pdf.

[11] OPP is using its agricultural runoff model (PRSM/EXAMS) for urban runoff and looks at wastewater with a model developed for Toxic Substances Control Act implementation. The "urban" scenarios used in the urban runoff modeling have significant shortcomings, as do the wastewater discharge modeling scenarios.

Activity	Results and Notes
DPR's Pest Management Advisory Committee (PMAC).	*Success!* Participation on the PMAC has increased DPR's focus on urban pest management and water quality issues and has generated funding for urban integrated pest management programs. DPR funded BASMAA proposal to increase adoption of IPM in multi-family housing.
EPA	
Pyrethroids Registration Review.	*Pending. By the end of 2013, EPA had initiated reviews of all pyrethroids. CASQA and UP3 continue* ongoing engagement, which has improved scientific accuracy of work related to urban runoff and continues to educate EPA and registrants about the water quality regulatory context for their decisions. The PSC and UP3 Partnership had multiple informal interactions with EPA and registrants about scientific topics related to EPA's pyrethroids reviews. EPA's first pyrethroids risk assessments are anticipated in 2015.
Antimicrobial Pesticides Evaluations.	*Promising*. Prior PSC/UP3 engagement caused EPA to expand its data requirements for antimicrobial pesticides (particularly to address wastewater discharges) and to integrate a process for identifying all of the pathways by which antimicrobial products can reach the MS4 into antimicrobial pesticide reviews. Informal educational interactions continued in 2013-2014. An important test of the new procedures will occur in 2015, when EPA completes a risk assessment for copper pesticides.
Preferred Approach for Pesticide Monitoring and Management in Permits and TMDLs.	*Pending.* Met informally with key EPA Region 9 Water Division staff in Sacramento. Will continue communications in 2014-15.
Water Quality Data	*Success.* Convinced OPP that upcoming modifications to OPP water quality data should establish that OPP staff obtain data from California databases rather than asking California agencies for these data.
US EPA's advisory committee, Pesticide Program Dialogue Committee (PPDC)	*Promising.* PSC attended PPDC in December 2013 (teleconference) and June 2014. Participation on PPDC and face-to-face meetings with OPP staff and management has helped increase OPP's focus on urban pest management and water quality. PSC met with OPP staff to discuss progress in OW/OPP common effects methodology. PSC participated in Integrated Pest Management workgroup, which made significant progress in promoting school IPM.

Activity	Results and Notes
Engagement with Water Boards	
Preferred Approach for Pesticide Monitoring and Management in Permits and TMDLs.	*Promising.* Water Boards are developing statewide approach for addressing pesticide impairment that recognizes limitations of local agencies, and acknowledges key role of DPR. This has been demonstrated in language recently included in Regions 2 and 3 Basin Plan amendments to address pesticides (see excerpts from the Santa Maria Basin Plan Amendment[12] immediately following this table). It has also been recognized by State Water Board staff working on its statewide Stormwater Strategy, as part of the "true source control" element of the strategy. PSC provided informal outline of preferred approach to Water Board staff that are leading this effort.
Coordinated Pesticides Monitoring in Urban Watersheds.	*Promising*. State Water Board and DPR continued coordinated urban monitoring for pyrethroids and fipronil. Steps to improve coordination with MS4 monitoring requirements are in progress in upcoming TMDLs and the Phase II monitoring program design. The Water Boards are considering development of a coordinated approach for urban pesticides monitoring as part of the statewide approach to pesticides management (see above). The PSC has written a letter, developed a summary of MS4 pesticides monitoring, met with Water Boards and DPR managers, and sent a letter to the Water Boards toward its goal of improving the value and cost-effectiveness of urban pesticides monitoring.
Other Agencies	
California Structural Pest Control Board (SPCB)	*Success!* A PSC member is an appointed member of the SPCB. The SPCB recognized the potential for excessive pesticide application to impact water quality. SPCB appointed an ad hoc committee to develop recommendations for promulgating regulation changes in continuing education requirements aimed at increasing IPM adoption and reducing water quality impacts by licensees.
University of California Statewide IPM (UCIPM)	*Success!* PSC participated in UCIPM's Urban and Community IPM Advisory Committee in May 2013. Long term, continuing engagement with UCIPM has resulted in increasing focus and commitment to urban pesticide and pest management issues. In 2014 this includes continuing publication of "Retail Nursery and Garden Center IPM News"[13], establishment of an IPM blog "Pests in the Urban Landscape"[14], and continuation of a series of urban IPM YouTube videos[15].

[12] http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/docs/santa_maria/pesticide/smof_pest_tmdl_att1_resoln_bpa_apprvd.pdf
[13] http://www.ipm.ucanr.edu/RETAIL/retail-newsletter.html
[14] http://ucanr.edu/blogs/UCIPMurbanpests/index.cfm
[15] http://www.youtube.com/user/UCIPM/videos

Activity	Results and Notes
Major Presentations	**Results**
The Future of Pesticides & Toxicity Monitoring - CASQA Conference, Sept 2013	*Success!* Educated diverse audiences on nexus of urban pesticide regulation and water quality and the key scientific issues involved in identifying, addressing, and preventing pesticides water pollution. The PSC had more than twice as many presentation invitations and opportunities than its resources allowed it to accept.
Implementing the Urban Creeks Pesticides TMDL - Early Victories on the Long Road to Solutions - State of the Estuary (San Francisco), Sept 2013	
Fipronil Water Quality Overview – Presentation to DPR, Jan 2014	
Fipronil Water Quality Overview - Bay Area Clean Water Agencies - Bay Area Pollution Prevention Group, Feb 2014	
Pyrethroids & Fipronil - California Water Environment Association Annual Conference, May 2014	
Fipronil Water Pollution and Its Sources - Northern California Society of Environmental Toxicology and Chemistry, May 2014	

The 2014 Santa Maria Basin Plan Amendment (BPA) acknowledges the key role of DPR in TMDL implementation:

"The TMDL implementation plan also utilizes an interagency approach among the California Department of Pesticide Regulation (DPR), the State Water Resources Control Board, and the Central Coast Water Board to address impairments. The approach is described in the California Pesticide Management Plan for Water Quality (California Pesticide Plan), which is an implementation plan of the Management Agency Agreement (MAA) between DPR and the Water Boards."

"The Department of Pesticide Regulation, the county agricultural commissioners, and USEPA are taking regulatory steps to address pesticide impairments. In accordance with the MAA, DPR has approved urban pesticide regulations to address pyrethroid pesticide water quality pollution. Also as part of the MAA, the Central Coast Water Board, DPR, and the commissioners are coordinating on county chlorpyrifos use permits."

2.4 A CASQA Success Story – DPR's Urban Modeling Research

Pesticide application to impervious surfaces for activities such as structural pest control can be a major source of pesticide washoff in subsequent rainfalls or over-spray during irrigation. For some time, DPR has been following CASQA's communications with OPP about the deficiencies in OPP's urban modeling. DPR agrees with CASQA's approach and understands that models that better estimate surface water pesticide concentrations from urban pesticide use are needed. Since OPP is not moving toward urban models, DPR determined that it should develop its own urban modeling capacity and added two staff members with urban modeling experience. The current direction includes:

(1) Short term - develop a more appropriate urban modeling scenario for OPP's existing agricultural runoff model (2014).
(2) Long term - build both urban runoff and POTW modeling capacity. DPR is using its intensive urban monitoring watersheds as example locations to support the model development. DPR has been conducting special studies in support of the long-term modeling effort.

Highlights from DPR's Research

DPR and University of California researchers are evaluating previous models and are seeking to develop models that better predict pesticide washoff and incorporate a number of variables, including:

- product formulation
- chemical properties (e.g. hydrophobicity)
- aging effects
- multiple applications
- rainfall duration
- rainfall intensity
- number of rainfall events

In the 2013 study referenced below, a model was developed that predicted the washoff of five different pyrethroids in 15 different scenarios. Preliminary results suggest that modeling can be used to predict pesticide washoff and thus provide technical support to risk assessments in urban settings. In the 2014 study, researchers conducted controlled rainfall events and monitored the washoff of commercial pesticides with eight active ingredients. The results formulated the basis for their model, which then was then tested with a set of 21 datasets from 38 different rainfall events. According to the study, the model "satisfactorily captured pesticide mass loads and their temporal variations" for both hydrophobic and hydrophilic pesticides and under a varied number of rainfall events (1-7) and under a wide range of timescales (from hours to hundreds of days).

As part of this effort, peer-reviewed papers are being published by DPR scientists seeking to characterize and model pesticide washoff from concrete surfaces.[16],[17] These and future modeling efforts by DPR are expected to provide valuable insights and improve the analysis of surface water quality impacts in future risk assessments.

[16] Y. Luo, F. Spurlock, W. Jiang, B. Jorgenson, T. Young, J. Gan, S. Gill, K. Goh. 2013. Pesticide Washoff From Concrete Surfaces: Literature Review and a New Modeling Approach. Water Research.
[17] Y. Luo, B. Jorgenson, D. Thuyet, T. Young, F. Spurlock, and K. Goh, 2014. Insecticide Washoff from Concrete Surfaces: Characterization and Prediction. Env. Sci. & Tech., 48(1):234-243. (http://pubs.acs.org/doi/abs/10.1021/es4028343) Author's Version, PDF.

Section 3: CASQA's Approach Looking Ahead

3.1 CASQA's Continuing Approach

At any given time, EPA and DPR may be in the process of evaluating and registering various pesticides for urban use. To address near-term concerns that may arise out of these ongoing pesticide regulatory processes, CASQA and the UP3 Partnership continuously track and engage in EPA and DPR activities. Typically, these efforts press for changes in an individual product's registration or request that regulators obtain more data from manufacturers. CASQA and the UP3 Partnership are also working on a parallel effort to effect long-term change in the regulatory process. The types of activities that CASQA and the UP3 Partnership engage in are presented Table 4. Many of these activities work to address both near-term concerns and the longer-term goal of systemic regulatory change.

Table 4. Types of Activities Undertaken to Address Immediate Pesticide Concerns and Long-term Regulatory Change

Activity		Purpose	Level of Effort
Regulatory Tracking	Track Federal Register notices	Identify regulatory actions that may require review.	Daily review; analyze EPA's scientific work and provide notification to CASQA members and partners as needed.
	Track DPR notices of evaluations and decisions	Identify potential problems with current DPR evaluation or registration plans other regulations, procedures & policies.	Weekly review; obtain water quality assessments from DPR through public record requests; analyze and provide notification to CASQA members and partners as needed.
	Track activities at the Water Boards	Identify opportunities for improvements in TMDLs, Basin Plan Amendments, and permits.	Often weekly phone calls with Water Board staff; weekly review of noticed proceedings; review scientific information.
	Review regulatory actions, guidance documents, and work plans	Identify potential problems with current EPA evaluation or registration plans, other regulations, procedures, and policies.	According to need as identified by tracking activities (average of 4 per month).
Regulatory Communications	Briefing phone calls, teleconference meetings, and emails with EPA and DPR	Information sharing about immediate issues or ongoing efforts; educate EPA and DPR about issues confronting water quality community. Provide early communication on upcoming proceedings that help reduce the need for time-intensive letters.	As needed, but often several times per week.
	Convene meetings, write letters and track responses to letters	Ensure current pesticide evaluation or registration process addresses potential water quality concerns, and take advantage of opportunities to formally suggest solutions to shift regulatory process in the future.	Typically a dozen or so pesticides annually that could pose threats to water quality if EPA or DPR does not initiate certain procedures. Letters vary in length, but often are many pages and require many hours to write. As dockets are updated, review responses to comments and identify next opportunities.

Activity		Purpose	Level of Effort
Advisory	Serve on EPA, DPR, and Water Board policy and scientific advisory committees	Provide information and identify data needs and collaboration opportunities toward development of constructive approaches for managing pesticides.	Two to six meetings per committee per year. The PSC is currently represented on both EPA's and DPR's external advisory committees and has sporadic representation on water board panels related to pesticides.
Educational	Presentations to EPA, DPR, Water Board, CASQA members, pesticide manufacturers, water quality researchers, and other collaborators	Educate EPA, DPR, Water Board, and CASQA member staff about the problems with existing pesticide regulatory process, encourage change, report on achievements. Influence research and monitoring programs. Inform development of new pesticides by manufacturers and selection of pesticides by professional users.	As many as a dozen opportunities to present at water quality, pesticides and chemical conferences nationally. Additional 8-10 opportunities per year for state and regional events. Preparation of presentations and coordination with water quality community can take as much as 40 hours per opportunity.
	Developing and delivering public testimony	Educate Water Board members about the problems with existing pesticide regulatory process, encourage change, report on achievements.	Two to three times per year. Preparation and coordination can take as much as 40 hours per opportunity.
Monitoring	Track urban runoff monitoring and pesticide-related research	Encourage coordination with Water Board/MS4 data needs and priorities; stimulate academic, government, or private development of analytical and toxicity identification methods to address anticipated MS4 needs; share information to improve decisions.	About 10 important publications per month and a dozen meetings per year.
	Data analysis of DPR/SWAMP/USGS/MS4 monitoring, pesticide use data, and information from scientific literature	Summarize data to educate CASQA members and water quality community, Water Boards, DPR, and EPA.	Detailed analysis is infrequent because finding, compiling, and analyzing data requires very high level of effort and funding. CASQA undertook a detailed monitoring summary in 2013. Report is available at www.casqa.org.

In addition to efforts listed in Table 4, the PSC has identified the following additional, *yet-to-be funded* activities that would assist the water quality community in achieving CASQA goals (Section 4):

- Education and Advisory
  - Periodically conduct trainings, including two that have been specifically requested by pesticide regulators:
    - Training for DPR's surface water program to increase understanding of pathways connecting pesticide applications to urban runoff and provide realistic expectations regarding urban runoff BMPs. Similar request from OPP.
    - Set up a briefing for OPP on swimming pool discharges.
  - Expand participation in scientific advisory panels and in scientific peer reviews to improve the quality and focus of scientific information that forms the basis of regulatory decisions.
  - Conduct more person-to-person meetings with EPA OPP staff to improve their knowledge and engagement in addressing pesticide impacts on urban water bodies.
  - Provide urban runoff modeling expertise to work with EPA to establish better modeling of pesticides in urban runoff.
  - Build relationships with EPA Region 9's Water Division; encourage them to become a UP3 partner.
  - Expand education of Water Board staff and Board members at the state level and the Los Angeles, San Diego, and Santa Ana regions.
  - Deliver presentations targeting pesticide regulators, manufacturers, and user audiences at their conferences and agency scientific meetings.

- Data Gathering and Analysis
  - Regularly analyze and report on pesticide sales and use information for priority pesticides (pyrethroids, fipronil, and indoxacarb) to identify use levels and trends.
  - Periodically review usage, toxicity, environmental fate, and monitoring data to update priority pesticides list.
  - Improve capacity to assemble scientific information for making a stronger "case" to pesticide regulators.
  - Develop capacity to provide EPA with appropriate documentation (e.g., costs of pesticide water pollution) to support regulatory decisions that protect water quality.

- Communications and Partnership Coordination
  - Renew communications with professional applicators.
  - Improve UP3 coordination.
  - Re-launch UP3 Partnership website as a resource for regulators and pesticide users
  - Restart Urban Pesticides Committee meetings to better coordinate activities and improve communication among the regulatory, environmental, pesticide manufacturer, and pesticide user communities.

3.2 FY 2015 Activities

In the coming year, depending on funding, CASQA will undertake numerous activities to both address near-term pesticide concerns and seek long-term regulatory change.

CASQA's current priority activities are as follows:

(1) Address near-term regulatory concerns:

- Obtain DPR action on fipronil water pollution
- Ensure DPR enforces mitigation measures for pyrethroids and adopts additional measures if necessary
- Ensure the state conducts surveillance monitoring to evaluate pyrethroids (and fipronil) mitigation effectiveness
- Encourage EPA to develop capacity to implement pyrethroids and fipronil mitigation measures, in case necessary mitigation cannot be implemented entirely by DPR

(2) Seek long-term changes in the pesticide regulatory structure

- Seek procedure changes such that EPA and DPR avoid approving new pesticides that cause urban water pollutions
- Encourage EPA to develop robust urban surface water risk assessment procedures for pesticide reviews
- Work toward obtaining a statewide management approach for pesticides that is adopted by the State Water Board, and formally recognizes the need to rely on DPR and OPP authority as the primary means to prevent and mitigate water quality impacts by pesticides.
- Seek restructuring of California's urban surface water pesticides monitoring to increase its effectiveness

Table 5 presents upcoming regulatory action items that are likely to proceed in the coming year. Many items will require letters as well as other communications with EPA, DPR, and the Water Boards. CASQA will continue to coordinate with other water quality organizations through the UP3 Partnership to take advantage of efficiencies and ensure that the water quality community has a consistent message.

Table 5. Action Items Anticipated to be Taken Up by CASQA and UP3 Partnership in 2014-2015

Action Items
EPA Pesticide Registration Review
Upcoming Registration Review Decisions • Pyrethroids: Allethrins, Metofluthrin (termination without risk assessment) • Organophosphates: Malathion
Upcoming Environmental Risk Assessments of Interest: • Pyrethroids: Allethrins, Cyfluthrins, Deltamethrin, Esfenvalerate, Etofenprox • Organophosphates: Malathion, Chlorpyrifos, Diazinon • Others: Zinc pesticides; copper salts; silver and compounds, Glyphosate, Simazine
Upcoming Work Plans of Potential Interest: • Diuron, MCPP, Triclopyr, Oxadiazon, Oxyfluorfen, Mancozeb, Chromate Arsenicals, Creosote, Pentachlorophenol, Tributyltin, Ziram, Zinc pyrithione
EPA Registration Applications
Applications of interest: • Pesticides proposed for urban, outdoor use with direct pathway for discharge to storm drains • Pesticides with high aquatic toxicity • Pesticides containing priority pollutants Watch for Decisions: • Momfluorothrin • Silver-zinc marine antifouling paint
Other EPA Action Items
• U.S. EPA OPP/OW Common Effects Assessment Methodology – continue to press for completion and implementation; request that project address time periods and other discrepancies. • U.S. EPA petition decisions – nanosilver registration, nanocopper regulation, request to ban triclosan. • U.S. EPA research and development activities to support pesticides management, such as urban runoff model development, nanomaterials case studies, and scientific data acceptance policies– seek to make urban runoff's needs a priority; share information to inform decisions. • U.S. EPA Pesticide Inert Ingredient Disclosure rulemaking. • Endangered species consultations/litigation (review/engage only if could significantly affect urban pesticide use or could help with permit compliance in key geographic areas). • Additional CASQA opportunities: o Educate OPP management and scientists about gaps in OPP scientific and regulatory procedures for urban runoff that prevent effective, proactive evaluation of pesticide risks. o Continue to engage EPA Region 9 re CASQA's preferred approach for pesticide monitoring and management in permits and TMDLs.

Action Items

DPR Registration Applications

Until procedures are modified to provide for surface water quality reviews of all priority pesticides from the urban runoff perspective, screen DPR product registration applications and proposed decisions and comment on activities that pose high risks or provide compelling examples of possible procedural deficiencies. Products of interest:

- Products proposed for urban, outdoor use with direct pathway for discharge to storm drains
- Products with high aquatic toxicity
- Products containing priority pesticides (Table 1)

Watch for Decisions:

- Cyantraniliprole (highly toxic pyrethroid alternative)
- Chlorantraniliprole (highly toxic pyrethroid alternative)
- Copper sulfate antimicrobial
- Novaluron (first outdoor structural use of toxic pyrethroid alternative)
- Fipronil foam product
- PathShield Antimicrobial Filter Media (for use in storm drains)

Other DPR-related Action Items

- Pyrethroids – continue to track activities, review scientific studies, and encourage DPR to take additional actions if necessary for water quality protection.
- Pyrethroids regulations – track implementation and obtain regular updates on effectiveness monitoring.
- Bifenthrin professional products labels – ensure that product labels are revised and corrected.
- Fipronil – continue to work with DPR on actions to protect water quality.
- Urban runoff model development – track short-term and long-term efforts and share information to improve approach.
- Urban runoff monitoring and research – continue to encourage coordination with Water Board/MS4 data needs and priorities; encourage monitoring prioritization to better capture pesticides and degradates of interest; share information to improve decisions.
- Methodology for Evaluating Pesticide Registration Applications for Surface Water Protection – share information to encourage DPR to address antimicrobials, swimming pool additives and to address degradates in review methods.

Water Boards Action Items

- Water Board policy for addressing pesticides in NPDES permits – continue to encourage development of a Statewide Coordinated Pesticides Approach; participate in policy development.
- Central Valley Water Board Pyrethroids Water and Sediment Criteria
- Central Valley Water Board Basin Plan Amendments: pyrethroids and diuron
- State Water Board Policy for Toxicity Assessment and Control – track pesticide monitoring, toxicity testing & other pesticide-related provisions in NPDES Permits.
- Monitoring requirements for Phase II permittees – continue participating in development.
- Pesticide/toxicity 303(d) listings and TMDLs – continue tracking.

Action Items
Other California Agency Action Items
• California Department of Food & Agriculture Draft Program EIR on invasive species control – Are pesticide application programs consistent with Water Board expectations in urban areas? • Adoption of Structural Pest Control Board regulations – increase licensee continuing education requirements for IPM and water quality protection.

In addition to the action items in Table 5, CASQA will also continue the following activities in FY 2015:

- Education and information sharing with CASQA and Partner[18] research and monitoring scientists about priority needs, integration, and data interpretation
- Track major relevant scientific studies; review relevant scientific literature, monitoring data, and government reports; and maintain database of key references.
- Serve on EPA, DPR, and Water Board policy and scientific advisory panels.
- Peer review EPA, DPR, and Partner work plans and reports.
- Participate in and give presentations at meetings or conferences with high participation from pesticide regulatory, research, and manufacturing communities – 2014-15 priorities include American Chemical Society (San Francisco CA) and SETAC (Vancouver BC),
- Educate and inform water quality community through presentations at CASQA and other California water quality meetings or conferences
- Update pesticide priority lists based on new scientific and regulatory information.
- Prepare monthly action plans
- Publish annual report

[18] Partners: USGS NACWA (national monitoring); other states; Water Board SWAMP (Statewide and 9 regions); DPR; POTWs; urban runoff programs; university researchers; pesticide manufacturers.

Section 4: Envisioning the Future

An effective regulatory system would identify whether urban uses of a pesticide pose a threat to water quality and would restrict or disallow those uses proactively so that water quality impacts are avoided. Such a system would be far more cost-effective than the current system in which mitigation of pesticide impacts is reactively attempted through Clean Water Act (CWA) mechanisms, such as TMDLs, that impose requirements on urban stormwater agencies and wastewater facilities.

CASQA's objective in engaging in pesticide-related regulatory activities is to ultimately protect water quality by eliminating problems stemming from urban pesticide use. The CASQA Pesticides Subcommittee envisions a future when the following goals have been attained:

- ***Goal 1: EPA and DPR will conduct effective, proactive evaluations of pesticide risks.*** EPA and DPR registration and registration reviews will include effective evaluations for the potential of all pesticide active ingredients and formulated products to impact urban waterways. Staff will understand all urban use patterns, and models will accurately reflect urban use patterns, the impervious nature of the urban environment, drainage systems and pathways to receiving waters. Data required of manufacturers will support proactive evaluations. Cumulative risk assessments will be conducted, especially for pesticides with similar modes of action.

Figure 4. CASQA envisions an effective regulatory system to identify whether urban uses of a pesticide pose a threat to water quality and then restrict or disallow those uses proactively so that water quality impacts are avoided.

- ***Goal 2: Pesticide regulators and water quality regulators will work in coordination to protect water quality.*** The Water Boards, DPR, EPA's Office of Water (OW) and OPP will have a consistent definition of what comprises a water quality problem. EPA's OW and OPP will complete "harmonization" of methodologies and approaches to protect aquatic life.

- ***Goal 3: Pesticide regulations and statutes will be used to solve pesticide-related water quality impairments* resulting** from the registered uses of pesticides. Rather than look to the Clean Water Act, the EPA and Water Boards will work with DPR and the EPA's Office of Pesticide Programs to manage problem pesticides without the use of the costly, slow and burdensome TMDL process.

- ***Goal 4: Pesticide monitoring will be coordinated at the state level to support rapid response to emerging pesticide problems in urban waterways***. DPR and the Water Boards will coordinate statewide monitoring to identify emerging pesticide problems in urban waterways before they become widespread and severe. Urban-specific, use-specific mitigation measures will be used to address water quality problems.

CASQA looks forward to working with our Partners to continue to forge a path towards this vision.

Appendix

Table 6. Highlights of Recent Regulatory Achievements by CASQA as part of the UP3 Partnership

Achievements Impacting High-Priority Urban Pesticides	Significance
In 2014, DPR initiated an effort to address **fipronil** water pollution in California urban areas *in direct response to a joint CASQA and Water Board request* based on CASQA's 2013 compilation of fipronil monitoring data.[19]	*DPR's timely action to reduce fipronil concentrations in urban runoff could avoid many future urban TMDLs*. Fipronil is a highly toxic pyrethroid alternative that is used only in urban areas. Fipronil monitoring data is likely to provide the basis for multiple fipronil 303(d) listings in future cycles.
In 2014, EPA modified its work plan for review of the **indoxacarb** to include urban uses *in direct response to CASQA and Water Board comments.* CASQA and Partners called these uses to EPA's attention and made a strong and well-documented case for detailed review of water quality impacts.	*Ensured that EPA's upcoming review will not omit urban uses of a highly toxic pyrethroid alternative.* The modified work plan will also substantially expand data requirements to obtain environmental fate and aquatic toxicity data for indoxacarb and its stable, toxic degradates; and require development and validation of chemical analysis methods.
In 2014, DPR initiated development of procedure improvements to address scientific gaps in DPR's scientific reviews of new pesticide registration applications.	*When completed, will provide more thorough reviews of pesticides that may impact urban water quality and better prevent water pollution.* Scientific gaps in DPR's procedures (related to building perimeter sprays and toxic degradates) caused DPR in 2014 to propose approval of CASQA priority, cyantraniliprole (see Table 2).
In July 2012, DPR issued new Surface Water Protection Regulations for 17 **pyrethroids** limiting how and where pyrethroids can be used by pesticide control operators.	*Estimated to reduce pyrethroid toxicity in surface water by 80-90%.* Effective pest management has not been adversely impacted by this change.
In 2011, DPR agreed with manufacturers to phase in new labels for **bifenthrin** to prohibit broadcast applications to horizontal impervious surfaces and certain building walls (see Figure 4).	*Estimated to reduce outdoor bifenthrin use >90%* in combination with new Surface Water Protection Regulations (see above).
Between 2010 and 2012, in response to CASQA and Water Board comments, EPA developed new conceptual models and scientific approaches to address pesticides in urban runoff and included these in workplans for upcoming Registration Reviews of the **pyrethroids** and **fipronil**. Will include impervious surface applications and urban drainage systems in modeling and will require additional aquatic toxicity data (e.g., data for *Hyalella azteca* were required for pyrethroids)	*EPA's upcoming reviews will not omit urban uses of pyrethroids and fipronil.* Including urban uses provides the ability for EPA to implement appropriate mitigation measures to protect water quality. While the new approaches are available for other pesticides, EPA does not consistently apply them (see discussion above on EPA review of indoxacarb).

[19] Ruby, Armand. 2013. Review of Pyrethroid, Fipronil and Toxicity Monitoring from California Urban Watersheds. Available at https://www.casqa.org/LinkClick.aspx?fileticket=t%2btwBGMxunc%3d&tabid=194&mid=995.

Achievements in Procedures, Modeling, and Monitoring	Significance
In recent years, DPR has institutionalized an **urban monitoring** program initiated as a pilot in the late 2000s *at the urging of CASQA and UP3*. In 2013-2014, DPR and the Water Boards' Surface Water Ambient Monitoring Program expanded their partnership to monitor sediment toxicity and high priority urban pesticides (currently **pyrethroids** and **fipronil**) in representative California urban watersheds and began exploring collaboration on other high priority pesticides.	*The Water Board/DPR partnership coordinates the state's toxicity and pesticides monitoring for the first time and expands it across all California regions.* DPR's monitoring program provides the specific types of data it needs to evaluate water quality and provide the basis for its management decisions.
In April 2013, EPA formally updated **data requirements** for certain **antimicrobials** in response to requests by CASQA and other water quality agencies to ensure data availability for urban runoff evaluations.	*EPA acknowledged that wood preservatives and antifoulants have pathways to stormwater* and is now requiring additional environmental toxicity and fate data from manufacturers. While it did not address other categories of pesticides in urban runoff, EPA has progressively improved its data requirements on a case-by-case basis since CASQA's initial engagement in the early 2000s.
As a result of requests by CASQA and other water quality agencies for better **urban runoff modeling**, DPR has devoted significant resources toward urban runoff model development and provided research funding to U.C. Davis and UC Riverside. **(See Section 2.4 for additional details.)**	*DPR's leadership is expected to lead to improved understanding of fate and transport of outdoor urban pesticide treatments on impervious surfaces.* Environmental fate and transport models have not adequately represented urban runoff. An improved model can help identify risk of pesticide pollution so it may be mitigated before registration.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 9-4

FY 13-14 Regional IPM Partnership Program Report (Our Water, Our World)

FY 13-14 Regional IPM Partnership Program Report

Below is a report of activities and accomplishments of the Regional IPM Partnership Program (also known as *Our Water, Our World* program) for FY 13-14.

- Coordinated program implementation with major chains Home Depot, Orchard Supply Hardware (OSH), and Ace Hardware National. Corporate office of OSH (San Jose) and Home Depot (Atlanta) directed support of the program with their stores.
- Coordinated updates as needed to and master print run of the following: fact sheets, shelf talkers, literature rack signage, beneficial bug brochure, magnet, Pest or Pal activity guide for kids, pocket guide, and Pests Bugging You? booklet.
- Updated less-toxic Product Lists: general plus OSH and Home Depot-specific lists/labels.
- Maintained *Our Water, Our World* website.
- Provided Ask-the-Expert service—which provides 24-hour turnaround on answers to pest management questions.
- Provided and staffed exhibitor booths.
    - Excel Gardens Dealer Show, Las Vegas (August 2013)
    - L&L Dealer Show, Reno (October 2013)
    - NorCal trade show (February 2014)
- Provided on-call assistance (e.g., display set-up, training, IPM materials review) to specific stores (e.g., OSH, Home Depots) .
- Provided print and web advertising – Bay Nature magazine; Bringing Back the Natives Garden Tour's garden guide, and Chinook Coupon Book.

New for FY 13-14, BASMAA and its member agencies and partners in *Our Water, Our World*:

- Worked with select local agencies to fund and with Home Depot to develop and initiate a pilot enhanced program in 10 Home Depots in the greater Bay Area and Sacramento. The enhanced program is being implemented primarily by the IPM Advocates.
- Created and launched mobile application (app) – OWOW mobile app.
- Worked with Scotts-Miracle Gro to set up eco-friendly displays of less-toxic products in 50 Home Depots.

Additionally in FY 13-14, BASMAA continued work on two other projects related to *Our Water, Our World*:

- Got Ants – This DPR funded grant project was led by the San Francisco Estuary Partnership and BASMAA was a sub-recipient of a portion of the grant funds. The project was a social marketing outreach campaign designed to provide easy-to-use information on ant control methods that do not harm water quality and shift users' behavior to integrated pest management (see Got Ants? Get SERIOUS website for more

information).

- Greener Pesticides for Cleaner Waterways – This EPA funded grant project is being led by the San Francisco Estuary Partnership. The project is implementing pesticide pollution prevention through engaging residential pesticide users to use less toxic products. Part of the project involves doing so through the *Our Water, Our World* program using the IPM Advocates, the former managed and the latter qualified by BASMAA. (see Greener Pesticides for Cleaner Waterways website for more details).

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 12-1

Collection of Street Sweeping Data- Co-permittees

- Summary of Street Sweeping Activities for FY 2013-2014
- Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Copper and Nickel - FY 2013-2014
- Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Lead and Zinc - FY 2013-2014

Santa Clara Valley *Urban Runoff* Pollution Prevention Program

Summary of Co-permittee Street Sweeping Activities - FY 2013-2014

Municipality	Miles of Paved Streets	Total Miles Swept	Volume of Material Collected	Removal Rate Vol./ Mile	Leaves Collected	Yard Waste Collected
City of Cupertino[1,2,3,14]	308	17,604	2,571 yd^3	0.15 yd^3/miles		7,245 tons
City of Los Altos[1,2]	108	5,775	1,538 yd^3	0.27 yd^3/miles	435 yd^3	10,278 tons
Town of Los Altos Hills[2]	57	1,364	13 yd^3	0.01 yd^3/miles	25 yd^3	110 tons
City of Milpitas[14]	126	10,667	3,887 yd^3	0.36 yd^3/miles		848 yd^3
City of Mountain View	340	10,480	6,070 yd^3	0.58 yd^3/miles	810 yd^3	
City of Palo Alto[7]	419	20,833	16,208 yd^3	0.78 yd^3/miles	18,136 yd^3	10,977 tons
City of San Jose[1,2,14]	6,930	54,026	23,405 yd^3	0.43 yd^3/miles		302,423 yd^3
City of Santa Clara[8,9]	247	26,487	6,286 yd^3	0.24 yd^3/miles	526 yd^3	
City of Sunnyvale[4]	734	33,213	11,163 yd^3	0.34 yd^3/miles	862 yd^3	5,016 yd^3
West Valley Communities						
City of Campbell[5,6,10,14]	149	5,378	1,666 yd^3	0.31 yd^3/miles		6,602 tons
Town of Los Gatos[14]	110	6,270	2,391 yd^3	0.38 yd^3/miles		7,211 tons
City of Monte Sereno[14]	28	545	97 yd^3	0.18 yd^3/miles		1,000 tons
City of Saratoga[2,11,14]	275	4,161	1,706 yd^3	0.41 yd^3/miles		9,275 tons
County of Santa Clara[1]	232	7,872	2,235 yd^3	0.28 yd^3/miles		8,756 yd^3
Santa Clara Valley Water District[12]	---	---	---	---	---	---
TOTALS	**10,063 miles**	**204,675 miles**	**79,235 yd^3 (51,463 tons)[13]**		**20,794 yd^3**	**52,698 tons 317,043 yd^3**
AVERAGE		**14,620 miles**	**5,660 yd^3**	**0.39 yd^3/miles**		

Notes:

1. Leaf litter included in material removed.
2. No leaf removal program other than routine street sweeping or yard waste collection.
3. Contractor started using regenerative air equipment on July 1, 2011.
4. Eight streets were requested and posted for no parking for a special sweep.
5. The City of Campbell corporation yard is swept every other Friday.
6. Beginning in FY13-14, street sweeping frequency has been increased
7. Trace rainfall over the winter, combined with staffing shortages this fiscal year have led to a lesser amount of material collected. There was a marked increase in both material collected and curb
8. Leaf VAC season November/December
9. Annual Clean Up Campaign was from March 24 to April 16, 2014.
10. As of May 2013, a 103 acres (i.e., 'Cambrian' area) were newly annexed. They are now being swept.
11. Beginning July 1, 2012, sweeping on residential streets has increased from once a month to twice a month.
12. Does not conduct street sweeping.
13. To determine the total volume of material removed in tons, it is necessary to convert cubic yards to tons. It is estimated that the average density of street sweeping material is 1,299 pounds per cubic yard (0.6495 tons per cubic yard) (Source: EOA, Inc., October 1996, Estimation of Copper Collected Through Street Sweeping Efforts. Prepared for San Mateo Countywide Stormwater Pollution Prevention Program). A value of 51,455 tons is calculated when 79,222 cubic yards is converted over to tons (79,222 cubic yards* .6495 tons/cubic yard= 51,455 tons).
14. Co-permittee co-mingles leaf litter with yard trimmings. The value reported represents the total weight or total volume of yard waste collected by individual Co-permittee. This Co-permittees does not have the ability to separate the weight or volume of leaves from this waste stream.

Santa Clara Valley *Urban Runoff* Pollution Prevention Program

Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Copper and Nickel - FY 2013-2014

Municipality	Miles of Paved Streets	Miles Swept				Volume of Material Collected (Cubic Yards)				Estimated Mean Pollutant Load Reduction (Pounds)							
										Copper[2]				Nickel[3]			
		Res.	Com.	Ind.	Total	Res.	Com.	Ind.	Total	Res.	Com.	Ind.	Total	Res.	Com.	Ind.	Total
City of Cupertino	308	15,324	2,280	---	17,604	2,230	341	---	2,571	45.44	6.87	---	52.31	89.82	13.60	---	103.42
City of Los Altos	108	3,705	2,071	---	5,775	1,063	475	---	1,538	21.66	9.56	---	31.22	42.82	18.92	---	61.73
City of Los Altos Hills	57	1,364	---	---	1,364	13	---	---	13	0.27	---	---	0.27	0.53	---	---	0.53
City of Milpitas	126	5,561	5,106	---	10,667	2,014	1,873	---	3,887	41.04	37.73	---	78.77	81.12	74.68	---	155.80
City of Mountain View	340	6,579	2,239	1,662	10,480	3,811	1,291	968	6,070	77.66	26.00	104.65	208.31	153.50	51.46	20.26	225.22
City of Palo Alto	419	13,746	5,027	2,060	20,833	13,490	2,271	447	16,208	274.89	45.75	48.32	368.95	543.35	90.55	9.35	643.25
City of San Jose	6,930	35,997	18,029	---	54,026	13,597	9,808	---	23,405	277.07	197.57	---	474.64	547.66	391.05	---	938.71
City of Santa Clara	247	19,103	7,384	---	26,487	4,968	1,318	---	6,286	101.23	26.55	---	127.78	200.10	52.55	---	252.65
City of Sunnyvale[3]	734	21,848	441	10,924	33,213	7,842	311	3,010	11,163	159.80	6.26	325.36	491.42	315.86	12.40	62.98	391.24
West Valley Communities																	
City of Campbell	149	2,907	2,471	---	5,378	862	804	---	1,666	17.57	16.20	---	33.76	34.72	32.06	---	66.78
Town of Los Gatos	110	4,000	2,270	---	6,270	1,568	823	---	2,391	31.95	16.58	---	48.53	63.16	32.81	---	95.97
City of Monte Sereno[4]	28	475	70	---	545	79	18	---	97	1.61	0.36	---	1.97	3.18	0.72	---	3.90
City of Saratoga	275	2,316	1,845	---	4,161	1,411	295	---	1,706	28.75	5.93	---	34.68	56.83	11.74	---	68.57
County of Santa Clara	232	---	7,872	---	7,872	---	2,235	---	2,235	---	45.02	---	45.02	---	89.11	---	89.11
Santa Clara Valley Water District[1]																	
TOTALS	**10,063**	**132,924**	**57,105**	**14,646**	**204,675**	**52,948**	**21,862**	**4,425**	**79,235**	**1,079**	**440**	**478**	**1,998**	**2,133**	**872**	**93**	**3,097**

Notes:

1. Does not conduct street sweeping.

2. To determine the estimated pollutant load reduction of copper (in pounds), the volume of material collected from each Co-permittee land use type (i.e., residential, commercial and industrial) was multiplied by the mean concentration of trace metal content for street sweeping samples determined in the study entitled Chemical and Physical Characteristics of Street Sweeping Sediments in Tampa, Florida, May 1999. In this study, the mean copper concentration for samples collected in residential areas (n=51) was 23.51 mg/kg. In addition the mean copper concentrations for samples collected in commercial (n=17) and industrial (n=7) areas was 23.24 mg/kg and 124.71 mg/kg, respectively. These values were then converted over to pounds and summed to represent the estimated mean pollutant load reduction for copper. A sample calculation is as follows: (2230*23.51*6.43*0.785*0.85)/(0.00495*1000*1000) =45.44

3. To determine the estimated pollutant load reduction of nickel (in pounds), the volume of material collected from each Co-permittee land use type (i.e., residential, commercial and industrial) was multiplied by the mean concentration of trace metal content for street sweeping samples determined in the study entitled Chemical and Physical Characteristics of Street Sweeping Sediments in Tampa, Florida, May 1999. In this study, the mean nickel concentration for samples collected in residential areas (n=51) was 46.47 mg/kg. In addition the mean nickel concentrations for samples collected in commercial (n=17) and industrial (n=7) areas was 46.00 mg/kg and 24.14 mg/kg, respectively. These values were then converted over to pounds and summed to represent the estimated mean pollutant load reduction for nickel. A sample calculation is as follows: (1063*46.47*6.43*0.785*0.85)/(0.00495*1000*1000)= 21.66

4. The City of Monte Sereno is entirely residential zoned development. However, for the purposes of applying pollutant load rates, the City Hall parking lot area is reported separately and categorized as commercial type of use.

Santa Clara Valley *Urban Runoff* Pollution Prevention Program

Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Lead and Zinc - FY 2013-2014

Municipality	Mile of Paved Streets	Miles Swept				Volume of Material Collected (Cubic Yards)				Estimated Mean Pollutant Load Reduction (Pounds)							
										Lead[2]				Zinc[3]			
		Res.	Com.	Ind.	Total	Res.	Com.	Ind.	Total	Res.	Com.	Ind.	Total	Res.	Com.	Ind.	Total
City of Cupertino	308	15,324	2,280	---	17,604	2,230	341	---	2,571	84.66	32.81	---	117.47	113.96	23.25	---	137.21
City of Los Altos	108	3,705	2,071	---	5,775	1,063	475	---	1,538	40.36	45.65	---	86.01	54.32	32.35	---	86.67
City of Los Altos Hills	57	1,364	---	---	1,364	13	---	---	13	0.50	---	---	0.50	0.68	---	---	0.68
City of Milpitas	126	5,561	5,106	---	10,667	2,014	1,873	---	3,887	76.46	180.20	---	256.66	102.92	127.68	---	230.61
City of Mountain View	340	6,579	2,239	1,662	10,480	3,811	1,291	968	6,070	144.68	124.19	98.18	367.05	194.76	87.99	80.80	363.55
City of Palo Alto	419	13,746	5,027	2,060	20,833	13,490	2,271	447	16,208	512.13	218.49	45.33	775.95	689.39	154.81	37.31	881.51
City of San Jose	6,930	35,997	18,029	---	54,026	13,597	9,808	---	23,405	516.19	943.62	---	1,459.81	694.86	668.61	---	1,363.47
City of Santa Clara	247	19,103	7,384	---	26,487	4,968	1,318	---	6,286	188.60	126.80	---	315.41	253.88	89.85	---	343.73
City of Sunnyvale	734	21,848	441	10,924	33,213	7,842	311	3,010	11,163	297.71	29.92	305.24	632.88	400.75	21.20	251.21	673.17
West Valley Communities																	
City of Campbell	149	2,907	2,471	---	5,378	862	804	---	1,666	32.72	77.35	---	110.08	44.05	54.81	---	98.86
Town of Los Gatos	110	4,000	2,270	---	6,270	1,568	823	---	2,391	59.53	79.18	---	138.71	80.13	56.10	---	136.23
City of Monte Sereno[4]	28	475	70	---	545	79	18	---	97	3.00	1.73	---	4.73	4.04	1.23	---	5.26
City of Saratoga	275	2,316	1,845	---	4,161	1,411	295	---	1,706	53.57	28.33	---	81.90	72.11	20.08	---	92.18
County of Santa Clara	232	---	7,872	---	7,872	---	2,235	---	2,235	---	215.03	---	215.03	---	152.36	---	152.36
Santa Clara Valley Water District[1]																	
TOTALS	**10,063**	**132,924**	**57,105**	**14,646**	**204,675**	**52,948**	**21,862**	**4,425**	**79,235**	**2,010**	**2,103**	**449**	**4,562**	**2,706**	**1,490**	**369**	**4,565**

Notes:

1. Does not conduct street sweeping.

2. To determine the estimated pollutant load reduction of lead (in pounds), the volume of material collected from each Co-permittee land use type (i.e., residential, commercial and industrial) was multiplied by the concentration of trace metal content for street sweeping samples determined in the study entitled Street Sweeping for Pollutant Removal, Department of Environmental Protection, Montgomery County, Maryland, February 2002. In this study, the lead concentration for samples collected in residential areas was 43.8 mg/kg. In addition the lead concentrations for samples collected in commercial and industrial areas was 111 mg/kg and 117 mg/kg, respectively. These values were then converted over to pounds and summed to represent the estimated mean pollutant load reduction for lead. A sample calculation is as follows: (2230*43.8*6.43*0.785*0.85)/(0.00495*1000*1000)= 84.66.

3. To determine the estimated pollutant load reduction of zinc (in pounds), the volume of material collected from each Co-permittee land use type (i.e., residential, commercial and industrial) was multiplied by the mean concentration of trace metal content for street sweeping samples determined in the study entitled Chemical and Physical Characteristics of Street Sweeping Sediments in Tampa, Florida, May 1999. In this study, the mean zinc concentration for samples collected in residential areas (n=51) was 58.96 mg/kg. In addition the mean zinc concentrations for samples collected in commercial (n=17) and industrial (n=7) areas was 78.65 mg/kg and 96.29 mg/kg, respectively. These values were then converted over to pounds and summed to represent the estimated mean pollutant load reduction for zinc. A sample calculation is as follows: (1063*58.96*6.43*0.785*0.85)/(0.00495*1000*1000)= 40.36.

4. The City of Monte Sereno is entirely residential zoned development. However, for the purposes of applying pollutant load rates, the City Hall parking lot area is reported separately and categorized as commercial type of use.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 12-2

Brake Pad Partnership FY 13-14 Summary Report

Brake Pad Partnership

FY 13-14 Summary Report

MRP Provision *C.13.c. Vehicle Brake Pads* requires Permittees to engage in efforts to reduce the copper discharged from automobile brake pads to surface waters via urban runoff. Provision C.13.c.iii requires that the Permittees report annually on legislation development and implementation status. Permittee compliance is achieved through continued participation in a process originally initiated by the Brake Pad Partnership (BPP) that achieved the 2010 passage of Senate Bill 346, which will phase out copper and other heavy metals in brake pads over the next 15-20 years (see Table)1. Because the State of Washington passed brake pad legislation a few months before California and the Washington law is similar but different in a few key areas, the automotive brake pad-related industry is responding to both laws simultaneously, and Permittees must do likewise regarding the laws' implementation status.

Table. Implementation Timeline for SB346 Regulation of Vehicle Brake Pads

Year	SB 346 Key Milestones or Provisions
2011	SB 346 became effective January 1. When reformulating brake pads, manufacturers must select alternatives to copper that pose less potential hazard to public health and the environment.
2012	Target date - finalization for certification and marking criteria.
2014	Limits on cadmium, chromium, lead, mercury and asbestos took effect January 1. (Non-compliant pads can be sold solely for inventory depletion until 2024) Compliance certification must be marked on pads and listed on the Internet.
2018	Cal□EPA Secretary appoints extension application advisory committee.
2019	Manufacturers may apply for extensions to the 2025 0.5% copper limit beginning January 1.
2021	5% copper limit takes effect January 1. (No extensions allowed, but non-compliant pads for pre-2021 vehicles may continue to be sold indefinitely)
2023	State Water Board & DTSC report to legislature on brake pad copper reductions and copper TMDL implementation progress. (The report can make recommendations for any additional brake pad copper controls needed to achieve TMDLs)
2025	0.5% copper limit takes effect January 1.
2032	Final end date for all light duty vehicle compliance extensions. (Non-compliant replacement pads for pre-2025 vehicles may continue to be sold indefinitely)

[1] Full text of the legislation was submitted with the FY 2010-11 Regional POC Report. The law is the Brake Friction Material Law (Health and Safety Code sections 25250.50 et seq.).

In FY 2013-14, Permittees continued to track and support implementation of SB 346 through participation in CASQA, which is engaged through a CASQA-funded project in the following implementation efforts:

- Legislation
- Regulations
- Marking
- Certification
- Education
- Memorandum of Understanding

Legislation

California's car dealers sought to make a change to SB 346 (2010) in the 2013 legislative session requiring CASQA and its BPP partners to track and participate in the legislative process. Ultimately, the Governor signed AB 501 Vehicles (2013), Nazarian, making a slight change (see below) in SB 346. The slight change allows used vehicles to be re-sold with the brake pads that were on the vehicle when it was purchased by a dealer or a private person. SB 346 technically would have required these brake pads be checked for compliance with the phase out of copper and other heavy metals, and potentially replaced. The change made by AB 501 will negligibly affect brake pad copper reduction, while eliminating an unintended task for vehicle resellers.

> Health & Safety Code Section 25250.51
>
> (b) Motor vehicle manufacturers and distributors, wholesalers, or retailers of replacement brake friction materials may continue to *sell or* offer for sale brake friction materials not certified as compliant with subdivision (a) solely for the purpose of depletion of inventories until December 31, 2023.
>
> *(c) Notwithstanding subdivision (b), motor vehicle dealers may continue to sell or offer for sale brake friction material not certified as compliant with subdivision (a) if the brake friction material was installed on a vehicle before the vehicle was acquired by the dealer.*

With assistance from the lobbyist that assisted the Brake Pad Partnership, CASQA and its BPP partners were able to ensure the bill made only the very narrow change intended by its author and its sponsor, California's car dealers.

Regulations

CASQA continued to engage in the potential development of regulations for SB 346 by the Department of Toxic Substances Control (DTSC) and also by the Washington Department of Ecology (DOE) for that state's Better Brakes Law, which is similar to SB

346 in many respects[2]. CASQA's engagement included tracking developments and regular check-ins with key staff at California DTSC, and at Washington DOE as needed.

This year, DTSC determined that SB 346 could not be enforced unless DTSC issues regulations to clarify a few elements in the law. On June 20, 2014, DTSC announced it had prepared informal draft regulations to help implement the law that became effective January 1, 2014. The proposed regulations clarify the standards for implementing the law, including the marking of the brake pads, the analytical testing methodology, and the analytical laboratory qualifications. The regulations are also intended to provide details on the processes that DTSC will use to provide extensions to the January 1, 2025 restrictions, and approve certification requirements used by the testing certification agencies.

DTSC will be holding a series of workshops in the summer of 2014 designed to receive comments from stakeholders on the proposed informal regulations and to address potential issues before initiating the formal rulemaking process later this year. It could take up to a year after the rulemaking is formally announced for it to become effective. CASQA will continue to participate in the regulatory process – conducting reviews and analyses and preparing and delivery comments – to try to ensure the full intent and letter of SB3 46 is implemented as designed.

Marking

Both California and Washington State laws require brake friction material to be marked according to an industry standard "edge code" certifying the formulation of the material complies with the concentration limits for copper and other constituents in the laws and enabling people throughout the supply chain to identify the information contained in an edge code quickly and easily. As of January 1, 2014, the concentrations of asbestos and other non-copper constituents were to be certified as being less than limits set in the law.

Washington State law (but not California law) also requires brake packaging to be marked with a registered certification mark that is intended to certify compliance with Washington State's law. On October 2, 2013, Washington DOE issued guidelines on marking requirements under the Washington Better Brakes Law.

The industry has developed a logo for packaging ("LeafMark") with three designations:

- Level A designates compliance with requirements concerning cadmium, chromium, lead, mercury and asbestos. Level A compliance was required by January 1, 2014, in California and is required by January 2015 in Washington.
- Level B designates compliance with each of the above metals as well as copper, which must be reduced to less than 5% of material weight. Level B compliance is

[2] SB 346 includes a requirement that California regulations must be consistent with those of other states concerning compliance markings and certification. Washington's brake pad law required adoption of implementing regulations by December 2012, which was ahead of DTSC's timeline for preparing regulations for SB 346. Washington Department of Ecology adopted final Better Brakes Rules in October 2012; available at http://www.ecy.wa.gov/programs/hwtr/betterbrakes.html

required by 2021.
- Level N designates compliance with the “Zero Copper” requirement, which takes effect in 2025.

Certification

The sole independent certification organization NSF began to certify pads for compliance with the toxic metals, asbestos, and copper standards in preparation for the January 1, 2014 certification deadline (see the certification website here and certified product list here).

On December 20, 2013, an updated version of SAE Standard J2975, Measurement of Copper and Other Elements in Brake Friction Materials was approved.

DTSC assigned enforcement staff to this new program and they have been involved in discussions with Bureau of Automotive Repair (BAR) and representatives of the Automotive Services Councils of America. DTSC cannot start enforcement until the regulations are adopted. DTSC must enforce directly—it does not have authority to delegate to others, like CUPAs (Certified Unified Program Agencies), but DTSC can accept referrals.

The industry has reported its baseline use of copper, nickel, zinc and antimony to Washington DOE (see the data summary here).

Education

Both states have developed websites (California) (Washington) that provide an increasing amount of information and links to additional information on the requirements and their implementation. ‘Completion’ of the California website is pending adoption of the California regulations. DTSC has also:

- Completed guidance documents for marking, analysis, and compliance.
- Drafted various fact sheets for outreach (release pending regulation adoption).
- Coordinated and trained DTSC’s Regional Assistance Officers.

DTSC also plans to provide materials to support industry's compliance education efforts.

CASQA has funded a project expected to start in later 2014 to promote shifting the brake pad manufacturers’ move to <0.5% copper content in advance of the statutory

deadlines to facilitate achievement of copper TMDL waste load allocations.

National Memorandum of Understanding (MOU)

In late 2013, a coalition of automotive-related industry representatives approached EPA with a proposal to develop and reach an agreement on a nationwide Memorandum of Understanding – purportedly to avoid a patchwork of laws and regulations and provide a streamlined, national approach to phasing out the use of copper and other constituents in brake friction materials. Both Washington DOE and California DTSC were made aware of the effort in early February 2014, and CASQA was made aware in early March 2014. It appears Washington DOE and California DTSC have been consulted regularly during the negotiations since that time, while CASQA and other stakeholders have been consulted less regularly.

CASQA representatives participated in a conference call with EPA staff in early April and followed that up with a comment letter[3]. In the letter, CASQA, in general:

- noted it supports and encourages EPA's interest in establishing nationwide source control (pollution prevention) solutions for stormwater pollution,
- pointed out that numerous California agencies are relying on implementation of laws adopted to control brake pad copper content that form the foundation of their compliance with requirements for stormwater copper discharge reductions, and
- urged any MOU established between EPA and the vehicle industry strongly support timely, robust implementation of existing state laws.

CASQA also stated the draft MOU fell significantly short of its stated intent of consistency with adopted California and Washington state laws and regulations, despite EPA's commitment to ensure the MOU meets the most stringent provisions in the combination of the existing state laws. So CASQA also made specific recommendations to bring the language of the draft MOU as close as possible to the stated intent. Negotiations continued into the new fiscal year but it appears most of CASQA's recommendations will be accepted, and there will be additional opportunity for review and input. A final MOU is expected by the end of 2014.

[3] CASQA Comments to EPA on Proposed MOU regarding Brake Pad Copper Content (April 15, 2014)

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 14-1

SCVURPPP January 29, 2014 response letter to Regional Water Board

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January 29, 2014

Writer's Direct Contact
415/268-6294
RFalk@mofo.com

Via U.S. Mail

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

Re: **Letter to Santa Clara Valley Urban Runoff Program Concerning Monitoring and Reporting Requirements for De Minimus Impact Potable Water Discharges**

Dear Mr. Wolfe:

I am writing to you on behalf of the Santa Clara Valley Urban Runoff Pollution Prevention Program ("SCVURPPP" or "Santa Clara Program") with respect to the letter you issued to Dr. Adam Olivieri dated December 9, 2013 concerning the above-referenced subject matter (the "Letter"). [1]

As Dr. Olivieri indicated to you at your meeting with him on December 23, 2013 and for the reasons I describe below, the Santa Clara Program disagrees with the analysis contained in the Letter and believes it is erroneous. As he discussed with you and reiterated in his email of January 6, 2014, SCVURPPP also is opposed to any policy that would require the expenditure of its members' very limited resources for wholesale monitoring, recordkeeping, and reporting of low (<15,000 gallon) volume discharges of potable water within their jurisdictions. Many of these discharges do not even reach surface waters, let alone have detectable levels of chlorine or other contaminants in them to the extent they might reach jurisdictional waters on rare occasion.[2]

[1] SCVURPPP is comprised of representatives from 13 cities and towns in the Santa Clara Valley, the County of Santa Clara, and the Santa Clara Valley Water District.

[2] The State Water Resources Control Board has officially recognized the type of discharges in question as de minimus for NPDES permit purposes since at least July 23, 2009. Accordingly, we refer to them herein as low volume "De Minimus Impact" potable water discharges.

As a legal matter, the Letter erroneously assumes that the SCVURPPP co-permittees have invalidly modified the Municipal Regional (stormwater) Permit's ("MRP's") terms and, based on that assumption, further accuses the Santa Clara Program of misusing MRP Provisions C.15.b.vii and viii(3). It also wrongly asserts that your approval and a reopener and the Water Board's approval of a permit amendment would be required before reduced monitoring and reporting would be in order for these low volume De Minimus Impact potable water discharges. As the plain language of MRP Provision C.15.b provides otherwise, the members of the Santa Clara Program therefore have not, as your Letter implies, failed to comply with the MRP or otherwise relied on invalid authority or rights.

Moreover, the approach the Santa Clara Program is implementing for low volume De Minimus Impact potable water discharges continues BMP implementation and basic discharge event data collection (i.e. date, location, duration, volume, etc.) plus monitoring for 5% of the release events per year to verify that appropriate BMPs continue to be implemented and remain effective. Even if Water Board staff believed that SCVURPPP's members were not approaching their MRP requirements on low volume De Minimus Impact potable water discharges appropriately, at a minimum, these issues should have been raised to the Santa Clara Program members' attention soon after the FY2011-12 Annual Reports were submitted, not 15 months later and well after another full year of program implementation and annual reporting had passed.[3]

While the Santa Clara Program believes the Letter should not have been issued, Dr. Olivieri, would be happy to dialogue with you or Dr. Mumley further about this issue and further explain the reasons why devoting resources to additional monitoring and reporting of these low volume De Mimimus Impact potable water discharges does not make technical or economic sense. In the interim, it is SCVURPPP's position that there is no legal basis for requiring prior or future annual reports to be supplemented, or a permit modification, pursued in light of the above.

Sincerely yours,

Robert L. Falk
SCVURPPP Legal Counsel

Attachment

[3] SCVURPPP's September 14, 2012 transmittal letter providing the FY 2011-12 Annual Reports specifically called out the Santa Clara Program's plans concerning low volume De Minimus Impact potable water discharges and asked for any concerns about or objections to those plans to be raised within 60 days.

cc: A. Olivieri (via email)
SCVURPPP Management Committee (via email)