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

September 30, 2025

Ms. Eileen White
Executive Officer
San Francisco Bay Region
Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Submittal of FY 2024-25 Program Annual Report

Dear Ms. White:

This letter transmits and certifies the Santa Clara Valley Urban Runoff Pollution Prevention Program's (SCVURPPP) FY 2024-25 Annual Report*, which has been uploaded to Stormwater Multiple Applications and Report Tracking System (SMARTS)* by the SCVURPPP Manager on behalf of all SCVURPPP Co-permittees, consistent with the directions provided by San Francisco Bay Regional Water Board staff.[1] Together with FY 2024-25 SCVURPPP Co-permittee Annual Reports, which were uploaded to SMARTs by each Co-permittee, these reports fulfill Provision C.22.a of NPDES Permit No. CAS612008 (Order No. R2-2022-0018, i.e., MRP 3.0) and document activities conducted during FY 2024-25 in compliance with the MRP 3.0.

The SCVURPPP Annual Report includes a certification statement pursuant to Permit Provision C.22.c signed by the Program Manager, who was authorized by the Program's Management Committee at its September 18, 2025 meeting to sign the certification form and upload the Annual Report to Co-permittees to submit via SMARTS as the Program's Duly Authorized Representative. The Program's FY 2024-25 Annual Report consists of 16 sections. Each section reports on the Program's activities associated with a specific Permit Provision, including our involvement in regional activities. Tasks and activities conducted by the Program, but not required by a specific Permit Provision (e.g., street sweeping and Santa Clara Basin Watershed Management Initiative activities), are included in the most appropriate section of the Annual Report.

Co-permittee Annual Reports were prepared by each SCVURPPP Co-permittee and each also includes a signed certification statement, pursuant to Provision C.22.c. In addition to the certification statement, each Annual Report includes a completed Annual Report Form: Sections 1-17 and relevant appendices and/or attachments.

Importantly, several significant MRP 3.0 milestones were achieved by SCVURPPP Co-permittees in FY 2024-25. These include:

- The achievement of the **100% Trash Load Reduction Goal** established in provision C.10 by the vast majority of Co-permittees, as a result of the significant investments made in trash capture systems and other trash control measures over the last 15 years;
- The creation and submittal of the **Regional Firefighting Emergency Discharges Report** that addresses provision C.15.b.iii.(2), which is intended to address discharges associated with emergency firefighting activities that may impact stormwater quality;

[1] The Program's *FY 2024-25 Annual Report* is also available at www.scvurppp.org.

- The **Reporting of Costs** expended by Co-permittees in FY 2024-25 to comply with MRP 3.0, as required by provision C.20; and
- The creation and submittal of municipal stormwater **Asset Management Plans** by each Co-permittee, as required by provision C.21.

The Program and SCVURPPP Co-permittees look forward to continued implementation of cost-effective stormwater management programs in the future and working with you and your staff to successfully prioritize and address new challenges during FY 2025-26. Please visit our website (www.scvurppp.org) for additional information on the stormwater management activities conducted by the Program and SCVURPPP Co-permittees.

Please contact me or Jill Bicknell if you have any comments or questions.

Very truly yours,

Chris Sommers
Program Manager

cc: SCVURPPP Management Committee Members

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Water Environment Federation
the water quality people®
National Municipal Stormwater and Green Infrastructure Awards Program
Overall Highest Score
Phase I Organization

FY 2024-2025 Annual Report

Submitted in Compliance with NPDES Permit No. CAS612008 (Order R2-2022-0018)

Program Annual Report
Sections 1 - 16

September 30, 2025

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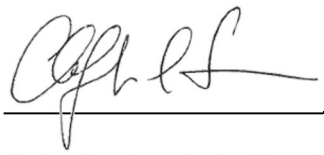
Certification Regarding SCVURPPP Program Annual Report

"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 30, 2025

Chris Sommers
Program Manager

[1] Notwithstanding the above, certain attachments were prepared as regional submissions as part of BAMS 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] This certification is made only with respect to the Program Annual Report; separate Co-permittee certifications have been provided with the individual Co-permittee Annual Reports.

Table of Contents

Credits **i-4**

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

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 4-2

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

Section 8: Water Quality Monitoring **8-1**
- Introduction 8-1
- Bay Area Regional Monitoring Coalition (C.8.a) 8-1
- Monitoring Protocols and Data Quality (C.8.b) 8-2
- San Francisco Estuary Receiving Water Monitoring (C.8.c) 8-2
- Low Impact Development Monitoring (C.8.d) 8-3
- Trash Monitoring Project (C.8.e) 8-4
- POC Monitoring (C.8.f) 8-6

- Pesticide and Toxicity Monitoring (C.8.g) 8-7
- Reporting (C.8.h) 8-7

Section 9: Pesticides Toxicity Control 9-1
- Introduction 9-1
- Program Activities 9-1
- Regional Activities 9-4

Section 10: Trash Controls 10-1
- Introduction 10-1
- Program Activities 10-2
- Regional Activities 10-7

Section 11: Mercury and PCBs Controls 11-1
- Introduction 11-1
- Assess Mercury and PCBs Load Reductions from Stormwater (C.11/12.a) 11-2
- Program for Source Property Identification and Abatement (C.11/12.b) 11-2
- Program for Control Measure Implementation in Old Industrial Areas (C.11/12.c) 11-6
- Mercury Collection and Recycling Implemented throughout the Region (C.11.d) 11-9
- Program for Controlling PCBs from Bridges and Overpasses (C.12.d) 11-11
- Program for Controlling PCBs from Electrical Utilities (C.12.e) 11-11
- Plan and Implement Green Stormwater Infrastructure to Reduce Mercury and PCBs Loads (C.11.e/C.12.f) 11-13
- Manage PCBs-Containing Materials and Wastes During Building Demolition Activities (C.12.g) 11-13
- Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations (C.11.f/C.12.h) 11-15
- Fate and Transport Study of Mercury and PCBs: Urban Runoff Impact on San Francisco Bay Margins (C.11.g/C.12.i) 11-16
- Implement a Risk Reduction Program (C.11.h/C.12.j) 11-17

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

Section 13: Exempt and Conditionally Exempted Discharges 13-1
- Introduction 13-1
- Program Activities 13-1
- Regional Activities 13-3

Section 14: Discharges Associated with Unsheltered Homeless Populations 14-1
- Introduction 14-1
- Program Activities 14-1
- Regional Activities 14-2

Section 15: Cost Reporting 15-1
- Introduction 15-1
- Program Activities 15-1
- Regional Activities 15-2

Section 16: Asset Management 16-1
- Introduction 16-1
- Program Activities 16-1
- Regional Activities 16-2

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 thirty-fourth Annual Report.

Management Committee Voting Members

- Cupertino – Ursula Syrova
- Los Altos – Harun Musaefendic
- Los Altos Hills – WooJae Kim
- Milpitas – Elaine Marshall
- Mountain View – Carrie Sandahl
- Palo Alto – Karin North
- San José – Rajani Nair, MC Vice Chair
- Santa Clara – Colleen Trostle
- Sunnyvale – Winola Cheong, Budget AHTG/Executive Committee Chair
- Santa Clara County – Vanessa Marcadejas
- Santa Clara Valley Water District – John Bourgeois, MC Chair
- West Valley Communities – Sheila Tucker
  - Campbell
  - Los Gatos
  - Monte Sereno
  - Saratoga

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 1

Introduction

September 30, 2025

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 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 and to improve the water quality of South San Francisco Bay and creeks in the 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, with amendments in 1999, 2005, 2006, 2016 and 2023. The MOA (and amendments) 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]), 2009[6] (amended in 2011[7]), 2015[8] (amended in 2019[9]), and 2022[10] (amended in 2023[11]). The permit reissued in 2009, amended in 2011, reissued in 2015, reissued in 2022, and amended in 2023 is referred to as the Municipal Regional Stormwater NPDES Permit (MRP). The MRP covers stormwater discharges from a total of 79 municipalities and local agencies in Alameda, Contra Costa, San Mateo, and Santa Clara Counties, and portions of Solano County.

Program Management

At the inception of the Program, the Santa Clara Valley Water District (Valley Water) 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

[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).
[8] NPDES Permit No. CAS612008, Order No. R2-2015-0049 (11/19/15).
[9] NPDES Permit No. CAS612008, Order No. R2-2019-0004 (2/13/19), Amendment Revising Order R2-2015-0049 to include the Cities of Antioch, Brentwood, and Oakley in Contra Costa County as part of the MRP, increased the number of MRP permittee agencies to 79.
[10] NPDES Permit No. CAS612008, Order No. R2-2022-0018 (5/11/22).
[11] NPDES Permit No. CAS612008, Order No. R2-2023-0019 (10/11/23).

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 to the Water Board on behalf of the Co-permittees. In 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* and updates included in subsequent annual reports. During FY 2024-25, there were four changes made to the list of MC representatives and alternates. The signed confirmation statements authorizing these changes are included in Appendix 1-1 of this Annual Report. The full list of MC representatives and alternates can be found in Appendix 7-2.

Program Annual Report

Permit Provision C.22.a of the MRP requires each Co-permittee to submit an Annual Report by September 30 of each year. Each Annual Report covers activities conducted during the previous fiscal year beginning July 1 and ending June 30. Since the current MRP (Order No. R2-2022-0018) took effect on July 1, 2022, the FY 2024-25 Annual Report reports on activities conducted during the third FY under the 2022 Permit (i.e., MRP 3.0).

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. Individual Co-permittee annual reports refer to information provided within the Program Annual Report.

■ Organization of Report

The Program's *FY 2024-25 Annual Report* consists of 16 sections, and one set of Appendices. 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 for specific sub-provisions and/or projects.

Following Section 1, the Program *FY 2024-25 Annual Report* consists of the following sections:

Program FY 24-25 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.15 Exempted and Conditionally Exempted Discharges
Section 14- Provision C.17 Discharges Associated with Unsheltered Homeless Populations
Section 15-Provision C.20 Cost Reporting
Section 16-Provision C.21 Asset Management

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 2

Municipal Operations

September 30, 2025

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.).

The provision identifies two other program elements that must be implemented: storm drain inlet marking (C.2.g.) and staff training (C.2.h.). Other MRP provisions also include activities that are conducted by municipal maintenance staff. Provision C.9 (Pesticide Toxicity Control) requires municipal maintenance staff to use Integrated Pest Management (IPM) techniques, report quantities and types of pesticides used, and participate in IPM training. Provision C.10 (Trash Control), specifically C.10.b.i , requires Permittees to maintain, and provide for inspection and review upon request, documentation of the design, operation, and maintenance of full trash capture systems. The provision identifies specific maintenance activities to ensure that devices are operated and maintained to meet full trash capture system requirements.

■ Program Activities

The SCVURPPP Municipal Maintenance Ad Hoc Task Group (AHTG) was formed in 2009 to assist Co-permittees with implementing requirements in Provision C.2. The AHTG meets as needed to address issues related to municipal maintenance activities. The AHTG met in September 2024 and 12 municipal staff attended the meeting.

At the AHTG meeting, Program staff facilitated agencies sharing information about BMP/SOP documents, training, BASMAA surface cleaner certification program, sanitizing procedures for washing down outside areas of human waste discharges related to human habitation and/or RVs and corporation yard stormwater BMPs. Program staff continued to communicate with the AHTG via email to inform the group of MRP requirement due dates and training opportunities.

The Program updated the pesticide tracking template for tracking pesticide use during FY 2024-25 in compliance with Provision C.9 and was distributed to the AHTG in July 2025.

Municipal Maintenance Training Workshop

The Program planned and held a comprehensive C.2 training for municipal maintenance staff on March 6, 2025. The training included a video on the *Handbook for Forest, Ranch and Rural Roads for the Mendocino County Resource Conservation District* (PWA 2014), a presentation on MRP rural road BMPs and temporary BMPs for erosion and sediment control, and a panel discussion on rural road inspection programs with Valley Water and the Division Chief of Resource Management – Santa Clara Unit, CalFire. A total of 31 municipal staff attended the workshop virtually and 19 municipal staff attended in person. The evaluation forms indicated that most attendees thought the workshop was very useful. The agenda, attendance list and evaluation summary for this training are included in Appendix 2-1. These documents, as well as the workshop presentations, are also available on the SCVURPPP website. A recording of the presentation was provided to SCVURPPP Co-permittees on the members only section of the SCVURPPP website for use in future municipal maintenance trainings.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 3

New Development and Redevelopment

September 30, 2025

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 and Green Stormwater Infrastructure (GSI). This section of the Annual Report describes the Program's efforts during FY 2024-25 to assist Co-permittees to control the impacts of development on stormwater quality and flow through the development project planning, review, and approval process, and continue planning and implementing GSI in public projects.

■ Program Activities

During FY 2024-25, Program staff continued to assist Co-permittees comply with C.3 and GSI requirements and conduct training workshops for municipal staff. 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 bi-monthly in FY 2024-25 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. To assist Co-permittees with the training requirement, the following workshop on C.3 and Green Stormwater Infrastructure (GSI) issues was held in FY 2024-25:

- ***SCVURPPP C.3 Workshop - Low Impact Development and Green Stormwater Infrastructure: Design and Maintenance, April 29, 2025***. The workshop included presentations on regulatory requirements, the SCVURPPP Green Stormwater Infrastructure (GSI) Handbook, suspended pavement systems, cost effective bioretention design and maintenance, and the City of Palo's partnership with Grassroots Ecology for bioretention area maintenance. The workshop also included a panel discussion on bioretention area maintenance challenges. A total of 126 municipal staff attended the workshop. The workshop flyer, agenda, evaluation summary, and attendance list are included in Appendix 3-1.

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

LID Guidance

Program staff provided on-call technical assistance as needed to Co-permittee staff and consultants, via email, phone conversations, and meetings on implementation of LID at private and public development

projects. In addition, Program staff developed and/or updated the following materials to assist Co-permittees with implementing the new MRP 3.0 requirements in Provision C.3:

- Updated the SCVURPPP C.3 Stormwater Handbook in October 2024 to address minor comments from Water Board staff;
- Developed a C.3 Data Form for Regulated and Non-regulated Public Projects.

Biotreatment Soil Media (BSM) Specifications

During FY 2024-25, the Program continued to support municipal staff, consultants, and suppliers who had questions on the review and use of BSM. Program staff also continued to screen and work with vendors that are supplying the BSM product in the Bay Area and wish to be added to the vendor list posted on the SCVURPPP website. The vendors must demonstrate an understanding of the BASMAA specification, submit lab results and a sample of their BSM product, and use consistent terminology on their websites advertising the product. The vendor list was updated in FY 2024-25 to add three new vendors and delete a vendor no longer in business. In addition, a Biotreatment Wood Mulch (BWM) supplier was added to the list. For the latest BSM specification, see Appendix C of the SCVURPPP C.3 Stormwater Handbook. For the latest BSM and BWM supplier list, see the BSM page of the SCVURPPP website.

Participation in BAMSC Development Subcommittee

Program and Co-permittee staff continued to participate in the Bay Area Municipal Stormwater Collaborative (BAMSC) Development Subcommittee[1] to implement the requirements under this provision, as many of the C.3 requirements have been or will be met by the development of regional products. Highlights of the activities completed by the Development Subcommittee in FY 2024-25 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 and inspect LID treatment measures, 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 stormwater treatment control measures and hydromodification flow control facilities for new and redevelopment projects, have experience with the sizing and design of LID treatment and HM measures, and/or experience with inspection of constructed LID measures for consistency with approved plans. The list is updated every two to three years.

In June 2024, Program staff sent out a Request for Qualifications (RFQ) to consultants already on the list as well as those who had requested to receive the RFQ. The submitted Statements of Qualifications (SOQs) were reviewed and the list updated in Fall of FY 2024-25.

[1] In late FY 2020-21, the Bay Area Stormwater Management Agencies Association (BASMAA) dissolved as a formal non-profit organization and its members continued to meet as an informal organization under the name Bay Area Municipal Stormwater Coalition (BAMSC). The BASMAA Development Committee is continuing to meet approximately quarterly as the BAMSC Development Subcommittee.

C.3.g. Hydromodification Management

Bay Area Hydrology Model

For Regulated Projects that are required to meet the hydromodification management (HM) requirements in Provision C.3.g, a continuous simulation hydrologic computer model must be used to simulate pre-project and post-project runoff and design HM controls to meet HM standards. The Bay Area Hydrology Model (BAHM) is a tool developed to assist permittees and development project engineers with sizing and design of facilities needed to meet the HM requirements in Provision C.3.g and to demonstrate that planned facilities meet the HM standards. The BAHM and a companion User Manual were originally developed in 2007 by Clear Creek Solutions, based on the Western Washington Hydrology Model (WWHM), and funded jointly by the Santa Clara, San Mateo, and Alameda countywide stormwater programs. These programs also funded an update to the BAHM and User Manual in 2013.

In FY 2022-23, the Program provided in-kind support to a BAMSC project of regional benefit, along with the San Mateo, Alameda, and Contra Costa programs, to update the BAHM and User Manual to extend rainfall and evaporation data and include Contra Costa County. A report on the BAHM updates was provided in the Program's FY 2022-23 Annual Report. During October 2023, virtual trainings were conducted by Clear Creek Solutions for beginning and advanced users as well as municipal reviewers. The final BAHM2023 software and User Manual have been posted on the Clear Creek Solutions website, along with the recordings of the trainings and a video library by topic.

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

Program staff continued to collect data from Co-permittees on newly installed treatment and hydromodification systems for submittal to the Santa Clara County Vector Control District and Regional Water Board per Provision C.3.h.iv.(2). The data were submitted to the Santa Clara County Vector Control District on September 29, 2025. A copy of the communication and the list of treatment and hydromodification systems installed in FY 2024-25 is included in Appendix 3-2.

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 to < 5,000 square feet of impervious surface and detached single family home projects that create and/or replace ≥ 2,500 square feet to < 10,000 square feet of impervious surface to install one of six site design measures. Program staff worked with the BASMAA Development Committee and Geosyntec Consultants during FY 2011-12 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. Co-permittees continued to use the fact sheets as a resource in FY 2024-25.

C.3.j. Green Infrastructure Planning and Implementation

The MRP contains requirements for GSI planning, implementation, outreach, tracking and reporting. To continue to assist Co-permittees with meeting these requirements, Program staff developed a GSI Work Plan for Program activities during FY 2024-25 and completed the following tasks.

Green Stormwater Infrastructure Handbook Update

In August 2019, Program staff completed the SCVURPPP GSI Handbook, which includes GSI project design guidelines, details, and specifications. The GSI Handbook includes two parts. Part 1, General Guidelines, provides guidance on selection, integration, prioritization, siting, and maintenance for GSI applications. Part 2 provides engineering and technical details and specifications that can be customized for construction plan submittals by designers, developers, and municipal agencies.

During FY 2024-25, Program staff updated sections of Part 1 to incorporate MRP 3.0 requirements and updated details in Part 2 of the Handbook. The detail updates included revisions to bioretention details, pervious pavement details, and general typical details. Revised details, in PDF and CAD, were added to the GSI Handbook posted on the SCVURPPP website.

Development of Guidance Materials

Program staff continued to research and compile documents and resources on GSI planning and implementation for an online GSI Resource Library for SCVURPPP Co-permittees. The Resource Library also contains all final SCVURPPP GSI products and guidance developed to date. The GSI Resource Library is currently hosted on a “members only” section of the SCVURPPP website.

Green Infrastructure Outreach and Education

In FY 2024-25, the Program’s Watershed Watch Campaign continued to promote GSI/LID features to the public using social media and digital advertising. GSI videos developed previously are available on the Watershed Watch YouTube Channel. Additional details on outreach are included in Section 7.

Tracking and Reporting Progress on Green Infrastructure

Provision C.3.j.v requires Permittees to continue to implement existing tracking and mapping tools developed during MRP 2.0 to track and report implementation of GSI measures, including treated area and connected and disconnected impervious area on both public and private parcels within their jurisdictions, and provide reasonable assurance that load allocations for TMDLs are being met.

Since FY 2018-19, the Program has been using the Stormwater Treatment Measure Data Portal (Data Portal), an online GSI tracking system to obtain, store, and access C.3-regulated and GSI project data at a countywide level. The system also allows projects, control measures, land use type, and acres of treatment to be visualized spatially on the web. The link above has been available to the public via the SCVURPPP website since 2020.

In FY 2020-21, a GSI Opportunity Analysis tool was added to the Data Portal. This tool, available only to Permittees with login/password, includes the Stormwater Resource Plan prioritization and metrics scores for GSI opportunity areas (parcels, streets, and regional projects). The user can click on GSI opportunity areas, see a summary of the metrics scores, and download multiple project metrics and scores to an Excel table for comparison.

In FY 2024-25, Program staff added data for projects constructed in FY 2023-24 and continued to work with Permittees to reconcile or add data to projects previously submitted. Other enhancements were made to the Data Portal to assist Co-permittees with inventory development and risk analyses related to

asset management planning (see Section 16 for a more detailed description). SCVURPPP's development and implementation of methods to track and report pollutant load reductions associated with GSI implementation are described in Section 11.

■ Regional Activities

Program and Co-permittee staff actively participated in the BAMSC Development Subcommittee and other C.3-related regional work groups to discuss, internally and with Water Board staff, issues to be addressed in Provision C.3 of MRP 3.0.

BAMSC Development Subcommittee

Program and Co-permittee staff continued to participate in the Development Subcommittee, which meets approximately quarterly, to share information on topics related to C.3 and GSI implementation. Topics discussed during FY 2024-25 included:

- The regional biotreatment soil media (BSM) and biotreatment wood mulch (BWM) specifications;
- A panel presentation on native and non-native drought tolerant plant species for low/no irrigation bioretention landscapes;
- A presentation on the "Climate Resilience Resources Guide", funded by the GI Leadership Exchange in partnership with several agencies across the US and Canada, which provides approaches to addressing the effects of climate change on GSI; and
- An update on the Contra Costa Countywide Clean Water Program's Regional Alternative Compliance Program and recent efforts to establish a Joint Powers Authority and a Community Facilities District to support its implementation.

Long-Term GSI Technical Working Group

Provision C.3.j.ii (4) of the MRP allows Permittees, Water Board staff, and impartial science experts to collectively form a technical working group to discuss long-term GSI goals and recommend long-term percentage reductions in Permittees' impervious surfaces, at individual, countywide and regional scales. Working cooperatively through BAMSC, Permittees formed the Long-Term GSI Technical Working Group (TWG) in FY 2023-24, and the TWG met four times in FY 2024-25. The TWG includes Water Board and EPA staff.

MRP Provision C.3.j.v (7) requires Permittees to collectively produce a report summarizing TWG efforts and recommendations and submit it to the Water Board by September 30, 2025. The BAMSC *TWG Summary and Recommendations Report* was completed in August 2025 and submitted with each Countywide Program's FY 2024-25 Annual Report (see Appendix 3-3 of the SCVURPPP Annual Report). The *TWG Summary and Recommendations Report* includes summaries of all TWG meetings and Permittee recommendations for a proposed GSI implementation framework that includes crediting of a broader range of project types, projects with multiple benefits, and projects in various phases of implementation. The TWG anticipates holding two meetings in FY 2025-26 to continue to discuss this topic.

Other Regional C.3 Work Groups

During FY 2024-25, SCVURPPP staff participated in two other regional work groups related to C.3: the Asset Management Work Group, and the Trees in GSI Work Group. The BAMSC FY 2024-25 Regional

Supplement for New Development and Redevelopment (Appendix 3-4) provides additional information on these regional Work Groups.

Participation in Processes to Promote Green Infrastructure

Provision C.3.j.iii requires that Permittees individually or collectively, track processes, assemble and submit information, and provide informational materials and presentations as needed to assist relevant regional, State, and federal agencies to plan, design, and fund incorporation of green infrastructure measures into local infrastructure projects, including transportation projects. Program staff and Co-permittees participated in the following activities to comply with this provision.

- Embrace the Future: Green Complete Streets Technical Deep Dive Workshop, September 12, 2025 - The Program partnered with the Metropolitan Transportation Commission (MTC), Valley Transportation Authority (VTA), and Caltrans District 4 to conduct this workshop. The workshop focused on holistic design approaches and practical implementation tools to help public agency professionals build infrastructure that incorporates GSI and is people-centric and climate-resilient. The workshop included presentations on proposed and completed green and complete projects in Santa Clara County. Over 100 staff from local agencies, MTC, VTA, and Caltrans attended the workshop. The workshop materials are available here.
- Biochar Seminar - Program staff attended a meeting on October 7, 2024, in Sacramento organized by several State of California departments to discuss recent developments and strategies for the use of biochar in California projects and policies. The attendees included representatives from Caltrans, CalRecycle, the Sacramento State University - Office of Water Programs, California Department of Conservation, California Air Resources Board, private biochar companies and other organizations.
- Other Activities – BAMSC representatives, including Program staff, participated in various other efforts to promote GSI. The BAMSC FY 2024-25 Regional Supplement for New Development and Redevelopment (Appendix 3-4) provides additional information on these activities.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 4

Industrial and Commercial Site Controls

September 30, 2025

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)), inspection frequency (C.4.b.ii.(2)), inspection content (C.4.d.ii.(1)), data tracking (C.4.b.ii.(3) and C.4.d.ii.(2)) and staff training (C.4.e).

■ 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 requirements in the MRP. In FY 2024-25, the AHTG met in October and December 2024, and March and June 2025.

The AHTG continued to have excellent participation with roughly 27-28 participants at each meeting. At these meetings, the AHTG discussed MRP 3.0 requirements, Industrial General Permit facilities, and outreach materials.

Industrial Inspector Training

The Program planned and held a training for inspectors on June 16, 2025, at the Quinlin Community Center in Cupertino. The training included a presentation by the Regional Water Board staff, four municipal case studies on illicit discharges and business inspections from West Valley Clean Stormwater Authority, City of San José, and Valley Water, and Program staff presentations on the MRP and inspector resources. A total of 47 municipal staff attended the training. The evaluation forms indicated that most attendees thought the workshop was very useful. The agenda, attendance list and evaluation summary for this training are included in Appendix 4-1. These documents as well as the workshop presentations are also available on the SCVURPPP website.

Outreach

Program staff developed a *Tallow Bin Best Management Practices (BMPs)* Fact Sheet with the AHTG. The final was formatted in the new SCVURPPP fact sheet template developed by the Program's graphic consultant. It has been posted on the Watershed Watch website.

Program staff worked with the AHTG to develop a *Sites Prone to Fires BMPs* Fact Sheet that presents good housekeeping practices and preventative measures stormwater BMPs for sites that are prone to firefighting emergencies. The factsheet was finalized in the new SCVURPPP fact sheet template and posted on the Watershed Watch website. See Section 13 for more information on the development of this outreach in compliance with C.15.b.iii Emergency Discharges of Firefighting Foam and Water.

■ Regional Activities

Program staff participated in the CASQA Industrial Subcommittee conference calls and provided information of interest to Co-permittee staff. The Program also maintains a subscription to the CASQA Industrial BMP Handbook portal for Co-permittees' use.

Program staff and SCVURPPP members participated in the BAMSC Regional Firefighting Discharges Work Group. More information on this Work Group is presented in Section 13 Exempt and Conditionally Exempted Discharges.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 5

Illicit Discharge Detection and Elimination

September 30, 2025

Section 5 Illicit Discharge Detection and Elimination

■ Introduction

Provision C.5 requires Permittees to implement an illicit discharge control program that includes centralized complaint collection and follow-up to target illicit non-stormwater discharge 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.e.), and spill and discharge complaint tracking system (C.5.d).

■ 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. In FY 2024-25, the AHTG met in October and December 2024, and March and June 2025.

Meetings

The AHTG continued to have excellent participation with roughly 27-28 participants at each meeting. At these meetings, the AHTG discussed MRP C.15.b.iii emergency firefighting discharges, including the requirement to evaluate large industrial sites for their firefighting discharge BMPs and SOPs, outreach materials, illicit discharges, BASMAA surface cleaner certification program, MS4 map updates and mobile business source control activities.

Mobile Business Program

During FY 2013-14, the AHTG developed a countywide inventory of mobile businesses. Since then, AHTG members have periodically added additional businesses to the inventory and mailed outreach materials to newly identified businesses. The countywide inventory is updated annually.

In FY 2019-20, the BMP brochure used for outreach was converted into a *Mobile Cleaner Fact Sheet* and posted on the Watershed Watch website in English, Spanish and Vietnamese. Co-permittees will also continue to distribute the fact sheet to mobile businesses as part of their illicit discharge detection and elimination (IDDE) programs.

Since FY 2016-17, AHTG members have provided information on mobile businesses that receive enforcement actions in their jurisdictions that is compiled into a table. This enforcement action table is updated annually, including updates for FY 2024-25. This table is used to track businesses that may receive enforcement actions from multiple municipalities as part of the countywide mobile business enforcement strategy. Since FY 2022-23, Program staff annually review the mobile business enforcement table to identify businesses that received enforcement actions in multiple jurisdictions within the past three years and send those businesses letters with the mobile business BMP fact sheet.

During FY 2024-25, Program staff conducted countywide outreach activities including having fact sheets available at tabling events and social media posts. In March 2025, Program staff mailed an outreach

letter to all the mobile businesses on the countywide mobile business inventory. The outreach letter included the mobile business fact sheets in English, Spanish and Vietnamese. Program staff also provided example content regarding mobile business BMPs for SCVURPPP Co-permittees to include in their newsletters.

Outreach

Program staff worked with the AHTG to develop a *Fire Restoration Contractors BMPs* Fact Sheet that presents BMPs for contractors hired by private parties to participate in the containment and cleanup of discharges of firefighting water and foam. The fact sheet was finalized in the new SCVURPPP fact sheet template and posted on the Watershed Watch website. The fact sheet was mailed to a list of applicable contractors that may respond to illicit discharges in Santa Clara County. The list was compiled from DTSC hazardous waste transporters in Santa Clara County and contractors provided by the AHTG. See Section 13 for more information on the development of this outreach in compliance with C.15.b.iii Emergency Discharges of Firefighting Foam and Water.

■ Regional Activities

The Bay Area Stormwater Management Agencies Association (BASMAA) developed and maintained a Surface Cleaner Training and Recognition Program that educates mobile surface cleaners about proper BMPs to protect water quality and allows them to market themselves as “recognized” cleaners. Since the dissolution of BASMAA, the Bay Area Municipal Stormwater Coalition (BAMSC) has continued to maintain this program on the BASMAA website. The BMP materials, quiz and videos were recently updated and translated into Spanish.

Program staff and SCVURPPP members participated in the BAMSC Regional Firefighting Discharges Work Group. More information on this Work Group is available in Section 13 Exempt and Conditionally Exempted Discharges.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 6

Construction Site Controls

September 30, 2025

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 maintain legal authority and an Enforcement Response Plan.

■ 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 requirements in the MRP. The AHTG has developed a number of tools 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. The AHTG also has a series of eight tri-fold brochures of stormwater BMPs related to different construction activities that are translated into Spanish and Vietnamese. The brochures are available on the Watershed Watch website. There is also a BMP Plan Sheet that includes BMPs from all the brochures and is available on the SCVURPPP website.

The AHTG did not meet in FY 2024-25. However, Program staff continued working with the AHTG to update three SCVURPPP Construction BMP brochures, the *Home Repair and Remodeling*, *General Construction and Site Supervision*, and *Fresh Concrete and Mortar Application.* Program staff are finalizing the BMP fact sheets into the new SCVURPPP template. The finalized fact sheets will be posted to the Watershed Watch website in FY 2025-26.

■ Regional Activities

Program staff participated in the CASQA Construction Subcommittee conference calls and provided information of interest to Co-permittee staff. The Program also maintains a subscription to the CASQA Construction BMP Handbook portal for Co-permittees' use.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 7

Public Information and Outreach

September 30, 2025

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 Watershed Education and Outreach Ad Hoc Task Group (WEO AHTG) helps direct and provide input on PI/P projects.

Highlights of the accomplishments of FY 2024-25 PI/P projects and ongoing projects from previous years are described in the sections below according to permit requirements.

The Program implemented the following PI/P projects in FY 2024-25:

- Program Activities
  - Outreach Campaigns – Watershed Watch Campaign (Provision C.7.b.)
  - Stormwater Pollution Prevention Education (C.7.c)
  - Public Outreach Events (Provision C.7.d.)
  - Citizen Involvement Events - Watershed Watchers Program at the Don Edwards San Francisco Bay National Wildlife Refuge and funding for advertising the Coastal Cleanup Day (Provision C.7.d.)
  - Watershed Stewardship Collaborative Efforts (C.7.e)
  - School-age Children Outreach - ZunZun School Assemblies, Earth Day Poster Challenge, and Watershed Watchers Program at the Don Edwards San Francisco Bay National Wildlife Refuge. (Provision C.7.f.)

■ Program Activities

C.7.a. Outreach Campaign

Watershed Watch Campaign

The Program's outreach activities are conducted under the umbrella of the Watershed Watch Campaign (Campaign). The Campaign completed 25 years of implementation (and 24 years of advertising) in FY 2024-25. Gigantic Idea Studio (SCVURPPP Campaign consultant) continued implementing the Campaign in FY 2024-25.

The following tasks were completed by the Program's consultants, with assistance from Program and Co-permittee staff, during FY 2024-25. Additional details are provided in the final FY 2024-25 Watershed Watch Campaign Annual Report included in Appendix 7-1.

- **Task 1: Website Upgrade** – The Watershed Watch Web Statistics Report is included in Appendix 7-1.
- **Task 2: Social Media** – Continued to maintain the Campaign's YouTube Channel, Facebook, Twitter, and Instagram pages. The Campaign's Facebook page currently has 1,929 fans and the Twitter/X page has 554 followers. The Campaign's Instagram page currently has 823 followers.

- **Task 3: Creative Services**– Developed scripts and filmed four videos targeted toward youth ages 16-34. The videos focused on litter prevention, storm drain awareness, picking up pet waste, and volunteering/joining a cleanup. Developed radio scripts on less-toxic pest control and discounted car wash events. Developed seven new Instagram Reels. Updated the Earth Day Poster Challenge materials and graphics for the Bean Bag game. Developed a new template the SCVURPPP BMP Fact Sheets.
- **Task 4: Partnership** – Maintained relationships with existing partners and added three new partners. In FY 2024-25, nine Watershed Watch partners offered discounts with the Watershed Watch discount card.
- **Task 5: Reporting and Management -** Attended and participated in four meetings of the WEO AHTG. Developed the FY 2024-25 Watershed Watch Campaign Annual Report and the Work Plan for FY 2025-26.
- **Task 6: Media Planning and Management** – Prepared media plans for Spring/Fall and Winter/Spring Media Campaigns. Implemented both Media Campaigns.
- **Task 7: Media Advertising** - Conducted media advertising consisting of streaming video, radio, and digital advertising. Messages included less-toxic pest management, litter prevention, Green Gardener training, and creek-friendly car washing. Additional details on the media campaign are included in the FY 2024-25 Summer-Fall and Winter-Spring Media Plans and the FY 2024-25 Watershed Watch Campaign Annual Report in Appendix 7-1.

Evaluation of Effectiveness

Many factors indicate that the FY 2024-25 Watershed Watch Campaign was a success. Some of these include:

- The continued successful partnerships with Classic Car Wash, Premier Car Wash, and Happy Hollow Park and Zoo, and the addition of three new partners: SummerWinds Nursery, Santa Clara Bird Alliance, and Los Gatos Birdwatchers.
- Media advertising showed substantial gains across key indicators, as highlighted below:
    - Impressions: A 40.13% increase, reaching 6,656,273 (up from 4,750,050 in FY 2023-24).
    - Video Views: A 222.23% increase, totaling 1,815,449 (compared to 563,386 in FY 2023-24).
    - Click-Through Rate: A 146.87% increase, with clicks increasing from 15,257 in FY 2023-24 to 37,666 in FY 2024-25.
- The large number of views garnered by the new Youth Campaign video advertisements with 2,155,147 views on YouTube and 1,162,697 views on Instagram.
- A significant increase in website visits: 108,988 visits in FY 2024-25 compared to 86,556 visits in FY 2023-24.

Additional details are included in the FY 2024-25 Watershed Watch Campaign Annual Report in Appendix 7-1.

C.7.a. SCVURPPP Partnership with the City of San José's Outreach Campaign with San José Sharks

In FY 2024-25, the City of San José's Environmental Services Department (ESD) continued its partnerships with the San José Sharks to conduct outreach to encourage residents to adopt behaviors that will help reduce waste and prevent stormwater pollution. SCVURPPP provided funding to the City of San José to support these partnerships.

SCVURPPP funding was used for the purchase of anti-litter advertisements on bus backs. To compensate for the reduced impressions due to the VTA strike during the campaign period that disrupted bus operations, VTA provided a digital billboard on Highway 101 at no cost. Additional advertising, using other funds, was also done on social media, Uforia Radio, Google, and YouTube. The Watershed Watch website was included in all advertisements.

Figure 7-1. Bus back advertisement in partnership with San José Sharks

Evaluation of Effectiveness

The bus back advertisement ran for four weeks in March 2025 and received an estimated 890,514 impressions. The billboard received an estimated 1,618,740 impressions. Visits to the Watershed Watch website increased significantly, receiving a total of 69,000 visits during the Sharks advertising campaign.

C.7.b. Stormwater Pollution Prevention Education

Program's Toll-Free Telephone Numbers and Websites

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 public and requests for information. Program and Watershed Watch consultant staff continued to maintain the Program and Watershed Watch websites respectively.

The Watershed Watch website includes extensive information on stormwater pollution prevention and watershed protection for residents, businesses, and students. All SCVURPPP outreach brochures are available on the website for download. Program and Co-permittees activities such as outreach events, the Earth Day Poster contest, and the Santa Clara Valley Green Gardener training are promoted on the website. The website also includes a contact form that visitors can fill out to request brochures or information. The website address is included on all Watershed Watch Campaign outreach materials, giveaways, and advertisements.

Individual agency points of contact are publicized on Program outreach materials and websites, and the point of contact list is maintained by the Program. The current Management Committee and Construction-Illegal Discharge-Industrial Inspection Contact Lists are included in Appendix 7-2.

Regional Point of Contact

BAMSC continued to maintain the Baywise website (www.Baywise.org) as a regional point of contact.

Evaluation of Effectiveness

The Watershed Watch website received a total of 108,988 visits in FY 2024-25, compared to 86,556 visits in FY 2023-24. Program staff received 21 requests for information and outreach materials via the Watershed Watch website contact form.

C.7.c. Public Outreach and Citizen Involvement Events

Public Outreach Events

Program staff, the Watershed Watch consultant, and Co-permittees staffed eight events at which outreach on IPM, proper car washing, litter, and general storm water pollution prevention was

conducted. Events were selected based upon target audience and expected attendance. Outreach events in FY 2024-25 included:

- 50% off Car Wash, Wednesday, August 21, 2024, Campbell
- 50% off Car Wash, Tuesday, August 27, 2024, San José
- Pumpkins in the Park, Saturday, October 12, 2024, San José
- Day on the Bay, Sunday, October 13, 2024, San José
- Sunnyvale Earth Day Festival, Saturday, April 5, 2025, Sunnyvale
- Santa Clara Earth Day/Arbor Day, Thursday, April 10, 2025, Santa Clara
- Milpitas Earth Day, Saturday, April 12, 2025, Milpitas
- Saratoga Blossom Festival, Saturday, May 17, 2025, Saratoga

The Watershed Watch event display was used at all events. The display features a central panel titled "You are the Solution to Water Pollution" that includes an 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, Mobile Business Best Management Practices fact sheets, "10 Most Wanted Backyard Bugs" brochures, "You are the Solution to Water Pollution" brochures, and "Clean Cars & Clean Creeks" brochures. Giveaways included Watershed Watch sports backpacks and fly swatters.

The Watershed Watch bean bag toss game for children was used at the events. Children learned 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 2,500 fact sheets, brochures, and giveaways at the events. The bean bag toss game was popular at events and offered a good opportunity to educate children and adults about stormwater pollution prevention. Over 1,000 children and adults played the bean bag game in FY 2024-25.

Citizen Involvement Events

The Program provided funding for the following citizen involvement events:

- 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 provided in Appendix 7-3.
- Creek Cleanup Events – In FY 2024-25, the Creek Connection Action Group (CCAG) sponsored two creek clean-up events: Coastal Cleanup Day on September 21, 2024, and National River Clean-up Day on May 17, 2025. In addition to conducting cleanups at designated sites, residents were also encouraged to clean up neighborhoods, areas near creeks, and other open spaces.

The Program provided financial support for advertising both events and promoted both on the Watershed Watch website and social networking sites.

Evaluation of Effectiveness

Table 7-1 summarizes the results of cleanup events conducted during FY 2024-25. The Program has supported cleanup events since 2001. Table 7-2 summarizes the total number of sites, number of volunteers, and pounds of materials collected each year for the last 10 years.

Table 7-1. Results for FY 2024-25: September 2024 and May 2025 Cleanup Events[1]

	Coastal Cleanup Day, September 21, 2024	National River Cleanup Day, May 17, 2025	Totals
Number of sites	50	42	92
Number of volunteers	953	778	1,731
Pounds of recyclables	4,876	-	4,876
Pounds of trash	27,998	17,499	45,497
Pounds of material (trash plus recyclables)	32,874	17,499	50,373

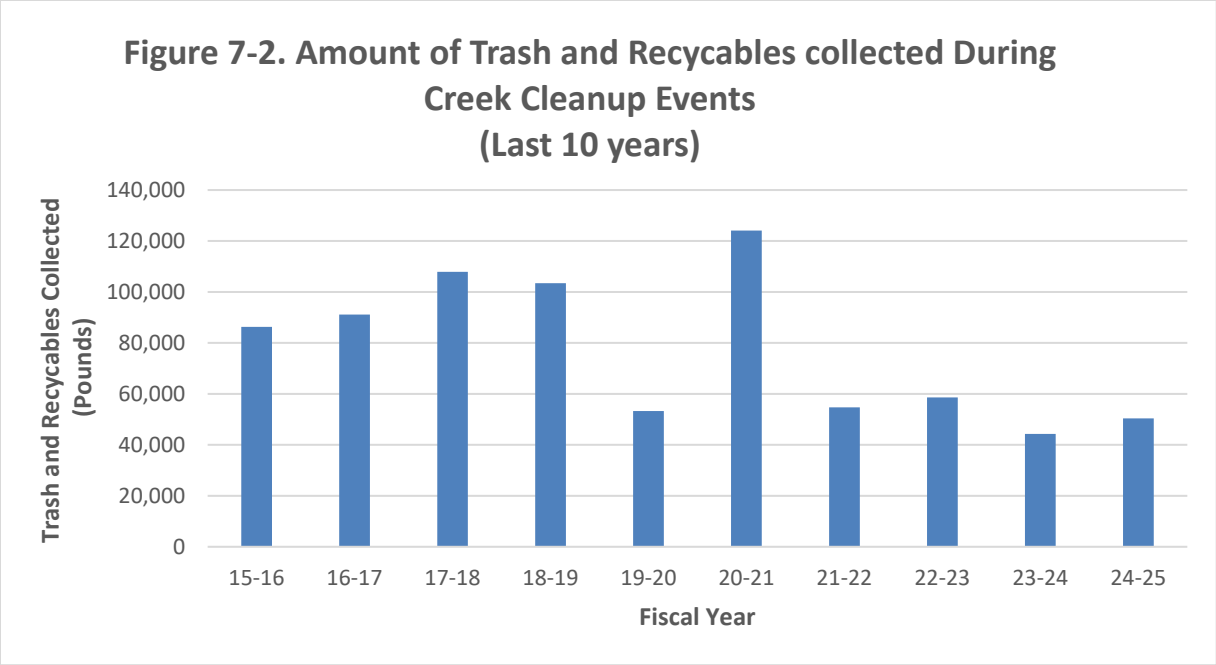
Table 7-2. Summary Results of Creek Cleanup Events, September 2015 – June 2025[2]

	No. of sites	No. of volunteers	lbs. of recyclables	lbs. of trash	Total lbs. collected	Average lbs./site
FY 15-16	93	2,953	6,002	80,291	86,293	927
FY 16-17	81	3,134	9,529	81,975	91,144	1,125
FY 17-18	94	3,382	9,043	98,856	107,898	1,052
FY 18-19	89	3,001	11,098	92,355	103,453	1,137
FY 19-20	46	2,166	4,404	48,893	53,297	1,159
FY 20-21	N/A	2,014	1,116	122,982	124,098	N/A
FY 21-22	55	1,509	3,917	50,780	54,697	995
FY 22-23	83	1,732	3,717	54,894	58,611	706
FY 23-24	95	1,899	4,387	39,937	44,324	466
FY 24-25	**92**	**1,731**	**4,876**	**45,497**	**50,373**	**547**

The total amount of trash and recyclables collected during the two creek cleanup events for the last ten years is plotted in Figure 7-2.

[1] Data includes quantities of trash and volunteers from sites located in Gilroy and Morgan Hill.

[2] Data includes quantities of trash and volunteers from sites located in Gilroy and Morgan Hill. Due to the COVID-19 shelter-in-place order, National River Cleanup Day scheduled for May 15, 2020, was canceled. Data reported for FY 19-20 is only for Coastal Cleanup Day, which occurred on September 21, 2019. The totals reported for FY 20-21 are from September 2020 and May 2021 cleanups of neighborhoods, creek areas and open spaces rather than designated creek cleanup sites. The totals reported for FY 21-22 include self-guided cleanups in addition to cleanups at designated sites.



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.

C.7.d. Watershed Stewardship Collaborative Efforts

Santa Clara Basin Watershed Management Initiative

During FY 2024-25, the Program supported the Santa Clara Basin Watershed Management Initiative (SCBWMI) by participating in the Land Use Subgroup and the Santa Clara Valley Zero Litter Initiative.

Land Use Subgroup

The Land Use Subgroup (LUS) continued to coordinate with the Peninsula South Bay Watershed Forum (PSBWF) on information sharing and event outreach. Due to declining participation in the LUS, the Program evaluated alternatives for watershed stewardship collaboration and is pursuing a possible partnership with the PSBWF for FY 2025-26.

Zero Litter Initiative

The Zero Litter Initiative (ZLI) Steering Committee met approximately every other month in FY 2024-25, and focused on the following efforts, topics and programs:

- Coordination with Caltrans, Valley Transportation Authority (VTA) and Beautify San Jose (Beautify SJ): ZLI participants continued coordination meetings with transportation and other agencies on trash-related issues such as illegal dumping, the Clean California Campaign, Adopt-A-Highway and homeless encampment cleanups in the public right of way, on public property and in other areas.
- Coordination with the Alameda County Illegal Dumping (ACID) Task Force and CalRecycle Illegal Dumping Technical Advisory Committee (IDTAC): The ZLI coordinated illegal dumping issues with two statewide task forces. The ACID Task Force is organized by the office of Alameda County

Board of Supervisor Nate Miley and the IDTAC organized by CalRecycle. The CalRecycle IDTAC meets quarterly. Information on the IDTAC can be found here.

- Coordination with the Technical Advisory Committee of the Santa Clara County Recycling and Waste Reduction Commission (RWRC TAC): The ZLI continued to share information (through ZLI members that attend both organizations' meetings) on best litter management practices to reduce litter and waste in relation to MRP requirements, trash-related requirements in state and local regulations, and illegal dumping. The ZLI continues to discuss guidance on policies and ordinances to reduce single-use foodware and litter including event planning and permitting.
- Tracking of Relevant Legislation and Regulations: The ZLI discussed and tracked information on: proposed and existing trash, packaging, foodware, and litter-related federal, state, regional and local laws, bills and regulations including SB-54, SB-1383, AB-1206 and others; proposed and on-going regulatory programs and policies for litter and compost being considered by the National Organic Standards Board, the National Organic Protocol, the California Department of Agriculture and other California departments overseeing the development of packaging and foodware regulations related to SB-54; and coordination with efforts to increase the use of reusable foodware and reduce single-use packaging and foodware including those taken by the West Coast Reusables Forum, Upstream, the Story of Plastic and other organizations.
- Monitoring Pollutants of Concern and Extended Producer Responsibility Programs: The ZLI discussed and shared information on: litter-prone and illegally dumped products and materials containing or generating pollutants of concern such as PFAS, 6PPD-Quinone, pesticides, tire wear dust, micro and nano-plastics; strategies for management including True Source Control (TSC) and Extended Producer Responsibility (EPR); strategies for reducing smoking-related litter and waste; and coordination with related organizations such as the California Product Stewardship Council, the National Stewardship Action Council, Californians Against Waste, CASQA, CalRecycle, the Department of Toxic Substances Control (DTSC), Department of Pesticide Regulation (DPR), the State Water Board and others.

In FY 2025-26, the ZLI will continue to meet as needed and as budget allows, discuss these topics, review existing and proposed legislation and regulations and coordinate with stakeholders to achieve zero litter goals.

C.7.e. School-Age Children Outreach

SCVURPPP provides outreach to school-age children by funding school assemblies by the ZunZun musical group and the Watershed Watchers Program at the Don Edwards San Francisco Bay Wildlife Refuge. In addition to these, SCVURPPP conducted an Earth Day Poster Challenge in FY 2024-25. These activities are described below, including evaluation of effectiveness.

ZunZun Musical Assembly

Each year the Program sponsors up to 50 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.

Figure 7-3. ZunZun assembly at a local school

In FY 2024-25, ZunZun conducted 52[3] assemblies at 25 elementary schools and one community event. The assemblies reached an estimated 10,927 students and 453 teachers. The FY 2024-25 ZunZun School Assembly Report, including the list of schools that received the assemblies, is provided in Appendix 7-4.

Evaluation of Effectiveness

To track effectiveness, teachers were asked to complete a postage-paid survey card or complete an online survey. A total of 73 teachers completed the survey. Overall, the feedback was very positive and indicated an increase in the students' knowledge about watersheds and pollution prevention. The FY 2024-25 Teacher Evaluation Report is included in Appendix 7-4.

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

The Watershed Watchers program includes 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. In FY 2024-25, Watershed Watchers programs were mostly offered in-person. More details are included in the Watershed Watchers Report in Appendix 7-3.

Evaluation of Effectiveness

In FY 2024-25, Refuge staff conducted 81 activities and events, attracting 3,289 participants. Surveys were conducted after some activities to gauge the participants' level of understanding and awareness of stormwater issues. The survey results indicated that participants had a good understanding of the storm drain system. Highlights from the survey results are provided below:

- 90% of survey respondents correctly answered that water flowing into the storm drain goes to local creeks.
- 81% of survey respondents correctly answered that stormwater does not get filtered before it reaches the San Francisco Bay.

2025 Earth Day Poster Challenge

In FY 2024-25, the Program once again implemented a poster contest for Santa Clara County students in grades K-12. The contest, titled the 2025 Earth Day Poster Challenge, invited students to submit posters on one of the following two themes: "What do you love about your local waterways (creeks, rivers,

[3] Due to a last-minute request, ZunZun conducted 52 assemblies in FY 2024-25, instead of 50.

lakes)?" and "How can you prevent water pollution?". A new webpage was created on the Watershed Watch website to post contest information and receive entries. The poster contest was launched on January 15, 2025, and submissions were due on March 17, 2025. The contest was publicized on the Watershed Watch website and by conducting paid promotions on social media. Co-permittees promoted the contest to local teachers and on social media. A group of Co-permittee representatives judged contest entries and selected first and second place winners in three grade brackets: K-2, 3-5, and 6-8. Cash prizes were awarded to all winners. The winning entries are posted on the Watershed Watch website.

Evaluation of Effectiveness

The Program received a total of 78 entries (37 in grades K-2, 27 in grades 3-5, and 14 in grades 6-8) from Santa Clara County students. The social media promotions delivered impressions and achieved engagements.

C.7.g. Reporting

Table 7-3 includes a summary of outreach programs (type and number) implemented by SCVURPPP during FY 2024-25.

Table 7-3. Summary of SCVURPPP's FY 2024-25 Outreach Activities (Provision C.7.g.iii.(1))

Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
C.7.a. Outreach Campaigns	SCVURPPP conducted the Watershed Watch Campaign which included media advertising, website, social media promotions, and partnership development.	Ongoing	Ongoing	Ongoing		
	SCVURPPP provided funding to the City of San Jose to conduct the anti-litter/volunteering for cleanup campaigns with the San José Sharks.	Two campaigns.	One campaign.	One campaign.		
C.7.c. Public Outreach and Citizen Involvement Events	The Watershed Watch booth was present at various community events. The booth included informational materials as well as a game for kids.	Five community outreach events.	Four community outreach events.	Eight community outreach events.		
	SCVURPPP provided funding to Valley Water to support advertising for the September Coastal Cleanup Day and the May National River Cleanup Day.	Cleanup events held at 83 sites.	Cleanup events held at 95 sites.	Cleanup events held at 92 sites.		
	SCVURPPP funded the Watershed Watchers Program at the Don Edwards San Francisco Bay National Wildlife Refuge which included citizen involvement and stewardship activities/events.	11 citizen involvement and stewardship activities/events.	12 citizen involvement and stewardship activities/events.	15 citizen involvement and stewardship activities/events.		

Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
C.7.d. Watershed Stewardship Collaboration	SCVURPPP supported the Santa Clara Basin Watershed Management Initiative by participating in the Santa Clara Valley Zero Litter Initiative (ZLI) and evaluated alternatives to supporting the Land Use Subgroup (LUS), e.g., the Peninsula/South Bay Watershed Forum (PSBWF). .	• Two LUS meetings. • One workshop titled "Riparian Corridors Setbacks: Challenges and Benefits" • Nine ZLI meetings.	• One LUS meeting. • Eight ZLI meetings.	• Two coordination meetings with PSBWF. Seven ZLI meetings.		
C.7.e. School-Age Children Outreach	SCVURPPP provided funding to the musical group, ZunZun, to conduct educational assemblies at elementary schools.	51 ZunZun assemblies conducted at 23 elementary schools and two community events	50 ZunZun assemblies conducted at 25 elementary schools.	52 ZunZun assemblies conducted at 25 elementary schools and one community event.		
	SCVURPPP funded the Watershed Watchers Program at the Don Edwards San Francisco Bay Wildlife Refuge which included interpretive events for school-age children.	Approximately 50 interpretive events.	Approximately 50 interpretive events.	Approximately 50 interpretive events.		
	SCVURPPP conducted the Earth Day Poster Challenge for grades K-8 children	One contest.	One contest.	One contest.		

Type of Outreach Program Implemented	Brief Description of Current Year Campaigns	Number of outreach campaigns or events occurring during each Permit Year, if applicable				
		FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
C.7.f. Outreach to Municipal Officials	SCVURPPP staff developed materials in FY 22-23 to inform municipal officials about MRP 3.0. These are available on the SCVURPPP website. No new materials were developed in FY 24-25.	N/A	N/A	N/A		

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 8

Water Quality Monitoring

September 30, 2025

Section 8 Water Quality Monitoring

■ Introduction

Since its inception in 2002, the Program has maintained an effective, NPDES permit compliant, and scientifically sound water quality monitoring and assessment program. During this time, the *SCVURPPP Monitoring and Assessment Program* has provided Co-permittees, the Water Board, and other stakeholders, such as CASQA and the State Water Board's Surface Water Ambient Monitoring Program (SWAMP), 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). The Program currently conducts water quality monitoring and associated projects for all Co-permittees in compliance with Provision C.8 of the MRP. By conducting monitoring for all Co-permittees, the overall costs are reduced by avoiding a duplication of effort that could occur if conducted individually, and data sharing opportunities are optimized. The monitoring requirements of the MRP reflect the longstanding Program goal to develop high quality information on water quality in discharges, local creeks and the Bay that supports effective municipal stormwater management.

This section of the Program's FY 2024-2025 Annual Report is intended to provide brief summaries of the Provision C.8 water quality monitoring requirements and the compliance activities conducted by the Program in Water Year 2025 (WY 2025).[1] No water quality data are included within this section. Interpretation and discussion of all monitoring data and conclusions of all water quality monitoring activities conducted in WY 2025 in compliance with the MRP will be described in the Program's Integrated Monitoring Report (IMR). The IMR, which will be submitted to the Water Board by March 31, 2026, will also report on all data collected since the Program's previous IMR (i.e., WY 2019).

■ Bay Area Regional Monitoring Coalition (C.8.a)

Since 2009, the Program has participated in a regional monitoring collaborative to address requirements in MRP Provision C.8. The regional monitoring collaborative is referred to as the Bay Area Municipal Stormwater Collaborative (BAMSC) (formerly BASMAA[2]) Regional Monitoring Coalition (RMC). The RMC is focused on providing a forum to implement regionally consistent water quality monitoring approaches and designs among Bay Area municipal stormwater monitoring programs subject to the MRP. While the costs of water quality monitoring compliance activities have increased since the RMC was created in 2009, costs to the Program have been offset as a result of collaboration through the RMC. Participation in the RMC is coordinated by stormwater program and/or Co-permittee representatives (or equivalent) and is facilitated through the BAMSC Monitoring and Pollutants of Concern (MPC) Subcommittee 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).

[1] Water quality monitoring is conducted on a Water Year (WY) basis, which begins on October 1 and ends on September 30 of the named year. For example, Water Year 2024 (WY 2024) began on October 1, 2023 and will conclude on September 30, 2024.
[2] As of June 28, 2021, BASMAA officially dissolved as a California non-profit public benefit corporation; however, members of BASMAA continue to work together through the Bay Area Municipal Stormwater (BAMS) Collaborative.

■ Monitoring Protocols and Data Quality (C.8.b)

Provision C.8.b requires that water quality data collected by Co-permittees in compliance with the MRP be consistent with SWAMP standards, set forth in the SWAMP Quality Assurance Program Plan (QAPrP). 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:

- **Standard Operating and Data Quality Assurance Procedures** – In WY 2013 the RMC adapted existing creek monitoring standard operating procedures (SOPs) and the QAPrP developed by SWAMP into a document applicable to local monitoring requirements. The RMC SOPs and Quality Assurance Project Plan (QAPP) document the field, laboratory, and data validation procedures necessary to maintain comparable, high-quality data among RMC participants. The RMC SOPs and the QAPP were revised in WY 2014 (FY 2013-2014), WY 2015 (FY 2014-2015) and WY 2016 (FY 2015-2016) in response to lessons learned, evolving MRP monitoring requirements, and changes to the SWAMP QAPrP. In WY 2020 (FY 2019-2020), the RMC QAPP was updated to reflect new SWAMP protocols that eliminate the need for toxicity field duplicates. No revisions to the RMC creek monitoring QAPP or SOPs have been made since WY 2020; however, in WY 2023, the RMC developed new QAPPs focusing on Low Impact Development (LID) effectiveness monitoring and trash monitoring. These QAPPs were submitted to the Regional Water Board for approval with monitoring plans required by the MRP. During WY 2025, the LID effectiveness monitoring QAPP was updated based on input from the LID Technical Advisory Group (TAG) and Water Board staff and will be resubmitted to the Regional Water Board for approval in September 2025.
- **Information Management System Development/Adaptation** – Information management systems developed in previous fiscal years store and manage water quality data collected in compliance with Provision C.8. LID, trash, Pollutants of Concern (POC) and pesticides/toxicity monitoring data collected in the Santa Clara Valley are managed by the Program.

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

Provision C.8.c requires Co-permittees 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 2024-25, Co-permittees complied with this Provision by contributing a combined total of $275,250 to the RMP, including the Program's equitable share of $100,000 (i.e., $34,104) to augment the RMP Emerging Contaminants Monitoring Strategy consistent with provision C.8.f.ii. In addition, Program and Co-permittee staff actively participated in RMP committees and work groups. Specifically, the SCVURPPP Senior Technical Advisor (Adam Olivieri) and Program Manager (Chris Sommers) represented all BAMSC member agencies on the RMP Steering and Technical Review Committees, respectively. Program staff also played active roles on a number of RMP work groups and strategy teams, such as the Sources, Pathways, and Loadings Workgroup (SPLWG) and the Emerging Contaminants Workgroup (ECWG). Detailed information on the RMP, including monitoring results and conclusions, can be found on the San Francisco Estuary Institute's website.

■ Low Impact Development Monitoring (C.8.d)

Provision C.8.d of the MRP directs Permittees to conduct LID monitoring during the permit term, and identifies specific parameters and monitoring frequencies that must be achieved to address the following management questions:

1. What are the pollutant removal and hydrologic benefits, such as addressing impacts associated with hydromodification, of different types of LID facilities, systems, components, and design variations, at different spatial scales (e.g., single control vs watershed or catchment scale), and how do they change over time?
2. What are the minimum levels of O&M necessary to avoid deteriorated LID facilities, systems, and components that reduce pollutant removal and hydrologic performance?

In Santa Clara County, a minimum of 25 water quality sampling events must be conducted during the MRP permit term, with an annual minimum of three events beginning in WY 2024. Each sampling event must consist of paired flow- (or time) weighted composite samples of the LID facility influent and effluent collected with automated samplers. Provision C.8.d.iv of the MRP specifies that all composite samples must be analyzed for total mercury, total polychlorinated biphenyls (PCBs), total suspended solids (TSS), per- and polyfluoroalkyl substances (PFAS), total petroleum hydrocarbons (TPH), total and dissolved copper, total hardness, and pH. In addition, flow must be measured at both influent and effluent sampling locations.

Permittees were required to submit LID Monitoring Plans at the regional or countywide level that demonstrate how the requirements in provision C.8.d.iii-iv will be met. To assist in development and implementation of scientifically-sound LID Monitoring Plans, to facilitate regional consistency with respect to sampling and analytical methodology, and to make recommendations about allocation of samples between and within different sites, provision C.8.d.ii required Permittees to form and convene a TAG consisting of impartial science advisors and Water Board staff. The TAG was asked to review and make recommendations on the LID Monitoring Plans prior to submission of the Plans to the Regional Water Board Executive Officer for approval. The Program submitted the SCVURPPP LID Monitoring Plan to the EO on May 1, 2023 and it was conditionally approved on August 23, 2023. A revised Plan, addressing the additional requirements described in the EO conditional approval letter was submitted on October 31, 2024.

During FY 2024-25, the Program implemented the SCVURPPP LID Monitoring Plan. Two LID facilities (known as TCM-4 and TCM-6) that are part of the Top Golf Public Green Street Project in the City of San José were equipped with automated sampling equipment prior to the onset of the WY 2025 wet season (i.e., October 1, 2024). Five sets of paired (influent/effluent) water quality samples were successfully collected from TCM-6 during five storm events. One influent water quality sample was successfully collected from TCM-4; however, a paired effluent sample was not collected due to lack of flow.

On May 9, 2025, the Program participated in a LID TAG meeting, the fourth LID TAG meeting since the TAG was first convened in December 2022. The purpose of the meeting was to present the status of LID Monitoring (Year 2) and propose modifications to the monitoring plan and QAPP based on lessons learned in Year 1 and Year 2 of monitoring.

Samples were submitted to contract laboratories for analysis. In FY 2025-26, SCVURPPP will continue to comply with Provision C.8.d requirements. Analytical and continuous flow data collected during FY 2024-2025 will be evaluated and validated according to the LID effectiveness monitoring QAPP, the LID TAG

will be convened to review the data, and the Program will collect a minimum of three paired samples at the Top Golf LID facilities.

■ Trash Monitoring Project (C.8.e)

Provision C.8.e directs Permittees to conduct trash monitoring at MS4 outfalls and in receiving waters, and prescribes specific monitoring location criteria, methods and frequencies. The trash monitoring must address the following management and monitoring questions:

Management Questions:

1. Have Permittees' trash management actions effectively prevented trash from their jurisdictions from discharging to receiving waters?
2. Are discharges of trash from areas within Trash Management Areas controlled to a low trash generation level causing and/or contributing to adverse trash impacts in receiving water?

Monitoring Questions:

1. What is the trash condition and approximate level of trash (volume, type, and size) within and discharging into receiving waters in areas that receive MS4 runoff controlled to a low trash generation via the installation of full trash capture devices, or the implementation of other trash management actions equivalent to full trash capture systems?
2. Does the level of trash in the receiving water correlate strongly with the conditions of the tributary drainage area of the MS4?

Two monitoring methods are prescribed in provision C.8.e.ii to address these questions. The first method (i.e., netting) is prescribed for locations within the MS4 (e.g., MS4 outfalls to receiving water). The second method (i.e., trawls, nets) is prescribed for receiving water locations (e.g., creeks). The MRP also requires the collection of flow data to calculate loadings of trash to and within receiving waters, and collection of data on material type for all trash captured through these methods.

Outfall Monitoring Requirements: In Santa Clara County, a minimum of three outfalls must be monitored during a minimum of three wet weather events per year beginning October 1, 2023. Monitoring must be conducted with netting (or equivalent devices) attached to the end of the outfall pipe or other equivalent location that allows for capture of trash discharging through the MS4. Targeted outfalls must drain areas that are controlled to the low trash generation level (i.e., < 5 gallons/acre/year) and must be representative of the types of trash controls implemented across the region.

Receiving Water Monitoring Requirements: A pilot program to directly sample sections of receiving waters that receive runoff primarily from MS4 outfalls that drain tributary areas controlled to the low trash generation level must begin October 1, 2024. At least two receiving water sites in Santa Clara County must be monitored during at least three wet weather events per year. Monitoring must be conducted with trawl, nets, or equivalent devices designed to capture as much of the width and depth of the receiving water's cross section as is feasible and safe.

Permittees were required to collectively (i.e., regionally) submit separate Trash Monitoring Plans (MP) and QAPPs for both Trash Outfall and Receiving Water (RW) Monitoring, The MPs and QAPPs are subject to approval by the Regional Water Board Executive Officer (EO). The MPs provide characteristics for

each monitoring site locations and catchment/drainage area, description of the site selection process, sampling methods and protocols to be used, sampling schedule, summary of permitting requirements.

A Trash TAG, composed of impartial science advisors and Regional Water Board staff, was formed and convened by the Permittees to review and provide input on ongoing trash monitoring, site selection, analysis methods, results, and conclusions. The Trash TAG met five times between March 2023 and February 2025 to review the MPs and QAPPs.

The Outfall Trash MP and QAPP (Version 1) were both submitted to the Water Board on July 31, 2023. Updated versions of the Outfall MP and QAPP (Version 2) were developed in response to the conditional approval received by the Regional Water Board EO and were submitted on July 31, 2024. The RW Monitoring Plan and QAPP (Version 1) were submitted on July 31, 2024. The Regional Water Board EO approved both MPs and QAPPs on January 30, 2025.

As defined in each MP, all trash (> 5 mm in diameter) that is collected during outfall and receiving water monitoring is sorted into 11 trash types and measured by volume. At each outfall monitoring location, flow measurements are recorded using depth sensors and data loggers, and the data is downloaded and compiled for analysis. Existing flow gages near receiving water monitoring locations are used to record flow measurements.

Outfall Monitoring

The first year of trash outfall monitoring began on October 1, 2023. The Program successfully collected trash samples at all three outfall monitoring locations for three storm events during WY 2024. Results from these sample events were summarized in the Annual Trash Progress Report, submitted in the UCMR on March 31, 2025.

During WY 2025, the Program conducted its second year of trash outfall monitoring at three locations in Santa Clara County. Trash samples were collected during three storm events at one site (SC-SFC) and two storm events at the remaining two sites (SC-COY and SC-STE). There were five disqualified sample events at the two remaining sites due to either equipment failure or vandalism. The missed sample event at each of these sites will be added to the monitoring events planned for WY 2026.

RW Monitoring

The development and implementation of the Receiving Water Trash Monitoring Program is funded by an U.S. Environmental Protection Agency (USEPA) San Francisco Bay Water Quality Improvement Fund (WQIF) grant, titled *Watching Our Watersheds – Improving Trash Monitoring Methods and Pollution Prevention Strategies through Regional Partnerships in the Bay Area*. RW Trash Monitoring began in WY 2025. A three-month delay procuring cranes prevented field crews from sampling early season storms and as a result, the first season flush storm event was not sampled at either site in Santa Clara County. Monitoring events were subsequently conducted, however, later in WY 2025.

Trash outfall and RW monitoring results will be reported in the IMR, which will be submitted to the Regional Water Board by March 31, 2026.

■ POC Monitoring (C.8.f)

Provision C.8.f. requires monitoring for pollutants of concern (POCs) identified in the MRP, which include PCBs, mercury, copper, and emerging contaminants. The MRP prescribes the minimum number of samples required annually and over the Permit term for each POC. POCs monitoring is intended to address six priority POCs management information needs (i.e., Management Questions). The Permit describes the minimum number of samples required for each Management Question depending on the specific POC.

1. **Source Identification** – identifying which sources or watershed source areas provide the greatest opportunities for reductions of POCs in urban stormwater runoff;
2. **Contributions to Bay Impairment** – identifying which watershed source areas contribute most to the impairment of San Francisco Bay beneficial uses (due to source intensity and sensitivity of discharge location);
3. **Management Action Effectiveness** – providing support for planning future management actions or evaluating the effectiveness or impacts of existing management actions, including compliance with TMDLs and other POCs requirements;
4. **Loads and Status** – providing information on POC loads, concentrations, and presence in local tributaries or urban stormwater discharges; and
5. **Trends** – evaluating trends in POCs loading to the Bay and POC concentrations in urban stormwater discharges or local tributaries over time; and
6. **Compliance with Receiving Water Limitations** – providing information to assess whether receiving water limitations (RWLs) are achieved.

Like LID and trash monitoring, POCs monitoring is conducted as part of the RMC. Collaboration on POCs monitoring is supplemented through the Small Tributaries Loading Strategy Workgroup (STLS), which is a subcommittee of the RMP's Sources, Pathways and Loadings Workgroup (SPLWG) and the RMP's Emerging Contaminants Workgroup (ECWG). Stakeholders involved in the STLS and ECWG include BAMSC representatives, staff of the San Francisco Estuary Institute (SFEI), and staff of the Water Board. The current focus of the SPLWG is on emerging contaminants in stormwater, and on developing an integrated monitoring and modeling approach for both legacy and emerging contaminants to address management questions about the sources, fate, and transport of these pollutants. The current objective of the ECWG is to identify Contaminants of Emerging Concern (CECs) that might impact beneficial uses in the Bay and to develop cost-effective strategies to identify, monitor, and minimize impacts. The ECWG is currently working with the STLS on screening of PFAS and other CECs in stormwater.

In WY 2025, the Program conducted sampling for PCBs, mercury and copper. The MRP-required yearly minimum number of samples was exceeded for these POCs. Wet weather stormwater samples and dry season sediment samples were collected as part of catchment-wide and local screening efforts. The primary goal of the investigations is to identify source properties that can be referred to the Water Board for abatement. Some samples collected by the Program, however, also address other information needs such as trends and loads and status. In addition, PCBs, mercury, and copper samples collected in compliance with provision C.8.d (LID Monitoring) address management action effectiveness information needs.

Emerging contaminant monitoring is being addressed through Program participation in the RMP. The level of effort required by provision C.8.f.ii, Table 8.2 is satisfied through augmentation of the RMP's Emerging Contaminants Monitoring Strategy (i.e., ECWG) in the amount of $100,000 per year for all Permittees combined.

Provision C.8.f.ii, Table 8.2 specifies that monitoring for Receiving Water Limitations (RWLs) assessment must be conducted during four wet season and one dry season sampling events over the course of the MRP. Analytes must include copper, zinc, fecal indicator bacteria, and additional analytes determined under provision C.8.h.iv. In WY 2023, the Program worked with the RMC to develop the Regional RWLs Assessment Report (i.e., Monitoring Plan). The Report was submitted with the Programs WY 2022 UCMR and conditionally approved by the Regional Water Board in June of WY 2023. Additional information required by the conditional approval was provided with the Programs WY 2023 UCMR. During WY 2024, the Program collected three of the four required wet season samples and one dry season sample. The final wet season sample was collected in WY 2025.

■ Pesticide and Toxicity Monitoring (C.8.g)

Pesticide and toxicity monitoring requirements, including monitoring parameters, methods, occurrences, durations, and minimum number of sampling sites for each stormwater program, are described in provision C.8.g. In FY 2024-2025 (i.e., July 2024), the Program conducted dry season pesticides and toxicity monitoring at two sites in collaboration with other RMC members. The dry season stations (Stevens Creek and San Tomas Aquino Creek) have been sampled during the previous eight years. Wet weather monitoring requirements were satisfied for the MRP 3.0 permit term during FY 2022-2023 (WY 2023). Pesticide and toxicity monitoring for FY 2025-2026 will include dry season data collected during WY 2025 (July 2025) and will be interpreted in the IMR which will be submitted in March of 2026.

■ Reporting (C.8.h)

Provision C.8.h requires Permittees to report annually on water quality data collected in compliance with the MRP. Annual reporting requirements include submittal of electronic data, notification of water quality standard exceedances, and interpretive reporting on C.8 sub-provisions. Each annual must include separate status reports for LID Monitoring, Trash Monitoring, POC Monitoring, and Pesticides and Toxicity Monitoring. The electronic data and annual reports are required by March 31 of each year. In lieu of the typical Urban Creeks Monitoring Report (UCMR), which reports on one year of data, WY 2025 data will be compiled with all data collected since WY 2019 and presented in the Program's IMR, which will be submitted by March 31, 2026.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 9

Pesticides Toxicity Control

September 30, 2025

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 education and outreach efforts to residents, businesses, pest control professionals, and municipal staff to promote behavior changes regarding pesticide use and less-toxic pest control methods. Outreach efforts have been supplemented by local and regional studies to define the need, participation in regional organizations to address pesticide regulations and other issues, and development of local Integrated Pest Management (IPM) plans.

In FY 2024-25, 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. 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.d)
  - Public Outreach (C.9.e)
- Regional Activities
  - Track and Participate in Relevant Regulatory Processes (C.9.f)

■ Program Activities

C.9.d. Interface with County Agricultural Commissioners

Program staff developed an article titled "Keeping Pesticides Out of Our Creeks" which was included in the Santa Clara County Division of Agriculture's "The Pesticide Review" newsletter. The article encouraged pest control professionals to provide IPM services and informed them about available IPM certification programs. In November 2024, the Division of Agriculture emailed the newsletter to all pesticide dealerships and registered pest control companies in Santa Clara County. The newsletter is available at this link on the Santa Clara County Division of Agriculture's website.

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.

C.9.e. Public Outreach

Point of Purchase Outreach to Consumers (C.9.e.ii(1))

The Program contributed funds to and actively participated in the CASQA Our Water Our World Program and implemented the program in Santa Clara Valley stores. The aim of the Our Water Our World (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-tags" on store shelves. Shelf-tags are small product identification signs 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, 24 local stores in Santa Clara Valley participate in the OWOW Program. Program staff visited each participating store three times and all Home Depot locations four times in FY 2024-25 to restock literature racks and update shelf-tags. Additional trips were made to some stores to replace broken or lost literature racks. Due to the lack of available trainers, store employee trainings could not be conducted during FY 2024–25.

The list of stores participating in the OWOW Program in Santa Clara Valley and their employee training status is provided in Appendix 9-1.

Evaluation of Effectiveness

The OWOW Program has been very successful in engaging stores and educating customers about less-toxic products. In FY 2024-25, the store managers continued to be enthusiastic about the program and were receptive to having the OWOW materials in their stores.

The Program intends to continue local implementation of the OWOW Program in FY 2025-26.

Pest Control Contracting Outreach (C.9. e.ii.(2)) – Outreach to Residents

The Program continued to conduct outreach about less-toxic pest control to residents who use or contract for structural pest control or landscape pest control and landscape professionals. Messages included the following: information on pesticide use and water quality, proper use and disposal of pesticides, IPM, hiring a Green Gardener, the list of trained Green Gardeners, IPM Certification Programs, and the OWOW Program. The Program conducted the following IPM outreach activities in FY 2024-25 to meet this requirement:

- Media Advertising – IPM advertisements were placed online and on local radio stations as part of the Watershed Watch Campaign media advertising. A summary of the components of the media advertising campaign on pesticides is presented below:
  - "Hire a Green Gardener" 30-second radio ads ran in English on KEZR.
  - "Less-Toxic Pest Control" 30-second radio ad ran in English on KUFX and KEZR, and in Spanish on KSOL.
  - "Less-Toxic Pest Control" and "Hire a Green Gardener" advertisements ran on digital media and were also promoted on social media via paid advertising.

  Additional details on the media campaign are included in Appendix 7-1.
- Watershed Watch Website - Messages about less-toxic pest control 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 Watershed Watch website throughout the year. The website also promotes proper disposal of pesticides and refers users to the County Household Hazardous Waste Program's website to find a disposal location near them.
- South Bay Green Gardens – Since FY 2012-13, the Santa Clara County Recycling and Waste Reduction Commission (SCCRWRC) and SCVURPPP have funded a website to educate residents,

landscape construction and maintenance professionals, and municipal staff on sustainable landscaping techniques. In FY 2024-25, Program staff and some Co-permittee staff participated in meetings of the South Bay Green Gardens Subcommittee. The Subcommittee conducted advertising using Facebook, Instagram, and Google Ad Words to promote the South Bay Green Gardens website.

Evaluation of Effectiveness

Results from FY 2024-25 media advertising and outreach events conducted by the Program indicate that media advertising and other outreach were successful in informing and engaging more residents in sustainable landscaping and reduced pesticide use:

- Media Advertising and Website - The Watershed Watch media campaign, which included digital/online placements, as well as 380 spots on radio on various stormwater pollution prevention topics, delivered over six million gross impressions. Additional details are included in the FY 2024-25 Watershed Watch Campaign Final Report included in Appendix 7-1.
- South Bay Green Gardens Program – In FY 2024-25, the South Bay Green Gardens (SBGG) promotional budget for social media and sponsored Google searches was the same as the prior fiscal year. The website received 28,860 visits resulting in 40,293 page views which was an increase of 53% in visits, and 45% more page views than FY 2023-24. The ad investment was seasonally adjusted for greater promotion during the peak gardening seasons (Q2 and Q3) and scaled back during the Q1 and Q4 seasons. The Google Ad campaign received 286,409 impressions resulting in 13,902 clicks (4.8% click through rate) which was a 44% increase in clicks over prior year. Social media following experienced a net growth of 10% in overall followers to a total of 3,635; X.com decreased by 8%, while Facebook grew by 13% and Instagram by 10%. Ads promoting SBGG on Facebook and Instagram delivered 465,911 total impressions and resulted in 6,248 link clicks and 11,639 total clicks. In all, social media achieved 12,820 engagements.

Outreach to Landscape Maintenance Professionals (C.9.e.ii.(3))

In FY 2007-08, 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 two-hour classes, held once a week for ten weeks. 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. The training is conducted in collaboration with the Fremont Union High School District (FUHSD) Adult School in Sunnyvale. The Program provides funds toward student and guest speaker fees.

Green Gardener Trainings were planned in Fall 2024 and Winter 2025 and publicized via email, the Watershed Watch website, and social networking sites. Postcards promoting the training were mailed to approximately 150 local landscaping businesses. However, both trainings were cancelled due to low enrollment.

To assist Green Gardeners in meeting the continuing education requirements, the Program offered Green Gardeners the following options to re-certify:

- Attend an online sustainable landscaping training (Program staff sent a list of available trainings to Green Gardeners); or
- Complete an online self-assessment form to demonstrate use of sustainable landscaping practices.

Evaluation of Effectiveness

A total of 38 Green Gardeners recertified in FY 2024-25 using the options mentioned earlier. The list of Green Gardeners is posted on the Watershed Watch website.

The FY 2024-25 Green Gardener training report and training announcement flyers are included in Appendix 9-2.

C.9.g. Effectiveness Evaluation of Source Control Actions Related to Pesticides

Provision C.9.g of the MRP requires Permittees to evaluate the implementation of source control actions relating to pesticides. It requires Permittees to:

- Evaluate the effectiveness of control measures implemented by staff and contractors;
- Evaluate the attainment of pesticide concentration and toxicity targets for water and sediment from monitoring data (collected by Permittees, research agencies, and/or State agencies);
- Identify improvements to existing control measures and/or additional control measures, if needed, to attain targets with an implementation time schedule; and
- Discuss improvements made by each Permittee in implementing pesticide source control actions in the preceding five years, and enhancements that each Permittee will focus on in the subsequent permit terms.

SCVURPPP conducted an evaluation of source control actions implemented by SCVURPPP and its Co-permittees. The results of the evaluation are described in the Pesticide Source Control Actions Effectiveness Evaluation Report included in Appendix 9-3.

■ Regional Activities

During FY 2024-25, the Program participated in the following regional activities to address MRP C.9 requirements:

- 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. Through contributions to CASQA, SCVURPPP helped fund the efforts of the CASQA True Source Control Subcommittee and its consultants 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 True Source Control Subcommittee and provides input on draft letters and regulatory efforts related to pesticides. Subcommittee 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 True Source Control Subcommittee and its consultants and the effectiveness of their efforts is provided in the CASQA 2025 Pesticide Annual Report and Effectiveness Assessment included in Appendix 9-4.

- Regional OWOW Program – The Program provided funds toward implementing the Regional OWOW Program, which is now being coordinated by CASQA. Program staff participated in the CASQA OWOW Committee and provided input, as needed. The Regional OWOW Program activities implemented in FY 2024-25 included:
  - Coordinated program implementation with major chains Home Depot and Ace Hardware National. Home Depot Corporate (Atlanta) directed support of the program by providing a support letter;
  - Coordinated a print run of fact sheets and other materials; and
  - Updated less-toxic product lists.

  Additional details are provided in the CASQA OWOW 2024-2025 Annual Report included in Appendix 9-5.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 10

Trash Load Reduction

September 30, 2025

Section 10 Trash Load Reduction

■ Introduction

The goal of MRP 3.0 Provision C.10 (Trash Load Reduction) is to implement control measures and other actions to reduce trash loads from Co-permittee stormwater conveyance systems to the 100 percent trash load reduction benchmark by June 30, 2025. To demonstrate progress towards and attainment of this reduction goal, Co-permittees were required to develop and implement trash reduction control actions that include the installation and maintenance of Full Trash Capture (FTC) devices and the implementation of other control measures and best management practices that prevent or intercept trash before entering local water bodies through stormwater conveyances. Co-permittees were also required to maintain and update (as necessary) their Long-Term Trash Load Reduction Plans that describe the control measures that are/will be implemented to attain the 100% trash load reduction benchmark.

Activities associated with Provision C.10 requirements were conducted by Co-permittees, the Program, and at the regional level (via the Bay Area Municipal Stormwater Collaborative or BAMSC) during Fiscal Year (FY) 2024-25. Local actions are documented in each Co-permittee's Annual Report under Section C.10. This section highlights trash management and assessment activities conducted at the Program and/or regional levels in FY 2024-25, including:

- Program assistance to Co-permittees on evaluating and planning new or enhanced trash control measure implementation designed to achieve MRP 3.0 trash load reduction benchmarks;
- Implementation of the SCVURPPP Trash Assessment Strategy, including managing the Program-wide On-land Visual Trash Assessment (OVTA) Program, managing geospatial information on full trash capture locations and drainage areas, and calculating Co-permittee Trash Load Reductions using methods described in MRP 3.0;
- Program assistance through the development of guidance and tools needed for Co-permittees to effectively implement their Private Land Drainage Area (PLDA) trash control programs;
- Program assistance through the development of Co-permittee Revised Trash Generation Maps;
- Program coordination of SCVURPPP Trash Ad hoc Task Group (AHTG);
- Program participation in Santa Clara Basin Watershed Management Initiative (SCBWMI) Zero Litter Initiative (ZLI); and
- Program participation in the BAMSC Trash Subcommittee.

These activities built upon a large body of knowledge gained through tasks completed in previous FYs.[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 (https://scvurppp.org/trash/).

■ Program Activities

Calculation of Trash Load Reductions (C.10.a.ii)

The Program developed its *Trash Assessment 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 no comments were provided on the approach. In subsequent FYs, the Strategy has been fully implemented by the Program on behalf of and in collaboration with, all SCVURPPP Co-permittees. The Strategy informed and is consistent with the requirements in MRP 2.0 and 3.0 regarding the methods used by Co-permittees to demonstrate trash load reductions from municipal separate storm sewer systems (MS4s).

The Strategy generates information needed to demonstrate the magnitude and extent of trash reductions associated with MS4 discharges in the Santa Clara Valley. The Strategy is consistent with trash monitoring, assessment, and reporting requirements in the MRP and is primarily designed to answer the following core management question:

Have SCVURPPP Co-permittees achieved MS4 trash load reduction targets (i.e., 40%, 70%, 80%, 90%, and 100%/Low Trash Generation)?

The primary environmental and programmatic indicators that the Program and Co-permittees currently track to answer this core management question are:

1. **Full Trash Capture (FTC) Systems** – The extent of areas effectively treated by full trash capture devices and the operation and maintenance of these devices.
2. **Other Trash Controls** – Reductions in the levels of trash observed on-land and available to enter the MS4.
3. **Direct Discharge Programs (Offset)[2]** – The extent and magnitude of trash removed or prevented from entering a receiving water body from pathways other than stormwater that are directly impacting those water bodies (e.g., illegal dumping or homeless encampments).
4. **Additional Creek and Shoreline Cleanups (Offset)[2]** – The volumes of trash removed via creek and shoreline cleanup events during a given FY.
5. **True Source Controls (Credits)[2]** – Reductions in the levels of litter-prone items observed in the environment that are subject to source controls, such as ordinances that limit or prohibit the distribution of specific types of items, which were adopted and accounted for after the MRP 2.0 termination date.

In selecting the indicators above, SCVURPPP Co-permittees recognize that multiple indicators can provide the information necessary to effectively determine progress made in reducing trash discharged from MS4s. SCVURPPP's methods used to collect or track information on the primary indicators 1-3 listed above are briefly described below, along with summaries of associated activities conducted by the Program in FY 24-25. Additional information and the results of data collected to support indicators 1-3 can also be found in Co-permittee Annual Reports [see Section 10 – Provision C.10.b.iii(a) and (b)] or can be made available upon request. Methods used to assess indicator 3 are specific to Co-permittee direct discharge control plans and can be found in the applicable Co-permittee Annual Reports (e.g., City of

[2] Load reduction credits for source controls and offsets for additional creek and shoreline cleanups and direct discharge programs, as described in MRP 3.0, are not allowable after June 30, 2025.

San José). Because trash load reduction credits for existing true source controls adopted by Co-permittees during MRP 1.0 or 2.0 are no longer allowable under the MRP 3.0, indicators 4 and 5 are no longer used by SCVURPPP Co-permittees to demonstrate trash load reductions.

1. **Full Trash Capture Systems (Including Operation/Maintenance)**

   Devices and stormwater treatment facilities meeting the FTC system design criteria described in the MRP and certified by the State Water Resources Control Board (State Water Board) are effective trash controls if adequately maintained to ensure their trash capture efficiency. Consistent with the MRP and the State Water Board's Trash Amendments, if a FTC device is maintained effectively, then trash from the area draining to the device is deemed to be effectively reduced to a level of "no adverse impacts or low trash generation" and has achieved the ultimate trash reduction benchmark in the MRP (i.e., 100% trash load reduction). Additional trash reductions, therefore, are not needed in areas draining to (and treated by) FTC systems to achieve the ultimate trash reduction benchmark. Since FY 13-14, Program and Co-permittee staff have spent considerable time each FY in identifying and mapping areas draining to FTC systems using a combination of field work and Geographical Information Systems (GIS). Drainage areas for each newly installed full capture devices are delineated and mapped as part of an annual update of individual Co-permittee GIS full capture device data layers. These data layers are used to demonstrate compliance with MRP trash load reduction requirements.

   The Program and Co-permittees have delineated all drainage areas of installed FTC systems meeting the trash FTC system definition in the Santa Clara Valley. More than 25,715 acres of land area is currently treated by FTC systems in the Santa Clara Valley. Trash reductions associated with these areas are calculated based on the baseline trash generation levels established on Co-permittee maps and weighting factors associated with these levels, as described in the MRP. The most recent version of each Co-permittee map can be found on the Program's website.[3] The website link is also provided in Section 10 of each Co-permittee's FY 24-25 Annual Report.

   In accordance with MRP provision C.10.a.ii(a) and the State Water Board's FTC Certification process, stormwater treatment facilities (e.g., bioretention systems) implemented in accordance with MRP provision C.3 are deemed a full capture system if the facility, including its maintenance, prevents the discharge of trash to the downstream MS4 and receiving waters and discharge points from the facility, including overflows, are appropriately screened or otherwise configured to meet the FTC system screening specification for storm flows up to the FTC system one year, one hour storm hydraulic specification. Based on this definition, Co-permittees have applied a very conservative assumption to determine which bioretention facilities constructed in Santa Clara County are meeting the criteria included in the MRP and the State Water Board Certification Factsheets for "multi-benefit" stormwater treatment systems should be considered FTC systems. Currently, only bioretention facilities constructed after July 1, 2010, designed to treat at least 3% of the drainage management area (DMA), and have at least a 6-inch ponding depth have been identified by Co-permittees as meeting the definition of a full trash capture system. A technical memorandum describing the analysis conducted by the Program that supports the application of these criteria and considering these multi-benefit systems as trash FTC systems was provided in Appendix 10-1 of the Program's FY 21-22 Annual Report. In April 2023, Program staff assisted with developing suggested responses to Water Board staff comments and next steps to the BAMSC Trash Subcommittee regarding the use of bioretention facilities as full trash capture. A follow-up

[3] http://scvurppp.org/trash-maps/

meeting was also held to discuss multi-benefit treatment systems as full trash capture in April 2023. MRP Permittees provided a written response to the Water Board staff comments in May 2024, and the issue was briefly discussed in Bay Area Municipal Stormwater Collaborative (BAMSC) meetings during summer 2024. In January 2025, Water Board staff distributed a letter to MRP Program Managers that provides additional comments on the SCVURPPP memorandum and guidance regarding how bioretention systems can be acceptable as full trash capture equivalent systems. In May 2025, Water Board staff agreed to presume that these systems are full trash capture systems until final criteria can be developed that establish the conditions under which these multi-benefit systems can be considered full trash capture. Given the uncertainties in the criteria that will eventually be developed, Co-permittees decided to not count these multi-benefit systems as full trash capture in FY 24-25. Countywide Program staff will continue to participate in discussions regarding the use of bioretention facilities as trash full capture.

Additionally, the Program completed the development of a Model Trash Full Capture Device O&M Verification Program in FY 15-16. The O&M Verification Program is intended to ensure that devices operate at a level necessary to maintain their FTC system designation. In FY 24-25, Program staff continued to provide guidance to Co-permittees on MRP operation and maintenance requirements, and standard operating procedures developed for the Program as part of the Model Verification Program. Co-permittees with FTC systems have an O&M verification program tailored to fit the types of devices in their stormwater conveyance system and maintenance procedures needed to adequately maintain them. Information regarding maintenance and operation of full capture devices (and any issues arising) can be found in Co-permittee Annual Reports (see Section 10 – Provision C.10.b.i and ii).

2. Other Trash Control Measures (via On-land Visual Trash Assessments)

The Program's approach to assessing trash reductions in land areas identified on Co-permittee baseline maps as generating substantial levels of trash (i.e., very high, high, or moderate trash generation) and are not treated by FTC systems is to use established and tested On-land Visual Trash Assessment (OVTA) protocols that were developed in the Bay Area. The OVTA protocols document the levels of trash on impervious areas (e.g., streets, sidewalks, and properties) and detect changes in trash levels over time at trash generating areas. The OVTA protocols score sites/areas using a 4-tier system (A, B, C and D, with A being the least amount of trash). The four OVTA scores correspond with the four trash generation rate categories (i.e., low, moderate, high, and very high) and the associated weighting factors (i.e., 0, 1, 4, 12) included in MRP 3.0.

Consistent with MRP 3.0, OVTAs are conducted at randomly selected street/sidewalk sites representing at least 10% of the applicable street miles in each Co-permittee trash management area (TMA) where trash reductions are being reported. OVTAs are conducted at a frequency necessary to confidently detect reductions in trash levels at these sites. Based on the findings of the *Tracking California's Trash* State Water Board funded project, conducting between 5 and 7 assessments at a site on average will allow Co-permittees to confidently report changes in trash levels in TMAs. Currently, the Program annually conducts three assessments per FY (on average) at each site and then averages two FYs of data to calculate trash load reductions in a specific FY. For example, in reporting reductions for FY 24-25, results from assessments conducted in both FY 23-24 (July 2023 – June 2024) and FY 24-25 (July 2024 – June 2025) were averaged and used to represent the current levels of trash generation in TMAs.

Collectively for all Co-permittees, SCVURPPP conducted 1,421 OVTAs during FY 24-25 at 505 assessment sites. Each site averaged 1,000 feet in length. Each site was assessed at least two times during FY 24-25, with most sites assessed three times. Table 1 provides a summary of the number of OVTAs conducted by SCVURPPP between FY 17-18 and FY 24-25. OVTA results are stored in the *SCVURPPP Trash Load Reduction Dashboard*, which is available to Co-permittees.

Table 1. Number of OVTAs completed in the Santa Clara Valley by fiscal year.

FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
1529	1388	1052	1395	1267	1044	1163	1421

3. Direct Discharge Control Programs

The City of San José is the only SCVURPPP Co-permittee that uses this method to demonstrate compliance with MRP trash load reduction benchmarks. The City submitted and received approval of their Direct Discharge Control Program Plan during MRP 2.0. Consistent with MRP 3.0 requirements, the City revised and resubmitted an update Plan on January 3, 2023, and resubmitted three subsequent revisions in 2023 and 2024 for consideration by the Regional Water Board's Executive Officer (EO). On June 3, 2024, the Water Board approved the City's Direct Discharge Trash Control Plan and granted an extension of the 100% credit until December 31, 2025. For additional information, please see the City of San Jose's FY 24-25 Annual Report.

4. Additional Creek and Shoreline Cleanups (via volumes of trash removed from waterways)

Although there is direct water quality benefit, starting in FY 24-25, trash reduction offsets for creek and shoreline cleanups are no longer allowed to be used when calculating trash load reductions. Therefore, no Co-permittees claimed trash load reduction offsets for trash cleanups of creek and shoreline areas.

Model Private Land Drainage Area Trash Control Program

As described in MRP 3.0 Provision C.10.a.ii(b), private properties that 1) generate moderate, high, or very high level of trash, 2) are plumbed to the Co-permittee's MS4, and 3) are not already addressed by a FTC system are required to be equipped with a FTC system or be managed by trash control measures equivalent to or better than a FTC system by July 1, 2025. To address trash contributions from these properties, which are referred to as Private Land Drainage Areas (PLDAs), the Program finalized the memorandum describing the recommended approach for implementing a Model PLDAs Trash Inspection Program (TIP). Guidance on developing a Co-permittee PLDA Trash Inspection Program Plan and inventory of PLDAs were included as attachments to the memorandum. Through the TIP, inspections are performed on PLDAs and if the level of trash observed on the property via OVTAs is greater than low trash generation, property owners and/or managers are required to implement additional trash control measures and achieve low trash generation. Trash control measures may include FTC systems or other types of trash control actions. The goal of the TIP is to address trash from all PLDAs in the City by July 1, 2025.

As described in Co-permittee FY 23-24 Annual Reports, several Co-permittees (i.e., Sunnyvale, Milpitas, Santa Clara, Santa Clara County, Campbell, Los Gatos, Saratoga, Palo Alto, Mountain View, and San José) began implementing their PLDA TIPs. Co-permittees inspected and documented low trash generation levels and appropriate trash control measure implementation. As part of part of launching Co-permittee

PLDA TIPs, the Program provided field training on how to perform PLDA trash inspections on April 24, 2023 and July 11, 2023. A standardized PLDA inspection data collection form was developed and presented at both training sessions. In addition, the Program distributed a draft fact sheet entitled *Trash Inspections at Private Land Drainage Areas (PLDAs): Information for Property Owners and Managers* and draft letter entitled *Upcoming Stormwater Inspection - NPDES Provision C.10 Trash Management Inspection on Private Land Drainage Area (PLDA) Property*. Both documents were developed to educate property owners and managers about PLDAs, and Co-permittee TIPs implemented to verify if PLDAs are low trash generating. During FY 24-25, Co-permittees requested additional guidance on how to implement a Private Land Drainage Area (PLDA) Trash Inspection Program (TIP). Like the initial field trainings, procedures for conducting PLDA trash inspections, including how to use the SCVURPPP standardized PLDA inspection data collection form were discussed. Guidance was provided during individual video meetings.

During FY 24-25, the Program identified remaining PLDAs with jurisdictional land areas adjacent to Caltrans right-of-way (ROW). As described in Co-permittee FY 24-25 Annual Reports, all Co-permittees with identified PLDAs completed inspecting and documenting low trash generation levels and appropriate trash control measure implementation, including jurisdictional land areas adjacent to Caltrans ROW. As part of compiling Co-permittee PLDA inspection data, Program staff assisted with managing Co-permittee PLDA data collection tools; and tracking and reporting Co-permittee PLDA inspection results in the SCVURPPP Trash Load Reduction Dashboard.

Development of Revised Trash Generation Maps

MRP 3.0 Provisions C.10.a.ii and g.ii require MRP Permittees to submit a revised trash generation map(s) with their FY 23-24 Annual Reports. The Bay Area Municipal Stormwater (BAMS) Trash Subcommittee decided to use ArcGIS Online (AGOL) Map Viewer as the tool to present the Revised Trash Generation Maps within the FY 23-24 Annual Report. This format allows for consistent resolution when zoomed in and out, ease of layer updates, and ease of viewability for all viewers. To view the maps, an AGOL license is required. In FY 23-24, Program staff assisted in developing regional guidance approved by Water Board staff to develop the Revised Trash Generation Maps for each Co-permittee. During FY 24-25, Program staff assisted with updating Co-permittee Trash Generation Maps using ArcGIS On-line (AGOL). A link which allows Regional Water Board staff to view the updated map(s) was provided in Co-permittee FY 24-25 Annual Reports.

Coordination of SCVURPPP Trash Ad hoc Task Group Meetings

The Program's Trash Ad Hoc Task Group (Trash AHTG) met a total of nine (9) times during FY 24-25. The following subjects were discussed: 1) MRP 3.0 Section C.10 – Trash Load Reduction; 2) FY 23-24 Annual Reporting for Provision C.10; 3) FY 24-25 Annual Report format for Provision C.10; 4) Revised Trash Generation Maps; 5) On-land Visual Trash Assessments; 6) SCBWMI Zero Litter Initiative; 7) Private Land Drainage Areas (PLDAs); 8) Watching our Watersheds (WOW), a regional grant project funded by the USEPA San Francisco Bay Water Quality Improvement Fund; 9) Receiving Water Trash Monitoring; 10) MRP-required submittals; 11) Multi-benefit Full Trash Capture Systems; and 12) Co-permittee Full Trash Capture Systems Installations. Program staff coordinated all AHTG meetings. During FY 25-26, the Trash AHTG plans to continue to meet regularly to discuss maintaining 100% trash load reduction or no adverse impact benchmark required by MRP 3.0, On-land Visual Trash Assessments, Receiving Water Trash Monitoring, 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 Santa Clara County and the Cities of Palo Alto, San José, Sunnyvale, Los Altos and Cupertino, West Valley Communities (the Cities of Campbell, Monte Sereno and Saratoga and the Town of Los Gatos), the Program, Valley Water, non-governmental organizations (e.g., CLEAN South Bay, franchised waste haulers), Santa Clara Valley Transportation Authority (VTA) and other interested parties (e.g., creek cleanup organizations and resource conservation districts).

In FY 24-25, the ZLI continued to focus on the following topics: reduction of single use foodware and other common forms of litter, illegal dumping, creek cleanups and challenges related to unhoused populations. The efforts have included material reduction and harm-mitigation strategies that municipalities can take through policy and waste hauler partnerships. The ZLI coordinates with Bay Area partners who are working on similar issues such as the Regional Reusables Campaign, from the non-profit organization Upstream, and work with restaurants by Rethink Disposables, a campaign from the non-profit Clean Water Action. The ZLI also supports the Santa Clara County Recycling and Waste Reduction Commission and its Technical Advisory Committee (TAC). In coordination with the ZLI, the TAC added to its agenda a standing quarterly agenda topic on stormwater and litter reduction to better coordinate efforts and information sharing. A few municipalities in Santa Clara County have recently adopted or updated foodware ordinances, including the Cities of Mountain View, Cupertino, and Palo Alto. The ZLI has coordinated with similar efforts organized in San Mateo County. The ZLI has also been involved with providing guidance and assistance to Santa Clara County municipalities on compliance with the regulations in SB 1383 – specifically with organically-derived waste material (compost, mulch, and energy) procurement that began on January 1, 2022. SCVURPPP workshops and trainings have included presentations by ZLI members on SB 1383 compliance. The ZLI provided updates on proposed legislation at the state level related to litter and waste including SB 54. In FY 24-25, the ZLI also continued coordination with organizations focusing on the issue of illegal dumping including CalRecycle's Illegal Dumping Technical Advisory Committee (IDTAC). The IDTAC meets twice per year and shares information with a statewide group of interested municipal staff and other interested parties.

■ Regional Activities

Participation in BAMS Trash Subcommittee

With the dissolution of BASMAA as a non-profit organization near the end of FY 20-21, Co-permittees and Programs in the Bay Area agreed to continue coordination on stormwater management by forming an informal group, the Bay Area Municipal Stormwater Collaborative (BAMSC). During FY 24-25, the BAMSC's Trash Subcommittee continued meeting on a quarterly basis and will continue to coordinate regionally applicable trash-related projects and requirements. Program staff served as the Vice-chair of the Subcommittee in FY 24-25. Co-permittee and Program staff also attended the meetings.

Subcommittee meeting agendas in FY 24-25 included the following topics: 1) MRP 3.0 Section C.10 – trash load reduction requirements; 2) FY 24-25 Annual Report format for Provision C.10; 3) Implementation of trash control measures; 4) Discussions with Water Board staff on trash load reduction and MRP 3.0 informational items and requirements; 5) Watching our Watersheds (WOW), a regional grant project funded by the USEPA San Francisco Bay Water Quality Improvement Fund; 6)

Direct Discharge Control Programs; 7) On-land Visual Trash Assessments;8) Private Land Drainage Areas (PLDAs); 9) Bioretention systems deemed as full trash capture systems; and 10) State and local trash-related items.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 11

Mercury and PCBs Controls

September 30, 2025

Section 11 Mercury and PCBs Controls

■ Introduction

Provisions C.11 and C.12 of the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (MRP 3.0; Order R2-2022-0018) requires Co-permittees to implement control programs to reduce the stormwater impacts of mercury and polychlorinated biphenyls (PCBs) on the San Francisco Bay (Bay). The Water Board has previously determined that the water quality objectives and associated beneficial uses of the Bay are impacted, partially as a result of stormwater discharges 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 that are scheduled for achievement within 20 years of the adoption of the TMDLs. These Provisions implement the urban runoff requirements of the mercury and PCBs TMDLs.

Provisions C.11 and C.12 of the MRP require Co-permittees to implement control programs and other actions during the permit term, including the following:

- Assess Mercury and PCBs Load Reductions from Stormwater (C.11/12.a)
- Program for Source Property Identification and Abatement (C.11/12.b)
- Program for Control Measure Implementation in Old Industrial Areas (C.11/12.c)
- Mercury Collection and Recycling Implemented throughout the Region (C.11.d)
- Program for Controlling PCBs from Bridges and Overpasses (C.12.d)
- Program for Controlling PCBs from Electrical Utilities (C.12.e)
- Plan and Implement Green Stormwater Infrastructure to reduce mercury and PCBs Loads (C.11.e/C.12.f)
- Manage PCBs-Containing Materials and Wastes During Building Demolition Activities (C.12.g)
- Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations (C.11.f/C.12.h)
- Fate and Transport Study of mercury and PCBs: Urban Runoff Impact on San Francisco Bay Margins (C.11.g/C.12.i) – Conduct studies to evaluate the fate and transport of PCBs from urban runoff to the Bay margins.
- Risk Reduction Program (C.11.h/C.12.j) – Continue to implement a risk reduction program for mercury and PCBs.

With assistance from the Program (SCVURPPP), Co-permittees have continued to address mercury and PCBs control program requirements described in MRP 3.0. In FY 24-25, MRP requirements were addressed directly by Co-permittees, at a county-based level via SCVURPPP, and at a regional level via the Bay Area Municipal Stormwater Collaborative (BAMSC). PCBs and mercury requirements in provisions C.11 and C.12 are written nearly identically in the permit due to the similarities in the sediment-associated and legacy nature of their occurrence. Therefore, descriptions of the activities conducted in compliance with the requirements above are grouped in a single section of this report.

The remainder of this section is organized by each of the sub-provisions in C.11 and C.12. Each sub-section below briefly describes the requirements for each sub-provision and summarizes all of the activities conducted during the current reporting year at the Co-permittee, Program (SCVURPPP) and regional (BAMS Collaborative) levels to address these requirements.

■ Assess Mercury and PCBs Load Reductions from Stormwater (C.11/12.a)

Provisions C.11/12.a require Co-permittees to implement an assessment methodology and data collection program to quantify PCBs loads reduced through implementation of all controls described in Provisions C.11/12. At the end of the previous permit, the Regional Water Board Executive Officer (EO) approved the accounting methodologies described in the *BASMAA Source Control Load Reduction Accounting for Reasonable Assurance Analysis* (BASMAA 2022) for use during MRP 3.0. This document describes the calculation methodologies, data requirements, and model parameters used to quantify mercury and PCBs loads reduced for each type of control measure identified in Provisions C.11/12. Co-permittees will use these methods to quantify the mercury and PCBs load reductions achieved through all controls implemented during the permit term as described in Provisions C.11/12.b through C.11.e and C.12.g. To comply with the detailed reporting requirements for the mercury and PCBs control programs, Co-permittees have developed a ***Mercury and PCBs Control Measures Report*** that will be updated each year of the permit. Version 3 of this report is included as **Appendix 11-1**. The *Mercury and PCBs Control Measures Report* provides the following:

- Each Year of the Permit:
    - Documentation to confirm that all control measures effectuated during the previous Permit term for which load reduction credit was recognized continue to be implemented at an intensity sufficient to maintain the credited load reduction.
    - Documentation to demonstrate the status of control measure implementation during the current Permit term, updated each year of the Permit.
- In the 2026 Annual Report, the following will also be provided:
    - Mercury and PCBs load reductions achieved through implementation of controls since the beginning of the permit term, and estimates of the load reductions from controls taking place through the end of the permit term, including all supporting data to substantiate the load reduction estimates, and
    - Refinements to the measurement and estimation methodologies to assess mercury and PCBs load reductions from control measures in the subsequent Permit for Regional Water Board EO approval.

Progress During FY 2024-25

During FY 2024-25, all control measures effectuated during the previous Permit term for which load reduction credit was recognized, continued to be implemented at an intensity sufficient to maintain the credited load reduction. Documentation of these controls is provided in the *Mercury and PCBs Control Measures Report* (Appendix 11-1).

■ Program for Source Property Identification and Abatement (C.11/12.b)

During the permit term Co-permittees in the Santa Clara Valley must investigate, using both conventional sampling and laboratory analysis techniques, at least 913 acres of land areas that likely contribute mercury and/or PCBs to their MS4s. These investigations focus on land areas where industrial

activities occurred prior to 1980 and continue today (i.e., old industrial land use areas). For properties or land areas found to be contributing substantial amounts of mercury or PCBs[1] or where elevated mercury or PCBs concentrations are found (generally defined as areas with sediment concentrations greater than 0.5 mg/kg), Co-permittees will take actions to abate the mercury and PCBs sources into their MS4s or refer the properties to the Water Board for follow-up measures. For each source property referred to the Regional Water Board, Co-permittees will implement interim enhanced operation and maintenance (O&M) measures in the street or storm drain infrastructure adjacent to the referred source property, or implement stormwater treatment downstream of the property. Reporting requirements include the following:

- In each Annual Report through 2026, Co-permittees will:
    - Report progress on the acreage of land areas investigated, including progress toward investigation of 100 percent of old industrial land uses. The reporting shall indicate what action was taken for the parcels investigated (e.g., abatement, referral, enforcement, etc.). Co-permittees shall submit all supporting data and information including referral reports.
    - Report ongoing enhanced O&M activities associated with all past contaminated property referrals.
- In the 2026 Annual Report, the following will also be provided::
    - Report on total acreage of land area investigated, area and description of properties referred, description of enhanced O&M measures, and the estimated total mercury and PCBs mass load reduced (consistent with the approved accounting procedures) resulting from implementing this control measure.

Progress During FY 2024-25

Ongoing Source Investigations

During FY 2024-25, the Program (on behalf of Co-permittees) continued to investigate old industrial land areas in the Santa Clara Valley following a tiered investigation process. This process starts with desktop review of catchments with old industrial properties to identify locations where screening samples may be collected. Screening sampling is intended to identify relatively large areas (i.e., catchment or sub-catchment areas) where PCBs or mercury concentrations are elevated. These areas then require further investigation to identify sources. Screening entails collection of stormwater or MS4 sediment samples in the public right-of-way (ROW). Stormwater samples are collected at or near a catchment outfall to screen the entire catchment. Catchment or sub-catchments with stormwater samples that exceed the screening criteria (i.e., stormwater samples that are in the top 15% of stormwater sample concentrations collected regionwide or those with a stormwater particle ratio ≥ 0.2 mg/kg) are targeted for further investigation. Screening-level sediment samples are collected in public ROW locations that drain one or more old industrial properties to target specific properties. Screened areas with elevated public ROW concentrations of mercury or PCBs (i.e., ≥ 0.3 mg/kg for mercury or ≥ 0.2 mg/kg for PCBs) are targeted for further investigation aimed at identifying specific properties that are likely contributing to elevated concentrations to the MS4. Properties that drain to screened areas with low levels of mercury or PCBs (i.e., < 0.3 mg/kg for mercury or < 0.2 mg/kg for PCBs) in the public ROW are deemed

[1] PCBs, with regards to source property identification and abatement, refers to the total sum of the Regional Monitoring Program (RMP) 40 PCBs congeners. The RMP 40 PCB congeners include: PCB-8, PCB-18, PCB-28, PCB-31, PCB-33, PCB-44, PCB-49, PCB-52, PCB-56, PCB-60, PCB-66, PCB-70, PCB-74, PCB-87, PCB-95, PCB-97, PCB-99, PCB-101, PCB-105, PCB-110, PCB-118, PCB-128, PCB-132, PCB-138, PCB-141, PCB-149, PCB-151, PCB-153, PCB-156, PCB-158, PCB-170, PCB-174, PCB-177, PCB-180, PCB-183, PCB-187, PCB-194, PCB-195, PCB-201, PCB-203.

unlikely sources and removed from further investigation. Properties may be identified as a source of mercury or PCBs to the MS4 based on public ROW sediment samples alone, or on-site sediment samples may be needed to confirm a given property is a source of PCBs or mercury to the MS4. This source investigation process is described in more detail in Appendix 11-1.

The source investigations conducted by the Program on behalf of all Co-permittees during FY 2024-25 included the following actions:

- Desktop Evaluation and Field Reconnaissance to Develop Sampling Plans for Old Industrial Parcels . These efforts began with old industrial parcels located in catchments where no monitoring has yet occurred, or where previous monitoring has found elevated PCBs in public ROW areas, but the source(s) have not yet been identified. First, Program staff reviewed old industrial parcels using street view in Google Earth™ , and MS4 infrastructure in GIS to identify likely stormwater flow pathways within catchments of interest and locate potential sites within the MS4 where sediment and/or stormwater samples could be collected. Field reconnaissance was also conducted to determine the feasibility of collecting stormwater samples in selected locations, to better understand flow pathways through catchments and from parcels into the MS4, and to confirm locations of storm drain structures where stormwater samples could be collected. Catchments where stormwater sampling was deemed infeasible were slated for MS4 sediment sampling. The Program used this information to develop sampling plans for FY 2024-25 that included both stormwater and MS4 sediment sampling. During FY 2024-25, the Program identified 3 locations that drained catchments containing over **200 acres** of old industrial parcels for stormwater monitoring. The Program also conducted further desktop evaluations of nearly **960 acres** of old industrial parcels to identify potential sample sites for sediment monitoring both in public ROW areas and on-site at suspect properties. These efforts informed the development of sampling plans for FY 2024-25.
- Stormwater Sampling. One stormwater sample was collected in March 2025 near the outlet of Watershed Management Area (WMA) 049STA050 in the City of Santa Clara. This WMA contains **51 acres** of unaddressed old industrial parcels. The analytical results for this sample had low particle ratios for both PCBs (< 0.2 mg/kg) and mercury (<0.3 mg/kg), so this catchment is considered unlikely to be a source of these POCs to the MS4.
- Public ROW MS4 Sediment Sampling. MS4 sediment samples were collected in the summers of 2024 and 2025. These samples were collected in locations that drain one or more old industrial parcels, as described below. In total, the Program screened nearly **350 acres** of old industrial parcels with public ROW sediment samples, as detailed below. Once final analytical data are available, the Program will review the results and determine the next steps for these areas, which may include on-site sampling at suspect properties and/or implementation of other actions to address any sources of PCBs or mercury identified in the catchments.
    - Mountain View – Ten sediment samples were collected in June 2025 in five WMAs (017XXX010, 032SVC470, 047SVC150, Other - Mountain View , and SVC-A) in the City of Mountain View. The FY 2024-25 samples targeted public ROW locations, including curbs, gutters, driveways, and inlets that drain **57 acres** of old industrial parcels. Final results were pending at the time this report was completed.
    - Palo Alto – One sediment sample was collected in June 2025 in WMA Other - Palo Alto in the City of Palo Alto. This sample screened **12 acres** of old industrial parcels. Final results were pending at the time this report was completed.

- City of Santa Clara – Twenty-three sediment samples were collected in July 2024 and June 2025 in five WMAs (049CZC800, 049STA300, 050GAC400, 050GAC580, and 066GAC150) in the City of Santa Clara. These samples screened **125 acres** of old industrial parcels. The analytical results for these samples all had low (< 0.2 mg/kg) PCBs.
- San Jose – Thirty-six sediment samples were collected in public ROW locations in 13 WMAs (050CTC100, 051CTC150, 051CTC850, 066GAC152, 066GAC810, 067CTC150, 067GAC190, 083CTC350, 083CTC650, 083GAC800, 083LGC225, 130CNC022, and Other - San Jose) in the City of San Jose in June 2025. These samples screened **150 acres** of old industrial parcels. Final results were pending at the time this report was completed.

- On-site Investigations. The purpose of on-site investigations is to increase the likelihood of identifying properties contributing elevated PCBs (≥0.2 mg/kg) to Co-permittee MS4s. During FY 2024-25, on-site investigations were conducted in the City of San Jose. City staff sent letters to properties owners approximately one month in advance to inform them about the upcoming inspections and sampling. In June 2025, the Program and City staff conducted the inspections and collected **on-site samples at 11 private properties**. These properties include **95 acres** of old industrial parcels. The analytical results of those samples are not yet available. Next steps for each property will be determined once the sample results are available.
- Reporting. The chemical analysis results for samples that were collected during Water Year (WY) 2024 (i.e., Oct 1 2023 – Sept 30 2024) were reported in the Program's WY 2024 Urban Creeks Monitoring Report (UCMR) that was submitted to the Regional Water Board in March 2025, if the results were available at the time of reporting. However, not all chemical analysis results were available at that time. Those chemical analysis results will be reported in the Program's Integrated Monitoring Report (IMR) that will be submitted to the Water Board in March 2026. The chemical analysis results for all samples that were collected during WY 2025 (i.e., Oct 1 2024 – Sept 30 2025) will be reported in the Program's IMR in March 2026. The combined outcomes of all source investigations conducted during MRP 30 to date in the Santa Clara Valley are presented in the Control Measure Report (Appendix 11-1).
- Continued Planning for Source Investigations during FY 25-26. Once the pending sampling results are available, the Program will review the data and other information collected in FY 2024-25 to determine next steps for the catchments and properties that were investigated. During FY 2025-26, the Program plans to continue screening-level stormwater and public ROW sediment sampling, and on-site sediment sampling in old industrial land use areas, as described in the SCVURPPP Old Industrial Area Control Measure Plan (submitted the Water Board in September 2024). The pace of these investigations is expected to increase further because of the availability of additional funding from US EPA through the San Francisco Bay Program grant funds. In early FY 2025-26, the Program will develop a Work Plan with review and input from Co-permittees, that will outline how the new US EPA grant funds will be used to complete all remaining public ROW investigations and increase the pace of on-site investigations across the Santa Clara Valley.

All required documentation to demonstrate implementation of the Source Investigation and Abatement control program in the Santa Clara Valley during the current Permit term is provided in the *Mercury and PCBs Control Measures Report* (Appendix 11-1).

Source Property Referrals and Ongoing Enhanced O&M

In FY 2024-25, SCVURPPP Co-permittees did not submit any new mercury or PCBs source property referrals to the Regional Water Board. Co-permittees continued to conduct the agreed-upon enhanced O&M activities for the source property referrals submitted in previous fiscal years as summarized in Appendix 11-1.

■ Program for Control Measure Implementation in Old Industrial Areas (C.11/12.c)

Co-permittees in the Santa Clara Valley are required, during the permit term, to implement or cause to be implemented control measures to address 664 acres of old industrial land use areas at 70% control measure efficiency, or through accounting for the mass reduction of 28 g/yr of mercury and 121 g/yr of PCBs. Reporting requirements include the following:

- Submit plans and schedules for implementing controls in old industrial areas by March 31, 2023.
- In each Annual Report starting in 2023, Co-permittees are required to submit an account of the controls implemented consistent with the plan submitted in March 2023, and any modifications thereto. Reporting shall include maps of the areas treated, the acreage of catchments addressed, and a description of all control measures, installed treatment devices and routing facilities for each treated catchment.
- In the 2026 Annual Report, Co-permittees shall report on all control measures and stormwater diversion measures implemented during the permit term and provide the total acreage treated and an estimate of the total mercury and PCBs mass loads reduced resulting from this implementation.

Progress During FY 2024-25

Old Industrial Area Control Measures Plan

In order to develop the Old Industrial Control Measure Plan (OICMP), the Program first developed a complete dataset of all old industrial parcels draining to an MS4 within the Santa Clara Valley. The Program then conducted a thorough analysis of existing data to identify both the treatment status and the PCBs monitoring status for each old industrial parcel. This information was documented in a database, and will be updated each year to reflect new data. The treatment status for each parcel was based on available data on whether the parcel had been redeveloped since 2002, and/or treated with green stormwater infrastructure (GSI) or other stormwater treatment systems. The monitoring status for each parcel was determined based on MS4 and/or stormwater samples that were collected in locations that drain a given parcel. Parcels that drained to locations that had low PCBs (< 0.2 mg/kg) were categorized as “Low”, indicating these parcels were unlikely sources of elevated PCBs to the MS4. Parcels that drained to locations that had elevated PCBs (≥ 0.2 mg/kg) were categorized as “Moderate” (≥ 0.2 mg/kg to < 1 mg/kg) or “High” (≥ 1.0 mg/kg). Parcels that were not associated with any samples were categorized as “No Monitoring”. The Program uses the treatment and monitoring status of old industrial parcels to determine what new or additional investigation of the parcel is needed in order to determine if the parcel is contributing elevated mercury or PCBs to the MS4, and/or to target potential locations for additional treatment or other control measures. The treatment and monitoring status are updated each year to reflect new source investigations and/or new treatment measures that have been applied to any parcels in the old industrial parcel dataset.

During FY 2024-25, Co-permittees worked with Program staff to revise and finalize their Old Industrial Control Measure Plan (OICMP) per the requirements of Provisions C.11/12.c and to address comments

provided by Water Board staff on the OICMP submitted in March 2023 and the revised version submitted in March 2024. The final-revised OICMP was submitted to the Water Board by the Program on behalf of all SCVURPPP Co-permittees in September 2024[2]. The Water Board accepted the revisions and approved the final-revised OICMP in a letter sent to the Program Manager dated October 10, 2024. The final-revised OICMP builds upon the March 2023 and March 2024 versions and adds additional details and commitment to actions to more clearly demonstrate the required C.11/12.c mercury and PCBs load reduction targets will be met.

The Final-Revised OICMP (March 2024) described the new and enhanced controls that Co-permittees anticipate will be implemented in old industrial land use areas in the Santa Clara Valley during the permit term to achieve the mercury and PCBs load reductions required by MRP C.11/12.c. The OICMP presented the status of current planning efforts, the anticipated load reductions, and implementation schedules for the following two types of control programs:

1. Targeted Control Programs. These control programs are directed by Co-permittees and include ongoing, enhanced, and new actions that target OI land areas located in stormwater catchments containing known or suspected PCBs or mercury source areas, or evidence of moderately to highly elevated PCBs or mercury based on monitoring data. Targeted control measures include:
    - Controls for properties with moderately elevated PCBs or mercury;
    - Controls for properties with highly elevated PCBs or mercury; and
    - Controls for public ROW areas in catchments with moderately to highly elevated PCBs or mercury (e.g., enhanced O&M).
2. Other (non-targeted) Control Measure Programs. These control programs include actions that are implemented by Co-permittees, other agencies, or by private parties associated with OI land areas, but do not specifically target areas with known moderately to highly elevated PCBs or mercury in the catchment. Other control measures include:
    - Green Stormwater infrastructure (GSI), including parcel-based Low Impact Development (LID), public green streets and regional stormwater capture projects;

Other Stormwater Treatment Measures, including High-Flow Capacity systems and inlet-based devices. The *Mercury and PCBs Control Measure Report* (Appendix 11-1) documents the control measures that have been implemented in the Santa Clara Valley consistent with the plan during the permit term to date, and provides maps of the areas treated, the acreage of catchments addressed, and a description of all control measures within each treated catchment. Additional information on control measure planning and implementation in old industrial areas during FY 2024-25 is presented below.

Targeted Controls in Old Industrial and Moderate PCBs Areas

During FY 2024-25, the Program worked with Co-permittees to continue implementing the new program that was described in the OICMP to identify and address moderate PCBs Contaminated properties (MPCPs), and implement other controls that specifically target old industrial and moderate PCBs areas. The new MPCP program includes additional efforts to conduct on-site inspections, collect samples on private properties, and address properties found to contribute moderate PCBs (or mercury) to MS4s. The MPCP program was described in detail in the OICMP (SCVURPPP 2024). A primary component of this

[2] SCVURPPP 2024. Control Measure Plan to Reduce PCBs and Mercury in Urban Runoff from Old Industrial Areas. Plan and Schedule for control measure implementation during MPR 3.0 in the Santa Clara Valley. Final Revised Report, September 2024.

new program includes enhanced efforts to identify moderate and high PCBs properties by conducting on-site sampling of suspect properties. Properties with moderate PCBs on-site will then be addressed through the MPCP abatement program, which requires Co-permittees to work directly with the property owner(s) to implement controls on the property and/or in the public ROW adjacent to the property to prevent the release of PCBs from the property and/or remove PCBs-contaminated sediment from the public ROW. Properties with high PCBs on-site will continue to be addressed through the existing source property referral program.

The Program identified one 20-acre MPCP (located in the City of Mountain View) during a previous fiscal year. The property is owned by the Santa Clara Valley Transit Authority. A portion of the property is already undergoing remediation activities for PCBs overseen by US EPA as part of a Caltrans project to realign the Shoreline Boulevard/101 Northbound off-ramp. During FY 2024-25, the Program continued working with the City of Mountain View to understand the sources of PCBs on this property, and to determine if any additional efforts aside from the ongoing remediation, are needed to reduce/prevent release of PCBs from this property. These efforts will continue in FY 2025-26.

During FY 2024-25, two additional properties (one moderate and one high) were identified as sources of PCBs to the City's MS4 in WMA 067CTC250 in the City of San Jose based on the outcomes of on-site sampling that was conducted during FY 2023-24. The Program has been working with the City to determine the next steps to address these properties, which will include outreach to the property owners to implement additional BMPs and potentially a source property referral to the Water Board. The Program also made recommendations for enhanced O&M that the City can conduct in this WMA to address PCBs in the public ROW. Based on these recommendations, the City is currently planning to conduct a cleanout (flush and capture) of the main storm drain line that runs through the catchment during FY 2025-26. As the results of on-site sampling conducted during FY 2024-25 become available, the Program anticipates more moderate and high PCBs source properties will be identified next fiscal year.

Program staff also met with selected Co-permittees during FY 2024-25 to discuss planning and future implementation of enhanced O&M activities in catchments containing old industrial parcels and/or moderately elevated PCBs. These efforts will likely include additional storm drain-line cleanouts as well as enhanced pump station cleaning. Planning for implementation of these efforts will continue in FY 2025-26.

GSI and Other Treatment Controls in Old Industrial / Moderate PCBs Areas

GSI facilities that treat old industrial land uses have been implemented across the Santa Clara Valley as a result of stormwater requirements issued to new and redevelopment projects. Although Co-permittees have little control over the pace and extent to which private redevelopment in old industrial areas occurs, as redevelopment projects are permitted, Co-permittees continue to ensure that stormwater treatment controls are incorporated into these projects on both public and private lands. During FY 2024-25, Co-permittees have continued to track the installation of GSI facilities across the Santa Clara Valley to ensure proper maintenance and operation, and to assist with demonstrating pollutant load reductions.

Co-permittees also have continued to plan and install other stormwater treatment systems (e.g., large high-flow capacity systems and small inlet-based devices) in public ROW locations that drain old industrial land use and other land use areas. During development of the OICMP, Program staff prioritized potential locations for future device installation in old industrial land use areas that also have

moderate, high, or very-high trash generation. These planning efforts will continue during the next fiscal year and will likely result in the increased installation of other stormwater treatment systems that treat old industrial land uses.

The GSI and other stormwater treatment controls implemented during FY 2024-25 in old industrial and moderate PCBs areas are documented in the *Mercury and PCBs Control Measure Report* (Appendix 11-1). The information provided in Appendix 11-1 includes all supporting data and information needed to calculate the mercury and PCBs loads reduced, including descriptions of the projects, maps of the areas treated, and the acreages treated within each catchment by land use category. The information available for the current reporting year should be considered preliminary, as the data on all projects completed in FY 2024-25 may not be available until after this report is finalized. However, Co-permittees will continue to gather this information as it becomes available and submit it in subsequent Annual Reports, as needed.

■ Mercury Collection and Recycling Implemented throughout the Region (C.11.d)

Co-permittees are required to promote, facilitate, and/or participate in collection and recycling of mercury containing consumer products, devices, and equipment to increase effectiveness and public participation.

Co-permittees must report on the following in each of the 2023 through 2026 Annual Reports:

- Efforts to promote recycling of mercury-containing products
- Efforts to increase effectiveness of those recycling efforts
- The mass of mercury-containing material collected throughout the county along with an estimate of the mass of mercury contained in recycled material using the methodology contained in load reduction accounting system described and cited in the Fact Sheet

Progress during FY 2024-25

Collection/Recycling of Mercury-Containing Products, Devices, and Equipment

Co-permittees continued to participate in the Santa Clara County Environmental Health Department's Household Hazardous Waste Program (HHW Program) during FY 2024-25 to reduce mercury in stormwater. The amount of mercury collected via these activities during MRP 3.0 to date is reported in the *Mercury and PCBs Control Measure Report* (Appendix 11-1).

The HHW Program offers residents the opportunity to drop-off mercury-containing products, devices and equipment and other hazardous wastes at their permanent drop-off facilities every other Wednesday; and every Thursday, Friday, and Saturdays (except holiday weekends) free of charge, by appointment only. 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. During FY 2024-25, the HHW Program held a total of 185 collection events (e.g., 175 at two permanent facilities and ten at temporary sites) and served 347 small business drop-offs including local governments, Goodwill Industries, and The Salvation Army. Many Co-permittees promote the availability of the HHW Program on their websites.

During FY 2024-25, the HHW Program collected a total of 74,362 pounds[3] of fluorescent lamps at HHW Program events and 28 retail drop-off locations within Santa Clara County[4]. This equates to 499,713 linear feet of fluorescent lamps (e.g., tubes, circular, and u-shaped) and 47,592 CFLs. In addition, the HHW Program also collected 214 pounds of mercury-containing equipment (including thermostats, thermometers, and other products) during FY 2024-25.

To calculate the mass of mercury collected during FY 2024-25 by the HHW Program, SCVURPPP used a spreadsheet entitled "Estimated Mass of Mercury Collected Calculator – 8/18/25." 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 2024-25 is provided in Table 11-1.

Table 11-1. Estimated mercury mass collected by the Santa Clara County HHW Program in FY 2024-25.

Mercury Containing Device/Equipment	Total Amount of Devices Collected	Estimated Mass of Mercury Collected (kg)
Fluorescent Lamps (linear feet)[5]	499,713	1.04
CFLs (each)[6]	47,592	0.21
Thermostats (pounds)[7],[8]	107	0.57
Thermometers (each)[9],[10]	107	0.07
Total Mass of Mercury Collected During FY 2024-25:		**1.88**

[3] 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 0.125 lbs and 1 CFL equals 0.25lbs. Previously, the conversion used was: 1 foot equals 0.25lbs, and 1 CFL equals 0.0625lbs.

[4] Information regarding the collection of mercury containing products (e.g., fluorescent bulbs, thermostats, thermometers and other products) during FY 24-25 was obtained from a memorandum entitled *Fiscal Year 2024-2025 HHW Program Update* (dated August 18, 2025). This memorandum was prepared by Billy Puk, Hazardous Materials Program Manager, County of Santa Clara.

[5] 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.

[6] 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.

[7] 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.

[8] It is estimated that approximately 50 % of elemental mercury collected by household hazardous waste facilities is thermostats. Thermostats are shipped to the Thermostat Recycling Corporation for recycling. Fifty percent of 214 pounds is 107 pounds. Therefore, 107 pounds of thermostats were shipped in FY 24-25. Source: personal communication, Dermot Casey, San Mateo County Hazardous Materials Specialist, August 20, 2012.

[9] 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.

[10] It is estimated that approximately 25 % of elemental mercury collected by household hazardous waste facilities is thermometers. Twenty-five percent of 214 pounds is approximately 53.5.pounds. Two thermometers equal one pound. Two thermometers per pound is equal to 107 thermometers. Therefore, 107 thermometers were shipped in FY 24-25. 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.

■ Program for Controlling PCBs from Bridges and Overpasses (C.12.d)

Co-permittees are required to implement a Caltrans specification to manage, as part of bridge and overpass roadway replacement or major repair, potential PCBs-containing material in bridge roadway expansion joints. Six months after availability of the Caltrans specification, Co-permittees must begin to implement or cause to be implemented the Caltrans specification during applicable replacement activities that are under the direction of the Co-permittee. Co-permittees are required to report the following:

- In the Annual Report immediately following availability of the specification, provide a description of the Caltrans specification for managing PCBs-containing materials in bridge or roadway expansion joints during roadway replacement or repair.
- In the 2023 Annual Report, submit an inventory of bridges in the program area that includes bridge ownership and the bridge roadway replacement schedule.
- In the 2022 through 2026 Annual Reports, submit documentation confirming the use of the Caltrans specification (once it is available) during all instances of bridge roadway replacement or repair in their jurisdiction during that reporting year and provide an estimate of the volume of material managed and total PCBs mass load reduced resulting from implementation of the specification.
- In the 2026 Annual Report, report an estimate of the total PCBs mass load reduced, consistent with approved accounting procedures, resulting from implementing this control measure.

Progress During FY 2024-25

The Caltrans specification was not yet available as of the end of FY 2024-25. However, the Program began working with other regional partners through the BAMSC to develop draft guidance materials that Co-permittees will be able to use to determine when on how to implement controls during bridge replacement or demolition activities to prevent the release of PCBs to the MS4. These draft guidance materials, which are still under development, are based on the Caltrans *Standard Operating Procedure (SOP) for Inspecting, Removing and Reporting Materials Containing Polychlorinated Biphenyls (PCBs) Prior to Demolition or Renovation of Structures,* which was released in 2024.[11] Although not a specification that Co-permittees can provide with bid documents for bridge repair/demolition contracts, the Caltrans SOP, and the BAMSC draft guidance that is currently under development, can eventually be used by Co-permittees to identify bridges slated for demolition that will require removal and special handling of PCBs-containing materials prior to demolition. Co-permittees can then request a project-specific specification from Caltrans for use during demolition of any bridges that are found to have PCBs-containing materials. Program staff anticipate the BAMSC guidance materials will be finalized in FY 2025-26. Future Annual Reports will describe the BAMSC guidance document (once it has been finalized) and document its use during all instances of bridge roadway replacement or repair within Co-permittees' jurisdictions.

■ Program for Controlling PCBs from Electrical Utilities (C.12.e)

Co-permittees are required to develop and implement a program to manage PCBs in oil-filled electrical equipment (OFEE) for municipally owned electrical utilities in the MRP program area and collaborate

[11] Caltrans, 2024. Standard Operating Procedure (SOP) for Inspecting, Removing and Reporting Materials Containing Polychlorinated Biphenyls (PCBs) Prior to Demolition or Renovation of Structures. CTSW-OT-23-407.05.1. June 2023, revised January 2024.

with the Water Board to determine PCBs loadings in OFEE from non-municipally owned electrical utilities. Reporting requirements include the following:

- In every Annual Report beginning in 2023:
    - A summary of the actions undertaken during that reporting year that remove municipally owned PCBs-containing OFEE along with the loads avoided and the details of the calculations and assumptions used to estimate the load reduced.
- In the 2023 Annual Report:
    - Estimated PCBs loads avoided (along with supporting documentation) resulting from the removal of municipally-owned PCBs-containing OFEE through maintenance programs and system upgrades for the period 2002 to the beginning of this permit term (2023).
    - A description of the improved spill response and reporting practices implemented by municipally owned electrical utilities.
- In the 2024 Annual Report, submit a summary of plans to maintain and upgrade OFEE for municipally owned electrical utilities.
- In the 2026 Annual Report, submit the estimated PCBs loads reduced during the permit term associated with municipally owned OFEE removal resulting from maintenance programs and system upgrades.
- Within 12-months of the Water Board transmitting to the Co-permittees information from the non-municipally owned electrical utilities, Co-permittees shall submit a report discussing the following, to the extent possible given any data limitations: (a) locations of the PCBs-containing OFEE still in service, (b) previous locations of PCBs-containing OFEE, and (c) opportunities to improve non-municipally owned electrical utilities' standard operating procedures for spill response, reporting, cleanup, and sampling and analysis

Progress During FY 2024-25

Municipal Electrical Utilities

There are two municipal electrical utilities in the Santa Clara Valley:

- City of Palo Alto Utilities (CPAU), Palo Alto CA; and
- Silicon Valley Power (SVP), Santa Clara CA.

During FY 2024-25, the Program worked directly with staff from CPAU and SVP to document actions taken during FY 2024-25 to remove municipally owned PCBs-containing OFEE, and gather data and develop estimates of the PCBs loads avoided resulting from these removals for the period between July 1, 2024 and June 30, 2025. During FY 2024-25, CPAU removed nine pole-top transformers and two underground residential distribution transformers that potentially contained PCBs (i.e., equipment purchase prior to 1985). These actions removed between 46 and 459 kg of PCBs from CPAU's distribution system. During the same time period, SVP removed two pad mount vacuum switches, two oil switches, 21 pad mount transformers, and 43 pole-top transformers. These actions removed between 1.8 and 6.3 kg of PCBs from SVP's distribution system. The data and the associated loads avoided for these removals are provided in the *Mercury and PCBs Control Measure Report* (Appendix 11-1). CPAU and SVP also continued to implement the improved spill response and reporting SOP that was submitted with the Program's FY 2022-23 Annual Report (SCVURPPP 2023).

Non-municipally owned electrical utilities

As of the end of FY 2024-25, the Water Board had not transmitted information from non-municipally owned electrical utilities to the Co-permittees. Based on updates obtained from Regional Water Board staff during recent BAMSC Monitoring and Pollutants of Concern (MPC) Sub-committee meetings, Regional Water Board staff have met several times with representatives from Pacific Gas and Electric (PG&E), the primary non-municipally owned electrical utility that operates in the MRP area, during the past fiscal year, and plan to continue to engage PG&E on this topic during the next fiscal year.

■ Plan and Implement Green Stormwater Infrastructure to Reduce Mercury and PCBs Loads (C.11.e/C.12.f)

Co-permittees are required to implement GSI projects consistent with the requirements in Provision C.3.j during the permit term. Reporting on this sub-provision will be required in the 2026 Annual Report, and will include the following information for all GSI projects implemented during the permit term:

- A summary description of the projects including GSI type, location, and area;
- The total acreage treated; and
- Estimates of the total mercury and PCBs mass load reduced resulting from this implementation.

Actions During FY 2024-25

During FY 2024-25, Co-permittees continued to implement their GSI plans that were developed under MRP 2.0, and the number of public GSI projects is anticipated to increase in the future. Project prioritization will likely be based on a number of factors (including PCBs and mercury contributions). A number of GSI facilities (e.g., green streets or regional stormwater control retrofit projects) have been implemented by SCVURPPP Co-permittees on public property or right-of-way. Many of these projects have served as demonstration projects. Co-permittees have continued to track the installation of these public GSI facilities during FY 2024-25 to ensure proper maintenance and operation, and to assist with demonstrating pollutant load reductions.

Updated information on public green streets and regional stormwater capture projects that were completed during MRP 3.0 to date is provided in the *Mercury and PCBs Control Measure Report* (Appendix 11-1). The information available for the current reporting year is considered preliminary, as the data on all projects completed in FY 2024-25 may not be available until after this report is finalized. However, Co-permittees will continue to gather this information as it becomes available and include it in subsequent Annual Reports, as needed.

■ Manage PCBs-Containing Materials and Wastes During Building Demolition Activities (C.12.g)

Co-permittees are required to continue to implement the protocols developed during the previous permit term for managing PCB-containing materials and wastes during building demolition so that PCBs do not enter MS4s. In addition, Santa Clara Valley Co-permittees are required to implement the following enhancements to their PCBs control programs starting July 1, 2023 to meet the new MRP requirements:

- Beginning July 1, 2023, for applicable structures containing building materials with PCBs > 50 ppm:

- Demolition contractors must provide notification to the Co-permittee, the Water Board, and US EPA at least one week before any demolition is to occur
- Co-permittees must enhance their construction site control programs to minimize migration of PCBs into the MS4 during demolition activities
- For permits approved after July 1, 2023, Co-permittees must verify that PCBs in demolished buildings are properly managed to minimize transport to the MS4 by obtaining official documentation that the building materials with PCBs > 50 ppm were disposed appropriately according to state and federal regulations

- Beginning in the 2023 rainy season, Co-permittees must inspect demolition sites with applicable structures containing building materials with PCBs >50 ppm pursuant to Provision C.6 to ensure that effective construction pollutant controls are used to prevent discharge into the MS4.

Reporting requirements include the following:

- Permittees seeking exemption from Provision C.12.g requirements based on lack of application structures must submit documentation, such as historic maps or other historic records, that clearly demonstrates that the only structures that existed pre-1980 were single-family residential and/or wood-frame structures.
- In their 2023 Annual Report, Permittees shall discuss enhancements to their construction site control program to minimize migration of PCBs from demolition activities into the MS4.
- Beginning with their 2023 Annual Report, the Permittees shall provide each of the following items:
  1. The number of applicable structures that applied for a demolition permit during the reporting year
  2. A running list of the applicable structures that applied for a demolition permit since July 1, 2019, the number of samples each structure collected, and the concentration of PCBs in each sample.
  3. For each applicable structure, with PCBs concentrations of 50 mg/kg or greater, include the following: the project address, the demolition date, and a brief description of the PCBs-containing materials.
  4. For each structure that was constructed or remodeled between the years 1950 and 1980 and requires emergency demolition to protect public health and/or safety, provide the following: address, date building was constructed, and date of demolition.
- Beginning with their 2024 Annual Report, Co-permittees shall provide the following: whether the site was inspected during demolition, and for those cases where notification and advance approval from the U.S. EPA is not required and were approved for demolition after June 30, 2023, the hazardous waste manifest prepared for transportation of the material to a disposal facility.
- In their 2026 Annual Report, Co-permittees shall submit an evaluation of the effectiveness of the protocol for controlling PCBs during building demolition as well as supporting data. This should be conducted and reported at the regional level on behalf of all Permittees and shall be considered the Report of Waste Discharge for Provision C.12.g for the next permit reissuance.
- In their 2026 Annual Report, Co-permittees may submit for use in the subsequent permit term an updated assessment methodology and data collection program to quantify PCBs loads reduced through implementation of the protocol for controlling PCBs-containing materials and wastes during demolition of applicable structures.

Progress During FY 2024-25

During FY 2024-25, Co-permittees continued to implement the protocols developed during the previous permit term for managing PCB-containing materials and wastes during building demolition so that PCBs do not enter MS4s. Co-permittees also continued to implement enhancements to their protocols to address new requirements in MRP 3.0 Provision C.12.g for construction site control programs that began on July 1, 2023. Those new protocols were described in each Co-permittee's FY 2023-24 Annual Report.

In addition, the Program developed a technical memorandum that addresses other FY 2024-25 reporting requirements in Provision C.12.g. (*Program for Management of PCBs during Building Demolition – Data Summary through FY 2024/25 for Santa Clara Valley MRP Permittees*). The technical memorandum is included as an attachment to Appendix 11-1. This memorandum documents the following items for Santa Clara Valley Co-permittees:

- The number of demolition permits issued for Applicable Structures during FY 2024-25, which is the sixth year of the program (data from FY 2019-20 through FY 2023-24, the first through fifth years of the program, are also included);
- A running list of the Applicable Structures for which a demolition permit was applied (since July 1, 2019, the date the PCBs control program began implementation) that had material(s) with total PCBs concentration ≥ 50 ppm, with the address and demolition date for each structure; and
- For FY 2024-25 samples with total PCBs concentration ≥ 50 ppm, the PCBs concentration in each sample and a brief description of PCBs-containing materials that were sampled.

■ Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations (C.11.f/C.12.h)

MRP 3.0 requires that Co-permittees evaluate the effectiveness of all mercury and PCBs control measures in the 2020 Mercury and PCBs Control Measure Plan and Reasonable Assurance Analysis (RAA) that was submitted during the previous permit term, and update the RAA as necessary. Updates can focus on those control measures for which new information is available and for control measures not evaluated in previous efforts. Co-permittees are also required to prepare detailed implementation plans for all control measures to be implemented and inform permit requirements during the subsequent permit term. These long-term plans must:

1. Identify all technically and economically feasible PCBs control measures to be implemented (including GSI projects); and
2. Include a schedule according to which these technically and economically feasible control measures will be fully implemented; and
3. Provide an evaluation and quantification of the PCBs load reduction of such measures as well as an evaluation of costs, control measure efficiency and significant environmental impacts resulting from their implementation.

Additionally, Permittees must identify all specific control measures to be implemented, the intensity of control measure implementation, and the estimated load reduction benefit from control measures implemented during the subsequent permit term. This implementation plan must include:

- Identification of all control measures implemented during the current permit term and any additional control measures to be implemented in the subsequent permit term;

- A description of the intensity or extent of control measure implementation (e.g., acres treated, acres investigated for source areas, types of roadway projects for which protocols applied);
- Identification of accountability metrics to track during the subsequent permit corresponding to the proposed implementation intensity; and
- Estimates for load reductions to be achieved through implementation of control measures during subsequent permit term at the proposed intensity.

Co-permittees must submit the updated plan and schedule no later than March 31, 2026.

Progress During FY 2024-25

During FY 2024-25, the Program, with input and approval of Co-permittees, developed a work plan to update the Control Measure Implementation Plan and RAA (RAA Plan) that was submitted during the previous permit term. The updates focus on the addition of new controls, and provide the estimated mercury and PCBs load reductions achieved during MRP 3.0 and anticipated load reductions during MRP 4.0. Co-permittees have continued to track all control measures implemented to date to reduce mercury and PCBs stormwater loads in the Santa Clara Valley. Co-permittees will use these data to update the RAA Plan for all new controls (e.g., GSI and source controls) in order to finalize the updated RAA Plan for submittal to the Water Board by March 31, 2026. All available data on control measures implemented to reduce mercury and PCBs during MRP 3.0 to date that will be included in the updated RAA Plan are provided in the *Mercury and PCBs Control Measure Report V.3* (Appendix 11-1). The information available for the current reporting year is considered preliminary, as the data on all projects completed in FY 2024-25 may not be available until after annual reporting. However, Co-permittees will continue to gather this information as it becomes available and subsequent Annual Reports will be updated as needed.

■ Fate and Transport Study of Mercury and PCBs: Urban Runoff Impact on San Francisco Bay Margins (C.11.g/C.12.i)

C.11.g/C.12.i Requirements

MRP 3.0 requires Co-permittees to conduct or cause to be conducted studies concerning the fate, transport, and biological uptake of mercury and PCBs discharged from urban runoff to San Francisco Bay margin areas. The studies should focus on near-shore areas contaminated with mercury and PCBs from historical activity and the expected trajectory of recovery as sources from local watersheds are reduced. Reporting requirements include the following:

- In the 2023 Annual Report:
  - Submit a workplan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a preliminary schedule, and
  - Report on status of the studies.
- In the March 15, 2026, Integrated Monitoring Report:
  - Findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted, or implemented in future permit cycles.

Progress During FY 24-25

Co-permittees are addressing Provisions C.11.g. and C.12.i. through a multi-year project by the San Francisco Bay (Bay) Regional Monitoring Program (RMP) to identify, model, and investigate embayments along the Bay shoreline designated "Priority Margin Units" (PMUs). BAMSC developed a Work Plan for the fate and transport study of mercury and PCBs during MRP 3.0, which was submitted with the Program's 2023 Annual Report. During FY 2024-25, Program staff have continued to participate in the RMP PCBs and Mercury Workgroups to help oversee this work and guide it towards developing information that will inform implementing controls for mercury and PCBs in stormwater runoff and reducing the Bay's impairment by these pollutants. During FY 2025-26, and at a minimum the remainder of the MRP 3.0 permit term, Program staff will continue to participate in the RMP PCBs and Mercury Work Groups to help oversee the projects. Co-permittees will report on the findings and results of the project in the March 2026 IMR.

■ Implement a Risk Reduction Program (C.11.h/C.12.j)

MRP 3.0 requires Permittees to conduct an ongoing risk reduction program to address public health impacts of mercury and PCBs in San Francisco Bay/Delta fish. The fish risk reduction program must take actions to reduce actual and potential health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence anglers and their families. The risk reduction framework developed in the Previous Permit term, which funded community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach. Permittees should work with local health departments, the Bay Area Clean Water Agencies, and the Western States Petroleum Association to leverage resources for this program and to appropriately target at-risk populations. At a minimum, the Risk Reduction Program must have the potential to reach 3,000 individuals annually who are likely consumers of San Francisco Bay-caught fish. Reporting requirements include:

- In each Annual Report, Co-permittees shall report on the status of the risk reduction program, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish.
- In the 2026 Annual Report, Co-permittees shall report the findings of the effectiveness evaluation of their risk reduction program.

Progress During FY 2024-25

SCVURPPPP implemented the following outreach activities in FY 2024-25 to address MRP requirements associated with risk reduction:

- Point of purchase outreach at fishing supply stores – Program staff worked with the following fishing supply stores to distribute the "Guide to Eating Fish and Shellfish from San Francisco Bay" brochures (in English, Spanish, Chinese and Vietnamese) to customers:
    - Bass Pro Shop – 5160 Cherry Ave., San José
    - Coyote Bait and Tackle - 8215 Monterey Rd, San José
    - Fishery Supply - 978 Story Rd, San José
    - Big 5 Sporting Goods – 946 Blossom Hill Rd, San José
    - Laine's Bait - 907 Elizabeth St, San José – this store has been replaced by a vending machine for selling baits. The owner has posted the "Guide to Eating Fish and Shellfish from San Francisco Bay" poster on the vending machine.
    - Big 5 Sporting Goods, 1600 Campbell Ave, Campbell

- Sportsman Supply, 1536 Camden Ave, Campbell

- Website and Social media posting – The brochures are posted on the SCVURPPP and Watershed Watch Campaign[12] websites and promoted on the Watershed Campaign social media pages.
- Video on safe fish consumption - A new video on safe consumption of fish was developed and promoted on Facebook/Instagram and YouTube.
- Outreach events –The brochures were distributed at six SCVURPPP outreach events.
- 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 Program. The Watershed Watchers program conducts numerous activities and sessions to educate participants about watersheds and urban runoff pollution prevention. In FY 2024-25, the Watershed Watchers Program conducted 23 activities/sessions that included information on human health and environmental impacts of mercury, with a specific focus on mercury in fish.

Evaluation of Effectiveness

The following measures indicate the success of the Program's outreach about health impacts of eating San Francisco Bay-caught fish:

- The "Guide to Eating Fish and Shellfish from San Francisco Bay" brochures placed in local fishing stores continue to be popular with customers. Approximately 1,000 copies of the brochures were provided to the stores.
- Visitors at the Watershed Watch booth at outreach events were interested in learning about the guidance on fish consumption. A total of 36 brochures were distributed to residents at these events.
- The safe fish consumption video received over 11,000 views on YouTube and over 51,000 views on Instagram.
- Approximately 700 adults and children attended programs that included information on mercury in fish at the Don Edwards San Francisco Bay Wildlife Refuge.
- The "Guide to Eating Fish and Shellfish from San Francisco Bay" brochures were downloaded 54 times from the Watershed Watch website.

[12] 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.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 12

Copper Controls

September 30, 2025

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; and
- C.13.c. Industrial Sources.

In FY 2024-25, activities associated with Provision C.13 were conducted at the Co-permittee and Program 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 level.

■ 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.
- Educate installers and operators on appropriate BMPs to manage wastewater during and post construction and enforce noncompliance. Require use of appropriate BMPs when issuing building permits.

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

- A description of ordinances related to copper architectural features that have been adopted by Co-permittees;
- 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; and
- 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 and is available on the SCVURPPP website. Architectural copper BMPs are presented and discussed at the Program's construction site stormwater inspector workshops. The last Program workshop was held in November 2023.

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 distribute the brochure entitled Draining Pools and Spas, available on the SCVURPPP website, which provides information on proper methods of draining, maintaining, and cleaning pools and spas and avoiding use of copper-based algaecides.

C.13.c. Industrial Sources

Co-permittee efforts to manage industrial sources of copper are described in their annual reports. This copper source is addressed through routine industrial inspections conducted in compliance with Provision C.4. Educational tools to train industrial inspectors to identify facilities likely to use copper or have sources of copper and proper BMPs continue to be available on the SCVURPPP website.

Copper (and other pollutant) Loads Removed via Street Sweeping

A summary of street sweeping activities conducted by Co-permittees is provided within the table entitled *Summary of Co-permittee Street Sweeping Activities- FY 2024-2025* (Appendix 12-1). All data presented within Appendix 12-1 were submitted to Program staff by individual Co-permittees for inclusion in this Annual Report.[1] During FY 2024-25, Co-permittees swept approximately 165,682 miles of paved streets and removed approximately 51,915 yd^3 or 33,719 tons of material[2]. Approximately 2,660 yd^3 and 30,240 tons of leaf litter were also removed by Co-permittees who have leaf removal programs other than routine street sweeping. In addition, approximately 48,067 yd^3 and 133,970 tons of yard and other organic waste (which includes large amounts of leaves) was routinely collected by Co-permittees[3].

[1] Co-permittees who submitted data for inclusion into this Annual Report is provided in Appendix 12-1.
[2] 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 50,442 tons is calculated when 77,663 cubic yards is converted over to tons (51,915 cubic yards* .6495 tons/cubic yard= 33,719 tons).
[3] Co-permittees who collect yard waste calculate the total volume in yd3 or total weight in pounds. Yard waste includes leaves. Other organic waste includes food and green waste. 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 to as the removal rate. In the case of this effectiveness evaluation, the Program uses average removal rate to show the effectiveness of Co-permittees' street sweeping activities within the Program's jurisdiction. The average Co-permittee removal rate during FY 2024-25 was 0.31 yd^3/curb mile (see Appendix 12-1) with a range from 0.019 yd^3/curb mile to 1.01 yd^3/curb miles. In comparison, the average Co-permittee removal rate during FY 2023-24 was 0.41 yd^3/curb mile.

The removal rate is influenced by several factors including accumulation rates of pollutants, the relationship between rainfall and sweeping frequencies, particle size, pavement condition and automobile parking controls[4]. 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[5]. 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[6]. 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 2024-2025* and *Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Lead and Zinc - FY 2024-2025*. 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 as a result of street sweeping conducted during FY 2024-25 are presented in Table 12-1. Estimated removals for copper, nickel, lead, and zinc as a result of street sweeping activities conducted during FY 2019-20 through FY 2024-25 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.

[4] Woodward Clyde Consultants, December 1994. *Street Sweeping Literature Review/Storm Inlet Modification*, Prepared for Alameda County Urban Runoff Clean Water Program.
[5] Sartor, J. and G. Boyd, 1972. *Water Pollution Aspects of Street Surface Contaminants*. Prepared for United States Environmental Protection Agency, Washington, DC.
[6] 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 2024-25.

Land Use Type	Estimated Mean Pollutant Load Reduction (Pounds)			
	Copper	Nickel	Lead	Zinc
Residential	680	1,344	1,267	1,706
Commercial	238	471	1,137	806
Industrial	518	100	486	400
Total	**1,437**	**1,916**	**2,891**	**2,912**

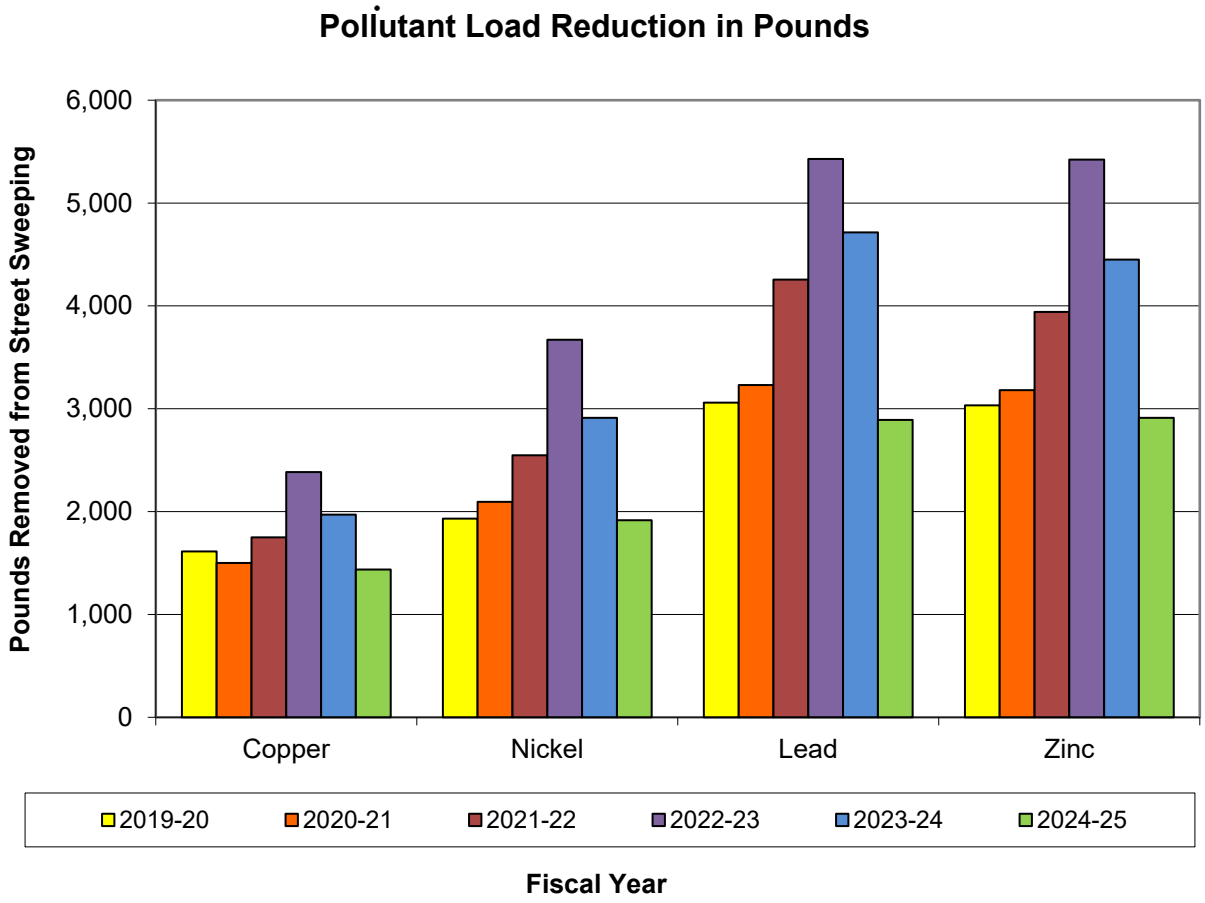


Figure 12-1. Estimated pollutant load reductions (in pounds) as a result of Co-permittee street sweeping activities conducted during FY 2019-20 through FY 2024-25.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 13

Exempted and Conditionally Exempted Discharges

September 30, 2025

Section 13 Exempted and Conditionally Exempted Discharges

Introduction

Provision C.15 identifies the types 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;
- Emergency discharges resulting from emergency firefighting activities;
- Individual residential car washing;
- Swimming pool, hot tub, spa and fountain water discharges;
- Irrigation water, landscape irrigation and lawn or garden watering.

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 requirements in Provision C.15.b.iii. under Order R2-2009-0074 (MRP 1.0) for planned, unplanned and emergency discharges that apply to water utility operations. As of January 1, 2016, the MRP no longer contains requirements related to potable water discharges, as these requirements are now contained in the State General Permit for Drinking Water Systems Discharges to Waters of the U.S. (Order WQ 2014-0194-DWQ). SCVURPPP Co-permittees that are also water utilities and may have potable water discharges have filed for coverage under the State General Permit.

In FY 15-16, the AHTG updated the SCVURPPP *Water Utility Operation and Maintenance Discharge Model Pollution Prevention Plan* (WUDPPP), which was approved by the Management Committee in February 2016, to reflect the State General Permit requirements. The WUDPPP is available on the SCVURPPP website. The AHTG also developed field form templates, Fact Sheets on visual turbidity

monitoring, chlorine residual false positives, and General Permit requirements, and a guidance memo on identifying annual representative monitoring locations.

Program staff continue to communicate with the AHTG via email to inform the group of State General Permit requirement due dates and training opportunities.

Emergency Discharges of Firefighting Water and Foam

Provision C.15.b.iii requires Permittees to collectively convene a regionwide Firefighting Discharges Work Group to identify and evaluate opportunities to reduce the impacts of discharges to the MS4 associated with emergency firefighting activities. During FY 22-23, Program staff surveyed the IND/IDDE AHTG for stormwater program and fire department representatives that would like to participate in the BAMSC Firefighting Discharges Work Group. SCVURPPP volunteered, along with Contra Costa Clean Water Program (CCCWP), to organize and facilitate the March 14 and June 1, 2023 Work Group meetings. A regional effort to continue the Work Group meetings and develop the Regional Firefighting Discharges Report (due September 2025) was scoped and budgeted in FY 23-24. SCVURPPP continues to provide in-kind services for the development of the Regional Report and facilitating the Regional Work Group.

The Regional Work Group consists of representatives from regulatory agencies (EPA and Regional Water Board), stormwater programs and Fire Departments. In FY 23-24, the Regional Work Group met March 26 and June 17, 2024. In FY 24-25, the Regional Work Group met January 14 and April 22, 2025. SCVURPPP staff also organized and participated in two Task Force meetings. The Task Force is a smaller, working group that reviews deliverables and identifies topics and questions to facilitate information sharing in the larger Regional Work Group.

Program staff assisted with the development of a Working Draft Regional Firefighting Emergency Discharges Report that was provided to the Task Force for review and comment. Program staff updated the Regional Report and provided a Draft Report to the Internal BAMSC Working Group for review and comment. Program staff assisted with revising the Regional Report based on comments received and provided a Revised Draft Report to the SCVURPPP IND/IDDE AHTG and Management Committee for review. Program staff revised the Regional Report based on comments received from the five countywide stormwater programs in July 2025. The Final Regional Report was provided to the SCVURPPP Management Committee and BAMSC Steering Committee for approval in August 2025. The Final Regional Firefighting Emergency Discharges Work Group Report is in Appendix 13-1.

Program staff provide information on the Work Group activities to the IND/IDDE AHTG (see Section 4). The IND/IDDE AHTG is also discussing implementation of Permittees evaluating the adequacy of large industrial sites (such as IGP sites, gas plants, gas concentration facilities, and chemical plants) BMPs and SOPs for the prevention, containment and cleanup of emergency firefighting discharges into storm drains and receiving waters (C.15.b.iii(3)(c)). Program staff provided a guidance memo *Identifying MRP Provision C.15.b.iii.(3)(c) "Large Industrial Facilities"* in April 2024 to the AHTG.

There is a requirement in C.15.b.iii to develop outreach materials on containment and cleanup BMPs and SOPs for contractors hired by private parties to participate in the containment and cleanup of discharges of firefighting water and foam and outreach materials for sites that are prone to firefighting emergencies regarding good housekeeping practices and preventative measures. These outreach materials must be distributed by September 2025. The two outreach materials *Fire Restoration Contractors BMPs* Fact Sheet and *Sites Prone to Fires BMPs* Fact Sheet were developed by the IND/IDDE AHTG and shared with the BAMSC Regional Firefighting Work Group countywide stormwater program leads. The final Fact Sheets are available on the My Watershed Watch website.

The Program distributed the fire restoration contractors BMPs Fact Sheet to a list of contractors that would typically respond to illicit discharges in Santa Clara County. The list was compiled from DTSC hazardous waste transporters in Santa Clara County and contractors provided by SCVURPPP Co-permittees. SCVURPPP Co-permittees are distributing the Fact Sheet for sites prone to fires to those sites they identify. The IND/IDDE AHTG discussed different methods to identify these sites.

Other Conditionally Exempted Discharges

Public outreach efforts that benefit from Program-wide collaboration are conducted as part of the Program's Watershed Watch Campaign (see Section 7). 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.v. Swimming Pool, Hot Tub, Spa, and Fountain Water Discharges; and C.15.b.vi.(1)(a) Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering:

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

- The multilingual *Clean Cars and Clean Creeks* brochure is available on the Watershed Watch website. The brochure includes information in four languages (English, Spanish, Chinese and Vietnamese). The brochure recommends washing your car at a commercial car wash and provides pollution prevention BMPs for washing your car at home.
- The following commercial car washes provided discounts on car washes to residents using the Watershed Watch Discount Card: Classic Car Wash, Pacific Car Wash (San Jose location), Montague Premier Car Wash, Zip Thru Express Car Wash (Sunnyvale location), Vikhar Valero Cupertino, and Sunnyvale Car Spa. Details on these partnerships and discounts are available on the Watershed Watch website.

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

- The *Draining Pools and Spas* brochure is available 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(1)(a) Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering

- The Watershed Watch continued to include information on proper lawn and garden watering.

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

■ Regional Activities

As discussed above, Program and Co-permittee staff participated in the BAMSC Firefighting Discharges Work Group. MRP 3.0 Provision C.15.b.iii, Emergency Firefighting Discharges, requires this Work Group to meet twice a year and collectively develop and submit a Firefighting Discharges Report by September 30, 2025. The report is in Appendix 13-1.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 14

Discharges Associated with Unsheltered Homeless Populations

September 30, 2025

Section 14 Discharges Associated With Unsheltered Homeless Populations

■ Introduction

Provision C.17 of the MRP requires Co-permittees to identify and implement appropriate control measures to address non-stormwater discharges into MS4s associated with unsheltered homeless populations, including discharges from areas where unsheltered people congregate.

In FY 2024-25, activities associated with Provision C.17 were conducted at the Co-permittee, Program and regional levels. This section summarizes activities conducted in FY 2024-25 at the Program level to assist Co-permittees with requirements in Provision C.17.

■ Program Activities

C.17.a.ii.(1) Unsheltered Homeless Population Map

This provision requires Permittees to submit, with the FY 2024-25 Annual Report, a map identifying the approximate location(s) of unsheltered homeless populations, storm drain inlets and existing streams, rivers, flood control channels, and other surface water bodies within the Permittee's jurisdiction. The MRP allows the use of biennial Point-in-Time (PIT) count results to develop the maps. The PIT count is designed to meet the United States Department of Housing and Urban Development (HUD) requirements to apply for McKinney-Vento Homeless Assistance funds (also known as Continuum of Care funds) and provide data for local homeless system planning. Every two years, during the last ten days of January, communities across the United States conduct comprehensive counts of the local population experiencing homelessness. These PIT counts estimate the prevalence of homelessness in each community and collect information on individuals and families residing in temporary shelters and places not meant for human habitation and ultimately help the federal government better understand the nature and extent of homelessness nationwide.

The Santa Clara County Office of Supportive Housing (County OSH) conducts the PIT count in Santa Clara County in partnership with local jurisdictions, non-profits, and community volunteers. County OSH staff provided the 2025 PIT count data of unsheltered populations to Program staff for developing the maps. Due to privacy and safety concerns, the location and count were provided at the census tract level. Exact locations were not provided because the maps would become available publicly as part of the Annual Reports. Program staff overlayed the 2025 PIT data with MS4 system, water body, and jurisdiction boundary layers to create Co-permittee specific maps. The maps were included in Co-permittee FY 2024-25 Annual Reports.

Santa Clara County OSH conducted a PIT count in 2025. The findings are summarized here.

Coordination with the County OSH and the Santa Clara County Continuum of Care

SCVURPPP recognizes that identifying BMPs and strategies to manage the water quality impacts associated with unsheltered populations does not inherently address the complex issues contributing to and impacting the chronic homelessness in the County. In Santa Clara County, efforts to provide services to unsheltered populations are led by the Santa Clara County Continuum of Care (SCC CoC), which is a

broad group of stakeholders dedicated to ending and preventing homelessness in Santa Clara County. The key CoC responsibilities are ensuring community-wide implementation of efforts to end homelessness, as well as ensuring programmatic and systemic effectiveness. The SCC CoC developed the Community Plan to End Homelessness (2020-2025) through a robust community engagement process. This plan will guide the County, cities, nonprofits, and other community members as they make decisions about funding, programs, priorities, and needs. The Plan aims to:

- Achieve a 30% reduction in annual inflow of people becoming homeless,
- House 20,000 people through the supportive housing system,
- Expand the Homelessness Prevention System and other early interventions to serve 2,500 people a year,
- Double temporary housing and shelter capacity to reduce the number of people sleeping outside; and
- Address the racial inequities present among our unhoused people and families and track progress towards reducing disparities.

SCVURPPP and Co-permittees are continuing to engage with County OSH for the implementation of Provision C.17 requirements. Program staff attended the 2025 PIT count Community Planning Meetings organized by County OSH. These meetings discussed PIT count process and provided information to volunteers conducting the PIT count. County OSH staff attended the July 18, 2024 SCVURPPP Management Committee meeting to provide an update on SCC CoC activities and the 2025 PIT count.

Unsheltered Homeless Populations Ad Hoc Task Group

A SCVURPPP Unsheltered Homeless Populations Ad Hoc Task Group (AHTG) was formed in FY 2024-25 to facilitate and coordinate development of the maps and discuss effectiveness evaluation BMPs. The AHTG met once in FY 2024-25.

■ Regional Activities

C.17.a.ii.(2) Regional Best Management Practices Report

To encourage ongoing regional, countywide, and municipal coordination efforts, the MRP requires Permittees to collectively develop a Best Management Practices (BMP) report that identifies effective practices to address non-storm water discharges associated with homelessness into MS4s that impact water quality. The BAMS Collaborative formed a Work Group to develop the *Regional BMP Report for Addressing Non-stormwater Discharges Associated with Unsheltered Homeless Populations* (Regional BMP Report).

The Regional BMP Report was submitted by countywide programs as part of their FY 2022-23 Annual reports, including the SCVURPPP FY 2022-23 Annual Report, in compliance with Provision C.17 requirements. The Regional BMP Report describes the BMPs that may be, or are currently being, implemented by Permittees to address discharges associated with homelessness impacting water quality. Each BMP is presented as a Fact Sheet in the BMP Report. The Fact Sheets describe the BMP, goals, limitations, and challenges, and provide local implementation examples. No comments on the Regional BMP Report have been received to date from Water Board staff.

To meet the broader goal of coordination regionally, and statewide, BAMSC members coordinated with

CASQA and San Diego State University staff on a panel presentation at the CASQA Annual Conference on September 13, 2023. The title of the session was “Unhoused Populations and Water Quality Impacts: Municipal Best Management Practices from the Bay Area and San Diego”. Panelists included Megan Welsh Carroll, PhD from San Diego State University, Vishakha Atre from EOA, Nicole Wilson from LWA and moderator, Peter Schultze-Allen from EOA representing BAMSC members, including SCVURPPP. The full-capacity session included an excellent discussion with audience members on the challenges of providing cost-effective municipal services for unhoused populations and the related public health, sanitation, and human rights issues.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 15

Cost Reporting

September 30, 2025

Section 15 Cost Reporting

■ Introduction

Provision C.20, Cost Reporting, is a new provision introduced within MRP 3.0. Provision C.20.a requires each Permittee to annually prepare and submit a fiscal analysis of the capital and operation and maintenance costs incurred to comply with MRP requirements. Provision C.20.b.i requires Permittees to develop a cost reporting framework and methodology to perform the fiscal analysis. Permittees are encouraged to collaboratively develop the framework and methodology. The framework is required to consider identification of costs incurred solely to comply with MRP requirements as compared to costs shared with other programs or regulatory requirements, provide meaningful data to assess costs of different program areas, and allow for comparisons and to identify trends over time. Provision C.20.c requires Permittees to submit the cost reporting framework and methodology to the Water Board by June 30, 2023, and to submit their fiscal analyses annually according to the accepted cost reporting framework and methodology starting with the 2025 Annual Report.

SCVURPPP provided in-kind support to a Bay Area Municipal Stormwater Collaborative (BAMSC) project of regional benefit to jointly develop a cost reporting framework and methodology, along with other BAMSC Phase I stormwater programs. Permittees submitted the final Bay Area Cost Reporting Framework (Framework) and Guidance Manual to the Water Board on June 26, 2023, and Water Board staff provided comments on August 11, 2023. In March 2024, the BAMSC project team (including Program staff) completed revisions to the Framework based on Water Board comments and submitted the revised final Framework and Guidance Manual. On June 26, 2024, the Water Board provided conditional approval for the revised final Framework and Guidance Manual. The condition of approval was that any future modifications, either for better alignment with Permittee accounting practices or for consistency with the State Water Board's Municipal Stormwater Cost Policy, must be approved by the Water Board's Executive Officer.

In FY 2023-24, Program staff created a SCVURPPP-version of the Cost Reporting Framework and conducted training and provided support to Co-permittees as they prepared to implement the cost reporting requirements. This section provides information on the Program and regional collaborative efforts during FY 2024-25.

■ Program Activities

C.20.b Cost Reporting Implementation

The Program focused on assisting SCVURPPP Co-permittees with use of the approved Framework and Guidance Manual to track and report costs of implementing MRP requirements during FY 2024-25. The Program developed and periodically updated a Frequently Asked Questions (FAQ) document based on questions received from Co-permittees throughout the FY. In addition, on February 20 and April 22, 2025, the Program held Cost Reporting Work Group Q&A Sessions. During the Q&A sessions, the Program reviewed the most up-to-date version of the FAQ and answered additional questions from Co-permittees. The Co-permittees made the necessary adjustments to internal cost budgeting and/or tracking systems in order to use the Framework. The FY 2024-25 cost analysis for each SCVURPPP Co-

permittee was completed and submitted with their individual FY 2024-25 Annual Report in September 2025.

During FY 2025-26, the Program will support Co-permittees in developing their second annual fiscal analyses, due with the FY 2025-26 Annual Reports, by answering Co-permittee questions and conducting brief presentations of the methodology in appropriate forums.

■ Regional Activities

The Program continued to track the State Water Board STORMS Unit and CASQA efforts on development of the Statewide Municipal Stormwater Cost Policy. Comments on the Revised Draft Policy were submitted in July 2024, and a Final Draft Policy was released in December 2024 and adopted in January 2025. Program staff worked with CASQA and STORMS staff to update the State's Guidance Manual to be consistent with the Policy and to more closely align with the Bay Area approach. The Program will provide in-kind support during FY 2025-26 for a BAMSC Regional Project to update the Bay Area Cost Reporting Framework to allow submittal of cost information to the State's Municipal Cost Data Portal for FY 2026-27, per the requirements of the adopted Municipal Stormwater Cost Policy.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Section 16

Asset Management

September 30, 2025

Section 16 Asset Management

■ Introduction

Provision C.21, Asset Management, is a new provision introduced with MRP 3.0. The objective of Provision C.21 is for each Permittee to develop and implement an Asset Management Plan to ensure the satisfactory condition of all hard assets constructed during this and previous permit terms. Hard assets are defined in the Permit as structural controls that serve a water quality function (e.g., bioretention cells, pervious pavement systems, and full trash capture devices). Provision C.21.b.i. requires Permittees to develop an Asset Management Plan that includes asset category descriptions, an inventory of assets, an Asset Management O&M Plan for prioritizing and scheduling O&M activities, and recommendations for a reporting strategy. Provision C.21.c. requires Permittees to submit their Asset Management Plans with the 2025 Annual Reports and then to report on implementation efforts annually starting with the 2026 Annual Reports. In addition, Provision C.21.c. requires Permittees to jointly complete a Climate Change Adaptation Report to identify potential climate change-related threats to assets and appropriate adaptation strategies by September 2026.

In FY 2024-25, SCVURPPP collaborated with other Phase I countywide programs through the BAMSC Asset Management Work Group and assisted SCVURPPP Co-permittees through the Information Management Ad Hoc Task Group (AHTG). This section provides information on these countywide and collaborative efforts, including the products developed and next steps.

■ Program Activities

C.21.b Asset Management Plan Development

In FY 2024-25, the SCVURPPP Information Management AHTG focused on helping guide Co-Permittees in the development of Asset Management Plans. SCVURPPP developed an Asset Management Plan Template with a framework for creating local asset management programs which AHTG members reviewed and approved. In addition, the AHTG met approximately monthly during FY 2024-25. Topics discussed included the SCVURPPP Asset Management Work Plan; Asset Management Template review; accounting for asset likelihood of failure and consequence of failure; countywide data management workflows; condition assessment approach and training; and developing cost projections. The Program also provided on-call support to Co-permittees as needed during development of their Plans. Co-permittees submitted their Asset Management Plans with their individual FY 2024-25 Annual Reports.

The Program developed tools and training to support Co-permittees with data management and condition assessments. Tools included a custom field application for asset data collection and condition assessments, a countywide database to manage asset and condition assessment data, and a dashboard for data visualization and analytics. On May 14 and May 20, 2025, the Program conducted two trainings to provide an overview of asset management and introduce the approach and parameters for condition assessments of LID/GSI assets. On May 14 and May 29, 2025, the Program conducted two in-field trainings on condition assessments. The trainings demonstrated how to reference and interpret condition assessment guidance and included a group calibration exercise with the goal of reducing score variability.

During FY 2025-26, the Program will support Co-permittees with Asset Management Plan implementation by providing an additional training on conducting condition assessments, making updates to data management tools, leading a countywide risk analysis, and further developing approaches to assessing condition and risk for trash-related assets.

■ Regional Activities

SCVURPPP provided in-kind support to a BAMSC Asset Management Work Group that formed for permittees to collaborate, share resources, and discuss a consistent approach to evaluating the condition of stormwater quality-related assets. The BAMSC Work Group held one meeting in July 2024 which focused on discussing approaches to assessing condition of trash-related assets and reporting on asset inventories and operation and maintenance needs. Information on discussions at the BAMSC Work Group was shared with the SCVURPPP Information Management AHTG.

During FY 2025-26, the BAMSC Work Group will continue to meet as needed to discuss topics of regional interest. SCVURPPP will also provide in-kind support for a BAMSC regional project for completion of a Climate Change Adaptation Plan (CCAP) that will identify potential climate change-related threats to Permittees' stormwater quality-related hard assets and appropriate adaptation strategies, due to the Water Board in September 2026.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Water Environment Federation
the water quality people®
National Municipal Stormwater and Green Infrastructure Awards Program
Overall Highest Score
Phase I Organization

FY 2024-2025 Annual Report

Submitted in Compliance with NPDES Permit No. CAS612008 (Order R2-2022-0018)

Program Annual Report Appendices

September 30, 2025

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 • Valley Water

Table of Contents Appendices

Section 1: Introduction

Appendix 1-1: Updated Confirmation Statement from Los Altos, Santa Clara County, Sunnyvale, and Cupertino designating a Management Committee representative and/or alternate

Section 2: Municipal Operations

Appendix 2-1: Rural Roads Workshop – March 6, 2025

- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Section 3: New Development and Redevelopment

Appendix 3-1: Annual C.3 Workshop Low Impact Development and Green Stormwater Infrastructure: Design and Maintenance – April 29, 2025

Appendix 3-2: Information on Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls - FY 2024-25

Appendix 3-3: Bay Area Municipal Stormwater Collaborative Draft Long-Term Green Stormwater Infrastructure Technical Working Group Summary and Recommendations Report – September 2025

Appendix 3-4: Bay Area Municipal Stormwater Collaborative FY 2024-25 Regional Supplement for New Development and Redevelopment

Section 4: Industrial and Commercial Site Controls

Appendix 4-1: IND/IDDE Training: Industrial, Commercial and Illicit Discharge Inspector Workshop – June 16, 2025

- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Section 7: Public Information and Outreach

Appendix 7-1: FY 2024-25 Watershed Watch Campaign

- FY 2024-25 Watershed Watch Campaign Summer/Fall 2024 Media Plan & Content
- FY 2024-25 Watershed Watch Campaign Winter/Spring 2025 Media Plan & Content
- FY 2024-25 Watershed Watch Campaign: Media Contractor Campaign Report – July 1, 2024 – June 30, 2025
- Watershed Watch Website Statistics FY 2024-25

Appendix 7-2: Program Contact Lists

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

Appendix 7-3: Watershed Watchers: Keeping Our Waterways Clean: FY 2024-25 Fourth Quarter Report April-June 2025

Appendix 7-4: ZunZun School Assemblies for Watershed Watch FY 2024-25

- ZunZun Assembly Programs for Watershed Watch – Final Report FY 2024-2025 School Year, July 15, 2025
- Memorandum – End of Year Evaluation of the FY 2024-25 School Assembly Program, July 28, 2025

Section 9: Pesticides Toxicity Control

Appendix 9-1: IPM Store Partnership Program

- List of Stores in the IPM Store Partnership Program and Training Dates

Appendix 9-2: FY 2024-25 Green Gardener Training Program

- Santa Clara Valley Green Gardener Training Program – FY 2024-25 Activities
- Santa Clara Valley Green Gardener Training Announcement Flyers – Winter 2024 & Winter 2025

Appendix 9-3: Pesticide Source Control Actions Effectiveness Evaluation – September 2025

Appendix 9-4: CASQA 2025 Pesticide Annual Report– August 2025

Appendix 9-5: CASQA Our Water Our World 2025 Annual Report – August 2025

Section 11: Mercury and PCBs Controls

Appendix 11-1: Mercury and PCBs Control Measures Report Version 3.0 (2025)

Section 12: Copper Controls

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

- Summary of Street Sweeping Activities for FY 2024-2025
- Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Copper and Nickel - FY 2024-2025
- Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Lead and Zinc - FY 2024-2025

Section 13: Exempt and Conditionally Exempted Discharges

Appendix 13-1: Bay Area Municipal Stormwater Collaborative Firefighting Emergency Discharges Report – September 2025

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 1-1

Updated Confirmation Statement from Los Altos, Santa Clara County, Sunnyvale, and Cupertino designating a Management Committee representative and/or alternate

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: 09/12/2024

Name of Co-permittee: City of Los Altos

Name of Management Committee Representative: Harun Musaefendic

Email and phone number of Representative: Hmusaefendic@losaltosca.gov
(650) 947-2650

Name of Management Committee Alternate (if any): Vency Woo

Email and phone number of Alternate Representative: Vwoo@losaltosca.gov
(650) 947-2622

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: Aida Fairman (Sep 12, 2024 17:09 PDT) Sep 12, 2024

Aida Fairman

Title of Appropriately Delegated Supervisor: Public Works Director

Docusign Envelope ID: 4F131D11-0011-45AA-A862-FCC8C8E26DF8

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: December 12, 2024

Name of Co-permittee: County of Santa Clara (Watershed Protection Division)

Name of Management Committee Representative: Vanessa Marcadejas, Program Manager
Email and phone number of Representative: vanessa.marcadejas@cep.sccgov.org
(408) 690-7602

Name of Management Committee Alternate (if any): Zhenzhen Jiang, Mgmt. Analyst
Email and phone number of Alternate Representative: zhenzhen.jiang@cep.sccgov.org
(408) 691-2616

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: DocuSigned by: 9A7F52EB1925473... 1/3/2025

Title of Appropriately Delegated Supervisor: Edgar Nolasco, Director
Consumer and Environmental Protection Agency
County of Santa Clara

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: 12/30/24

Name of Co-permittee: City of Sunnyvale

Name of Management Committee Representative: Winola Cheong

Email and phone number of Representative: wcheong@sunnyvale.ca.gov, 408.730.7763

Name of Management Committee Alternate (if any): Emma Hinojosa

Email and phone number of Alternate Representative: ehinojosa@sunnyvale.ca.gov, 408.730.7764

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: Ramana Chinnakotla

Title of Appropriately Delegated Supervisor: Director of Environmental Services

CONFIRMATION OF AUTHORIZATION FOR NPDES PERMIT SUBMITTALS BY SCVURPPP PROGRAM MANAGER

Date: 6/16/2025

Name of Co-permittee: City of Cupertino

Name of Management Committee Representative: Ursula Syrova

Email and phone number of Representative: ursulas@cupertino.gov 408-777-7603

Name of Management Committee Alternate (if any): Riley Moffatt

Email and phone number of Alternate Representative: rileym@cupertino.gov 408-655-8685

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: Public Works Director

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 2-1

Rural Roads Workshop – March 6, 2025

- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Rural Roads Workshop

March 6, 2025

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

RURAL ROADS WORKSHOP
Thursday, March 6, 2025

Santa Clara Valley Water District
Headquarters Board Room
5750 Almaden Expressway, San Jose, CA

WORKSHOP AGENDA

8:45 AM	Registration	
9:00 AM	Welcome	Kristin Kerr, *Program Staff*
9:15 AM	Overview of the Handbook for Forest, Ranch and Rural Roads (PWA) for the Mendocino County Resource Conservation District	Video
9:45 AM	Rural Road Inspection Programs • Anthony Guzman, P.E. Associate Engineer Valley Water • Edgar Orre, Division Chief Resource Management - Santa Clara Unit, CalFire	Panel Discussion
10:30 AM	MRP Rural Road BMPs and Temporary BMPs for Erosion/Sediment Control	Peter Schultze-Allen, *Program Staff*
11:15 AM	Adjourn	

SCVURPPP Rural Roads Workshop

March 6, 2025 Virtual (Zoom Meeting) Attendance

	First Name	Last Name	Agency
1	Riley	Moffatt	City of Cupertino
2	Alan	Cunnigham	City of Monte Serreno
3	Abraham	Campos	City of Palo Alto
4	Miguel	Chacon	City of Palo Alto
5	Eduardo	Delapaz	City of Palo Alto
6	Jesus	Garcia	City of Palo Alto
7	Juan	Granados	City of Palo Alto
8	Elizabeth	Hochstetler	City of Palo Alto
9	Victor	Huizar	City of Palo Alto
10	Javier	Huizar	City of Palo Alto
11	Arturo	Mejia	City of Palo Alto
12	Fermin	Mora	City of Palo Alto
13	Kaela	Noakes	City of Palo Alto
14	David	Pringle	City of Palo Alto
15	Jose	Ramirez	City of Palo Alto
16	Elsie	Sbarbori	City of Palo Alto
17	James	Treacy	City of Palo Alto
18	Rigoberto	Valentin	City of Palo Alto
19	Jose	Vargas	City of Palo Alto
20	Mike	Warner	City of Palo Alto
21	Joaquin	Garcia	City of San Jose
22	Joe	Schwennesen	City of San Jose
23	Isaac	Calvillo	City Palo Alto
24	Max	Carlos- Gome	Santa Clara County
25	Chris	Ellsbury	Santa Clara County
26	Joanna	Kincaid	Santa Clara County
27	Rocelia	Kmak	Santa Clara County
28	Jeff	Ham	Valley Water
29	Lina	Li	Valley Water
30	Ryan	Tregoning	Valley Water
31	Julie	Schaer	West Valley Stormwater Authority

SCVURPPP Rural Roads Workshop

March 6, 2025 In Person Attendance

	First Name	Last Name	Agency
1	Ed	Orre	CalFire - Santa Clara Unit
2	Manny	Barragan	City of Cupertino
3	Lori	Baumgartner	City of Cupertino
4	Juan	Barocio	City of Palo Alto
5	Chris	Fujimoto	City of Palo Alto
6	Jose	Hernandez	City of Palo Alto
7	Mark	Ribeiro	City of Palo Alto
8	Vanessa Van	Dang	City of San Jose
9	Rachel	Huzzey	City of San Jose
10	Erick	Roa	City of San Jose
11	Dave	Boyd	County of Santa Clara
12	Gavin	Finley	County of Santa Clara
13	John	Bourgeois	Valley Water
14	Kendra	Boutros	Valley Water
15	Matthew	Bozzo	Valley Water
16	Will	DeDen	Valley Water
17	Anthony	Guzman	Valley Water
18	Shawn	Lockwood	Valley Water
19	David	Ridi	Valley Water

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Rural Roads Workshop – Spring 2025

Number of In Person Evaluations: 12
Number of In Person Attendees: 19

Number of Evaluations for Virtual Zoom Meeting: 10
Number of Attendees for Virtual Zoom Meeting: 31

Valley Water Board Room – 5750 Almaden Expressway, San Jose March 6, 2025

1. **Video – Overview of the Handbook for Forest, Ranch and Rural Roads for the Mendocino County Resource Conservation District**

   Very Useful 18 Somewhat Useful 3 Not useful 1

   Comments:
   - Good video. Very informative. The visuals really helped show how the BMPs operate (2)
   - Helpful meeting, I appreciated the video covering best practices for rural roads.
   - Excellent, but could use more information on erosion control in areas.
   - Great examples!
   - It was useful just needed a bit more in the specification on the length of rolling dips.
   - Good information
   - Next time, avoiding ads will be better.

2. **Panel Discussion – Municipal Rural Road Inspection – Anthony Guzman, Valley Water and Edgar Orre, Division Chief, CalFire**

   Very Useful 11 Somewhat Useful 11 Not useful 0

   Comments:
   - Helpful segment to know when maintaining rural roads.
   - Good information from those with firsthand experience.
   - Edgar's presentation was very useful
   - Interesting hearing how each agency deals with different land owners and inspections.

3. **MRP Rural Road BMPs and Temporary BMPs for Erosion/ Sediment Control – Peter Schultze-Allen, Program Staff**

   Very Useful 19 Somewhat Useful 3 Not useful 0

   Comments:
   - Excellent information, particularly the method comparisons.
   - Good use of CASQA BMP Handbook
   - Really liked the photos showing how each BMP worked

- It was good to see the new products that are out there

6. **Did this training meet your expectations?** Yes 22 No 0

Comments:

- Lots of good information
- Very useful
- Would appreciate or learn more if we talk about or go through a sample project from start to end and discuss how BMPs were selected.

7. What parts of the training were most useful to you?

- The video was really good. (7)
- Introducing me to rolling dips. Details about the various BMPs.
- Erosion control measures (2)
- Erosion control method comparisons.
- Details on advanced slope stabilization
- BMP examples (2)
- The training on best practices with fire and flooding
- Case study
- Descriptions of common misuses of BMPs
- All was good

8. What would have made this training more useful?

- Erosion control methods in rural road areas.
- The video can be downloaded or purchased ad-free for the presentation.
- Nothing. Great topics and great examples
- At least briefly talking about every BMP
- Maybe have other topics for panel discussion
- Types of materials used to repair rural roadways would have been useful
- Everything was on point
- Overall useful. Maybe to encourage more audience participation, use polls or audience engagement tools to promote discussion.
- More case studies from other partners
- Key points to look for during inspections

9. What topics would you recommend for future training?

- A quick time-lapsed video showing operators installing certain BMPs
- Same topics
- More information on all the BMPs
- Perhaps a section on "temporary fixes" that could be done on a rural road during a rain event (to mitigate against an imminent culvert failure, etc.)
- BMPs or Water Pollution Control Plan (WPCP) for roadway maintenance and construction.
- Presentations about design of culverts with specifications about pipe sizing and slope fill around pipe.

- Erosion and sediment controls in fire burn scar areas and how to protect residents that live down slope of burn scars from mudslides/debris flows.
- Discussion of how these programs are affected by other resource agencies/permits.
- Discussion of soil types and effectiveness of BMPs, or considerations when repairing eroded areas.
- Interface with other permit requirements (401, 404, etc.)

10. General Comments?

- I appreciate your effort in organizing this training.
- Great workshop!
- Good class
- Thank you for the training
- Thanks for making today possible!

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 3-1

Annual C.3 Workshop Low Impact Development and Green Stormwater Infrastructure: Design and Maintenance – April 29, 2025

- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Annual C.3 Workshop

Low Impact Development and Green Stormwater Infrastructure: Design and Maintenance

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April 29, 2025

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

WORKSHOP ANNOUNCEMENT

SCVURPPP C.3. WORKSHOP:

Low Impact Development and Green Stormwater Infrastructure: Design and Maintenance

Tuesday, April 29, 2025

9:00 AM – 3:00 PM

Orchard Banquet Hall, Campbell Community Center
1 W Campbell Ave, Campbell, CA 95008

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

- Plan, design, and construct public projects, including transportation projects
- Review and approve stormwater control plans for development projects
- Manage stormwater programs and oversee regulatory compliance
- Oversee maintenance and inspection of stormwater treatment measures

Workshop agenda: This workshop will include training on the following topics:

- Review of Municipal Regional Permit Provision C.3 requirements for Regulated Projects, Low Impact Development (LID), and Green Stormwater Infrastructure (GSI)
- Updates to the SCVURPPP GSI Handbook and GSI design details
- Design and maintenance of suspended pavement/tree well systems for stormwater treatment
- Addressing bioretention area condition and maintenance issues after installation, including a presentation on renovation of the Southgate Neighborhood (Palo Alto) bioretention areas
- Panel discussion of challenges with bioretention area maintenance

*There will be **no charge** for the workshop. Light breakfast and box lunch will be served.*

Please pass this flyer to appropriate staff within your organization.

CLICK HERE TO REGISTER

Registration Deadline: Tuesday, April 22, 2025. Questions? Email Lynn at <lpinell@eoainc.com>

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Annual C3 Workshop

Low Impact Development and Green Stormwater Infrastructure: Design and Maintenance

Tuesday, April 29, 2025

8:30 AM - 3:00 PM

Orchard Banquet Hall, Campbell Community Center
1 W Campbell Ave, Campbell, CA 95008

WORKSHOP AGENDA

8:30 AM	**Registration (and Refreshments)**	
9:00 AM	Welcome	Jill Bicknell *SCVURPPP*
9:10 AM	Review of Provision C.3 Requirements in MRP 3.0	Jill Bicknell *SCVURPPP*
9:50 AM	GSI Handbook Updates and Details	Renee Crawford *SCVURPPP*
10:30 AM	**BREAK**	
10:45 AM	Suspended Pavement Systems for Stormwater Treatment	Shawn Freedberg *DeepRoot*
12:00 PM	**Lunch**	
1:00 PM	Cost-Effective Bioretention Maintenance and Design	Peter Schultze-Allen *SCVURPPP*
1:50 PM	Southgate Neighborhood: A Partnership to Revitalize Bioretention Areas	Brad Hunt *City of Palo Alto* Junko Bryant *Grassroots Ecology*
2:15 PM	Bioretention Area Maintenance Challenges - Panel Discussion	Brad Hunt *City of Palo Alto* Robert Siudzinski *City of Campbell* Mahmoud Jillo *City of San José*
3:00 PM	Adjourn	

*** Attendance at the workshop is acceptable for 5 PDUs toward maintaining CPESC, CESSWI and/or CPSWQ certifications. ***

SCVURPPP Annual C.3 Workshop
Attendance List
April 29, 2025

	First Name	Last Name:	Agency:
1	Andrew	Kin-McAlpine	City of Campbell
2	Roger	Storz	City of Campbell
3	Arlyn	Villanueva	City of Campbell
4	Lori	Baumgartner	City of Cupertino
5	Alejandro	Torres	City of Cupertino
6	Riley	Moffatt	City of Cupertino
7	Lyhak	Eam	City of Milpitas
8	Anna	Highsmith	City of Milpitas
9	Jeremy	Wu	City of Milpitas
10	Alan	Cunningham	City of Monte Sereno
11	Arlynn	Bumanglag	City of Mountain View
12	Paola	Burk	City of Mountain View
13	Lauren	Cody	City of Mountain View
14	Wing	Fung	City of Mountain View
15	Brian T.	Jones	City of Mountain View
16	Jacky	Leong	City of Mountain View
17	Brandon	Redic	City of Mountain View
18	Alex	Wong	City of Mountain View
19	Zachary	Wu	City of Mountain View
20	Andy	Zhou	City of Mountain View
21	Pam	Boyle Rodriguez	City of Palo Alto
22	Chris	Fujimoto	City of Palo Alto
23	Brad	Hunt	City of Palo Alto
24	Alejandro	Bermudez	City of San José
25	Trenna	Burbank	City of San José
26	Paul	Calderon	City of San José
27	Daniel	Carrillo	City of San José
28	Steve	Castillo	City of San José

SCVURPPP Annual C.3 Workshop
Attendance List
April 29, 2025

	First Name	Last Name:	Agency:
29	Jason	Condit	City of San José
30	Irene	Ding	City of San José
31	Peter1	Ding	City of San José
32	Joseph	Dyke	City of San José
33	Keith	Gaxiola	City of San José
34	Jeffrey	Gomez	City of San José
35	Oksan	Gouthier	City of San José
36	Khanh	Huynh	City of San José
37	Lauren	Ishii-Rivera	City of San José
38	Garrett	Jenks	City of San José
39	Mahmoud	Jillo	City of San José
40	Regina	Kairmdjanova	City of San José
41	Elias	Kauders	City of San José
42	Gabryela	Landin	City of San José
43	Hamilton	Lee	City of San José
44	Kaylee	Messina	City of San José
45	Joe	Nguyen	City of San José
46	Darrick	Nguyen	City of San José
47	Phillip	Ody	City of San José
48	Joshua	Saavedra	City of San José
49	Ryan	Santos	City of San José
50	Mark	Saturnio	City of San José
51	Nancy	Solorio	City of San José
52	Claire	Sorensen	City of San José
53	Binh	Tran	City of San José
54	Ellen	Yuen	City of San José
55	Cesar	Arellano	City of San José
56	California	Biordi	City of San José

SCVURPPP Annual C.3 Workshop
Attendance List
April 29, 2025

	First Name	Last Name:	Agency:
57	Carl	Dinga	City of San José
58	Jiane	Dionisio	City of San José
59	Sandra	Freitas	City of San José
60	Casey	Hirasaki	City of San José
61	Layna	Layer	City of San José
62	Esteban	Orozco	City of San José
63	Cecilia	Rios	City of San José
64	Shayan	Serajeddini	City of San José
65	Brandon	Coco	City of Santa Clara
66	Kaveh	Forouhi	City of Santa Clara
67	Gaurav	Kumarllemos	City of Santa Clara
68	Faranak	Mahdavi	City of Santa Clara
69	Jungwoon	Park	City of Santa Clara
70	Christian	Tran	City of Santa Clara
71	Colleen	Trostle	City of Santa Clara
72	Cindy	McCormick	City of Saratoga
73	Lauren	Acance	City of Sunnyvale
74	Michelle	Arias	City of Sunnyvale
75	Dustin	Clark	City of Sunnyvale
76	Richard	Gutierrez	City of Sunnyvale
77	Jessie	Hendren	City of Sunnyvale
78	Emma	Hinojosa	City of Sunnyvale
79	Rachel	Moran	City of Sunnyvale
80	Marcella	Navas	City of Sunnyvale
81	Joey	Wong	City of Sunnyvale
82	Beibei	Chen	County of Santa Clara
83	Rikti	Dalal	County of Santa Clara
84	Mick	D'Alessio	County of Santa Clara

SCVURPPP Annual C.3 Workshop
Attendance List
April 29, 2025

	First Name	Last Name:	Agency:
85	David	Dorcich	County of Santa Clara
86	Ed	Duazo	County of Santa Clara
87	Gavin	Finley	County of Santa Clara
88	Ermias	Gizaw	County of Santa Clara
89	Christine	Hii	County of Santa Clara
90	Yu-Wen	Huang	County of Santa Clara
91	Zhenzhen	Jiang	County of Santa Clara
92	Navjit	Kalotia	County of Santa Clara
93	Joanna	Kincaid	County of Santa Clara
94	Rocelia	Kmak	County of Santa Clara
95	Julianna	Martin	County of Santa Clara
96	Jesse	Medina	County of Santa Clara
97	Hien	Nguyen	County of Santa Clara
98	Dara	Ozoa	County of Santa Clara
99	Paul	Pascoal	County of Santa Clara
100	Peter	Perez-Hernandez	County of Santa Clara
101	Barni	Roncal	County of Santa Clara
102	Ronald	Short	County of Santa Clara
103	Suyesh	Shrestha	County of Santa Clara
104	Jess	Tanciangco	County of Santa Clara
105	Megan	Tang	County of Santa Clara
106	Sandeep	Vangari	County of Santa Clara
107	Quynh	Vo	County of Santa Clara
108	Darrell	Wong	County of Santa Clara
109	Aleisha	Wright	County of Santa Clara
110	Yali	Zheng	County of Santa Clara
111	Steve	Beams	County of Santa Clara
112	David	Boyd	County of Santa Clara

SCVURPPP Annual C.3 Workshop
Attendance List
April 29, 2025

	First Name	Last Name:	Agency:
113	Christine	Li	County of Santa Clara
114	Larry	Maceren	County of Santa Clara
115	Mayra	Cervantes	Santa Clara County
116	Kara	Baker	Stanford University
117	John	Chau	Town of Los Altos Hills
118	Shirley	Ng	Town of Los Gatos
119	James	Watson	Town of Los Gatos
120	Jessica	Ariani	Valley Water
121	Lisa	Brancatelli	Valley Water
122	Benjamin	Hwang	Valley Water
123	Eric	Meyer	Valley Water
124	Peter	Park	Valley Water
125	Madhu	Thummaluru	Valley Water
126	Julie	Schaer	WVCWA

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Evaluation Form

Annual C3 Workshop
Low Impact Development and Green Stormwater Infrastructure: Design and Maintenance

Number of Evaluations: 84

Number of Attendees: 126

Community Center, Campbell *Tuesday, April 29, 2025*

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1. **Review of Provision C.3 Requirements in MRP 3.0 –** Jill Bicknell, SCVURPPP

Very Useful - 71 **Somewhat Useful - 10** **Not Useful - 1** **Did Not Attend - 2**

Comments:

- Always good review. (2)
- Always helpful to be walked through C.3 requirements, especially for newer staff in stormwater.
- As a newer engineer, I wish the presentation was longer.
- Excellent explanation, and would be so beneficial to have the recording posted on the website. Would be very cool to see an actual project sample and see which category the project falls into.
- Excellent explanation and would be so beneficial.
- Expand using a parcel-based development example showing all unique possible considerations.
- Feel like I've heard the same presentation three times.
- Good to point out the frontage requirements and utilities trenching for parcel projects.
- Great details.
- Great overview of changes. (3)
- Great overview of what is C.3. (3)
- I am not in the design stage.
- I recommend having a slide or key in the beginning with all the acronyms used.
- I would like to learn more about roadway-related projects requirements.
-
- Presentations are very clear and easy to comprehend.
- The retrofit and alternative compliance was a great refresher.
- Very help to see new regulations being introduced.

2. **GSI Handbook Updates and Details –** Renee Crawford, SCVURPPP

Very Useful - 61 **Somewhat Useful - 22** **Not Useful - 0**

Comments:

- Going through the list of updates was perfect to know what changes to expect. (4)
- Good resources, great seeing Rene.
- Good to see the future GSI details.

- Great overview.
- I don't design, so it is not very helpful for my field.
- I recommend including page numbers for where to find certain information in the GSI handbook.
- More on complete street details.
- Nice to go over the changes and updates.
- Provided good guidance for design of C.3 treatment measures.
- Use laser pointer to point out changes in the detail itself, explain why changes were added.
- Was missing for me at least, the connection point on when to use this guide/who the audience is for this resource. How to use it in conjunction with the C.3 Handbook.

3. **Suspended Pavement Systems for Stormwater Treatment –** Shawn Freedberg, DeepRoot

Very Useful - 72 **Somewhat Useful - 13** **Not Useful - 1**

Comments:

- Add more time to speak.
- Awesome discussion. I thought Shawn did a great job emphasizing the flexibility and customization of Silva Cells, and the design input needed for each project.
- Excellent discussion and questions. (2)
- Felt a bit defensive, but I get it. Still very useful to better our understanding of the product.
- Good to see successful projects.
- Good to see the different treatment options.
- I have a lot of questions about suspended pavement and some design flaws, so it was nice to have Shawn available to answer.
- I regulate the Arques property mentioned in the presentation and it gave me a better insight on its function. It also went in depth on other types of projects that Silva Cells could be used for.
- I would love to see these in person.
- I'm glad this was covered because I had a lot of design questions answered.
- Interesting concept for non-roadway use
- It would be helpful to see case studies of the system failing so we can prevent it happening. Also, reasons for system failure.
- Love the option of Silva Cells in tight spaces. (2)
- My dept doesn't have many of these projects but it is a very interesting topic.
- Revelation-Silva Cells isn't a stormwater treatment device, rather facilitates stormwater treatment.
- Silva Cell is not allowed in our jurisdiction.
- The maintenance component still requires more information. It sounds like a great concept, but unsure of its use within residential settings.
- This was a great walk through on these systems and Silva Cells; really improved my understanding.
- Try to have the presenter wait to answer questions until the end or have people contact him directly. Too many personal/specific questions cut into his presentation, and we couldn't hear.
- Very informative. (3)

4. **Cost-Effective Bioretention Maintenance and Design –** Peter Schultze-Allen, SCVURPPP

Very Useful - 70 **Somewhat Useful - 13** **Not Useful - 0**

Comments:

- Always a pleasure hearing Peter talks plants in bioretention. His example pictures and "right plant, right place" is a fantastic tool for better bioretention design.
- Didn't feel the cost side was directly discussed enough.
- Great ideas for design options.
- I like the good/bad photo examples.
- I think by this point of the day; I was a bit tired I can't retain much by this time.
- I'm not in maintenance, but good see what's not working.
- It was very helpful to hear about the maintenance issues. (2)
- It would be great to hear/see actual cost breakdown of staff time/equipment /materials needed to maintain bioretention areas.
- Nice ideas that I can discuss with my inspection sites/contracts.
- Provided good high-level ideas on what to consider for bioretention maintenance would be good to review the challenges w/civil aspect of maintenance.
- The plant list was helpful!
- Understand which plants are best to use. (2)
- Very good overall information. (2)
- Very important topic.

5. **Southgate Neighborhood: A Partnership to Revitalize Bioretention Areas** – Brad Hunt, City of Palo Alto and Junko Bryant, Grassroots Ecology

Very Useful - 70 **Somewhat Useful - 14** **Not useful - 0**

Comments:

- A great example of an approach to rehab bioretention areas.
- Brad and Junko are fun presenters. (2)
- Excellent example! Great to see the lessons learned and the established camaraderie between the vendor – Grassroots – and the community! What an educational and successful hands-on campaign/opportunity!
- Good case study for non-regulated bioretention system.
- Great to see specific plants and how they function in real life situations. (4)
- Fun! Appreciate the honesty on what was successful and what was not. Also, good points on the importance of plants, Refreshing.
- Helpful to see what the issues were, the scope, outcome, maintenance, challenges, and lessons learned. Native plant overview was very helpful. The presentation layout was good too.
- I loved the case study, found it very interesting and useful.
- Love Brad's delivery and way to get the community involved in the project; Junko's take on plant was informative.
- Nice topic! It is interesting to learn how the community was used for restoration support. (2)
- Such an inspiring program. I enjoyed seeing the contributions Grassroots volunteers and the neighbors provided.
- This presentation was super informative. (4)
- Use splash pad instead of cobble stones.
- Very cool project; loved hearing about the design features. Junko's pollinator graphs were

fascinating to see.
- Very interesting presentation to show interaction with the public.

6. **Bioretention Area Maintenance Challenges - Panel Discussion**

Very Useful - 55 **Somewhat Useful - 17** **Not useful - 2**

Comments:
- A lot of repeat topics and discussions.
- Appreciate real world experiences. (2)
- Great examples, full of great information.
- Great panel and spread of expertise. Mahmoud is the best! All three were very knowledgeable and had great lessons to share.
- It was informational to see different cities' issues and approaches**.**
- It's always useful to learn about other cities' maintenance practices and challenges. (2)
- Lively discussion, great moderator, great ideas. (2)
- Not involved with maintenance but still good to hear.
- Nothing better than sharing lessons learned from respective program coordination - all great lessons learned – keep offering!
- This gave a good perspective on maintenance and challenges that people maintaining these bioretention systems face. Refreshing to see other cities have similar issues.
- Wish we had more time for questions from the audience.

7. **Did this training meet your expectations? Yes - 74 No - 1**
- It was super!

8. **What parts of the training were most useful to you?**
- All (5)
- Both maintenance discussions.
- Deeproot (5)
- Good balance of info versus case studies.
- GSI design, bioretention. (2)
- GSI Handbook updates because I use the Handbook often.
- Hearing new ideas pertaining to GSI and panel discussion.
- Hearing about maintenance issues and design considerations.
- I enjoyed learning about how other cities are tackling O&M issues that arise in the field of GSI.
- I enjoyed the case study presented by the City of Palo Alto. It was interesting to see program implementation and issues. (2)
- I enjoyed the MRP provision review and suspended pavement discussion.
- It was interesting to learn more about Silva Cells and tree spacing. (4)
- Jill's MRP C.3 requirement review. (13)
- Learning about updates to materials.
- Learning more about Silva Cells and plant types.
- Lunch.
- Pros/cons with various native plant species.
- Southgate neighborhood project. (2)
- Standard details.

- Suspended pavement, cost effective bioretention. (8)
- The discussions that came with or after each presentation.
- The question and answers portion.
- The Silva Cell presentation. I like the slower pace of his presentation. (3)
- There was something for all phases of development – design, construction, and maintenance. Very helpful and useful for all entities.
- Updates and refresher to MRP 3.0. Examples/photos of discussion topics. Experience sharing with other jurisdictions.
- Updates to the GSI Handbook.

9. **What would have made this training more useful?**

- Applying bioretention and when it doesn't work due to site constraints.
- Better integration between all topics. Some aspects were too broad.
- More examples used in the field. Many ideas used were ideal hypothetical scenarios.
- Discussion groups.
- Discussion with field crew for maintenance issues.
- Education for the public.
- Everything was very useful already.
- For the first segment it would be nice for the group to do an activity and apply information that was introduced at the beginning. This will be good practice.
- Ground Squirrels vs GSI.
- Having a key of acronyms and a checklist of requirements.
- I think there could have been more time allowed to ask questions after the Silva cells presentation.
- I would love to see the actual maintenance cost for a specific project or multiple projects. (2)
- If the training was done on a more consistent basis (Quarterly or semiannual). (2)
- It would have been helpful to have the presentations printed.
- Learning more about the minimum requirements for C.3.
- Maybe a walk outside. Hard to concentrate sometimes.
- More and longer breaks between presentations. Also, presentations that were one hour, one hours plus, were too big. Please condense them in the future.
- More discussion on the C.3 requirements and the Builder's Remedy.
- More discussion to see what other cities are struggling with/ excelling with.
- More group discussions. (3)
- More time for audience questions after each presentation. (2)
- More information on alternative compliance and frontage C3 treatment requirements. (3)
- More interactive panels/group networking.
- More practical - show some products.
- More review of the 2-year-old permit. I know it's been around for some time, but as a new engineer, it would've been appreciated.
- More visual examples. (2)
- More information on how to apply C.3 to projects and key things to look out for review.
- Not sure, well done.
- Sample of a real project review.
- Trip to see Hacienda.

10. **What topics would you recommend for a future training?**

- Alternative compliance – provide a how-to for offsite projects in-lieu payment fee; how's it coordinated. What does a credit bank look like? How do monitor credits when they expire? What is a good database to trace activity?
- Another topic would be MRP 4.0 - what to expect, and asset management - how to collect information.
- C.3 inspection discussion and enforcement steps.
- C.3 requirements for subdivisions.
- C3 design rather than maintenance. (2)
- Complete street design.
- Compliance enforcement. (3)
- Design of C.3 in the ROW and the challenges for municipalities to require parcel -based bioretention design per city preferences. (2)
- Equivalent treatment design for both public row and private land.
- Examples of road reconstruction projects.
- Going over maintenance contracts language to be included in contract negotiations.
- Ground Squirrels vs GSI.
- Hands on examples outside.
- How jurisdictions are dealing with SB9 Builder's Remedy. (2)
- Impervious vs pervious calculations.
- Including a larger variety of stormwater treatment measures would be helpful.
- Issues and challenges in maintaining Silva cells and their maintenance cost compared to other treatment methods.
- Maybe a study of the GSI handbook. Go through each chapter and summarize key points, just an idea.
- More about explanation of plants used in bioretention areas. (2)
- More different treatment type talks like the Silva cells.
- More in-depth discussion of treatment system design (siting, sizing, etc.)
- More open Q&A for policy questions related to the permit.
- More presenters from different municipalities showcasing what they are doing within their organizations.
- Other below-grade treatment systems like Silva Cells as LID treatment.
- Outreach and funding
- Outreach efforts aimed at informing the property owners of their regulated devices. (2)
- Pavement improvement.
- Practical example that includes design samples.
- Requirements for trail projects.
- Review biotreatment soil approval process, how to get funding.
- Specific site design.
- State of the art practices, what is on the horizon.
- Treatment of ROW impervious areas.
- Trees in bioretention – pluses and minuses.

11. **General Comments**

- City staff all go through training but handoff O&M to contractors, how are contractors trained? They meet MRP requirements. Where would landscape contractors learn LID O&M? ReScape should have a certification.
- Great to have in-person; certainly recommend annual training, if possible, on C.3 and inter-related topics.
- Great training, looking forward to next year's training. (2)
- Great workshop. (4)
- I thoroughly enjoyed this workshop; it was great to see other industry professionals and make new connections as well as have an opportunity to discuss the implementation of MRP requirements with so much professional knowledge in one room.
- I wasn't expecting so much talk about specific plant species.
- It was great and very organized.
- Need additional information on alternative green infrastructure.
- One of the better C.3 workshops.
- Overall good workshop.
- Presentations are a bit long; poor time management lunch was cut short by 15 minutes. There were no breaks in the afternoon.
- Really enjoyed the suspended pavement presentation – very useful.
- Thank you for providing food.
- Thank you. (5)
- Thanks to SCVURPPP and all the presenters.
- The broad topics of design, landscaping, and inspection loses the attention of attendees that are not involved in some aspects. A more focused workshop would better help attendees decide what to stay for.
- The maintenance discussions are useful, but also discouraging. The specs for GSI are so detailed, but the reality in the ground doesn't seem close to satisfying it at all. The cost is also high.
- Very informative. (2)
- Very nicely coordinated and appreciated. Please continue to offer this session and thank you for snacks and lunch.

Santa Clara Valley
Urban Runoff
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Appendix 3-2

Information on Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls - FY 2024-25

Santa Clara Valley
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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

September 25, 2025

Nayer Zahiri, Ph.D.
District Manager
Santa Clara County Mosquito & Vector Control District
1580 Berger Drive
San Jose, CA 95112

Transmitted via email: *nayer.zahiri@cep.sccgov.org;mosquitovector@cep.sccgov.org*

Subject: Information on Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls - FY 2024-25

Dear Dr. Zahiri:

On behalf of Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), and in accordance with the requirements in Provision C.3.h.v.(2) of NPDES Permit No. CAS612008 (Order No. R2-2022-0018, i.e., MRP 3.0), we have attached the following document for your information and use:

FY 2024-25 List of Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls

The report provides relevant information (e.g., name of facility, address of facility, party responsible for maintenance, and type of treatment/HM control(s)) for stormwater treatment systems and hydromodification management controls installed during FY 2024-25. We have compiled this information into one Excel spreadsheet to make it easier to access and sort.

If you have any questions regarding this submittal, please contact me at (510) 832-2852, X109 or csommers@eoainc.com.

Sincerely,

Chris Sommers
Program Manager

Attachment: FY 2024-25 List of Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls

Cc: Keith Lichten, SFBRWQCB
Rebecca Nordenholt, SFBRWQCB
SCVURPPP Management Committee

FY 2024-25 List of Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls

Co-Permittee	Name of Facility	Address of Facility	Party Responsible For Maintenance	Type of Treatment/HMControl(s)
Campbell	Mozart Parcel Map - Lot 1	16160 E. Mozart Ave., Campbell	Property Owner	Bioretention Area
Campbell	Mozart Parcel Map - Lot 2	16162 E. Mozart Ave., Campbell	Property Owner	Bioretention Area
Campbell	Mozart Parcel Map - Lot 3	16164 E. Mozart Ave., Campbell	Property Owner	Bioretention Area
Campbell	Mozart Parcel Map - Lot 4	16166 E. Mozart Ave., Campbell	Property Owner	Bioretention Area
Campbell	Trailblazer Ct (Tract 10580)	1429 Westmont Ave., Campbell, CA 95008	HOA	Bioretention Area Pervious Pavement
Cupertino	Alan Row (formerly Bateh Brothers) onsite improvements	22516-22540 Stevens Creek Blvd, 10147 & 10149 S Foothill Blvd (formerly 22690 Stevens Creek Blvd)	Alan Enterprise LLC	Bioretention Area
Cupertino	Alan Row Offsite Improvements	22690 Stevens Creek Blvd.	Alan Enterprise LLC	Bioretention Area
Cupertino	Westport – Parcel A	Multiple Addresses on Point Reyes Terrace & Dana Point Ln (formerly 21255 Stevens Creek Blvd)	Taylor Morrison of California LLC	Bioretention Area Silva Cells
Cupertino	Westport – Parcel C	21301 Point Reyes Terrace	Cupertino Pacific Associates LP	Bioretention Area
Cupertino	76 Gas Station	10490 S De Anza Blvd	Liaoning Benefit Petroleum Corporation	Infiltration Trench
Los Altos	425 First St	425 First Street, Los Altos, CA	425 First Street, Los Altos LLC	Bioretention unlined w/o underdrain
Los Altos Hills	None			
Los Gatos	The Grove at Los Gatos	400 Blossom Hill Road	Property Owner	Bioretention Area
Los Gatos	Tesla Parking Lot	15500 Los Gatos Blvd	Property Owner	Bioretention Area
Milpitas	Sunnyhills Apartments	1724 Sunnyhills Dr.	Owner	Bioretention areas
Monte Sereno	None			
Mountain View	Flynn Condominiums	186 E Middlefield Rd	Grandwell, LLC	Flow-through planter concrete lined w/ underdrain Bioretention lined w/ underdrain

FY 2024-25 List of Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls

Co-Permittee	Name of Facility	Address of Facility	Party Responsible For Maintenance	Type of Treatment/HMControl(s)
Mountain View	The Sevens	777 W Middlefield Rd	Mountain View Owner, LLC	Flow-through planter concrete lined w/ underdrain Bioretention lined w/ underdrain
Mountain View	Colony Sierra Homes	851 Serra Vista	Colony Sierra Homes, LLC	Flow-through planter concrete lined w/ underdrain Bioretention lined w/ underdrain
Mountain View	The Residences at Shoreline	1170 Spruce St	LH Shoreline Apartments LP	Flow-through planter concrete lined w/
Mountain View	1255 Pear Avenue - Phase 2 Development	1255 Pear Ave	The Sobrato Organization	Flow-through planter concrete lined w/ underdrain Bioretention lined w/ underdrain Bioretention lined w/ underdrain
Mountain View	Googleplex Security Enhancements - Phase 2.3	1600 Amphitheater Pkwy	Google	Bioretention lined w/ underdrain Bioretention lined w/ underdrain
Mountain View	St Francis High School - Buildings 100 & 300	1885 Miramonte Ave	Saint Francis High School	Bioretention unlined w/ underdrain
Mountain View	Saint Francis High School – Quad Access & Fire Lane	1885 Miramonte Ave	Saint Francis High School	Bioretention unlined w/ underdrain
Mountain View	Leghorn Building	2019 Leghorn	Leghorn, LLC	Bioretention unlined w/ underdrain Bioretention lined w/ underdrain
Mountain View	Rengstorff Park Aquatics Center	2073 Crisanto	City of Mountain View	Bioretention unlined w/ underdrain Interceptor trees
Mountain View	1300 Villa Street	1300 Villa St	Google, LLC	Bioretention lined w/ underdrain
Palo Alto	3705 El Camino Real, Palo Alto, CA 94303	3705 El Camino Real, Palo Alto, CA 94303	Wilton ECR, LP	Bioretention Pervious Pavers
Palo Alto	1500-1530 Page Mill Road, Palo Alto, CA 94304	1500-1530 Page Mill Road, Palo Alto, CA 94304	Stanford University	Bioretention
Palo Alto	Mercedes-Benz of Palo Alto	1700 Embarcadero Road, Palo Alto, CA 94303	Swickard Automotive Group	Bioretention

FY 2024-25 List of Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls

Co-Permittee	Name of Facility	Address of Facility	Party Responsible For Maintenance	Type of Treatment/HMControl(s)
Palo Alto	Stanford Mall – Bldg B. EE, FF	180 El Camino Real, Palo Alto, CA 94304	Simon Property Management	Bioretention
San José	1098 Valentine Court Lot 1	1098 Valentine Court	Property Owner	Bioretention Area (1)
San José	Almaden Road	1807 Almaden Road	Property Owner	Bioretention Area (9)
San José	Roosevelt Park Apartments	21 North 21st Street	Property Owner	Proprietary Media Filter System (1) Pervious Pavement (1)
San José	Norwood Residential	3539 Norwood Residential	Property Owner	Flow-Through Planter (3)
San José	Silver Creek Valley Hotel	5952 Silver Creek Valley Road	Property Owner	Bioretention Area (7)
San José	Winfield Mini-Storage	5775 Winfield Boulevard	Property Owner	Flow-Through Planter (1)
San José	Bascom Gateway Station	1330 South Bascom Avenue	Property Owner	Bioretention Area (8)
San José	Winchester Ranch	555 South Winchester Boulevard	Property Owner	Bioretention Area (4)
San José	253 Race Street	253 Race Street	Property Owner	Bioretention Area (3) Flow-Through Planter (2)
San José	Holden Assisted Living on Bascom	1017 South Bascom Avenue	Property Owner	Flow-Through Planter (11) Proprietary Media Filter System (1) Pervious Pavement (1)
San José	1094 Valentine Court Lot 2	1094 Valentine Court	Property Owner	Bioretention Area (2)
San José	1090 Valentine Court Lot 3	1090 Valentine Court	Property Owner	Bioretention Area (1)
San José	1086 Valentine Court Lot 4	1086 Valentine Court	Property Owner	Bioretention Area (1)
San José	Garden Gate Amendment	600 South 1st Street	Property Owner	Flow-Through Planter (2) Proprietary Media Filter System (1). Pervious Pavement (1)
San José	San Carlos Steet Marriott Hotel	495 West San Carlos Street	Property Owner	Flow-Through Planter (9) Proprietary Media Filter System (1)
San José	Stevens Creek Chrysler Showroom	4100 Stevens Creek Boulevard	Property Owner	Bioretention Area (2)
San José	0 Bret Harte Drive	0 Bret Harte Drive	Property Owner	Bioretention Area (1)
San José	802 Rosemar Court	802 Rosemar Court	Property Owner	Bioretention Area (3)
San José	905 North Capitol Avenue	905 North Capitol Avenue	Property Owner	Bioretention Area (1) Flow-Through Planter (1)
San José	1586 Industrial Avenue	1586 Industrial Avenue	Property Owner	Bioretention Area (3)
San José	1200 El Paseo De Saratoga	1200 El Paseo De Saratoga	Property Owner	Flow-Through Planter (1) Bioretention Area (1) Pervious Pavement (3)

FY 2024-25 List of Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls

Co-Permittee	Name of Facility	Address of Facility	Party Responsible For Maintenance	Type of Treatment/HMControl(s)
San José	Google Midpoint – South Campus	4300 North 1st Street	Property Owner	Bioretention Area (6)
San José	1 Branham Lane	1 Branham Lane	Property Owner	Bioretention Area (1) Pervious Pavement (1)
San José	Alum Rock Street Improvement Plan	1860 Alum Rock Avenue	Property Owner	Bioretention Area (6) Flow-Through Planter (2) Pervious Pavement (1)
San José	Assembly at North First Phase 2	3940 North 1st Street	Property Owner	Bioretention Area (3)
San José	Bellarmine College Prepatory	960 West Heading Street	Property Owner	Bioretention Area (8) Flow-Through Planter (2)
San José	Rotten Robbie #11	2305 Story Road	Property Owner	Pervious Pavement (1)
San José	2325 Orchard Parkway	2325 Orchard Parkway	Property Owner	Flow-Through Planter (1)
San José	Chick-Fil-A	3155 Silver Creek Road	Property Owner	Bioretention Area (2) Flow-Through planter (2)
San José	Target Parking Lot	3095 Silver Creek Road	Property Owner	Flow-Through planter (2)
San José	Diridon Plaza Transit-Oriented Development	33 South Montgomery Street	Property Owner	Bioretention Area (3)
San José	Evergreen Circle South Retail	2140 Quimby Road	Property Owner	Bioretention Area (1)
San José	Park: Almaden Lake	6099 Winfield Boulevard	City of San José	Bioretention Area (1)
San José	New Facilities Admin & Fleet Maintenance Building	1126 Coleman Avenue	City of San José	Bioretention Area (5)
San José	Almaden Church	19550 McKean Road	Property Owner	Bioretention Area (2) Pervious pavement (1)
San José	Google Mid-Point North Campus	4300 North 1st Street	Property Owner	Bioretention Area (1)
San José	Coleman Highline	1143 & 1155 Coleman Avenue	Property Owner	Bioretention Area (1)
San José	Summerhill Homes	0 Bret Harte Drive	Property Owner	Bioretention Area (2)

FY 2024-25 List of Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls

Co-Permittee	Name of Facility	Address of Facility	Party Responsible For Maintenance	Type of Treatment/HMControl(s)
San José	1300 Berryessa Supportive Parking	1300 Berryessa Road	City of San José	Bioretention Area (1)
San José	Infera Service Yard Phase 2	6373 San Ignacio Avenue	Property Owner	Bioretention Area (1)
Santa Clara	Stevens Creek Phase II	5407 Stevens Creek Blvd	Del Rey Investment Company (DBA Peery/A	Subsurface Infiltration System (1)
Santa Clara	Mission Center	2811 Mission College Blvd	SI 29, LLC	Bioretention Area (1) Flow-through Planter (1)
Santa Clara	Vantage CA31	2600 Walsh Ave	Vantage Data Centers 7, LLC	Bioretention Areas (5)
Santa Clara	The Lafayette Apartments	2333 Calle Del Mundo	The Lafayette Apartments CDM, LLC	Flow-through Planters (6) Media Filters (2)
Santa Clara	The Deck	3406 El Camino Real	Rancho El Camino LP	Bioretention Areas (7) Flow-through Planters (4) Media Filter (1)
Santa Clara	Ellore Senior Living The Clara Residential Park	2350 Calle De Luna 5150 Calle Del Sol 2330 Calle De Luna	Tasman ASL PropCo (Ellore) RCR Tasman I LLC (The Clara and Park)	Bioretention Areas (4) Flow-through Planters (2) Media Filters (4)
Santa Clara	Skybox	1200 Memorex Dr	1220 Santa Clara Propco, LLC	Bioretention Areas (9)
Santa Clara	Blueprint	3035 El Camino Real	Blueprint Homeowners Association	Bioretention Areas (4) Pervious Pavement (1) Media Filter (1)
Santa Clara	The Meridian	3945 Stevens Creek Blvd	Hyder Property Management	Bioretention Area (1) Flow-through Planters (3)
Santa Clara	AVE Santa Clara (The Station)	2240 Calle De Luna	AVE by Korman Communities	Bioretention Areas (3) Flow-through Planters (2) Media Filters (2)
Santa Clara	Colovore Data Center	3060 Raymond St	EPL Raymond LLC	Flow-through Planter (1)
Santa Clara	Passero (Greystar Tasman East)	2230 Calle Del Mundo (Building A) 2223 Calle De Luna (Building B)	Tasman East Apartments, LLC	Bioretention Areas (4) Media Filters (3)
Santa Clara	Central Park Magical Bridge	909 Kiely Blvd, Santa Clara, CA 95051	City of Santa Clara	Bioretention Area (1)
Santa Clara County	None			
Saratoga	None			
SCVWD	None			
Sunnyvale	Tree House Sunnyvale	1100 N. Mathilda Ave	SOF X Sunnyvale Owner LP	Bioretention Area

FY 2024-25 List of Newly Installed Stormwater Treatment Systems and Hydromodification Management (HM) Controls

Co-Permittee	Name of Facility	Address of Facility	Party Responsible For Maintenance	Type of Treatment/HMControl(s)
Sunnyvale	220 Carroll LLC	220 Carroll St	Townhomes	Bioretention Area
Sunnyvale	Intuitive Surgical Instruments	950 Kifer	Intuitive Surgical	Bioretention Area Flow-through Planter
Sunnyvale	Hartwood	401 Willow Ave	Olympic Residential Group/Aster Avenue Owner LLC	Bioretention Area
Sunnyvale	Applied Materials	545 Oakmead Ave	Applied Materials	Bioretention Area

Santa Clara Valley
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Appendix 3-3

Bay Area Municipal Stormwater Collaborative Draft Long-Term Green Stormwater Infrastructure Technical Working Group Summary and Recommendations Report – September 2025

BAY AREA MUNICIPAL
STORMWATER (BAMS) COLLABORATIVE

Long-Term Green Stormwater Infrastructure Technical Working Group Summary and Recommendations Report

Submitted in compliance with the San Francisco Bay Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, Order No. R2-2022-0018, Provision C.3.j.v.(7)

Prepared on behalf of:

Alameda Countywide Clean Water Program

Contra Costa Clean Water Program

San Mateo Countywide Water Pollution Prevention Program

Santa Clara Valley Urban Runoff Pollution Prevention Program

Solano Stormwater Alliance

September 30, 2025

Table of Contents

1. Background 4
   1.1 Permit Requirements 4
   1.2 TWG Formation and Participants 5
   1.3 TWG Activity During FY 2024-25 5
2. Summary of Key TWG Discussion Points and Outcomes 6
   2.1 TWG Meeting #1 6
   2.2 TWG Meeting #2 7
   2.3 TWG Meeting #3 8
   2.4 TWG Meeting #4 9
3. Permittee Recommendations 11
   3.1 Purpose of this Section 11
   3.2 Guiding Goals and Principles 11
   3.3 Desired Elements of a Framework 12
      3.3.1 Washington Phase I and Phase II Permits 12
      3.3.2 Project Phasing 13
      3.3.3 Project Types 13
      3.3.4 Multiple Benefits 16
4. Examples of Project Types 17
5. Recommended Next Steps 18

List of Tables

Table 1. County Level Summary of GSI Retrofit Targets 4
Table 2. Long Term GSI TWG Meetings 5
Table 3. Example Project Phases for Crediting Toward Long-Term Goals 13
Table 4. Project Type Examples 15
Table 5. Example Project Benefits List 16

List of Attachments

Attachment A: TWG Members

Attachment B: Meeting Summaries

Attachment C: Project Examples

1. Background

1.1 Permit Requirements

MRP 2 required Permittees to complete and implement a Green Infrastructure (GI) Plan) in 2019. In MRP 3, the focus changed from planning green stormwater infrastructure (GSI) to implementing GSI projects, and the permit established numeric targets for retrofitting existing impervious surface with GSI facilities. Each Permittee was assigned a retrofit target of three acres of impervious surface treated per 50,000 population, capped at five acres. Permittees could meet their target individually or collectively at the countywide level. If meeting the target collectively, each Permittee, at a minimum, had to implement a project to treat 0.2 acres of existing impervious surface. A full breakdown of the individual permittee targets is provided in MRP 3 Attachment H. Table 1 summarizes the C.3.j.ii.(2) targets at the county level.

Table 1. County Level Summary of GSI Retrofit Targets

County	GSI Retrofit Target (acres)
Alameda	58.42
Contra Costa	57.32
Santa Clara	46.09
San Mateo	43.31
Solano	11.78
Total	216.92

MRP Provision C.3.j.ii (4) states that Permittees may, together with Regional Water Board staff and impartial science experts (e.g., SFEI, SFEP, U.S. EPA Region 9), collectively form a Technical Working Group (TWG) to discuss long-term GSI goals and recommend long-term percentage reductions in Permittees' impervious surfaces, at individual, countywide, and regional scales. The TWG should prioritize discussion of long-term GSI goals for development and redevelopment projects not already captured by Provision C.3.b, and in particular, public road and right of way reconstruction projects that are not already defined as Regulated Projects by Provision C.3.b.ii.(5). The TWG should additionally review BMPs and performance metrics and should consider linkages to climate change impacts and resiliency including the benefits of urban forestry.

MRP Provision C.3.j.v (7) states that the Permittees shall collectively submit a report summarizing any TWG efforts and recommendations for long-term percentage reductions in Permittees' impervious surfaces with the September 2025 Annual Report.

1.2 TWG Formation and Participants

Working cooperatively through the Bay Area Municipal Stormwater Collaborative (BAMSC) as a project of regional benefit, Permittees began planning the formation of the TWG in fiscal year (FY) 2023-24. In FY 2024-25, the TWG was formed and began meeting. The work of the TWG is anticipated to continue in FY 2025-26.

The TWG is composed of countywide program and municipal staff knowledgeable about planning and other processes that can facilitate implementation of GSI; technical staff knowledgeable about existing stormwater requirements; Regional Water Board staff; and EPA staff. A list of the TWG members is provided in **Attachment A**. Each countywide program contributed a proportional in-kind cost share towards the effort, and technical consultants facilitated TWG meetings and coordinated the development of this TWG Summary and Recommendations Report.

1.3 TWG Activity During FY 2024-25

During FY 2024-25, four meetings of the TWG were held on the dates shown in Table 2.

Table 2. Long Term GSI TWG Meetings

TWG Meeting	Date
Mtg #1	September 13, 2024
Mtg #2	December 5, 2024
Mtg #3	March 26, 2025
Mtg #4	June 4, 2025

Program staff and consultant facilitators met with Regional Water Board staff prior to each TWG meeting to plan the agenda and identify discussion and presentation topics for each TWG meeting. Small permittee work group meetings were held to explore ideas discussed at the TWG meetings. Permittee representatives met separately to plan and develop presentations and discuss the outcomes of the TWG meetings. Permittee representatives provided updates on the TWG progress at BAMSC Steering Committee and Development Subcommittee meetings.

2. Summary of Key TWG Discussion Points and Outcomes

Over the course of the four meetings, the TWG engaged in dialogue regarding GSI requirements in future MRPs and community greening goals. The discussions considered various conceptual ideas that were debated and evolved over the course of the nine-month process. At the last meeting, the TWG reached consensus on a general framework that would incentivize urban greening and GSI projects, recognize a larger range of project types, and could be implemented within the structure of a National Pollutant Discharge Elimination System (NPDES) Permit. The TWG did not address numeric targets or impervious area percent reductions during the FY 2024-25 meetings but anticipates that these discussions will continue into FY 2025-26 TWG meetings and MRP 4 negotiations. The following subsections summarize the key discussions from each meeting. The full meeting summaries, along with materials presented at the meetings, are included in **Attachment B**.

2.1 TWG Meeting #1

The first meeting of the TWG included a discussion of the history and need for the TWG and its goals, including the final report that will be submitted with the September 2025 Annual Report. The TWG noted that their efforts would form a foundation for MRP 4 negotiations, anticipated to commence in Fall 2025.

The TWG discussed: 1) drivers for urban greening; 2) constraints and barriers to urban greening; 3) bridges to address the constraints/barriers; and 4) the need to identify the planning horizon for long-term GSI implementation. Two examples of planning horizons were cited: 1) Permittee GI Plans required by MRP 2 had a planning horizon of 2040; and 2) Plan Bay Area, a regional planning document, has a horizon of 2050. The GSI planning timeframe was briefly discussed, noting that targets based on a five-year permit term introduce challenges given the typical delivery time (planning, funding, design, and construction) for municipal projects.

Topics were identified for discussion at future meetings or research. Some of the key topics included:

- Understanding the implementation of GSI at different scales, e.g., parcel-based projects, green street projects, and regional projects.
- Exploring how a larger range of project types, such as stream restoration and urban forestry, could be incorporated into GSI targets.

- How to align GSI planning with other planning and funding efforts, e.g., climate action plans, bicycle and pedestrian safety plans, roadway improvement master plans, and urban forestry plans.
- Identifying clear translatable metrics that can communicate project benefits to stakeholders and serve as credit toward numeric retrofit targets for GSI projects and programs.

2.2 TWG Meeting #2

The second TWG meeting explored two topics identified in TWG Meeting #1: GSI implementation at different scales and options for meeting long-term goals.

The discussion on GSI implementation at different scales initially focused on terminology to reach a common understanding. Permittee-developed plans, such as Stormwater Resource Plans, describe three types of GSI projects:

- Parcel-based projects that treat runoff from the identified parcel;
- Green street projects that treat runoff from the road and can treat runoff from portions of the adjacent parcels; and
- Regional projects that treat runoff from an area larger than the parcel on which they are located.

It was noted that regional projects can vary significantly in size, from smaller projects capturing runoff from less than 100 acres to larger projects capturing runoff from greater than 1,000 acres. Regional Water Board staff noted some concerns about very large regional projects, especially those that may involve diversion of water from creeks, and those that cannot meet the 80% capture of annual runoff standard in the MRP. However, Permittees and Regional Water Board staff recognized that larger regional projects can be more cost-effective than parcel-based or green street projects, have greater potential to provide multiple benefits, including capture and use of stormwater, and may be more effective at reducing pollutant loads. Regional multi-benefit projects could also attract alternative funding sources, such as from Caltrans, state or federal grants, or Public Private Partnerships. Permittees also noted that, while large-scale regional projects have many desirable aspects, it can be challenging to identify feasible locations and to fund ongoing O&M.

For parcel-based and green street projects, the TWG discussed the potential water quality benefits of smaller projects that may not meet the MRP sizing criteria but provide opportunities to incorporate GSI elements and stormwater treatment.

In general, there was agreement that future requirements should achieve a balance between distributed GSI projects (parcel-based and green streets) and regional projects.

During the discussion of options for meeting long-term goals, Regional Water Board staff presented a working concept of a potential two-path approach that would allow Permittees to either meet a numeric retrofit target (Path 1) or an alternative path that would have reduced numeric retrofit targets compared to Path 1 for voluntarily coordinating GSI planning and implementation with other planning efforts (urban forestry, climate change adaptation, stream restoration, etc.). The TWG explored the concept of Path 2, including the types of planning that might qualify, how progress might be measured, how water quality benefits might be determined, and how innovative or multi-benefit projects could be incentivized. The TWG suggested developing a framework for Path 2 and looking at concrete project examples to determine how metrics might be established and applied.

2.3 TWG Meeting #3

The key topics at the third TWG meeting were the continued discussion of the integrated planning path (Path 2) from TWG Meeting #2 and developing a framework for meeting long-term green infrastructure goals.

Building on the conceptual two-path approach discussed in the second meeting, the TWG considered a hybrid approach incorporating aspects of both paths into a single path. A hybrid approach could evaluate the integrated planning aspects and the area treated on a project basis, rather than committing to a Path 1 or 2 program from the outset. The TWG considered an example matrix of project evaluation criteria and a suggested approach for providing incentive bonuses for multi-benefit projects. The challenge of creating an equitable and uniform system, given the diversity of Permittee planning efforts and documents, was noted as a drawback.

Permittees presented two examples of existing projects as types of projects that a future framework could address: 1) The Three Creeks Parkway Project in Brentwood; and 2) The Lower Walnut Creek Restoration Project. Both projects involve restoration of creek functions and habitat along with community recreation, outreach, and flood protection benefits.

During the discussion of the hybrid path for meeting long-term green infrastructure goals, Regional Water Board staff pointed to the frameworks in the Western Washington Phase I and Phase II Stormwater Permits, which allow for a variety of project types to count toward achieving a numeric retrofit target. The TWG agreed to review and evaluate the Western Washington Phase II Stormwater Permit system for its suitability for the Bay Area, as its crediting system aligned more closely with the direction in which the TWG was focusing.

The TWG also explored how a long-term goal could be successfully implemented in permits that are structured in five-year terms. The key concern raised by Permittees is the current MRP's lack of recognition for past projects and how that will affect future project

planning. Permittees noted that GSI requirements, in some form, have been in Bay Area permits since MRP 1. Permittees that were "early adopters" may have installed GSI in earlier permits before there were metrics. In addition, Permittees are currently working to install GSI to meet the MRP 3 numeric targets, and some may exceed the targets. As such, Permittees expressed interest in having the long-term goals consider all the GSI installed, i.e., count past projects toward the long-term goal, and allow excess treated acres to carry over from one permit term to the next. On the latter point, Permittees noted that project delivery timelines often do not synchronize with permit terms, which may result in an overabundance of acres treated in one permit term and a deficit in another. Regional Water Board staff recognized these timing challenges and noted that they want the future permit requirements to continue to build capacity, accelerate progress, and incentivize smart decisions regarding GSI.

2.4 TWG Meeting #4

The final TWG meeting continued the exploration of the Western Washington Phase II Stormwater Permit as a starting point for a Bay Area framework. Regional Water Board staff presented an overview of Appendix 12 of the permit, which contains the Stormwater Management for Existing Development Program, noting that many of the project types that the TWG has discussed are part of the framework. The Western Washington Phase II Stormwater Permit allows Permittees to select from a variety of project types and activities to achieve their GSI numeric targets, including, for example, reconnecting riparian zones or maintenance of existing GSI. The permit establishes ratios for crediting the different types of projects and actions toward the numeric targets. It also limits the amount of credit that can be taken from certain project/activity categories. The TWG noted that this type of framework could be adapted for the MRP, since it has been shown that such a framework can work within an NPDES permit structure.

Overall, the TWG agreed that a framework that envisions a mix of project types is desirable and that such a framework could set a good foundation for future permit terms because the mix of project types or allowance for category credits can be adjusted as Permittees' GSI programs advance. For example, as retrofit projects get built out, the focus could potentially shift to allow more credit for maintenance. Several items were identified for further discussion:

- Permittees would like more definition on the Regional Water Board's concerns about diverting stormwater from a receiving waterbody and requested that different conditions be considered for diversion projects from concrete channels and large storm drain pipes vs. natural channels.

- Permittees would like more guidance on acceptable parameters for regional projects, including stormwater diversions.
- Permittees would like a clearer indication from Regional Water Board staff as to whether excess treated impervious acres from MRP 3 can be carried over into MRP 4.
- Regional Water Board staff would like Permittees to continue to provide input on the Western Washington Phase II Permit approach and identify a set of projects and activity types that a Bay Area framework should include.

3. Permittee Recommendations

3.1 Purpose of this Section

The MRP requires that Permittees collectively submit a report summarizing any TWG efforts and recommendations with the September 2025 Annual Report. The TWG had productive, wide-ranging discussions of GSI opportunities, successes, challenges, and issues from the perspective of both Permittees and Regional Water Board staff. However, several issues, approaches, and goals are yet to be resolved and agreed upon before the permit reissuance process begins. The TWG anticipates that discussions will continue into FY 2025-26 via TWG meetings and subsequent MRP 4 negotiations. As a result, the recommendations in this report are high-level, based on the TWG's progress to date, and are intended to be a starting point to inform and facilitate future discussions of MRP 4 requirements.

The Permittee Recommendations begin with a statement of guiding goals and principles (Section 3.2). This section is followed by identification of the desired elements of a framework for crediting public projects towards compliance with future numeric retrofit requirements (Section 3.3), including project phasing, project types, and benefits to be recognized within the framework. Section 4 presents examples of project types, and Section 5 concludes with recommended next steps.

3.2 Guiding Goals and Principles

Based on TWG discussions as well as separate discussions with Permittees and countywide program managers, the recommended guiding goals and principles for a crediting framework include the following:

- The framework should address water quality improvement and protection, climate resilience, and other benefits.
- The framework should provide flexibility in meeting numeric retrofit targets.
- The framework should recognize a broader range of project types beyond the standard GSI described in the MRP.
- The framework should incentivize multi-benefit projects that meet multiple municipal planning goals.
- The framework should incentivize opportunistic or "tactical" LID/GSI (i.e., LID/GSI that provides benefits in strategic locations but may or may not meet all GSI design standards).
- The framework should recognize time, resource, and funding limitations.

- The framework should recognize actual municipal infrastructure planning and implementation timelines and include credit for progress in each phase, from conceptual planning through the maintenance of GSI projects.
- The framework should grant credits to municipalities that constructed GSI projects under earlier permits (e.g., MRP 1.0 or 2.0) and allow for rolling over credit for municipalities that went beyond their required target in MRP 3.0.
- The framework should consider the constraints associated with implementing GSI in built-out areas and small communities where available land and resources are limited.

3.3 Desired Elements of a Framework

The TWG discussed establishing a Bay Area Long-Term GSI Implementation Framework (Framework) to guide how Permittees could achieve future numeric targets in the MRP. The TWG agreed that the range of Framework elements eligible for crediting should be more comprehensive and flexible than the range of elements in the current MRP. As an example of this type of framework, the TWG (based on the recommendation of Regional Water Board staff) referenced the Western Washington Phase I and Phase II permits. Based on the TWG discussions and Western Washington permits, the elements considered by the TWG for crediting included project phasing, expanded project types, and multiple benefits.

3.3.1 Washington Phase I and Phase II Permits

The Western Washington Phase I[1] and Phase II[2] permits include expanded elements to address numeric targets for runoff treatment from existing impervious surfaces. The Western Washington permits include a Stormwater Management for Existing Development (SMED) program. The SMED program addresses stormwater discharges from areas of existing development, including runoff from highways, streets, and roads owned or operated by the Permittee. These are generally areas that are not addressed as part of new and redevelopment project requirements. The SMED programs in the Phase I and II permits are not identical, but both include a point system and mandatory targets for Permittees to meet within the permit term.

While the SMED program may be a good general reference for Framework elements, the TWG agreed that its details were not directly relevant or appropriate to the MRP in their entirety. The SMED program offers some examples of crediting for project phasing, an expanded project list, and multiple benefits that the TWG should consider when developing a Framework.

[1] https://fortress.wa.gov/ecy/ezshare/wq/permits/MS4_2024_App12_Final.pdf
[2] https://fortress.wa.gov/ecy/ezshare/wq/permits/MS4_2024_App12_PhIIWWA_Final.pdf

3.3.2 Project Phasing

Including project phasing consideration in the Framework would recognize that GSI projects can take multiple years to implement fully. It would also give the Permittees more confidence in their ability to scope project implementation across multiple permit terms. To account for project phasing in the Framework, the Permittees considered establishing credits for the project phases shown in Table 3.

Table 3. Example Project Phases for Crediting Toward Long-Term Goals

Phase	Description
Planning and Collaboration	This phase would credit the significant effort that goes into Permittees identifying projects, interagency collaboration, educating and receiving buy-in from their communities, conducting feasibility studies, and obtaining funding.
Design	Credit for this phase would account for the time and expense of going through the design, permitting, and outreach processes.
Construction	Credit for this phase would account for the acreage Permittees treat with constructed GSI.
Operations and Maintenance	Credit for operating and maintaining constructed GSI projects recognizes that this is a significant effort for Permittees to fund and conduct, and one that will continue to increase over time.

The TWG also discussed the fact that Permittees have constructed projects that did not receive numeric credit under MRP 3 because they were built before January 1, 2021. By limiting numeric target credits to a 6 ½ year period, the Permittees become restricted in their ability to plan ahead. The incentive for Permittees to construct beyond their required numeric target in any given permit term is also reduced significantly. The Framework should consider projects and/or credits spanning multiple permit terms to address these issues, especially for larger regional projects with multiple stakeholders.

3.3.3 Project Types

The TWG also discussed expanding the list of possible project types that can be counted toward numeric retrofit targets. The intent of expanding the list of project types is to increase the opportunities for Permittees to address water quality and other benefits desired by their communities. An expanded list will give Permittees more options for

overcoming the numerous challenges of GSI implementation, such as space constraints, utility conflicts, and funding. The TWG discussed establishing standard metric ratios to account for various expanded project types. Developing metric ratios would allow for credit to be applied to projects that provide benefits but don't fully meet the current characteristics and design standards for structural GSI required in Provision C.3. The TWG also considered the benefit of non-structural controls and how they could be credited for their water quality-related benefits.

Table 4 provides a preliminary list of example projects and actions that should be considered for receiving credit toward numeric retrofit targets. The list below is not intended to be exhaustive of all potential project types. The TWG should continue to vet and expand the list as appropriate during the development of the Framework. Ultimately, the Framework should provide some flexibility so as not to preclude certain project types that may not fit the exact categories below but still meet the intent of the type(s) of projects listed.

Table 4. Project Type Examples

Example Project Type	Description
Low impact development	Current project type receiving credit.
Undersized / opportunistic LID	Project with LID treatment not achieving C.3.d sizing requirements.
Regional projects with some or all non-LID treatment	Multi-benefit projects using a potential range or mix of treatment options, including media filters and other high-flowrate treatment systems.
Urban forestry	Increasing canopy cover throughout a jurisdiction results in reduced runoff and urban heat.
Stream restoration	Stream restoration, replanting, erosion control, and/or restoration of riparian buffers.
Stream maintenance	Removal of sediment for pollutant control and re-establishment of natural conditions/flow.
Preservation of land	Land acquisition for water quality and/or flow control benefits.
Removal of impervious surfaces	Removal of impervious surfaces and replacement with pervious pavement or pervious vegetated surfaces that promote infiltration, dispersion, and uptake by plants and/or reduce the amount polluted runoff.
Enhanced sweeping and line cleaning	Reduction in sediment transport to address Provision C.11 Mercury or C.12 PCBs requirements.
Flood control and floodplain reconnection projects	Projects that reduce flooding and/or reconnect riparian areas that serve as enhanced floodplains.
Climate Resilience	Projects that address sea-level rise, urban heat, and/or other climate impacts through infrastructure improvements and urban greening and which have a direct water quality and/or hydrology improvement aspect.

3.3.4 Multiple Benefits

As part of the standard metric ratios discussed for project types, the TWG also considered how projects with multiple benefits could be credited, accounting for their added benefits and the additional effort often required to incorporate them. The approach discussed by the TWG was to have projects with multiple benefits receive additional credits that go beyond those provided for the acreage treated. In other words, Permittees could achieve a higher than "one for one" credit ratio for each project, including multiple benefits. It is also a way to recognize the extra work conducted and funds expended by Permittees to incorporate multiple benefits and the extra benefits that are realized as a result.

Table 5 includes examples of multiple benefits for which projects could receive additional credit towards numeric targets beyond the credit for treated acreage achieved by the project.

Table 5. Example Project Benefits List

Example Project Benefits	
– Improved water quality	– Reduced energy use and/or greenhouse gas emissions, or provision of a carbon sink
– Reduction of Mercury or PCBs for compliance with C.11 or C.12	– Reestablishment of natural hydrology
– Support of underserved communities and/or tribal communities and values	– Reduced water temperatures
– Watershed collaboration among multiple agencies	– Employment opportunities and workforce development
– Increased water supply and/or conservation	– Public education
– Increased evapotranspiration, filtration, and/or treatment of runoff	– Community involvement
– Nonpoint source pollution control	– Increased and/or enhanced recreational and public use areas
– Reestablished natural water drainage and treatment	– Climate change adaptation and resilience
– Decreased flood risk by reducing runoff rate and/or volume	– Increased tree canopy, urban cooling, soil restoration, infiltration, and groundwater recharge
– Reduced sanitary sewer overflows	– Improved air quality
– Environmental and habitat protection and improvement	– Increased urban green space, habitat, and regenerative landscaping

4. Examples of Project Types

Attachment C includes example projects that have been planned and/or completed by Permittees and represent a subset of project types that could be considered for a framework as outlined in Section 3.3.3. Each project page includes the project name, goals, description, location, project proponent, type, status, and benefits provided. Asterisks are applied to the Project Type if they are also included in the WA State Phase II Permit, Appendix 12. The project benefits serve as examples of the types of multiple benefits that a framework could acknowledge with additional credits towards numeric targets. The benefits are further broken down into primary and secondary benefits that are generally based on Proposition 1 Project Proposal Evaluation Criteria. The project examples in **Attachment C** include flood control and riparian restoration, urban forestry, and parcel-based, green street, and regional GSI projects. There is also an example of a project that has significantly advanced GSI planning in the community but has not resulted in any constructed projects to date.

5. Recommended Next Steps

Based on the TWG progress to date and the proposed Framework elements described in this document, the Permittees recommend the following next steps:

- Continue to discuss and reach agreement on desired elements of a GSI Implementation Framework for MRP 4 at two additional TWG meetings in FY 2025-26.
    - Work with Regional Water Board staff to develop a preliminary Framework outlining project types, metric ratios, and multi-benefit factors for discussion by the TWG.
    - Test the preliminary Framework using example projects to develop metrics and credit scenarios.
- Continue to discuss a potential approach for establishing long-term GSI implementation goals and reductions in Permittees' impervious surfaces, at individual, countywide, and regional scales, if such goals would support the GSI Implementation Framework.
    - Work with Regional Water Board and SFEI staff to evaluate the need for and desired outputs of any potential studies, mapping, and/or decision support tools needed for setting long-term GSI implementation goals.
- Continue to discuss other outstanding issues, including:
    - The Regional Water Board staff's concerns about diverting stormwater from a receiving waterbody. The discussion should consider whether regulations should consider different conditions for diversion projects from concrete channels and large storm drainpipes vs. natural channels.
    - Acceptable parameters for regional projects, including stormwater diversions.
    - The potential for excess treated impervious acres from MRP 3 to be carried over into future permits and for projects constructed pre-2021 to be credited.

Attachment A: TWG Members

Organization	Name	Agency	Alternates
SCVURPPP	Vanessa Marcadejas	Santa Clara County	Julianna Martin Brad Hunt Mary Morse Kendra Boutros
	Pam Boyle Rodriguez	Palo Alto	
	Rajani Nair	San Jose	
	Melody Tovar Emma Hinojosa	Sunnyvale	
	James Downing	Valley Water	
	Jill Bicknell	SCVURPPP/EOA	
	Jeff Sinclair	SCVURPPP/EOA	
SMCWPPP	Reid Bogert	C/CAG	N/A
	Dan Sternkopf	C/CAG	
	Kelly Havens Lisa Austin	SMCWPPP/Geosyntec	
	Peter Schultze-Allen	SMCWPPP/EOA	
ACCWP	Sandy Mathews	ACCWP/LWA	N/A
	Alina Constantinescu	ACCWP/LWA	
	Daniel Matlock	Fremont	
	Erwin Ching	San Leandro	
	Echo Lee	Alameda	
CCCWP	Rinta Perkins	CCCWP/Geosyntec	Brianne Visaya Joe Camacho Mitra Abkenari
	Erin Lennon	CCCWP	
	Lucile Paquette	Walnut Creek	
	John Michelle Steere Giolli	Contra Costa County	
	Frank Kennedy	Various CCCWP Permittees	
	Amanda Booth	San Pablo	
	Yvana Horvat	CCCWP/Haley & Aldrich	
	Rachel Kraai	CCCWP/Lotus Water	
SSA	Meg Herston		N/A
Regulators	Keith Lichten	Regional Water Board	Richard Looker
	Rebecca Nordenholt	Regional Water Board	
	Aidan Cecchetti	Regional Water Board	
	Luisa Valiela	EPA	

Attachment B: Meeting Summaries

Long-Term Green Stormwater Infrastructure (GSI) Implementation
Technical Working Group (TWG) Meeting #1
September 13, 2024
1:00pm – 3:00pm

Meeting Summary

Meeting Attendees: Jill Bicknell (EOA/SCVURPPP), Jeff Sinclair (EOA/SCVURPPP), James Downing (Valley Water), Sandra Freitas (City of San Jose), Mary Morse (City of San Jose), Norman Mascarinas (City of San Jose), Rajani Nair (City of San Jose), Jason Day (City of San Jose), Julianna Martin (County of Santa Clara), Pam Boyle Rodriguez (City of Palo Alto), Emma Hinojosa (City of Sunnyvale), Rinta Perkins (Geosyntec/CCCWP), Erin Lennon (CCCWP), Michelle Giolli (Contra Costa County), Amanda Booth (City of San Pablo), Elizabeth Callahan (City of Concord), Brianne Visaya (City of Oakley), Rachel Kraai (Lotus Water/CCCWP), Reid Bogert (C/CAG), Kelly Havens (Geosyntec/SMCWPPP), Peter Schultze-Allen (EOA/SMCWPPP), Sandy Mathews (LWA/ACCWP), Erwin Ching (City of San Leandro), Daniel Matlock (City of Fremont), Keith Lichten (SF Bay Regional Water Board), Aidan Cecchetti (SF Bay Regional Water Board)

1. Introductions

Participants introduced themselves. There were no changes to the agenda.

2. Review Agenda and Meeting Goals

Meeting goals were reviewed, including scoping the TWG effort, developing a list of topics to be discussed at meetings, and suggesting potential outside speakers to inform discussion.

3. History of Long Term GSI Provision and Need for TWG

A brief history of the long-term GSI provision was shared. The need for discussion of long-term GSI goals was raised by Permittees during the MRP 3.0 negotiations. Permittees had expressed concerns about how MRP 3.0's numeric retrofit targets were developed as well as concerns about the project types applicable to the targets and the cut-off dates for accounting for/crediting constructed GSI projects. Permittees also had general concerns and questions about long-term goals for GSI and how the numeric targets fit into those long-term goals. Water Board staff added concerns about water quality impacts of existing impervious surface and the need to recognize other pollutant specific goals in the permit as well. They'd like to understand how to provide flexibility that allows recognition of other goals including climate resilience, flood control, and urban greening in dense urban environments.

4. Goals of the TWG

Participants discussed: 1) drivers for urban greening; 2) constraints and barriers to urban greening; and 3) bridges to address the constraints/barriers. Drivers included: sustainability planning; pedestrian and bike safety; climate adaptation and hazard mitigation planning; regenerative solutions; habitat; urban forestry; CA Water Strategy; and placemaking. Permittees would like to define GSI more broadly and link it to other drivers for urban greening.

Constraints and barriers discussed included: maintenance capacity, urban forestry/bioretention soil media (BSM) concerns, risk aversion, limited GSI track records, water conservation restrictions, design uncertainties, scales of GSI, funding for construction and maintenance,

housing demand, timeframe for retrofit/targets, and permit constraints including limitations on small projects and regional projects.

Water Board staff noted that: 1) they are aware there are difficulties following the permit's requirements while scaling up, such as with regional projects; and 2) they do not see housing demand as a conflict with GSI but as an opportunity for more GSI, and think Permittees should be using the many examples of GSI integrated with housing around the Bay and the country as models for successful GSI integration. Water Board staff also mentioned the opportunity to work on improvements to the BSM specification that address issues with moisture retention, irrigation, etc., leading into the next permit reissuance.

Participants discussed the importance of finding ways to bridge the following constraints:

- Linking GSI to related funding initiatives (e.g. climate change funding)
- Adapting performance standards for small projects
- Expanding GSI definition to adapt for constraints as we work to scale up these programs/projects and adapt to climate change
- Receive value and credit for all scales of GSI
- Workforce development
- Time to build, learn, and adapt
- Integration with other planning efforts, Plan Bay Area, Estuary Blueprint
- Integration with related permit provisions
- Assess and learn: who can we learn from?

Water Board staff agreed with these approaches, and mentioned that, for workforce development, we have the National GI Certification Program and other models to learn from. They were interested in exploring expansion of the GSI definition and how we integrate with the Estuary Blueprint. They'd also like to recognize the benefits of stream restoration, flood control, and other work going on in streams.

Additional Permittee goals discussed included:

- Balancing equity and environmental justice goals when setting milestones/crafting metrics.
- Clarity on whether Permittees can take credit for Caltrans funded projects and other partnerships.
- Clarity on how credit gets allocated based on trash, PCBs, etc. It is hard for the Permittees to move forward with projects without this clarity.
- Recognition of the large amount of time/effort for municipal staff to be involved in larger, more innovative, and/or grant-funded projects.
- Integrating different environmental and social goals instead of siloing them.
- Aiming to enable and use translatable metrics like impervious acres treated or volumes managed which can be a useful "currency" in terms of cost-sharing on projects with a variety of partners (especially multi-benefit projects) and in communicating to the public.

Some participants stated that they did not want a total impervious surface goal/requirement that is very difficult to achieve and indicated strong preference for the current numeric retrofit requirement approach in MRP 3.0.

The group started to talk about the timeframe to accomplish a long-term vision. The question was raised as to the relevancy/role of the GI Plans' timeframe in this effort (i.e., 2040). Some planning documents (e.g., Plan Bay Area) have planning horizons to 2050. Water Board staff mentioned that long-term GSI planning is a way to flexibly accommodate the "early adopters" and the "minimum compliance" permittees and to bridge the gap of 5-year permit requirements. They'd like to look at how they can more flexibly target progress over time and ways of categorizing different groups of projects or providing interim milestones. Water Board staff also stated that one of the outcomes they would like to see is a way for permittees to flexibly set their own path that meets Water Board expectations.

There was also discussion of the timeframe for conducting the TWG meetings. Water Board staff noted that they generally start permit reissuance discussions 1.5-2 years ahead of the reissuance date and requested that this group look to identify some tentative outcomes which could be put in a permit draft by fall 2025 and come to some kind of consensus by late 2026. A request was made that at the end of each meeting there should be actionable items that will help Permittees with permit implementation.

5. Topics, Research and Potential Speakers for FY 24-25 TWG Meetings

The group discussed topics for future meetings. Ideas included:

- Implementation of GSI at different scales. Participants discussed the importance of permit changes that allow more flexibility in GSI implementation now that programs are scaling up; both smaller and larger regional projects require more flexibility. Water Board staff indicated the importance of having project/plan examples that will allow the group to look at where/how to allow flexibility in the permit. Water Board staff also noted that they want to know how permittees are prioritizing the different drivers for the range of GSI work.
- Discussion about what needs to be demonstrated to get credit for a larger/more flexible range of projects. It would be helpful for Permittees to understand what could be acceptable and to look at existing technical studies and case studies.
- Interest in looking at/learning from examples of how GSI Plans are currently being implemented and lessons learned about constraints.
- Long-term funding sustainability is a major issue for Permittees and is a topic they want to plan for in concert with GSI goals. TWG needs to think cleverly about how to align long-term goals with funding; an example is municipal bonds.
- It could be helpful to look at other plans (e.g., bike/ped, urban forestry) to find the touch points to GSI and if there are metrics and goals in those plans. This could be a homework assignment and report out during a future meeting.
- San Mateo Program's (C/CAG's) One Watershed project will be examining the linkages between climate adaptation, energy, and other watershed goals later this year and will have some metrics/linkages the TWG could look at.
- A full meeting on trees, stormwater and the integration with other city greening goals. Permittees want to have a discussion about how cities can get C.3.j credit for trees at the municipal scale. The group discussed whether most cities have urban forestry plans or components in other plans. Water Board staff suggested that discussions of urban forestry

could be woven into a larger discussion of multiple benefits and associated metrics and funding sources.

Participants set up an online shared document where working group members can contribute ideas on future speakers.

Participants also suggested circulating a survey to all countywide stormwater programs on potential topics and framework for the next three meetings. This survey could be organized by categories like: funding and incentives, policy and regulations, Innovative design to promote GSI, and integrated planning.

6. Schedule for FY 24-25 TWG Meetings

- Next meeting will be on December 5th from 1-3 pm.
- Two additional meetings will be scheduled during the remainder of the FY (tentatively March and June).

7. Next Steps/Action Items

Water Board staff suggested that the next meeting focus on GSI at different scales. The group agreed that participants would bring specific issues/examples to discuss.

Long Term Green Stormwater Infrastructure (GSI) Implementation
Technical Working Group (TWG) Meeting #2
December 5, 2024, 1:00pm – 3:00pm

Meeting Summary

Meeting Attendees: Jill Bicknell (SCVURPPP/EOA), Jeff Sinclair (SCVURPPP/EOA), James Downing (Valley Water), Rajani Nair (City of San Jose), Mary Morse (City of San Jose), Pam Boyle Rodriguez (City of Palo Alto), Emma Hinojosa (City of Sunnyvale), Julianna Martin (Santa Clara County), Rinta Perkins (CCCWP/Geosyntec), Erin Lennon (CCCWP), Amanda Booth (City of San Pablo), Lucile Paquette (Walnut Creek), John Steere (Contra Costa County), Frank Kennedy (Kennedy & Associates), Mitra Abkenari (City of Concord), Rachel Kraai (CCCWP/Lotus Water), Reid Bogert (C/CAG), Dan Sternkopf (C/CAG), Kelly Havens (Geosyntec), Sandy Mathews (ACCWP/LWA), Alina Constantinescu (ACCWP/LWA), Daniel Matlock (Fremont), Keith Lichten (SF Bay Regional Water Board), Aidan Cecchetti (SF Bay Regional Water Board), Rebecca Nordenholt (SF Bay Regional Water Board), Richard Looker (SF Bay Regional Water Board)

Introductions
Meeting participants introduced themselves. Edits to the TWG Meeting #1 Summary were requested by December 12th.

GSI Implementation at Different Scales
An overview of three different scales of GSI was shared: parcel-based GSI, green streets, and regional GSI. Regional projects can vary in size from small projects capturing runoff from < 100 acres to large projects capturing runoff from >1,000 acres. Permittees reported that they have received comments from Water Board staff with concerns about large regional projects including Orange Memorial Park (OMP) in San Mateo County. Permittees requested clarity from Water Board staff about issues with regional projects like OMP, so they can move forward with developing and taking credit for them.

Water Board staff noted that there are opportunities and constraints at all scales of regional projects. Water Board staff have concerns about large projects that are taking water out of creeks and then putting it back in (ideally, stormwater treatment would be provided prior to discharge to receiving water). These projects are more complex and involve more agencies; as projects get larger, water quality benefits also seem less certain. They are concerned that these projects may not meet the 80% capture of annual runoff standard in the permit. They indicated that they are not sure how the water quality benefits of these projects should be quantified, as they are complex and are only capturing/treating a portion of the runoff from the upstream watershed. However, staff do recognize some potential benefits to larger scale projects including stormwater capture and reuse. Water Board staff also recognize that Permittees are working in tightly constrained environments where limited retrofits are possible. Staff wondered if there is an intermediate scale of regional project that is better suited to meeting sizing and treatment requirements and still provides multiple benefits.

A San Mateo representative noted that the "subregional" project scale is interesting but stressed that what cities are looking for is locations where they can maximize cost/benefit. OMP was paid for by trash capture funds, but the community was looking for other benefits, e.g., climate resilience, groundwater recharge, and flood control. A Contra Costa representative also noted that Contra Costa Permittees are very interested in regional projects from a cost/benefit standpoint. But they have not been able to find suitable locations on public lands, especially park lands in disadvantaged communities. Permittees asked about the Water Board's vision for these subregional projects.

Water Board staff reiterated that they are concerned about moving away from the notion of 80% capture and allowing partial credit. They know that all Permittees are working in different conditions and want to know what kind of design flexibility will make projects more feasible. They want feel comfortable that Permittees are looking at multiple scales of projects.

Permittees shared that larger GSI projects allow more potential flood control benefits. In general, larger projects have potential to provide more benefits, and when there are more benefits, there are more opportunities for funding, including critical maintenance. Permittees noted that in order to get funding, projects need to address what people care about, e.g., flooding, storm drains that are too small, etc. Permittees also noted that they also want to get some kind of credit for smaller projects and programs like downspout disconnection; there needs to be a new way to consider and talk about credits, because supporting/incentivizing smaller projects and programs is also important for watershed health. The permit's narrow requirements cause Permittees to reject smaller/partial projects and programs. Permittees also indicated that a shift towards an incentive-based approach versus a credits-based approach would encourage Permittees who are already meeting their baseline numeric requirements. Permittees also noted that there needs to be a balance between the desire to have distributed GSI projects that protect creeks and the need for larger scale projects to meet TMDLs for the Bay.

Options for Meeting Long Term Goals

Water Board staff indicated that they are starting to think through how a comprehensive planning approach could potentially be recognized in MRP 4, but still intend to require a subset of applicable projects to meet the current standards. They recognize that projects are more implementable when they incorporate multiple benefits and meet multiple needs.

Permittees noted that they would like to be able to leverage what is already being done and count it for compliance. Examples include urban forestry projects and downspout disconnection programs.

Water Board staff shared a presentation titled "Long-Term GSI Implementation in MRP 4" (attached) with a proposed alternative framework for MRP 4 compliance. They indicated that there are many questions to be addressed about how the alternative would be implemented and enforced, but that the goal is to support a broader view of watershed health and to provide flexibility as requested by Permittees. Another goal is to develop a framework that can support longer term planning beyond the limitations of single permit terms.

Water Board staff started the presentation by reviewing current MRP 3 C.3.j requirements. Then staff presented two potential "pathways" for compliance with MRP 4. Path 1 would include prescriptive requirements similar to current MRP 3 numeric retrofit requirements (but likely increased acreage based om TWG input). Path 2 was described as an "Alternative Compliance" pathway that would allow compliance through voluntarily coordinating GSI planning and implementation with other planning efforts (e.g., urban forestry, climate change adaptation, stream restoration, etc.). There would still be numeric retrofit targets under Path 2 but they would be reduced compared to Path 1.

Water Board staff indicated that some of the details to be worked out around a potential Path 2 include:

1) Basic minimum requirements for Path 2;
2) Framing/categorizing multiple benefits and how planning efforts can be recognized as compliant with the MRP (i.e., have water quality benefits);
3) Quantifying/measuring multi-benefit planning efforts;
4) Relationship to jurisdiction-wide vs. countywide crediting
5) Time scale - what can be achieved during MRP 4 vs. a longer time scale and how to make GSI implementation more predictable and sustainable
6) How to avoid concerns about anti-backsliding.

Permittees indicated interest in and appreciation for the Path 2 concept. Permittees shared the following questions and comments:

1) Request to call it something different than "Alternative Compliance" as that term is already in use. Some suggestions included: "Multi-Benefit Pathway" or "Adaptive Compliance Strategy".
2) Request that both Paths recognize cumulative accomplishments across permit terms.
3) Support for including stream restoration efforts in Path 2.
4) How would disadvantaged communities be affected by this potential provision?
5) Could there be a Path 1.5 or a Path 2 "Light" that recognizes previous efforts?
6) When would Permittees choose their Path?
7) Request to include community-driven watershed/creek stewardship and restoration in Path 2. Some communities have a very strong culture of community-driven projects and planning.
8) Request that there still be flexibility for accounting at the countywide scale.
9) Request to consider incentivizing a program for greening.
10) Consider boundaries around what advancing programmatic GSI looks like.

Water Board staff indicated that they are open to discussing these questions with the TWG. Water Board staff asked what Permittees would suggest as reasonable requirements for stream restoration efforts. The group discussed the multiple "slowing and spreading" benefits that some flood control projects can have, including water quality. The Water Board indicated that they are looking for projects with more benefits than conventional flood control projects and don't want to miss capturing and treating the smaller flows. The group also discussed balancing the "no missed opportunities" approach with good planning for coordinated projects.

Permittees asked how consideration of disadvantaged communities would factor into the integrated planning approach in Path 2. Water Board staff indicated that MRP 3 opened the door for different types of prioritization and that disadvantaged communities could be considered in project prioritization.

Permittees also emphasized the importance of getting confirmation/clarification regarding allowing MRP 3 credits to be rolled over to MRP 4. Water Board staff indicated that this is likely, but that it is difficult for the Water Board to link requirements across two permits. Permittees also indicated that they would like to receive credit for projects done under earlier permits. Water Board staff indicated that this might be more difficult because of the anti-backsliding rules. Permittees also stressed the importance of clarifying how current project types and planning efforts can be counted.

Water Board staff indicated that they have discussing how to get better data on the water quality benefits of "allied efforts" (e.g. through monitoring of existing projects that may have been implemented in past permit terms) and also trying to figure out how to use planning and modeling tools to identify strategic implementation locations. Water Board staff noted that they have been considering the benefits of having a more strategic geographic focus where integrated/more comprehensive planning occurs on a smaller scale. Integration over time might be more feasible in a smaller area with legacy pollutants, limited green space, underserved community, etc., where integrated benefits could maximize return on investment. An analogous approach might be the "Specific Plans" used by Planning Departments. Water Board staff asked if Permittees' "allied plans" would align well with a more focused approach for GSI implementation. Permittees pointed out that even if GSI implementation is coordinated with other plans, it may not be the highest priority of those plans and resulting projects (e.g., "Vision Zero" pedestrian safety plans).

The group continued to discuss questions about how progress would be recognized by the Water Board using a potential Path 2. Water Board asked whether local documents/frameworks included implementation benchmarks that could potentially be used to mark progress. Participants discussed developing a structure and/or a matrix for the Water Board to use to evaluate plans and/or programs.

Permittee representatives suggested that concrete examples be discussed and "run through" a potential Path 2 in order to clarify how metrics would be used and different efforts be credited. Examples of concrete examples include Palo Alto's urban forest plan, downspout disconnection programs, coastal floodplain/wetland projects, community-driven creek restoration projects, projects with proposed media filters with equivalent multiple benefits, etc. Permittee representatives also suggested that the Water Board consider incentivizing projects/plans that go above and beyond existing requirements or pilot projects that attempt to address new compounding problems like climate change.

Next Steps/Action Items

The TWG summarized next steps including:

1) Water Board staff to send their presentation slides to the TWG.

2) Countywide Program representatives to discuss proposed Path 2 with Permittees and come to future TWG meetings with feedback.
3) Schedule next TWG meeting.
4) Schedule small group agenda planning meeting with Water Board staff. Topics for the next meeting include:
    a. Continuing discussion of regional projects and potential limitations.
    b. Determining what can be credited and what metrics can be used for Path 2.
    c. Determining points/benchmarks to recognize progress.
    d. Determining flexibility in design criteria desired/needed.
    e. Determining how disadvantaged communities fit into Path 2.
    f. Discussion of example projects and how they would work through Path 2 to illustrate/troubleshoot metrics and crediting.
    g. Determining how MRP 3 projects could get credit through MRP 4 Path 1 and 2.
    h. Beginning discussion of potential requirements for Path 1.
5) Continue discussions with Water Board staff about issues with different scales of regional projects and how to move forward with large regional projects this permit term.

Adjourn

Water Boards Draft Framework: Long-Term GSI Implementation in MRP 4

Technical Working Group Meeting #2

December 5, 2024

CALIFORNIA Water Boards

San Francisco Bay Regional Water Quality Control Board Staff

Overview

- Current framework (MRP 3)
- Proposed MRP 4 framework
- Considerations, discussion, and next steps

Image of GSI from CCCWP website (https://cccleanwater.org/development-infrastructure/green-infrastructure).

MRP 3 Green Infrastructure Provisions

- C.3.j.ii.(1) – Programmatic Implementation
  - Continuous progress through GI Plan updates and revisions
- C.3.j.ii.(2) – Numeric Implementation (GSI Retrofits)
  - Mercury and PCB TMDLs as drivers
- C.3.j.ii.(4) – Long-Term GI Implementation (TWG)

MRP 4 Proposed GSI Framework

- Multiple compliance pathways within permit
- Path 1: Compliance with prescriptive requirements
  - Continuation of MRP 3 C.3.j requirements
  - Increased retrofit acreage requirements
  - Updated with TWG-determined input on GSI drivers and goals
- Path 2: Alternative compliance pathway
  - Recognize multi-benefit planning efforts
  - Comply through voluntarily coordinating GSI planning and implementation with other planning efforts (e.g., urban forestry, climate change adaptation, complete streets, stream restoration)
  - Potential for focused implementation to move water quality needle

Considerations

- Scale and framing of multi-benefit implementation
  - Permittee-specific v. countywide commitments
- Level of effort required versus credit
  - Reduced retrofit requirements in alternative pathway relative to prescriptive compliance path
- How to determine credit for multi-benefit planning efforts
- Time-scale for planning and implementation

Long Term Green Stormwater Infrastructure (GSI) Implementation
Technical Working Group (TWG) Meeting #3
March 26, 2025, 1:30pm – 3:30pm

Meeting Summary

Meeting Attendees: Jill Bicknell (SCVURPPP/EOA), Jeff Sinclair (SCVURPPP/EOA), James Downing (Valley Water), Rajani Nair (City of San Jose), Pam Boyle Rodriguez (City of Palo Alto), Rinta Perkins (CCCWP/Geosyntec), Erin Lennon (CCCWP), Peter Schultze-Allen (SCVURPPP/EOA), Sandra Freitas (City of San Jose), Lucile Paquette (Walnut Creek), Joel Camacho (Walnut Creek), John Steere (Contra Costa County), Michelle Giolli (Contra Costa County), Mitra Abkenari (City of Concord), Yvana Hrovat (CCCWP/Haley & Aldrich), Reid Bogert (C/CAG), Dan Sternkopf (C/CAG), Kelly Havens (Geosyntec), Sandy Mathews (ACCWP/LWA), Alina Constantinescu (ACCWP/LWA), Daniel Matlock (Fremont), Keith Lichten (SF Bay Regional Water Board), Aidan Cecchetti (SF Bay Regional Water Board), Rebecca Nordenholt (SF Bay Regional Water Board), Ashraf Ali (SF Bay Regional Water Board)

Introductions

Meeting participants introduced themselves. The TWG Meeting #2 Summary was approved.

Agenda and Meeting Goals

The agenda and meeting goals were reviewed, and it was asked if anyone had additions to the agenda. A SCVURPPP representative mentioned the Trees and GSI Workgroup meeting on April 2nd at 1 pm.

Pathway for Integrated Planning

At the TWG Meeting #2, San Francisco Bay Regional Water Quality Control Board (Water Board) staff presented two proposed pathways for compliance with GSI numeric retrofit targets in the next permit. Path 2 looks at integrated planning and gives some consideration for implementing projects that address multiple municipal plans and goals. Water Board staff had asked for permittee input on the integrated planning path. A SCVURPPP representative explained one possible approach in which you would not have to select Path 1 or 2, but would use a matrix of municipal plans and goals and apply this to a selected project to show how the project meets multiple goals. The representative then went over an example project and matrix. The lists (plans, programs, benefits) would vary by project and municipality. Another approach would be to evaluate the project from a grant application scoring perspective, listing the primary and/or secondary benefits. As an example, the SCVURPPP representative reviewed the Proposition 1 grant application benefits list. The list could work with the matrix that includes goals around those benefits. The general concept would be that a project that has multiple benefits and/or meets multiple planning goals could earn some type of bonus credit (e.g., additional acres treated) toward the numeric targets.

The draft matrix and Prop 1 benefits list are attached to the meeting summary.

A Contra Costa County representative said he liked the approach and requested that General Plans and Watershed Plans be added to the list of planning documents. He noted that challenges remain around cost and ongoing maintenance of GSI. Models involving nonprofits and community groups for operations and maintenance (O&M) have been successful, and projects that include such partnerships could potentially receive bonus credits. Municipalities

with strong community stewardship could also be acknowledged for their efforts. While this approach was seen as promising, questions were raised about how it fits into broader strategies.

Water Board staff expressed interest in the matrix approach but raised a concern that, because each municipality has different planning documents, creating a uniform crediting system may be difficult. It was suggested that focusing on the benefits list rather than the specific planning documents could make things simpler. Ideally, crediting would evolve from construction in the early permit terms to maintenance in later ones. Water Board staff expressed that designing projects to maximize benefits by aligning with existing plans was also recommended, particularly for projects still in development. A SCVURPPP representative responded that there are many different project drivers and there is not always enough budget to maximize secondary benefits. It would help if there were incentives (such as treated acres credits) to integrate more benefits during design.

An ACCWP representative clarified that the proposed table is more useful as a tracking tool for completed efforts. A SCVURPPP representative expressed an interest in including workforce development and green jobs as benefits, though measuring those benefits for determining credit remains a challenge.

A Palo Alto representative reminded the group that GSI Plans were required in the last permit term and that many permittees have worked hard to integrate GSI into planning updates. Caution was given against excluding these resource-intensive efforts from crediting. GSI integration into other plans, even in the absence of a formal program, should be recognized, as it will result in more projects in the ground with multiple benefits.

Water Board staff emphasized the importance of equity, warning against giving more points to municipalities simply because they have more plans or programs. A SMCWPPP representative suggested that crediting should accommodate either a single plan or multiple documents, as long as certain goals were achieved. Other permittees proposed that General Plans should be considered differently, since they are more comprehensive and require more effort to update, and that bonus credits should be given for projects in disadvantaged communities, ideally captured in a dedicated column of the matrix or benefits list. Water Board staff reiterated the importance of considering community input in projects serving disadvantaged communities. It was stressed that without meaningful engagement of the community, projects may not deliver the intended benefits.

A SCVURPPP representative noted that any metric-based evaluation might not align directly with General Plans. Other permittees urged moving away from numbers of planning documents and metrics and focusing on the multiple benefits provided by the projects. To illustrate this point, two presentations were made about ongoing projects with multiple benefits.

A Walnut Creek representative presented the Three Creeks Parkway Project in Brentwood, focused on providing flood conveyance capacity and restoring riparian habitat along Marsh Creek (attached). The project also includes “soft” benefits such as community engagement and public education. Water Board staff agreed this was a strong project with clear water quality drivers and benefits that could fit the proposed framework. The question as to whether projects in receiving waters could receive credit was reiterated, though it seemed clear that projects in riparian zones adjacent to receiving waters could receive credit. A Valley Water representative expressed strong interest in participating in any follow-up conversation, explaining that many of the projects they hoped to fold into this framework are in wetted zones and include adjacent improvements. It was stressed that the complexity of this issue needed continued discussion.

A Contra Costa County representative presented the Lower Walnut Creek Restoration Project, the purposes of which are to restore and enhance habitat in Lower Walnut Creek, provide sustainable flood management, and allow opportunities for public access and recreation (attached). A City of San Jose representative asked how multi-jurisdictional projects could be credited and raised concerns about balancing time and resource requirements. It was suggested that allowing regional projects to count toward permit targets, such as through a collective countywide stormwater program, could be an option. This could offset individual permittees' targets. Water Board staff shared that Washington State's Department of Ecology has a credit system, as part of the Phase 1 and Phase II NPDES permits, that assigns points for project design, construction, and maintenance phases, which could help address time-based considerations. The goal is to recognize arcs of project implementation and planning across permit terms. Another question raised was, if permittees engage in a multi-jurisdictional project, how would a credit system work? This was added to the list of issues that would need to be worked out.

Water Board staff emphasized the importance of coordination with resource agencies. A City of San Jose representative reiterated the point about acknowledging regional projects. Water Board staff commented that youth engagement in stewardship activities can have lasting effects and pointed to Three Creeks and Lower Walnut Creek as projects that combine education and water quality benefits.

Framework for Long Term GSI Implementation

The objective of this agenda item was to discuss elements of a framework for meeting long term goals, including types of projects that qualify, scales of projects, and whether retrofit acres exceeding permit term targets can be carried over to future permit terms.

Permittees requested clarification on which projects qualify for Path 2 crediting. Water Board staff pointed to the Western Washington Phase II permit, where Appendix 12 outlines eligible and ineligible project types, although it was noted that Bay Area municipalities differ significantly and that Water Board staff are still evaluating whether projects in receiving waters could be credited.

Permittees also asked whether excess acreage from MRP 3.0 could be rolled over to count toward MRP 4.0 retrofit requirements. Water Board staff stated that past efforts should be recognized but they want to see accelerating implementation over time. It was further stated that continued progress should be emphasized, rather than large, one-off projects; however, they will continue to recognize larger projects. A SCVURPPP representative added that project timelines and opportunities for funding don't always follow a linear five-year cycle and questioned whether a long-term goal for GSI (including regulated and nonregulated projects) would be established. Permittees suggested raising the question of a long-term goal and rolling over credits with the Water Board during the C.3 information item at the August 13th meeting.

Water Board staff stated that the intent of C.3.j is to incentivize accelerated progress while acknowledging associated challenges. It was acknowledged that if permits continue to require more and more acres to be retrofit, permittees may run out of opportunities in their jurisdictions. Water Board staff shared that they have been talking with SFEI about mapping impervious surfaces and redevelopment opportunities to assess realistic targets.

Permittees asked how "long-term" is being defined. Water Board staff responded that timelines haven't been defined yet but emphasized that a framework for measuring progress is needed. A SCVURPPP representative remarked that there may be a practical limit to what can be done on

public property or rights-of-way. It was suggested that any timeline should not go beyond the next three permit terms. The long-term benefit of creek restoration in terms of receiving water quality was pointed to as a valuable indicator of upstream project effectiveness.

Concerns were raised about the possibility of not being able to carry over acreage into future permit cycles, despite some jurisdictions exceeding their goals. Projects are being designed and implemented based on the assumption that credit can be applied to the next permit term. Water Board staff acknowledged that the issue requires careful framing and consideration of adverse consequences. It was confirmed this topic would be addressed at the August Board meeting, and it was noted that it would be helpful to show progress on provision C.3.j and support for rolling over acreage.

Water Board staff stated that the Annual Report includes completed projects but lacks information on projects in progress and recommended including that in the August presentation for a complete picture. A SCVURPPP representative stated that they would help collect that information and confirmed there would be a coordinated Permittee presentation.

There was also general agreement on the need to credit projects that convert impervious areas to pervious surfaces. Many restoration efforts already incorporate this work, making it a key interest.

The group concluded by agreeing to meet again in May or early June, preceded by an internal planning session. It was also agreed that future meetings in FY 25/26 should be scheduled earlier in the fiscal year to support timely progress. Water Board staff concluded by encouraging the group to resolve these discussions before moving into MRP 4.0 negotiation topics.

Next Steps/Action Items

The TWG summarized next steps including:

1) Send all materials from today's meeting to the TWG.
2) Schedule internal meeting, ahead of next TWG meeting.
3) Schedule TWG meeting #4 for May/early June.
4) Collect information on C.3.j projects in progress for the August information item.
5) Continue discussion and move toward agreement on:
    a. Role, benefits, and potential limitations of regional projects;
    b. What can be credited and what metrics can be used for Path 2;
    c. Crediting/points for construction and maintenance phases of projects;
    d. Rolling over of acreage from MRP 3 to MRP 4;
    e. Points/benchmarks to recognize progress;
    f. Potential for flexibility in design criteria desired/needed;
    g. Crediting projects in disadvantaged communities;
    h. Beginning discussion of potential requirements for Path 1.

DRAFT 3-26-25

Documentation of Integrated Planning and Multiple Benefits of GSI Retrofit Projects

Project Name	Project Description	Impervious Area (IA) Treated (acres)	Related Municipal Plans and Programs			Bonus IA Treated (acres)	Total IA Treated (acres)
			Plan or Program[1]	Goal, Mandate or Action[2]	Benefit of This GSI Project[3]		
Main Street Improvement Project	Street reconstruction and enhancements in DAC, including bike/ped safety improvements, climate resilience, and GSI curb extensions and planters.	2.0	GSI Plan/Stormwater Resource Plan (SWRP)	Implement GSI projects in priority areas and/or coordinated with planned PW projects.	Meets C.3.j (water quality) requirements and achieves benefits used to set priorities in SWRP	0.5 (25%)	2.5
			Climate Action Plan	Reduce heat island effect in critical areas	GSI includes trees, which provide shade in this critical area		
			Urban Forestry Plan	Replace dying trees; Increase density of canopy	GSI includes trees of type recommended in Plan to increase canopy		
			Vision Zero	Increase bike/ped safety in specific location	GSI is incorporated into bulbouts at inter-sections/crosswalks and planter strips along protected bike lanes		
			One Water Plan (or other watershed management plan)	Implement GSI in specific locations to address watershed management goals	GSI addresses a desired action in this location		
			Environmental Justice	Provide urban greening and better air and water quality in DACs	GSI provides the desired benefits		

[1] Only list those plans or programs relevant to the project.
[2] Examples provided are general. In the actual table, the permittee would provide a specific reference to the document, section, and identified goal, mandate, or action.
[3] The benefit of the project is how it accomplishes the goal, mandate or action of a plan/program. The examples provided are general. Ideally, benefits would be quantified as much as possible.

Multi-Benefit Scored Criteria
(Modified from Prop 1 List)

Does the applicant provide a quantification of **one or more primary and secondary benefits** from the list below? Was documentation supporting the claimed benefit provided? Preference will be given to primary benefits for water quality or water supply. Points will be awarded based on the geographic scale, and quantification of the benefit relative to other Proposals (e.g., acre-feet infiltrated, gallons of storm water reused, pounds of pollutant reduced).

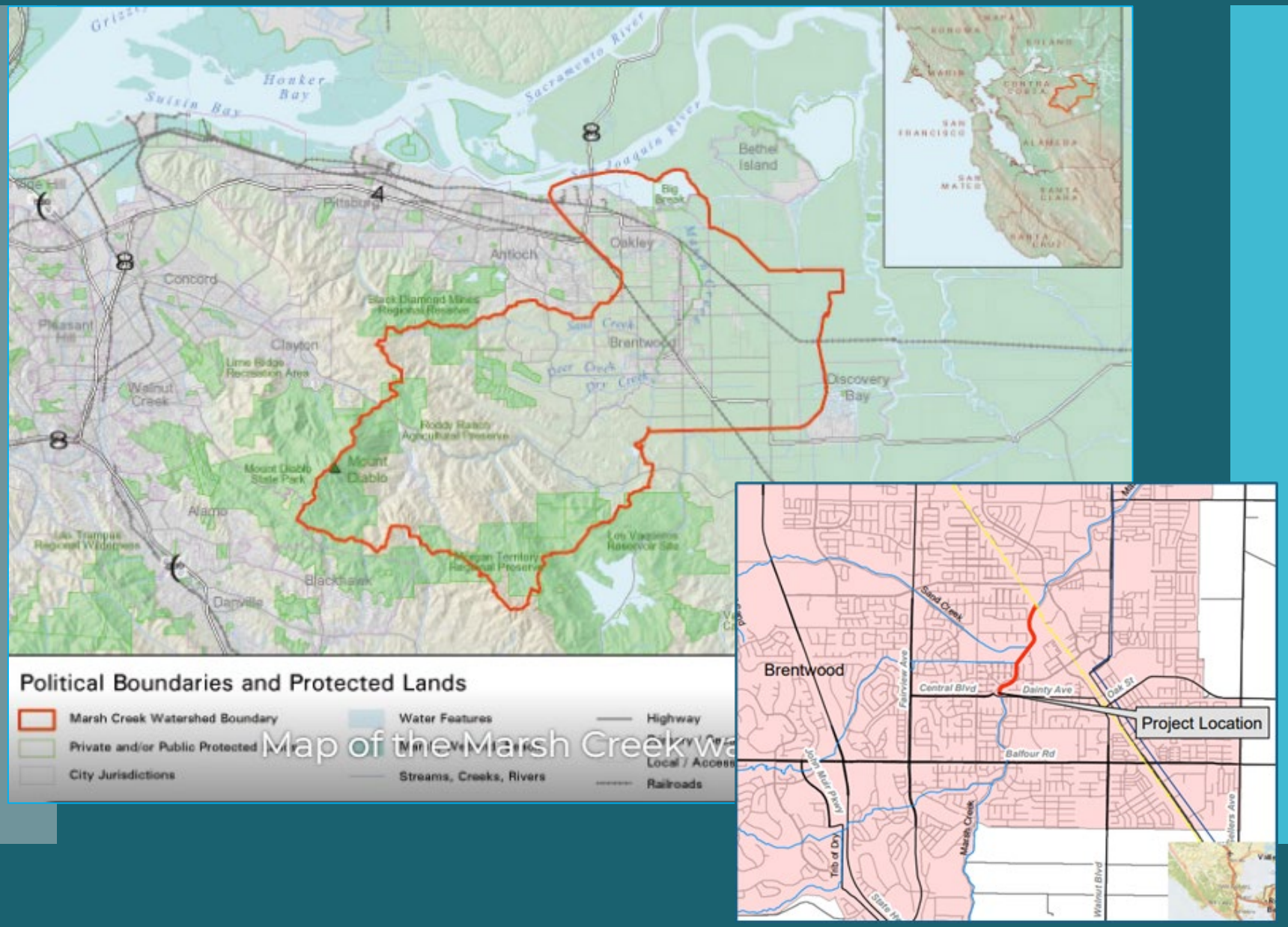
a) Increased water supply reliability
b) Conjunctive use
c) Increased water conservation
d) Increased filtration and/or treatment of runoff
e) Nonpoint source pollution control
f) Reestablished natural water drainage and treatment
g) Decreased flood risk by reducing runoff rate and/or volume
h) Reduced sanitary sewer overflows
i) Environmental and habitat projection and improvement
j) Increased urban green space
k) Improved air quality
l) Reduced energy use, greenhouse gas emissions, or provides a carbon sink
m) Reestablishment of natural hydrograph
n) Water temperature improvements
o) Improved public health
p) Employment opportunities provided
q) Public education
r) Community involvement
s) Enhance and/or create recreational and public use areas

Other Beneficial Uses:

- **Climate change adaptation.** Addressing sea level rise and climate changes.
- **Recreation:** Supporting recreational activities like swimming, boating, and fishing.
- **Aesthetic Enjoyment:** Maintaining water quality for visual enjoyment
- **Estuarine and Marine Habitats:** Protecting estuaries and marine ecosystems.
- **Fish and Wildlife Habitat:** Supporting healthy populations of fish, amphibians, reptiles, and other wildlife.
- **Warm and Cold Freshwater Habitats:** Maintaining specific water temperatures for different types of fish and aquatic life.
- **Shellfish Harvesting:** Supporting the collection of shellfish for human consumption
- **Migration and Spawning:** Supporting the movement and reproduction of fish, including anadromous species.
- **Tribal/Cultural.** Supporting collaboration with tribal groups and promoting cultural values.

Three Creeks Parkway Project, Brentwood

Contra Costa County Flood Control and Water Conservation District, American Rivers, EPA, Bay Delta Authority, Friends of Marsh Creek



Map of the Marsh Creek Wa

Project Location

-Marsh Creek, downstream of Marsh Creek reservoir

-East Contra Costa County

-Wide trapezoidal earth channel

-Draining ~150 sq. mile into Sacramento-San Joaquin Delta

Project Goals

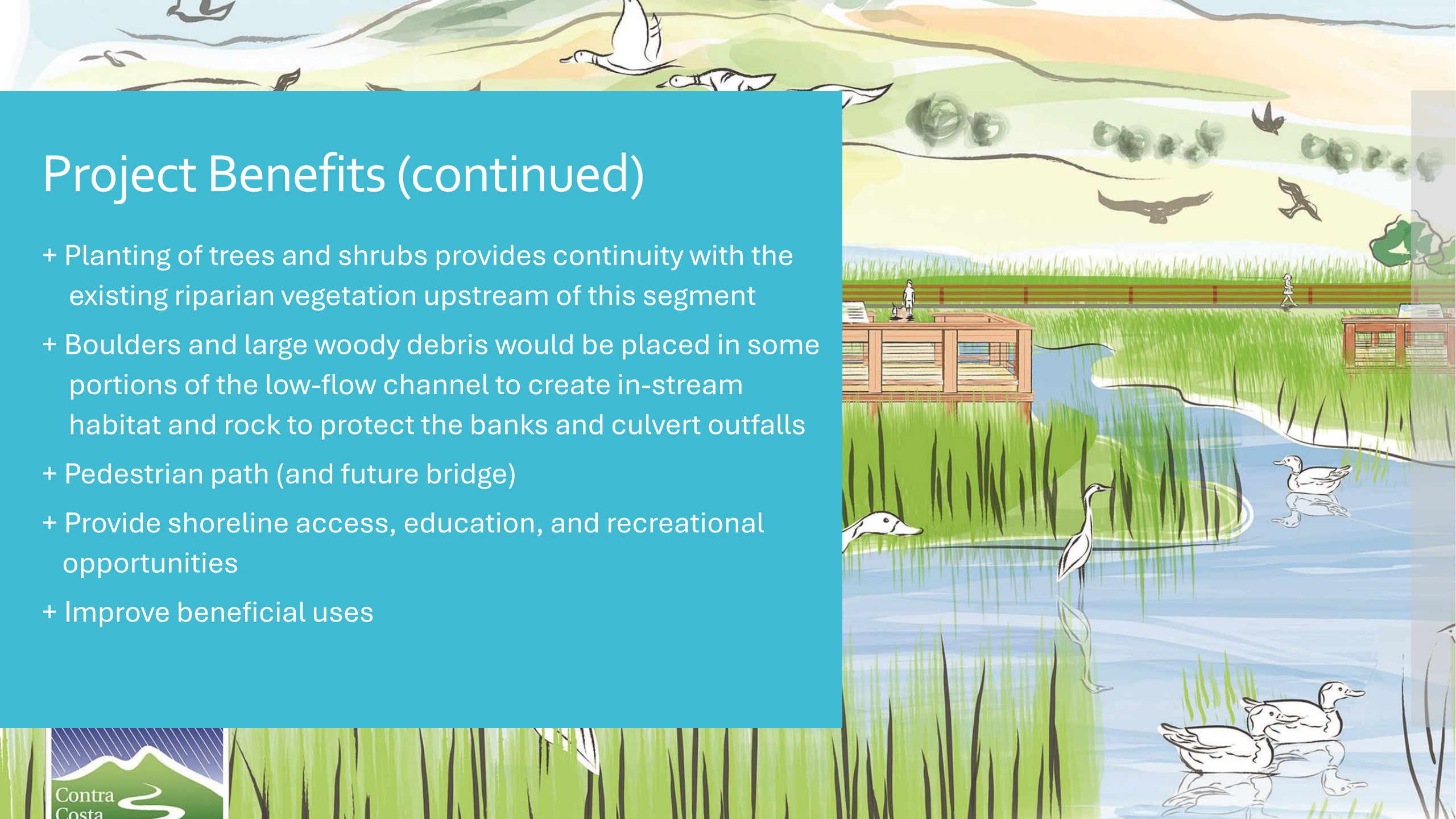
To widen and improve a section of Marsh Creek to provide additional flood conveyance capacity and restore riparian habitat along the creek by planting 1 acre of seasonal wetland, 2 acre of woody vegetation and 2 acre of grassland and native scrub

Project Benefits

+ Improve flood conveyance capacity, to meet standards for 100-year flood protection
+ Restore native vegetation along an approximately 4,000 linear foot section of Marsh Creek
+ Restore spawning habitat
+ Plant up to 1.0 acre of frequently inundated floodplain (seasonal wetland), 1.87 acres of woody riparian vegetation, and 1.87 acres of grasslands and native scrub
+ Enhances ecosystem habitat and recreational uses

Project Benefits (continued)

+ Planting of trees and shrubs provides continuity with the existing riparian vegetation upstream of this segment
+ Boulders and large woody debris would be placed in some portions of the low-flow channel to create in-stream habitat and rock to protect the banks and culvert outfalls
+ Pedestrian path (and future bridge)
+ Provide shoreline access, education, and recreational opportunities
+ Improve beneficial uses



Other long-term complimentary projects along Marsh Creek

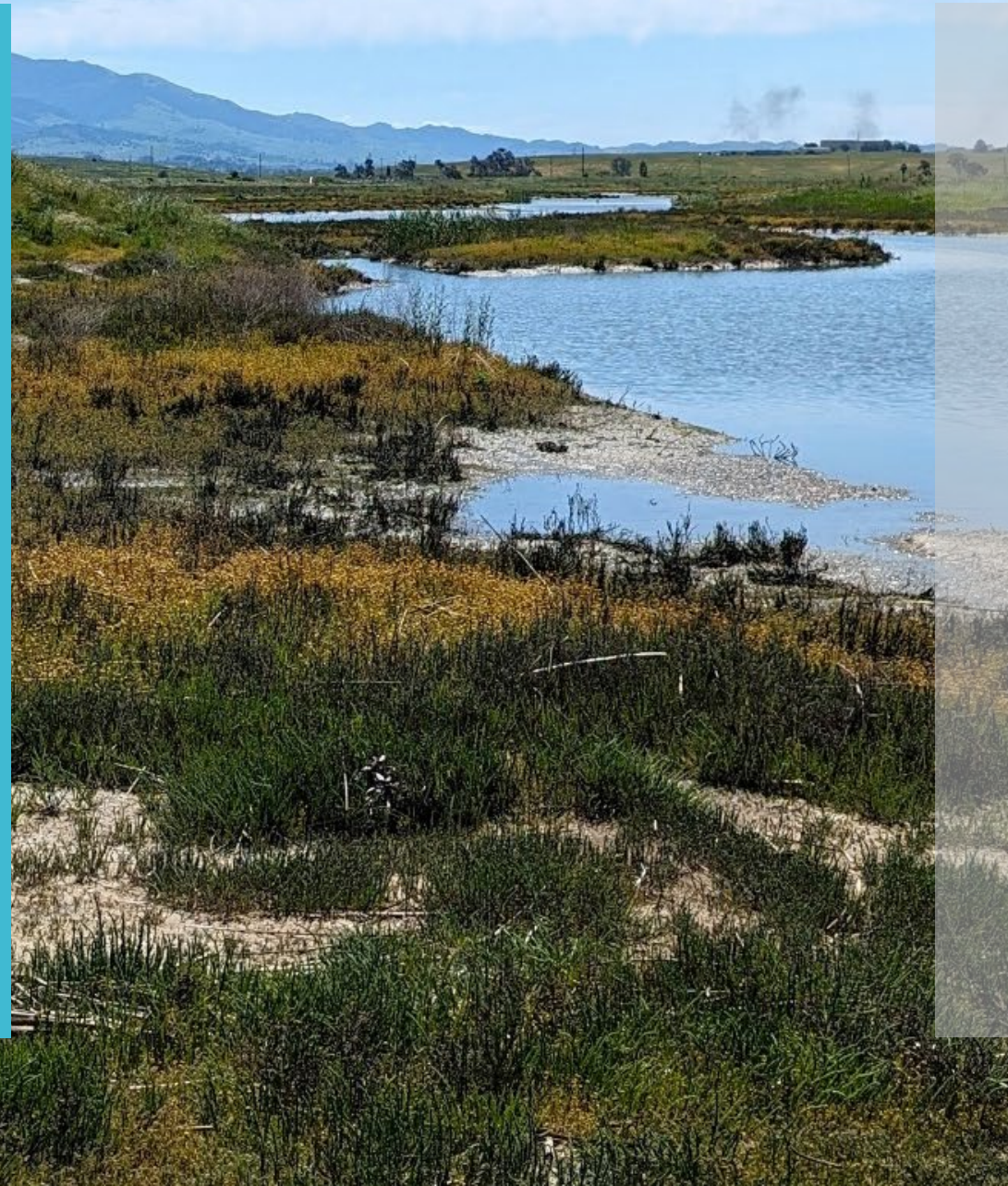
- Installation of a fish ladder (2005)
- Building a pedestrian bridge – abutments were done as part of the Three Rivers project
- Restoring Dutch Slough at the mouth of Marsh Creek
  - Benefit native species by re-establishing a natural ecological network, especially for Delta species currently in decline
  - Contribute to scientific understanding of ecological restoration in the Delta
  - Provide shoreline access, education, and recreational opportunities

- Other proposed projects in discussion

Example Scored Matrix

(From Prop 1 Evaluation)

Primary Benefits	Secondary Benefits
Flood protection	Recreational use
Habitat protection	Shoreline access
Wetland protection	Improved public health (via trail)
Water quality improvement	
Native planting	
Greenhouse gas reduction	
Pedestrian trail	
Public education	



Project Statistics

Completed Construction: 2020 – June 2023

Restoration Planting: 2021

Funding:

+ EPA $1.5 million

+ Proposition 1 Grant Fund awarded by the Sacramento-San Joaquin Delta Conservancy $836,409 with help from American Rivers

Lower Walnut Creek Restoration Project

Contra Costa County Flood Control and Water Conservation District

Project Location

-Downstream 'Lower' end of Walnut Creek

-East of Martinez, Contra Costa County

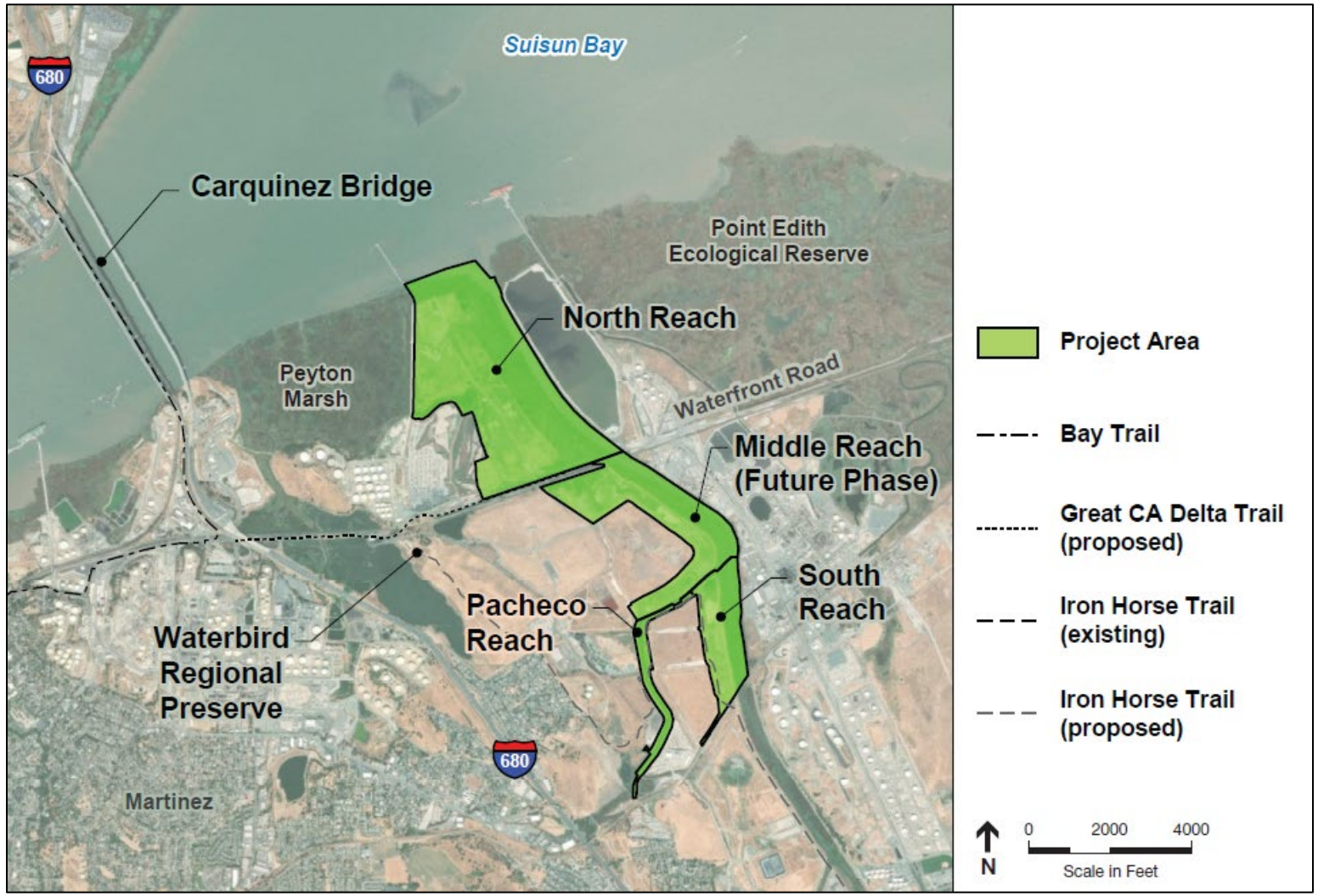
-Draining ~150 sq. mile into Suisun Bay

-Wide trapezoidal earth channel with levees on one or both sides and accumulated sediment

-Upland areas previously diked from the bay

Project Goals

…to restore and enhance habitat in Lower Walnut Creek and to provide sustainable flood management, while allowing opportunities for public access and recreation.



Public Access

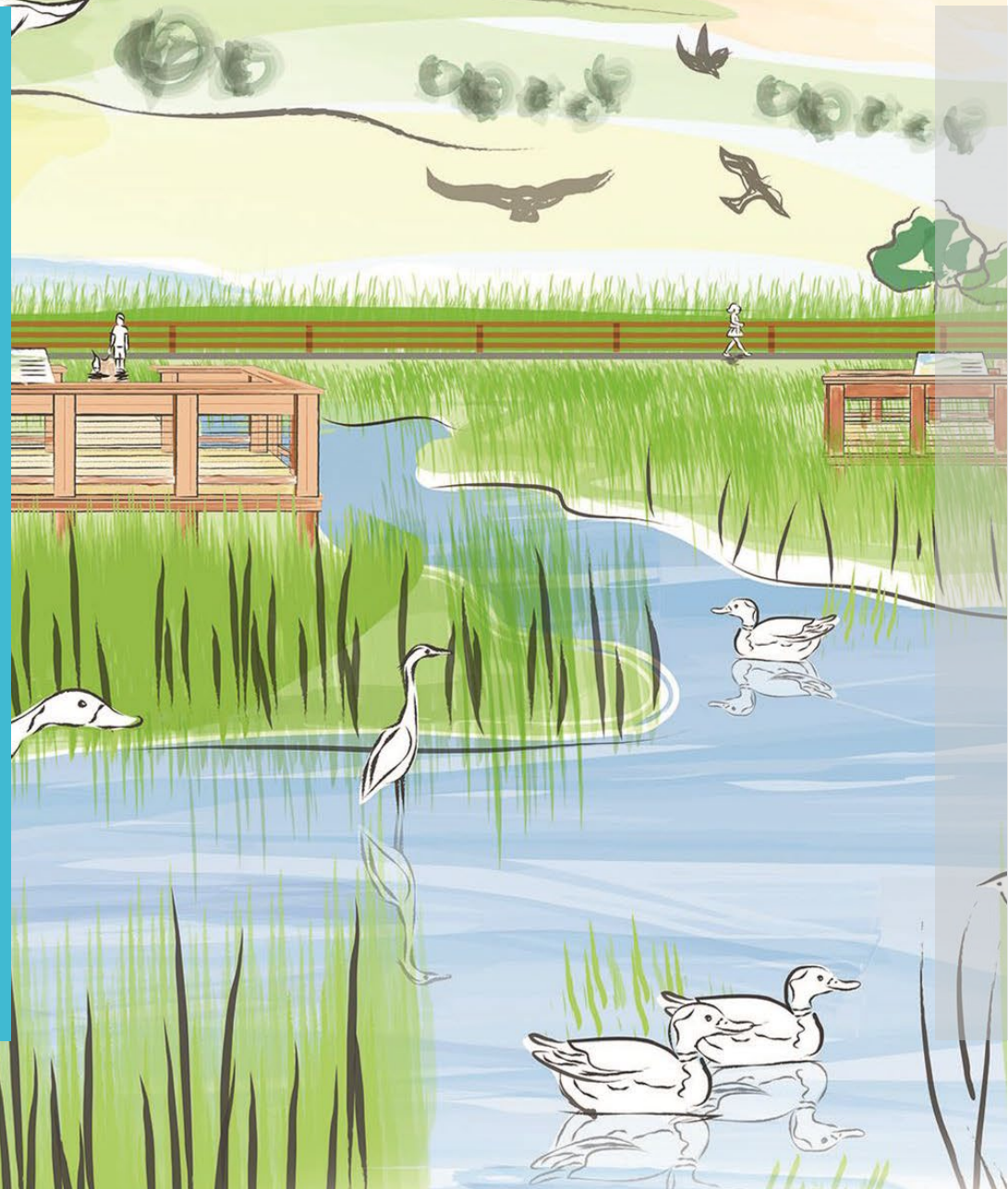
- John Muir Land Trust
- ~ 3 miles of trails
- Bird blinds, bridges, vista points
- Kayak launch
- Working with EBPRD for potential future connection to Iron Horse Trail

Project Benefits

- Restore and enhance ~200 acres wetlands and waters
- Increase habitat quality, connectivity, and diversity
- Flood protection
- Resiliency to future sea level rise
- Increase public access, recreation and community involvement
- Water quality benefits: tidal nutrient exchange, dissolved oxygen, water quality treatment through wetlands
- Monitoring and adaptive management
- Enhance Beneficial Uses of Walnut Creek: MIGR, RARE, SPWN, WARM, COLD, WILD, REC-1 and REC-2

Consistency with Local and Regional Plans

- Baylands Ecosystem Habitat Goals Project Science Update 2015
- Recovery Plan for Tidal Marsh Ecosystem of Northern and Central California, USFWS 2013
- Flood Control 2.0's Resilient Landscape Vision for Lower Walnut Creek (SFEI 2016)
- Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan)



Contra Costa

Scored Matrix Example

Primary Benefits	Secondary Benefits
Flood protection	Trail improvement
Wetland restoration	
Aquatic migratory habitat	
Fish spawning habitat	
Cold and Warm freshwater habitat	
Water quality improvement	
Water contact + non-contact recreation	

Project Stats

- *Completed Construction:* April 2021 – June 2023
- *Monitoring & Adaptive Management*: Year 4 of 10
- *Recreation*: John Muir Land Trust Construction Fall 2024
- Funding: $16.5 million in grants
- Project Partners/Funders: JMLT, DWR, NWFW, USFWS, CDFW, EPA, Coastal Conservancy, etc.
- Opening to the public this year!

Long Term Green Stormwater Infrastructure (GSI) Implementation
Technical Working Group (TWG) Meeting #4
June 4, 2025, 1:30pm – 3:30pm

Meeting Summary

Meeting Attendees: Jill Bicknell (SCVURPPP/EOA), Jeff Sinclair (SCVURPPP/EOA), Rajani Nair (City of San Jose), Pam Boyle Rodriguez (City of Palo Alto), Emma Hinojosa (City of Sunnyvale), Julianna Martin (Santa Clara County), Rinta Perkins (CCCWP/Geosyntec), Erin Lennon (CCCWP), Amanda Booth (City of San Pablo), Lucile Paquette (City of Walnut Creek), John Steere (Contra Costa County), Michelle Giolli (Contra Costa County), Frank Kennedy (Kennedy & Associates), Rachel Kraai (Lotus Water), Mitra Abkenari (City of Concord), Reid Bogert (C/CAG), Dan Sternkopf (C/CAG), Peter Schultze-Allen (SMCWPPP/EOA), Lisa Austin (Geosyntec), Sandy Mathews (ACCWP/LWA), Alina Constantinescu (ACCWP/LWA), Echo Lee (City of Alameda), Daniel Matlock (City of Fremont), Keith Lichten (San Franscisco Bay Regional Water Board [Water Board]), Aidan Cecchetti (Water Board), Rebecca Nordenholt (Regional Water Board), Luisa Valiela (EPA)

Introductions

Brief introductions were made, focusing on new members of the TWG. A SCVURPPP representative served as the meeting facilitator.

Review Agenda and Meeting Goals

The meeting agenda and goals were reviewed. There were no changes to the agenda.

Approve TWG Meeting #3 Summary

TWG Meeting #3 Summary was approved.

Pathway for Integrated Planning

Water Board staff reported that they are considering using the Washington State Department of Ecology (Ecology) Phase II permit as a potential framework for an integrated planning approach for GSI implementation goals in MRP 4. Staff provided an overview of the applicable sections of the Ecology permit and aspects considered for the Bay Area. Staff indicated that one of the benefits of the Ecology Phase II permit is that it includes a list of different types of projects and efforts that permittees can choose from to meet their GSI implementation requirements, including, for example, reconnecting riparian zones or maintenance of existing GSI. Permittees can use a variety of project types to meet their acreage requirements. There are also different crediting factors for different levels of water quality benefits and bonuses for additional benefits. For example: while an LID project may get full credit, other project types that don't have the same benefits will get partial credit.

Water Board staff noted that the Ecology permit includes project types which may have limited applicability in the Bay Area due to the different land uses in the Washington region (for example – large rural areas). Ecology originally based their GSI implementation requirements on the MRP but raised the acreage requirements in their permit. They also give credit for projects in different phases of implementation (i.e. planning, construction, operations and maintenance), however their permittees cannot get all their credit from one project type or projects in only one phase of implementation.

Water Board staff noted that they have been discussing giving credit for projects in different phases of implementation in MRP 4, as well as credit for projects that have a wider range of benefits. Water Board staff encouraged Permittees to read Ecology's Phase II permit and provide feedback on how the framework could be applied in the Bay Area and individual jurisdictions.

ACCWP representatives noted that there are good sections of the Ecology permit, such as the riparian restoration and maintenance provisions, and that it has an interesting structure that could be adapted for the MRP. A SCVURPPP representative asked whether impervious surface removal projects would be considered applicable; Water Board staff indicated that the answer was conditionally "yes" as long as the removal was permanent.

Permittee representatives asked whether the Ecology framework would be incorporated into the Path 1/Path 2 framework previously discussed in TWG meetings. Water Board staff indicated that their current thinking is that the Ecology approach would replace the Path 1/Path 2 framework, and that the MRP 4 language would instead use an "a la carte" approach. SCVURPPP representatives indicated support for this change.
Water Board staff noted that they would like to use the Ecology Phase II permit as the model (vs the Ecology Phase I permit) because the crediting scheme is less complicated and already expressed in acreage units. Water Board staff stressed that they want to provide flexibility within the bounds of the permit, i.e., as long as the water quality benefits can be justified. They also noted that they may look to the Permittees in the future to support/justify this kind of flexibility.
An EPA representative expressed interest in the Ecology approach and asked about the level of confidence in Ecology's crediting framework for the different project types. SF Bay Regional Water Board staff responded that the level of confidence varies depending on the project type. Ecology has recalibrated some of their crediting factors over time/permit cycles. They have a "medium" confidence level. Ecology has also recalibrated based on stakeholder feedback.

Meeting attendees discussed the scientific basis for Ecology's permit, indicating that the work was driven by salmonid health, and noted belief that the science behind the crediting framework is solid.

One Permittee representative requested that restoring soils in urban areas be considered as a project type. Permittees also indicated that it would be helpful for the Water Board to consider actual built Bay Area projects as they are developing the framework. CCCWP representatives have given presentations to the TWG on several built projects that fall into riparian restoration category and would like to have these considered as "test cases"; Permittees would also be happy to put forward an urban forest project and an undersized GSI project for consideration. These could be used to test permit language as it is developed. Water Board staff responded positively to this suggestion and requested more project examples.

Water Board staff indicated that Ecology's permit has stipulations for undersized projects and that they are interested in exploring applicability to the Bay Area permit and projects. A Permittee requested that the Water Board also consider giving credit for community-driven watershed stewardship and education. Water Board staff noted that it will be difficult to give credit for work that has already been done. Permittees requested that project retrofits or upgrades be added to crediting framework.

A meeting attendee asked what Ecology's permittees experiences have been with implementing their permit requirements. Water Board staff responded that Ecology has received recent feedback from some permittees that their targets are not high enough; this is because some jurisdictions get credit for a lot of project types that they are already doing; overall it sounds like the implementation has been relatively smooth.

Meeting attendees asked whether the Water Board intends this framework to be a model for public retrofits only or for regulated projects on private property as well. Water Board staff responded that they envision it for public projects, but these projects may also be treating water from private property.

Framework for Long Term GSI Implementation

The meeting facilitator recapped the discussion in the TWGs thus far, highlighting common areas of agreement. It was noted that:

- Participants seem to agree that a framework which envisions a mix of project types is desirable – for example, not all regional projects or all distributed projects;
- Permittees would like more definition on the Water Board's concerns about diverting stormwater from a receiving waterbody. It was requested that the Water Board consider diversion projects from concrete channels and large storm drain pipes vs natural channels;
- Permittees would like more guidance about acceptable parameters for regional projects.

Water Board staff indicated a willingness to look at "bands" of flexibility around some of the regulatory requirements and indicated that it may make sense to include ranges in the permit language. One of the examples discussed was including a potential percent capture range instead of the strict 80% capture standard in the current permit; Water Board staff stressed that once the percent capture gets too small, a potential project might not be worth it and/or there might not be a significant water quality benefit. A second example was potential flexibility around allowing diversion if additional ecosystem benefits are provided, such as groundwater recharge. Southern California was pointed to as a precedent. Water Board staff also noted that one of the reasons they are concerned about diversion is that they want to allow potential for urban creek daylighting and maintaining baseflow. A third potential applicable example was urban forestry projects.

One Permittee asked for more flexibility on the C.3.d sizing standards, including underdrain requirements. Another Permittee indicated interest in credit for keeping water on site through LID site design measures, but not necessarily treating it to current requirements. Water Board staff responded that the "a la carte" system could allow for these scenarios.

The meeting facilitator also indicated that Permittees want more assurance that credits will be counted across permit terms. Water Board staff noted that they understand that project planning takes a long time and that the five-year permit term is arbitrary relative to municipal project planning cycles. Water Board staff indicated belief that their staff can develop a system that allows credits to count across permit terms. Water Board staff also noted that they want to acknowledge Permittees' hard work, but that they also need to continue to use the permit to advance GSI implementation. The meeting facilitator noted that it was great to hear that the underlying agreement is that projects can span permit terms, and that projects could also get credit in the planning and O&M phases.

Water Board staff noted that they would like Permittees to provide input on the pool of project types that should be considered. Water Board staff also asked whether language could be included in a future sub-provision that could help Permittees develop long-term funding sources/measures. Permittees responded that broadening project definition will help; the more benefits a project has, the easier it is to get funding from other sources and also community support. Permittees indicated specific interest in project types that can help address flood risk, sea level rise, and shoreline adaptation. One Permittee also noted that it is important to think about project types that can meet multiple permit provisions.

Water Board staff indicated that they are interested in exploring crediting for projects that also

address sea level rise, but that the connection is more tenuous because those projects are generally constructed in or adjacent to a receiving water body. Staff indicated interest in thinking through how recent climate change adaptation studies in San Mateo County could inform the permit.

Permittee representatives indicated that Permittees will need to meet internally about the outcomes of the TWG meetings and develop the accompanying report due with the FY 24/25 Annual Reports. Two additional meetings of the full TWG are also planned for next fiscal year. It was suggested that the next full TWG meeting be held in September or October.

Water Board staff agreed that September/October is an appropriate time for the next full TWG meeting and indicated that they believe that the TWG is in a good place to start framing proposed MRP 4 language.

Permittee representatives asked whether and how Water Board staff would use example built projects in the regulatory framework development process. Water Board staff stated that they are hoping Permittees will respond to the Ecology permit framework in the TWG report including indicating which categories make sense for Bay Area Permittees and which categories do not. Water Board staff also indicated that a list of example projects or "test cases" could potentially be submitted in the TWG report for discussion at future TWG meetings. Staff noted that a cut sheet for each project is not needed; instead, project summaries could be more descriptive, with key details noted.

Next Steps/Action Items

1. Permittees will develop a report on the outcomes and recommendations from the TWG meeting series to be included with FY 24/25 Annual Reports. In the TWG Report, Permittees will respond to the Ecology Phase II permit language as a potential framework for MRP 4, as well as consider providing a list of example built projects or "test cases" to inform the framework development process.
2. Meeting facilitators will send out a Doodle Poll for an internal Permittee meeting in June.
3. Next TWG Meeting is proposed for September or October. Water Board would like to work together to start developing draft MRP language in the fall of 2025.

Adjourn

The meeting was adjourned.

Attachment C: Project Examples

THREE CREEKS PARKWAY PROJECT

Brentwood, California

PROJECT GOALS & DESCRIPTION

The goals of the Three Creek Parkway Project include widening and improving a section of Marsh Creek to provide additional flood conveyance capacity and restoring riparian habitat along the creek by planting ~1 acre of seasonal wetland, 2 acres of woody vegetation, and 2 acres of grassland and native scrub.

PROJECT LOCATION

- Marsh Creek
- Draining ~150 mi^2 into Sacramento-San Joaquin Delta

PROJECT PROPONENTS

- CCFCD, American Rivers
- Partners: Brentwood, EPA, DWR, Delta Conservancy, Coastal Conservancy, Friends of Marsh Creek

PROJECT TYPE

- Riparian Buffer Restoration*
- Floodplain Reconnection*

STATUS

- Completed: June 2023
- Funding: $2.3M: $1.5M EPA, $0.8M Prop 1

PROJECT BENEFITS

- Improve flood conveyance capacity
- Restore native vegetation along ~4,000 ft section of creek
- Plant up to 1ac of frequently inundated floodplain (seasonal wetland), 1.87ac of woody riparian, and 1.87ac of grasslands and native scrub
- Provide riparian vegetation continuity with upstream reach
- Create in-stream habitat, protect banks and culvert outfalls
- Restore spawning habitat
- Shoreline access, education & recreational opportunities

PRIMARY BENEFITS+	SECONDARY BENEFITS+
Flood protection	Recreational use area
Habitat protection	Shoreline access
Wetland protection	Improve public health (via trail)
Water quality improvement	Community involvement
Native planting	Public education
Greenhouse gas reduction	
Reestablish natural drainage	
Urban greening	

** Project Types with an asterisk are included in the WA State Phase II Permit, Appendix 12*
+ Primary and Secondary Benefits are generally based on Proposition 1 Project Proposal Evaluation Criteria

LOWER WALNUT CREEK RESTORATION

Contra Costa County, California

PROJECT GOALS & DESCRIPTION

The goals of the Lower Walnut Creek Restoration Project included restoring and enhancing habitat in Lower Walnut Creek, improving water quality, and providing sustainable flood management, while allowing opportunities for public access and recreation.

PROJECT LOCATION

- East of Martinez
- Lower Walnut Creek
- Draining ~150 mi^2 into Suisun Bay

PROJECT PROPONENTS

- CCFCD, JMLT
- Partners: DWR, NWFW, USFWS, CDFW, EPA, Coastal Conservancy

PROJECT TYPE

- Riparian Buffer Restoration*
- Floodplain Reconnection*
- Sea Level Rise Resilience

STATUS

- Completed: June 2023
- Funding: $19.8M in grant funds from numerous sources

PROJECT BENEFITS

- Restore and enhance 200ac of wetlands and waters
- Increase habitat quality, connectivity, and diversity
- Flood protection
- Resiliency to future sea level rise
- Increase public access, recreation, and community involvement
- Water quality benefits: tidal nutrient exchange, dissolved oxygen, water quality treatment through wetlands
- Monitoring and adaptive management
- Enhance Beneficial Uses of Walnut Creek: MIGR, RARE, SPWN, WARM, COLD, WILD, REC-1, & REC-2

PRIMARY BENEFITS+	SECONDARY BENEFITS+
Flood protection	Improve public health (via trail)
Wetland restoration	Community involvement
Aquatic migratory habitat	Resilience to sea level rise
Fish spawning habitat	
Cold & Warm freshwater habitat	
Water quality improvement	
Recreation use area	
Reestablish natural drainage	
Public education	

** Project Types with an asterisk are included in the WA State Phase II Permit, Appendix 12*
+ Primary and Secondary Benefits are generally based on Proposition 1 Project Proposal Evaluation Criteria

SUTTER AVENUE GREEN STREET

San Pablo, California

PROJECT GOALS & DESCRIPTION

The Sutter Avenue Green Street Project is a state and locally funded multi-benefit project that incorporates stormwater facilities, urban greening (street trees), and pedestrian and roadway improvements to capture and treat stormwater in bioretention facilities, reduce flooding, enhance pedestrian safety, and add urban greening.

PROJECT LOCATION

- Sutter Avenue between Church Lane & Fordham Street

PROJECT PROPONENTS

- City of San Pablo

TYPE REPRESENTED

- Undersized project
- High flow media in constrained site

STATUS

- Completed: 2025
- Funding: $5.6M
  - $2.9M from Prop 1
  - $0.6M from City General Fund
  - $2.0M from other funding

PROJECT BENEFITS

- Average annual PCBs removal of 0.11 grams per year and average annual Mercury removal of 0.96 grams per year.
- 9.9 acre-ft per year in volume captured
- "San Pablo Shines" Campaign in conjunction with this project resulted in:
  - 369 volunteers over 25 events
  - 7,800 gallons of trash removed
  - 61 hours of outreach

PRIMARY BENEFITS+	SECONDARY BENEFITS+
Water quality improvement	Public education
Flood protection	Community involvement
Increased filtration of runoff	
Urban greening	
Recreation use area/pedestrian improvements	

** Project Types with an asterisk are included in the WA State Phase II Permit, Appendix 12*
+ Primary and Secondary Benefits are generally based on Proposition 1 Project Proposal Evaluation Criteria

ENHANCED STREET TREE PLANTING

Emeryville, California

PROJECT GOALS & DESCRIPTION

The Park Ave Beautification project replaced stunted street trees with new trees that, after 15 years of growth, shade 50% of the public right of way and provide rainfall interception, habitat, and reduced heat island benefits. Utilities were undergrounded, and large tree planting areas with increased volumes of rootable soil were constructed, allowing for large stature trees that have fewer sidewalk lifting issues.

PROJECT LOCATION

- Park Ave between Hollis and Halleck Streets.

PROJECT PROPONENTS

- City of Emeryville

PROJECT TYPE

- Restoration of Forest Cover*

STATUS

- Completed: 2010
- Total Funding: $5,000,000
- Tree-related costs:
  - 80 trees planted
  - $5,000 per tree (in 2010 $)

PROJECT BENEFITS

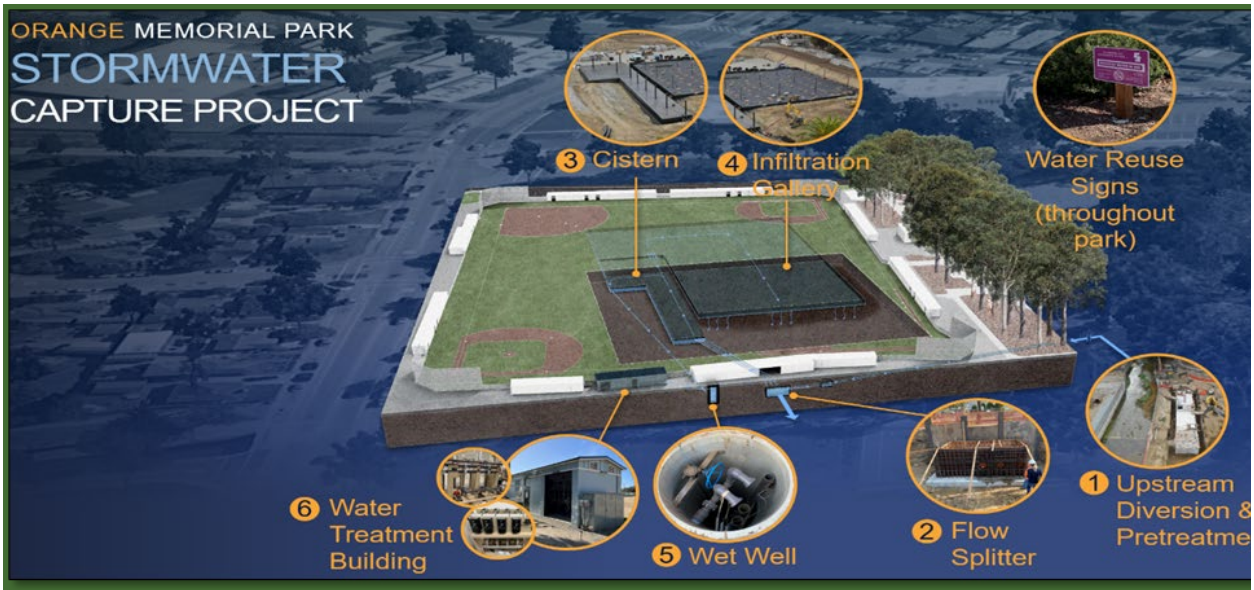
- Beautifies public street with large shade trees
- Improves pedestrian realm and incentivizes walking
- Increases canopy coverage in the City
- Reduces urban heat - cools neighborhood
- Undergrounding utilities increases resiliency & allows for larger trees
- Large canopy increases rainfall interception
- Providing larger planting areas and soil volumes allows tree roots to grow and reduces damage to sidewalks and other infrastructure
- Climate Action Plan progress
- Reduces trip and fall hazards
- Longer pavement lifespan

PRIMARY BENEFITS+	SECONDARY BENEFITS+
Improves air quality	Reduces building energy use
Increases infiltration of runoff	Improves public health
Increases urban green space	Improves habitat
Reduces impervious surface	Enhances public use areas
Reestablishes natural water drainage	

** Project Types with an asterisk are included in the WA State Phase II Permit, Appendix 12*
+ Primary and Secondary Benefits are generally based on Proposition 1 Project Proposal Evaluation Criteria

ORANGE MEMORIAL PARK REGIONAL STORMWATER CAPTURE PROJECT

South San Francisco, California



PROJECT GOALS & DESCRIPTION

This project is a first-of-its-kind in the Bay Area, a large-scale multi-benefit stormwater capture project. The project diverts dry and wet weather runoff from Colma Creek Channel via an instream drop inlet diversion structure and moves the water through a series of treatment mechanisms, including a certified full trash capture debris separator (pretreatment), a flow splitter which directs water into two subterranean storage basins. When the storage basins are at capacity, the pretreated water is returned to the channel. The project drainage area includes seven jurisdictions, with a total area of over 6,500 acres and an impervious area of approximately 2,500 acres. Water stored in the cistern is treated through an onsite treatment shed and can be used to irrigate the park and neighboring Centennial Trails.

PROJECT LOCATION

- South San Francisco, CA

PROJECT PROPONENTS

- City of South San Francisco, C/CAG, Caltrans

PROJECT TYPE

- Regional Stormwater Capture Project with Multiple Benefits

STATUS

- Completed: June 2022
- Funding: $15.5M (design and capital funding)

PROJECT BENEFITS

- 1,720 ac-ft of stormwater managed annually
- 10 g PCBs removed annually, 30 g Hg removed annually
- 240 ac-ft of water recharged annually
- Up to 45 ac-ft potable water offset for irrigation annually
- New park amenities

PRIMARY BENEFITS+	SECONDARY BENEFITS+
Water quality improvement	Climate resilience
Groundwater recharge	Channel maintenance benefits
Stormwater capture and use	Flood mitigation
Enhanced recreational use area	

** Project Types with an asterisk are included in the WA State Phase II Permit, Appendix 12*
+ Primary and Secondary Benefits are generally based on Proposition 1 Project Proposal Evaluation Criteria

RESILIENT SAN CARLOS SCHOOLYARDS

San Carlos, California

PROJECT GOALS & DESCRIPTION

In partnership with Green Schoolyards America, Bay Tree Design, SMC Office of Education, and the San Carlos School District (SCSD), C/CAG led the Resilient San Carlos Schoolyards Project, which is a collaborative schoolyard greening and resilience planning project. The project established a vision and goals for what Resilient Schoolyards in the SCSD and throughout San Mateo could be, developed a clear and objective process for site selection based on set quantitative and qualitative metrics, and through a participatory engagement process developed campuswide schoolyard resilience concept plans for three pilot sites. The hope is that this process and program could be replicated in other school districts throughout San Mateo County, California, and the country.

PROJECT LOCATION

- San Carlos School District, San Mateo County, CA (Arundel Elementary, Tierra Linda Middle, and Mariposa Elementary Schools)
- Pulgas and Belmont Creek Watersheds

PROJECT PROPONENTS

- SCSD, C/CAG, San Mateo County Office of Education

PROJECT TYPE

- Resilient Schoolyard Planning Guidance
- GSI*
- Flood Protection

STATUS

- Completed: January 2023
- Funding: $95,342 (planning only, no capital costs estimated)

PROJECT BENEFITS

- Schoolyard resilience/nature play areas
- Water quality improvements
- Support curriculum development
- Habitat restoration
- Heat island mitigation
- Flood protection

PRIMARY BENEFITS+	SECONDARY BENEFITS+
Community involvement	Flood protection
Public education	
Water quality improvement	
Habitat restoration	
Heat island mitigation	
Increase urban green space	
Enhance public use areas	

** Project Types with an asterisk are included in the WA State Phase II Permit, Appendix 12*

+ Primary and Secondary Benefits are generally based on Proposition 1 Project Proposal Evaluation Criteria

RIVERVIEW STORMWATER GARDEN

San Jose, California

PROJECT GOALS & DESCRIPTION

The Riverview Stormwater Garden is a 5.2-acre bioretention basin and public park. The project converted an existing untreated stormwater detention basin to a bioretention basin that collects and treats runoff from ~344 acres of impervious and pervious surfaces. Stormwater runoff now flows through the 2.1-acre bioretention basin to receive bio-treatment; the treated stormwater is then captured by underdrains and discharged to the Guadalupe River, and ultimately the San Francisco Bay, through an upgraded pump station. This project is an example of integrating GSI into existing urban spaces, converting outdated "gray" infrastructure into green spaces, combining multiple community, public art, and environmental benefits, and maximizing water quality benefits with streamlined operations and maintenance (O&M) costs.

PROJECT LOCATION

- Eastern bank of Guadelupe River, San Jose, CA

PROJECT PROPONENTS

- City of San Jose

PROJECT TYPE

- Regional Stormwater Capture Project with Multiple Benefits

STATUS

- Project Completed: April 2025
- Cost: $17.5M
- Funding Sources: Prop 1 IRWP Grant, City of San Jose Measure T Bond Program

PROJECT BENEFITS

- Reduces pollutant load to the Guadelupe River
- Improves riverine habitat
- California-native plantings
- Maintains flood prevention functionality
- New park space with walking paths, boardwalk, and nature-inspired play area for children
- Includes public art and educational signage
- Streamlined O&M costs
- Non-potable reuse potential currently being assessed

PRIMARY BENEFITS+	SECONDARY BENEFITS+
Water quality improvement	
Habitat restoration	
Enhance recreational area	
Increase urban green space	
Flood mitigation	
Public education	

** Project Types with an asterisk are included in the WA State Phase II Permit, Appendix 12*
+ Primary and Secondary Benefits are generally based on Proposition 1 Project Proposal Evaluation Criteria

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 3-4

Bay Area Municipal Stormwater Collaborative FY 2024-25 Regional Supplement for New Development and Redevelopment

Annual Reporting for FY 2024-2025

Regional Supplement for New Development and Redevelopment

San Francisco Bay Area Municipal Regional Stormwater Permit

Bay Area Municipal Stormwater Collaborative

September 30, 2025

MRP Regional Supplement for New Development and Redevelopment
Annual Reporting for FY 2024-2025

TABLE OF CONTENTS

INTRODUCTION **2**

GREEN INFRASTRUCTURE PLANNING AND IMPLEMENTATION **2**

C.3.j.iii Participation in Processes to Promote Green Infrastructure **2**

Activities and Accomplishments during FY 2024-25 **3**

MRP 3.0 C.3/GSI Work Groups 3

BAMSC Development Subcommittee 3

Other Participation and Comments 4

Future Activities **5**

INTRODUCTION

This Regional Supplement has been prepared to report on regionally implemented activities complying with portions of the Municipal Regional Stormwater Permit (MRP) issued to 79 municipalities and special districts (Permittees) by the San Francisco Bay Regional Water Quality Control Board (Water Board). The Regional Supplement covers new development and redevelopment activities related to the following MRP 3.0 provision:

- C.3.j.iv Participate in Processes to Promote Green Infrastructure.

These regionally implemented activities were conducted under the auspices of the Bay Area Municipal Stormwater Collaborative (BAMSC), an informal coalition of the municipal stormwater programs in the San Francisco Bay Area. Most of the 2024-25 annual reporting requirements of Provision C.3.j.iv covered in this Supplement were completely met by BAMSC member activities, except where otherwise noted herein or by Permittees in their reports. Through their program representatives on the BAMSC Steering Committee and its Subcommittees, MRP Permittees collaboratively participated in these BAMSC informal regional activities.

GREEN INFRASTRUCTURE PLANNING AND IMPLEMENTATION

C.3.j.iv Participation in Processes to Promote Green Infrastructure

This provision requires:

> *(1) The Permittees shall, individually or collectively, track processes, assemble and submit information, and provide informational materials and presentations as needed to assist relevant regional, State, and federal agencies to plan, design, and fund incorporation of green infrastructure measures into local infrastructure projects, including transportation projects. Issues to be addressed include coordinating the timing of funding from different sources, changes to standard designs and design criteria, ranking and prioritizing projects for funding, and implementation of cooperative in-lieu programs.*

This section describes activities and accomplishments during FY 2024-25 to promote green infrastructure (GI or GSI). The BAMSC activities described in this section provide compliance for MRP Permittees with this provision.

Activities and Accomplishments during FY 2024-25

MRP 3.0 C.3/GSI Work Groups

The following development-related BAMSC regional work groups began to meet or continued to meet in FY 2024-25: the Long Term GSI Technical Working Group, the Asset Management Work Group, and the Trees in GSI Work Group.

BAMSC Long Term GSI Technical Working Group

Provision C.3.j.ii (4) of the MRP allows Permittees, Water Board (WB) staff, and impartial science experts to collectively form a technical working group to discuss long-term GSI goals and recommend long-term percentage reductions in Permittees' impervious surfaces, at individual, countywide and regional scales. Working cooperatively through BAMSC, Permittees formed the Long Term GSI Technical Working Group (TWG) in FY 2023-24, and the TWG met four times in FY 2024-25. The TWG includes WB and EPA staff.

MRP Provision C.3.j.v (7) requires Permittees to collectively produce a report summarizing TWG efforts and recommendations and submit it to the WB by September 2025. The BAMSC "TWG Summary and Recommendations Report" was completed in August 2025 and submitted with each Countywide Program's FY 2024-25 Annual Report. The TWG Summary and Recommendations Report includes summaries of all TWG meetings and Permittee recommendations for a proposed GSI Implementation Framework that includes crediting of a broader range of project types, projects with multiple benefits, and projects in various phases of implementation. The TWG anticipates holding two meetings in FY 2025-26 to continue to discuss this topic.

BAMSC Asset Management Work Group

The purpose of the Work Group is to provide a forum to discuss and get regional agreement on approaches to condition assessment and O&M needs of stormwater quality assets. In FY 2023-24, two Work Group meetings were held, both focused on condition assessment of LID/GSI assets. In FY 2024-25, one meeting was held on July 23, 2024 to discuss assessing condition of trash control assets. Following the July meeting, the effort to assist Permittees with development of Asset Management Plans shifted to the Countywide Programs, and no additional BAMSC Work Group meetings were held.

BAMSC Trees in GSI Work Group

The Trees in GSI Work Group is a work group of the Development Subcommittee. The Work Group met twice in FY 2024-25. Attendees included staff from several municipalities, the Regional Water Board, UC Extension, Davey Resource Group, and NGOs. The Work Group met on August 27, 2024, and discussed the current Biotreatment Soil Media specification and how it impacts trees in GSI. The Work Group also discussed the regional biotreatment wood mulch specification. At the second meeting on March 12, 2025, the Work Group received a presentation from Peter Schultze-Allen (SCVURPPP) on a spreadsheet of the types of stormwater systems that utilize trees. In FY 2025-26, the Trees in GSI Work Group will continue to meet and focus on design and construction challenges with integrating trees into bioretention systems.

BAMSC Development Subcommittee

The BAMSC Development Subcommittee continued to meet approximately quarterly during FY 2024-25 and promoted the implementation of GSI by providing a forum to discuss the following topics:

- The regional biotreatment soil media (BSM) and biotreatment wood mulch (BWM) specifications.
- Native and non-native drought tolerant plant species for low/no irrigation bioretention landscapes including a panel presentation on the topic moderated by John Steere, Contra Costa County Watershed Program.
- The "Climate Resilience Resources Guide" funded by the GI Leadership Exchange, led by Reid Bogert (SMCWPPP) and Kelly Havens (Geosyntec), and in partnership with several agencies across the US (and Canada), including the SF Public Utilities Commission. The CRRG collected information from municipalities in the US and Canada on approaches to addressing the effects of climate change on green stormwater infrastructure. The guide provides information on benefits from resilience practices and challenges that climate change is bringing. The document is posted on the Flows to Bay (SMCWPPP) website.
- The Contra Costa County Regional Alternative Compliance (RAC) System is a collaborative framework enabling participating municipalities and developers to meet permit compliance through a regional, market-based approach. RAC System allows for the purchase of "compliance units" generated by off-site Green Stormwater Infrastructure (GSI) projects. To administer and sustain the RAC System, a Joint Powers Authority (JPA) and a Community Facilities (CFD), providing a recurring funding stream for operations and maintenance. The JPA will serve as a separate legal entity responsible for managing compliance exchanges and coordinating among member agencies. The CFD will finance long-term operations and maintenance of GSI projects. The RAC System was selected to receive **the 2025 CASQA Award for the Outstanding Stormwater Funding Initiative.** Rinta Perkins, Program Manager for CCCWP, delivered two presentations on the CCCWP Regional Alternative Compliance Program to the BAMSC Development Committee on recent efforts to establish a Joint Powers Authority and a Community Facilities District to support its implementation.

Other Participation and Comments

- Peter Schultze-Allen (EOA/SCVURPPP) worked with staff from MTC and Valley Transportation Authority, to host the workshop, "Embrace the Future – Green Complete Streets Technical Deep Dive" on September 12, 2024 at the Campbell Community Center with over 130 attendees. Staff from BAAQMD (now known as the Bay Area Air District), Save the Bay, Bay Area Regional Collaborative, the City of San Jose, City of Mountain View, and City of Campbell assisted in the workshop and gave presentations. MTC Commissioner and Mountain View Councilmember, Margaret Abe-Koga, gave the welcoming remarks. The workshop included presentations on proposed and completed green and complete projects in Santa Clara County.
- Peter Schultze-Allen (EOA/SCVURPPP) attended a coordination meeting on October 7, 2024, in Sacramento organized by several State of California departments to discuss recent developments and strategies for the use of biochar in California projects and policies. The attendees included

representatives from Caltrans, CalRecycle, the Sacramento State University - Office of Water Programs, California Department of Conservation, California Air Resources Board, private biochar companies and other organizations.

- Reid Bogert (SMCWPPP) presented the following technical and panel presentations at the California Stormwater Quality Association 2024 Annual Conference in Sacramento on October 21 and 22, 2024:
    - "Developing a OneWatershed Framework in San Mateo County" (technical presentation);
    - "Assembling the Puzzle - Developing Comprehensive Strategies for Local Stormwater Program Funding" (panel); and
    - "Integrating Safe Routes to School and Green Streets Pilot Program in San Mateo County" (technical presentation).
- Reid Bogert (SMCWPPP) met with State Assembly and Federal Congressional leaders, including Senator Padilla's Office on April 21, 2025, Senator Schiff's Office on April 22, 2025, and Assemblymember Stefani on April 24, 2025, to advocate for federal funding for GSI projects in San Mateo County, focusing on earmark requests for $3M in funding for a sustainable streets project in Colma and $1.5M for advancing SMCWPPP's OneWatershed effort to develop a comprehensive Countywide OneWatershed Strategic Plan. Bogert also submitted a $20M grant under the USEPA Community Change Grant Program in November 2024 for the proposed *Groundwork for Equity and Resilience in San Mateo County: Advancing Green Infrastructure and a Green Workforce in Frontline Communities*, which would make substantial investments in nature-based climate resilience infrastructure and work force development in the county.
- Reid Bogert (SMCWPPP) presented on green stormwater infrastructure and resilient schoolyards partnership opportunities at the San Mateo County Office of Education's 10th Annual Environmental Solutionary Teacher Fellowship community partners event. The presentation was focused on how school site and district staff can effectively integrate GSI with schoolyard greening and climate resilience initiatives through partnerships with the countywide stormwater program.
- Reid Bogert (SMCWPPP)worked in partnership with the Ten Strands Institute to feature the Resilient San Carlos Schoolyards planning project on the California Collaborative for Educational Excellence website - https://spotlights.ccee-network.org/spotlights/san-carlos-sd. The Resilient San Carlos Schoolyards project was a grant funded project led by SMCWPPP in collaboration with the San Carlos School District, Green Schoolyards America and the San Mateo County Office of Education, geared towards establishing a participatory planning process to develop schoolyard greening concept plans and initiate planning and funding strategies in a pilot school district to advance schoolyard resilience, water quality, and other school community benefits through GSI and related infrastructure.

- Rinta Perkins (CCCWP) delivered three presentations to Contra Costa County Public Managers Association (PMA), City/County Engineering Advisory of Contra Costa (CCEAC), and Contra Costa Planning Directors on the RAC System JPA and CFD. The CCCWP held an informational session for stakeholders in March. It is anticipated that the RAC JPA formation will be completed in January 2026.

- Funded by the US EPA Water Quality Improvement Fund (WQIF) program, the CCCWP *Clean Watershed for All (CW4A)* project focused on countywide implementation (i.e., funding and delivery) of GSI and other water quality improvement projects, especially in underserved communities. In this permit year, the Project completed identifying and prioritizing stormwater capture projects and developed concept designs. As part of its funding and delivery option, the Project explored alternative public-private partnerships (P3) strategies.

Future Activities

The Long Term GSI TWG will continue meeting in FY 2025-26 to discuss long-term goals for GSI and a proposed GSI Implementation Framework.

BAMSC representatives will also continue to engage in various coordination efforts related to funding and implementation support for GSI. For example, the current BAMSC Steering Committee Co-Chair, Reid Bogert, has served during FY 2024-25 as the BAMSC representative on the San Francisco Estuary Partnership Implementation Committee to continue advocating for appropriate funding and policy support for multi-benefit GSI projects. Additionally, BAMSC representatives will continue efforts to promote green and complete streets with MTC, BAAQMD, Save the Bay, CalBike, Caltrans, BARC and other Bay Area and California organizations.

Santa Clara Valley
Urban Runoff
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Appendix 4-1

IND/IDDE Training: Industrial, Commercial and Illicit Discharge Inspector Workshop – June 16, 2025

- Workshop Agenda
- Attendance List
- Workshop Evaluation Summary

Industrial, Commercial and Illicit Discharge Inspector Workshop

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June 16, 2025

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 WORKSHOP

Industrial, Commercial and Illicit Discharge Stormwater Inspections

Monday, June 16, 2025

Cupertino - Quinlan Community Center
10185 N Stelling Rd, Cupertino, CA 95014

AGENDA

11:00 AM	Welcome and Introductions	Kristin Kerr, *SCVURPPP*
11:10 AM	Regional Water Board Industrial Stormwater Inspection Program	Maggie Monahan and Joe Monical, *Regional Water Board Staff*
11:30 AM	Valley Water Pollution Prevention Hotline Program Summary and Incident Responses	Heather Malanog, *Valley Water*
11:50 AM	From Unknown Source to Identified Responsible Party	Eric Uldrick, *City of San Jose*
12:10 PM	Business Inspection Case Study: Seasonal Concerns	Daphny Pan, *City of San Jose*
12:30 PM	Break	
12:45 PM	IND/COM & IDDE Case Study	Rafles Warnars, *WVSWA*
1:05 PM	Municipal Regional Permit: Provision C.4/C.5 and More	Kristin Kerr, *SCVURPPP*
1:25 PM	Inspector Resources	Kristin Kerr, *SCVURPPP*
1:45 PM	Summary Remarks, Adjourn	Kristin Kerr, *SCVURPPP*

Attendance at this training is acceptable for 2.30 Contact Hours toward maintaining CWEA certifications.

IND/IDDE TRAINING WORKSHOP

June 6, 2025

Attendance List

	First Name	Last Name	Agency/Organization
1	Roger	Storz	City of Campbell
2	Ron	Taormina	City of Campbell
3	Riley	Moffatt	City of Cupertino
4	CheyAnne	Brown	City of Los Altos
5	Irene	Chiu	City of Los Altos
6	Harun	Musaefendic	City of Los Altos
7	Oscar	Olais	City of Los Altos
8	Julia	Recker	City of Los Altos
9	Jane	Hou	City of Los Altos
10	Zuhayl	Lambert	City of Milpitas
11	Jill	Barnes	City of Milpitas/CSG
12	Brian	Jones	City of Mountain View
13	Brandon	Redic	City of Mountain View
14	Brad	Hunt	City of Palo Alto
15	Gabrielle	Stauffer	City of Palo Alto
16	Veronica	Bi	City of San José
17	Trenna	Burbank	City of San José
18	Sabrina	Denton	City of San José
19	Chris	Donaldson	City of San José
20	Lorena	Gomez Ortiz	City of San José
21	Brandon	Massey	City of San José
22	Daphny	Pan	City of San José
23	Alexander	Piñon	City of San José
24	Cecilia	Rios	City of San José
25	Ryan	Sommers	City of San José
26	Eric	Uldrick	City of San José
27	Peter	Wampler	City of San José
39	James	Lucarotti	City of San José ESD
28	Damaris	Han	City of Santa Clara
29	Jessie	Hendren	City of Sunnyvale
30	Rachel	Moran	City of Sunnyvale
31	Marcella	Navas	City of Sunnyvale
32	Zhenzhen	Jiang	County of Santa Clara
40	Gaurav	Kumarllemos	County of Santa Clara
41	Joanna	Kincaid	County of Santa Clara Watershed Protection Division
33	Leffert	Lefferts III	EOA, Inc.
34	Claudia	Mayo	EOA, Inc.
35	Kira	O'Shelski	EOA, Inc.
36	Zach	Wu	Mountain View Fire Department
37	Maggie	Monahan	Regional Water Board
38	Joseph	Monical	Regional Water Board

IND/IDDE TRAINING WORKSHOP

June 6, 2025

Attendance List

	First Name	Last Name	Agency/Organization
42	Allen	Meyer	Town of Los Gatos
43	Shirley	Ng	Town of Los Gatos
44	Heather	Malanog	Valley Water
45	Audrea	Haynes	West Valley Stormwater Authority
46	Sheila	Tucker	West Valley Stormwater Authority
47	Rafles	Warnars	West Valley Stormwater Authority

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

IND/IDDE TRAINING WORKSHOP

Number of Evaluations: 35
Number of Attendees: 47

Quinlan Community Center – 10185 N Stelling Rd, Cupertino June 16, 2025

1. **Regional Water Board Industrial Stormwater Inspection Program – Maggie Monahan and Joe Monical, Regional Water Board Staff**

   Very Useful 21 Somewhat Useful 14 Not useful 0

   Comments:
   - Harder to follow W/O printout (3)
   - Good to know that cities should be checking SMARTS regularly for updates on if the Water Board has inspected and/or issued an enforcement action
   - I didn't learn much new, but I appreciated having the Water Board present during the workshop
   - Would have liked a more comprehensive example of one of their inspections
   - It is good to learn their process and about the program
   - I would love to hear more about the referral program
   - Good to know how RWB conducts/prioritizes inspections
   - It is interesting to see how the Water Board prioritizes the sites
   - Smaller cities don't deal with industrial stormwater inspections due to lack of these facilities
   - Very general

2. **Valley Water Pollution Prevention Hotline Program Summary and Incident Responses – Heather Malanog, Valley Water**

   Very Useful 26 Somewhat Useful 9 Not useful 0

   Comments:
   - Did not know about this group
   - How does this program fit into the bigger picture with CAL OES being the "one stop shop"?
   - It would be helpful to know how many people staff the hotline
   - Great/useful information (2)
   - Interesting case study photos (4)
   - Good to know the hotline resource

3. **From Unknown Source to Identified Responsible Party – Eric Uldrick, City of San Jose**

   Very Useful 33 Somewhat Useful 2 Not useful 0

Comments:

- Only $1800 fine for 6 months dumping?
- Awesome! Great follow up and consistent response from Eric
- A good example of how to follow up and track down RP to restore the issue
- Great slides & key takeaways
- Interesting case with multiple parties involved
- It was helpful to see the various methods to find responsible parties
- Very detailed presentation
- Great advice on investigative tactics and communications
- Best presentation- very useful (2)

4. Business Inspection Case Study: Seasonal Concerns – Daphny Pan, City of San Jose

Very Useful 30 Somewhat Useful 5 Not useful 0

Comments:

- Very relatable
- Interesting case with multiple parties involved
- Great presentation (2)
- Good example of follow up and seasonal issues
- Daphny did great work! Loved to hear that she had a good response from her facility, great to hear the coordination with teamwork as well.
- Amazing
- Very unique case study

5. IND/COM & IDDE Case Study – Rafles Warnars, WVSWA

Very Useful 24 Somewhat Useful 11 Not useful 0

Comments:

- Learned authority varies between agencies
- Salmon
- It would be interesting to learn how Los Gatos issues enforcement for work done by West Valley Stormwater Authority
- Best case scenario, Rafles is great and very knowledgeable
- It is hard to hear; Salmon background slide and enforcement structure overview would be helpful because of how different it is.
- I enjoyed the connection between IDDE & IND inspections

6. Municipal Regional Permit: Provision C.4/C.5 and More – Kristin Kerr, Program Staff

Very Useful 31 Somewhat Useful 4 Not useful 0

Comments:

- Great material
- Maybe this presentation should be first

- Thank you! I always appreciate this section, especially for new inspectors
- Great refresher & nice having the information in a succinct slide deck
- Good overview (2)
- I really appreciate the breakdown of the MRP, especially useful for new inspectors/employees
- Good discussion points that I'll bring to the team
- I enjoyed hearing a little bit about other provisions

7. Inspector Resources – Kristin Kerr, Program Staff

Very Useful 30 Somewhat Useful 5 Not useful 0

Comments:

- Thank you! Great overview (3)
- Thank you for the slides, great desk reference
- I appreciate going over resources. Fact Sheets, etc.
- Excited about Tallow BMP fact sheet

8. Did this training meet your expectations? **Yes** 35 **No** 0

Comments:

- Case studies should be challenging

9. What parts of the training were most useful to you?

- Listening to other municipalities
- Case Studies (4)
- Cases and resources
- Review of the general permit and case studies
- Unknown source/ Kristin's presentation
- Explaining resources available
- I found the case studies to be incredibly helpful. It's incredibly useful to see what other municipalities do
- When facing similar issues, I also enjoyed the inspector talk.
- Going into depth the requirements of the different provisions in the MRP
- Examples of inspections & how corrective actions were enforced & implemented
- Getting info about the resources available
- Regional Water Board presentation, case study photos, MRP overview, resources available
- All the examples
- Case studies' photos
- Case studies & MRP overview
- Water Board presentations
- Meeting other inspectors
- Real work examples
- Information on citations & case studies

- The case studies were very interesting
- Going into regulatory requirements
- When illicit discharge detected/ reported
- While I love hearing about case studies, Kristin's presentation about the MRP was very helpful, it brought up good questions after the presentation, but it is also good for our teams to bring back to the office.
- The Regional Water Board presentation because it was the first I've heard the material in presentation format. Also, the CASQA Handbook overview & fact sheet information.

10. What would have made this training more useful?

- More interpretation of legal language
- Talk about SOP's
- Focus on real-world examples
- More interaction
- Examples of reports
- More case discussions
- EPA takes on some subjects
- Resource sheet but great information in the presentations
- More challenging case studies, Water Board to address referrals roundtable to discuss more
- Finish before lunch (tired after eating)
- Not an industrial talk
- Discussion of how to improve mobile food truck permitting requirements
- More detailed Regional Water Board inspection case study/walkthrough
- Comparison of enforcement/inspector/programs structures and tracking/reporting SOPs
- A mic/sound check prior to presentation would really help with audio quality/the ability to clearly hear the presenters
- Having the room warmer would make it more comfortable and easier to focus on content

11. What topics would you recommend for a future training?

- Various clean up methodology
- Metal storage outside, uncovered storage
- Case enforcement and fine structure
- Tougher issues, more audience engagement to show experience/challenges
- Unhoused RV's & trailers including resources
- When to bill responsible parties for city time/clean up
- Difficult Responsible Parties
- Permit development processes
- I would love to hear more about the new MRP provisions and how they apply to municipalities, especially to the work that the inspectors do
- Perhaps a fire or conditionally exempt discharge presentation

- Current challenges from different agencies, punch list for onsite inspection

12. General Comments?

- Thanks (6)
- Great Workshop, thank you (3)
- The microphone/audio was very poor, making it difficult to understand the speaker
- Would it be more helpful to pass the 2nd microphone around for questions or make sure the speaker
  repeats (2)
- Very timely, organized w/great speakers
- Keep the lunch, perhaps add noncaffeinated drinks and time to connect w/other agencies
- I like the format - Kristin & case studies
- Don't print PowerPoint slides, waste of paper
- Job titles on the agenda could be helpful
- Thank you having in person

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-1

FY 2024-25 Watershed Watch Campaign

- FY 2024-25 Watershed Watch Campaign Summer/Fall 2024 Media Plan & Content
- FY 2024-25 Watershed Watch Campaign Winter/Spring 2025 Media Plan & Content
- FY 2024-25 Watershed Watch Campaign: Media Contractor Campaign Report – July 1, 2024 – June 30, 2025
- Watershed Watch Website Statistics FY 2024-25

FY 24-25 Watershed Watch Campaign
Summer/Fall Media Plan & Content

Summer/Fall Media Plan (July-September 2024)

The media plan for Summer/Fall 2024 will support several goals as stated in the SCVURPPP 2021 Watershed Education and Outreach Strategy (WE&O Strategy).

1. Build resident awareness of watershed and urban runoff pollution issues.
2. Inform audiences that indoor and outdoor daily activities impact our watershed.
3. Change behaviors that negatively impact the watershed.
4. Encourage behaviors that protect, preserve, and restore the watershed.
5. Deliver messages to students designed to encourage personal responsibility and actions that benefit the watershed.

Audience

There will be overlap of audiences, with all messaging relevant to all age groups, housing type and languages:

- Residents/ household decision makers aged 35 and over
- Homeowners & MFD residents
- Young adults 16-34
- Spanish speaking residents

Fall Media Buy Budget

The recommended budget of **($12,000)** is a subset of the year's total paid media budget **($58,030)**

Segmenting the media buy into two campaigns **(Aug-Sep 2024)** and **(January-May 2025) will** allow us to run some promotions before the election and holiday seasons, which are typically low-engagement—while reserving the bulk of the media budget for 2025.

Messages & Media Mix

Media messages below were selected for seasonality and to achieve the messaging goals for using less toxic pest control, using a commercial car wash, joining a litter cleanup, becoming a Green Gardener. Scripts/images are provided later in this document for review.

Overview of Messages & Media

The paid media plan will take advantage of the last of the typical dry season and Coastal Cleanup Month to deliver messages relevant to this time of year:

Message Framing	Paid Media Selections
1. Use Less-Toxic Pest Control The messaging focuses on indoor/outdoor pests such as ants, roaches, fleas. This message frame is less dependent on owning a home or having decision-making power for maintaining a property, and therefore relevant to all residents, not just SFDs. The ads would be targeted to increase traffic to the Less-Toxic Pest Control web page, which offering resources to find a store and/preferred product or alternative practice to use.	● Digital Banner Ads ● Radio Spot :30 or less in English & Spanish ● Facebook/IG
2. Car Washing & Car Wash Events Car Wash Event Promotion Car Wash Promoted Reel (after event)	● Radio Spot :30 or less in English & Spanish ● Facebook Event Post ● Facebook & Instagram Posts ● Boosted Reel (filmed at event)
3. Coastal Cleanup/Litter Volunteering Pre-event promotion-existing Join a Cleanup video. If approved, film a new reel	● Radio Spot :30 or less in English & Spanish ● Facebook/IG Post ● Boosted Reel
4. Partners Promotions: ● Happy Hollow ● Car Wash Partners	● Facebook/IG
5. Become a Green Gardener Timed to promote the Fall training class.	● Facebook/IG

Media Plan — Paid Media

Radio

Media Outlet	Creative Desc.	No. of Spots	Bonus	Total	Run Dates (weeks)	Gross Impressions	Total Cost	CPM
KFUX	Car Wash PSA	32	TBD	32	8/26-8/31	129,600	$1,250	$9.64
	Car Wash #1 Event Promotion	30	TBD	30	8/14 - 8/21	129,600	$1,250	$9.64
	Car Wash #2 Event Promotion	30	TBD	30	8/21 - 8/27	129,600	$1,250	$9.64
	Less-Toxic Pest Control- Indoor Pests	32	TBD	32	8/26-8/31	103,680	$1,000	$9.64
	Coastal Cleanup	30	TBD	30	**8/05-8/11**	129,600	**$1,250**	$9.64
English Radio Total		**154**		**154**		**622,080**	**$6,000**	$9.64

Media Outlet	Creative Desc.	No. of Spots	Bonus	Total	Run Dates (weeks)	Gross Impressions	Total Cost	CPM
Spanish Media								
KSOL	Car Wash Event Promotion	20	TBD			80,000	$2,000	$25.00
	Less-Toxic Pest Control-Indoor	20	TBD			50,000	$1,250	$25.00
Spanish Radio Total		**40**				**130,000**	**$3,250**	**$25**

Radio Totals

Media Outlet	Total Spots	Impressions	Cost	CPM
English Radio Total	154	622,080	$6,000	$9.64
Spanish Radio Total	40	130,000	$3,250	$25
All Radio Total	**194**	**752,080**	**$9250**	**$12**

Digital Ads

Media Outlet	Creative	Run Dates	Est. Impressions	Total Cost	CPM
Hearst Media (SF Chronicle / SF GATE):	Programmatic Display Ads: Indoor/Outdoor Pest Control	**8/26-8/31**	**83,333**	**$1,100**	**$12**

Facebook/IG: Promoted Posts/Ads

Media Outlet	Creative Desc.	Run Dates	Key Performance Metrics			Total Cost	CPM
			Est. Impressions	Est. Reach	Est. Engagements		
Facebook/IG	Partner: Happy Hollow Zoo	8/7-8/15	10,000-15,000	10,000 - 15,000	TBD	$50	$3.33-$5.00
Facebook/IG	Partners: Car Wash Partners Static Images	8/6-8/14	10,000-15,000	10,000-15,000	TBD	$50	$3.33-$5.00
	Car Wash Event	8/14-8/27	67,688-118,888	21,000-100,000	TBD	$500	$4.2-$7.38
	Become a GG-Static image	8/29 -9-2	10,000-13,000	10,000-13,000	TBD	$50	$3.33-$5.00
Facebook/IG	Less-Toxic Pest Control-Animated Ad	8/26-8/31	40,000- 100,000	40,000-61,500	TBD	$500	$3.85-$5.00
Total			**137,688 - 261,888**	**91,000-204,500**	**TBD**	**$1,150**	**$4-$8**

Instagram/FB Reels

Media Outlet	Creative Desc.	Run Dates	Key Performance Metrics			Total Cost	CPM
			Est. Impressions	Est. Reach	Est. Engagements		
Instagram	Car Wash Reel	9/1-9/5	82,500- 93250	82,500- 93,250	TBD	$250	$2.68- $3.03
	Join a Litter Cleanup (Reel)	1st two weeks of Sep	82,500- 93250	82,500- 93,250	TBD	$250	$2.68-$3.03
Total			**165,000 -186,500**	**165,000 -186,500**	**TBD**	**$500**	$2.68-$3.03

Fall Campaign Media Estimate Totals

Channel	Gross Impressions	Reach	Views	Clicks	Total Cost	CPM
Radio	752,080	752,080	N/A	N/A	$9,250	$12
Programmatic Display	83,333	TBD	N/A	TBD	$1,100	$12
Facebook/IG Posts	137,688 - 261,888	91,000- 204,500	TBD	TBD	$1,150	$4-$8
Instagram/FB Reels/Video	165,000- 186,500	165,000- 186,500	TBD	TBD	$500	$.68-$3.03
Grand Totals	**1,138,101- 1,283,801**	**1,1008,080- 1,143,080**	**TBD**	**TBD**	**$12,000**	

Content Review: Paid Media

1. Less Toxic Pest Control

Digital Banner Ad Artwork

The digital ads were approved last spring. The ads run in multiple sizes. One size is pasted here for your convenience:

:30 Radio Spot

Are uninvited guests like ants, fleas, mosquitos and flies making themselves at home in and around YOUR home? If you have pest problems, you don't have to use toxic sprays. MyWatershedWatch.org has resources for less-toxic pest control products, and tips for going pesticide-free. Create a healthier home AND prevent pollution of our creeks and the Bay! Learn how at MyWatershedWatch.org!

Facebook IG/Post

Uses animation from above, with the following post copy:

Are uninvited guests like ants, fleas and flies making themselves at home in and around YOUR home? If you have pest problems, you don't have to use toxic sprays to keep pests away. Learn more at https://mywatershedwatch.org/pests/

2. Car Wash Event Promotion

:30 Radio Spot*

Watershed Watch and Classic Car Wash and are teaming up to offer 50% off all car wash services! Get a half-price car wash from 7 to 9 am on Wednesday, August 21 at Delta Queen Classic Car Wash in Campbell, AND Tuesday, August 27 at Classic Car Wash in San Jose. Using a commercial car wash keeps pollution off our streets and out of our creeks and the Bay. Learn more at MyWatershedWatch.org

Live announcement guideline:

- Aug 21: Head over to Delta Queen Classic Car Wash in Campbell now for 50% off all car wash services! Today only from 7-9 am. It's that car wash that looks like a river boat! Learn more about the Clean Cars, Clean Creeks campaign at MyWatershedWatch.org!
- Aug 27: This morning only: 50% off on all car washes from 7-9 am at Classic Car Wash on Almaden Expressway in San Jose! They recycle and treat the wash water, which means you get a clean car, and Santa Clara Valley gets cleaner creeks! Learn more about the Clean Cars, Clean Creeks campaign at MyWatershedWatch.org!

* *Will be translated into Spanish by Univision*

Car Wash Promoted Facebook Event & Post

50% Car Wash Event – Clean Cars, Clean Creeks

Watershed Watch and Classic Car Wash are teaming up to offer 50% off all car wash services! Get a half-price car wash from 7 to 9 am on Wednesday, August 21 at Delta Queen Classic Car Wash at 981 E Hamilton in Campbell, AND Tuesday, August 27 at Classic Car Wash at 5005 Almaden Expressway in San Jose. Using a commercial car wash keeps pollution off our streets and out of our creeks and the Bay. Learn more at https://mywatershedwatch.org/events/

Car Wash Reel Video

This vertical format video will be filmed at the first event and will be posted and boosted after the event to keep the car washing message relevant for a bit longer in the remaining dry season. It will also give an incentive to like/follow our channels and request a discount card for future use —a way to stay informed of future 50% off discount events.

3. Coastal Cleanup/Litter/Volunteering

:30 Radio Spot

Concerned about the environment? Taking action is one of the best ways to boost your mood. Joining a local litter cleanup is a great way to make a difference, in just a few hours! September is California Coastal Cleanup month, and cleanups are happening throughout the Santa Clara Valley. Bring friends or meet new ones! Visit MyWatershedWatch.org to find a cleanup near you. That's MyWatershedWatch.org!

Boosted FB/IG Video

This was approved last spring, posted here for your convenience:

Version 1:
Concerned about the environment? Taking action is one of the best ways to boost your mood! Joining a local litter cleanup is a great way to make a difference, in just a few hours! September is Coastal Cleanup month, and cleanups are happening throughout the Santa Clara Valley. Visit our partner, Creek Connections Action Group, to find an event near you. https://cleanacreek.org/upcoming-events/

4. Partner Promotions:

Post at least once per year about each discount partner.
Nonprofit partner shares are part of the organic content, unless otherwise indicated.

Happy Hollow

Watershed Watch + Happy Hollow Zoo = Happy Watersheds and You! Download our discount card for $3 off admission to Happy Hollow Zoo. Have fun and learn more about how conservation supports wildlife!

Images TBD week of 7/29.

Car Wash Partners

Special thank you to our car wash discount partners!! Not only will these car washes get the grime off your ride, but they'll also keep all that dirt and pollution off the streets—and out of storm drains, creeks and the Bay. That's because car washes send the dirty water to the wastewater treatment plant. Get your discount card at https://mywatershedwatch.org/discount-card/

Tag each business featured.

Images TBD week of 8/5

5. Become a Green Gardener

Landscape professionals, grow your business! Enroll now for the Santa Clara Valley Green Gardener Training starting (DATE TBD). Classes will be held in-person.
Learn:

🐜Pest management without toxic pesticides

🌱 Soil management

💦Proper irrigation techniques

Register now, limited space is available: https://fuhsdadultschool.asapconnected.com/...

Update graphic:

Include this in organic post:

Content: Social Media Posts | July-October 2024

Two new, Original Posts per month. Additional posts of existing content, shares, paid promotions etc. as needed (these are additional to the 2 new posts). The full year topic calendar is included as Attachment A. This calendar may be updated as opportunities and trends arise.

www.facebook.com/mywatershedwatch

www.instagram.com/watershed_watch

www.twitter.com/watershed_watch

Watershed Awareness/Wild Watersheds
Tips, WW Programs-At least 1x month, and promoted on FB/IG.
Partners
Environmental Holidays-Seasonal Holidays related to WW, ie: Coastal Cleanup, National River Cleanup Day

INCLUDE HASHTAGS, especially on Instagram, but limit to 3-5 per post

Instagram: Update Linktree as needed with new web content links
Note: there are no clickable links in Instagram posts – content can refer to Linktree in bio or provide easily typed URL in post. The "insert links" below are for use with Facebook.

X:
X should be used for posts that highlight WW's work and benefit to the community; assume it might be read by other organizations, politicians, media, rather than "regular people". Focus on promoting events (and their results), specific areas/cities, goals met, or news/updates.

Partner shares as needed
Email myer@gigantic-idea.com and cc Vishakha at vatre@eoainc.com with your requests.

Post Date	Topic & Image	Facebook and Instagram Copy	Hashtags	X	Boost/ Ad
August					
8/7	**Partner: Happy Hollow Zoo** Image of hand holding discount card at Happy Hollow Zoo, or employees holding our discount card and/or WW partner sign.	Watershed Watch + Happy Hollow Zoo = Happy Watersheds and You. Download our discount card for $ off admission to the Happy Hollow Zoo. Have fun and learn more about how conservation supports wildlife!	#happyhollowzoo #watershedwatch		$50
8/5	**Watershed/Stormwater Awareness** Park image of golden hills, TBD	It's dry and hot, and the hills are golden at Pearson Arastradero Preserve. Are you dreaming of the cooling rains to come? We've still got a few months until the wet season starts, but everyday actions you take now can protect the rainwater that flows to creeks and the Bay through storm drains. Learn how at https://mywatershedwatch.org/pollution/	#pearsonarastradero #paloalto #watersheds #watershedwatch #santaclaravalley #santaclaraparks		No

Post Date	Topic & Image	Facebook and Instagram Copy	Hashtags	X	Boost/ Ad
8/7	**Partners: Car Washes** *Multi image post: images of discount card and/or staff at each car wash partner.*	Special thank you to our car wash discount partners!! Not only will these car washes get the grime off your ride, but they will also keep all that dirt and pollution off the streets—and out of storm drains, creeks and the Bay. That's because car washes send the dirty water to the wastewater treatment plant. Get your discount card at https://mywatershedwatch.org/discount-card/ *Tag each business featured.*	*Tag each business* #carwash # CleanCarsCleanCreeks #waterpollution		$50
8/14	**Car Wash Event** Clean Cars Clean Creeks Graphic Facebook Event Facebook Post Xpost IG Post	**50% Car Wash Event – Clean Cars, Clean Creeks** **50% Car Wash Event – Clean Cars, Clean Creeks** Watershed Watch and Classic Car Wash are teaming up to offer 50% off all car wash services! Get a half-price car wash from 7 to 9 am on Wednesday, August 21 at Delta Queen Classic Car Wash at 981 E Hamilton in Campbell, AND Tuesday, August 27 at Classic Car Wash at 5005 Almaden Expressway in San Jose. Using a commercial car wash keeps pollution off our streets and out of our creeks and the Bay. Learn more at https://mywatershedwatch.org/events/	# CleanCarsCleanCreeks #carwash #classiccarwash #watershedwatch	**Yes**	$500

Post Date	Topic & Image	Facebook and Instagram Copy	Hashtags	X	Boost/ Ad
8/26		Are uninvited guests like ants, fleas and flies and mosquitos making themselves at home in and around YOUR home? If you have pest problems, you don't have to use toxic sprays to keep pests away. Learn more at https://mywatershedwatch.org/pests/	#ToxicFreeHome #LessToxicLiving #WatershedWatch #ecofriendlypestcontrol #pestcontrol		$500
8/29	Use Updated GG Graphic	Landscape professionals, grow your business! Enroll now for the Santa Clara Valley Green Gardener Training starting [DATE]. Classes will be held in-person. Learn: 🐜Pest management without toxic pesticides 🌱 Soil management 💦Proper irrigation techniques Register now, limited space is available: [link here]	#santaclaravalley #landscaper #gardener #sustainability #watershedwatch #waterwisegarden	**Yes**	

Post Date	Topic & Image	Facebook and Instagram Copy	Hashtags	X	Boost/ Ad
September					
9/1	**Join a Cleanup** **Facebook Post** **IG/FB** Vertical Video X	Concerned about the environment? Taking action is one of the best ways to boost your mood! Joining a local litter cleanup is a great way to make a difference, in just a few hours! September is Coastal Cleanup month, and cleanups are happening throughout the Santa Clara Valley. Visit our partner, Creek Connections Action Group, to find an event near you. https://cleanacreek.org/upcoming-events/	#coastalcleanupday #coastalcleanup #stoplitter #pollution #CCD2024 #watershedwatch	**Yes**	$250
9/7	**Official CCD artwork**	September is Coastal Cleanup month! Joining a cleanup is a great way to make a difference and connect with your community. Cleanups are happening throughout Santa Clara Valley. Visit our partner, Creek Connections Action Group to find an event near you. https://cleanacreek.org/upcoming-events/	#coastalcleanupday #coastalcleanup #stoplitter #pollution #CCD2024 #watershedwatch #cleanacreek	Retweet CCC	No

Post Date	Topic & Image	Facebook and Instagram Copy	Hashtags	X	Boost/ Ad
October					
10/6	***Coastal Cleanup Results*** New Coastal Cleanup Reel or new photo from a September event.	It feels great to make a measurable difference! **X** pounds of trash was collected by **X** volunteers at **X** cleanup sites in #SantaClaraCounty for Coastal Cleanup Day! Thanks to all who came out to clean up **X** miles of our watershed! Visit cleanacreek.org to learn how you can volunteer for future cleanups.	#coastalcleanupday #coastalcleanup #stoplitter #pollution #CCD2024 #watershedwatch #cleanacreek	Yes	No
	Green Stormwater Public Infrastructure Project Image Need input on a local project to feature.	[*Catchy intro related to project*]. This [*Project Type*] installation in [*LOCATION*] will [insert *details of how project will capture rainwater and/or prevent pollution*]. For more information on how Santa Clara Valley is collecting and protecting our precious rainwater visit https://scvurppp.org/swrp/gsi/	#Stormwater #PollutionPrevention #RecycledWater #GreenInfrastructure #WatershedWatch #RainReadyCA	Yes	
	Residential **Green Stormwater** Features Get photo or video clip of actual resident with any of the features listed on the Rain Ready Home Improvements page.	Smart planning can beautify your property while collecting rainwater and preventing pollution! *[insert details on the featured project here.]* Lean how you can make similar improvements to your home. Visit https://mywatershedwatch.org/rainready/	#Stormwater #PollutionPrevention #RecycledWater #GreenInfrastructure #WatershedWatch #RainReadyCA		

FY 24-25 Watershed Watch Campaign
Winter/Spring 2025 Media Plan

Winter/Spring Media Plan (January-May 2025)

The media plan for Winter/Spring 2025 will support several goals as stated in the SCVURPPP 2021 Watershed Education and Outreach Strategy (WE&O Strategy).

1. Build resident awareness of watershed and urban runoff pollution issues.
2. Inform audiences that indoor and outdoor daily activities impact our watershed.
3. Change behaviors that negatively impact the watershed.
4. Encourage behaviors that protect, preserve, and restore the watershed.
5. Deliver messages to students designed to encourage personal responsibility and actions that benefit the watershed.

Audiences

There will be overlap of audiences, with all messaging relevant to all age groups, housing type and languages:

- Residents/ household decision makers aged 35 and over
- Homeowners & Multi-family Dwelling MFD residents
- Young adults 16-34
- Spanish speaking residents

Winter/Spring 2025 Media Buy Budget

The recommended budget of **($46,500)** is the remainder of the year's total paid media budget **($58,030)**

Media Plan Overview

The media messages, media mix, timing and budgets below were selected for seasonality and to achieve the messaging goals relevant to the season.

The media mix will include the following:

- English radio (KBAY/ KEZR)
- Spanish radio (KSOL)
- Facebook/Instagram
- YouTube
- Digital Ads/articles (placements on various websites using Hearst Media)
- Over-the-Top & Connected TV Advertising (OTT & CTV)

Last year's spring campaign results for a spend of $41,711: Impression numbers far exceeded expectations, reaching **4,750,500** compared to the projected **3,061,366**, representing a **55.16%** exceedance. Similarly, video views totaled **563,386**, surpassing the estimated **211,500** by **166.37%.** Click-through rates also outperformed the 1,200 minimum projection, with a final tally of **15,257** clicks.

Based on our projections, the Winter/Spring 2025 plan will deliver between **8,525,419** and **9,414,431** impressions. We anticipate a minimum of **781,431** video views with a total spend of **$46,450.**

This would represent a 79.4% to 98.1% increase in impressions compared to the previous year and 38.7% increase in video views.

Definitions:

- Reach refers to unique persons to whom the ad was delivered.
- Impressions refers to the Reach x Frequency of messages appearing in feeds (some people may be delivered the ad more than once).
- View is the number of times a piece of content, usually a video, has been watched by users.
- Engagements are the interactions with our posts. Engagements may include post likes/reactions, comments, post shares, page likes, link clicks and/or photo clicks.

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Overview of Messages & Media

Message Framing	Paid Media Selections	Budget (GROSS)	Timing
Become a Green Gardener Timed to promote the Winter training class.	● Facebook/IG Ads ● Radio Spot :30 or less in Spanish	$2,000	January
Storm Drain Awareness Boosted Reel	● Facebook/IG Boosted Reel ● YouTube Shorts	$2,000	January
Youth Campaign Series of 4 short form vertical videos, for 16-34 age group.	● Instagram & Facebook Reels Ads ● YouTube Shorts Ad	$20,000	Feb – Apr or May, TBD
Poster Challenge Submissions Promotion	● Facebook/IG Ads ● Prize for winning school/classroom and students	$800 media *$1,200 Classroom Prize Money*	Feb-mid March
Litter Trash Poster Download promo	● Boosted FB post	$500	March

Message Framing	Paid Media Selections	Budget (GROSS)	Timing
Use Less-Toxic Pest Control-Gardening Focus The ads would be targeted to increase traffic to the Healthy Yards and Gardens web page.	● Digital Display/Banner Ads English & Spanish ● Radio Spot :30 or less in English & Spanish ● Facebook/IG ads ● Boosted OWOW carousel post or Reel (using OWOW store video, highlighting fact sheets & online resources) ● Hearst Custom article	$12,000	April
Hire a Green Gardener	● Digital Banner Ads ● Radio ● Streaming (use original video update with new branding) ● Boosted Facebook Post with GG feature	$6,250	April
National Rivers Day/ Volunteering To drive traffic to cleanacreek.org	● Boosted Facebook Post	$250	April
Car Washing Car Wash Promoted Reel	● Facebook & Instagram Boosted Reel (filmed at Fall event) ● YouTube Shorts	$750	May
Fishing/Mercury Instagram Reel or YouTube Short Video to be filmed in Winter/Spring	● Facebook/IG Reels Ads ● YouTube Shorts	$750	May
Total Budget		**$46,500**	

Radio

Media Outlet	Creative Desc.	No. of Spots	Bonus	Total	Run Dates (weeks)	Gross Impressions	Total Cost	CPM
KBAY/ KEZR	Use Less-Toxic Pest Control- Gardening Focus	30	TBD	30	3/24 4/7	76,500	$1500	$19.61
	Hire a GG	30	TBD	30	3/31, 4/14	91,790	$2000	$19.61
English Radio Total		**60**		**60**			**$3,500**	$19.61
KSOL	Use Less-Toxic Pest Control- Gardening Focus	22	TBD	22	3/24	54,000	$1,500	$27.28
	Become a GG	22	TBD	22	1/3-1/10	54,000	$1,500	$27.28
Spanish Radio Total		**44**		**44**	TBD	**108,000**	**$3,000**	**$27.28**

Radio Totals

Media Outlet	Total Spots	Impressions	Cost	CPM
English Radio Total	60	168,290	$3,500	$19.61
Spanish Radio Total	44	108,000	$3,000	$27.28
All Radio Total	**104**	**276,290**	**$6,500**	**$23.53**

Digital Ads/Article

Media Outlet	Creative	Run Dates	Est. Impressions	Total Cost	CPM
Hearst Media	Programmatic Display Ads: Use Less-toxic Pest Control (ENGLISH)	4/10 – 4/20	120,030	$1,600	$13.33
	Programmatic Display Ads: Use Less-toxic Pest Control (SPANISH)	4/10 – 4/20	120,030	$1,600	$13.33
	Programmatic Display Ads: Hire a GG	4/25 -5/18	112,528	$1,500	$13.33
	Custom Story/ Article on SF Gate/SF Chroncile	3/31	Guaranteed 500,000	$3,850	$7.70
Total			**852,588**	**$8,550**	**$10.03**

Streaming Video

Media Outlet	Creative Desc.	Run Dates	Impressions	Views	Total Cost	CPM
OTT-JamLoop	Hire a GG	4/25 -5/9	55,147	55,147	$2,000	$36.27
YouTube Shorts	Storm Drain Awareness	1/16 – 2/16	212,416	76,900	$1,000	$4.73
	Youth Campaign Video 1-Storm Drain	Approx 2-3 weeks February	475,687	153,846	$2,500	$5.26
	Youth Campaign Video 2-Litter	Approx 2 -3 weeks March	475,687	153,846	$2,500	$5.26
	Youth Campaign Video 3-Pet Waste	Approx 2-3 weeks April	475,687	153,846	$2,500	$5.26
	Youth Campaign Video 4-Volunteering	Approx 2-3 weeks May	475,687	153,846	$2,500	$5.26
	Fishing/Mercury	5/2-5/9	26,467	17,000	$250	$9.45
	Car Washing	5/23- 5/30	26,467	17,000	$250	$9.45
Total			**2,223,245**	**781,431**	**$13,500**	**$6.07**

Facebook/IG: Promoted Posts/Ads

Media Outlet	Creative Desc.	Run Dates	Key Performance Metrics			Total Cost	CPM
			Est. Impressions	Est. Reach	Est. Engagements		
Facebook/ IG	Become a GG	1/6-1/19	100,000-150,000	100,000 - 150,000	TBD	$500	$3.33-$5.00
Facebook /IG	Less-Toxic Pest Control- Animated Ad	3/20 - 4/20	190,000-246,000	190,000-246,000	TBD	$1,000	$3.85-$5.00
	Litter	3/15	100,000-150,000	100,000 - 150,000	TBD	$500	$3.33-$5.00
	Boosted OWOW	4/17	178,000-230,000	178,000-230,000	TBD	$950	$3.85-$5.00
	Boosted Facebook Post with GG feature	5/1	135,000 -175,000	135,000 - 175,000	TBD	$750	$3.85-$5.00
Facebook/ IG	National Rivers Day/ Volunteering	4/15	45,000 – 58,400	45,000 – 58,400	TBD	$250	$3.85-$5.00
Total			748,000 - 1,009,400.00	748,000 - 1,009,400.00	**TBD**	**$3,950**	**$3.91-$5.28**

Instagram/FB Reels

Media Outlet	Creative Desc.	Run Dates	Key Performance Metrics			Total Cost	CPM
			Est. Impressions	Est. Reach	Est. Engagements		
Instagram Reel	**Storm Drain Awareness Boosted Reel**	1/1 – 1/12	330,000-373,000	330,000-373,000	TBD	$1000	$2.68- $3.03
	Car Washing	5/16-5/31	165,000 - 186,500	165,000 - 186,500	TBD	$500	$2.68-$3.03
	Fishing	5/2-5/09	165,000 - 186,500	165,000 - 186,500	TBD	$500	$2.68-$3.03
	Youth Campaign Video 1-Storm Drains	Approx 2-3 weeks February	742,574-839,552	742,574-839,552	TBD	$2,500	$2.98-$3.37
	Youth Campaign Video 2-Litter	Approx 2-3 weeks March	742,574-839,552	742,574-839,552	TBD	$2,500	$2.98-$3.37
	Youth Campaign Video 3-Pet Waste	Approx 2-3 weeks April	742,574-839.552	742,574-839,552	TBD	$2,500	$2.98-$3.37
	Youth Campaign Video 4-Volunteering	Approx 2-3 weeks May	742,574-839,552	742,574-839,552	TBD	$2,500	$2.98-$3.37
Total			**4,290,296 - 4,850,208**	**4,290,296 - 4,850,208**	**TBD**	**$12,000**	**$2.47-$2.80**

Earth Day Poster Challenge

Media Outlet	Creative Desc.	Run Dates	Key Performance Metrics			Total Cost	CPM
			Est. Impressions	Est. Reach	Est. Engagements		
Facebook/ IG	Contest Announcement	2/10-3/10	135,000 – 202,700	135,000 – 202,700	TBD	$800	$3.95-$5.93
	*Additional Classroom Prize Money	4/22	NA	NA	NA	$1,200	NA
Total				135,000 – 202,700	**TBD**	**$2,000**	**NA**

*Contestant Prize money ($1,2,00) is budgeted separately from this media budget. However, we suggest adding additional prize money to be awarded to the winning school, classroom, or teacher with the most entries in each division. Alternatively, it could fund a pizza party or classroom celebration, for example if a teacher enters multiple student entries, they will be entered to win a classroom prize, ie: $150 Amazon card for supplies, or gift certificate for a local pizzeria for a pizza party. There are many possibilities we can discuss.

Winter/Spring 2025 Campaign Media Estimate Totals

Channel	Gross Impressions	Reach	Views	Clicks	Total Cost	CPM	
Radio	276,290	276,290	NA	NA	$6,500	$23.53	
Hearst Media	852,588	852,588	NA	TBD	$8,550	$10.30	
Digital Streaming/ YouTube	2,223,245	TBD	781,431	TBD	$13,500	6.07	
Facebook/IG Posts	748,000 - 1,009,400	748,000 - 1,009,400	TBD	TBD	$3,950	$3.91- $5.28	
Instagram/FB Reels/Video	4,290,296 - 4,850,208	4,290,296 - 4,850,208	TBD	TBD	$12,000	$2.47- $2.80	
Earth Day Poster Challenge	135,000 – 202,700	135,000 – 202,700	NA	NA	$2,000	$3.95- $5.93	
Grand Totals	**8,525,419- 9,414,431**	**6,302,174 - 7,191,186**	**781,431**	**TBD**	**$46,500**	**$4.94- $5.45**	

Content Review: Paid Media

Less Toxic Pest Control

Digital Banner Ad Artwork

The digital ads were approved last year. The ads run in multiple sizes. One size is pasted here for your convenience:

:30 Radio Spot (text approved previously)

Are pests eating your plants? Weeds making you mad? If you have garden pest problems, you don't have to use toxic sprays to keep your yard looking great. MyWatershedWatch.org has resources for less-toxic pest control products and tips for going pesticide-free. Try something new this season! Create a healthier yard for you, your kids, and pets to play— AND prevent pollution of our creeks and the Bay! Visit MyWatershedWatch.org!

Facebook IG Ad Copy

Uses animation from above, with the following copy:

Are pests eating your plants? Weeds making you mad? You don't have to use toxic sprays to keep bugs away. Learn more at https://mywatershedwatch.org/pests/

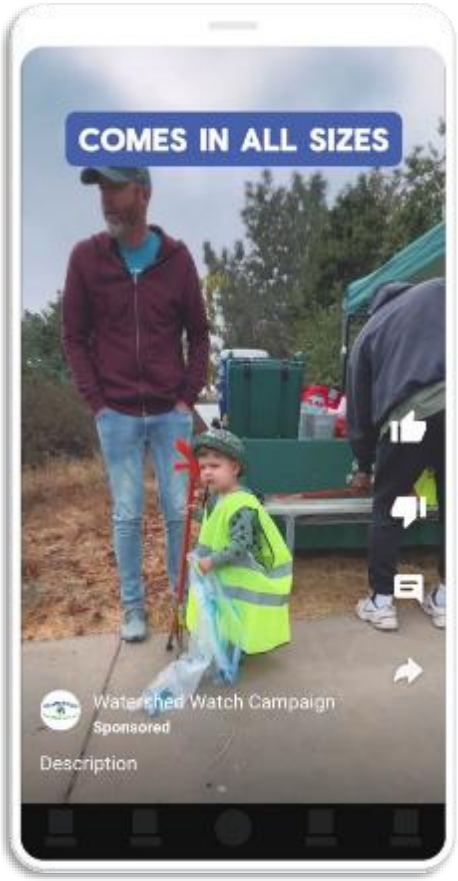
MEDIA SELECTIONS

YouTube Shorts

We will utilize skippable in-stream ads, seamlessly integrated within YouTube Shorts' massive audience (2 billion users monthly, 70 billion daily views). These authentic, creator-style videos resonated well with viewers, exceeding industry standards. We're building on this success by featuring storytelling and tips verticals.

Sample

https://youtube.com/shorts/rBX1BoCRoTs?si=K4b98d1lABhL5S2E



Over-the-Top & Connected TV Advertising (OTT & CTV), (Streaming Video)

Definitions

OTT-TV stands for “Over-the-top” and is digital on-demand programming watched through connected devices, streaming through apps.
CTV stands for “connected TV” and is any television set used to stream video over the internet.

OTT & CTV advertising runs ads on subscription-based streaming services that don’t need cable. Examples would be Roku, Sling Tv, and Hulu. We place our advertising through a direct service provider, Jamloop.

Streaming Video is used to reach people that don’t consume content on their phones and are primarily watching on a smart TV set. This is an effective way to target homeowners and get related messages, like IPM, directly to them, when they are at home.

There are many benefits of streaming vs. traditional linear broadcast TV. Streaming allows geotargeting so that the ads are shown to the specific cities or counties we are targeting, vs. a broad audience with traditional broadcasting. With streaming, the ads are shown on networks and shows where the audience we target are likely to be watching, as opposed to traditional broadcasts where the ad would be shown during a specific show and at the same time and day.

Notable networks include: TLC, Discovery Networks, HGTV, DIY Network, Weather Channel, Animal Planet, Travel Channel. Total media placements include over 300+ shows.

Meta

FACEBOOK / INSTAGRAM via Meta Business

Meta Business allows us to boost posts or deliver ads to your 1,923 Facebook and 553 Instagram followers. We can target friends of followers and audiences based on location, interests, parental status, age, and keywords.

Most Facebook users are millennials (ages 27-42) and 56% are male. We will therefore promote Car Wash and HHW messages geared towards this demographic.

Instagram has a younger demographic than Facebook, with the majority of users under 34. This allows us to reach the "15-34 Youth" audience.

Reels offer a unique opportunity to connect with a younger demographic on Instagram. Here's why:

- **Wide Reach:** Reels are a highly popular feature, ensuring your ads can reach a vast audience and boost visibility.
- **High Engagement:** Reels often generate more user interaction than other ad formats. Likes, comments, and shares can significantly increase brand exposure.
- **Seamless Integration:** Reels fit seamlessly into users' browsing habits, making your ads more likely to be seen and remembered.
- **Short-Form Video Popularity:** The Reels tab is a go-to destination for entertaining content, aligning with the preferences of younger audiences.
- **Discoverability:** Reels can easily appear in the Explore section, which is visited by over 200 million users, providing a great opportunity for brand discovery

Broadcast Radio

Radio is a powerful medium for reaching a broad audience in the South Bay, especially audiences aged 35+ and Spanish speakers 18+. It is a passive companion medium that accompanies people while they go about their lives, and it is community-oriented and active at the grassroots level.

Radio stations offer a variety of promotional opportunities, such as public service announcements, interviews, and sponsored segments. They also have opt-in subscribers for email newsletters, online and mobile app versions of their stations, and strong social media presence.

Here are some of the benefits of radio promotion for the South Bay:
Broad reach: Radio has a broad reach, so we can reach a large number of people with our messages.
Passive companion medium: Radio is a passive medium, so people can listen to it while they are doing other things, such as driving, working, or cooking. This makes it a great way to reach people who may not be actively seeking out information about our campaign.
Community-oriented: Radio is community-oriented and active at the grassroots level. This means that radio stations are likely to be supportive of your campaign and may be willing to promote it for free or at a reduced cost (added value).
We determine which radio stations are most likely to reach our desired audiences in a cost-efficient way.

KEZR "Mix" 106 ranks consistently high with our 35+ audience with an average age of 42. They are also one of the top-rated stations with Spanish-speaking adults 18+ in Santa Clara County. KEZR/KBAY was recently ranked as top stations in San Jose.

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Ranker

SAN JOSE (Metro Survey Area)
JUL24 / JUN24 / MAY24
Station Rankings Based on: User Selected

	Adults 25-54 M-Su 6a-12m			
	Station	Weekly Cume Persons	Average Rating	Average Persons*
1	**KEZR-FM**	**103,300**	**0.2**	**1,500**
2t	**KBAY-FM**	**50,400**	**0.1**	**1,100**
2t	KUFX-FM	88,600	0.1	1,100
4	KBRG-FM	66,900	0.1	900
5	KVVF-FM	39,600	0.1	500
6	KXZM-FM	22,800	0.0	400
7	KJLV-FM	20,600	0.0	300
8	KZSF-AM	7,800	0.0	200

Spanish Language Media

Univision Radio Bay Area is a commercial radio station that serves the San Francisco Bay Area. It includes two stations: KBRG Amor 100.3 FM and KSOL Estero Sol 98.9 / 99.1 FM. It offers a variety of programming options and is a great way to reach Spanish-speaking audiences in the San Francisco Bay Area.

KBRG is the top-rated Spanish language radio station in the South Bay. It features a Spanish adult contemporary format and ranks in the top 10 stations for homeowners 35+. We will promote the General Ad, Less-toxic Pest Control and Car Wash, on this station.

KSOL is the #2 radio station in the market for Spanish listeners 18+. It features a Mexican Regional format and has a 68% male audience. We will promote the Car Wash message on this station.

Digital Ads/News Outlets

Hearst Bay Area is a full-service integrated marketing and digital media buying service that encompasses the San Francisco Chronicle, SFGATE, 46Mile, and The Story Studio. We will be using Heart Bay Area to launch the new website through programmatic banner ads which uses real-time bidding to place ads on brand-safe websites and apps based on targeting parameters. We choose the audiences we want to reach, and Hearst finds the best places to show the ads.

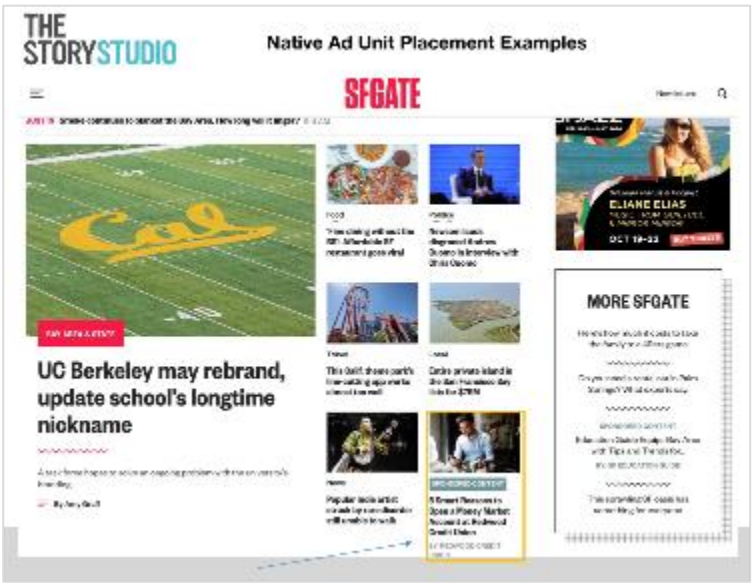
Hearst programmatic banner ads can be targeted in a variety of ways, including:

- Geographic targeting: Show your ads to people in specific zip codes, such as the SCVURPPP zip codes.
- Search targeting: Show your ads to people who have searched for keywords related to your campaign.
- Contextual targeting: Show your ads to people who are viewing content related to your campaign.
- Demographic targeting: Show your ads to people of specific ages, homeowners, etc.

This means that we can reach our target audience with relevant ads, without wasting money on ads that won't be seen by the right people.

Examples of websites and apps where the ads may appear:

- CNN.com
- USA Today
- MercuryNews.com
- CBS Sports mobile app
- msn.com
- Business Insider



We will also be using their Story Studio to create a custom article. Story Studio is a platform that helps brands create impactful content that matters. It houses all content in one environment, creating an immersive brand experience that resonates with the target audience. The article will be styled in the look and feel of the editorial platform. It will include visual storytelling elements such as slideshows, videos, images, and infographics. Related content will be included to deepen the brand relationship, and interactive elements such as social feeds, live polls, RSS feeds, and booking modules will be used to engage the reader.

In short, the custom article will be a well-written, informative, and visually appealing piece of content that will keep readers engaged and help them learn more about Watershed Watch.

FY 24-25 Watershed Watch Campaign
Media Contractor Campaign Report
July 1, 2024 through June 30, 2025

Campaign Summary

The contractor, Gigantic Idea Studio, Inc. (contractor), worked with SCVURPPP to implement the FY 24-25 Watershed Watch Campaign (Campaign) Work Plan, including creative production, events, partnership relations, negotiating and executing the media plan, social media, and website updates. The contractor attended virtual meetings and provided consulting, reporting, and other support as needed.

The Media Plan was divided into Summer-Fall 2024 and Winter-Spring 2025 media plans to avoid the election season. This report includes the results from the Summer/Fall advertising and a progress report on all other tasks.

The Media Plan supports several goals as stated in the SCVURPPP 2021 Watershed Education and Outreach Strategy (WE&O Strategy).

1. Build resident awareness of watershed and urban runoff pollution issues.
2. Inform audiences that indoor and outdoor daily activities impact our watershed.
3. Change behaviors that negatively impact the watershed.
4. Encourage behaviors that protect, preserve, and restore the watershed.
5. Deliver messages to students designed to encourage personal responsibility and actions that benefit the watershed.

Audience

There will be overlap of audiences, with all messaging relevant to all age groups, housing type, and languages:

- Residents/household decision makers aged 35 and over
- Homeowners & Multi-family dwelling residents
- Young adults 16-34
- Spanish speaking residents

Messages & Media Mix

Media messages were selected for seasonality and to achieve the messaging goals and included less-toxic pest control, using a commercial car wash, safe fish consumption, preventing litter, and joining a litter cleanup.

This report summarizes the completion of tasks, activities, and effectiveness of the campaign.

Summary of Tasks

Task 1: Website

The contractor managed the website as follows:

- Updated content as needed to align with media promotions
- Prepared monthly website statistic reports
- Updated plugins and software
- Responded to as-needed requests for posting

Website Statistics[1]

A comparison of FY 23-24 and FY 24-25 website statistics is summarized in the table below:

Item	FY 23-24	FY 24-25	Percent Change
Total Visits	86,556	108,988	+25.91% increase
Unique Visitors	46,486	90,098	+93.81% increase
California Visits	36,380	53,039	+43.04% increase
Total Page Views	93,222	168,488	+80.73% increase
Average Daily Page Views	255	462	+81.17% increase
Home Page Visitors from CA	12,610	40,764	+223.26% increase
Total downloads	1,950	1,429	-23.48% decrease
Discount Card Web Page Visitors from CA	417	936	+124.46%
Total events (page views, downloads, outbound referrals/links clicked, etc.)	237,591	442,816	+86.37% increase

Of the total 108,988 visits, **53,039 (48.66%)** were from California. Shown in top 10 ranking order below:

[1] Definitions
User: A visitor who has initiated a session on your website
Pageviews: Total number of times a page is viewed
Average Session: The average amount of time spent per session on the website
Direct traffic: Website visits where the traffic source is unknown or the referral source is not properly tracked.
Paid search: The traffic that comes from your paid search ads. Traffic can come from ads running in search engines, such as Google, Bing, AOL or Ask.com.
Organic: The traffic that's come to your site through unpaid search results on search engines such as Google, Yahoo, or Bing.
Social: Tracks traffic that comes from social media.
Referral: Records site visits that come from websites that are not social media or search engines. If another website (such as an online newspaper) links to you and somebody clicks through to your site, this will be part of the referral channel.

California visitors came from:
1. San Jose (40.45% of CA visits)
2. San Francisco (8.89% of CA visits)
3. Los Ángeles (8.03% of CA visits)
4. Santa Clara (5.63% of CA visits)
5. Sacramento (3.01% of CA visits)
6. Sunnyvale (2.85% of CA visits)
7. San Diego (1.57% of CA visits)
8. Milpitas (1.18% of CA visits)
9. Mountain View (1.18% of CA visits)
10. Gilroy (0.9% of CA visits)

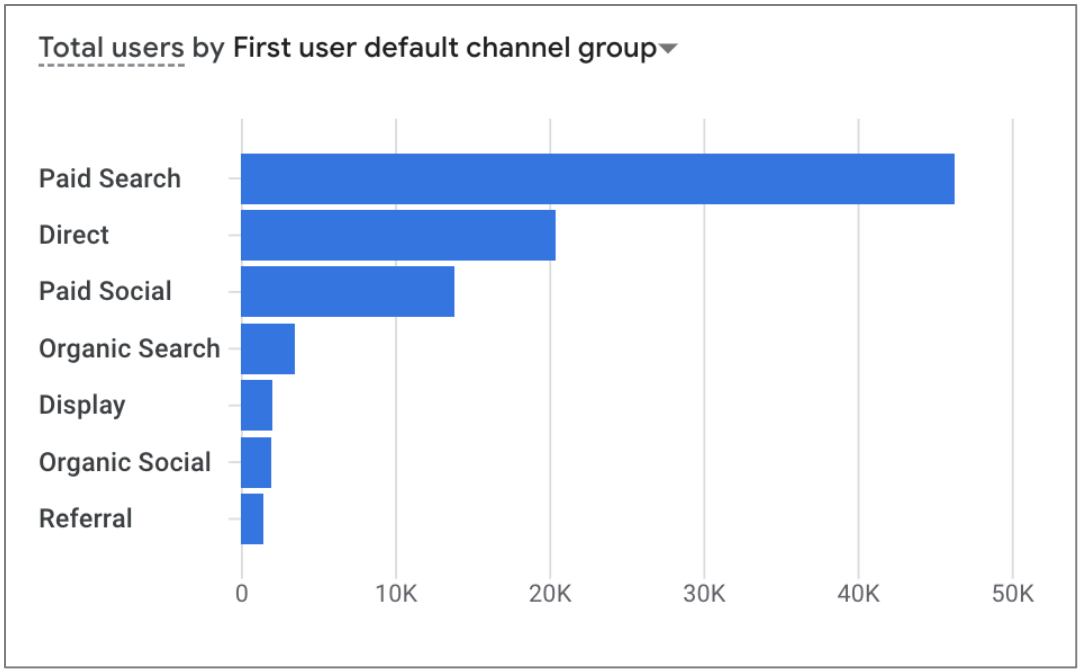
Other SCVURPPP areas:
12. Palo Alto (0.81% of CA visits)
13. Cupertino(0.80% of CA visits)
18. Los Gatos (0.76% of CA visits)
19. Campbell (0.49% of CA visits)
22.Los Altos (0.35% of CA visits)
23. Saratoga (0.34% of CA visits)

Visitors arrive at the site via three different ways:

1. **Direct traffic** – entering the URL directly into their browsers
2. **Referring sites** – external links to www.mywatershedwatch.org from other sites, online ads, mobile applications and emails; Google Analytics reports referrals from Social Media referrals as "Social" and from Google Ads as "Paid Search"
3. **Search engines** – key word searches resulting in hits to the site

Sources of traffic / visitors to site:
1. Paid Search (51.70%)
2. Direct Traffic (22.78%)
3. Paid Social (15.49%)
4. Organic Search (3.93%)
5. Display (2.31%)
6. Social (2.18%)
7. Referral (1.61%)

The sources of traffic/visitors are summarized in the table below:



Top search engines:

1. Google
2. Bing
3. Yahoo

Top 10 referring sites were:

1. Google
2. Instagram
3. Facebook
4. Hearst Bay Area
5. Amazon-ad system
6. Univision
7. Bay Area News Group
8. Bing
9. qrcodes.pro
10. lnktr.ee

Top 10 visited pages:

1. mywatershedwatch.org/ (Home page)
2. mywatershedwatch.org/pests
3. mywatershedwatch.org/volunteer/
4. mywatershedwatch.org/wp-content/uploads/2023/12/How-Trash-Gets-into-Creek-Poster-School_May2014-hi-1.pdf
5. mywatershedwatch.org /posterchallenge/
6. mywatershedwatch.org/solutions/
7. mywatershedwatch.org/fishing/
8. mywatershedwatch.org/find-a-green-gardener/

9. mywatershedwatch.org/garden/
10. mywatershedwatch.org/discount-card/

100% of the top 10 visited pages were English.

Top 10 Downloads:

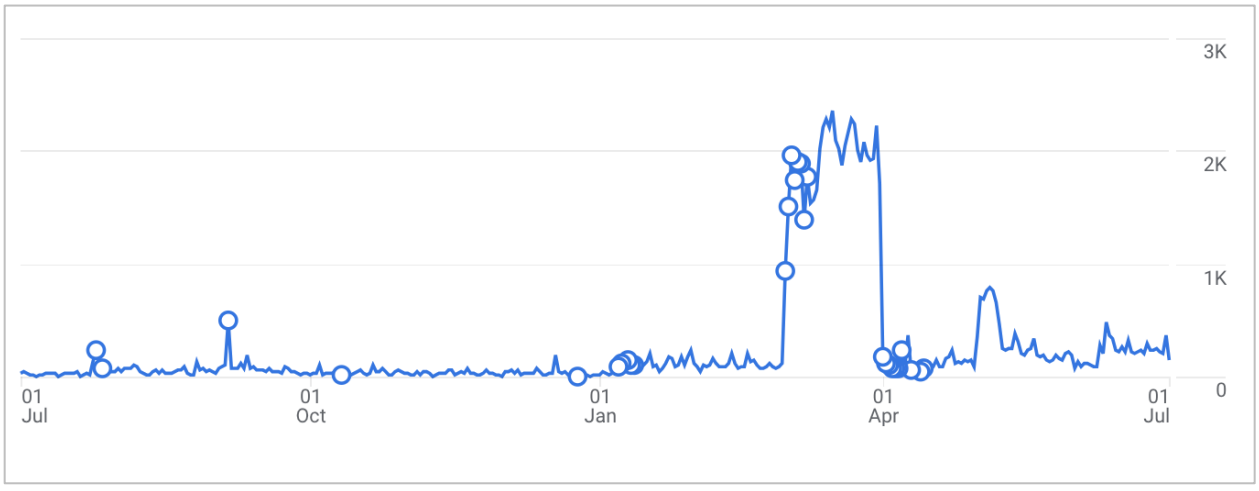
1. Discount Card
2. Watershed poster-brochure (You are the solution to Water Pollution)
3. How Trash Gets into Creeks poster
4. Preventing Storm Drain Pollution- Guidelines for Commercial and Light Industrial Facilities
5. Guide to Eating Shellfish from San Francisco Bay
6. Mobile Cleaner Fact Sheet
7. Best Management Practices for Restaurants
8. Spill Response Outdoor Fact Sheet
9. Draining Pool and Spas Brochure
10. Green Gardener List

Technology

Mobile activity accounted for 70.27% of all visits, desktop and tablet users were 29.73% of all visits.

Media Campaign Impacts on Web Activity

-



There was an increase in website activity in from February through May directly related to the Spring Campaign that included Hearst and Radio ads, San Jose Sharks Litter Campaign, Youth Campaign Video Series, and Earth Day Poster Challenge Promotions.

Task 2: Social Media

We implemented the social media content concepts approved by the WEO AHTG in Spring 2024:

- Discount Card Partner posts
- Event posts: Pumpkins in the Park, Car Wash, National Rivers Cleanup Day
- Tips content for car care, HHW disposal, less-toxic pest control, and litter.
- Green Infrastructure-featured permittee installation
- Storm drain awareness
- Youth Campaign video series
- Sharks campaign
- OWOW, Green Gardener Programs
- Fish Advisory/Health
- Car Wash Reel
- Relevant holidays/themes: World Ocean Day

We continue to share partner posts as requested.

All actual posts made to the social media accounts are publicly available:

www.facebook.com/mywatershedwatch
www.instagram.com/watershed_watch

www.twitter.com/watershed_watch

Facebook

@MyWatershedWatch www.facebook.com/mywatershedwatch.
The page currently has **1,929** followers, an increase of 3 followers from FY 23-24. The page also has a total of **1,873 likes** compared to **1,871 likes** in FY 23-24 (**-.1% decrease**). The Campaign made a total of 72 Facebook posts in FY 24-25.

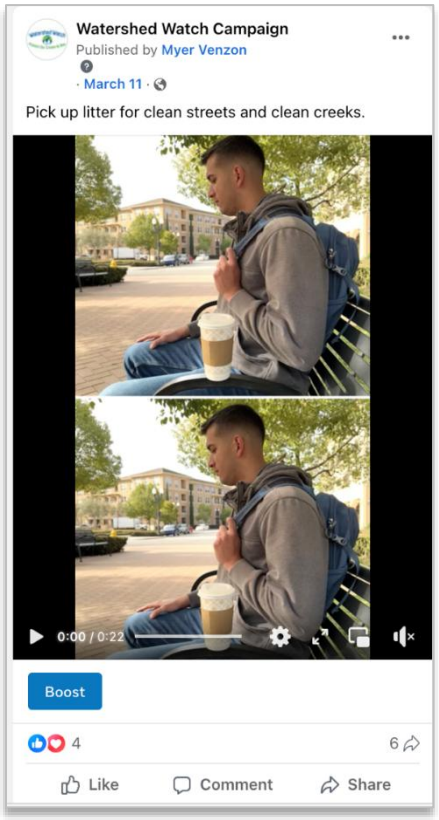
Fan / Page Demographics:

- Male 45.3% / Female 54.7%
- The largest group of followers is Female ages 35-44 (13.1% of followers)

The age breakdown is summarized in the table below:

Age Range	Percent Following @MyWatershedWatch
18-24	1%
25-34	25.2%
35-44	24.2%
45-54	18.5%
55-64	14.9%
65+	16.2%

Organic Post Reach/Engagement Highlights[2]
The implementation of new video content strategies has yielded positive results in increasing organic reach and engagement compared to previous years. A notable success was the Youth Campaign video targeting the Litter message (Litter's Journey). This organic post to Facebook Reels video achieved over 410 views, garnered 10 interactions, and demonstrated a strong engagement rate of 5.23%. This performance significantly exceeds the 2025 average Facebook organic post engagement rate of 0.15%, demonstrating strong audience interest and interaction.



Promoted Posts
The Campaign utilized paid promotions to boost post reach for key messages and stimulate engagement with Facebook and Instagram users. A total of 38 posts were promoted during the FY 24-25.

The average engagement rate for all promoted posts was 23.11%, significantly exceeding the 2025 average engagement rate for Facebook (1-5%) and Facebook ads (0.063%).
We can attribute this to the Youth campaign's new video content promotions, which are driving higher engagement compared to traditional static posts.

[2] Definitions
- Reach refers to unique persons to whom the ad was delivered.
- Impressions refers to the Reach x Frequency of messages appearing in feeds (some people may be delivered the ad more than once)
- Engagements are the interactions with our posts. Engagements may include post likes/reactions, comments, post shares, page likes, link clicks and/or photo clicks.
- Engagement Rate is the number of Engagements vs. Impressions, which provides a standardized measure to gauge response to a post.

Engagement/Reach with Promoted Posts

Facebook Boosted Post	Date	Cost	Reach & Impressions	Event Responses	Engagements	Engagement Rate
Happy Hollow Park & Zoo	8/2 – 8/7	$55.19	Reach 9,083 Impressions 13,103		354	3.89%
Car wash discount partners	8/15-8/20	$49.46	Reach 4,476 Impressions 6,964		336	7.5%
Car Wash Regular Post Robertsville	8/22 -8/26	$181.50	Reach 58,597 Impressions 59,440		31	Less than 1%
Car Wash Event Post promotions – Robertsville	8/22 -8/26	$27.50	Reach 1086 Impressions 2644	4	11	1.01%
Car Wash Event post promotions – Delta Queen	8/15 -8/20	$27.28	Reach 1032 Impressions 2262	9	14	1.36%
Car Wash - Classic Car Wash: Regular Post Delta Queen and Robertsville locations	8/15 -8/27	$259.53	Reach 7,784 Impressions 12,030		372	4.8%
Less-Toxic Pest Control-indoor Animated Ad	9/1 - 9/16	$495	Reach 18,577 Impressions 36,577		16,279 (Includes video plays)	87%
Green Gardener Training	1/7-1/19	$44.21	Reach 34,890 Impressions 100,252		748	2.14%

Facebook Boosted Post	Date	Cost	Reach & Impressions	Event Responses	Engagements	Engagement Rate
Earth Day poster Challenge	1/17-3/14	$376.57	Reach 29,981 Impressions 58,625		776	2.59%
Litter Poster	5/1-5/15	$384.94	Reach 32,003 Impressions 66,691		571	1.78%
OWOW	5/1-5/8	$949.92	Reach 99,733 Impressions 125,798		59,243	59.40%
Green Gardener Feature	5/1-5/18	$714.62	Reach 44,003 Impressions 108,455		1,099	2.50%
Less-Toxic Pest Control-outdoor Animated Ad	5/1-5/15	$997.47	Reach 39,522 Impressions 82,432		31,879	80.66%
National Rivers Day	5/1-5/15	$39.10	Reach 3,288 Impressions 7,788		43	1.31%
Total		**$4,402.29**	Reach **384,955** Impressions **683,061**	**13**	**111,756**	**29.10%**

Overall, in FY 24-25, the total paid reach was 384,955 compared to 545,974 during FY 23-24 (-29.49% decrease)

Paid impressions for FY 24-25 totaled 683,061, a (-41.11% decrease) compared to 1,159,919 in FY 23-24. This reduction is primarily due to a strategic shift in allocating the Facebook budget towards vertical video content, predominantly on Instagram. While this change led to fewer overall impressions and a narrower reach, it resulted in a significant increase in engagement metrics on the Instagram platform, which we will detail later in this report.

Despite the decrease in impressions, our content proved to be more effective, generating 111,756 engagements—a 19.41% increase from 93,590 in the previous fiscal year. We also saw 5,382 link clicks and a notable rise in our average engagement rate from 17.14% to 29.10%. To put this in perspective, the average engagement rate across all industries is 0.15%, with anything above 0.23% considered good. Our current engagement rate significantly surpasses these benchmarks, indicating highly effective content.

Instagram

@watershed_watch currently has 823 followers (net gain of 198 followers,+31% since June 30, 2024). Adults ages 35-44 make up 32.6% of the followers; women ages 35-44 are the largest single group of followers (18.2%). The Campaign made a total of 51 posts.

The new focus on developing fresh video content, specifically for Instagram's Youth Campaign Reels worked to increase followers, organic (unpaid) reach and engagements compared to previous years, as summarized in the table below.

Metric	FY 23-34	FY 24-25	Change
Reach (organic)	2,863	3,678	28.46% increase
Reach (paid)	195,521	371,038	89.76% increase
Impressions	796,990	1,109,351	255.15% increase
Engagements	11,563	297,859	2475.97% increase

We've achieved an outstanding Instagram engagement rate of 4.8%, significantly exceeding the 2025 industry benchmark of 0.45% - 0.55%. This remarkable success is primarily due to our focused efforts on incorporating vertical video, carousel images, and Reels. These content types have consistently driven higher engagement compared to static images, demonstrating the effectiveness of our evolving content strategy.

YouTube

@watershedwatchcampaign1785

The Watershed Watch YouTube channel has a collection of 49 videos that garnered 593,698 views in FY 24-25, compared to 234,798 views in FY 23-24 (+152.85%). The significant increase we're seeing can be directly attributed to our strategic focus on YouTube Shorts, with the Youth Campaign reels proving especially effective.

X (Formerly Twitter)

@watershed_watch currently has 554 followers, which is a net loss of 2 followers since July 1, 2024.

The Campaign tweeted 19 times during the fiscal year for 504 organic impressions that received 23 engagements (4.5% engagement rate)[3]. We cut back posting on this channel due to changes in services offered by Twitter changing to X and having lower engagement compared to our other social media channels.

Task 3: Creative Services

The Creative Services task includes several deliverables. Updates on progress are as follows:

Youth Campaign Creative

The contractor led the WEO AHTG through a process to select the messaging and media mix for this campaign, which included four vertical videos on litter prevention, storm drain awareness, picking up pet waste, and volunteering/joining a cleanup. We developed scripts, and filmed the following videos in a user-generated content style:

1. "Dirty Jobs" showcased an actual storm drain cleanout performed by staff at the City of Palo Alto.
2. Litter's Journey-shows two different timelines: what happens if you do or don't pick up your litter.
3. Do Your Doody-picking up pet waste to protect stormwater
4. Healing our Messy Relationship: A take on volunteering for a cleanup as a way to take relationships to the next level.

[3] Definitions:

- Reach refers to unique persons to whom the ad was delivered.
- Impressions refers to the Reach x Frequency of messages appearing in feeds (some people may be delivered the ad more than once)
- Engagements are the interactions with our posts. Engagements may include post likes/reactions, comments, post shares, page likes, link clicks and/or photo clicks.

Social Graphics and Videos

We created new social graphics and videos: images for all car wash discount partners with original onsite photography, Happy Hollow Zoo with onsite photography, a Household Hazardous Waste disposal Holiday graphic, Green Gardener, OWOW program.

We developed seven new original Reels videos: 1) a video filmed at the Car Wash event which was promoted in May/June 2025; 2) a storm drain awareness reel featuring new original footage of rain flowing into a storm drain, and rain falling on the creek connected to the storm drain; 3) A reel promoting OWOW stores; 4) a Fishing Advisory Reel, promoting the Guide to Eating Fish in the San Francisco Bay; 5) Volunteer video 'reality TV' to encourage joining a litter cleanup; 6) Split screen video showing good vs bad behavior 'Litter's Journey'; 7) video to raise awareness about the importance of picking up pet waste 'Do Da Doo';

An 8th Reel was filmed at National River Cleanup Day and will be edited in the next fiscal year.

Watershed Watch Event Booth

We updated the graphics for the Bean Bag game, printed the transfers, and affixed them to the bean bags.

Green Gardener

We provided an updated flyer, social graphics and feedback on a postcard design.

As-Needed Requests

We updated the logo on the backpacks and updated the You Are the Solution Brochures in English, Spanish, Vietnamese, and Draining Pools and Spas brochure with new logos and phone numbers.

We finalized the Tip Sheet template, setting up InDesign file that will streamline formatting for ADA compliance.

Earth Day Poster Challenge Social Media Graphics and Content

We updated the social graphics and content, flyer and the website for promotion beginning in January 2025. Our team also prepared the certificates, processed prize payments and sent them out to the winners.

Images were updated to fit new 4:5 aspect ratio for Instagram. Content was used to promote the Earth Day Poster Challenge on Facebook, Instagram and X (Twitter).

Hearst Bay Area Story Studio Article

Our team facilitated a promoted article that ran on all Hearst Bay Area media and partner outlets. The article featured a Santa Clara Valley Green Gardener and gave instructional tips for reducing pesticide use in local gardens.

Radio Ads

We developed Spanish scripts for the approved less-toxic pest control ads. We also developed "General Spots" and "Live Reads" scripts for the Car Wash Events. The scripts were approved in English and sent to KSOL for translation and recording.

Task 4: Partnerships

Car Wash Events

The contractor created new outreach materials and secured event partnership with Classic Car Wash and KSOL for two events, August 21 and 27, 2024, staffed by SCVURPPP and Co-permittee staff. Promotion of the event was included in the Summer/Fall Media Plan.

Partnership Development

The contractor reached out to nurseries and wildlife and recreational businesses and organizations and presented a short list of interested partners to Program staff for review. These included: Shoreline Aquatic Center, Redwood Watersports, Santa Clara Bird Alliance, SummerWinds Nursery and Los Gatos Birdwatchers. Of these, SummerWinds, Santa Clara Bird Alliance, and Los Gatos Birdwatchers were confirmed as partners. The partners included the content provided by Watershed Watch in their member communications (e.g., website, newsletters), and in return, Watershed Watch has listed them on their website and on social media.

Task 5. Reporting and Management

- The contractor prepared for and attended four WEO AHTG meetings.
- The contractor prepared a Mid-Year Report.
- The contractor prepared this Annual Report.

Task 6: Media Planning and Management

- The contractor prepared a detailed media plan for both the Summer/Fall and the Winter/Spring Media Campaigns.
- The contractor implemented both Media Campaigns, and a report of results is included in Task 7.

Task 7: Media Advertising — FY 24-25 Media Report

Budget

The Media Budget for the Fall and Spring Campaigns was $58,651.30.

Media Selections

Media selections for the fiscal year included:

Streaming Video

- Streaming Video is used to reach people that don't consume content on their phones and are primarily watching on a smart TV set. This is an effective way to target homeowners and get related messages, like IPM, directly to them, when they are at home.

Digital

- YouTube Digital video advertising, targeted by geography, key words (searched content), age and lifestyle demographics.
- Pandora Audio ads on the music and podcast streaming app.
- Programmatic Display Ads on Hearst Media network
- Sponsored Articles on Hearst Bay Area (SF Chronicle/ SF GATE) and Bay Area News Group (Mercury News)

Radio

To reach Santa Clara County residents outside their homes, we concentrated on radio stations popular with our target demographic: South Bay adult homeowners aged 35+. We created and aired radio commercials tailored to resonate with this audience, delivering our key messages effectively. Additionally, we included Spanish-language radio to connect with the Hispanic segment of our target market.

Media Services

Media services provided by the consultant include the following:

- Received and reviewed media proposals, ratings data and contracts; conferred/met with Streaming Video and Streaming Audio reps
- Developed final media plans including media mix options for English & Spanish.
- Negotiated final media buys and added value
- Developed and maintained a media calendar with planned media dates and corresponding creative messages
- Sent traffic orders and all creative to fulfill media buy according to the approved plan
- Received, audited, processed and paid invoices
- Managed fulfillment of added-value media / creative

Media Overview

Our media Key Performance Indicators included a mix of awareness/gross impressions and views, clicks and engagements when applicable. The media campaign for this year included the following audiences and media mixes for each audience.

Message Framing	Paid Media Selections	Timing
Become a Green Gardener Timed to promote the Winter training class.	● Facebook/IG Ads ● Radio Spot :30 or less in Spanish	Aug/Sep January
Storm Drain Awareness Boosted Reel	● Facebook/IG Boosted Reel ● YouTube Shorts	January
Youth Campaign Series of 4 short form vertical videos, for 16-34 age group.	● Instagram & Facebook Reels Ads ● YouTube Shorts Ad	Feb – May
Poster Challenge Submissions Promotion	● Facebook/IG Ads ● Prize for winning school/classroom and students	January-mid March
Litter Trash Poster Download promo	● Boosted FB post	March
Use Less-Toxic Pest Control- Ads targeted to increase traffic to the Healthy Yards and Gardens and Pest Control web pages.	● Digital Display/Banner Ads English & Spanish ● Radio Spot :30 or less in English & Spanish ● Facebook/IG ads ● Boosted OWOW carousel post or Reel (using OWOW store video, highlighting fact sheets & online resources) ● Hearst Custom article	Sept-Indoor Pests April-Garden Pests
Hire a Green Gardener	● Digital Banner Ads ● Radio ● Streaming (use original video update with new branding) ● Boosted Facebook Post with GG feature	August April
National Rivers Day/ Volunteering To drive traffic to cleanacreek.org	● Boosted Facebook Post	April
Car Washing Car Wash Events (August) Car Wash Promoted Reel (May)	● Facebook & Instagram Boosted Reel (filmed at Fall event) ● YouTube Shorts	August May
Fishing/Mercury Instagram Reel or YouTube Short Video filmed in Winter/Spring	● Facebook/IG Reels Ads ● YouTube Shorts	June

Individual Campaign Results

Radio

Watershed Watch utilized radio effectively for outreach, placing a total of 288 advertisements (192 paid and 96 free). The message variety aimed to educate listeners on various messages, with campaigns promoting the General, Less-toxic Pest Control Methods, Car Washing, and Hire a Green Gardener ads. The net radio advertising budget was $**13,337**. Media partners provided significant added value by offering a package of benefits and resources. This included **430,800** of free impressions overall, with a breakdown of **40,000** free impressions weekly from KFUX radio station alone, and an additional **17,700** free impressions each week from Spanish Radio.

Radio Result

Media Outlet	Creative Desc.	No. of Spots	Bonus	Total	Run Dates (weeks)	Gross Impressions	Total Cost	CPM
KBAY/ KEZR	• Use Less-Toxic Pest Control-Gardening Focus	36		36	3/24-4/7	83,000	$1,500	$19.61
	• Hire a GG	46		46	3/31-4/21	107,800	$2,000	$19.61
KFUX	• General Car Wash Ad • Less-Toxic Pest Control • Coastal Cleanup	192	20	212	8/19-9/16	765,800	$6000	$7.83
KSOL	• General Car Wash Ad • Coastal Cleanup	49		49	8/12-9/1	182,000	$3,250	$17.86
	• Become a Green Gardener	22		22	1/22-2/02	111,800	$1500	$13.42
	• Less-Toxic Pest Control	15		15	3/24-4/6	121,500	$1500	$12.35

Radio Totals

Media Outlet	Total Spots	Impressions	Cost	CPM
English Radio Total	294	956,600	$9,500	$9.93
Spanish Radio Total	86	415,300	$6,250	$15.05
All Radio Total	**380**	**1,371,900**	**$15,750**	**$11.48**

Digital Ads and Sponsored Stories

Media Outlet	Creative	Run Dates	Impressions	Clicks	Total Cost	CPM
Hearst Media	Programmatic Display Ads: Use Less-toxic Pest Control-Indoor Creative	8/26-9/04	86,080	126	$1,100	$12.78
	Programmatic Display Ads: Use Less-toxic Pest Control-outdoor	5/13-5/31	206,950	74	$2320	$11.21
	Programmatic Display Ads: Hire a GG	5/13-5/31	206,619	93	$2320	$11.23
	Custom Story/ Article on SF Gate	5/1-5/31	566,935	1,151	$3,850	$6.79
Total			**1,066,584**	**1,444**	**$9,590**	**$8.99**

Streaming & Digital Video

Media Outlet	Creative Desc.	Run Dates	Impressions	Views	Total Cost	CPM
OTT-JamLoop	Hire a GG	5/10-5/27	60,805	60,504	$1,980	$32.56
YouTube Shorts	Storm Drain Awareness	1/17 -2/16	248,666	53,485	$691.27	$2.78
	Youth Campaign Video 1-Storm Drain "Dirty Jobs"	2/14-2/28	580,345	146,796	$2,921.69	$5.03
	Youth Campaign Video 2-Litter's Journey	3/12-3/21	611,975	127,230	$2,921.81	$4.77
	Youth Campaign Video 3-Pet Waste	4/13 -4/30	597,194	126,062	$2,921.82	$4.89
	Youth Campaign Video 4-Volunteering	5/16 - 5/31	365,633	126,853	$2,921.26	$7.99
	Fishing/Mercury	5/29-6/5	39,869	11,325	$246.88	$6.19
	Car Washing	5/31-6/9	1,422	497	$21.23	$14.93
Total			**2,505,909**	**652,752**	**$14,625.96**	**$5.84**

Facebook/IG: Promoted Posts/Ads

Media Outlet	Creative Desc.	Run Dates	Key Performance Metrics			Total Cost	CPM
			Impressions	Reach	Engagements		
Facebook	Happy Hollow Park & Zoom	8/2-8/7/24	13,312	9,383	354	$55	$4.13
Facebook	Car Wash Discount Partners	8/15-8/20/24	7,178	4,785	336	$49.47	$6.89
Facebook	Car Wash Event	8/15-8/27/24	74,114	66,601	414	$468.53	$6.32
Facebook	Less-Toxic Pest Control-	9/1-9/16/24	36,704	18,106	16,279	$495.00	$13.49

Media Outlet	Creative Desc.	Run Dates	Key Performance Metrics			Total Cost	CPM
			Impressions	Reach	Engagements		
	indoor Animated Ad						
Facebook/ IG	Become a GG	1/7-1/19/25	118,657	39,647	939	$548.90	$4.63
Facebook/ IG	Contest Announce-ment	1/17-3/14	79,955	29,408	1062	$524.62	$6.56
Facebook /IG	Litter Poster	3/15/25	88,450	33,558	151	$494.97	$5.60
	Less-Toxic Pest Control-Animated Ad	5/1-5/15/25	82,626	40,164	31,911	$989.44	$11.97
	Boosted OWOW	4/17/25	125,800	102,415	59,243	$940.42	$7.48
	Boosted Facebook Post with GG feature	5/1-5/18/25	110,423	45,717	1157	$729.17	$6.60
Facebook/ IG	National Rivers Day/ Volunteering	5/1-5/15/25	48,993	12,788	307	$247.47	$5.05
Total			**786,212**	**402,572**	**112,153**	**$ 5542.99**	**$7.05**

Youth Campaign 16-34

Instagram/FB Reels

Media Outlet	Creative Desc.	Run Dates	Key Performance Metrics				Total Cost	CPM
			Impressions	Views	Engagements	Reach		
Instagram Reels	Storm Drain Awareness Boosted Reel	1/14-2/14	58,942	65,459	15,793	38,639	$847.24	$14.37
	Youth Campaign Video 1- Storm Drain "Dirty Jobs"	2/14 - 2/24	118,518	120,721	16,867	43,004	$1,812.10	$15.29
	Youth Campaign Video 2- Litter's Journey	3/12-3/31	128,170	141,497	39,009	82,658	$2,618.84	$20.43
	Youth Campaign Video 3- Pet Waste	4/14 - 4/30	339,880	399,940	112,350	132,969	$2,643.04	$7.78
	Youth Campaign Video 4- Volunteering	5/16-5/31	234,875	304,783	79,395	110,299	$2,618.85	$11.15
	Fishing	5/29-6/8	40,073	51,811	10,821	21,732	$643.78	$16.07
	Car Washing	5/31-6/9	66,802	78,486	22,640	36,085	$643.82	$9.64
Total			**987,260**	**1,162,697**	**296,875**	**465,386**	**$11,827.67**	**$94.73**

Earth Day Poster Challenge

Media Outlet	Creative Desc.	Run Dates	Total Cost		
			Prize Money	Postage	
Prize Money & Postage	*Additional Classroom Prize Money increased $50 for honorable mention	1/17-3/14	$1,250	$64.68	$1,314.68

FY 24-25 Campaign Media Total

Channel	Gross Impressions	Reach	Views	Clicks	Total Cost	CPM
Radio	1,371,900	1,371,900	NA	NA	$15,750	$11.48
Hearst Media	1,066,584	1,066,584	NA	1,444	$9,590	$8.99
Digital Streaming/ YouTube	2,505,909	NA	652,752	7,358	14,625.96	$5.84
Facebook/ IG Posts	**786,212**	402,572	NA	21,506	$5542.99	$7.05
Instagram/ FB Reels/ Video	987,260	465,386	1,162,697	7,358	$11,827.67	$11.98
Earth Day Poster Challenge	NA	NA	NA	NA	$1,314.68	NA
Grand Totals	**6,717,865**	**3,306,442**	**1,815,449**	**37,666**	**$58,651.30**	**$8.81**

FY 24-25 Media Performance

The campaign final spend on media was $58,651.30.

Our media plan projected campaign impressions to range from 8,500,000 to 9,400,000; however, we achieved a total of **6,717,865 impressions**. Similarly, our reach projections were between 6,300,000 and 7,100,000, while the actual reach attained was **3,306,442**. Conversely, we significantly exceeded our video view estimates, achieving **1,815,449 views** against an original projection of 781,000. It is important to note that our initial estimates for impressions were based on the performance of a limited number of previous Reels for Watershed Watch. Instagram Reels doesn't always provide precise performance estimates, so these figures should be viewed as a general baseline for a best-case scenario, rather than guaranteed outcomes. Additionally, average Cost Per Mille (CPM) rates charged by media outlets saw a significant increase in 2025, rising from approximately $4.29 to a range of $5-$15, depending on the industry. Our video performance fell within this new industry average.

Our original goal was focused on views, and we observed a notable increase in engagement, including higher comments and new followers. This led us to pivot our strategy to encourage this engagement.

We also saw significant improvement over last year's campaign results and website visits. Beyond awareness, our primary objective is to drive our audience to the website, where they can access more comprehensive information than a 30-second video or static post can provide.

Compared to the previous year, our digital strategy proved highly effective in FY24-25, leading to substantial gains across key performance indicators.

We saw:

- Impressions: A 40.13% increase, reaching 6,656,273 (up from 4,750,050 in FY23).
- Video Views: An impressive 222.23% increase, totaling 1,815,449 (compared to 563,386 previously).
- Click-Through Rate: A significant 146.87% increase, with clicks rising from 15,257 to 37,666.

These strong results directly contributed to a 25.91% increase in website traffic, indicating a broad improvement across all our website analytics.

The FY 24-25 campaigns demonstrated exceptional effectiveness, with all key performance indicators (KPIs) being significantly exceeded. This success was a direct result of our efforts to provide engaging and relevant content that audiences genuinely wanted to consume, marked by a departure from typical "government style" towards a more contemporary and "edgy" approach.

Our primary recommendation is to continue leveraging current trends to reach and engage younger audiences. We also suggest diversifying our promotional tactics for all messaging, moving beyond traditional content formats to explore new and impactful avenues.

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
June 2025	420	**Total Visits:** 7,080 **Visits from California:** 2,856	1. /(home page) 2. /fishing/ 3. /cars/ 4. /solutions/ 5. /discount-card/ 6. Earth-day-poster-challenge/ 7. /garden/ 8. Find-a-green-gardener/ 9. /for-businesses/ 10. /for-residents	English-10	Search Engines: Google(+mobile) Bing 57.68% Direct 35.87% Paid Search 3.07% Paid Social 1.49% Organic Search 1.16% Display .74% Organic Social Referral Sources: 1. Google 2. Facebook/Instagram 3. Hearst Display	Guide to eating Fish and Shellfish Discount Card Preventing Storm Drain Pollution Best Management Practices for Tallow Bins Preventing Storm Drain Pollution Tips for Recreation Vehicle (RV) Owners 117 downloads 1774 click links	Requests for Discount Card / Brochure: Discount card– 1	Media + events: Facebook/ Instagram/X(Twitter)-Weekly Posts **Instagram Reels:** • Fish Advisory • Car Wash **YouTube Shorts** • Fish Advisory • Car Wash

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
May 2025	375	**Total Visits:** 10,656 **Visits from California:** 5,322	1. /pests/ 2. /volunteer/ 3. /(home page) 4. /garden/ 5. /find-a-green-gardener/ 6. /litter/ 7. /fishing/ 8. /earth-day-poster-challenge/ 9. /solutions/ 10. /discount-card/	English-10	Search Engines: Google(+mobile) Bing 63.76% Paid Social 11.31% Paid Search 8.69% Direct 6.42% Organic Social 5.48% Display 4.34% Organic Search Referral Sources: 4. Google 5. Facebook/Instagram 6. Hearst Display	How Trash Gets into Creeks Guide to eating Fish and Shellfish Green Gardener List SCVURPPP Restaurant Fact Sheet Concrete Brochure 107 downloads 172 click links	Requests for Discount Card / Brochure: Discount card–2 Watershed Watch Brochure-1	Media + events: Facebook/ Instagram/X(Twitter)-Weekly Posts **Boosted Posts** • National River Cleanup Day **Instagram Reels:** • Volunteer • Fish Advisory • Car Wash **YouTube Shorts** • Volunteer • Fish Advisory • Car Wash **Hearst Bay Area Programmatic Display Ads:** • Less-toxic Pest Control • Hire a GG **Streaming Video:** • Hire a GG

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
April 2025	401	**Total Visits:** 5,169 **Visits from California:** 1,918	1. /(home page) 2. /posterchallenge/ 3. /solutions/ 4. /volunteer/ 5. /zh-hans/防止乱扔垃圾/ (litter prevention page) 6. /vi/luu-vuc-song-la-gi/ (what is a watershed page) 7. /discount-card/ 8. /for-residents/ 9. /garden/ 10. /litter/	English-8 Chinese-1 Vietnamese-1	Search Engines: Google(+mobile) Bing 52.05% Paid Search 23.69% Direct 6.93% Paid Social 11.48% Referral 9.84% Organic Search 2.95% Organic Social Referral Sources: 7. Google 8. Facebook/Instagram	How Trash Gets into Creeks Discount Card Watershed poster-brochure Watershed Activity Booklet(3-5) Public Participation Opportunities List Watershed Activity Booklet(6-8) 91 downloads 115 click links	Requests for Discount Card / Brochure: Discount card–0 Watershed Watch Brochure-0	Media + events: Facebook/ Instagram/X(Twitter)-Weekly Posts **Boosted Posts** • OWOW • Less-toxic Pest Control **Instagram Reels:** • Litter's journey • Dog Doo **YouTube Shorts:** • Dog Doo **Radio:** KBAY/KEZR • Less-toxic Pest Control • Hire a GG **Hearst Bay Area Programmatic Display Ads:** • Less-toxic Pest Control (English and Spanish)

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
								• Hire a GG

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
March 2025	2,763	**Total Visits:** 69,142 **Visits from California:** 37,023	1. /(home page) 2. /solutions/ 3. /volunteer/ 4. /posterchallenge/ 5. /rainready/ 6. /discount-card/ 7. /for-residents/ 8. /vi/luu-vuc-song-la-gi/ 9. /partners/ 10. /pollution/	English-9 Vietnamese-1	Search Engines: Google(+mobile) Bing 72.21% Paid Search 16.95% Direct 6.93% Paid Social 1.39% Display (Univision) 1.12% Organic Search .64% Referral .47% Banner .29% Organic Social Referral Sources: 9. Google 10. Facebook/Instagram	Discount Card Watershed poster-brochure How Trash Gets into Creeks Mobile Cleaner Fact Sheet SCVURPPP Restaurant Fact Sheet Public Participation Opportunities List Green Gardener List 168 downloads 1,186 click links	Requests for Discount Card / Brochure: Discount card–0 Watershed Watch Brochure-2	Media + events: Facebook/ Instagram/X(Twitter)-Weekly Posts **Sharks Campaign** **Instagram Reels:** • Litter's journey **YouTube Shorts:** • Litter's journey **FB/IG:** • Earth Day Poster Challenge **Radio:** KBAY/KEZR • Less-toxic Pest Control • Hire a GG Spanish Radio • Less-toxic Pest Control

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
Feb 2025	166	**Total Visits:** 3716 **Visits from California:** 1411	1. /posterchallenge/ 2. /(home page) 3. /wp-content/uploads/How-Trash-Gets-into-Creek-Poster-SFR_May2014 4. /solutions/ 5. /volunteer/ 6. /discount-card/ 7. /pollution/ 8. /for-businesses/ 9. /become-a-green-gardener/ 10. /pests/	English-10	Search Engines: Google(+mobile) Bing 38.21% Direct 16.91% Paid Search 16.31% Organic Search 13.58% Paid Social 8.30% Organic Social 6.69% Referral Referral Sources: 11. Google 12. Facebook/Instagram	Discount Card How Trash Gets into Creeks Mobile Cleaner Fact Sheet Preventing Storm Drain Pollution The Water Beat Book Watershed poster-brochure 87 downloads 155 click links	Requests for Discount Card / Brochure: Discount card–1 Watershed Watch Brochure-0	Media + events: Facebook/ Instagram/X(Twitter)-Weekly Posts **Instagram Reels:** • Storm Drain Awareness • Dirty Jobs **YouTube Shorts:** • Storm Drain Awareness • Dirty Jobs **FB/IG:** • Earth Day Poster Challenge

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
Jan 2025	175	**Total Visits:** 4089 **Visits from California:** 1905	1. /posterchallenge/ 2. /become-a-green-gardener/ 3. /wp-content/uploads/How-Trash-Gets-into-Creek-Poster-SFR_May2014-hi.pdf 4. /(home page) 5. /volunteer/ 6. /solutions/ 7. /discount-card/ 8. /fieldtrips/ 9. /assemblies/ 10. /students/	English-10	Search Engines: Google(+mobile) Bing 35.89% Direct 26.25% Paid Social 16.16% Organic Search 8.43% Referral 6.97% Organic Social 6.30% Paid Search Referral Sources: 13. Google 14. Facebook/Instagram 15. Bing	Watershed poster-brochure Discount Card How Trash Gets into Creeks ZunZun Assemblies Flyer Pesticides and Water Quality Fact Sheet Kids Guide Backyard To Bugs 126 downloads 163 click links	Requests for Discount Card / Brochure: Discount card–2 Watershed Watch Brochure-0	Media + events: Facebook/ Instagram/X(Twitter)-Weekly Posts **Radio Promotions:** KSOL Spanish radio-Become a GG **Instagram:** Storm Drain Awareness **YouTube Shorts:** Storm Drain Awareness **Facebook:** Earth Day Poster Challenge

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
Dec 2024	223	**Total Visits:** 959 **Visits from California:** 173	1. /(home page) 2. /wp-content/uploads/How-Trash-Gets-into-Creek-Poster-SFR_May2014-hi.pdf 3. /solutions/ 4. /become-a-green-gardener/ 5. /posterchallenge/ 6. /students/ 7. /partners/ 8. /zh-hans/实地考察/ 9. /discountcard/ 10. /litter/	English- 9 Chinese-1	Search Engines: Google(+mobile) Bing 72.96% Direct 20.12 Organic Search 5.57% Referral .72% Paid Search .62% Organic Search Referral Sources: 16. Google 17. Bing	Guide to eating Fish and Shellfish Watershed poster-brochure Controlling Ants Controlling Yellowjackets How Trash Gets into Creeks Rats and Mice Fact Sheet 66 downloads 73 click links	Requests for Discount Card / Brochure: Discount card–0 Watershed Watch Brochure-0	Media + events: Facebook/ Instagram/X(Twitter)-Weekly Posts Shared Keep Coyote Creek Beautiful events

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
Nov 2024	49	**Total Visits:** 1018 **Visits from California:** 187	1. /(home page) 2. /solutions/ 3. /wp-content/uploads/How-Trash-Gets-into-Creek-Poster-SFR_May2014-hi.pdf 4. /pests/ 5. /discount-card/ 6. /es/que-es-la-contaminacion-por-aguas-pluviales/ 7. /become-a-green-gardener/ 8. /zh-hans/家庭有害废物处理/ 9. /for-residents/ 10. /zh-hans/	English- 7 Spanish-1 Chinese-2	Search Engines: Google(+mobile) Bing 59.89% Direct 33.67% Organic Search 3.5% Referral 2.03% Paid Search .9% Organic Social Referral Sources: 1. Google 2. Bing 3. Facebook/Instagram	Watershed poster-brochure Controlling Ants How Trash Gets into Creeks Rats and Mice Fact Sheet General Brochure Rain Barrel Fact Sheet 52 downloads 54 click links	Requests for Discount Card / Brochure: Discount card–0 Watershed Watch Brochure-0	Media + events: Facebook/ Instagram/X(Twitter)-Weekly Posts Shared Keep Coyote Creek Beautiful events

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
Oct 2024	142	**Total Visits:** 1207 **Visits from California:** 239	1. /(home page) 2. /wp-content/uploads/How-Trash-Gets-into-Creek-Poster-SFR_May2014-hi.pdf 3. /solutions/ 4. /students/ 5. /discount-card/ 6. /partners/ 7. /aboutus/ 8. /es/que-es-la-contaminacion-por-aguas-pluviales/ 9. /zh-hans/防止乱扔垃圾/ 10. /fieldtrips/	English- 8 Spanish-1 Chinese-1	Search Engines: Google(+mobile) Bing 62.69% Direct 31.39% Organic Search 3.24% Referral 2.10% Paid Search .57% Organic Social Referral Sources: 1. Google 2. Facebook/Instagram	Watershed poster-brochure How Trash Gets into Creeks Preventing Storm Drain Pollution Pools Brochure Discount Card Mobile Cleaner Fact Sheet 118 downloads 118 click links	Requests for Discount Card / Brochure: Discount card–0 Watershed Watch Brochure-0	Media + events: Facebook/ Instagram/Twitter-Weekly Posts Event: Pumpkins In the Park 10/12

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
Sept 2024	575	**Total Visits:** 2600 **Visits from California:** 697	1. /(home page) 2. /pests/ 3. /wp-content/uploads/How-Trash-Gets-into-Creek-Poster-SFR_May2014-hi.pdf 4. /solutions/ 5. /become-a-green-gardener/ 6. /es/que-es-la-contaminacion-por-aguas-pluviales/ 7. /partners/ 8. /events/ 9. /for-residents/ 10. /for-businesses/	English- 9 Spanish-1	Search Engines: Google(+mobile) Bing 51.30% Direct 16.95% Paid Social 13.69% Organic Search 12.45% Display (Hearst Bay Area) 3.97% Referral 1.32% Organic Social .31% Paid Search Referral Sources: 1. Google 2. Facebook/Instagram	Discount Card Controlling Ants Watershed poster-brochure Preventing Storm Drain Pollution How Trash Gets into Creeks Spill Response Fact Sheet 104 downloads 178 click links	Requests for Discount Card / Brochure: Discount card–0 Watershed Watch Brochure-0	Media + events: Facebook/ Instagram/Twitter-Weekly Posts **FB/IG** • Join a cleanup Promotion • Less-toxic pest control promo **Radio Promotions** KFUX- • Car Wash PSA • Less-Toxic Pest Control (indoor pests) **Hearst Bay Area Programmatic Display Ads:** Indoor Pest Control

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
Aug 2024	**85**	**Total Visits:** 1832 **Visits from California:** 726	1. /(home page) 2. /discount-card/ 3. /pests/ 4. /cars/ 5. /wp-content/uploads/How-Trash-Gets-into-Creek-Poster-SFR_May2014-hi.pdf 6. /solutions/ 7. /become-a-green-gardener/ 8. /litter/ 9. /for-residents/ 10. /pollution/	English- 10 Spanish-0	Search Engines: Google(+mobile) Bing 42.28% Direct 19.51% Paid Social 14.21% Organic Search 10.94% Organic Social 9.59% Display (Hearst Bay Area) 2.45% Referral 1.02% Paid Search Referral Sources: 1. Google 2. Facebook/Instagram	Discount Card Watershed poster-brochure SCVURPPP Restaurant Fact Sheet Mobile Cleaner Fact Sheet General Brochure How Trash Gets into Creeks 245 downloads 170 click links	Requests for Discount Card / Brochure: Discount card–1 Watershed Watch Brochure-2	Media + events: Facebook/ Instagram/Twitter-Weekly Posts **Car Wash Events:** Classic Car Wash-Delta Queen and Robertsville **Radio Promotions**: KFUX- KSOL **Facebook/Instagram paid promotions** **Hearst Bay Area Programmatic Display Ads**

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments
July 2024	**69**	**Total Visits:** 1520 **Visits from California:** 582	1. /(home page) 2. /find-a-green-gardener/ 3. /solutions/ 4. /for-businesses/ 5. /for-residents/ 6. /discount-card/ 7. /litter/ 8. /rainready/ 9. /pests/ 10. /garden/	English- 10 Spanish-0	Search Engines: Google(+mobile) Bing 68.14% Direct 14.98% Organic Search 12.73% Organic Social 2.60% Referral 1.56% Paid Search Referral Sources: 1. Google 2. Facebook/Instagram	Preventing Storm Drain Pollution - Guidelines for Commercial and Light Industrial Facilities SCVURPPP Restaurant Fact Sheet Discount Card Spill Response Outdoor Fact Sheet Pools Brochure Green Gardener List 148 downloads 120 click links	Requests for Discount Card / Brochure: English Discount card– 3 Watershed Watch Brochure-1 Spanish – 0	**Facebook/ Instagram** Shared Keep Coyote Creek Beautiful events

WATERSHED WATCH CAMPAIGN WEBSTATS - FY 24-25

Month	Avg. Page Views/ Day	Total Visits CA Visits	Top pages	No. of Top Pages	Sources: Top Search Engine Top Referrals	Most Downloaded	Contact Form	Comments

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-2

Program Contact Lists

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

Santa Clara Valley Urban Runoff Pollution Prevention Program (Management Committee Representatives*/Alternates)

Organization	Contact	Address	Phone	E-mail
Campbell	*Sheila Tucker	70 North First Street Campbell, CA 95008-1423	tel 408-354-5385	stucker@cleancreeks.org
Cupertino	*Ursula Syrova Riley Moffatt	10300 Torre Avenue Cupertino, CA 95014	tel 408-777-7603 tel 408-777-3255	UrsulaS@cupertino.org RileyM@cupertino.gov
Los Altos	* Harun Musaefendic Jane Hou	One North San Antonio Road Los Altos, CA 94022-3087	tel 650-947-2650 tel 650-947-2644	hmusaefendic@losaltosca.gov jhou@losaltosca.gov
Los Altos Hills	* WooJae Kim John Chau	26379 Fremont Road Los Altos Hills, CA 94022	tel 650-947-2516 tel 650-947-2510	wkim@losaltoshills.ca.gov jchau@losaltoshills.ca.gov
Los Gatos	* Sheila Tucker	41 Miles Ave or P.O. Box 949 Los Gatos, CA 95031	tel 408-354-5385	stucker@cleancreeks.org
Milpitas	*Elaine Marshall Roberto Alonzo	455 East Calaveras Boulevard Milpitas, CA 95035	tel 408-586-2603 tel 408-609-1452	emarshall@ci.milpitas.ca.gov ralonzo@ci.milpitas.ca.gov
Monte Sereno	*Sheila Tucker	18041 Saratoga-Los Gatos Rd. Monte Sereno, CA 95030	tel 408-354-5385	stucker@cleancreeks.org
Mountain View	* Carrie Sandahl Brian T. Jones	500 Castro Street, City Hall, 4th Floor Mountain View, CA 94041	tel 650-903-6224 tel 650-903-6225	carrie.sandahl@mountainview.gov Brian.T.Jones@mountainview.gov
Palo Alto	*Karin North Pamela Boyle Rodriguez Michele Jeremias	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 650-329-2104 tel 650-329-2421	Karin.North@paloalto.gov Pamela.BoyleRodriguez@paloalto.gov Michel.Jeremias@paloalto.gov
San José	*Rajani Nair Mary Morse	Environmental Services Department Watershed Protection, City of San Jose 200 East Santa Clara Street, 7th Floor San Jose, CA 95113	tel 408-535-8306 tel 408-793-5323	Rajani.Nair@sanjoseca.gov Mary.Morse@sanjoseca.gov
Santa Clara	* Colleen Trostle Dave Staub	CSC Street Corp. Yard 1700 Walsh Avenue Santa Clara, CA 95050	tel 408-615-3099 tel 408-615-3086	CTrostle@SantaClaraCA.gov dstaub@santaclaraca.gov
Santa Clara County	* Vanessa Marcadejas Zhenzhen Jiang	Clean Water Program 1553 Berger Drive, Bldg. 1 San Jose, CA 95112	tel 408- 690-7602 tel 408- 691-2616	Vanessa.marcadejas@cep.sccgov.org zhenzhen.jiang@cep.sccgov.org
Valley Water	* John Bourgeois James Downing	5750 Almaden Expressway San José, CA 95118	tel 408-630-3138 tel 408-314-8859	JBourgeois@valleywater.org jdowning@valleywater.org
Saratoga	*Sheila Tucker	13777 Fruitvale Avenue Saratoga, CA 95070	tel 408-354-5385	stucker@cleancreeks.org
Sunnyvale	*Winola Cheong Emma Hinojosa	City of Sunnyvale P.O. Box 3707 Sunnyvale, CA 94088	tel 408-730-7763 tel 408-730-7764	WCheong@sunnyvale.ca.gov EHinojosa@sunnyvale.ca.gov
West Valley Communities	*Sheila Tucker	West Valley Clean Water Authority One West Campbell Avenue, H-73 Campbell, CA 95008-1039	tel 408-354-5385	stucker@cleancreeks.org

* Current Voting Members

SCVURPPP Construction, Illegal Discharge, and Industrial Inspection Contacts

Agency	Construction Inspection	Illegal Discharge	Industrial Inspection
Campbell	**Dustin Burch** Building Inspector 408 866 2134 dustinb@campbellca.gov **Bob Lennen** Building Official 408-866-2130 bobl@campbellca.gov **Roger Storz** Senior Civil Engineer 408-866-2190 rogers@campbellca.gov	**Rafles Warnars** West Valley Stormwater Authority 408-354-4734 rwarnars@cleancreeks.org **Randy Sweet** Code Enforcement Officers 408-866-2760 randys@campbellca.gov	**Rafles Warnars** West Valley Stormwater Authority 408-354-4734 rwarnars@cleancreeks.org **Michael Benjamin** SCC FD, Haz Mat 408-378-4010 michael.benjamin@sccfd.org **Jeremy Davis** Hazardous Materials Assistant Fire Marshal HAZMAT and Fire Investigation Programs Santa Clara County Fire Department **408-591-7967** Jeremy.davis@sccfd.org
Cupertino	**Kevin Rieden** Public Works Inspector 408-777-3104 KevinR@cupertino.org **Ursula Syrova** Environmental Programs Manager 408-777-7603 UrsulaS@cupertino.org **Chad Mosley** Public Works Director/City Engineer 408-777-7604 ChadM@cupertino.org	**Riley Moffatt** Environmental Programs Specialist 408-655-8685 rileym@cupertino.org **Ursula Syrova** Environmental Programs Manager 408-777-7603 UrsulaS@cupertino.org **Manny Barragan** IND/IDDE Inspector 408-472-9907 ManuelB@cupertino.org	**Riley Moffatt** Environmental Programs Specialist 408-655-8685 rileym@cupertino.org **Lori Baumgartner** Environmental Programs Manager 408-691-7769 lorib@cupertino.gov **Manny Barragan** IND/IDDE Inspector 408-472-9907 ManuelB@cupertino.org
Los Altos Hills	**John Chau** 650-947-2510 jchau@losaltoshills.ca.gov	**John Chau** 650-947-2510 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	**Jane Hou** 650-947-2644 jhou@losaltosca.gov **Harun Musaefendic** 650-947-2650 hmusaefendic@losaltosca.gov	**Jane Hou** 650-947-2644 jhou@losaltosca.gov **Harun Musaefendic** 650-947-2650 hmusaefendic@losaltosca.gov	**Jane Hou** 650-947-2644 jhou@losaltosca.gov **Harun Musaefendic** 650-947-2650 hmusaefendic@losaltosca.gov **Los Altos does not have any industrial sites (the City inspects its commercial sites)**
Los Gatos	**Roy Alba** Building Division Inspector 408-354-6815 ralba@losgatosca.gov **Robert Gray** CBO 408-354-6815 rgray@losgatosca.gov	**Rafles Warnars** West Valley Stormwater Authority 408-354-4734 rwarnars@cleancreeks.org **Dan Keller** Facilities & Environmental Programs Manager 408-395-5310 (Mon thru Fri) dkeller@losgatosca.gov **Parks & Public Works General Line** 7am-4pm (Mon thru Fri) 408-399-5770 **Allen Meyer** Code Enforcement Officer 409-399-5746 AMeyer@losgatosca.gov	**Rafles Warnars** West Valley Stormwater Authority 408-354-4734 rwarnars@cleancreeks.org **Jeremy Davis** Hazardous Materials Assistant Fire Marshal HAZMAT and Fire Investigation Programs Santa Clara County Fire Department 408-591-7967 Jeremy.davis@sccfd.org **Curtis Ruel** Senior Hazmat Inspector SCC-FD 408-341-4432 Curtis.ruel@sccfd.org
Milpitas	**Sharon Goei** Building & Housing Director 408-586-3260 sgoei@ci.milpitas.ca.gov **Gary King** Building Permit Manager 408-586-3262 gking@ci.milpitas.ca.gov	**Albert Zamora** Fire Marshall 408-586-3370 azamora@ci.milpitas.ca.gov **Valerian Catunao** Hazardous Materials Inspector 408-586-3372 vcatunao@ci.milpitas.ca.gov	**Albert Zamora** Fire Marshall 408-586-3370 azamora@ci.milpitas.ca.gov **Valerian Catunao** Hazardous Materials Inspector 408-586-3372 vcatunao@ci.milpitas.ca.gov

SCVURPPP Construction, Illegal Discharge, and Industrial Inspection Contacts

Agency	Construction Inspection	Illegal Discharge	Industrial Inspection
Monte Sereno	**Alan Cunningham** Building Inspector-Code Enforcement 408-354-7635 acunningham@cityofmontesereno.org	**Rafles Warnars** West Valley Stormwater Authority 408-354-4734 rwarnars@cleancreeks.org **Alan Cunningham** Building Inspector-Code Enforcement 408-354-7635 acunningham@cityofmontesereno.org	**City of Monte Sereno does not have any industrial or commercial sites**
Mountain View	**Brian T. Jones** **Environmental Safety Coordinator** 650-903-6378 main 650-316-2874 direct Brian.t.jones@mountainview.gov **Carrie Sandahl** **Fire Marshal** 650-903-6378 main 650-316-2868 direct carrie.sandahl@mountainview.gov **Brandon Redic** **Environmental Safety Protection Inspector** 650-903-6378 main 650-316-2871 direct brandon.redic@mountainview.gov **Zach Wu** **Environmental Safety Protection Inspector** 650-903-6378 main 650-316-2873 direct Zachary.Wu@mountainview.gov	**Brian T. Jones** **Environmental Safety Coordinator** 650-903-6378 main 650-316-2874 direct Brian.t.jones@mountainview.gov **Carrie Sandahl** **Fire Marshal** 650-903-6378 main 650-316-2868 direct carrie.sandahl@mountainview.gov **Brandon Redic** **Environmental Safety Protection Inspector** 650-903-6378 main 650-316-2871 direct brandon.redic@mountainview.gov **Zach Wu** **Environmental Safety Protection Inspector** 650-903-6378 main 650-316-2873 direct Zachary.Wu@mountainview.gov **City of Mountain View Police Department** (after hours) 650-903-6395	**Brian T. Jones** **Environmental Safety Coordinator** 650-903-6378 main 650-316-2874 direct Brian.t.jones@mountainview.gov **Carrie Sandahl** **Fire Marshal** 650-903-6378 main 650-316-2868 direct carrie.sandahl@mountainview.gov **Brandon Redic** **Environmental Safety Protection Inspector** 650-903-6378 main 650-316-2871 direct brandon.redic@mountainview.gov **Zach Wu** **Environmental Safety Protection Inspector** 650-903-6378 main 650-316-2873 direct Zachary.Wu@mountainview.gov

SCVURPPP Construction, Illegal Discharge, and Industrial Inspection Contacts

Agency	Construction Inspection	Illegal Discharge	Industrial Inspection
Palo Alto	**Chris Fujimoto** 650-329-2430 christopher.fujimoto@paloalto.gov **Pam Boyle Rodriguez** 650-329-2421 Pamela.BoyleRodriguez@paloalto.gov **Watershed Protection** 650-329-2122	**Watershed Protection** 650-329-2122 **Palo Alto Police Department** 650-329-2413 (after hours)	**Isabel Zacharczuk** 650-329-2585 Isabel.Zacharczuk@paloalto.gov **Samantha Engelage** 650-329-2123 Samantha.Engelage@paloalto.gov
San José	**Maile Harrison** Senior Environmental Inspector 408-425-5594 (mobile) Maile.Harrison@sanjoseca.gov **Cecilia Rios** Senior Environmental Program Manager 408-793-5358 Cecilia.Rios@sanjoseca.gov	**No Dumping Hotline** 408-945-3000 https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/our-creeks-rivers-bay/storm-drain-discharge-complaint-form	**Chris Donaldson** Senior Environmental Inspector 408-793-5374 Chris.Donaldson@sanjoseca.gov **Cecilia Rios** Senior Environmental Program Manager 408-793-5358 Cecilia.Rios@sanjoseca.gov
Santa Clara	**Damaris Han** Code Enforcement Officer 408-615-3098 dhan@santaclaraca.gov **Gaurav Kumarllemos** Code Enforcement Technician 408-615-3093 gkumarllemos@santaclaraca.gov **Joseph Palaniuk** Code Enforcement Technician 408-615-3092 jpalaniuk@santaclaraca.gov **Colleen Trostle** Compliance Manager 408-615-3099 ctrostle@santaclaraca.gov	**Street Division (business hours)** 408-615-3080 or submit an online request (“Report a Spill”). **Police Department (after hours)** 408-615-5580 **Damaris Han** Code Enforcement Officer 408-615-3098 dhan@santaclaraca.gov **Gaurav Kumarllemos** Code Enforcement Technician 408-615-3093 gkumarllemos@santaclaraca.gov **Joseph Palaniuk** Code Enforcement Technician 408-615-3092 jpalaniuk@santaclaraca.gov	**Damaris Han** Code Enforcement Officer 408-615-3098 dhan@santaclaraca.gov **Gaurav Kumarllemos** Code Enforcement Technician 408-615-3093 gkumarllemos@santaclaraca.gov **Joseph Palaniuk** Code Enforcement Technician 408-615-3092 jpalaniuk@santaclaraca.gov **Colleen Trostle** Compliance Manager 408-615-3099 ctrostle@santaclaraca.gov

SCVURPPP Construction, Illegal Discharge, and Industrial Inspection Contacts

Agency	Construction Inspection	Illegal Discharge	Industrial Inspection
		Colleen Trostle Compliance Manager 408-615-3099 ctrostle@santaclaraca.gov	
Santa Clara County (Unincorporated)	**Steve Beams** Senior Construction Inspector 408-299-6867 Steve.Beams@pln.sccgov.org	**Discharge Reporting Hotline** 408-918-4609 watershed@cep.sccgov.org **Roads and Airports Department** (For incidents occurring after-hours or on weekends only) (408) 494-2700 **Department of Environmental Health (DEH)** 408-918-3400 dehweb@deh.sccgov.org	**Watershed Protection Division (WPD)** 408-918-4609 watershed@cep.sccgov.org **Department of Environmental Health (DEH)** 408-918-3400 dehweb@deh.sccgov.org **Mickey Pierce** HazMat Program Manager 408-918-1982 Mickey.pierce@deh.sccgov.org **Beatrice Santiago** Consumer Protection Division (CPD) Director 408-918-4725 Beatrice.Santiago@cep.sccgov.org

SCVURPPP Construction, Illegal Discharge, and Industrial Inspection Contacts

Agency	Construction Inspection	Illegal Discharge	Industrial Inspection
Saratoga	**Aaron Yuma** Chief Building Officer 408-868-1228 ayuma@saratoga.ca.us **Toby Brenton** Buinding Inspector 408-868-1237 tbrenton@saratoga.ca.us	**Rafles Warnars** West Valley Stormwater Authority 408-354-4734 rwarnars@cleancreeks.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	**Rafles Warnars** West Valley Stormwater Authority 408-354-4734 rwarnars@cleancreeks.org **Curtis Ruel** Senior Hazmat Inspector SCC-FD 408-341-4432 Curtis.ruel@sccfd.org **Jeremy Davis** Hazardous Materials Assistant Fire Marshal HAZMAT and Fire Investigation Programs Santa Clara County Fire Department 408-591-7967 Jeremy.davis@sccfd.org
Sunnyvale	**Richard Gutierrez** 408-730-7459 rgutierrez@sunnyvale.ca.gov	**Pollution Prevention Hotline** 408-730-7260	**Dustin Clark** 408-730-7701 dclark@sunnyvale.ca.gov
Valley Water	**Uday Mandlekar** 408-630-2732 umandlekar@valleywater.org **Pollution Hotline** 1-888-510-5151	**Pollution Hotline** 1-888-510-5151	**Not Applicable**

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-3

Watershed Watchers: Keeping Our Waterways Clean: FY 2024-25 Fourth Quarter Report April – June 2025

WATERSHED WATCHERS

Keeping Our Waterways Clean

April - June 2025

WATERSHED WATCHERS PROGRAM: 4TH QUARTER REPORT & ANNUAL SUMMARY

San Francisco Bay Wildlife Society

Photo: SFBayWS staff engaging students at Russo McEntee Earth Day Festival with the watershed model. Photo: Emeric Bisbee

Prepared for Santa Clara Valley Urban Runoff Pollution Prevention Program,
San Francisco Bay Wildlife Society,
& Don Edwards San Francisco Bay National Wildlife Refuge

FY24-25

San Francisco Bay Wildlife Society

NATIONAL WILDLIFE REFUGE SYSTEM

Santa Clara Valley *Urban Runoff* Pollution Prevention Program

Prepared by
Sirena Lao

WATERSHED WATCHERS

4TH QUARTER REPORT: APR-JUN 2025

SFBayWS

Table of Contents

A. Program Introduction 3

B. Quarter Highlights 4

C. Quarter Programs Summary 6

D. Quarter Program Details 8

E. Public Outreach 12

F. FY 24-25 Year in Review 14

Appendix A: Program Descriptions, Registration Data, Survey Results 18

Appendix B: FY 24-25 Work Plan 24

Additional Notes 31

A. Program Introduction

This partnership program between the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), 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 (SFBayWS) provides services and programming that interpret the message of the Watershed Watchers program. The Watershed Watchers program aims to increase the surrounding communities' knowledge of urban runoff pollution and how to reduce its harmful effects through personal behavior changes.

Watershed Watchers Program Team

- Sirena Lao (she/her) is the Watershed Watchers Program Coordinator. She has a B.S. in Environmental Science and M.S. in Natural Resource Ecology & Management. She previously held various positions studying birds and conducting environmental education & outreach programs.
- Leila Inocentes (she/her) is our Interpretive Associate. She graduated from San Jose State University with a B.S. in Environmental Studies and a minor in Climate Change Strategies.
- Joe Montes de Oca (he/him) is our Interpretive Associate. He recently moved to the Bay Area from Miami, Florida, where he was a field researcher in Everglades National Park and a high school Italian and Portuguese teacher.
- Erika Bessler (she/her) is our Summer Programs Coordinator. She graduated from UC Davis with a B.S. in Environmental Science and a minor in Education and has experience with summer camp, environmental education, and interpretive positions.
- Volunteers are vital and are often very involved with the Watershed Watchers Program by assisting with interpretive programs, field trips, special events, and restoration efforts.

SFBayWS, established in 1987, is a nonprofit Friends group that supports education, interpretation, and other public use programs at the Don Edwards San Francisco Bay National Wildlife Refuge, including administering the Watershed Watchers Program.

Sirena Lao

Leila Inocentes

Joe Montes de Oca

Erika Bessler

B. Quarter Highlights

Earth Month Kickoff at the Refuge

Earth Day has been one of the biggest public events we host at the Don Edwards SF Bay National Wildlife Refuge. This year, we decided to move it up a couple of weeks and turn it into an Earth Month Kickoff Celebration! On April 6th, we gathered on a beautiful day to celebrate the wildlife we protect and the habitats they depend on.

With the help of 8 USFWS & SFBayWS staff, 14 volunteers, and 8 partner organizations, the event was a resounding success! Each of our scheduled programs during the event were well attended. **Santa Clara Valley Bird Alliance** hosted two bird walks, **BioBlitz Club** hosted a Mini BioBlitz to document organisms around the trails, USFWS Environmental Education Specialist Tia Glagolev put on an uproariously fun Earth Day puppet show, and Victoria Ho, a high school student at the Harker School, shared her research on the effects of different light colors on the eating habits of plastic-consuming superworms and mealworms!

Families enjoying the Earth Day puppet show. (Photo: Richard Tejeda)

Joe explaining the watershed bean bag game to a young visitor. (Photo: Leila Inocentes)

We also provided fun activities throughout the day for visitors to enjoy. SFBayWS hosted our watershed model, face painting, native seed ball making, and SCVURPPP's watershed bean bag game, which was very popular! **Saved by Nature** had visitors painting American Avocets, USFWS Urban Ranger Miguel Marquez brought back the popular Learn to Cast game, **Grassroots Ecology** had an educational oak matching game, the **SF Bay Area Chapter of The Wildlife Society** gave out cuttings of native plants, **SF Bay Bird Observatory** brought an educational bird migration game, and **County of Santa Clara Vector Control District** and **Alameda County Mosquito Abatement District** demonstrated the mosquito life cycle with a live sample and had a large tick model, providing vector control resources for residents.

We were glad to see so many happy faces exploring the areas around the EEC and engaging in the activities, and it was great to have so many partners join us!

B. Quarter Highlights

Earth Month Activities

Outreach

April is a busy time for outreach with community events for Earth Day. This year, we participated in three events: City of Santa Clara Earth Day & Arbor Day, Mission College Eco Fair, and Russo McEntee Earth Day Festival. At each of these events, we distributed "You are the Solution to Water Pollution" brochures and other information and resources. We also brought our watershed model to two of these events, and it was a huge draw for children to learn about how pollution runs off into the San Francisco Bay. We interacted with 670 people through these Earth Month outreach events!

Children engaging with our watershed model. (Photo: Sirena Lao)

Joe showing families how to photograph insects for a BioBlitz. (Photo: Sirena Lao)

Stewardship & Citizen Science Programs

To invite the community to get involved and take action, we helped host two volunteer events at the Refuge: our Earth Month Volunteer Work Day and Tending for Tomorrow with our partners at Keep Coyote Creek Beautiful and San Francisco Bay Bird Observatory. During these events, a total of 53 people volunteered to help remove invasive plants including mustard, thistle, iceplant, and poison hemlock. Removing invasive plants allows more room for a diversity of native plants to grow, which provide more resources for native wildlife. Volunteer events like these help educate the public on the importance of native plants while allowing people to connect with nature and be a part of a restoration project.

Volunteers helping remove invasive plants from the Refuge. (Photo: Sirena Lao)

We also hosted an Earth Month BioBlitz to encourage making observations and documenting organisms at the Refuge. By connecting with the wildlife, we encourage people to not only contribute to community science, but also protect these organisms through urban runoff pollution prevention. 16 people attended, and 84 observations of at least 49 species were documented.

C. Quarter Programs Summary

April - June 2025

Total Number of Programs & Activities

Program Type	# Proposed	#Conducted	Proposal Met
Public Programs	4	5	Exceeded
Group Programs	5	8	Exceeded
Special Event	1	1	Met
Outreach (In-Person)	3	4	Exceeded
Stewardship & Community Science	3	4	Exceeded
Coordinating Volunteers	2	2	Met
TOTAL	18	24	Exceeded

Total Number of Participants Summary

Program Type	Pre-K	Elem	Middle	High	Adult	Total #
Public Programs	1	4	1	0	74	80
Group Programs	4	76	6	0	166	252
Special Event	12	28	3	1	87	131
Outreach (In-Person)	53	367	14	1	346	781
Stewardship & Community Science	2	8	3	11	61	85
Coordinating Volunteers	0	1	0	3	31	35
TOTAL	72	484	27	16	765	1364

Mercury Outreach Summary

Program Type	# Proposed	#Conducted	Proposal Met	# Participants
Mercury Outreach	4	6	Exceeded	174

Note: The number of programs and participants under Mercury Outreach are already counted as part of Public Programs or Group Programs.

C. Quarter Programs Summary (cont.)

April - June 2025: Summary of quarter programs

Program Type	Date	Program Name	# Participants	Mercury Outreach
Public Programs	5/11/25	World Migratory Bird Day	2	
	6/1/25	Sunnyvale Library Bird Walk	44	
	6/1/25	Why Tides Matter	4	
	6/7/25	Twilight Tales at the Refuge	19	Y
	6/22/25	Pollinators: What Flowers Are They Visiting?	11	
Group Programs	4/7/25	SJCC Field Trip	24	Y
	4/9/25	SJCC Field Trip	27	Y
	4/11/25	Earth Week presentation - Birds	50	
	4/29/25	SJCC Field Trip	26	Y
	5/15/25	De Anza Field Trip	65	Y
	5/23/25	De Anza Field Trip	13	Y
	6/12/25	Boys & Girls Club Summer Science Project: Alviso	27	
	6/26/25	Boys & Girls Club Summer Science Project: Si se puede	20	
Special Event	4/6/25	Earth Month Kickoff at the Refuge	131	
Outreach	4/10/25	City of Santa Clara Earth Day/Arbor Day	481	
	4/22/25	Mission College Eco Fair	63	
	4/23/25	Russo/McEntee Earth Day Festival	126	
	5/23/25	George Mayne Carnival	111	
Stewardship & Citizen Science	4/13/25	Earth Month Volunteer Work Day	28	
	4/20/25	Earth Month BioBlitz	16	
	4/26/25	Tending for Tomorrow	25	
	5/18/25	National River Clean Up Day	16	
Coordinating Volunteers	5/14/25	Calpine Volunteer Work Day	15	
	6/29/25	Volunteer Appreciation Banquet	20	

Additional Metrics:

18
Partner Schools & Organizations

115
Volunteers Engaged

3427+
Social Media Reach

D. Quarter Program Details

Public Programs

Interpretive programs are offered to the public as both online virtual platforms and in-person at the Refuge. Talking points include how individual behaviors cause urban runoff pollution and impact wildlife and their habitats in our watersheds.

Date	Program Name	Location	Pre-K	Elem	Middle	High	Adult	Total #
5/11/25	World Migratory Bird Day	EEC					2	2
6/1/25	Sunnyvale Library Bird Walk	EEC		4	1		39	44
6/1/25	Why Tides Matter	EEC					4	4
6/7/25	Twilight Tales at the Refuge	EEC	1				18	19
6/22/25	Pollinators: What Flowers Are They Visiting?	EEC					11	11
TOTAL	5 programs		1	4	1	0	74	80

Group Programs

Interpretive programs offered to community groups, youth groups, and schools at the Refuge, virtually, or on-site at schools and other community locations, focusing on how individual behaviors cause urban runoff pollution and affect wildlife and habitat in our watersheds.

Date	Program Name	Location	Pre-K	Elem	Middle	High	Adult	Total #
4/7/25	SJCC Field Trip	EEC					24	24
4/9/25	SJCC Field Trip	EEC					27	27
4/11/25	Earth Week presentation - Birds	Resurrection Catholic School (Sunnyvale)	4	31	6		9	50
4/29/25	SJCC Field Trip	EEC					26	26
5/15/25	De Anza Field trip	EEC					65	65
5/23/25	De Anza Field Trip	EEC					13	13
6/12/25	Boys & Girls Club Summer Science Project: Alviso	5040 N First St, San Jose		25			2	27
6/26/25	Boys & Girls Club Summer Science Project: Si se puede	2249 Dobern Ave, San Jose		20				20
TOTAL	8 programs		4	76	6	0	166	252

D. Quarter Program Details (cont.)

Special Event

An event-type program that attracts approximately 50-100 people to participate in an in-person event. These events may be supplemented with online activities.

Date	Program Name	Location	Pre-K	Elem	Middle	High	Adult	Total #
4/6/25	Earth Month Kickoff at the Refuge	EEC	12	28	3	1	87	131
TOTAL	1 program		12	28	3	1	87	131

Outreach

In-person outreach opportunities increase public awareness about the Refuge, habitats and wildlife, local watersheds, and the urban runoff pollution prevention program. Outreach opportunities occur at community locations such as local libraries or larger community events.

Date	Program Name	Location	Pre-K	Elem	Middle	High	Adult	Total #
4/10/25	City of Santa Clara Earth Day/Arbor Day	Santa Clara Central Park	37	280	3		161	481
4/22/25	Mission College Eco Fair	Mission College	1	1			61	63
4/23/25	Russo/McEntee Earth Day Festival	Russo McEntee Academy (SJ)	6	42	8	1	69	126
5/23/25	George Mayne Carnival	Mayne School (Alviso)	9	44	3		55	111
TOTAL	4 programs		53	367	14	1	346	781

Stewardship & Community Science

Stewardship activities encourage and inspire visitors to create wildlife habitats and use chemical-free garden techniques in their own backyards. Clean-up days help participants connect their trash habits with effects on the environment and local wildlife. Community science programs monitor the effects of invasive species and climate change as well as the positive impacts of stewardship activities on plants and wildlife.

Date	Program Name	Location	Pre-K	Elem	Middle	High	Adult	Total #
4/13/25	Earth Month Volunteer Work Day	EEC		3	1	4	20	28
4/20/25	Earth Month BioBlitz	EEC	2	3			11	16
4/26/25	Tending for Tomorrow	EEC				6	19	25
5/18/25	National River Clean Up Day	EEC		2	2	1	11	16
TOTAL	4 programs		2	8	3	11	61	85

D. Quarter Program Details (cont.)

Marsh-In Summer Camp

This 3-day camp program is designed to provide opportunities for young campers to learn about and connect with wetland habitats, animals, and plants. In addition to in-person days, we also provide at-home activities that children can complete before or after camp. Camp is partially funded by Cargill.

Completed During Q1 of FY24-25

Coordinate Refuge Volunteers

Volunteer coordination includes maintaining and growing a volunteer program that aids Watershed Watchers programs and projects.

Date	Program Name	Location	Pre-K	Elem	Middle	High	Adult	Total #
5/14/25	Calpine Volunteer Work Day	EEC					15	15
6/29/25	Volunteer Appreciation Banquet	HQ		1		3	16	20
TOTAL	2 programs		0	1	0	3	31	35

In addition to these programs above, we communicate regularly with volunteers to plan future programs and distribute supplies as needed.

Mercury Outreach

Outreach provides information for college students, high school groups, and the public regarding human health and environmental impacts of mercury, specifically focusing on mercury in fish. Programs provide historical information about mercury contamination and discuss the adverse effects of mercury on wildlife and the Bay.

Date	Programs	Location	Pre-K	Elem	Middle	High	Adult	Total #
4/7/25	SJCC Field Trip	EEC					24	24
4/9/25	SJCC Field Trip	EEC					27	27
4/29/25	SJCC Field Trip	EEC					26	26
5/15/25	De Anza Field Trip	EEC					65	65
5/23/25	De Anza Field Trip	EEC					13	13
6/7/25	Twilight Tales at the Refuge	EEC	1				18	19
TOTAL	6 programs		1	0	0	0	173	174

Note: These numbers have been counted as part of Public/Group Programs above.

D. Quarter Program Details (cont.)

Virtual Outreach & Number of Online Engagements

Virtual outreach activities include social media and website blog posts. Social media posts can be "boosted" to reach a wider audience within Santa Clara County that does not already follow our page. Posts and blogs may include photographs, videos, graphics, and narrative text, tying themes of urban runoff pollution prevention to the protection of the Refuge and its wildlife. The posts highlighted below were created specifically for this educational purpose and included a link to the Watershed Watch website.

Date	Post	Facebook Reach	Instagram Reach	Total Reach
4/7	Earth Month Celebration recap	143	561	704
4/22	Earth Day reel	--	520	520
5/11	World Migratory Bird Day reel	52	336	388
5/20	World Bee Day	56	194	250
5/22	International Day for Biological Diversity reel	385	697	1082
6/16	Pollinator Week reel	53	185	238
6/20	Pollinator Week	72	173	245
TOTAL	7 posts	761	2666	3427

**Reach indicates the number of people who saw the content at least once.*

We also regularly create other posts to promote upcoming programs, recap recent programs, highlight wildlife we are seeing, and encourage engagement with the Refuge. In addition, we share relevant posts from partner organizations. While the engagement from these posts are not captured in the table above, these types of posts have helped us strengthen partnerships, share the impact of our programs, and further expand our reach.

E. 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, occupation, and income levels. The following programs offer opportunities for public outreach, where we provide informational brochures and Watershed Watchers giveaways, including "You are the Solution to Water Pollution" brochures from SCVURPPP in English, Spanish, and Vietnamese as well as Creek Connections bags:

- 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. Brochures are available to pick up just outside the EEC. Visitors who tour around the EEC have opportunities to speak with the interpretive specialist about the salt marsh and learn about current threats to wildlife that rely on this habitat. The audience is as diverse as the population in the Bay Area, including people from varied ethnic backgrounds and socioeconomic statuses.
- As described in Program Details, we also table at community events and public locations like libraries to expand our reach, promote programs, answer questions, and talk to various audiences about urban runoff pollution prevention. These tabling opportunities may include additional educational activities like the watershed model.

The Watershed Watchers Program also uses online platforms to reach new and different audiences. In addition to the SFBayWS website, social media platforms have been excellent tools for expanding our reach. Through engaging social media content, we have been able to drive online traffic to the Watershed Watch Campaign and SFBayWS websites and reach new audience members within Santa Clara County.

Brochures and additional Watershed Watchers resources are handed out at all in-person outreach events and interpretive programs. These materials are also made available to general Refuge visitors to the Environmental Education Center. Photo of Joe tabling at Russo McEntee Earth Day Festival in San Jose. (Photo: Leila Inocentes)

E. Public Outreach (cont.)

Partnerships

The following partnerships allowed us to expand the audience we reach:

Organization	Outcome
Alameda County Mosquito Abatement District	1 special event
BioBlitz Club	1 special event
Boys & Girls Club	2 group programs
Calpine	1 volunteer event
Grassroots Ecology	1 special event
Keep Coyote Creek Beautiful	1 volunteer event

Organization	Outcome
San Francisco Bay Bird Observatory	1 special event, 1 volunteer event
Santa Clara Valley Bird Alliance	1 special event
Santa Clara Vector Control District	1 special event
Saved by Nature	1 special event, 2 group programs
Sunnyvale Library	1 public program
The Wildlife Society, SF Bay Area Chapter	1 special event

Schools served this quarter:

- Mayne Elementary (Alviso)
- Russo/McEntee Academy (San Jose)
- Resurrection Catholic School (Sunnyvale)
- De Anza College (Cupertino)
- Mission College (Santa Clara)
- San Jose City College (San Jose)

Making the Project Known to the Community at Large

The Watershed Watchers Program uses multiple strategies to promote events, engagement opportunities, and urban runoff pollution prevention messaging. We reach the community using these platforms:

- Tide Rising (The SFBWS quarterly newsletter)
- San Francisco Bay Wildlife Society Website, Facebook, and Instagram
- Don Edwards San Francisco Bay National Wildlife Refuge website
- Eventbrite for event registration
- Kids Out And About Outside website
- VolunteerMatch website to recruit volunteers
- Bay Nature Magazine events calendar and Bay Area Science Calendar
- On-refuge flyers for event promotion
- Flyers distributed at community locations such as libraries & community centers

F. FY24-25 Year in Review

Program Numbers

Program Type	# Proposed	# Conducted	# Participants
Public Programs	17	19	318
Group Programs	21	34	986
Special Event	1	1	131
Outreach (In-Person)	7	8	1373
Stewardship & Citizen Science	12	15	324
Coordinating Volunteers	8	8	97
Summer Camp	1	1	60
Mercury Outreach *	16	23	703
TOTAL	67	81	3,289

* Mercury Outreach Programs & Participants overlapped with Outreach, Public, & Group Program Participants and are not included in the overall total # of Participants.

Participant Numbers

Quarter	Pre-K	Elem	Middle	High	Adult	Total #
Quarter 1 (Jul-Sep)	19	240	101	58	259	677
Quarter 2 (Oct-Dec)	16	81	15	117	521	750
Quarter 3 (Jan-Mar)	21	92	35	32	318	498
Quarter 4 (Apr-Jun)	72	484	27	16	765	1364
TOTAL	128	897	178	223	1863	3289

Online Educational Posts

Quarter	# Posts Proposed	# Posts Created	Reach (FB & IG)
Quarter 1 (Jul-Sep)	3	6	1319
Quarter 2 (Oct-Dec)	3	4	621
Quarter 3 (Jan-Mar)	3	3	1314
Quarter 4 (Apr-Jun)	1	7	3427
TOTAL	10	20	6681

F. FY24-25 Year in Review

Attendees by City

We strive to serve and educate Santa Clara Valley residents with our programs. While our Public Programs are open to anyone, we prioritize our outreach efforts to cities and unincorporated areas within the Santa Clara Valley. In the registration process for our programs, post-program surveys, and often during programs, we ask participants to provide what city they live in.

City	# Known Attendees	% of Total Attendees
Alviso	246	7.48%
Campbell	20	0.61%
Cupertino	110	3.34%
Los Altos	3	0.09%
Los Gatos	13	0.40%
Milpitas	81	2.46%
Monte Sereno	0	0.00%
Mountain View	35	1.06%
Palo Alto	35	1.06%
San Jose	878	26.70%
Santa Clara	578	17.57%
Saratoga	14	0.43%
Sunnyvale	257	7.81%
Santa Clara County (unspecified)*	285	8.67%
Other City*	360	10.94%
Unknown**	374	11.37%

*Santa Clara County (unspecified) includes participants who said they lived in Santa Clara County but did not specify which city or if they were from an unincorporated area.
**Other City includes participants who identified that they came from cities outside of Santa Clara Valley, including Gilroy, Morgan Hill, and counties outside of Santa Clara County
***Unknown includes participants for whom we were unable to collect city information or they declined to provide this information.

Among program attendees who shared their city, **86%** identified themselves as residents of Santa Clara Valley!

F. FY24-25 Year in Review (cont.)

Survey & Feedback Summary

After our public, group, and volunteer programs, we send out surveys whenever possible to get feedback from event participants. These surveys help us assess what participants learned and enjoyed from each program, their understanding of the Watershed Watchers messaging, and how we can improve our programs. We were able to greatly increase our survey responses this year. Here are results of our most frequently asked survey questions:

47
 # Programs with Surveys Sent

477
 # Survey Responses

Where does water that flows into our storm drains go?

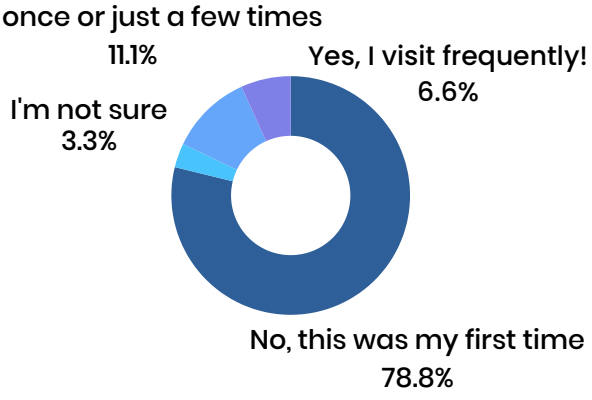
90%
Correctly answered:
To a creek, the SF Bay, or the ocean

Is stormwater (water that flows from our streets into storm drains) treated before it reaches the San Francisco Bay?

81%
Correctly answered:
No

Others answered "Yes," "Sometimes?" or "I don't know"

Before this program, have you ever been to the Don Edwards SF Bay National Wildlife Refuge?



Share one step you can take to prevent water pollution.

Nearly all respondents listed at least one of the following steps:

- Dispose of trash properly/pick up litter, recycle
- Reduce plastic usage
- Go to the carwash instead of washing cars in the driveway
- Pick up pet waste
- Keep storm drains clean
- Don't dump anything into drains
- Plant native plants

In addition, we have received many positive comments, constructive feedback, and ideas for future programs. These comments are considered as we plan our events.

F. FY24-25 Year in Review (cont.)

Program Partners

Organization/Agency	# Programs
Alameda County Mosquito Abatement District*	1
Alviso in Action*	1
American Association of University Women*	1
BioBlitz Club*	1
Boys & Girls Club	4
Calpine*	1
City of Santa Clara	1
Climate Resilient Communities*	1
Creek Connections Action Group	2
Grassroots Ecology	1
Jain Center of Northern California*	1
Joyce Ellington Branch Library*	1
Keep Coyote Creek Beautiful	4
Marshmallow Minds*	2
San Francisco Bay Bird Observatory	5
Santa Clara County Parks	3
Santa Clara County Vector Control District*	1
Santa Clara Valley Bird Alliance	3
Saved by Nature	5
South Bay Salt Pond Restoration Project	1
Sunnyvale Library	3
Tamien Nation*	1
The Wildlife Society, SF Bay Area Chapter*	1
Western Regional Robotics Forum*	1

Schools/Colleges Served

School/College	# Programs
De Anza College	7
George Mayne Elementary	3
Homestead High School	1
Mission College	3
Resurrection Catholic School*	1
Russo McEntee Academy	2
San Jose City College	6
San Jose State University	8
Windmill Springs Elementary*	1

Totals:

24 partner organizations/agencies

9 schools/colleges

- **Asterisks indicate new partners to our knowledge**

Appendix A: Q4 Program Descriptions, Attendee Data, & Survey Results

Public Programs

World Migratory Bird Day: The Role of Community Science

In celebration of World Migratory Bird Day, we hosted a presentation and short walk discussing how community/citizen science helps us understand the amazing feat of bird migration, how bird populations are changing, and how we can explore data visualization tools in apps and websites like iNaturalist and eBird. We shared World Migratory Bird Day stickers and pamphlets with the theme of Shared Spaces to encourage participants to take action to help protect birds.

Sunnyvale Library Bird Walk

We continued our partnership with Sunnyvale Library by offering a bird walk and tour for library patrons. With a group of over 40 people, we first discussed the Refuge and some of the species protected. We then split up into 3 groups to look for birds and discuss the different habitats and native plants we have onsite, observing over 25 different bird species. Finally, we shared how we can all play a role to protect the Refuge and these birds by protecting the watershed.

A Black-necked Stilt chick spotted during the bird walk. (Photo: Joe Montes de Oca)

Why Tides Matter

Longtime USFWS volunteer Laurel gave a presentation focusing on the science of tides and why they are important, including implications for how development and pollution get into the Bay. The presentation was followed by a short walk to see the slough, with some discussion about the levee project.

Twilight Tales at the Refuge

Another longtime USFWS volunteer, Larry, gave a presentation focusing on the history of the Refuge, covering everything from the development and industrialization of the Bay (including mercury mining) to the establishment of the Refuge and restoration of the salt ponds. This walk was followed by a pleasant sunset walk on the marsh.

Participants enjoying the sunset on the marsh. (Photo: Sirena Lao)

Pollinators: What Flowers Are They Visiting?

To celebrate Pollinator Week, we hosted a presentation focused on how to document pollinators in iNaturalist and use the power of the community/citizen science to understand which flowers different species are using – an underutilized and lesser known tool available to the public. The presentation was followed by a short walk to practice documenting pollinators in the Butterfly Garden, and we discussed wildlife-friendly gardening techniques to help support pollinators.

Appendix A: Q4 Program Descriptions, Attendee Data, & Survey Results

Group Programs

College Field Trips

We hosted field trips for biology, environmental studies, and marine biology classes from local colleges. This quarter, we welcomed three classes from San Jose City College and two classes from De Anza College. During each field trip, students received a tour of the habitats of the refuge while learning about the wildlife, plants, benefits of salt marshes, and restoration projects. We also covered the history of mercury pollution and how we can all help protect the refuge by reducing urban runoff pollution.

Joe leading a group of San Jose City College students through the marsh. (Photo: Leila Inocentes)

Earth Week Presentation: Birds

Sirena visited Resurrection Catholic School in Sunnyvale as part of their Earth Week to give a presentation at a school assembly focused on birds. We covered why birds are important, talked about a few of the bird species commonly found at the Refuge, introduced endangered birds and threats they face, and shared how to help birds through watershed protection. The students ranged from TK to 8th grade and were an attentive audience with great questions!

Boys & Girls Club Summer Science Project

As part of a partnership with Saved by Nature, we visited two local Boys & Girls Clubs (Alviso and Si Se Puede in East San Jose) to talk about wetlands and the wildlife we protect. We gave a presentation introducing wetlands, their benefits, and the species they support, including Salty the salt marsh harvest mouse. Kids developed a fondness for Salty and were challenged to use their observation skills to keep track of the number of Salties on the slides. We then shared ways to help Salty and protect its marsh habitat through reducing watershed pollution. Following the presentation, we played an interactive Marsh Match-up Game, asking students to match different species to an adaptation they have for surviving in marshes.

Boys & Girls Club students playing the Marsh Match-up game. (Photo: Sirena Lao)

Appendix A: Q4 Program Descriptions, Attendee Data, & Survey Results

Outreach

Tabling at George Mayne Carnival

We tabled at George Mayne Carnival alongside USFWS to engage with our local community here in Alviso. We shared flyers, pamphlets, bookmarks, and stickers about the Refuge, as well as upcoming programs and volunteer events. We also had pelts, paw prints, scat, and fun fact cards for coyote, skunk, raccoon, and grey fox -- all mammals that are found on the Refuge. In addition to checking out these materials, visitors participated in a track card activity, where students would match the track stamp to the correct animal.

City of Santa Clara Earth Day & Arbor Day, Mission College Eco Fair, and Russo McEntee Earth Day Festival: See Quarter Highlights: Earth Month Activities, page 5

Stewardship & Citizen Science

National River Clean Up Day at the EEC

With support from the Creek Connections Action Group, we hosted a clean up site at the EEC for National River Clean Up Day. This program encourages people to volunteer to help pick up litter from our local waterways to reduce the amount of pollutants that flow through the watershed and into the San Francisco Bay. With the help of 16 volunteers, we were able to remove over 60 lbs of trash from areas around the EEC and Grand Blvd, including a number of small statues, a lint roller, and of course many cigarette butts and snack bags.

Participants picking up litter along Grand Blvd next to New Chicago Marsh. (Photo: Joe Montes de Oca)

Habitat Restoration Volunteer Work Days, Earth Month BioBlitz: See Quarter Highlights: Earth Month Activities, page 5

Appendix A: Q4 Program Descriptions, Attendee Data, & Survey Results (cont.)

Coordinating Volunteers

Calpine Volunteer Work Day

Calpine is a local power company, and one of their facilities is just down the road on Los Esteros Rd. We coordinated with them to organize a volunteer day at the EEC for their employees as a way for them to engage in team-building while helping a local cause. We had so much invasive mustard and thistle flowering this spring, but 15 volunteers made quick work of removing them using only shovels and elbow grease. This group expressed interest in participating in another volunteer day at the Refuge.

Calpine volunteers pulling up a large stand of invasive mustard. (Photo: Leila Inocentes)

Volunteer Appreciation Banquet

As a way to share our appreciation for our volunteers and continue cultivating our relationship with them, we held our annual volunteer appreciation event. These banquets would normally be co-hosted with USFWS, but due to staffing and funding shortages, no federal staff were able to attend. Instead, SFBayWS led the planning and implementation of the event and shared some updates about the status of the Refuge, played a video about the National Wildlife Refuge System to inspire them, and recognized volunteers who went above and beyond in the last year. We also created a "Find Your Colony" game for the volunteers to test out and provide feedback on.

Volunteers playing the Find Your Colony game. (Photo: Sirena Lao)

Appendix A: Q4 Program Descriptions, Attendee Data, & Survey Results (cont.)

Survey Results

This quarter, we sent out 11 post-program surveys after public, group, and stewardship programs and received 93 responses. By implementing a QR code and providing the option of filling out physical survey sheets, we were able to increase response rates. Below are questions we commonly ask as part of our surveys and a summary of responses.

What was your favorite part of the event, or what was your favorite thing you learned?

With so many of our survey responses coming from the college field trips, most people responded that they enjoyed walking the trails, observing birds through binoculars, learning about endangered species, tasting pickleweed, and smelling/learning about native plants.

Stand-out comments:
"My favorite part at the Watershed Watchers Program was getting to see how the whole water system connects like how storm drains, creeks, and wildlife are all tied together. It made me think differently about how even small things, like washing your car or using too much fertilizer, can end up affecting the bay. I also liked how hands-on everything was it wasn't just info, it was stuff you could actually see and relate to. It made the whole experience stick with me more."

"The most interesting thing I learned was the agricultural impact of the mercury mining process during the Gold Rush and its remnants around local landmarks such as Quicksilver Park and Almaden Lake."

"My favorite part of the event was when we got to see the different birds in the wetlands. I learned other ways to be eco friendly when it comes to what gets washed out into the refuge."

Multiple Choice Questions

Where does water that flows into our storm drains go?
To a creek, the San Francisco Bay, or the ocean

91.4%
Correct Responses

Is stormwater (water that flows from our streets into storm drains) treated before it reaches the San Francisco Bay?
No

86.2%
Correct Responses

Before this program, have you ever been to the Don Edwards SF Bay National Wildlife Refuge?

74.2%
First Timers

Appendix A: Q4 Program Descriptions, Attendee Data, & Survey Results (cont.)

Survey Results (cont.)

Share one step you can take to prevent water pollution.

The most common responses we received (and some examples of favorite responses) were:

- Take vehicles to a car wash instead of washing them in driveways
- Avoid littering / pick up and dispose of trash properly
- Reduce single-use plastic / opt for reusable items
  - *"One way to prevent it is to reduce the amount of plastics used. Rather than bottled water it would be better to drink out of a reusable water bottle."*
- Pick up after pets
  - *"I have a dog so i'll be sure now to pick up his poop."*
- Avoid pouring various contaminants down drains and dispose of hazardous materials safely
  - *"One step I can take to prevent water pollution is to never pour oil, paint, or any chemicals down the storm drain or onto the street. Instead, I'd make sure to dispose of them properly at a hazardous waste facility. It seems small, but even one person doing the right thing can help keep toxic stuff out of our creeks, rivers, and the Bay."*
- Share the importance of water pollution prevention with other people
  - *"Use my voice! Talk to family members or even if I am teaching people how to do something, maybe a kid in the future, this is how to do it."*
- Avoid using pesticides

Other Feedback

In addition to our surveys, partners sometimes collect and share feedback from participants. Here are a few of the comments shared by Sunnyvale Library participants following our Bird Walk:

"It was a lovely day. Me and my family enjoyed the walk. Learning about different birds and the endangered harvest mouse salty. It was great watching the brown and white pelicans. Thank you for providing binoculars. It was my sons 10th Birthday yesterday and he choose to do this event and he was so happy to learn so many new things. You made his day. Thank you for an awesome morning!"

"Learning more about wildlife and birds through the staff and really seeing the birds in their natural habitat. I appreciate that they provided binoculars and spent the time to explain all the different species and the vegetation in the area. The staff were great and it was well-organized. =)"

Appendix B: Watershed Watchers Work Plan for FY24-25

WATERSHED WATCHERS PROGRAM TITLE & GOALS July 2024 - June 2025	METHODS AND OBJECTIVES OF PROGRAMS
Public Programs: Both In-Person and Virtual Opportunities **Goal:** Interpretive programs offered to the public on-Refuge or at partner locations within Santa Clara Valley (either self-guided or staff/docent-guided as permitted), focusing on how individual behaviors cause urban runoff pollution and impact wildlife and habitat in our watersheds. In-person programs are the priority, but virtual programs can be used effectively to reach new audiences and provide programs with a low barrier to entry.	The interpretive specialist will coordinate with docents and associate(s) to offer various programs to members of the public of all age groups. These events include interpretive programs that introduce visitors to the Refuge's habitats, plants, and animals through historical and ecological contexts. The multi-pronged approach to the program prioritizes on-Refuge programs but allows for the continuation of self-guided, virtual, and off-site programs to reach our community members in new and accessible ways. These programs will increase visitors' awareness of Bayland habitats and will provide opportunities for visitors to connect to them. Program offerings vary by season and availability of volunteer docents. Whenever possible, a survey will be offered to gather information about participant location. **Public Locations:** EEC and other locations within DESFBNWR, or in Santa Clara Valley **Virtual Platform:** Zoom **Objective:** Participants will state various ways they can protect the Refuge, such as reducing litter by properly disposing of their trash, reducing their trash output by using less packaging, and recycling. They can also reduce urban runoff by using fewer pesticides or using alternatives at home or work.
Group Programs: Both In-Person and Virtual Opportunities **Goal:** Interpretive programs offered to community and youth groups and schools in-person at the Refuge or on-site at schools and other community locations, focusing on how individual behaviors cause urban runoff pollution and affect wildlife and habitat in our watersheds.	The interpretive specialist will coordinate with docents and associate(s) to offer various programs for community and youth groups, such as cultural organizations, scouts, senior groups, and school groups from Pre-K through College. These events include interpretive programs that introduce visitors to the habitats and wildlife of the Refuge through historical and ecological contexts. This program model allows for flexibility to meet the needs of these specific groups. These programs will increase visitors' awareness of Bayland habitats and will provide opportunities for visitors to connect to them. Program offerings vary by season and availability of volunteer docents. Whenever possible, a survey will be offered to gather information about participant location. **Public Locations:** EEC and other locations within DESFBNWR, or in Santa Clara Valley **Virtual Platforms:** Zoom

WATERSHED WATCHERS PROGRAM TITLE & GOALS July 2024 - June 2025	METHODS AND OBJECTIVES OF PROGRAMS
	Objective: Participants will state various ways they can protect the Refuge, such as reducing litter by properly disposing of their trash, reducing their trash output by using less packaging, and recycling. They can also reduce urban runoff pollution by using fewer pesticides or using alternatives at home or work.
Special Event: In-Person **Goal:** Provide an event-type program that attracts approximately 50-100 people to participate in an in-person event supplemented with online activities.	The interpretive specialist and associate(s) will work with FWS staff and other partner organizations to coordinate an in-person event that may be supplemented by online (at-home) or self-guided activities. For example, we could continue with large-scale events for Earth Day or similar events during the Spring. **Public Locations:** EEC and other locations within DESFBNWR, or in Santa Clara Valley **Virtual Platforms for Supplemental Activities:** Facebook, Instagram, and SFBWS Website. **Objective:** Participants will be able to identify how nature, wildlife, the Refuge, and our local watersheds benefit us and the steps they can take to protect and enhance them, i.e., ride their bike instead of driving when possible, pick up trash, and use less-toxic pest management.
Outreach: On-Refuge, In the Community, & Virtual **Goal:** Create in-person and virtual outreach opportunities that increase public awareness about the Refuge, habitats and wildlife, local watersheds, and the urban runoff pollution prevention program.	The interpretive specialist and associate(s) will create outreach opportunities for the community to increase their awareness, connection, and education. This outreach also includes promoting Public Programs to inform the public, groups, and schools about upcoming programs and urban runoff pollution prevention. In-person outreach activities and events will be conducted as the priority for outreach. This will include hosting or attending outreach opportunities on-Refuge or off-site at community locations, i.e., libraries, farmers markets, etc. Virtual outreach activities include Facebook, Instagram, and website blog posts. Facebook posts can be "boosted" to reach a wider audience within Santa Clara County that does not already follow our page. Posts and blogs may include photographs, videos, graphics, and narrative text and will tie themes of urban runoff pollution prevention to the protection of the Refuge and its wildlife. **Public Locations:** EEC and other locations within DESFBNWR, or in Santa Clara Valley

WATERSHED WATCHERS PROGRAM TITLE & GOALS July 2024 - June 2025	METHODS AND OBJECTIVES OF PROGRAMS
	Virtual Platforms: Facebook, Instagram, SFBWS Website, SFBWS Tide Rising Newsletter, and Partner Organizations. **Objective:** Provide opportunities to spread the word about the Refuge and deliver information for people to learn about the effects of litter and how to prevent urban runoff pollution in the watershed.
Stewardship and Community Science: In-Person (Guided or Self-Guided On-Refuge or with Partners Off-Site) **Goal:** Stewardship activities encourage and inspire visitors to create wildlife habitats and use chemical-free garden techniques in their own backyards. Clean-up days help participants connect their trash habits with effects on the environment and local wildlife. The community science programs monitor the effects of invasive species and climate change as well as the positive impacts of stewardship activities on plants and wildlife.	The interpretive specialist and associate(s) will work on developing opportunities for the public to participate in stewardship and community science at the Refuge or at community locations within the watersheds of the Santa Clara Valley. We will also implement stewardship messaging and resources into virtual programs, outreach, and activities. In addition, we will work with partners to host off-site events that promote watershed stewardship and highlight the connections between healthy habitats and healthy watersheds. School groups and public workdays will be hosted at the Refuge as permitted given constraints from construction efforts on the South Bay Shoreline Levee construction. We are currently able to host these programs on Sundays. **Public Locations:** EEC and other locations within DESFBNWR, or in Santa Clara Valley. **Virtual Platforms:** Zoom, Facebook, YouTube, Instagram, SFBWS Website, and iNaturalist. Stewardship and Service-Learning programs take many forms and can integrate varying topics that emphasize urban runoff pollution prevention. Options are being explored as we continue in-person programs with EEC construction constraints. 1. A*s permitted by the U.S. Fish and Wildlife Service*: Garden workdays emphasize chemical-free and low-water use gardening techniques. **Objective:** Through the upkeep of the native plant demonstration gardens, visitors can replicate native plant and chemical-free gardening techniques in their home gardens. 2. *As permitted by the U.S. Fish and Wildlife Service*: Habitat clean-up days allow visitors to take action to clean up the local environment by removing trash from wildlife habitat. **Objective:** These programs provide volunteers a first-hand experience to see the effects of trash from urban runoff on coastal environments and wildlife.

WATERSHED WATCHERS PROGRAM TITLE & GOALS July 2024 - June 2025	METHODS AND OBJECTIVES OF PROGRAMS
	3. *As permitted by the U.S. Fish and Wildlife Service*: On-site or off-site opportunities will provide Stewardship and Service-Learning experiences. **Objective:** Stewardship and Service-Learning programs will allow students to learn about the Refuge's habitats and wildlife while also volunteering to help improve these habitats, or their local habitats. By visiting a DESFBNWR site or working locally off-site students will learn about chemical-free gardening practices and their connection to the watershed. Stewardship will include habitat restoration, trash pickups, and community science data collection. 4. *As permitted by the U.S. Fish and Wildlife Service*: Community Science programs provide visitors and volunteers an opportunity to take action to monitor and observe the changes and effects of climate change and habitat restoration of the native plant garden. **Objective:** The opportunity to closely observe plants and wildlife provides a chance for visitors to develop a deeper understanding and appreciation of the wildlife and plants that can be affected by urban runoff pollution. In addition, they will learn about the benefit of native plants in preventing soil erosion and urban runoff.
Marsh-In Summer Camp **Goal:** This camp program is designed to provide opportunities for young campers to learn about and connect with wetland habitats, animals, and plants.	The interpretive specialist will co-lead Summer Camp with USFWS staff through the planning, organization, and supervision of the Summer Camp & Programs Associate. This effort is funded in part by another corporate funder. We are bussing students from Santa Clara County to Fremont Summer Camp 2024 because of the Levee Construction effort. The annual summer camp will include self-guided activities for campers to complete at home, followed by three in-person camp days at the Refuge. We encourage the participation of students from the local elementary school in Alviso and the Refuge's partner school district in Newark. However, it is open to all students in the local area. In addition, the specialist will focus on targeted Camp outreach within Santa Clara County to encourage sign-ups. *Planning for this program begins six months in advance during the previous fiscal year.* **Virtual Platforms:** Zoom, YouTube, and SFBWS Website.

WATERSHED WATCHERS PROGRAM TITLE & GOALS July 2024 - June 2025	METHODS AND OBJECTIVES OF PROGRAMS
	Objective: This camp provides an opportunity to introduce young students to how individual behaviors cause urban runoff pollution and affect wildlife habitats in our watershed. All campers receive a "Creek Connection" drawstring bag and a "You are the Solution to Water Pollution" brochure. Campers also learn about pollution prevention through engaging videos and activities that encourage campers to reduce their single-use plastic usage through creative measures.
Coordinate Refuge Volunteers for Numerous Projects & Programs **Goal:** To maintain and grow a volunteer program that aids the Watershed Watchers programs and projects.	Work with and maintain ongoing relationships with volunteers at the Refuge that assist with Watershed Watchers programs and projects. Provide volunteers with the necessary training and educational opportunities to spread the Watershed Watchers and Refuge's messages. Maintaining our volunteer base includes volunteer meetings via Zoom and in-person, providing learning opportunities for volunteers hosted by the Refuge and partners, and encouraging volunteer opportunities such as leading in-person or virtual programs. Host on-site opportunities for new volunteers that engage the public in habitat restoration or community science. Participants will be surveyed after these events and are invited to attend future volunteer orientation or enrichment events. **Public Locations:** EEC and other locations within DESFBNWR, or in Santa Clara Valley **Virtual Platform:** Zoom **Objective:** By building and maintaining a highly trained volunteer core, volunteers will help provide a variety of programs and help reach diverse audiences with an emphasis on expanding relationships in Alviso and with Asian and Latino/a/e/ community members. This priority is identified in the DESFBNWR Visitor Services Plan 2021-2026 and will guide planning efforts. In addition, they will increase the capacity of the Watershed Watchers program.

WATERSHED WATCHERS PROGRAM TITLE & GOALS July 2024 - June 2025	METHODS AND OBJECTIVES OF PROGRAMS
Visitor Enrichment and Maintenance of Environmental Education Center **Goal:** Enrich visitor experiences at the Environmental Education Center site and trails through tangible communication materials. Maintain the Environmental Education Center and trail aesthetics to provide visitors with a welcoming and safe environment. Assist with providing quality visitor services by working with FWS staff to provide a clean and safe environment for visitors, staff, and volunteers.	Design and implement tangible communication and educational materials, such as interpretive signage along trails, that share messaging related to preventing urban runoff pollution and protecting local habitats. Maintaining a welcoming and safe environment for Refuge visitors includes removing weeds surrounding buildings and trails, picking up trash, and stocking outdoor brochure racks. Assist USFWS staff in reorganizing and assessing former in-person programs and developing ways to keep the Environmental Education Center safe, clean, and organized. **Objective:** Provide a quality, safe, and welcoming environment for visitors to the Refuge at the Environmental Education Center site through tangible communication materials and a presentable and safe outdoor recreation site.
Developing and Maintaining Partnerships with Local Community Organizations **Goal:** Maintain and create partnerships with local community organizations via in-person meetings, phone calls, emails, and virtual meetings with groups.	The interpretive specialist will reach out to new audiences to break down barriers and invite these groups to participate in the available program experiences. The specialist will reach out to groups that have traditionally not used the Refuge as a resource, such as but not limited to groups for children and adults with special needs, etc. During the year, relationships will be cultivated and maintained through the exchange of information and collaboration on issues related to urban runoff pollution prevention and wildlife with local collaborative groups and consortiums. Groups will be invited to participate in educational and interpretive programs. **Objective:** Connect with new and diverse audiences, such as Latino/a/e and Asian residents in neighboring communities (as identified in the DESFBNWR Visitor Services Plan 2021-2026), to share urban runoff pollution prevention messaging and support the longevity, effectiveness, and relevance of the Watershed Watchers program to focus audiences.

WATERSHED WATCHERS PROGRAM TITLE & GOALS July 2024 - June 2025	METHODS AND OBJECTIVES OF PROGRAMS
Program Research, Development, and Documentation **Goal:** Research and development time is necessary for creating 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. Documentation includes writing scripts, lesson plans, and quarterly and annual reports.	The interpretive specialist and associate(s) will dedicate time to 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 program development training (in-house or local) to expand knowledge of the subject and create and develop new ideas for programs. Time is also 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. This also includes the implementation of post-event surveys that participants complete on their own time. These evaluations assess the participant's knowledge of urban runoff pollution prevention from the program. Any survey information will be summarized in 4Q (Annual) Report. **Objective:** Support the longevity, effectiveness, relevance, and efficiency of the Watershed Watchers program.
Mercury Risk Reduction Outreach **Goal:** Provide information for college and high school groups and the public regarding human health and environmental impacts of mercury, specifically focusing on mercury in fish.	The interpretive specialist and associate(s) will offer and develop in-person and virtual programs and messaging for college and high school groups and the public. Programs will provide historical information about mercury contamination, guides to safely eating fish and shellfish from the San Francisco Bay, as well as current research projects on the Refuge relating to the impacts of mercury on wildlife and the Bay. **Objective:** Provide information to the public about the impact of mercury on human health and the environment by incorporating the information into existing programming. This information will include the historical impacts of mercury on our wetland ecosystems as well as tangible actions to prevent mercury pollution. This message will be incorporated into all college and high school programs.

Additional Notes:

While participants are welcome from any location, the goal of the Program is to have 80% of participants be Santa Clara County residents.

Reaching Diverse Audiences

Along with supporting the Watershed Watchers mission, the San Francisco Bay Wildlife Society will follow and carry out the goals listed in the Don Edwards San Francisco Bay National Wildlife Refuge Visitor Services Plan 2021-2026 (VS Plan). The VS Plan outlines the culturally diverse communities where the SFBWS and the Refuge will continue to focus engagement and outreach efforts. Below is an excerpt from the VS plan that describes how the Refuge and partner organizations, including SFBWS, will move forward in connecting with our diverse communities.

"In an effort to create meaningful connections between the Refuge and communities not often represented on public lands, we have defined specific audiences within our neighboring communities to focus our environmental education and community engagement efforts. Approaching visitor services opportunities in this way allows staff, volunteers, and partners the opportunity to deepen their knowledge and awareness of the communities in which we are a part. Defining specific focus audiences is not meant to exclude any traditional visitor group or conservation partner, but rather, to ensure all audiences have the opportunity to be public land stewards. Long-term conservation success will stem from the inclusion of diverse audiences."

Within Santa Clara County, Alviso is a neighboring community that is a target audience for the SFBWS and the Refuge. There are ~2,000 residents in Alviso, the majority of whom are of Latin American descent.

In addition to focusing on target audiences, the SFBWS also follows the **Urban Wildlife Conservation Program's Standards of Excellence**, which provide a framework for connecting urban communities. The standards include the following:

1. **Know and Relate to the Community**
2. **Connect Urban People with Nature via Stepping Stones of Engagement**
3. **Build Partnerships**
4. **Be a Community Asset**
5. **Ensure Adequate Long-Term Resources**
6. **Provide Equitable Access**
7. **Ensure Visitors Feel Safe and Welcome**
8. **Model Sustainability**

The VS Plan and the Urban Wildlife Conservation Program Standards will guide SFBWS's efforts to reach diverse audiences and connect with community members to promote the Watershed Watchers mission.

Planning for In-Person Events

The Environmental Education Center site is impacted by the **South San Francisco Bay Shoreline Levee Project**, led by the U.S. Army Corps of Engineers with partners including the California State Coastal Conservancy, Valley Water, and the U.S. Fish & Wildlife Service. Phase I of this project has led to the multiyear closure of the Mallard Slough Trail around Pond A16 and has significantly affected the visitor experience at the Alviso Unit of the Don Edwards San Francisco Bay National Wildlife Refuge (DESFBNWR). The larger DESFBNWR Visitor Services Team has utilized this opportunity to engage the public in discussions about the importance of large-scale restoration projects and climate change; however, the situation has posed several difficulties. The Watershed Watchers team has adapted to these constraints by planning programs at the EEC on Sundays and in the evenings when construction is not scheduled. We will continue to adapt to these changes and will use other DESFBNWR sites, especially within Santa Clara County, as well as community locations such as classrooms, libraries, and local parks as needed. The Watershed Watchers Program is committed to hosting our in-person programs and will place the safety and well-being of our community members and staff at the highest priority as we plan events.

Photo: De Anza College students observing birds in New Chicago Marsh by Joe Montes de Oca

THANK YOU FOR YOUR CONTINUED SUPPORT

San Francisco Bay Wildlife Society

Santa Clara Valley Urban Runoff Pollution Prevention Program

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 7-4

ZunZun School Assemblies for Watershed Watch FY 2024-25

- ZunZun Assembly Programs for Watershed Watch-Final Report FY 2024-25 School Year, July 15, 2025
- Memorandum-End of Year Evaluation of the FY 2024-25 School Assembly Program, July 28, 2025

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website: www.zunzuntunes.com

ZunZun Assembly Programs for Watershed Watch
FINAL REPORT 2024-2025 School Year
July 15, 2025

OVERVIEW

During the 2024-2025 school year, ZunZun performed 52 assemblies at 26 sites in Watershed Watch's service area; 25 of these were elementary schools and one a community event attended mostly by elementary school children.

ZunZun reached approximately 10,927 students and approximately 453 educators and parents with the watershed education assemblies. Through these performances, ZunZun shared information about the Santa Clara Valley watershed (what it is and where students are in their watershed), the San Francisco Bay ecology, how to protect the watershed, estuary definition, recycling, waste reduction, watershed and school clean ups, and what to do to have 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
- Final Performance Schedule
- 2024-25 Outreach Flier
- Sample Newsletter Article

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. Once a contact was established, ZunZun emailed a flyer to the school contact person and then followed up to answer questions and book assemblies. A performance update was sent to SCVURPPP monthly. We strived to do outreach to cities and towns that had not had an assembly in the previous two years, and we stay in contact with SCVURPPP staff to keep checking in throughout the 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 showtimes 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 Watershed Watch brochures, evaluation postcards. After the assembly each school was emailed a post-assembly hand out, and links to online activities.

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, and provides information and links on how to prevent pollution at home as well as ideas on how to get involved.

STATE STANDARDS

This year schools in California continue to implement NGSS (Next Generation Science Standards), so we are continuing to update our content to meet common core and NGSS curriculum goals. As Common Core standards are designed to encourage critical thinking and holistic learning, they are a greatly addressed in the watershed 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 **NGSS**

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, problem solving and critical thinking and are geared to stimulate reflections on students' real-life situations.***

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 (NGSS): 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

Our focus was on watershed protection, storm drain runoff, pollution prevention, recycling, aquatic wildlife, and school and neighborhood cleanups.

ZunZun Water Program "The Water Beat" For Watershed Watch

Introduction to Program-Acknowledge Watershed Watch and introduce performer(s).

Water Words- A song highlighting the importance of water to all life and the many words for water used in different languages. We highlight *Agua* (Spanish, Portuguese), *Vatten* (Swedish), *Amanzi* (Zulu), *Su* (Turkish) *Mizu* (Japanese) *Apa* (Romanian) *Vai* (Hawaiian) *Pani* (Hindi) , and the students sing along with accompaniment of a Nigerian Udu (musical clay container).

H20- Go with the Flow- Introduce popular movement song, which covers topics such as, watershed elements (waterfall, creek, river, bay-ocean) water cycle, properties of water, and how our bodies are filled with water.

Rainsticks for Drought and Atmospheric River- We showcase rain stick instruments made from recycled cardboard tubes and from cactus to show how rainfall levels are constantly changing due to climate change. Droughts, flooding and atmospheric rivers are realities of our climate in the western states. We show how to make rainsticks, including one featured which is 12 feet tall! We explain that rainfall levels in our watershed due to drought and flooding, dramatically affect aquatic wildlife habitat. Example: fish that spawn in creeks and rivers can't successfully do so when water levels are too low. We emphasize that no matter what kind of year we are presented with, we should also never waste water. Water conservation protects watersheds by leaving more water for the aquatic wildlife, and for maintaining healthy watershed flow.

Storm Drain to the sea- Through colorful illustrations on cards made by local artist Doug Ross, and emphasized with our watershed backdrops, we illustrate the pathways from storm drain to drainpipe, to creek, to river (Guadalupe) and ultimately to the San Francisco Bay and Pacific Ocean. We introduce the topic of storm drain pollution and how to prevent it, such as picking up trash on school campus.

Doing the Water Dance- We create two student participation dances to highlight different kinds of pollution sources from our own neighborhoods. Plastic pollution (The jellyfish), Soap and Oil (the carwash). We give alternatives such as commercial car washes that recycle water, and use of reusable containers and bags, rather than single use bottles and plastic bags.

Polluted Water Song- In this simple movement song played with ukulele, we follow polluted water (oil, trash etc.) from neighborhood to storm drain, to creek and finally to the sea. Along the way, the polluted water makes wildlife like fish become sick.

Recycled instruments- We show trash found on creek and river clean ups (plastic bottles, wrappers, cans and cups) and talk about the importance of keeping our schools and neighborhoods clean of trash to prevent polluting our waterways. We create instruments from the trash and demonstrate how to make them. We encourage students to do clean ups of their school campus.

***Pulpo*/Octopus song**- This flamenco inspired song played with guitar, celebrates the adaptations of the octopus. All water that flows through the watershed eventually makes it way to the Pacific Ocean, where an incredible diversity of creatures live, like the octopus.

When we protect the watershed, we protect these creatures. We have students move like an 8-armed octopus and have them act out shooting an inky spray to protect themselves, changing colors (blue-yellow-red) and changing shape to fit into small spaces. We count to eight and sing the chorus "*Pulpo pulpo con ocho patas*" in Spanish as well. A very lively song!

Watershed Birds- We showcase various aquatic birds found in Bay Area watersheds (pelican, sanderlings, ducks, coots, kingfishers, gulls) with corresponding distinctive movements and a song played on ukulele.

Final Remarks and Thank You- We thank students, teachers and Watershed Watch, and mention the follow up activities and evaluations teachers will receive.

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 FOR WATERSHED WATCH SHOWS
2024-25

	Date	School	Contact	Time	City	# Students
1	08/21/24	Washington Open	Jennifer Contos	9:15 & 10:15	Santa Clara	334
2	09/03/24	Brooktree	Marissa Barajas	10:00 & 10:45	San Jose	379
3	09/16/24	Palo Verde	Annora Lee	9:30 & 9:10	Palo Alto	366
4	09/17/24	Eaton	Sonia Sharma	8:55 & 9:45	Cupertino	478
5	09/18/24	Sedgwick	Amanda Clark	9:00 & 9:50	Cupertino	392
6	09/23/24	Noddin	Emma Polden	8:30 & 9:15	San Jose	522
7	09/30/24	Blue Hills	Angelina Pearce	1:00 & 1:40	Cupertino	399
8	10/02/24	Windmill Springs	Becky Roussin	8:30 & 9:10	San Jose	560
9	10/03/24	Lynhaven	Heidi Towne	8:30 & 9:15	Campbell	502
10	10/15/24	Duveneck	Brittany	10:20 & 11:00	Palo Alto	349
11	10/29/24	Weller	Julian Roque	8:15 & 9:00	Milpitas	440
12	11/18/24	Montague	Heather Stephens	10:30 & 11:05	Santa Clara	272
13	11/19/24	Grant	Ana Palacios	8:15 & 9:00	San Jose	375
14	11/20/24	Briarwood	Diane Handley	8:30 & 10:15	Santa Clara	287
15	11/21/24	Castlemont	Alicia Stapes	9:00 & 10:00	Campbell	452
16	12/02/24	Hoover	Molly Loomis	10:20 & 11:00	Palo Alto	648
17	12/04/24	Sinnott	Adrienne Barbar	8:05, 8:40 & 9:20	Milpitas	714
18	12/09/24	Millikin	Iramnaz Ansari	10:20 & 11:05	Santa Clara	518
19	01/10/25	Stratford Pomeroy	Swati Pathak	8:30, 9:10 & 9:55	Santa Clara	713
20	01/16/25	Sutter	Nicole Boscacci	10:15 & 10:50	Santa Clara	305
21	03/31/25	Blossom Hill	Amy Despars	8:35 & 10:30	Los Gatos	489
22	04/10/25	Arbor Day	Karin Hickey	10:00	Santa Clara	See note below
23	04/11/25	San Miguel	Nicole Fiala	10:25 & 11:00	Sunnyvale	399
24	04/21/25	Fairwood	Rachelle Romander	12:50 & 1:35	Sunnyvale	321
25	04/22/25	Muir	Ann Nagamatsu	10:35 & 11:20	Cupertino	542
26	05/02/25	Lexington	Jason Deppong	10:35	Los Gatos	171

TOTALS: 26 schools/programs, 52 assemblies, 10,927 students.
Note: Approximately 1,200 students, teachers, and chaperones registered for the Arbor Day event. The number of attendees that attended this outdoor assembly was not tracked**.**

Sample Parent Letter:

The Musical Watershed

The musical duo ZunZun recently came to your child's school and presented a musical assembly about watersheds. ZunZun, a husband-and-wife duo who bring interactive, lively concerts and assemblies of music from all over North, Central and South America to audiences all over the Western United States. The assembly is bi-lingual and highly interactive.

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 drain's 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.

"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. The Watershed Watch Campaign is dedicated to educating and informing the public about the importance and value of local watersheds, and why protection of watersheds is so important to you, your children and future generations. It encompasses cities from Milpitas to Palo Alto, whose storm drains drain to the bay.

Follow up with your kids: check out the mywatershedwatch.org website. Go on a storm drain walk in your neighborhood and try to guess which creeks and rivers your storm drains run to. 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.

www.mywatershedwatch.org
www.zunzuntunes.com

Watershed Watch is sponsoring FREE assemblies by performing arts group, ZunZun!

Now Booking for 2024-2025!

SPACE IS LIMITED
FIRST COME, FIRST SERVED

Call (831)419-7012
or email
zunzunassemblies@gmail.com

Assemblies-
Indoors or Outdoors

The Waterbeat –Water Education Through Movement.

Water science/music/PE assembly- 30-40 minutes

Featuring original music by ZunZun to coincide with movements/games/sequences about water science, water conservation, watershed protection, pollution prevention, energy use, climate change and aquatic wildlife.

-Battery powered sound system for outdoor use (playgrounds and parks)

-Program can be bilingual in Spanish/English.

-Very active and fun!

ZunZun, the award-winning children's performing arts group, brings an engaging, musical movement educational assembly to your students and staff!

Assemblies teach your students about watershed awareness and water conservation in a fun, lively, and humorous performance!

Grades K-6 ***Bilingual shows available!** (Spanish-English)*

Meets State Content Standards! *30-40 Minutes*

Visit www.zunzuntunes.com for more information!

Fun Follow up Activities - Click on the links below

Teacher Evaluation

Please help us by completing this short evaluation. It helps us keep the assembly free!

Watershed Watch Assembly Evaluation

Videos

Watch our distraction free videos without ads!

Video Showcase

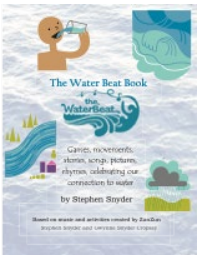
Matching Game

Water Conservation Card Matching game. Share your screen to play together or give kids the link to play at home! In Spanish and English.

Water Matching Game, English: https://matchthememory.com/zunzun

Water Matching Game, Spanish: https://matchthememory.com/zunzunwaterconservationspanish

PDF and Video of the WaterBeat Book



http://www.thewaterbeat.com/books.html

https://www.youtube.com/watch?v=Wq1jDs3yWdc

Music

Sing along on your favorite streaming service

ZunZun on Spotify

ZunZun on itunes

3-5 Activity Sheet

Word Search!

Words may be backwards, forwards, up, down, or diagonal.

www.MyWatershedWatch.org

Conservation	preserve natural resources from loss, injury, decay, or waste
Herbicide	chemicals used to destroy particular plants
Pesticide	chemicals used to destroy particular insects
Pollution	something that dirties our air or water
Runoff	water that drains or flows off roofs, parking lots, driveways, or streets, and goes into storm drains and creeks
Sanitary Sewer	a system of pipes under the streets that connects indoor drains (in sinks, showers, and toilets) with the local wastewater treatment plant
Storm Drains	a different system of pipes under the streets that carries rainwater and runoff directly to creeks and the Bay. Drains in the gutters (usually marked "No Dumping! Flows to Creek") are also called storm drains.
Stormwater	a drain water that flows down the streets during and after a storm
Toxic	poisonous, harmful
Watershed	a region in which all land drains into the same boy of water, such as into a bay, creek, river, or lake
Wetlands	land next to creeks, rivers, and the Bay where many birds animals, and plants live

W R F T K R V C U I N V L O I R M U Q T
E W K N S C A L W A T E R S H E D R P G
S C H U D T A F N S T O R M C W A V F Z
T M F V C D O C U I J D I P S I E Z N N
B W A G R O Q R W H E R B I C I D E T N
Y X H K S I N V M E L Q S Q Q M R X O U
U Q D O T V T S P W G G R E V X X P X X
L R M O D L R Y E M A U R U W C P H I E
Y C U D H W Y M S R P T W M E E S T C J
C C N N F U A M T V V O E E S X R P T B
T U S O O W B R I B R A L R T V R X J M
D T P E E F N K C I W I T L P L B D H Q
U I U Y Q G F V I V I P E I U P A T R U
S O E O C K D V D Q A X H U O T G N Y Q
F G D R A I N S E M C A C N U N I O D V
J H K F F V R K B U S F S H T B I O U S
W D X W T L T T C Q D V M T S T X A N B
L S H C Q O X J B R U N H H K K T S T K
O O B Y B O W V S Y P X N Z U F M O O T
Y Q X R G P L N D Q E S A N I T A R Y S

K-2 Activity Sheet

Crack the Code - Save the Bay!

Find the letter that matches the number. Write that letter in the space.

www.MyWatershedWatch.org

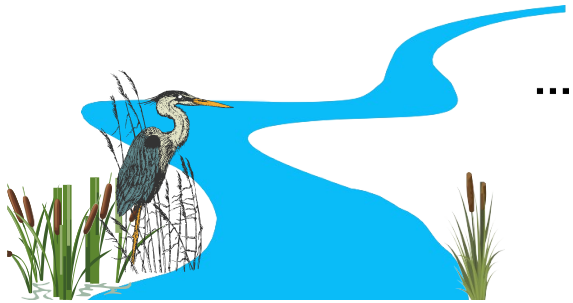
___	___	___	___		___	___	___	___		___	___	___	___		
23	13	18	8		24	7	16	13		14	23	17	13		

___	___	___		___	___	___	___	___		___	___	___	___	___	
26	6	9		20	26	23	24	11		14	24	7	16	13	

Clues:

A	B	C	D	E	F	G	H	I	J	K	L	M
7	3	12	14	9	21	25	6	16	10	2	18	11

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
13	23	5	4	24	20	26	22	1	17	19	8	15



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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 https://mywatershedwatch.org/fieldtrips/

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 https://explore.museumca.org/creeks/crkmap.html

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.

City	Contact
Campbell, Los Gatos, Monte Sereno, and Saratoga	West Valley Clean Water Authority Pia Lusk plusk@wvcwp.org or info@cleancreeks.org 408-354-4734
Cupertino	Environmental Programs environmental@cupertino.org 408-777-3236
Milpitas	Samantha Vergara svergara@milpitas.gov (408) 586-2617
San Jose	Environmental Services Stormwater Hotline sjenvironment@sanjoseca.gov 408-945-3000
Santa Clara	Karin Hickey kahickey@santaclaraca.gov 408-615-3097
Sunnyvale	Environmental Outreach green@sunnyvale.ca.gov 408-730-7717

Valley Water also offers a wide range of free educational programs for teachers and students. These are available to all schools and youth-serving organizations in Santa Clara County.

Valley Water
Public Information Representative,
Education and Outreach Program
Elizabeth Park
epark@valleywater.ord

Valley Water
Adopt-A-Creek Program and
Countywide Creek Cleanup Events
Nicholas Ingram
NIngram@valleywater.org
408-630-2454

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

MEMORANDUM

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 • Valley Water

TO: WEO AHTG

FROM: Program staff

DATE: July 28, 2025

SUBJECT: End-of-Year Evaluation of the FY 24-25 School Assembly Program

The school education assembly program is in its 23rd year of implementation. Each year, Program staff works with the Schools and Youth Outreach Work Group to develop a target list of schools for ZunZun to contact. In FY 24-25, ZunZun conducted 52 assemblies at 25 elementary schools and one community event. The assemblies reached approximately 11,238 students in grades K-6. The list of schools where assemblies have been booked is provided at the end of this memo.

ZunZun continued to email 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. ZunZun continued to distribute Watershed Watch brochures to teachers in English and Spanish after assemblies. In addition, an e-mail with follow-up activities for teachers and students was sent to all schools.

To track effectiveness, teachers were asked to complete an online survey or fill out postage-paid survey cards. The Program received 72 completed surveys (40 postcards and 32 online). Of these, 28 are from grades K-2 teachers and 29 from grades 3-6 teachers. There are also 15 surveys where the grade is not indicated. Results are presented as “Grades K-2” and “Grades 3-6”, and “Grades not Marked”.

Results of the survey, along with comments and suggestions received from teachers are listed below:

End-of-Year Survey Results [1]

1. What percentage of your students know what a watershed is? (Check one)

	25%	50%	75%	100%	Total Responses
Grades K-2 results (#)	7	3	10	8	28
Grades K-2 results (%)	25%	10%	36%	29%	
Grades 3-6 results (#)	5	6	11	7	29
Grades 3-6 results (%)	17%	21%	38%	24%	
Grades not marked (#)	1	3	3	6	13
Grades not marked (%)	8%	23%	23%	46	

2. What percentage of your students can name a way to prevent pollution in the watershed? (Check one)

	25%	50%	75%	100%	Total Responses
Grades K-2 results (#)	0	1	10	17	28
Grades K-2 results (%)	0%	4%	36%	60%	
Grades 3-6 results (#)	0	0	7	21	28
Grades 3-6 results (%)	0%	0%	25%	75%	
Grades not marked (#)	0	0	4	9	13
Grades not marked (%)	0%	0%	30%	70%	

3. How would you characterize the content of the assembly? (Check one)

	Educational	Balanced	Entertaining	Neither	Total Responses
Grades K-2 results (#)	4	15	3	0	22
Grades K-2 results (%)	18%	68%	14%	0%	
Grades 3-6 results (#)	0	19	3	0	22
Grades 3-6 results (%)	0%	86%	14%	0%	
Grades not marked (#)	0	3	3	0	6
Grades not marked (%)	0%	50%	50%	0%	

[1] All teachers do not respond to all questions, so the count under "total responses" can differ for each question.

Sampling of Comments:

Grades K-2

Comments

- My Kindergarteners took away we need to protect and keep our H2O clean.
- It was so cute and fun! Thank you for coming!
- We loved it. The kids were smiling and learning.
- So engaging! Love the songs – my kids sang them all day!
- The students really enjoyed it. They have been singing the songs. We refer back to it when we talk about saving water and keeping our environment clean.
- This was an excellent assembly for all students. I received schoolwide positive feedback!
- I think using the word watershed more would increase the knowledge of this vocabulary word.
- Very engaging presenter, large number of visual/auditory aides (instruments), songs, kids enjoyed it and are still singing the H2O song! Thank you!
- My students and I had such a wonderful time during this assembly. It was engaging, spirited, educational. Our presenter was lovely in his interactions with students and staff. I could see his passion for music and the wellbeing of our waterways.
- The audience participation was great and kept the kids engaged. They will also remember the message about water sheds and pollution because of the movement and singing along.
- At first, I thought that the songs could be introduced a little more slowly, but I was pleasantly surprised at how quickly they were able to get it after a few repetitions. I had a lot of them singing the songs afterwards in class. Well done!
- We enjoyed the music and octopus stuffed animal.
- Thanks for the great energy and your interesting instruments!
- It was very educational!
- It is a great experience. Thank you!
- My students enjoyed the assembly so much and they were singing the songs after returning to the classroom.
- Really enjoyed the music and the message! Cheers!
- Very fun and educational assembly! Even students with special needs were engaged all the time!
- It was lovely! I teach TK (4 & 5 year olds) and deeply appreciated the pacing & interactive nature of the assembly. My kids have been talking about it all day. The morning after the assembly, one of my kids made one of the instruments from magic trash in our art center.

Grades 3-6

Comments

- It was fun. When discussing in class, my kids were singing the songs!
- You are great!
- Thank you! The songs always stick with us!
- Kids enjoyed learning!
- Speed and pacing were excellent.
- Great assembly. I loved the connection to music and movement.
- Amazing! Great variety of instruments and languages
- Great presentation! The kids really were engaged!
- Great! The kids loved singing and learning along with the presenter.

- I was not looking forward to this assembly, but to my surprise, it was educational and entertaining. Incorporating instruments, singing, and dancing really helped students engage in the science & conservation topics.
- Thank you! They had a wonderful time!
- So great! Love the bilingual element!
- Stephen was awesome!
- It was fun, educational and interactive. The use of varied instruments was a plus!
- Outstanding! Students were engaged with the assembly.
- Thank you for incorporating visuals, music and participation.
- Thank you for the assembly! I wanted to check both Education and Entertaining in the question above.
- The incorporation of multicultural and eco-friendly instruments is so meaningful!

Suggestions:

- I am wondering if it would be possible to have the follow up activities available to teachers before the assembly? This would help students by supporting language needs and further engagement.

<u>Grades not marked</u>

Comments

- Very engaging. The little guys loved it. And the H2O song was sung for the remainder of the day.
- It was presented very well. Our preschoolers loved the music and were doing actions as well. The presenter had the attention and participation of all the students in the assembly. It was very entertaining and educational in a fun way. Thank you
- I teach a Special Ed PreK class and the students were fairly engaged the entire duration! Music is a wonderful way to communicate the information and make it fun!
- Not sure if the students really remembered what's important. I think they were more entertained than they were educated.
- Educational, balanced and entertaining! Excellent!
- Fun and engaging.
- I liked that there was movement and activity requested from the audience. Our little TK friends enjoyed it and loved the instruments!
- I have seen this assembly many times over the years. It was two people and then became one person. The way the stage was set up it was very difficult for my students to see. There was a large speaker that was blocking part of the view. The music and instruments were great and engaging, but it was simply not as well organized as previous years. I have LOVED ZunZun in the past and highly encouraged our principal to have them back, but this year was just OK. ZunZun is clearly well informed and talented, I just think the program needs a bit of a refresh.

Suggestions:

- It would be helpful to have two presenters, so that the one presenter doesn't have to multitask as much. One can play the instrument and sing the song, while the other does the movement that the crowd should do and the chanted words.
- The visuals were more about instruments, recycling projects. For example, a good demo would be to demo how much water is wasted when brushing, to actually see how much water gets wasted. My 2 cents....
- It was very entertaining, maybe to a fault, and more focus on water preservation, the watershed focus, etc., would be better.

FY 24 - 25 List of Booked School Assemblies

	Date	School	Number of Assemblies	City
1.	08/21/24	Washington Open	2	Santa Clara
2.	09/03/24	Brooktree	2	San Jose
3.	09/16/24	Palo Verde	2	Palo Alto
4.	09/17/24	Eaton	2	Cupertino
5.	09/18/24	Sedgwick	2	Cupertino
6.	09/23/24	Noddin	2	San Jose
7.	09/30/24	Blue Hills	2	Cupertino
8.	10/02/24	Windmill Springs	2	San Jose
9.	10/03/24	Lynhaven	2	Campbell
10.	10/15/24	Duveneck	2	Palo Alto
11.	10/29/24	Weller	2	Milpitas
12.	11/18/24	Montague	2	Santa Clara
13.	11/19/24	Grant	2	San Jose
14.	11/20/24	Briarwood	2	Santa Clara
15.	11/21/24	Castlemont	2	Campbell
16.	12/02/24	Hoover	2	Palo Alto
17.	12/04/24	Sinnott	3	Milpitas
18.	12/09/24	Millikin	2	Santa Clara
19.	01/10/25	Stratford Pomeroy	3	Santa Clara
20.	01/16/25	Sutter	2	Santa Clara
21.	03/31/25	Blossom Hill	2	Los Gatos
22.	04/10/25	Arbor Day	1	Santa Clara
23.	04/11/2025	San Miguel	2	Sunnyvale
24.	04/21/25	Fairwood	2	Sunnyvale
25.	04/22/25	Muir	2	Cupertino
26.	05/02/25	Lexington	1	Los Gatos
	TOTAL		52	

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 9-1

IPM Store Partnership Program

- List of Stores in the IPM Store Partnership Program and Training Dates

City	Store Name	Address	FY13-14 Training	FY14-15 Training	FY15-16 Training	FY16-17 Training	FY17-18 Training	FY18-19 Training	FY19-20 Training	FY21-22 Training	FY22-23 Training	FY23-24 Training
Campbell												
1	Home Depot	480 E Hamilton Ave	5/15/14						2/25/20 (2 trainings)			
2	SummerWinds Nursery	2460 S Winchester Blvd		3/9/15		5/31/17	1/31/18				12/21/22	
Cupertino												
3	SummerWinds Nursery	1491 S De Anza Blvd	6/11/14		2/17/16		2/28/18				3/8/23	
4	Yamagami's Nursery	1361 S De Anza Blvd	1/21/14				1/11/18			6/7/2022		
Los Gatos												
5	Ace Los Gatos Hardware	15300 Los Gatos Blvd		10/10/14		3/10/17						
Milpitas												
6	Home Depot	1177 Great Mall Drive		11/19/14					10/21/2019			
Mountain View												
7	Blossom True Value Hardware	1297 W El Camino Real										
Palo Alto												
8	Ace Hardware	875 Alma Street		1/29/15		5/2/17		1/29/19				
9	SummerWinds Nursery	725 San Antonio Rd	6/5/14		2/24/16		2/28/18 (2 trainings)				3/15/23	
10	California Avenue Hardware	251 California Avenue										

City	Store Name	Address	FY13-14 Training	FY14-15 Training	FY15-16 Training	FY16-17 Training	FY17-18 Training	FY18-19 Training	FY19-20 Training	FY21-22 Training	FY22-23 Training	FY23-24 Training
Santa Clara												
11	Home Depot	2435 Lafayette St			11/24/15						11/8/22	
San Jose												
12	Ace Hardware	2253 Lincoln Ave	6/20/14			11/22/16						
13	Almaden Valley Nursery	15800 Almaden Exwy				2/10/17						
14	Home Depot	2181 Monterey Road	3/14/14		4/13/16						12/14/22	
15	Home Depot	2855 Story Road	4/18/14				6/18/18				11/28/22	
16	Home Depot	635 W Capitol Expy			12/9/15						11/15/22	
17	Home Depot	1855 Hillsdale Ave				10/26/16		1/31/19			12/14/22	
18	Home Depot	975 De Anza Blvd		11/8/14						4/20/22		
19	OSH Princeton Plaza	1375 Blossom Hill Rd										
20	OSH Silver Creek	1751 Capitol Expy										10/25/23
21	Payless Nursery	2927 S King Rd										
Saratoga												
22	Ace Hardware	12870 Saratoga Sunnyvale Rd								6/8/22		
Sunnyvale												
23	Home Depot	680 Kifer Rd		3/27/15						4/13/22		
24	OSH Cupertino	1601 Hollenbeck Ave, Sunnyvale 94087										10/25/23

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 9-2

FY 2024-25 Green Gardener Training Program

- Santa Clara Valley Green Gardener Training Program – FY 2024-25 Activities
- Santa Clara Valley Green Gardener Training Announcement Flyers – Winter 2024 & Winter 2025

Santa Clara Valley *Green Gardener* Training Program
FY 24-25 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, two-hour classes 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.

The Santa Clara Valley Green Gardener trainings are conducted in collaboration with the Fremont Union High School District Adult Education and the Master Gardeners of Santa Clara County. SCVURPPP also provides recertification opportunities to help Green Gardeners meet the recertification requirements.

FY 24-25 Santa Clara Valley Green Gardener Training

SCVURPPP planned and offered two Green Gardener trainings in FY 24-25, and publicized them via email, digital advertising, direct mailing, the Watershed Watch website, and social networking sites. However, both were canceled due to low enrollment.

To assist with recertification, Program staff offered Green Gardeners a list of available online classes, as well as a virtual self-assessment form to demonstrate understanding of sustainable landscaping practices.

Evaluation of Effectiveness

A total of 35 Green Gardeners re-certified in FY 24-25.

Currently, the Santa Clara Valley *Green Gardener* List includes 35 landscape professionals. The list of Green Gardeners is distributed at outreach events and is available online on the Watershed Watch website.

Landscapers, grow your business!

Learn eco-friendly practices with the Santa Clara Valley Green Gardener Training

LEARN TO:

- Design and maintain sprinklers and drip irrigation systems
- Select the right plants to save water and reduce the use of pesticides and fertilizers
- Solve pest problems without using toxic pesticides
- Prune correctly
- Use compost and mulch to feed soils naturally and protect plants

RECEIVE:

- Certification of completion and Green Gardener Card
- Free publicity on local gardening websites

Dates and Registration

The training consists of ten (10) two-hour classes

DATES
Wednesdays
February 5 to April 23, 2025

TIME
5:00 pm – 7:00 pm

COST
$90 for landscape professionals (with proof of employment);
$150 for all others

LOCATION
FUHSD Adult School,
EdOps 105

REGISTER ONLINE
fuhsdadultschool.com

FOR MORE INFORMATION

MyWatershedWatch.org/become-a-green-gardener/

Santa Clara Valley Green Gardener

The Santa Clara Valley Green Gardener Training is funded by the Santa Clara Valley Urban Runoff Pollution Prevention Program, a coalition of local government agencies.

FUHSD Adult School
One School Educating All

Santa Clara Valley Green Gardener Training

Meet the demand for "Green Gardening" and expand your business prospects! Learn practices that conserve water, protect the soil, and reduce the use of pesticides.

Dates: Thursdays, February 8 - April 25, 2024
Time: 5:30 PM – 7:30 PM
Location: FUHSD Adult School, Sunnyvale, CA 94087
Cost: $90 for landscape professionals, $150 for others

Register online:
fuhsdadultschool.com
or, scan the code

Complete the Green Gardener Training and Receive:

- Certification of Completion
- Green Gardener Card
- Free Publicity on Local Websites and Media

Register online:
fuhsdadultschool.com
or, scan the code below

The training is sponsored by the Santa Clara Valley Urban Runoff Pollution Prevention Program - a coalition of local government agencies.

Santa Clara Valley
Green Gardener Program
1021 S. Wolfe Rd., Suite 185
Sunnyvale, CA 94086

To:

For more information:
MyWatershedWatch.org/green-gardener-program/become-a-green-gardener/

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 9-3

Pesticide Source Control Actions Effectiveness Evaluation – September 2025

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Pesticide Source Control Actions Effectiveness Evaluation

Submitted on behalf of all SCVURPPP Permittees in Compliance with Provision C.9.g of the Municipal Regional Permit (Order R2-2022-0018)

September 30, 2025

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TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 BACKGROUND 1

2.1. Water Quality Impairment and Bay Area Urban Creeks TMDL 1

2.2. Pesticide Regulation and Oversight 2

2.3. Current Urban-Use Pesticides of Concern 3

2.4. MRP Requirements 3

2.4.1. Source Control Measures 4

2.4.2. Monitoring Program 4

2.5. Effectiveness Evaluation 6

2.6. Evaluation Methodology 6

3.0 IMPLEMENTATION ASSESSMENT RESULTS (LEVELS 1 - 4) 8

3.1. Maintaining and Implementing IPM Policies/Ordinances and Standard Operating Procedures (SOPs) 8

3.2. Municipal Staff Training 10

3.3. Requiring Contractors to Implement IPM 11

3.4. Participation in Regulatory Processes 12

3.5. Interface with County Agricultural Commissioners 13

3.6. Public Outreach 14

3.7. Minimizing Pesticide Use at New Development and Redevelopment Sites 18

4.0 WATER QUALITY ASSESSMENT (LEVEL 6) 19

4.1. Pesticide and Toxicity Creek Monitoring Programs in the Santa Clara Valley 19

4.2. Pesticides of Concern in Santa Clara Valley Urban Creek Water and Sediment 20

4.2.1. Concentrations in Water 20

4.2.2. Concentrations in Sediment 23

4.3. Toxicity in Santa Clara Valley Urban Creek Water and Sediments 26

4.4. Statewide Review of Pesticide and Toxicity Monitoring Data 33

5.0 PERMITTEE SPECIFIC IMPROVEMENTS AND ENHANCEMENTS 34

5.1. City of Campbell 34

5.2. City of Cupertino 34

5.3. City of Los Altos 35

5.4. Town of Los Altos Hills 35

5.5. Town of Los Gatos 35

5.6. City of Milpitas 36

5.7. City of Monte Sereno 36

5.8. City of Mountain View 36

5.9. City of Palo Alto 36

5.10. City of San Jose 37
5.11. City of Santa Clara 37
5.12. City of Saratoga 38
5.13. City of Sunnyvale 38
5.14. County of Santa Clara 38
5.15. Santa Clara Valley Water District (Valley Water) 39
6.0 CONCLUSIONS 39
6.1. Summary of Implementation Assessment Outcomes (Levels 1 - 4) 40
6.2. Summary of Water Quality Assessment Outcomes (Level 6) 41
7.0 NEXT STEPS 42
7.1. Program Level 42
7.2. Permittee Level 43
8.0 REFERENCES 46

List of Tables

Table 3-1. Summary of Pesticide of Concern Use by SCVURPPP Permittees from FY 19-20 to FY 23-24 9
Table 3-2. Summary of Permittee Employee Trainings from FY 19-20 to FY 23-24 11
Table 3-3 Number of Residents Served by the County HHW Program 16
Table 3-4. Quantity of total poisons (including pesticides) collected at Santa Clara County HHW locations from FY 19-20 to FY 23-24 17
Table 3-5. Number of Approved Regulated Projects that include Beneficial Landscaping 19
Table 4-1. Number of water samples collected from Santa Clara Valley urban creeks and analyzed for pesticides from 2002 to 2024. 21
Table 4-2 Number of bedded sediment samples collected from Santa Clara County urban creeks and analyzed for pesticides from 2002 to 2024 24
Table 4-3. Number of water samples collected from Santa Clara Valley urban creeks and analyzed for toxicity from 2002 to 2024 29
Table 4-4. Number of sediment samples collected from Santa Clara Valley urban creeks and analyzed for toxicity from 2002 to 2024 30
Table 4-5. Toxicity test result summary, 2016 – 2024. 31

List of Figures

Figure 4-1. Sum of pyrethroids (bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda cyhalothrin, and permethrin) in water samples collected by SCVURPPP by monitoring year 22
Figure 4-2. Sum of fipronil and its degradates in water samples collected by SCVURPPP by year 23
Figure 4-3. Bifenthrin concentrations in bedded sediment collected from Santa Clara Valley urban creeks from 2012 to 2024.. 26
Figure 6-1. Summary of Improvements Made to SCVURPPP Permittee IPM Programs from FY 19-20 to FY 24-25 41
Figure 7-1. Specific Enhancements Planned to Permittee IPM Programs in the Next Permit Term. 45

List of Abbreviations

303(d) List	List of Impaired Waters under Section 303(d) of the Federal Clean Water Act
BASMAA	Bay Area Stormwater Management Agencies Association
BAMSC	Bay Area Municipal Stormwater Collaborative
BMP	Best Management Practice
CASQA	California Stormwater Quality Association
DPR	California Department of Pesticide Regulation
HHW	Household Hazardous Waste
LC_{50}	Lethal Concentration 50% - i.e., the dose required to kill half the members of a tested population after a specified test duration
MRP	Stormwater NPDES Municipal Regional Permit
NOAEC	No Observable Adverse Effects Concentration
NOEC	No Observable Effects Concentration
NPDES	National Pollutant Discharge Elimination System
IPM	Integrated Pest Management
O&M	Operation and Maintenance
OWOW	Our Water Our World
PCO	Pest Control Operator
RMC	Regional Monitoring Coalition
SFEI	San Francisco Estuary Institute
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SOP	Standard Operating Procedure
SPoT	Stream Pollutant Trend Monitoring Project (Statewide SWAMP)
SWAMP	California Surface Water Ambient Monitoring Program
SWRCB	State Water Resource Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
WQAS	Water Quality Attainment Strategy
WQOs	Water Quality Objectives

1.0 INTRODUCTION

This *Pesticide Source Control Actions Effectiveness Evaluation* addresses the requirements of Provision C.9.g of the Municipal Regional Stormwater NPDES Permit (MRP) (SFBRWQCB 2022) - Evaluate Implementation of Source Control Actions Relating to Pesticides. This provision requires Permittees to:

- Evaluate the effectiveness of the control measures implemented by staff and contractors (per MRP Provisions C.9.a - e and g);
- Evaluate the attainment of pesticide concentration and toxicity targets for water and sediment from monitoring data (collected by MRP Permittees, research agencies, and/or State agencies) and any changes in water quality regarding pesticide toxicity in urban creeks; and,
- Identify improvements to existing control measures and/or additional control measures, if needed, to attain targets with an implementation time schedule, including a brief description of one or more pesticide-related area(s) the Permittee will focus on enhancing during the subsequent permit term.

The MRP includes requirements associated with pesticides because regulatory agencies have previously identified pesticides as causing water and/or sediment toxicity and impairing beneficial uses of San Francisco Bay Area (Bay Area) creeks and determined that urban stormwater is a likely cause or contributor to the impairment (SFRBWQCB 2022). This report describes the source control measures implemented by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP or Program) and its 15 permittee agencies[1] and provides an evaluation of the effectiveness of the control measures using effectiveness assessment outcomes developed by the California Stormwater Quality Association (CASQA) (CASQA 2015). The effectiveness of pesticide control measures is assessed using both implementation and water quality outcomes, including a comparison to receiving water quality targets.

This evaluation also includes a discussion of improvements made by each SCVURPPP permittee in implementing pesticide source control actions in the preceding five years (FY 19-20 to FY 23-24[2]), and enhancements that each Permittee plans to make during the next permit term.

2.0 BACKGROUND

2.1. Water Quality Impairment and Bay Area Urban Creeks TMDL

During the early 1990s, organophosphate pesticides were identified as causing water column toxicity in Bay Area urban creeks (SWRCB et al. 1997). The toxicity was observed via bioassays using *Ceriodaphnia dubia*, an indicator organism used in laboratory tests to assess surface water toxicity and evaluate biological community responses. The concentration of diazinon in water samples from urban creeks throughout the Bay Area was often high enough to account for the observed water column toxicity and diazinon was identified as the primary cause of the toxicity.

In May 1999, the U.S. Environmental Protection Agency (USEPA) listed San Francisco Bay and 35 Bay Area urban creeks as impaired by diazinon under Section 303(d) of the federal Clean Water Act (USEPA 1998). In 2000, because of growing concerns about the effects organophosphate chemicals have on

[1]SCVURPPP's permittee agencies are 13 cities/towns, the County of Santa Clara, and Valley Water (formerly the Santa Clara Valley Water District).

[2]If available, data for FY 24-25 are also included.

human health, the USEPA announced an agreement with pesticide manufacturers to remove most products containing diazinon and chlorpyrifos from retail store shelves and end most residential and professional uses by the end of 2004. As a result, urban uses of diazinon and chlorpyrifos declined substantially. These pesticides have generally not been detected in Santa Clara County creeks since 2005 (See Section 4.0). The phase-out of diazinon, however, resulted in increased use of alternative pesticides and new pesticides entering the marketplace. Replacements for organophosphate pesticides included pyrethroids, carbamates, neonicotinoids, and fipronil.

In 2005, the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) adopted the Total Maximum Daily Load (TMDL) and Water Quality Attainment Strategy (WQAS) for diazinon and pesticide-related toxicity in San Francisco Bay area urban creeks (SFRBWQCB 2005). Because it was anticipated that the phase-out of diazinon could lead to the use of other pesticides that could potentially cause toxicity, the TMDL/WQAS targeted diazinon specifically, while concurrently addressing the potential for other pesticide-related toxicity in urban creeks. The following water and toxicity targets were established through the TMDL/WQAS:

- **Toxicity Targets** - no pesticide-related acute or chronic toxicity in urban creeks in excess of 1.0 TU_a or 1.0 TU_c:

  where:

  TU_a = 100 / No Observable Adverse Effects Concentration (NOAEC)

  TU_c = 100 / No Observable Effects Concentration (NOEC)

  NOAEC = statistically significant differences between acute endpoints in sample and control
  NOEC = statistically significant differences between chronic endpoints in sample and control

  NOAEC and NOEC are both expressed as the percentage of a sample in a test container (e.g., an undiluted sample has a concentration of 100%). In both cases, an observable effect must be statistically significant. An undiluted ambient water or sediment sample that does not exhibit an acute or chronic toxic effect that is significantly different from control samples on a statistical basis shall be assumed to meet the relevant target.

- **Diazinon Target** - The one-hour average concentration of diazinon in freshwater shall not exceed 100 ng/l.

As described in the TMDL/WQAS, the goal of the implementation strategy is to eliminate and prevent pesticide-related toxicity in Bay Area urban creeks. The overarching strategy to reach this goal is to encourage pest management alternatives that do not threaten water quality and to discourage the use of pesticides that run off and threaten water quality, which can best be accomplished through the application of Integrated Pest Management (IPM) techniques and the use of less toxic pest control methods (SFBRWQCB 2005). The TMDL includes proposed actions that focus on effective IPM implementation, proactive regulation, education and outreach, and research and monitoring. Requirements included in Provision C.9 of the MRP are consistent with the actions outlined in TMDL/WQAS.

2.2. Pesticide Regulation and Oversight

Several agencies and organizations oversee pesticide use and pesticide discharges. Those with the broadest authorities include the USEPA and the California Department of Pesticide Regulation (DPR).

Gaps in pesticide regulatory program implementation allow pesticides to be used in ways that result in discharges that impair beneficial uses in San Francisco Bay Area urban creeks. The role of the Regional Water Board in reducing pesticide-related toxicity in urban creeks is to encourage, monitor, and enforce implementation actions (SFBRWQCB 2005). Local governments in the Bay Area are responsible for managing urban runoff discharges through Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) permits, but California law generally prohibits these agencies from regulating the registration, sale, transportation, or use of pesticides. SCVURPPP's permittee agencies are therefore limited in their ability to reduce the concentrations and impacts of pesticides in discharges from stormwater conveyances. Pesticide control measures implemented by permittee agencies are focused primary on practicing and encouraging IPM and participating in regulatory processes to ensure water quality impacts are considered during the pesticide re-registration and approval process. These control measures are described later in this document.

2.3. Current Urban-Use Pesticides of Concern

The MRP identifies the following as the pesticides of primary concern to water quality in Bay Area urban creeks.

- Organophosphate products (example active ingredients: diazinon, chlorpyrifos, malathion);
- Carbamate products (example active ingredients: carbaryl and aldicarb[3]);
- Pyrethroid products (example active ingredients: bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and metofluthrin);
- Fipronil and its degradates;
- Diamides (example active Ingredients: chlorantraniliprole and cyantraniliprole);
- Diuron;
- Indoxacarb; and
- Neonicotinoids (example active ingredients: imidacloprid, acetamiprid, and dinotefuran)

2.4. MRP Requirements

Provision C.9 of the MRP requires Permittees to implement pesticide toxicity control programs based on the concepts of Integrated Pest Management (IPM) to address the use of pesticides that pose a threat to water quality and have a potential to enter their MS4.

Consistent with the requirements of Provision C.9, SCVURPPP Permittees implement source control and pollution prevention actions that can potentially reduce the use of the pesticides of concern. These include robust outreach efforts to residents and businesses, providing training to municipal staff on IPM practices, and requiring municipal contractors to implement IPM. Local training and regional outreach efforts have been supplemented by monitoring studies to define the problem and track trends, participation in regional efforts to address pesticide regulations (e.g., related to registration) and other issues, and development of local municipal IPM plans.

[3] Currently, there are no registered pesticides in California containing the active ingredient aldicarb. EPA banned the primary aldicarb containing pesticide, Temik, in 2010, requiring an end to distribution by 2017.

2.4.1. Source Control Measures

SCVURPPP and its participating agencies have implemented source control measures to control pesticide pollution for over 25 years. Based on requirements in its 2001 municipal stormwater NPDES permit, SCVURPPP developed a Pesticide Management Plan (Plan) to control pesticide-related toxicity attributable to urban runoff. The Plan identified specific source control measures, the goals of each source control measure, specific actions, monitoring mechanisms, and implementation schedules (SCVURPPP 2002). The monitoring mechanisms were actions that measure progress toward achieving the stated goals. The Plan also identified whether actions will be implemented at the Program level, municipality level, or both.

Though the Plan was developed as a 5-year plan, implementation of tasks continued with subsequent permits, including the MRP. Source control measures were enhanced, as needed, to meet MRP requirements. Currently, source control measures include the following:

- Adopting and implementing IPM policies/ordinances and establishing Standard Operating Procedures;
- Training municipal staff on IPM techniques;
- Requiring contractors to implement IPM;
- Communicating with County Agricultural Commissioners;
- Participating in regulatory processes to ensure water quality impacts are considered in the pesticide re-registration and approval process;
- Conducting outreach to residents and pest control professionals to promote IPM; and,
- Minimizing pesticide use at new development and redevelopment project sites.

These source control measures are described in detail later in this report.

2.4.2. Monitoring Program

Prior to the adoption of the MRP in 2009, SCVURPPP implemented a creek water quality monitoring program (beginning in the early 2000s) that included the collection of water and sediment samples from selected urban creeks for analysis of organophosphate and pyrethroid pesticides and toxicity. The results of this monitoring were summarized in several technical reports submitted to the Regional Water Board (e.g., SCVURPPP 2007 and 2008).

MRP Monitoring

With the adoption of MRP 1.0 in 2009, SCVURPPP began implementing new monitoring requirements as a participant in the Bay Area Municipal Stormwater Collaborative (BAMSC; formerly Bay Area Stormwater Management Agencies Association[4] [BASMAA]) Regional Monitoring Coalition (RMC). From 2012 through 2015, per Provision C.8.c of MRP 1.0, SCVURPPP conducted annual dry season monitoring at three locations for toxicity in water and sediments and pesticides in sediments. Water column samples were collected from the same three locations each year during a storm event for toxicity testing. The sampling locations were designated through a probabilistic monitoring design (BASMAA 2011) and sampling was conducted using standard protocols (BASMAA 2012). The suite of parameters monitored included legacy pesticides such as DDT and dieldrin as well as pyrethroid pesticides in sediment. Water column toxicity was assessed using three test organisms, *Pimephales promelas*

[4] As of June 28, 2021, BASMAA officially dissolved as a California non-profit public benefit corporation; however, members of BASMAA continue to work together through the Bay Area Municipal Stormwater (BAMS) Collaborative.

(fathead minnow), *Ceriodaphnia dubia* (a crustacean), and *Selenastrum capricornutum* (a green algae), and sediment toxicity was assessed using *Hyalella azteca* (an amphipod).

In 2016, with the adoption of MRP 2.0 and continuing through MRP 3.0, which was adopted in 2022, SCVURPPP conducted pesticides and toxicity monitoring in compliance with Provision C.8.g. Dry weather monitoring is conducted at two locations per year and includes:

- Toxicity testing in water using five species: *Ceriodaphnia dubia* (chronic survival and reproduction), *Pimephales promelas* (larval survival and growth), *Selenastrum capricornutum* (growth), *Hyalella azteca* (survival) and *Chironomus dilutus* (survival).
- Toxicity testing in sediment using two species: *Hyella azteca* (survival) and *Chironomus dilutus* (survival).
- Sediment chemistry analytes include pyrethroids, fipronil, carbaryl, total polycyclic aromatic hydrocarbons (PAHs), metals, Total Organic Carbon (TOC), and sediment grain size.

Wet weather monitoring under MRP 2.0 and MRP 3.0 includes collection of water samples during storm events for toxicity testing (using the same five organisms required for dry weather toxicity testing) and analysis of pyrethroids, fipronil, and imidacloprid. Although indoxacarb was included in MRP 2.0 on the list of constituents, there was no available analytical method and it was not sampled. As part of the RMC, SCVURPPP was required to collect a total of three wet weather samples during each permit term. These were collected during a single storm event in Water Year (WY) 2018 (i.e., October 1, 2017 through September 30, 2018) satisfying MRP 2.0 requirements and in WY 2023 satisfying MRP 3.0 requirements.

Toxicity and chemistry data collected as part of MRP monitoring are analyzed to evaluate potential stressors (including pesticides) that may impact water quality. The monitoring results are compared to water quality objectives (WQOs) and monitoring trigger thresholds specified in the MRP. Results that exceed WQOs or monitoring trigger thresholds may lead to additional monitoring to confirm or identify stressors and/or sources of impacts and their spatial extents, and/or the implementation of management actions to minimize the impacts associated with urban runoff.

Upper Penitencia Creek Stressor/Source Identification Project
In WY 2016, SCVURPPP conducted a stressor/source identification (SSID) project in Upper Penitencia Creek to investigate sources of poor biological condition, based on the California Stream Condition Index (CSCI) score for benthic macroinvertebrate (BMI) data. Several potential stressors were investigated, including sediment chemistry and toxicity (SCVURPPP 2017).

Coyote Creek Stressor/Source Identification Project
In WY 2017, SCVURPPP initiated an SSID project in Coyote Creek to investigate sources of sediment toxicity identified through prior monitoring. The Coyote Creek SSID Work Plan (SCVURPPP 2018) was submitted to the Regional Water Board on March 31, 2018 and satisfies the MRP regional requirement for one toxicity SSID project. In 2018, SCVURPPP conducted the first phase of the SSID project field effort by collecting sediment samples from five locations and analyzing the samples for pyrethroids and toxicity to *Hyalella azteca* (survival).

Statewide Monitoring Program
Under Objective 6 of the Strategy to Optimize Resource Management of Storm Water (STORMS), adopted by the California State Water Resources Control Board (State Water Board) in January 2016, the State Water Board is developing a statewide framework for urban pesticides reduction (Urban Pesticides Provisions). The primary goal of the statewide Urban Pesticides Provisions (UPP) is to improve collaboration among regulators, leading to better management of pesticides in urban runoff. The Provisions will also organize coordinated pesticides and toxicity monitoring and data sharing.

The UPP team is proposing a statewide monitoring program that may eventually substitute for pesticides and toxicity monitoring requirements in MS4 permits, such as the MRP. The goal is to generate useful data at minimal cost. At this time, the mechanism and timing for implementing the statewide monitoring program is uncertain.

2.5. Effectiveness Evaluation

This report evaluates the effectiveness of source control measures implemented by SCVURPPP and its permittees. The evaluation uses "Outcome Levels" described by CASQA (2015) in *A Strategic Approach to Planning for an Assessing the Effectiveness of Stormwater Program* (Guidance Manual). Information on the level of implementation and associated data (e.g., local implementation of IPM Policy, trends in use of pesticides impacting water quality, and number of staff trained in IPM) used to assess the effectiveness of pesticide source controls were obtained from SCVURPPP and permittee agency Annual Reports. Water quality monitoring data collected by SCVURPPP and other agencies (e.g., Regional Water Board) were also compiled and summarized to assess progress towards achieving the TMDL/WQAS targets described in Section 2.1.

2.6. Evaluation Methodology

The CASQA effectiveness assessment approach utilizes a general model that relates three primary components to the six outcome levels and associated, general outcome types. The three primary components are:

- Stormwater Programs (Outcome Level 1) – Stormwater programs are the road map for the improvements that managers wish to attain in receiving waters. Their immediate purpose is to describe programs that will facilitate changes in the behaviors of key target audiences. This component is typically assessed on a short-term basis.
- Target Audiences (Outcome Levels 2-3) – This component focuses on understanding the behaviors of the people responsible for source contributions. It explores the factors that determine existing behavioral patterns and looks for ways to replace polluting behaviors with non-polluting behaviors. This component is typically assessed on a short- and/or long-term basis.
- Sources and Impacts (Outcome Levels 4-6) – This component addresses the generation, transport, and fate of urban runoff pollutants. It includes sources (sites, facilities, areas, etc.), stormwater conveyance systems, and the water bodies that ultimately receive the source discharges (receiving waters). This component is typically assessed on a long-term and/or regional basis.

The six categories of outcome levels establish a logical and consistent organizational scheme for assessing and relating individual outcomes. According to the CASQA Guidance Manual, "outcomes" are the results of implementing a stormwater control measure, program activity or element, or overall program. Each control measure or activity can lead to one or more "Outcome Levels". The six Outcome Levels described in the Guidance Manual are summarized below:

1. **Outcome Level 1: Stormwater Program Activities** – Many specific activities are either prescribed by or established under stormwater permits. The most basic means of assessing effectiveness is to determine compliance with activity-based permit requirements. Level 1 Outcomes may take the form of a simple yes/no answer.
2. **Outcome Level 2: Barriers and Bridges to Action** – A goal of most stormwater management programs is to increase the level of knowledge and awareness among target audiences.

Measuring Level 2 Outcomes is a useful way of gauging whether outreach, training, or other program activities are producing changes in awareness, knowledge, or attitudes of target audiences. Various methods and tools, both quantitative and qualitative, are currently utilized to measure changes in knowledge and awareness. These methods generally take the form of surveys and quizzes.

3. **Outcome Level 3: Target Audience Actions** – Water quality improvements can be achieved only when specific actions have occurred in one or more target audiences. Building on increases in knowledge and awareness, a key focus of stormwater management programs is to effect changes in behavior in the target audiences. Level 3 Outcomes measure the effectiveness of programs in motivating target audiences to change their behaviors and implement appropriate control measures. Methods used to measure behavioral changes include those described above for Level 2 Outcomes and direct observation via site visits and reporting by dischargers or third parties.
4. **Outcome Level 4: Source Contributions** – Many activities implemented through stormwater management programs are intended to reduce the loading of pollutants or runoff volumes from targeted sources. A source is anything with the potential to generate urban runoff flow or pollutants prior to their introduction to the storm drain system. Load reductions should in turn result in improvements to discharge and receiving water quality. Load reductions quantify changes in the amounts of pollutants associated with specific sources before and after one or more control measures are employed.
5. **Outcome Level 5: MS4 Contributions** – A primary focus of stormwater management programs is to reduce pollutants in stormwater and non-stormwater discharges to the maximum extent practicable, and to ensure that these discharges do not cause or contribute to violations of WQOs in receiving waters. Level 5 Outcomes may be measured as reductions in one or more specific pollutants in MS4 discharges and may reflect effectiveness at a variety of scales ranging from site-specific to programmatic.
6. **Outcome Level 6: Receiving Water Conditions** – The ultimate objective of stormwater management programs is the protection of water bodies receiving discharges from MS4s. Changes to receiving water and environmental quality may be expressed through a variety of outcomes such as achievement of WQOs and TMDL targets, protection of biological integrity, and beneficial use attainment.

Once the desired outcomes of program implementation have been defined, specific assessment measures are used to determine whether or how successfully a programmatic or water quality outcome has been achieved. They may be qualitative (e.g., yes/no) or quantitative (e.g., % of target audience reached, % reduction in a constituent level). All priority outcomes have at least one assessment measure associated with them, but some may have multiple measures.

On a broader scale, there are two general categories of effectiveness assessments: 1) Implementation Assessments; and 2) Water Quality Assessments. These categories of assessments are differentiated by whether the type of outcome is implementation–based or water quality–based. Implementation assessments include those evaluations conducted at levels 1 - 4, and water quality assessments are those conducted at levels 5 and 6. Section 3.0 and Section 4.0 discuss the results of both implementation and water quality assessments conducted to evaluate the effectiveness of pesticide source control measures implemented by SCVURPPP and its Permittees.

3.0 IMPLEMENTATION ASSESSMENT RESULTS (LEVELS 1 - 4)

This section evaluates the effectiveness of the source control measures described in Section 2.4.1. These measures are consistent with the requirements in Provision C.9 of the MRP.

3.1. Maintaining and Implementing IPM Policies/Ordinances and Standard Operating Procedures (SOPs)

The goal of this control measure is to establish structural and landscape pest control guidelines for municipal staff and pest control contractors. Adopting an IPM policy/ordinance demonstrates a local agency's commitment to reducing pesticide use. The effectiveness of this source control measure is assessed at Outcome Levels 1, 2, 3 and 4.

Outcome Level 1 - Stormwater Program Activities

All SCVURPPP Permittees have adopted IPM Policies/ Ordinances and established detailed IPM Plans and pesticide application Standard Operating Procedures (SOPs). The date of adoption of IPM Policies by SCVURPPP Permittees is below:

- City of Palo Alto – 2001, updated in 2020
- Santa Clara Valley Water District – 2001, revised 2010, and updated in 2025
- West Valley Cities (Campbell, Saratoga, Monte Sereno and Los Gatos) – 2002, updated in 2023
- City of Mountain View – 2003
- County of Santa Clara – 2002
- City of Sunnyvale – 2002, updated in 2010
- City of Cupertino – 2002, updated in 2008 and 2011
- City of San Jose – 2003
- City of Milpitas – 2004, updated in 2012
- City of Los Altos and Town of Los Altos Hills – 2010, updated in 2020
- City of Santa Clara –2012[5]

Outcome Level 2: Barriers and Bridges to Action

Staff trainings are used to raise the awareness of and update municipal staff on IPM policies/ordinances and the agency's commitment to using less-toxic pest management techniques. All contractors are made aware of and required to apply pesticides in a manner consistent with IPM policies/ordinances. Additionally, pesticide application SOPs describe the pest control procedures that municipal staff and contractors must follow.

Outcome Level 3: Target Audience Actions and Outcome Level 4 - Source Contributions

One indicator of behavior change and source reduction associated with municipal use of pesticides of concern is the amount of pesticides applied annually by SCVURPPP Permittees. Another measure is demonstration of IPM tactics that Permittees have implemented. SCVURPPP Permittees report both of these via their Annual Reports to the Regional Water Board. IPM tactics employed by Permittees are further described in Section 5.0 of this report.

[5] The City of Santa Clara had an in-house IPM Program until 2012. The IPM Policy was officially adopted in 2012.

Pesticide use data reported in Permittee Annual Reports were reviewed and a preliminary evaluation conducted to better understand whether pest control practices have changed. The results of the evaluation indicated that Permittees are using pesticides of concern sparingly, and only as a last resort.

- Nine Permittees reported that they have not used any pesticides of concern from FY 19-20 to FY 23-24.
- The pesticides of concern that Permittees reported using are pyrethroids, fipronil, indoxacarb, and neonicotinoids.
- Permittees did not report using any other pesticides of concern (organophosphates, carbamates, diuron, and diamides) from FY 19-20 – FY 23-24.

Table 3-1 shows the pesticides of concern usage reported by Permittee agencies. The data indicate that pesticides of concern are used occasionally, and in small quantities. The permittee agencies that reported using pesticides of concern did so only as a last resort and provided a reason for the use within the Annual Report. In most cases, the pesticides of concern were applied in small quantities and the agency indicated that staff were working with the pesticide applicators to reduce or eliminate the use.

Table 3-1. Summary of Pesticide of Concern Use by SCVURPPP Permittees from FY 19-20 to FY 23-24

Permittee	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24
Campbell	Beta-Cyfluthrin 0.17 oz; Permethrin 0.88 oz; Fipronil - 0.30 oz	Beta-Cyfluthrin 0.48909 oz ; Fipronil 1.86251 oz	Beta-Cyfluthrin 0.3 oz; Fipronil 1.18 oz	Bifenthrin 0.371 fl oz; Beta-cyfluthrin (solid) 0.18 oz; Beta-cyfluthrin 0.19 fl oz; Imidacloprid 1.76 oz; Imidacloprid 2.31 fl oz; Dinotefuran 2.43 oz; Dinotefuran 0.78 fl oz; Fipronil 0.00028 fl oz	Indoxacarb 0.00056 oz; Imidacloprid 12.6752 oz, Fipronil 0.31853 oz
Cupertino	None used	None Used		Acetamiprid 17 oz, Dinotefuran 0.6oz	Dinotefuran 44.4 lb
Los Altos	None used	None used	None used	None used	None used
Los Altos Hills	None used	None used	None used	None used	None used
Los Gatos	None used	None used	None used	None used	None used
Milpitas	None used	None used	None used	None used	None used
Mountain View	Pyrethrins 0.00064 lb; Fipronil 0.000125 lb; Indoxacarb 0.00375 lb	None Used	Fipronil 0.0500 lb; Indoxacarb 0.0004 lbs	Neonicotinoids 2.25 lb Dinotefuran, 0.0017 lb	Dinotefuran 1.5 lb
Monte Sereno	None used	None used	None used	None used	None used

Permittee	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24
Palo Alto	None used	None used	None used	None used	None used
San Jose	Beta-Cyfluthrin 0.33600 lb; Bifenthrin 4.02900 lb; Deltamethrin 0.30032 lb; Fipronil 0.00001 lb; Indoxacarb 0.00384 lb;	Bifenthrin 8.532 lb; Deltamethrin 4.77600 lb; Permethrin 0.32750; Prallethrin 0.00800; Tetramethrin 0.13100; Fipronil 0.26981; Indoxacarb 0.00909 oz	Permethrin 0.60563 lb, Fipronil 0.77363 lb, Indoxacarb 0.00294 lb	Cyfluthrin 19.7400 oz, Deltamethrin 30.02100 oz, Indoxacarb 0.00294 oz, Fipronil 0.00004 oz	Cyfluthrin 3.6 oz, Deltamethrin 19.71250 oz, Permethrin 2.94400 oz, Prallethrin 0.16400 oz
Santa Clara	None used	None used	None used	None used	None used
Saratoga	Permethrin 143 oz; Beta-Cyfluthrin 1.7 oz	Permethrin 143 oz; Beta-Cyfluthrin 0.3 oz	Permethrin 143 oz; Beta-Cyfluthrin 0.3 oz	Permethrin 143 oz	None used
Sunnyvale	Beta-Cyfluthrin 45.8 oz; Lambda-Cyhalothrin 3.1 oz; Fipronil 11.6 oz	Beta-Cyfluthrin 0.21 oz; Bifenthrin 0.096 oz; Fipronil 0.26 oz; Indoxacarb 0.0066 oz.	Beta-Cyfluthrin 0.21 oz; Bifenthrin 0.096 oz; Fipronil 0.26 oz; Indoxacarb 0.0066 oz	Permethrin 0.092 oz; Indoxacarb 0.0061 oz; Imidacloprid 3.852 oz; Dinotefuran 0.18; Fipronil 0.00364 oz	Deltamethrin 0.55338 oz; Imidacloprid 213.305 oz; Dinotefuran 0.666 oz; Fipronil 0.0961 oz
Santa Clara County	None used	None used	None used	None used	None used
Valley Water	None used	None used	None used	None used	None used

3.2. Municipal Staff Training

The intent of trainings for municipal staff is to: 1) raise awareness of all municipal employees about IPM, and 2) train employees who apply pesticides about the municipality's IPM Policy and/or IPM techniques as appropriate. The effectiveness of this source control measure is assessed at Outcome Levels 1, 2, 3 and 4.

Outcome Level 1 - Stormwater Program Activities

All SCVURPPP permittee agencies ensure that staff responsible for applying pesticides are familiar with their agency's IPM Policy, SOPs and new and current IPM techniques. Permittees also send staff to trainings organized by other organizations (e.g., Bay Friendly Landscaper Training, Pesticide Applicators Professional Association's IPM Trainings). An evaluation of Annual Report data indicates the following:

- Two SCVURPPP permittees do not have employees that apply pesticides.

- All SCVURPPP permittees that have employees that apply pesticides conduct annual trainings to ensure that these employees are trained on the permittee agency's IPM policy/ordinance, and IPM techniques.

Table 3-2 summarizes the training data from FY 19-20 to FY 23-24.

Table 3-2. Summary of Permittee Employee Trainings from FY 19-20 to FY 23-24

Metric	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24
Total number of SCVURPPP Permittee employees that applied or used pesticides	415	384	405	397	539
Total number of SCVURPPP Permittee employees that received trainings on the IPM policy and procedures	388	374	372	397	516
Percentage of SCVURPPP Permittee employees that apply pesticides and have received training in the IPM policy and IPM standard operating procedures each year.	93%	97%	92%	100%	96%

Outcome Level 2: Barriers and Bridges to Action

The IPM trainings help increase municipal staff's awareness of IPM techniques. Generally, training content includes topics such as overview of IPM techniques, using IPM for managing pest problems, plant selection to avoid pest problems, and available less-toxic pest control products. By attending trainings, the awareness of municipal staff of IPM and the use of less toxic pesticides was increased.

Outcome Level 3: Target Audience Actions and Level 4 - Source Contributions

As discussed earlier, a preliminary analysis of the reported pesticide use data indicates that permittees are using minimal amounts of pesticides of concern.

3.3. Requiring Contractors to Implement IPM

The goal of this control measure is to ensure that all pest control contractors retained by SCVURPPP permittee agencies are familiar with the permittee's IPM policy and are able to address pest problems using IPM techniques. The effectiveness of this source control measure is assessed at Outcome Levels 1, 2, 3 and 4.

Outcome Level 1: Stormwater Program Activities and Outcome Level 2- Barriers and Bridges to Action

All Permittee agencies work closely with the contractors to ensure that IPM techniques are implemented. Contractor compliance is ensured via regular meetings and review of pest management techniques. An analysis of Annual Report data indicates the following:

- 13 of 15 permittee agencies have contract specifications that require contractors to follow the IPM Policy and implement IPM. The remaining two permittees do not hire contractors for pest control work. All contract specifications require that contractors follow the Permittee's IPM Policy.
- Three Permittees require that contractors be IPM certified (e.g., Eco-wise, Green Pro and Green Shield) and/or obtain training from the Green Gardener or Bay Friendly Landscaping programs.

Outcome Level 3: Target Audience Actions and Outcome Level 4 - Source Contributions

As discussed earlier, a preliminary analysis of the reported pesticide use data indicates that permittees are using minimal amounts of pesticides of concern.

3.4. Participation in Regulatory Processes

The goal of this source control measure is to actively participate in regulatory processes to increase the level of consideration given to water quality by regulatory agencies during the pesticide approval and registration process. Improvements to the registration process (e.g., requiring formulations that minimize pesticides of concern to water quality) will reduce the impact that registered pesticides have on Bay Area water bodies. Active participation by SCVURPPP and its permittee agencies includes working with CASQA to communicate with the USEPA Office of Pesticide Programs (OPP) and California Department of Pesticide Regulation (DPR) the need to improve the pesticide registration process.

To address the problems caused by pesticides in California's urban waterways, CASQA collaborates with the State Water Board and the California Regional Water Quality Control Boards (Water Boards) in a coordinated statewide effort, referred to as the Urban Pesticides Pollution Prevention (UP3) Partnership. By working with the Water Boards and other water quality organizations, CASQA helps to address the water quality impacts of pesticides efficiently and proactively through the statutory authority of the DPR and OPP. The effectiveness of this source control measure is assessed at Outcome Levels 1, 2, 3, and 4.

Outcome Level 1 - Stormwater Program Activities

SCVURPPP provides funding to a CASQA project to track and participate in pesticide-related regulatory processes, with an emphasis on protecting water quality. This project tracks regulatory efforts, comments on pesticide re-registrations, and maintains other relevant communications with USEPA and DPR through meetings and letters. Implementation of this project has resulted in significant changes in pesticide regulation.

Outcome Level 2: Barriers and Bridges to Action and Outcome Level 3: Target Audience Actions

CASQA efforts, which have been supported and partly funded by SCVURPPP (and in the past, BASMAA), have raised awareness about water quality-related pesticide issues and led to improvements in the pesticide approval and registration processes at USEPA and DPR. Recent achievements include:

- CASQA provided comment in support of EPA's proposed label language mitigations for carbaryl, and recommended edits to label mitigation measures for consistency. EPA included all label language mitigation and clarifications in the Final Biological opinion as well as the application rate correction.

- The 2021 version of General Services Administration's (GSA) Regulations.gov limited public access and impaired CASQA's ability to access data and provide comments. CASQA submitted a comment letter to GSA identifying four issues with the regulations.gov website. While two issues were handled promptly in 2022, two issues remained that significantly hindered docket searches. In 2024, GSA updated the system to respond to all CASQA's comments. All EPA OPP documents are now accessible and searchable on Regulations.gov.
- CASQA supported the EPA's proposed mitigation for Oxyfluorfen, including the cancelation of residential uses, covering all residential turf and ornamental products. EPA received many comments from pesticide registrants as well as the USDA which argued that there should not be a ban on residential uses of oxyfluorfen. In the end, EPA sided with CASQA: *"The Agency has considered retaining residential application of oxyfluorfen by commercial applicators. However, it is not possible to preclude residential users from using products intended for professional applicators; therefore, residential uses will be removed from all products."*
- CASQA commented on the etofenprox product label modification. EPA accepted CASQA's comments regarding restricting use on impervious surfaces. Under the proposed label language, etofenprox would only be allowed to be sprayed on impervious surfaces in these cases: applications to underside of eaves, soffits, doors, or windows permanently protected from rainfall by a covering, overhang, awning, or other structure, applications around potential exterior pest entry points into man-made structures such as doorways and windows, when limited to a band not to exceed one inch, and applications to vertical surfaces (such as the side of a man-made structure) directly above impervious surfaces (e.g., driveways, sidewalks, etc.), up to 2 feet above ground level.
- CASQA commented on EPA's Chlorine gas/swimming pools Draft Risk Assessment. CASQA recommended that the label language be updated to match the language for copper products, which would also provide consistent label language across pool, spa, and hot tub chemicals. EPA adopted the following language for all products used to treat commercial and residential pools and fountains: *"Before draining a treated [pool] or [fountain], contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated [pool] or [fountain] water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities."*

Outcome Level 4 - Source Contributions

The modifications to pesticide labels and changes to application guidelines are expected to reduce the quantities of pesticides of concern applied on outdoor impervious surfaces by professional applicators. This will reduce the quantity of these pesticides that can be washed directly into gutters and storm drains when it rains or when water (e.g., irrigation overflow) runs across treated surfaces.

3.5. Interface with County Agricultural Commissioners

The goal of this source control measure is to maintain communication with the County Agricultural Commissioner's office to update them on water quality issues related to pesticides, get their input and assistance on pest management practices, and report to them any observed or citizen-reported violation of pesticide regulations. The effectiveness of this source control measure is assessed at Outcome Level 1.

Outcome Level 1 - Stormwater Program Activities

SCVURPPP staff routinely updates the Deputy Agricultural Commissioner on water quality issues and MRP requirements. SCVURPPP staff works with Santa Clara County Division of Agriculture staff to conduct outreach to structural Pest Control Professionals. A summary of activities conducted in coordination with the Santa Clara County Division of Agriculture is provided below:

- The Division of Agriculture provided contact information for structural pest control operators registered in Santa Clara County. As described in Section 3.6., SCVURPPP used this list to conduct outreach on IPM.
- Program staff developed articles on pesticide toxicity control which were included in the Santa Clara County Division of Agriculture's "The Pesticide Review" newsletter in November 2020, November 2023, and November 2024. The Division of Agriculture sent these newsletters to all PCOs registered in Santa Clara County. The newsletters are also available online on the Santa Clara County Division of Agriculture's website at the following links:
  - The Pesticide Review - November 2024
  - The Pesticide Review - November 2023
  - The Pesticide Review - November 2020

3.6. Public Outreach

The goals of the Public Education and Outreach element are to: 1) inform the general public about stormwater pollution due to pesticides, 2) educate them about using IPM techniques for pest control, and 3) help them choose the least-toxic pesticide. SCVURPPP conducts outreach through its Watershed Watch Campaign, a multi-year, multi-media outreach effort that was launched in 2000 and promotes watershed stewardship by educating the public about watersheds, urban runoff issues and pollution prevention. The Campaign conducts outreach through media advertising, outreach events, school presentations, website, social networking sites, and partnerships with local businesses and community organizations.

SCVURPPP's outreach efforts can be broadly divided into the following categories:

1. **Point-of-Purchase Outreach** – SCVURPPP implements the CASQA IPM Store Partnership Program (also known as the *Our Water Our World* Program or the OWOW Program) in local retail stores and nurseries. 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 visiting participating stores regularly (at least three times per year) to stock literature racks with "Less-Toxic Pest Management" fact sheets and update "shelf-tags". Shelf-tags are product identification tags that are placed on store shelves to help customers identify less-toxic products. In addition, Program staff conducted store employee trainings to educate store employees about IPM and selling less-toxic products.
2. **Outreach to Residents** – SCVURPPP conducts a countywide multi-media outreach campaign called the Watershed Watch Campaign (Campaign) to conduct outreach to residents on watershed awareness and stormwater pollution prevention. Messages on IPM, less-toxic pest control, proper disposal of unused pesticides, and hiring an eco-friendly landscape professional or pest control professional are included in the Campaign's media campaign, website, and brochures. During the MRP 3.0 term, the Program has conducted media advertising on IPM

using television, radio, print and online. Advertising is conducted in English and Spanish. In addition, Program and Permittee staff conduct IPM outreach at community events each year.

3. **Outreach to Pest Control Professionals** – SCVURPPP conducts the Santa Clara Valley Green Gardener Program for training landscape maintenance professionals on sustainable landscaping techniques. Each training session consists of ten 2-hour classes, held once a week for ten weeks. SCVURPPP also conducts targeted outreach to structural PCOs on water quality issues and available IPM-certification programs.

The effectiveness of the SCVURPPP public outreach program and its components is assessed at Outcome Levels 1, 2, 3, and 4. Results of the effectiveness assessment are grouped by outreach program component: 1) Point-of-Purchase Outreach; 2) Outreach to Residents; and 3) Outreach to Pest Control Professionals.

Point-of-Purchase Outreach

Outcome Level 1 - Stormwater Program Activities

SCVURPPP began implementing the OWOW Program locally in FY 98–99. At present, 24 retail stores and nurseries in Santa Clara Valley participate in the OWOW Program.

Each year, SCVURPPP staff visits each store at least three times to stock the literature rack and replace "shelf-tags". SCVURPPP staff also provided training to 123 store employees from FY 19-20 to FY 23-24.

Outcome Level 2: Barriers and Bridges to Action and Outcome Level 3: Target Audience Actions

The willingness of store managers to participate in the OWOW Program and send employees to trainings reflects the continued support of pesticide sellers toward IPM and the use of less-toxic pest control methods. Regional OWOW Program leaders report an overall increase in sales of less toxic products as a result of the OWOW Program's implementation.

Outcome Level 4 Source Contributions

As mentioned above, there is an overall increase in sales of less toxic products as a result of the OWOW Program's implementation. This increase is expected to result in a reduction in the quantity of pesticides of concern being used and ultimately flowing into storm drains.

Outreach to Residents

Outcome Level 1 - Stormwater Program Activities

SCVURPPP conducts extensive outreach on IPM using media advertising, social media posts, social media advertising, and distribution of outreach materials at events to educate residents about IPM, proper disposal of Household Hazardous Waste, and hiring IPM certified pest control professionals. Below are some examples of IPM related advertising conducted as part of SCVURPPP's Watershed Watch Media Campaign:

- "Hire a Green Gardener" 30-second television ads ran in Spanish on KSTS radio and in English on KNTV and KEZR radios.
- "Hire a Green Gardener" 30-second video ran on AnyScreen OTT-TV and YouTube in English and Spanish.
- "Hire an IPM Pro" 30-second radio ads ran in English on KUFX, Spanish on KSOL and KBRG. The ads were also placed in English and Spanish on Pandora.
- "Hire an IPM Pro" 30-second television ads ran in Spanish on KSTS and in English on KNTV.

- "Hire an IPM Pro" 30-second video ran on AnyScreen OTT-TV and YouTube.
- "Choose Less Toxic Pest Control" 30-second radio ad in English ran on KUFX and KEZR, in Spanish on KSOL and KBRG.
- "Choose Less Toxic Pest Control" 60-second radio talent endorsement ran on KEZR.
- "Choose less toxic DIY" 30-second TV ran in Spanish on KSTS.
- "Choose less toxic DIY" 30-second video ran on AnyScreen OTT-TV and YouTube in English and Spanish.
- "Pests Bugging You?" IPM messages on Hearst AnyScreen digital in English and Spanish.
- The following topics were promoted on social media pages via paid advertising – the Green Gardener Training Program, hire an IPM professional, choose less-toxic pest control, and find an OWOW store near you.

Outcome Level 2: Barriers and Bridges to Action

SCVURPPP's various efforts to educate residents about IPM and pesticide use and disposal, including media advertising, website postings and distribution of outreach materials at events, raise awareness among residences on IPM and less-toxic pest control. As an example, in FY 24-25, media advertising delivered over six million impressions.

Outcome Level 3: Target Audience Actions

While data are lacking regarding to the extent residents are implementing IPM techniques, data from the Santa Clara County Household Hazardous Waste (HHW) Program indicates that Santa Clara Valley residents are continuing to properly dispose of household hazardous wastes, including pesticides. As shown in Table 3-3, from FY 19-20 to FY 23-24, 190,811 residents disposed of household hazardous waste, including unused pesticides, via the Santa Clara County HHW Program.

Table 3-3 Number of Residents Served by the County HHW Program

Fiscal Year	Number of Residents Served	Number of Collection Events
FY 19-20	27,900	134 collection events: 128 at two permanent facilities and 6 at temporary sites
FY 20-21	42,424	173 collection events: at two permanent facilities, 263 small business drop offs and none at temporary sites
FY 21-22	38,009	189 collection events: 185 at two permanent facilities and five at temporary sites
FY 22-23	37,869	206 collection events: 197 at two permanent facilities and nine at temporary sites
FY 23-24	44,609	194 collection events: 184 at two permanent facilities and 10 at temporary sites

Outcome Level 4 - Source Contributions

From FY 19-20 through FY 23-24, the Santa Clara County HHW Program collected 949,150 pounds of liquid poisons and 443,050 pounds of solid poisons. If not properly disposed, these HHW materials could have caused urban runoff pollution. Table 3-4 provides a summary by fiscal year.

Table 3-4. Quantity of total poisons (including pesticides) collected at Santa Clara County HHW locations from FY 19-20 to FY 23-24

Year	Quantity of Liquid Poisons Collected (pounds)	Quantity of Solid Poisons Collected (pounds)	Total Quantity of Poisons (Liquid and Solid) Collected	Number of Collection Events	Pounds of Poisons (Liquid and Solid) Collected Annually per Collection Event
FY 19-20	169,683	91,600	261,283	134	1,950
FY 20-21	236,817	94,200	331,017	173	1,913
FY 21-22	213,750	87,900	301,650	189	1,596
FY 22-23	176,450	73,000	249,500	206	1,211
FY 23-24	152,450	96,350	248,800	194	1,282

Outreach to Pest Control Professionals (PCOs)

Outcome Level 1 - Stormwater Program Activities

From FY 19-20 to FY 24-25, SCVURPPP conducted the following activities to educate structural pest control operators and landscape professionals on water quality issues associated with pesticide use and IPM:

- Offered the Santa Clara Valley Green Gardener Training annually for landscape professionals. The trainings were canceled a few times due to low enrollment. From FY 19-20 to FY 24-25, a total of 109 individuals completed this training.
- Conducted significant outreach via mailings, email, radio ads, the Watershed Watch website, and social networking sites to inform landscape professionals about the availability of the Green Gardener training.
- In FY 21-22, developed and mailed an educational postcard to 200 pest control firms. The postcard encouraged PCOs to use eco-friendly pest control techniques to prevent pesticide pollution in local creeks. As mentioned in Section 3.5, SCVURPPP staff developed articles on pesticide toxicity control which were included in the Santa Clara County Division of Agriculture's "The Pesticide Review" newsletter in November 2020, November 2023, and November 2024. The Division of Agriculture sent these newsletters to all PCOs registered in Santa Clara County.

Outcome Level 2: Barriers and Bridges to Action and Outcome Level 3: Target Audience Actions

Students attending the Santa Clara Green Gardener training are requested to complete a survey at the completion of the training. Highlights of evaluations received in FY 23-24 are provided below:

- 89% of survey respondents indicated that they would change their landscape management practices based on what they have learned in the training. Several respondents added that they are already practicing sustainable landscaping, and the training added to their knowledge.
- 87% of survey respondents indicated that they would recommend this Green Gardener class to a co-worker or another landscape professional.
- 92% of respondents noted that they found the class on IPM useful.

The survey responses indicate an increase in awareness of sustainable landscaping practices and willingness to make changes to landscape management practices based on what was learned at the trainings. In addition to the evaluation, attendees are required to take a final test to receive the

certificate of completion. This ensures that they understand the curriculum and will be able to implement the practices at their client locations.

3.7. Minimizing Pesticide Use at New Development and Redevelopment Sites

The goal of this source control measure is to reduce pesticide use by encouraging pest-resistant landscaping and design features in the design, landscaping, and environmental reviews of proposed development projects. This measure is assessed at Outcome Level 1, Level 2, and Level 3.

Outcome Level 1 - Stormwater Program Activities

The SCVURPPP Model Conditions of Approval (COAs) of Development and Redevelopment Projects include measures for incorporating pest resistant landscaping features and practices. Permittees have incorporated these or similar COAs into their project review and approval processes. Beneficial landscaping that minimizes pesticides, fertilizers, irrigation, and runoff is also listed as a Source Control Measure on the SCVURPPP C.3 Data Form that is used (with some modifications) by most Permittees.

The Program's C.3 Stormwater Handbook (updated October 2024) includes templates for Operation and Maintenance (O&M) of stormwater treatment measures. These templates include guidance on using IPM to maintain these treatment measures. The templates are posted on the Program's website and Permittees use the templates as exhibits to their stormwater treatment measure maintenance agreements.

The C.3 Handbook's Appendix D also includes a list of plants that can be used for stormwater treatment measures, and guidance on planting and maintaining these plants. The recommended plants are non-invasive, California natives that require less water and minimum use of pesticides. The plant list is available on the Program's website.

Outcome Level 2: Barriers and Bridges to Action

SCVURPPP conducts workshops to educate municipal staff that review development project applications and consultants about the MRP requirements for new and redevelopment projects. Information on Low Impact Development, green streets, landscaping with native plants, and selecting plants for stormwater treatment measures is included in the workshops. This ensures that staff reviewing development projects are familiar with the sustainable landscaping techniques and encourage developers to include these features in their projects.

Outcome Level 3: Target Audience Actions

Table 3-5 summarizes data from Permittee Annual Reports on the number of regulated projects that incorporate "beneficial landscaping" (landscaping that minimizes pesticides, fertilizers, irrigation, and runoff) as a source control measure.

Table 3-5. Number of Approved Regulated Projects that include Beneficial Landscaping

Year	Number of Regulated Projects Approved by SCVURPPP Permittees	Number of Approved Regulated Projects that Include Beneficial Landscaping	Percentage of Approved Regulated Projects that Include Beneficial Landscaping
FY 19-20	104	78	75%
FY 20-21	95	76	80%
FY 21-22	92	73	79%
FY 22-23	90	69	77%
FY 23-24	105	71	68%

The data indicate that most of the approved regulated projects are including "beneficial landscaping" (landscaping that minimizes pesticides, fertilizers, irrigation, and runoff) as a source control measure. These data suggest that municipal staff that review projects are encouraging project applicants to include beneficial landscaping in their projects. Project applicants and developers are also willing to incorporate these measures into their landscape plans.

4.0 WATER QUALITY ASSESSMENT (LEVEL 6)

Water quality assessments are conducted using monitoring and assessment data that characterize the quality of discharges from stormwater conveyance systems (Outcome Level 5) or the chemical, physical or biological condition of receiving waters (Outcome Level 6). The available applicable water quality monitoring data in Santa Clara County is generally from receiving waters (i.e., pesticide concentrations and toxicity in water and sediment collected from urban creeks). Collecting useful data from stormwater conveyances is problematic for a number of reasons and as a result these types of data are generally not available. Thus, the effectiveness of source control measures is assessed at Outcome Level 6 (Protecting Receiving Water Quality). The origins of the data used in the Level 6 water quality assessment are described below.

4.1. Pesticide and Toxicity Creek Monitoring Programs in the Santa Clara Valley

Over the course of the past two decades, several monitoring programs have tested for pesticides and toxicity in water and sediment from Santa Clara Valley urban creeks:

- SCVURPPP has been the primary monitoring program in the Valley since the late 1990s and continues to collect data in urban creeks, consistent with NPDES municipal stormwater permit requirements. This includes measuring the concentrations of pesticides in water and sediment from urban creeks and assessing the degree of toxicity to test organisms exposed to water and sediment. See Section 2.4.2 for more details.
- In coordination with SCVURPPP, from 2012 to 2014, the Regional Monitoring Program for Water Quality in San Francisco Bay (RMP) Sources, Tributaries, and Loading Strategy (STLS) analyzed samples collected from Santa Clara Valley creeks for pollutants of concern (POCs), including pesticides and related toxicity.
- California's Surface Water Ambient Monitoring Program (SWAMP) has collected pesticide and toxicity data in Santa Clara Valley urban creeks since 2002. These data have been collected through a number of projects implemented at regional and statewide scales, including the

Regional Water Board's regional SWAMP program, the State Water Board's Statewide Stream Pollutant Trend (SPoT) program, and a 2004-2005 project conducted by the San Francisco Estuary Institute (SFEI) funded through a California Proposition 13 Pesticide Research and Investigation of Source and Mitigation (PRISM) grant (Lowe et al. 2007). The SPoT program's statewide monitoring network includes two bottom-of-the-watershed stations in the Santa Clara Valley that have been sampled nearly every year since 2008. [6]

- The California Department of Pesticide Regulation (DPR) has monitored pesticides in water and sediment at stations throughout California since 1991. The DPR monitoring network currently includes five stations in Santa Clara Valley where water and sediment samples have been collected since 2014.
- The concentration of pesticides and extent of toxicity in Bay Area urban creeks were monitored by the Clean Estuary Partnership (CEP) in 2005, including two sites in Santa Clara Valley (CEP 2005).
- The United States Geological Service (USGS) monitored current-use pesticides and toxicity at urban and agricultural sites throughout California (including one site in Santa Clara Valley - Stevens Creek) from 2015 – 2017 (Sanders et al 2018). Additional monitoring by USGS was completed in San Francisquito Creek at Stanford University during 2017.

4.2. Pesticides of Concern in Santa Clara Valley Urban Creek Water and Sediment

Each program described above has measured various parameters in water and/or sediment collected from Santa Clara Valley urban creeks. Decisions regarding parameters and sample matrices (i.e., water and/or sediment) are informed by project/program objectives, the chemical characteristics of the pesticides of interest, and available resources. For example, water soluble pesticides such as the organophosphate diazinon (and more recently, the neonicotinoid imidacloprid) are monitored in water samples; whereas pesticides with a higher affinity to absorb to particles, such as pyrethroids, carbaryl and fipronil are generally measured in creek bedded sediment samples.

Since the early 2000s, the primary focus of pesticide and toxicity monitoring in Santa Clara Valley urban creeks has shifted from the presence and effects of chlorpyrifos, diazinon, and legacy pesticides (e.g., DDT) to pyrethroids and, more recently fipronil. This shift was in response to the declining use of chlorpyrifos and diazinon following the cancellation of these chemicals for residential uses in 2004 and their subsequent replacement with pyrethroids and other newer chemicals.

4.2.1. Concentrations in Water

Table 4-1 summarizes the numbers of water samples collected in Santa Clara Valley urban creeks and analyzed for pesticides from 2002 to 2024. These data were generated from the studies, projects, and programs described in the previous section. During this timeframe, more than 200 water samples collected from various sites in urban creeks were analyzed for pesticides. Samples were collected during both storm events and dry weather conditions. All SCVURPPP water samples were collected during wet weather in WY 2018 and WY 2023.

[6] https://www.waterboards.ca.gov/water_issues/programs/swamp/spot/

Table 4-1. Number of water samples collected from Santa Clara Valley urban creeks and analyzed for pesticides from 2002 to 2024

Monitoring Program	Data Points Collected in Santa Clara Valley Urban Creeks per Year																					
	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
SCVURPPP Monitoring Program																							
Pre-MRP Monitoring	7	20	23	19	11	8	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RMC Monitoring (MRP)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	3	-	-
POC Loads Monitoring (with the RMP STLS)	8	17	4	-	-	-	-	-	-	-	9	2	9	-	-	-	-	-	-	-	-	-	-
Surface Water Ambient Monitoring Program (SWAMP)																							
Region 2 (SF Bay Region) Monitoring	6	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
Statewide Stream Pollution Trends (SPoT) Program	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PRISM Grant Program	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clean Estuary Partnership (CEP)																							
Urban Pesticide Monitoring Project	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Department of Pesticide Regulation (DPR)																							
Surface Water Monitoring Project	-	-	-	-	-	-	-	-	-	-	-	-	4	4	1	2	4	8	8	7	2	2	2
United States Geological Service (USGS)																							
Current-Use Pesticides (Data Series 1088)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	12	-	-	-	-	-	-	-
Totals	**21**	**40**	**29**	**23**	**11**	**8**	**6**	**0**	**0**	**0**	**9**	**2**	**13**	**5**	**4**	**14**	**7**	**11**	**8**	**7**	**5**	**2**	**2**

Diazinon is an organophosphate pesticide that was once used widely, but is now specifically targeted by the TMDL for diazinon and pesticide-related toxicity in San Francisco Bay area urban creeks (SFRBWQCB 2005). Due to its toxicity to birds and aquatic organisms, diazinon was essentially removed from retail store shelves in 2000, and most residential and professional uses ceased by the end of 2004. Monitoring data from 2002 through 2018 showed that diazinon concentrations were well below the TMDL concentration targets during this period (SCVURPPP 2019a); therefore, monitoring of this pesticide was not required in MRP 3.0.

Pyrethroids, synthetic insecticides derived from chrysanthemum flowers, are commonly used as replacements for diazinon. Whereas diazinon is water soluble, pyrethroids have a strong affinity for sediments and tend to be more persistent in that matrix compared to water. However, since WY 2018, SCVURPPP has collected six wet weather samples for analysis of pyrethroids. The sum of pyrethroid concentrations in these samples ranged from non-detect (San Tomas Aquino Creek in WY 2018) to 0.04 ug/L (Guadalupe River in WY 2022), with concentrations of many individual pyrethroids (e.g., bifenthrin, cyfluthrin, cypermethrin, permethrin) above the lowest USEPA benchmarks (i.e., lowest published concentration potentially leading to chronic effects for freshwater invertebrates) (SCVURPPP 2019b; 2024). Figure 4.1 shows the sum of pyrethroid pesticides in water samples collected by SCVURPPP in 2018 and 2022. Other monitoring programs have also reported pyrethroid pesticides as being some of the most ubiquitous pesticides in Santa Clara County urban creeks (Alvarado 2024).

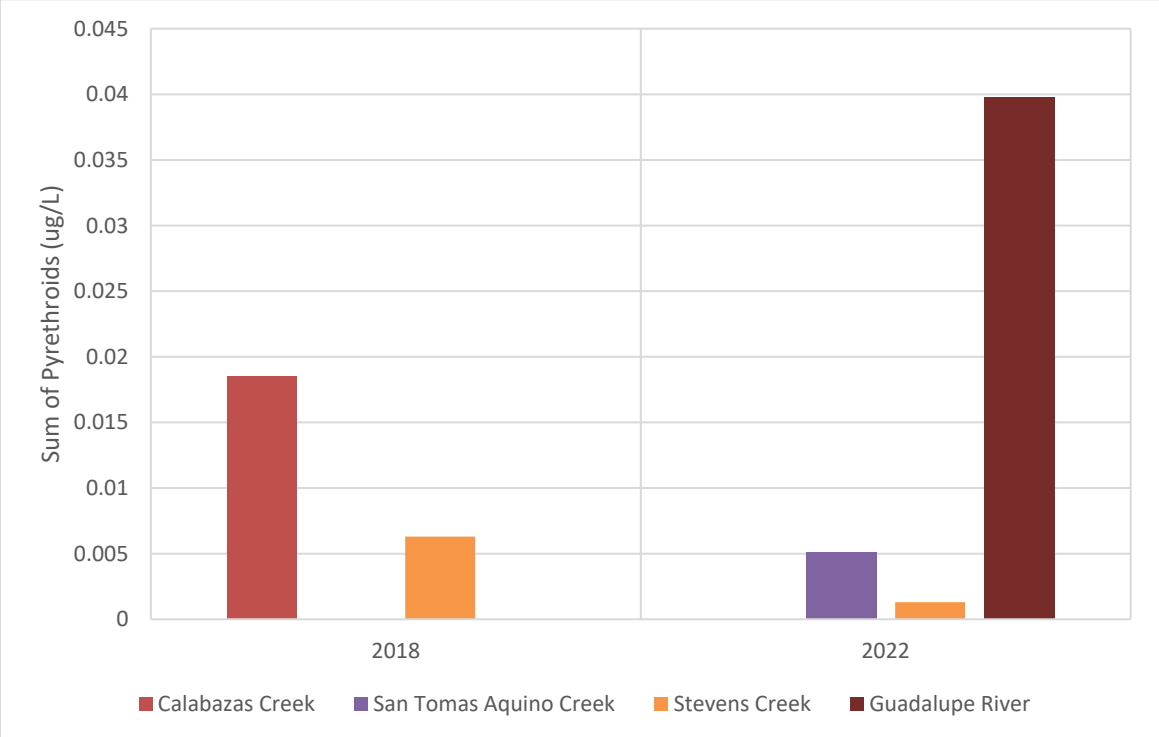

Figure 4-1. Sum of pyrethroids (bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda cyhalothrin, and permethrin) in water samples collected by SCVURPPP by monitoring year

Imidacloprid is a neonicotinoid pesticide that has been used in recent years as a pyrethroid replacement for indoor and outdoor pest control, pet treatments, and in construction materials. A total of at least 80 water samples from Santa Clara Valley urban creeks have been analyzed for imidacloprid since 2014. USGS collected many of these imidacloprid water samples during 2017 and had no detections. SCVURPPP collected three water samples in WY 2018 and three samples in WY 2023 and found no

detections (SCVURPPP 2019b, SCVURPPP 2024). Since 2014, DPR has also collected water samples from Santa Clara Valley urban creeks (n=46), with imidacloprid detected in approximately 33 percent of samples.

The insecticide fipronil is another pyrethroid replacement. Fipronil and its degradates (fipronil amide, fipronil sulfide, fipronil sulfone) were measured in SCVURPPP wet weather water samples in WY 2018 and WY 2023 (SCVURPPP 2019b; 2024). Figure 4-2 shows the sum of fipronil and its degradates in these samples which ranged from 0.002 ug/L (San Tomas Aquino Creek in 2022) to 0.039 (Stevens Creek in 2018). DPR water samples from Santa Clara Valley urban creeks collected during this same time period had much lower concentrations, with few detections of fipronil or its degradates.

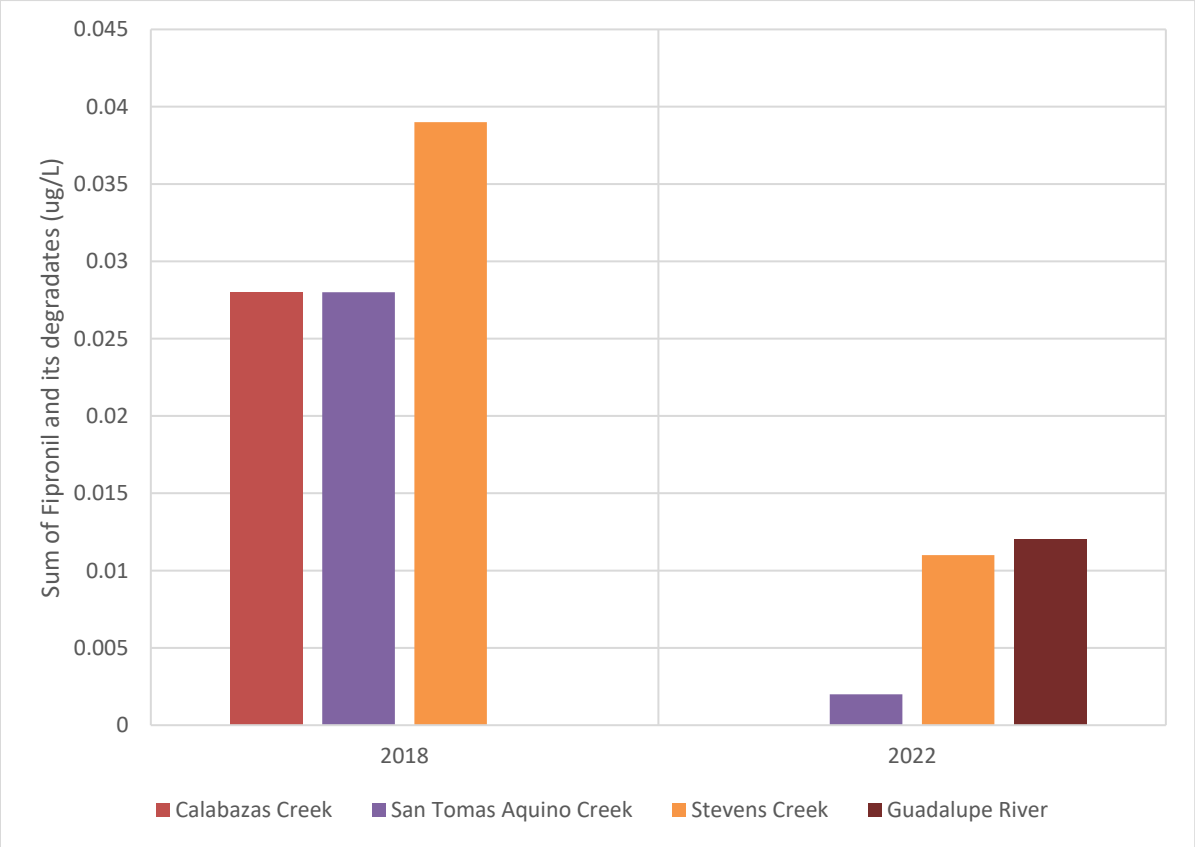

Figure 4-2. Sum of fipronil and its degradates in water samples collected by SCVURPPP by year

4.2.2. Concentrations in Sediment

Table 4-2 summarizes the numbers of bedded sediment samples collected in Santa Clara Valley urban creeks and analyzed for pesticides from 2002 to 2024. These data were generated by the programs described in Section 4.1.; however, the primary data sources include the SPoT Program which has sampled Coyote Creek and Guadalupe Creek nearly every year since 2008, and SCVURPPP which has sampled urban creeks throughout the County since 2012 per MRP monitoring requirements (see Section 2.4.2 for a description of MRP monitoring requirements). During this timeframe, more than 130 sediment samples collected from various sites in urban creeks were analyzed for concentrations of pyrethroids and/or other current use or emerging pesticides (such as fipronil). All bedded sediment samples were collected during dry weather conditions.

Table 4-2 Number of bedded sediment samples collected from Santa Clara County urban creeks and analyzed for pesticides from 2002 to 2024

Monitoring Program	Data Points Collected in Santa Clara Valley Urban Creeks per Year																						
	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
SCVURPPP Monitoring Program																							
Pre-MRP Monitoring	4	3	-	-	12	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RMC Monitoring (MRP)	-	-	-	-	-	-	-	-	-	-	3	3	3	3	4	2	7	2	2	2	2	2	2
POC Loads Monitoring (with the RMP STLS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surface Water Ambient Monitoring Program (SWAMP)																							
Region 2 (SF Bay Region) Monitoring	2	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-
Statewide Stream Pollution Trends (SPoT) Program	-	-	-	-	-	-	2	1	2	2	2	2	2	2	2	2	2	2	2	-	2	-	-
PRISM Grant Program	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clean Estuary Partnership (CEP)																							
Urban Pesticide Monitoring Project	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Department of Pesticide Regulation (DPR)																							
Surface Water Monitoring Project	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-
United States Geological Service (USGS)																							
Current-Use Pesticides (Data Series 1088)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	**6**	**3**	**1**	**2**	**12**	**19**	**18**	**1**	**2**	**2**	**5**	**5**	**5**	**5**	**14**	**4**	**9**	**4**	**5**	**2**	**4**	**3**	**2**

As stated previously, pyrethroids have a strong affinity for sediments and are among the most ubiquitous pesticides throughout the state and in Santa Clara County urban creeks (Alvarado 2024). For this reason, monitoring has focused on pyrethroids in sediments, with the largest datasets generated by SCVURPPP and the SPoT program. Both programs collect two dry season sediment samples per year for pyrethroid analysis.

Figure 4-3 compares total organic carbon (TOC)-normalized concentrations of bifenthrin, the most commonly detected pyrethroid in local sediments, with LC50 toxicity thresholds[7] reported in the literature (Amweg et al. 2005). The figure includes available SPoT data (2012-2020) from Coyote Creek (station 205COY060) and Guadalupe River (station 205GUA020) along with the long-term SCVURPPP record (2016-present) for Stevens Creek (station 205STE021) and San Tomas Aquino Creek (station 205STQ010). Bifenthrin, which is considered to be the leading cause of pyrethroid-related toxicity in urban areas (Ruby 2013), rarely exceeds the LC50 in the four Santa Clara Valley creeks included in Figure 4-3.

In recent years, many urban applicators have shifted from pyrethroids to the non-pyrethroid alternatives like fipronil for insect control (e.g., ants and termites). In 2013, SPoT began analyzing for fipronil and its degradates, with SCVURPPP adding them in 2016. Although only one SCVURPPP sample had a detection (fipronil sufone in San Tomas Aquino Creek, 2020), 5 of 7 SPoT samples from Coyote Creek and 4 of 7 SPoT samples from the Guadalupe River have had detections. However, all of these TOC-normalized concentrations were below the adverse effects thresholds proposed by Maul et al. (2008).

[7]Lethal Concentration 50% - the dose required to kill half the members of a tested population after a specified test duration.

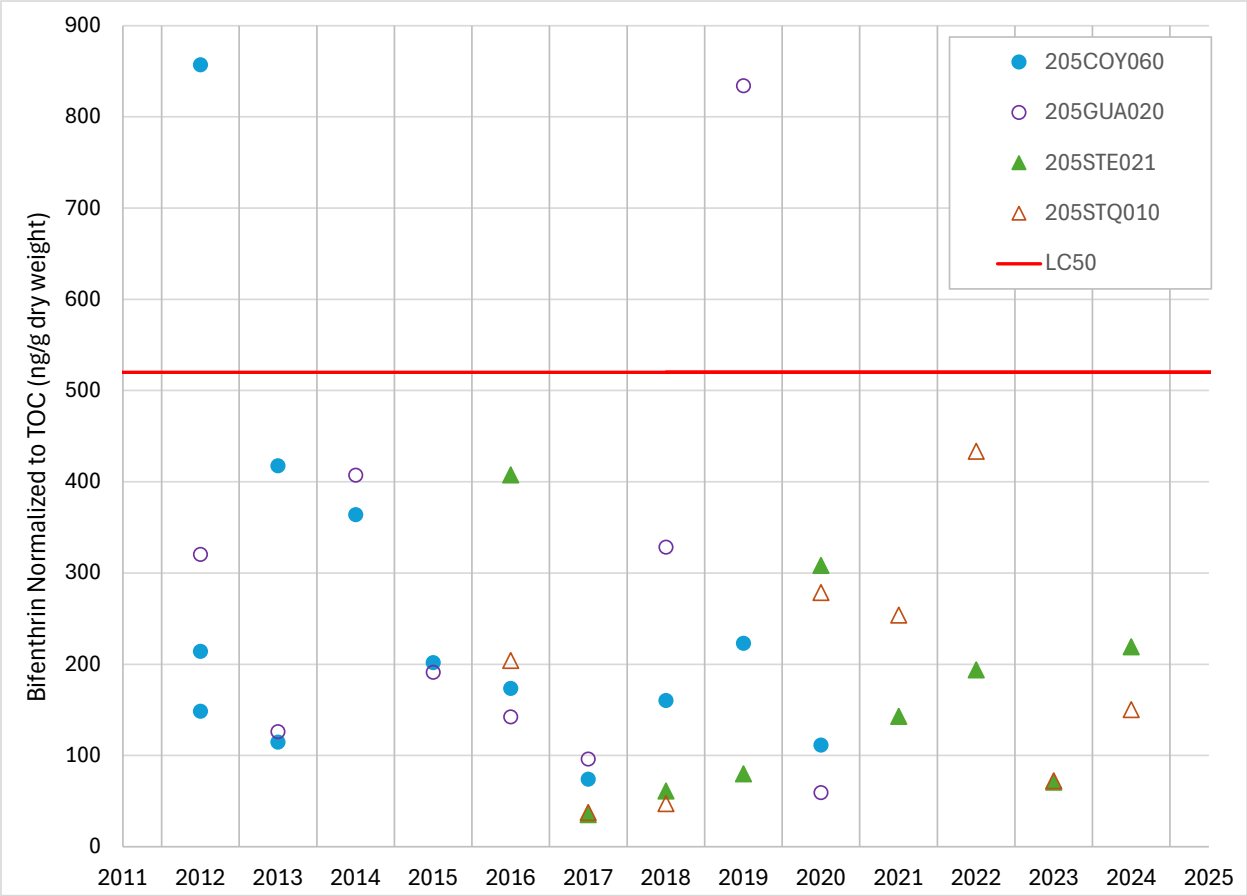

Figure 4-3. Bifenthrin concentrations in bedded sediment collected from Santa Clara Valley urban creeks from 2012 to 2024. Red line is the LC50 for Hyalella azteca (Amweg et al. 2005). Only samples with concentrations above the detection limit are included

4.3. Toxicity in Santa Clara Valley Urban Creek Water and Sediments

The types of test organisms used in toxicity testing differ between water and sediment and responses vary with exposure to different pesticides. Test organisms *Ceriodaphnia dubia* (a crustacean), *Hyalella azteca* (an amphipod), *Pimephales promelas* (fathead minnow), and *Selenastrum capricornutum* (a green algae) are typically utilized for testing for acute and chronic toxicity in the water column. *Ceriodaphnia dubia* is highly sensitive to diazinon. *Hyalella azteca* and *Chironomus dilutus* are typically the only organisms used to evaluate toxicity in sediments from freshwater creeks. *H. azteca* is highly sensitive to pyrethroid pesticides. *Chironomus dilutus* (a midge) is sensitive to fipronil, its degradates, and neonicotinoids (i.e., imidacloprid); it was added to the SPoT program in 2015 and to MRP monitoring in 2016.

A two-tiered approach is typically applied to determine toxicity. First, organism responses from ambient samples are compared to responses from appropriate control samples using a statistical comparison. This is followed by a comparison to a "threshold value" that indicate the magnitude of the difference in response. The SWAMP database applies a threshold value of 20 percent. Both criteria must be met for a sample to be considered toxic.

Tables 4-3 and 4-4 summarize the numbers of water (Table 4-3) and sediment (Table 4-4) samples collected in Santa Clara Valley urban creeks and tested for toxicity to laboratory test organisms between 2002 and 2024. These data were generated by the programs described in Section 4.1. Water samples for toxicity testing are collected in dry and wet weather conditions.

Table 4-5 summarizes the results of SCVURPPP water and sediment toxicity monitoring since 2016, which has been conducted primarily in San Tomas Aquino and Stevens Creeks during the dry season. In 2018 and 2022, SCVURPPP also conducted wet weather water toxicity monitoring in three creeks including San Tomas Aquino Creek, Stevens Creek, Calabazas Creek (2018 only) and the Guadalupe River (2022/2023 only). In compliance with the MRP, whenever there is a finding of toxicity with a percent effect greater than 50, a resample is collected as soon as possible.

Findings from the nine-year toxicity summary in Table 4-5- include the following:

- ***H. azteca*.** Toxicity to *H. azteca*, a test organism known to be sensitive to pyrethroid pesticides, was observed in WY 2022 and WY 2023 dry season sediment samples, as well as wet weather water samples collected in WY 2018 and WY 2023. Pyrethroid pesticides tend to accumulate in sediment, and pyrethroids in sediment samples collected synoptically with the dry season toxicity samples are generally below levels of concern. Further, long-term monitoring of local creeks by the SPoT Program suggests that pyrethroid concentrations in sediment have decreased since 2011/2012 (SCVURPPP 2019b). It is unknown whether the toxicity to *H. azteca* observed in SCVURPPP WY 2022 and WY 2023 dry season sediment and WY 2018 and WY 2023 wet weather water samples is directly related to pyrethroids or some other toxic substance present in the creeks.

- ***C. dilutus.*** Toxicity to *C. dilutus*, a test organism known to be sensitive to neonicotinoids (e.g., imidacloprid) and fipronil, was observed in five sediment and five water samples collected during the dry season, including three sediment samples from San Tomas Aquino Creek with a Percent Effect exceeding the MRP threshold for resampling. Toxicity to *C. dilutus* was not observed in any of the six wet weather water samples collected in WY 2018 and WY 2023. Although fipronil and its degradates are rarely detected in synoptic sediment chemistry samples, it appears plausible that the water quality impacts associated with pyrethroid pesticides may be decreasing, while impacts associated with their replacements (i.e., neonicotinoids) may be increasing as these types of pesticides have gained market share.

- ***C. dubia* (reproduction).** Of the 32 dry season samples where significant toxicity was observed, half (n=16) were water samples with *C. dubia* reproduction toxicity. *C. dubia* is a water flea that is sensitive to a broad range of aquatic contaminants. However, the specific cause of the chronic *C. dubia* toxicity in San Tomas Aquino and Stevens Creeks is unknown, not seemingly explained by the synoptic sediment chemistry results.

  Statewide, there have been other reports of unexplained chronic *C. dubia* toxicity, within and between laboratory variability in the magnitude of toxicity, and suspicion of false positives. An analysis by SWAMP in conjunction with the Statewide Toxicity Provisions adopted by the State Water Board on December 1, 2020 (Resolution No. 2020-0044) indicates that *C. dubia* toxicity variability could arise from inconsistencies in QA procedures used by laboratories. The final report of a nearly three-year special study requested by the State Water Board and completed by the Southern California Coastal Water Research Project (SCCWRP) was released in September 2023 (Brent et al. 2023). The SCCWRP report investigates levels and sources of variability in lab testing for *C. dubia* toxicity testing. The study also provides recommendations for regulators,

regulated parties, and testing laboratories that will enhance the data quality for *C. dubia* toxicity tests and affect stormwater toxicity provisions.

There are many factors that may influence *C. dubia* toxicity test results. The *Ceriodaphnia dubia* Quality Assurance Guidance Recommendations Study (Brent et al. 2023) investigated laboratory techniques and historical data to better understand how variabilities in test results can be explained and reduced. Laboratory visits and interlaboratory comparisons were also conducted, and found that no two laboratories performed *C. dubia* toxicity testing in the same manner (Brent et al. 2023). Inconsistencies between lab processes on many factors were observed (e.g., recipes for dilution water, food sources, feeding methods, test chambers, volumes, light intensities, health assessments, etc.). The Study recommended guidance for laboratory best practices, accreditation, and training. A list of constraints that limit the conclusions and recommendations of the Study was also provided. Overall, the main concern that was identified in the Study was lab performance, not test methods.

Table 4-3. Number of water samples collected from Santa Clara Valley urban creeks and analyzed for toxicity from 2002 to 2024

Monitoring Program	Data Points Collected in Santa Clara Valley Urban Creeks per Year																						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
SCVURPPP Monitoring Program																							
Pre-MRP Monitoring	4	8	10	11	7	8	6	-	-	-	-	-	-	-	-	-	-						
RMC Monitoring (MRP)	-	-	-	-	-	-	-	-	-	-	6	6	6	6	2	2	7	4	4	4	2	7	3
POC Loads Monitoring (with the RMP STLS)	-	-	-	-	-	-	-	-	-	-	4	2	9	-	-	-	-						
Surface Water Ambient Monitoring Program (SWAMP)																							
Region 2 (SF Bay Region) Monitoring	8	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	5					
Statewide Stream Pollution Trends (SPoT) Program	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1						
PRISM Grant Program	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Clean Estuary Partnership (CEP)																							
Urban Pesticide Monitoring Project	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-						
Department of Pesticide Regulation (DPR)																							
Surface Water Monitoring Project	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
United States Geological Service (USGS)																							
Current-Use Pesticides (Data Series 1088)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Totals	**12**	**12**	**10**	**13**	**7**	**8**	**6**	**0**	**0**	**0**	**10**	**8**	**15**	**6**	**2**	**3**	**11**	**9**	**4**	**4**	**2**	**7**	**3**

Table 4-4. Number of sediment samples collected from Santa Clara Valley urban creeks and analyzed for toxicity from 2002 to 2024

Monitoring Program	Data Points Collected in Santa Clara Valley Urban Creeks per Year																						
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
SCVURPPP Monitoring Program																							
Pre-MRP Monitoring	-	-	-	-	6	15	16	-	-	-	-	-	-	-	-	-	-						
RMC Monitoring (MRP)	-	-	-	-	-	-	-	-	-	-	3	3	3	3	2	2	2	3	2	3	3	2	2
POC Loads Monitoring (with the RMP STLS)	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-						
Surface Water Ambient Monitoring Program (SWAMP)																							
Region 2 (SF Bay Region) Monitoring	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	7					
Statewide Stream Pollution Trends (SPoT) Program	-	-	-	-	-	-	2	1	2	7	10	5	2	2	2	2	2	2	2	1	1	2	2
PRISM Grant Program	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Clean Estuary Partnership (CEP)																							
Urban Pesticide Monitoring Project	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-						
Department of Pesticide Regulation (DPR)																							
Surface Water Monitoring Project	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
United States Geological Service (USGS)																							
Current-Use Pesticides (Data Series 1088)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Totals	**2**	**0**	**0**	**0**	**6**	**18**	**18**	**1**	**2**	**7**	**18**	**8**	**5**	**5**	**4**	**2**	**4**	**12**	**4**	**4**	**4**	**4**	**4**

Table 4-5. Toxicity test result summary, 2016 – 2024. The Percent Effect is indicated for test results with toxicity relative to the lab control. Test results with toxicity exceeding the threshold of 20% Effect are highlighted blue. Test results with toxicity exceeding the MRP threshold of 50% Effect are highlighted orange

Station ID	Creek	Date	Water Year	Season	Sediment		Water						
					C. dilutus	*H. azteca*	*C. dubia*		*P. promelas*		*C. dilutus*	*H. azteca*	*S. capricornutum*
					Survival	Survival	Survival	Reproduction	Survival	Growth	Survival	Survival	Growth
San Tomas Aquino Creek Dry Season Samples													
205STQ010	San Tomas Aquino Cr	7/11/2016	WY 2016	Dry	**Yes** (18%)	No	No	No	No	No	No	No	No
205STQ010	San Tomas Aquino Cr	7/13/2017	WY 2017	Dry	No	No	No	**Yes** (30%)	No	No	**Yes** (11%)	No	No
205STQ010	San Tomas Aquino Cr	7/17/2018	WY 2018	Dry	No	No	No	No	No	No	No	No	No
205STQ010	San Tomas Aquino Cr	7/23/2019	WY 2019	Dry	**Yes (56%)**	No	No	**Yes** (31%)	No	No	No	No	No
205STQ010	San Tomas Aquino Cr	8/28/2019	WY 2019	Dry [a]	No	--	No	--	--	--	--	--	--
205STQ010	San Tomas Aquino Cr	7/22/2020	WY 2020	Dry	No	No	No	**Yes (67%)**	No	No	**Yes** (31%)	No	No
205STQ010	San Tomas Aquino Cr	9/9/2020	WY 2020	Dry [a]	--	--	--	No	--	--	--	--	--
205STQ010	San Tomas Aquino Cr	6/23/2021	WY 2021	Dry	**Yes (57%)**	No	No	**Yes** (45%)	No	No	No	No	No
205STQ010	San Tomas Aquino Cr	8/18/2021	WY 2021	Dry [a]	--	--	No	No	--	--	--	--	--
205STQ010	San Tomas Aquino Cr	7/12/2022	WY 2022	Dry	**Yes (100%)**	**Yes** (47%)	No	No	No	No	No	No	No
205STQ010	San Tomas Aquino Cr	9/6/2022	WY 2022	Dry [a]	**Yes** (25%)	--	--	--	--	--	--	--	--
205STQ010	San Tomas Aquino Cr	7/18/2023	WY 2023	Dry	**Yes** (47%)	**Yes** (41%)	No	**Yes** (44%)	No	No	No	No	No
205STQ010	San Tomas Aquino Cr	7/9/2024	WY 2024	Dry	No	No	No	**Yes (56%)**	No	No	No	No	No
205STQ010	San Tomas Aquino Cr	9/18/2024	WY 2024	Dry [a]	--	--	--	**Yes (58%)**	--	--	--	--	--
Stevens Creek Dry Season Samples													
205STE021	Stevens Cr	7/11/2016	WY 2016	Dry	No	No	No	No	**Yes** (27%)	No	No	No	No
205STE021	Stevens Cr	7/13/2017	WY 2017	Dry	No	No	No	**Yes (80%)**	No	No	No	No	No
205STE021	Stevens Cr	8/15/2017	WY 2017	Dry [a]	--	--	No	No	--	--	--	--	--
205STE021	Stevens Cr	7/17/2018	WY 2018	Dry	No	No	No	No	No	No	**Yes** (24%)	No	No
205STE021	Stevens Cr	7/23/2019	WY 2019	Dry	No	No	No	**Yes (73%)**	No	No	**Yes** (18%)	No	No
205STE021	Stevens Cr	9/18/2019	WY 2019	Dry [a]	--	--	No	**Yes** (47%)	--	--	--	--	--
205STE021	Stevens Cr	7/22/2020	WY 2020	Dry	No	No	**Yes** (30%)	**Yes (79%)**	No	No	No	No	No
205STE021	Stevens Cr	9/9/2020	WY 2020	Dry [a]	--	--	--	No	--	--	--	--	--
205STE021	Stevens Cr	6/23/2021	WY 2021	Dry	No	No	**Yes** (40%)	**Yes (57%)**	No	No	No	No	No
205STE021	Stevens Cr	8/18/2021	WY 2021	Dry [a]	No	--	--	NA [b]	--	--	--	--	--
205STE021	Stevens Cr	7/12/2022	WY 2022	Dry	No	No	No	**Yes** (24%)	No	No	No	No	No
205STE021	Stevens Cr	7/18/2023	WY 2023	Dry	No	No	No	**Yes (57%)**	No	No	**Yes** (13%)	No	No

Station ID	Creek	Date	Water Year	Season	Sediment		Water						
					C. dilutus	*H. azteca*	*C. dubia*		*P. promelas*		*C. dilutus*	*H. azteca*	*S. capricornutum*
					Survival	Survival	Survival	Reproduction	Survival	Growth	Survival	Survival	Growth
205STE021	Stevens Cr	9/11/2023	WY 2023	Dry [a]	--	--	--	**Yes (54%)**	--	--	--	--	--
205STE021	Stevens Cr	7/9/2024	WY 2024	Dry	No	No	No	**Yes** (41%)	No	No	No	No	No
Wet Weather Samples													
205STQ010	San Tomas Aquino Cr	1/8/2018	WY 2018	Wet	--	--	No	No	No	No	No	**Yes (56%)**	No
205STQ010	San Tomas Aquino Cr	3/1/2018	WY 2018	Wet [a]	--	--	No	--	--	--	--	No	--
205STE021	Stevens Cr	1/8/2018	WY 2018	Wet	--	--	No	No	No	No	No	**Yes** (28%)	No
205CAL018	Calabazas Cr	1/8/2018	WY 2018	Wet	--	--	No	No	No	No	No	**Yes** (60%)	No
205CAL018	Calabazas Cr	3/1/2018	WY 2018	Wet [a]	--	--	No	--	--	--	--	**Yes** (12%)	--
205GUATRM	Guadalupe River	11/8/2022	WY 2023	Wet	--	--	No	No	No	No	No	**Yes (63%)**	No
205GUATRM	Guadalupe River	1/10/2023	WY 2023	Wet [a]	--	--	--	--	--	--	--	**Yes** (40%)	--
205STE021	Stevens Cr	11/8/2022	WY 2023	Wet	--	--	No	No	No	No	No	No	No
205STQ010	San Tomas Aquino Cr	11/8/2022	WY 2023	Wet	--	--	No	No	No	No	No	No	No

[a] Resample, [b] Laboratory error

4.4. Statewide Review of Pesticide and Toxicity Monitoring Data

Ruby (2013) compiles and summarizes chemistry data from monitoring performed in urban areas of California (including the San Francisco Bay area) for pyrethroid and fipronil pesticides and related toxicity testing results, covering the ten-year period from 2003 to 2012 (Ruby 2013). Over 9,200 pyrethroid sample analysis results and 3,200 fipronil results were evaluated and summarized along with a large amount of toxicity testing data. The author concluded that evidence of the presence and effects of pyrethroids and fipronil, and associated toxic effects in urban watercourses, is widely distributed geographically throughout urbanized areas of California. Furthermore, the author found that pyrethroid-related toxicity has been documented in nearly every major urban watershed in the state.

The SWAMP SPoT program monitors large watersheds across California (including Coyote Creek and Guadalupe River in Santa Clara County) to determine how stream pollutant concentrations are affected by land use, with an emphasis on urban and agricultural development. The 2020 SPoT technical report reviews monitoring data from 2007-2017 (Philips et al. 2020). Statewide, concentrations of many individual pyrethroids increased in urban land use watersheds, with a significant upward trend in statewide pyrethroid concentrations when examined as the sum of toxic units[8]. In contrast, detected concentrations of fipronil were stable and concentrations of the legacy organochlorine pesticide DDT decreased significantly.

Other studies that quantify pesticide concentrations in water can provide a perspective with which to review the results of the pesticide monitoring conducted in the Santa Clara Valley. The California DPR Surface Water Protection Program (SWPP) routinely conducts pesticide monitoring at MS4 and receiving water sites in both Northern and Southern California with the objectives of evaluating pesticide concentrations in water, frequencies with which individual pesticide compounds are detected, and exceedances of USEPA pesticide benchmarks. The DPR SWPP's ongoing study 329 (Northern California Urban Areas) and study 320 (Southern California Urban Areas) have consistently found bifenthrin and imidacloprid as some of the highest pesticide concentrations in urban areas of the state. Fipronil is commonly detected, but not as much as its degradates, especially fipronil sulfone. Lowest benchmark thresholds from the USEPA have been exceeded for pyrethroids and fipronil samples (SCVURPPP 2025). Recent detection frequencies from study 329 suggest lower instances of detection for similar pesticides found at higher frequencies in study 320 (Alvarado and McClanahan 2024; Budd 2023, respectively).

California's Pesticide Use Reporting Program (PUR) is periodically reviewed by state agencies that seek to inform the public about emerging registered pesticide use trends. These PUR reviews will ultimately support the statewide Urban Pesticides Amendments (UPAs), which will seek to improve considerations of surface water quality during the registration process overseen by state and federal pesticide regulatory authorities such as the DPR and USEPA. The anticipated result of the UPAs will be reduction in pyrethroids and other pesticides in urban stormwater runoff and the eventual elimination of pesticide-related toxicity in local urban creeks. The UPAs would also likely establish a statewide monitoring program that may substitute for pesticides and toxicity monitoring requirements in MS4 permits, such as the MRP. The goal of this statewide coordinated monitoring program is to generate useful data at minimal cost and standardize information at the statewide level to support the objectives of the UPAs. At this time, the mechanism for implementing the statewide monitoring program is uncertain and will likely be developed over the next few years.

[8] Toxic units are calculated by dividing the TOC-normalized concentration of an individual pyrethroid by its LC50. One toxic unit of pyrethroid would be expected to cause mortality to half of the exposed organisms. Because pyrethroids in a mixture can work additively, toxic units can be summed.

5.0 Permittee Specific Improvements and Enhancements

As described in Section 3.0 of this report, Permittees have been implementing pesticide toxicity control programs since 2003. The sections below summarize the improvements to IPM programs made by Permittees in the preceding five years, and enhancements that are planned in the subsequent permit term.

5.1. City of Campbell

Improvements to IPM Practices in the Last Five Years

The City adopted a new IPM Policy in 2023. As part of the new policy, the City has introduced pest monitoring practices, such as installing insect traps in buildings to identify the types and quantities of insects present. The City is also proposing that employees attend IPM seminars and consider obtaining "Rescape" certification to further strengthen their knowledge and skills. To ensure compliance with the new Policy, the City is providing more oversight of contractors and working closely with them to ensure that pesticides of concern are not being used. These efforts are complemented by ongoing improvements in staff training, updates to the pesticide tracking system, and expanded outreach to both pest control professionals and the community.

Enhancements to IPM Practices Planned for the Next Permit Term

The City will focus on IPM practices in parks, including strategies to reduce pesticide use and improve their effectiveness when application is necessary. In addition, the City also aims to establish at least one pesticide-free park. These efforts will be supported by enhanced staff training, and continued improvements to pest management practices.

5.2. City of Cupertino

Improvements to IPM Practices in the Last Five Years

The City has established pesticide-free areas, notably at McClellan Ranch Preserve, where pesticides, herbicides, and rodenticides are not used. The only exception involves habitat restoration work by Grassroots Ecology, which involves applying herbicides using the targeted cut-and-dab method to manage the invasive Tree of Heaven, and uses live and dead traps for rodent control.

To further support IPM, the City regularly evaluated and modified its pest management practices. Recent efforts include introducing beneficial insects such as ladybugs to control aphids, deploying wasp traps, and using manual weed removal methods.

Enhancements to IPM Practices Planned for the Next Permit Term

The City is currently updating its IPM Policy and Standard Operating Procedures, with the goal of completing these updates within the next five years. A new annual IPM training program is also being developed for all City staff who apply pesticides. To strengthen outreach efforts to the community, the City plans to publish an article in *The Scene* newsletter and distribute informational mailings to residents in multi-unit properties.

5.3. City of Los Altos

Improvements to IPM Practices in the Last Five Years

The City has designated all municipal parks as pesticide-free zones, which restricts pesticide use across all park properties. Pest management practices have been modified to align with IPM principles, emphasizing non-chemical control methods. The City also implemented broader pesticide use restrictions on municipal properties, including buildings, parks, and rights-of-way. To support safe and effective implementation, four full-time staff members lead 3–5 training sessions annually focused on Personal Protective Equipment (PPE), pesticide use and handling, and pest control strategies. These efforts ensure staff are equipped with the knowledge and tools necessary to uphold the City's commitment to sustainable, health-conscious pest management.

Enhancements to IPM Practices Planned for the Next Permit Term

The City plans to cover all open areas with native plants or mulch to prevent weeds. The City also plans to provide more training to staff.

5.4. Town of Los Altos Hills

Improvements to IPM Practices in the Last Five Years

The Town does not use pesticides in-house. However, a contractor is hired to use pesticides for weed control and root foaming in sewer lines in accordance with the Town's IPM policy.

Enhancements to IPM Practices Planned for the Next Permit Term

The Town plans to maintain its current policy and pest management procedures.

5.5. Town of Los Gatos

Improvements to IPM Practices in the Last Five Years

The Town adopted a new IPM Policy in 2023. The updated IPM program focused on reducing pesticide use by prioritizing mechanical control methods, such as using a skid steer with a mower deck. Pesticide safety training was also provided, covering key topics including the IPM policy overview, application procedures, monitoring, and other safety protocols. Improvements to the IPM program include updating the pesticide tracking system, enhancing staff training on IPM practices, and revising the hiring process for contractors to ensure compliance with the IPM policy.

Enhancements to IPM Practices Planned for the Next Permit Term

The Town will continue to update its pesticide tracking system to document any pesticide use, as well as the use of less-toxic pest control methods for both animals and plants. Staff training on IPM will be conducted annually at the start of each fiscal year and will also be included in orientation for new employees. The hiring process for contractors will be updated to ensure all pest control contractors are trained on the Town's IPM Policy before beginning work. Staff will also increase supervision of contractors performing pest control services to verify ongoing compliance with IPM standards. Public outreach will be expanded, with staff sharing information on IPM practices and pesticide reduction through school and community events, workshops, advertisements, and at retail locations such as nurseries and hardware stores. Residents and businesses will be informed about pesticide disposal options available through the County's Household Hazardous Waste Program, and all pesticide use records will be made available to the public within 10 days of request. Additionally, the Town will

annually pilot and evaluate at least two less-toxic pest control methods not previously used, with staff assessing their effectiveness to determine future use.

5.6. City of Milpitas

Improvements to IPM Practices in the Last Five Years

The City of Milpitas modified its pest management practices to enhance IPM implementation. Since FY 22-23, the City has been working with County of Santa Clara IPM staff to provide IPM training to Milpitas maintenance staff and to help identify opportunities for improving IPM in City operations. In addition, the City coordinates virtual IPM workshops for residents each year.

Enhancements to IPM Practices Planned for the Next Permit Term

The City plans to assess overall IPM implementation and identify areas for improvement in IPM implementation. The City plans to begin an assessment of City operation and practices in FY 26-27 followed by an assessment of contractors in FY 27-28. The City also plans to conduct additional outreach to residents.

5.7. City of Monte Sereno

Improvements to IPM Practices in the Last Five Years

The City of Monte Sereno adopted a new IPM Policy in 2023. The City improved outreach on IPM to residents through information posted on social media. The City also updated the contractor hiring process to ensure that pest management contractors comply with the City's IPM policy.

Enhancements to IPM Practices Planned for the Next Permit Term

The City of Monte Sereno will enhance staff training on IPM. The City also plans to create guidelines for restricting the use of certain pesticides on City owned properties.

5.8. City of Mountain View

Improvements to IPM Practices in the Last Five Years

The City of Mountain View has modified pest management practices to support IPM more effectively. Staff now use more mulch in parks, which has led to less pesticide applications.

Enhancements to IPM Practices Planned for the Next Permit Term

The City plans to continue to enhance staff training on IPM. The City has added more staff training during FY 23-24 and plans to continue doing so.

5.9. City of Palo Alto

Improvements to IPM Practices in the Last Five Years

The City of Palo Alto updated its IPM Policy in July 2020. The City has a total of 34 parks. Of those, 14 parks are designated as pesticide-free parks. However, in practice, 33 out of 34 parks do not receive pesticide applications. Pesticides are also not used in the City’s four Open Space Preserves. The City has nine facilities/buildings and five community gardens that are designated pesticide-free. The Purchasing Department monitors purchases for pesticides that do not adhere to the IPM Policy and alerts the IPM Coordinator for follow-up and correction. In August 2024, the City hired a Watershed Protection

Outreach Project Manager to fulfill the IPM Coordinator role for the City. Planning for a revitalization of the IPM program has begun.

Enhancements to IPM Practices Planned for the Next Permit Term

The IPM city-wide team with departmental representatives will be relaunched with the purpose of updating the IPM Standard Operating Procedures. The team will determine what type of pesticide tracking system will be most effective. The IPM Policy will be updated to reflect new permit requirements and to correct outdated information and procedures. Staff trainings will be offered on IPM. While outreach to residents is currently conducted, it will be reviewed for effectiveness and opportunities for improvements will be identified with new outreach efforts launched as appropriate.

5.10. City of San Jose

Improvements to IPM Practices in the Last Five Years

The City of San Jose updated its IPM SOP to improve format, update links, and remove outdated requirements. It was published to the City's IPM SharePoint site. The City's pesticide tracking system was updated per City applicators' requests to allow for multiple chemicals per submission, as some applicators combine products, if needed. City staff developed a virtual version of the IPM training for pesticide applicators that cannot attend the in-person training due to work schedule or absences.

The City continued to use contractors that are licensed with the Department of Pesticide Regulation and Santa Clara County Department of Agriculture, ensuring that contractors are trained in handling and using pesticides correctly and are able to follow all state laws and regulations. The City's arborists use pesticides only when absolutely necessary.

The City improved outreach to residents in response to invasive shothole borers (ISHB). The City conducts monthly Zoom meetings to update the community on what the City is doing to manage ISHB. A part of the presentation focuses on the different levels of infestation and when to consider treatment. The City also sent out information cards (in four languages) to residents within a mile of positive reported ISHB trees.

The City improved outreach to pest control professionals through a new partnership with pesticide dealer, Rainbow Ecoscience. They conducted a joint presentation with City staff to tree industry professionals, informing them of proper treatment methods and when treatment is applicable.

Enhancements to IPM Practices Planned for the Next Permit Term

The City plans to update IPM processes based on feedback received on recent changes. The City is always evaluating past and current IPM programs and will implement improvements as needed.

5.11. City of Santa Clara

Improvements to IPM Practices in the Last Five Years

The City made changes to its pest management practices and began using more pre-emergent herbicides. The Parks and Recreation Department stopped applying pesticides to the Eddie Souza Park Community Garden. Herbicides are applied to the park side of the site but not in the community garden. The City continued to provide IPM training to staff that apply pesticides.

Enhancements to IPM Practices Planned for the Next Permit Term

In the next permit term, the Parks and Recreation Department is planning to not use any pesticides at the new Community Garden Mini Park within the Lawrence Station Area Parks. The City also plans to conduct IPM outreach to residents on social media.

5.12. City of Saratoga

Improvements to IPM Practices in the Last Five Years

The City of Saratoga adopted a new IPM Policy in 2023. The City modified its pest management practices to support IPM and updated the hiring processes for contractors that apply pesticides to ensure compliance with the IPM policy.

Enhancements to IPM Practices Planned for the Next Permit Term

The City will continue to implement its IPM implementation and improve outreach to contracted pest control professionals.

5.13. City of Sunnyvale

Improvements to IPM Practices in the Last Five Years

The City continues to make improvements to its pest management practices to reduce the use of pesticides. The City has started developing the scope of an in-house project to complete a cost/benefit analysis of the City's current pesticide applications, alternative pest control methods, and elimination of chemical pesticides. This study also includes doing a cost/benefit analysis for eliminating the use of pesticides in at least one City owned park.

Enhancements to IPM Practices Planned for the Next Permit Term

Over the next Permit term, the City plans to complete the study, and its recommendations will guide the City's IPM implementation in the next Permit term. The City will look for opportunities to minimize pesticide use and create at least one pesticide-free park. The City also plans to enhance staff trainings on IPM and increase contractor supervision. Outreach efforts will also be improved, with a focus on educating both residents and pest control professionals.

5.14. County of Santa Clara

Improvements to IPM Practices in the Last Five Years

The County modified its pest management practices to better support the IPM program, placing greater emphasis on effective monitoring and follow-up maintenance, particularly for burrowing rodent control. To strengthen program implementation, staff trainings were enhanced with interactive and department-specific content. The County's pesticide handler and applicator training was updated to include participatory elements and tailored guidance, for example, open space and rangeland management for Parks staff, and right-of-way vegetation management for Roads staff. Additionally, more detailed IPM plans are now required to ensure improved accountability and outcomes across all departments.

Enhancements to IPM Practices Planned for the Next Permit Term

The County is updating its IPM ordinance to clarify and streamline language related to approved pesticide use. To support implementation, a supplemental administrative guidelines document is being developed to guide operations involving IPM and pesticide applications. Furthermore, improvements to the pesticide tracking system are underway through the development of an automated exemption request process. This new system will enhance the user experience, enable better data tracking, require post-application reporting, and create a publicly accessible list to increase transparency. Additionally, contractor oversight is being strengthened. Vendors are now required to provide service schedules in advance so facility staff can coordinate on-site verification of services. Staff must also review and sign

off on vendor service reports to ensure alignment with IPM standards and completion of contracted work.

5.15. Santa Clara Valley Water District (Valley Water)

Improvements to IPM Practices in the Last Five Years

Valley Water made the following improvements to its IPM program:

- Updated IPM Policy or Standard Operating procedures and modified pest management practices to support IPM.
- Increased the amount of hand pulling of invasive weeds, and using more mulch to control weeds instead of herbicide.
- Held annual calibration trainings on application equipment (backpacks, spray truck).
- Involved more staff in label trainings and discussions on herbicide effectiveness.
- Updated a fact sheet for residents on Valley Water's Weed Abatement program outlining all the methods Valley Water uses to control weeds (mechanical, hand weeding, goats, herbicide).
- Used nest boxes to recruit barn owls as a biological control for burrowing rodents, rather than using rodenticides, along Valley Water levees, creek banks, and mitigation sites.

Valley Water is continuing to host the bi-monthly Santa Clara County Weed Management Area meetings (SCC WMA) for local collaboration on weed abatement techniques and information sharing on new invasive plants in the county.

Valley Water is currently updating its pesticide tracking system. The work order system is being assessed and work orders are being streamlined to more efficiently and accurately track herbicide usage at mitigation sites.

Enhancements to IPM Practices Planned for the Next Permit Term

Valley Water is planning to implement the following enhancements:

- Modify the timing of herbicide application with the correct plant stage to have desired effect.
- Develop an Early Detection Rapid Response program for invasive plants on Valley Water owned properties. This program would allow for management of invasive plants while eradication is still possible before the invasion stage.

6.0 CONCLUSIONS

Through the development of this pesticide source control effectiveness evaluation report, SCVURPPP and its Permittee agencies have complied with the requirements in MRP Provision C.9.g by:

- Evaluating the effectiveness of pesticide source control measures implemented;
- Evaluating the attainment of TMDL/WQAS pesticide concentration and toxicity targets for water and sediment.
- Describing the improvements to Permittee IPM programs in the last five years; and
- Describing the improvements planned during the next Permit term.

This section summarizes the conclusions of the evaluation, including source control measures that SCVURPPP and its Permittee agencies should continue to implement and potential enhancements to assist in achieving targets for pesticide concentrations and pesticide-related toxicity in Santa Clara Valley urban creeks.

6.1. Summary of Implementation Assessment Outcomes (Levels 1 - 4)

SCVURPPP Permittees have successfully implemented a number of source control measures consistent with Provision C.9 of the MRP and the TMDL/WQAS implementation plan (see Section 3.0). For example, the following Level 1 through 4 outcomes have been achieved as a result of control measure implementation:

- All SCVURPPP Permittees have IPM policies/ordinances and established pesticide application SOPs. All municipal staff that apply pesticides receive training on the IPM policy. IPM Policies and pesticide programs have led to an increase in awareness about pesticide impacts and a change in behavior by municipal employees and contractors. SCVURPPP Permittees are either not using pesticides of concern, or using them in minimal quantities, and only as a last resort.
- All Permittees that use contractors to apply pesticides have contract specifications in place that require contractors to follow the IPM Policy and implement IPM.
- SCVURPPP Permittees are working with the County HHW Program to ensure that adequate pesticide disposal services are available to all residents.
- SCVURPPP implements the OWOW Program in local retail stores and nurseries to provide less-toxic pest control information to residents at the point of purchase. From FY 19-20 to FY 23-24, SCVURPPP trained 123 store employees on selling less-toxic pesticides. The willingness of store managers to participate in the OWOW Program and send employees to trainings reflects that pesticide sellers are continuing to support IPM and the use of less-toxic pest control methods.
- SCVURPPP's various efforts to educate residents about pesticides and IPM, including media advertising, website postings and distribution of outreach materials at events, raise awareness among residences and lead to increased use of IPM and decreased use of toxic pesticides. Information on less-toxic pest control is posted on the Watershed Watch Campaign website (www.MyWatershedWatch.org).
- SCVURPPP is continuing to educate pest control professionals on IPM and water quality issues by sending them informational letters and publishing articles in the Department of Agriculture's newsletter.
- From FY 19-20 to FY 23-24, a total of 109 individuals completed the Basic Green Gardener Training and learned sustainable landscaping practices, including IPM, which they can implement at their client sites.
- As a result of SCVURPPP and Permittee efforts to reduce pesticide use at new development and redevelopment sites, project developers are continuing to use "beneficial landscaping" techniques that minimize pesticides, fertilizers, irrigation, and runoff. On an average, 76% of approved Regulated Projects in the last five years included "beneficial landscaping".
- All Permittees have made significant improvements to their IPM programs in the last five years. Figure 6-1 shows an overview of the types of improvements made, and the number of Permittee agencies that made these improvements. The most commonly reported improvement by Permittees was modifying their pest management practices to better incorporate IPM, followed by enhancing staff trainings on IPM, updating IPM Policies/SOPs, and increasing outreach to residents

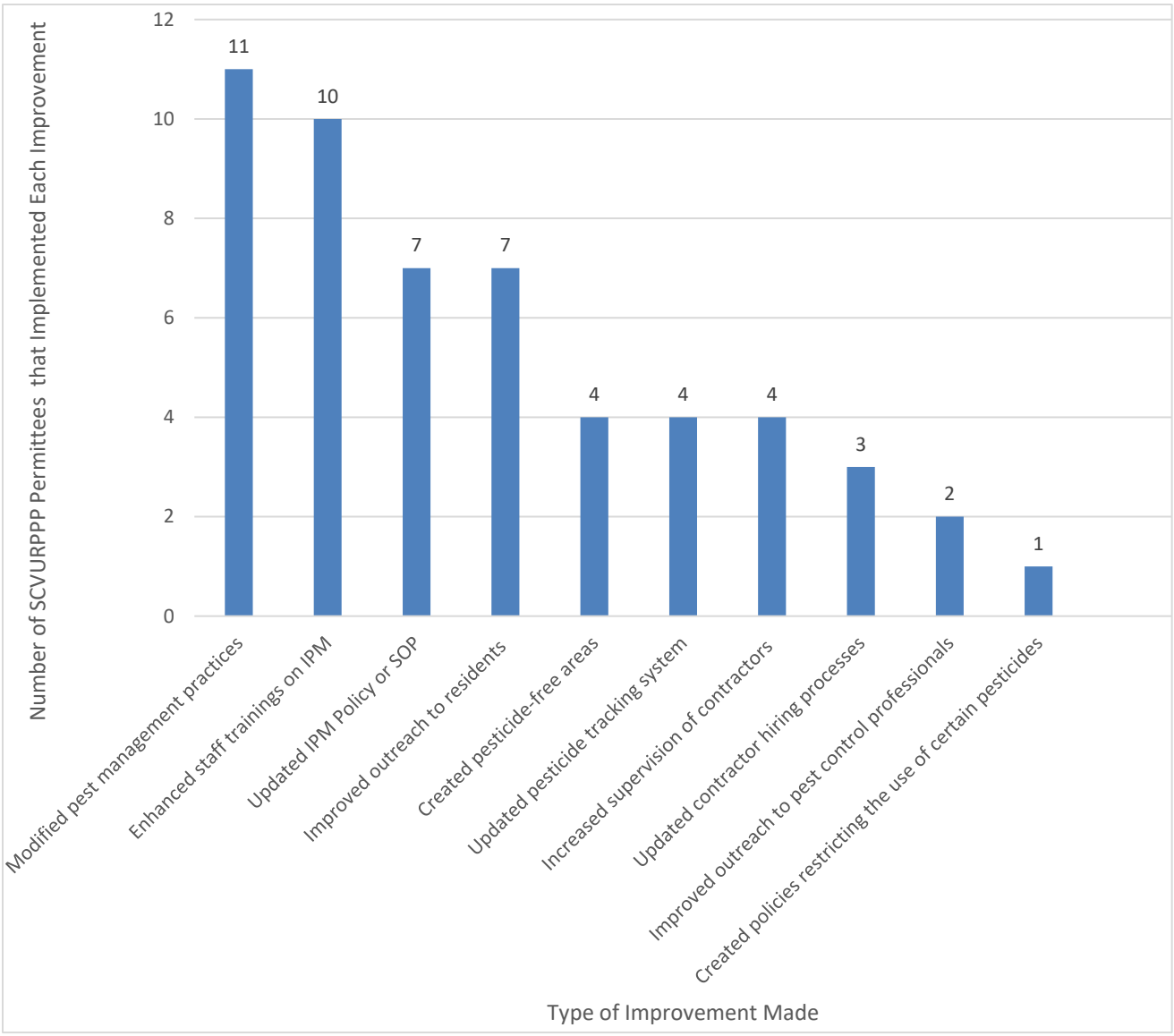

Figure 6-1. Summary of Improvements Made to SCVURPPP Permittee IPM Programs from FY 19-20 to FY 24-25

6.2. Summary of Water Quality Assessment Outcomes (Level 6)

Over the course of the last two decades, a number of monitoring programs have tested for pesticides and toxicity in water and sediment from Santa Clara Valley urban creeks. SCVURPPP has monitored urban creeks since the early 2000s, consistent with NPDES municipal stormwater permit requirements, and other programs have collected additional data, as described in Section 4.1. Based on evaluation of these data, the following Level 6 outcomes were observed:

- The available monitoring data suggest that diazinon is no longer a concern in Santa Clara Valley urban creeks. From 2002 to 2018, diazinon concentrations were well below the TMDL/WQAS target (i.e., 100 ng/L) and monitoring for organophosphate pesticides was subsequently

eliminated from NPDES monitoring requirements. These results correspond to the timeframe when diazinon and chlorpyrifos were phased out of use in urban areas.

- Pesticides that have gained market share during the past decade (e.g., pyrethroids, fipronil, and neonicotinoids) are a potential concern in Santa Clara Valley urban creeks. TOC-normalized concentrations of individual pyrethroids in sediment samples are generally below LC50s, and fipronil and its degradates are rarely detected. However, 2 of 8 sediment samples collected in San Tomas Aquino Creek by SCVURPPP from 2016 to 2024 were acutely toxic to *Hyalella azteca* (a test organism known to be sensitive to pyrethroids), and 5 of 11 samples were acutely toxic to *Chironomus dilutus* (a test organism known to be sensitive to fipronil and neonicotinoids).
- Statewide, pyrethroids such as bifenthrin are still the most widely detected pesticides and were considered to be the leading cause of pesticide-related toxicity in urban areas, based on data collected from 2003 to 2012 (Ruby 2013). In addition, statewide monitoring programs (e.g., SWAMP SPoT, DPR) are finding increased concentrations of many individual pyrethroids in urban areas (Philips et al. 2020) and frequent detections of bifenthrin, imidacloprid, and fipronil sulfone (Alvarado and McClanahan 2024).

7.0 NEXT STEPS

Considering the results of this pesticide source control effectiveness evaluation, the Program and Permittees plan to continue to implement pesticide source control measures, in an effort to not only reduce the impacts of current pesticides of concern, but also reduce the risk of future pesticide products from impacting Santa Clara Valley creeks and the San Francisco Bay. Based on the evaluation of available water quality monitoring results, pesticides that have gained market share during the past decade (e.g., pyrethroids, fipronil, and neonicotinoids) may be of particular concern in Santa Clara Valley urban creeks.

7.1. Program Level

The SCVURPPP plans to continue its pesticide source control efforts described previously in this report. In particular, the Program will conduct the following activities:

- **Continue Active Participation in the Regulatory Process** - Since municipal agencies do not have the authority to ban or place significant restrictions on pesticide sales or use within their jurisdiction, it is essential that the Program and permittees continue to try to influence the pesticide approval and registration process. The Program will continue to work with CASQA to communicate to the USEPA Office of Pesticide Programs and the California DPR the need to fully consider the impact on water quality during the pesticide approval and registration process. CASQA plans to undertake activities to both address near-term pesticide concerns and seek long-term regulatory change. CASQA's current priority activities are as follows:
    - Continue collaboration with DPR to address near-term regulatory concerns, while seeking USEPA actions:
        - Support completion of DPR action on fipronil water pollution, including implementation of effective education for professional users regarding restrictions on its outdoor urban use.

  - Advocate for the enforcement of DPR's existing mitigation measures for pyrethroids and fipronil, and recommend adoption of additional mitigation measures as warranted.
  - Support completion of DPR's evaluation of the impacts of neonicotinoid pesticides on aquatic organisms.
  - Continue to respond to EPA pesticide registration decisions, including the eight proposed new active ingredients slated for review in the coming fiscal year.
- Seek long-term changes in the pesticide regulatory structure:
  - Continue engagement with EPA regarding incorporating their ESA obligation in registrations and re-registrations, including recommending the use of pictograms in labels, and seeking opportunities in California for EPA's future regional and vulnerable species pilot programs.
  - Continue engagement with DPR regarding its Sustainable Pest Management Roadmap specific to urban implementation programs and opportunities.
  - Support DPR's proposed pesticide prioritization process as an effective pathway to prioritize pesticides under their continuous reevaluation process.

- **Continue Outreach to Residents** – The Program and Permittees will continue to conduct outreach to pesticide users (i.e., residents who either themselves apply pesticides, or hire professionals who provide pest control services). This includes conducting media outreach, outreach at events, and point of purchase outreach at local stores.
- **Continue Outreach to Structural Pest Control Professionals** – The Program will continue to work with the County Division of Agriculture to conduct outreach to structural pest control professionals.
- **Continue Implementing the Santa Clara Valley Green Gardener Program** – The Program will continue implementing the Santa Clara Valley Green Gardener Program to educate landscape maintenance professionals on sustainable landscaping techniques. Continuing this program is important to ensure that landscape workers are aware of IPM practices.
- **Continue Implementing a Water Quality Monitoring Program** - The Program plans to continue to implement its water quality monitoring program per MRP requirements and to evaluate the results (and the results from other applicable local monitoring programs) for the attainment of pesticide concentration and toxicity targets for water and sediment and any changes in water quality regarding pesticide toxicity in urban creeks.

7.2. Permittee Level

SCVURPPP Permittees plan to continue their pesticide source control activities and make selected enhancements to these efforts, including the following:

- **Continue Providing Disposal Locations for HHW, including Pesticides –** Permittees will continue to work with the County HHW Program to provide free pesticide disposal locations to residents.
- **Continue Requiring New Development and Redevelopment Projects to Implement "Beneficial Landscaping" Techniques** – Permittees will continue to encourage the inclusion of "beneficial landscaping" techniques in new and redevelopment projects.

- **Continue Implementing Local IPM Programs** – SCVURPPP Permittees will continue implementing and improving their local IPM Programs as appropriate to reduce the use of pesticides of concern.
- **Specific Enhancements to Local IPM Programs** – Figure 7-1 below summarizes specific enhancements that Permittees plan to make in the upcoming Permit term. These enhancements were described in more detail in Section 5. The most commonly planned actions are to improve staff trainings, update IPM policy/SOPs, and improve outreach to residents. It is recommended that Permittees incorporate information on pesticides of concern in the trainings, along with information on water quality issues associated with pesticides.

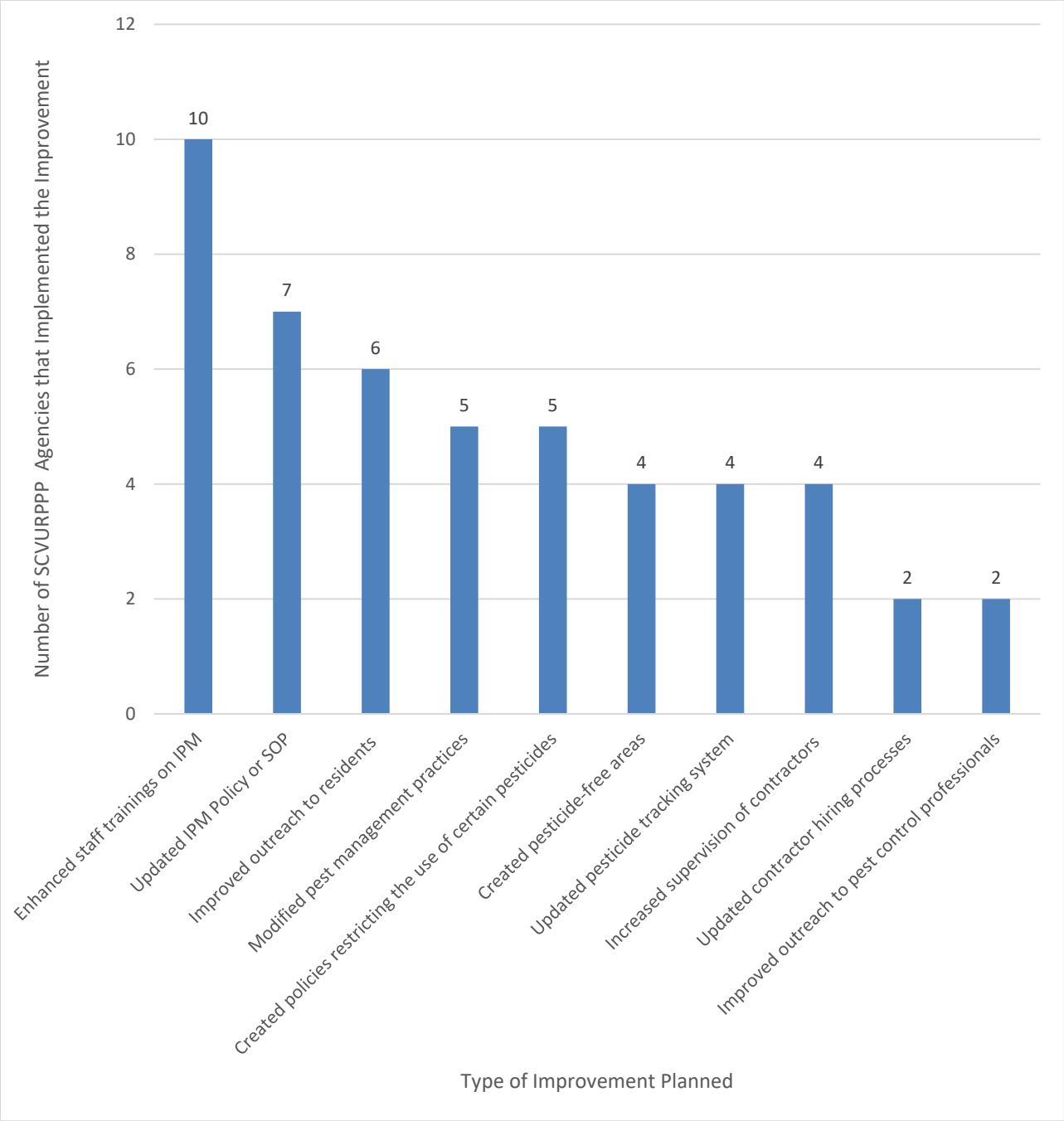

Figure 7-1. Specific Enhancements Planned to Permittee IPM Programs in the Next Permit Term

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Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 9-4

CASQA 2025 Pesticide Annual Report – August 2025

California Stormwater Quality Association®

Dedicated to the Advancement of Stormwater Quality Management, Science and Regulation

2025 Pesticides Annual Report

Prepared by the California Stormwater Quality Association

August 2025

Preface

ADVANCING SUSTAINABLE STORMWATER MANAGEMENT

The California Stormwater Quality Association (CASQA) is a nonprofit corporation that advances sustainable stormwater management protective of California water resources. With well over 2,000 members, CASQA's membership is comprised of diverse range of stormwater quality management organizations and individuals, including cities, counties, special districts, federal agencies, state agencies, ports, universities and school districts, wastewater agencies, water suppliers, industries, and consulting firms throughout the state. Collectively, CASQA represents over 34 million people in California.

CASQA's *Vision for Sustainable Stormwater Management*[1] (Vision) defines the actions needed to manage stormwater as an essential component of the state's water resources, support human and ecological needs, protect water quality, and enhance and restore California's waterways. There are four guiding principles to achieve this Vision. Like the legs of a chair, each Principle is essential and all four must be in place to support the whole.

Principle #1: Program Implementation: Projects and programs that use stormwater as a resource, protect water quality and beneficial uses, and efficiently minimize pollution are critical for sustainable stormwater management. Stormwater capture and true source control (identifying and mitigating a pollutant at its source) are the primary drivers of these solutions, with effective BMPs providing an important supportive role.

Principle #2: Permits, Regulations, and Legislation: Permits, regulations, and legislation need to focus on effectiveness and desired outcomes to support sustainable stormwater management. Regulatory and legislative actions must align with and support the other components of the Vision – advancing stormwater capture, true source control, effective BMPs, increasing public education and awareness focused on stormwater as a resource, and securing funding to support these solutions.

Principle #3: Public Education: Public awareness, understanding, and support is essential to sustainable stormwater management. The key shift is viewing stormwater as a resource that must be protected and integrated into overall water resource management.

Principle #4: Funding: Significant financial investment is required to achieve sustainable stormwater management. Stormwater is the most underfunded portion of the water sector and substantial funding is needed to bring these solutions forward.

2025 PESTICIDES ANNUAL REPORT

This report, *2025 Pesticides Annual Report,* advances Principle #1 by addressing pesticide pollution through source control solutions. CASQA has identified Current Use Pesticides as a Water Quality Priority, requiring solutions at a statewide scale. To advance true source control for pesticides, CASQA is actively engaged with state and federal regulators in an effort to develop an effective pesticide regulatory system, based primarily on existing statutes, that includes timely identification and mitigation of urban water quality impacts, and proactively prevents additional problems through the registration and registration review processes. This report describes CASQA's regulatory engagement activities from July 2024 through June 2025.

[1] https://www.casqa.org/wp-content/uploads/2022/10/final_-_vision_for_sustainable_stormwater_management_-_10-07-2020.pdf

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Table of Contents

Preface 2
Section 1. Introduction 5
1.1 Importance of CASQA's Efforts to Improve Pesticide Regulation 5
Section 2. Pesticide Program Activities 8
2.1 Regulatory Tracking 8
2.2 Regulatory Communications 8
2.3 Education 8
2.4 Participation in Federal and State Advisory Groups 8
2.5 Pesticide Watch List 8
2.6 Partnerships 9
Section 3. Annual Program Implementation 9
3.1 Regulatory Engagement 9
3.2 Participation in Federal and State Advisory Groups 15
3.3 Updated Pesticide Watch List 15
3.4 Partnerships 19
Section 4. Assessment of Progress 20
4.1 State-Level Progress 20
4.2 Federal-Level Progress 20
Section 5. Looking Forward 21
Attachment 1: Pesticides Regulatory Action Items
Attachment 2: Regulatory Participation Outcomes and Effectiveness Assessment Summary Tables

Section 1. Introduction

1.1 IMPORTANCE OF CASQA'S EFFORTS TO IMPROVE PESTICIDE REGULATION

For decades, the uses of certain pesticides in urban areas – even when applied in compliance with pesticide regulations – have adversely impacted urban water bodies. Currently, several pesticides are present in California urban water bodies at concentrations above aquatic toxicity thresholds.[2] Our member agencies face substantial costs to comply with pesticides-related Total Maximum Daily Loads (TMDLs), California State Water Board Toxicity Provisions, and additional permit requirements. Throughout California, more municipalities will be subject to similar requirements, as additional TMDLs and Basin Plan Amendments are adopted (Table 1). Meanwhile, while local agencies in California have authority over their own use of pesticides, they are pre-empted by state law from regulating pesticide use by consumers and businesses to address these sources of pollution in stormwater.

Consistent with CASQA's Vision for Sustainable Stormwater Management (Vision), our efforts focus on reducing pesticide pollution at the source. Minimizing pesticide pollution before it can occur, as opposed to attempting to remove pesticides from the environment, is essential to sustainable stormwater management. True source control (the elimination of a pollutant at its source) and the use of alternative products offers the most effective and economical approach to eliminating pesticides that impair the beneficial uses of California's waterways.

[2] California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report) https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html

Table 1. California TMDLs, Statewide Water Quality Control Plans, and Basin Plan Amendments Addressing Currently Registered Pesticides and/or Toxicity in Urban Watersheds[3, 4, 3]

Water Board Region	Water Body	Pesticide	Status
Statewide	Statewide Water Quality Control Plan amendments for urban pesticides reduction ["Urban Pesticides Amendments"] (Inland Surface Waters, Enclosed Bays & Estuaries, and Ocean)	All Pesticides/All pesticide-related toxicity	In preparation
	Sediment Quality Objectives (Enclosed Bays & Estuaries)	Sediment Toxicity[6]	Approved
	Toxicity Provisions (Inland Surface Waters and Enclosed Bays & Estuaries)	Toxicity	Approved May 2023[7]
San Francisco Bay (Region 2)	All Bay Area Urban Creeks	All Pesticide-Related Toxicity	Approved
Central Coast (Region 3)	Santa Maria River Watershed	Pyrethroids, Toxicity	Approved
	Lower Salinas River Watershed	Pyrethroids, Toxicity, Malathion, Chlorpyrifos, Diazinon9	Amended by Central Coast Water Board, June 2024[8]
	San Lorenzo River Watershed (Santa Cruz)	Chlorpyrifos[9]	Approved
Los Angeles (Region 4)	Marina del Rey Harbor	Copper (Marine antifouling paint)[10]	Approved
	Oxnard Drain 3 (Ventura County)	Bifenthrin, Toxicity	EPA-Adopted Technical TMDL
	Calleguas Creek, its Tributaries and Mugu Lagoon	Water & Sediment Toxicity[7]	Approved

[3] Excludes pesticides that are not currently registered in California, such as organochlorine pesticides.
[4] https://www.waterboards.ca.gov/water_issues/programs/tmdl/
[3] https://www.waterboards.ca.gov/water_issues/programs/tmdl/2020_2022state_ir_reports_final/apx_d_adopted_tmdls_list.pdf
[6] These TMDLs/Plan provisions can trigger toxicity testing stressor source identification studies, and additional follow up, even when toxicity is linked to current pesticides.
[7] https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/tx_ass_cntrl.html
[8] https://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/docs/salinas/oppesticides/
[9] Use prohibited in urban areas (diazinon) or no meaningful use due to use limitations (chlorpyrifos).
[10] Primarily addresses pesticides that are directly discharged and should not ordinarily appear in stormwater (marine antifouling paint).

Water Board Region	Water Body	Pesticide	Status
		Diazinon & Chlorpyrifos[9]	
	McGrath Lake (Ventura County)	Sediment Toxicity6	Approved
	Colorado Lagoon (Long Beach)	Sediment Toxicity6	Approved
	Dominguez Channel; Greater Los Angeles & Long Beach Harbor	Sediment Toxicity6	Approved
	Ballona Creek Estuary	Sediment Toxicity6	Approved
Central Valley (Region 5)	Sacramento River and San Joaquin River Basins	Pyrethroids	Approved
	Sacramento-San Joaquin River Delta Waterways	Diazinon & Chlorpyrifos9	Approved
	Sacramento & Feather Rivers	Diazinon & Chlorpyrifos9	Approved
	Sacramento County Urban Creeks	Diazinon & Chlorpyrifos9	Approved
	Lower San Joaquin River	Diazinon & Chlorpyrifos9	Approved
Lahontan (Region 6)	Pesticide Discharge Prohibition	All Pesticides	Approved[11]
Santa Ana (Region 8)	Newport Bay	Copper (Marine antifouling paint)10	Adopted by Santa Ana Water Board[12]
	San Diego Creek, and Upper and Lower Newport Bay	Toxicity (Diazinon & Chlorpyrifos)9	EPA-Adopted Technical TMDL
San Diego (Region 9)	Shelter Island Yacht Basin (San Diego Bay)	Copper (Marine antifouling paint)10	Approved
	Chollas Creek	Diazinon9	Approved

[11] https://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/pesticidebpa.shtml
[12] https://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/tmdl_metals.html

Section 2. Pesticide Program Activities

The following pesticide program activities support the development of an effective pesticide regulatory system based primarily on existing statutes, that includes timely identification and mitigation of urban water quality impacts, and proactively prevents additional problems through the registration and registration review processes.

2.1 REGULATORY TRACKING

CASQA actively tracks a range of regulatory activities to identify potential issues and opportunities for engagement. This effort includes reviewing Federal Register and DPR notices to flag regulatory actions that may affect high priority active ingredients requiring further review. Through this tracking, CASQA can identify gaps in current procedures and highlight potential urban runoff-related impacts. CASQA also reviews relevant regulatory actions, guidance documents, and work plans from EPA and DPR to assess their alignment with urban runoff concerns and determine whether additional input is warranted.

Activities at the State and Regional Water Boards are monitored to identify opportunities for improving TMDLs, Basin Plan Amendments, and National Pollutant Discharge Elimination System (NPDES) permits. A monthly summary titled *Pesticides Regulatory Action Items* documents regulatory tracking efforts and informs future engagement. This summary is distributed to the CASQA True Source Control Subcommittee. See Attachment 1: Pesticides Regulatory Action Items for the most recent update.

2.2 REGULATORY COMMUNICATIONS

To maintain strong working relationships and to provide early input, CASQA maintains communications with both EPA and DPR. These communications may be formal through comment letters in response to regulatory actions or informal to share areas of concern or collaboration. The purpose is to provide information sharing about immediate issues or ongoing efforts and inform EPA and DPR about issues confronting the stormwater community. Early communication on upcoming proceedings can reduce the need for time-intensive letters and add context.

2.3 EDUCATION

Through presentations and discussions with EPA, DPR, Water Boards, and CASQA members, CASQA provides education on the urban runoff-related challenges of the existing pesticide regulatory process, educational efforts to support process improvements, and report on achievements. Through these educational activities, CASQA encourages research and monitoring programs to address urban runoff data needs and priorities, stimulate academic, government, or private development of analytical and toxicity identification methods to address anticipated urban runoff monitoring needs, and inform development of new pesticides by manufacturers and selection of pesticides by professional users.

2.4 PARTICIPATION IN FEDERAL AND STATE ADVISORY GROUPS

When opportunities allow, CASQA may serve on policy and scientific advisory committees convened by EPA, DPR, and the Water Boards. Through this participation, CASQA can contribute technical information, identify data gaps, and foster collaboration in the development of more effective pesticide regulatory system. CASQA closely follows relevant advisory groups such as EPA's Pesticide Program Dialogue Committee (PPDC) and DPR's Pest Management Advisory Committee (PMAC).

2.5 PESTICIDE WATCH LIST

To prioritize pesticide regulatory efforts, CASQA updates its Pesticide Watch List annually based on a combination of new scientific and regulatory literature and data analysis of the California Water Boards Statewide Ambient Monitoring Program, DPR, the U.S. Geological Survey (USGS), DPR, and MS4 monitoring. The Pesticide Watch List prioritizes pesticides based on their current and potential impacts to water quality from urban uses.

2.6 PARTNERSHIPS

CASQA and the Bay Area Clean Water Agencies (BACWA) continue to work on parallel efforts to effect long-term systemic changes in the pesticide regulatory process. CASQA and BACWA combine resources to track stormwater and wastewater priorities into a unified monthly Pesticides Action Plan. Partnering with BACWA to coordinate the review of EPA and DPR pesticide regulatory actions allows for increasing the capacity and value of our collective pesticide program activities.

Section 3. Annual Program Implementation

3.1 REGULATORY ENGAGEMENT

At any given time, there are dozens of pesticides with current or pending actions before EPA or DPR. Addressing these regulatory concerns is critical because some pesticides may pose an immediate threat to water quality and create compliance risks for MS4s. In addition, regulatory decisions made by EPA and DPR often remain in place for many years – typically revisited only once every fifteen years – making early engagement essential to avoid long-term consequences for stormwater programs. Our engagement with EPA and DPR seeks to reinforce source control measures and alternatives as an effective strategy to reduce pesticide pollution.

Table 2 summarizes recent CASQA and partner activities in responding to regulatory actions, along with the latest outcomes. For additional details on ongoing pesticide registrations, see Attachment 2: Regulatory Participation Outcomes and Effectiveness Assessment Summary Tables.

Table 2. Recent Regulatory Activities and Outcomes

Regulatory Action or Concern	Activity	Partner Support	Outcomes and notes
General Services Administration (GSA) Regulation.gov website	Comment Letter: January 29, 2021	BACWA	***Success.*** The 2021 version of Regulations.gov limited public access and impaired CASQA's ability to access data and provide comments. CASQA submitted a comment letter to GSA identifying four issues with the regulations.gov website. While two issues were handled promptly in 2022, two issues remained that significantly hindered docket searches. In 2024, GSA updated the system to respond to all CASQA's comments. All EPA OPP documents are now accessible and searchable on Regulations.gov.
Carbaryl Proposed Interim Decision	Comment Letter: February 14, 2023		***Success.*** CASQA provided comment in support of EPA's proposed label language mitigations for carbaryl. These mitigations include use deletions, general environmental protection measures (including water protection statements), and updated environmental hazard statements. Further, CASQA recommended label mitigation measures for consistency. These recommendations included clarification of application statement on pervious surfaces. CASQA also recommended that EPA correct the application rates in the PID mitigations to be consistent with the mitigations stated in the November 2022 Biological Evaluation Memorandum. EPA included all label language mitigation and clarifications in the Final Biological opinion as well as the application rate correction.
Carbendazim (Thiophanate methyl) Interim Decision	Comment Letter: March 23, 2023		***Partial Success.*** EPA included many of the proposed mitigation measures outlined in the PID and our comment letter. This included a reduction in active ingredient in paint and building materials from 3,450 ppm to 2,000-2,500ppm. CASQA also recommended that EPA adapt its existing standard surface water quality modeling approach by modifying the Residential Scenario to enable risk assessment for antimicrobial pesticides, such as carbendazim, that are used outdoors for protection of building materials. However, EPA did not respond to our recommendation.

Regulatory Action or Concern	Activity	Partner Support	Outcomes and notes
Endangered Species Act (ESA)	Comment Letter: February 13, 2023 & June 16, 2023	BACWA	***Partial Success.*** Endangered species habitats frequently overlap with urban areas, and the ESA plays a critical role in shaping mitigation measures to protect these species. Historically, EPA has focused its ESA implementation efforts on agricultural pesticide use. In 2023, CASQA submitted two comment letters addressing ESA implementation and pesticide registrations. In 2024, the EPA announced a targeted analysis of residential pesticide use and issued a proposed guidance for antimicrobial pesticides, which included considerations for outdoor urban applications. This marks a notable shift toward incorporating residential and urban pesticide uses into the ESA review process, reflecting a longer-term evolution in EPA's approach. Furthermore, on January 15, 2025, the EPA and the U.S. Fish and Wildlife Service (USFWS) signed a joint statement of cooperation to support data sharing and process alignment. This interagency collaboration is expected to improve coordination and outcomes under the ESA.
DPR Draft Strategic Plan	Comment Letter: November 9, 2023		***Partial Success.*** CASQA provided comment in support of DPR's plan for greater engagement, collaboration, and transparency, including a commitment to Diversity, Equity, and Inclusion (DEI). In addition, CASQA recommended that DPR revise their pesticide prioritization process to reflect a group-based approach, such as by pest or application type, rather than by active ingredient. The final DPR Strategic Plan kept all goals and details related to engagement and transparency, and DEI. The section of the plan related to pesticide prioritization was revised to focus on a science-based approach, which can be considered consistent with our recommended group-based approach. DPR is actively meeting goals within its updated strategic plan. In 2025, DPR held a pesticide prioritization process workshop and added transparency by creating a Continuous Evaluation and Mitigation webpage detailing its current actions to continuously evaluate pesticides and mitigations to protect people and the environment.

Regulatory Action or Concern	Activity	Partner Support	Outcomes and notes
Chlorothalonil	Comment Letter: January 17, 2024		***Partial success.*** EPA agreed that consumer product directions should be in smaller units that make sense to consumers rather than pounds active ingredient per acre. However, EPA did not extend the rain advisory from 24-hour to 48-hour, as requested by CASQA. CASQA requested EPA to include mitigation measures for the antimicrobial uses of chlorothalonil, specifically uses that occur outdoors, with potential exposure to rain, such as paints, coatings, and wood treatments. EPA responded that they do not regulate product labels for pesticide-treated products, because these are part of a "treated article exemption" for pesticide active ingredients that are intended to present the article itself. EPA stated that the "treated article exemption" gap is an area they will consider in the future.
Pesticides Label White Paper	Comment Letter: March 13, 2024	BACWA, NACWA, SFBRWQCB	***Pending.*** CASQA is recommending that EPA: • Harmonize pesticide labeling practices with those developed by the World Health Organization and United Nations, including standards for font and pictogram usage and sizing. • Simplify pesticide label language to better accommodate the reading level of adults in the United States. Provide pesticide labels in multiple languages.
IPBC (3-Iodo-2-propynyl butylcarbamate) Draft Risk Assessment (RA)	Comment Letter: July 19, 2024	BACWA	***Pending.*** The Draft RA acknowledged several data gaps in the IPBC ecotoxicity dataset: • Chronic ecotoxicity endpoints for freshwater invertebrates • Ecotoxicity endpoints for aquatic vascular plants • Ecotoxicity endpoints for benthic species CASQA recommended that EPA require registrants to submit the missing ecotoxicity data as noted above for freshwater invertebrates, aquatic vascular plants, and benthic species, and reevaluate risk to aquatic life with this information included.

Regulatory Action or Concern	Activity	Partner Support	Outcomes and notes
Malathion PID	Comment Letter: September 16, 2024		***Pending.*** The Proposed Interim Decision's (PID's) ecological risk assessment conclusions were based on a limited analysis included in the March 2024 Memorandum. While the March 2024 Memorandum was primarily focused on endangered species, but did address non-listed species, the aquatic risk assessment was limited to environmental exposure and risk associated with only three crops: corn, cotton, and citrus. The PID does not address urban and residential uses, even though residential uses account for 24 percent of overall malathion annual use. In a comment letter, CASQA recommended EPA prepare a comprehensive ecological risk assessment that is consistent with EPA's Guidelines for Ecological Risk Assessment and incorporate the findings into a revised PID. CASQA further recommended that EPA identify mitigation measures to effectively address the risks posed to aquatic life from registered outdoor, non-agricultural uses of malathion, with special attention on pollutant fate and transport in runoff from impervious surfaces to surface waters. Lastly, CASQA commented that the toxicological endpoints in the March 2024 Memorandum did not match EPA's Aquatic Life Benchmarks (ALBs) for malathion. In each case, the listed ALB is lower than the March 2024 Memorandum toxicity endpoint. The use of higher-than-recommended toxicological endpoints would likely result in underestimation of potential risk to aquatic life.
Comparison of Aquatic Life Protective Values Developed for Pesticides Under the FIFRA and the CWA	Comment Letter: January 30, 2025 & March 3, 2025		***Pending.*** In March 2025, CASQA submitted a letter describing the need for EPA OPP actions to better align with water quality criteria in the Clean Water Act, noting that incongruence can impact permit compliance for stormwater agencies.
DPR Pesticide Prioritization Process	Comment Letter: May 7, 2025		***Pending.*** In May 2025, CASQA submitted a comment letter in support of DPR's proposed pesticide prioritization process, including recommendations to develop a work plan-like approach to prioritization similar to Department of Toxic Substances Control's Safer Consumer Products Program.

Regulatory Action or Concern	Activity	Partner Support	Outcomes and notes
Isocyloseram Proposed Registration if a New Active Ingredient	Comment Letter: June 10, 2025	BACWA	***Pending.*** Isocycloseram, a new pesticide with proposed urban outdoor uses, appears to be more toxic than existing pesticides (including pyrethroids) with parallel uses. The proposed perimeter band spray label language for around structures allows for a seven-foot application band, irrespective of the permeability of the surface type surrounding the structure. For context, from 2019 to 2020, EPA worked extensively with pyrethroid registrants to develop perimeter band label language that was both effective against pests as well as protective of aquatic life. This reduced the band spray width for some applications on impervious surfaces to be just 1-inch wide. CASQA has recommended that EPA require pesticide registrants to submit revised labels for urban pesticides, using a process similar to the development of the pyrethroid labels. Further, because the proposed labels for isocycloseram allow product use in and around sewers and do not prohibit use in storm drains, CASQA recommended that EPA clarify urban labels so that isocycloseram is not applied in or around storm drains.

3.2 PARTICIPATION IN FEDERAL AND STATE ADVISORY GROUPS

As presented in Table 3, CASQA remains actively involved with various agencies and advisory groups that affect urban pesticide use and pest management. In addition to the PPDC and PMAC, new advisory groups are currently being proposed by DPR, such as a Scientific Advisory Committee and an Environmental Justice Advisory Committee.

Table 3. Participation in Federal and State Efforts to Support CASQA's Goals

Agency or Conference	Latest Outcomes
EPA's Pesticide Program Dialogue Committee (PPDC)	The 40-person committee, chaired by the Director of OPP, includes representatives from growers, industry, environmental, public health, farmworkers, as well as state/local/tribal government. The PPDC holds biannual public meetings. At the June 2025 meeting, key CASQA topics included: • OPP provided an extensive update on their 2025 goals, including proposed new active ingredients and priority and process improvements; • An update from the PPDC Label Reform Workgroup, with recommendations to support improvements to the review and approval process, quality and consistency of review and approval of labeling, and adoptability by industry and consumers; • An update on ESA Outreach and Education.
DPR's Pest Management Advisory Committee (PMAC)	Victoria Kalkirtz (co-chair of the True Source Control Subcommittee) participates on the PMAC. Participation on the PMAC has resulted in expanded focus by DPR on urban pest management and water quality issues and generated funding for urban IPM research and implementation programs. In February 2025, the PMAC considered 21 research grant proposals.

3.3 UPDATED PESTICIDE WATCH LIST

A key tool for identifying near-term regulatory concerns is the Pesticide Watch List. To maintain the Pesticide Watch List, scientific literature, government reports, and monitoring studies are reviewed as they are published. This information is used to prioritize pesticides based on the most up-to-date understanding of urban uses, pesticide characteristics, monitoring, and surface water quality toxicity (for pesticides and their degradates). The Pesticide Watch List, as shown on Table 4, serves as a management tool to help focus efforts on the most important pesticides from the perspective of MS4 agencies.[13] The Pesticide Watch List serves as a benchmark to prioritize activities, but it is not based on a comprehensive review of all pesticides. As a result, during regulatory tracking, CASQA watches for additional 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.

The 2025 investigation assessed Watch List chemicals, incorporating information from the following surface water monitoring programs:

- **DPR**: (1) Study 329. *Surface Water Monitoring for Pesticides in Urban Areas of Northern California (FY2023-2024*), McClanahan 2025 and (2) Study 320. *Ambient Surface Water and Mitigation Monitoring in Urban Areas in Southern California (FY2022-2023*), Nepal 2024.

[13] The first Watch List was published by the UP3 in 2005.

- **San Francisco Estuary Institute (SFEI)**: Vuckovic, D et al. Pharmaceuticals, pesticides, and ultraviolet filters in wastewater discharges to San Francisco Bay as drivers of ecotoxicity. Environmental Pollution 336. SFEI Contribution No. 1153. San Francisco Estuary Institute, 2023.
- **Delta Regional Monitoring Program:** Current Use Pesticides monitoring data (available from CEDEN).
- **MS4/NPDES monitoring**: the Bay Area Municipal Stormwater Collaborative and the Southern California Stormwater Monitoring Coalition.
- **Additional study**: Li, Zhong-Min et al. 2025. A survey of 27 quaternary ammonium compounds in surface water, drinking water, stormwater runoff, swimming pool water, and rainwater from New York State, USA. Water Research 282 (2025) 123736.

The available data were compared to aquatic toxicity thresholds, represented by Aquatic Life Benchmarks established by EPA based on Ecological Risk Assessments. For the DPR data sets, this comparison was performed by DPR and reported in the associated study reports. Following the review of monitoring data, additional factors were checked, including section 303(d) impaired waters listings and pesticide product uses. Based on the review, the following Watch List updates were implemented:

- **Confirmation of Priority 1 pesticides.** All of the pesticides listed under Priority 1 exceeded EPA's Aquatic Life Benchmarks in the latest monitoring data provided by DPR for Southern California and Northern California urban watersheds. These pesticides continue to be the highest concern.
- **Quaternary Ammonium Compounds (QACs).** QACs are antimicrobial pesticides that are used in many products, including disinfectants and algaecides. The previous Watch List focused on one key QAC family, ADBAC.[13] Since then, several studies have looked more closely at QACs in stormwater, including Lin, et al. 2025. These studies identified numerous additional QAC families in stormwater, often at concentrations higher than swimming pool water or wastewater. In response, the Watch List has been updated to include the general category of QACs, with specific QAC families of interest listed in the footnote.
- **Removal of Dacthal (DCPA) from Watchlist.** In August 2024, EPA issued an emergency order to remove all registered uses of Dacthal due to significant concerns for human health.
- **Addition of Isocycloseram to "Keep Watching" section of the Watch List.** Isocycloseram is a new pesticide that appears to be more toxic to aquatic invertebrates than existing pesticides for parallel uses. Its approved use on outdoor impervious surfaces – including applications up to seven feet wide for structural perimeter treatments – is of particular concern.
- **Addition of Veratridine to "Keep Watching" section of the Watch List.** Veratridine is a new pesticide that is expected to be a pyrethroid replacement. The limited data available indicates that veratridine may have aquatic toxicity characteristics.

[13] Alkyl Dimethyl Benzyl Ammonium Chlorides (ADBAC) include a family of 21 different quaternary ammonium pesticides.

Table 4. Pesticide Watch List

Priority	Basis for Priority Assignment	Pesticides
1	Monitoring data exceeding benchmarks; linked to toxicity in surface waters; urban 303(d) listings	Diuron Fipronil Imidacloprid Malathion Pyrethroids with significant monitoring data: • Bifenthrin • Cyfluthrin • Cyhalothrin (lambda • Cypermethrin • Deltamethrin/Tralomethrin • Esfenvalerate/Fenvalerate • Permethrin
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	Carbendazim/Thiophanate-methyl Chlorantraniliprole Clothianidin (Neonic) Copper pesticides[14] Creosote (PAHs) Indoxacarb Pendimethalin Polyhexamethylenebiguanidine (PHMB)**Error! Bookmark not defined.** Pyrethroids with little or no monitoring data[15] Simazine Thiamethoxam (Neonic, degrades into Clothianidin) Zinc pesticides (including Ziram)**Error! Bookmark not defined.** 2,4-D[16]
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 Bensulide Chromium pesticides Dichlorvos (DDVP) Naled Naphthenates Silver pesticides**Error! Bookmark not defined.** Trifluralin
4	High or unknown toxicity (parent or degradate) and urban use pattern associated with water pollution; synergist for higher tier pesticide; on DPR priority list	Antimicrobials in paints/coatings Abamectin Quaternary Ammonium Compounds (QACs)**Error! Bookmark not defined.**[17] Azoxystrobin *Bacillus sphaericus**Error! Bookmark not defined.*** Methoprene**Error! Bookmark not defined.** Mineral bases, weak**Error! Bookmark not defined.** Mineral oil (aliphatic)**Error! Bookmark not defined.** Methoxyfenozide Methyl anthranilate**Error! Bookmark not defined.**

[14] Used in pools, spas, and/or fountains.
[15] Pyrethroids *with little or no* urban monitoring data include Allethrins, Cyphenothrin, Etofenprox, Flumethrin, Imiprothrin, Metofluthrin, Momfluorothrin, Prallethrin, Sumethrin [d-Phenothrin], Tau-Fluvalinate, Tefluthrin, and Tetramethrin. Etofenprox is included in SoCal analytes but has not been detected; there continue to be no NorCal monitoring data for etofenprox.

[16] These pesticides may have dioxins as contaminants; there are several bay and estuary 303(d) listings for dioxin compounds.
[17] QACs found in stormwater include DDACs, ADBAC, ATMACs, BACs, EBAC, and others. Discharges from pools, spas, and fountains can be a source of QACs in stormwater but the main sources of QACs in stormwater are undetermined at this time.

Priority	Basis for Priority Assignment	Pesticides	
		Bacillus thuringiensis (Bti)**Error! Bookmark not defined.** Bromacil N-Bromosulfamates**Error! Bookmark not defined.** Busan-77**Error! Bookmark not defined.** Carbaryl Chlorinated isocyanurates[2] Chlorine**Error! Bookmark not defined.** Chlorine dioxide**Error! Bookmark not defined.** Chlorfenapyr Chlorothalonil[16] Chlorsulfuron DCOIT**Error! Bookmark not defined.** DDAC**Error! Bookmark not defined.** Dichlobenil Dithiopyr Halohydantoins**Error! Bookmark not defined.** Hydramethylnon Hypochlorites**Error! Bookmark not defined.** Imazapyr Isoxaben Mancozeb Methomyl	MGK-264 Novaluron Oryzalin Oxadiazon Oxyfluorfen PCNB Peroxyacetic acid**Error! Bookmark not defined.** Phenoxy herbicides[18] Piperonyl butoxide (PBO) Prodiamine Propiconazole Pyrethrins Pyriproxyfen**Error! Bookmark not defined.** Sodium bromide**Error! Bookmark not defined.** Sodium chlorite[2] Sodium percarbonate**Error! Bookmark not defined.** Sodium tetraborate**Error! Bookmark not defined.** Spinosad/Spinetoram Sulfometuron-methyl Tebuconazole Terbuthylazine**Error! Bookmark not defined.** Triclopyr Triclosan Trimethoxysilyl quats
5	Frequent questions from partners[19]	Glyphosate Metaldehyde	
Keep Watching	Urban pesticides that may threaten water quality depending on approved urban use patterns.	Acetamiprid (Neonic) Cyantraniliprole Dinotefuran (Neonic) Flupyradifurone (Neonic-like) Sulfoxaflor (Neonic-like)	Isocycloseram Veratridine (pyrethroid replacement)
None	Based on review of available data, no approved urban use or no tracking trigger as yet identified.	Most of the >1,000 existing pesticides	
Unknown	Lack of information. No systematic screening has been completed for the complete suite of urban pesticides.	Unknown	

[18] MCPA, 2,4-DP, MCPP(Mecoprop), Dicamba. 2,4-D is listed separately.
[19] Chlorpyrifos and Diazinon, while often asked about, have near zero or no urban uses, respectively.

3.4 PARTNERSHIPS

CASQA and BACWA continued to combine resources to track stormwater and wastewater priorities into a unified monthly pesticide action plan (see Attachment 1: Pesticides Regulatory Action Items for the most recent update). In July, CASQA and BACWA jointly met with DPR to strengthen relationships and receive updates to their Sustainable Pest Management (SPM) initiatives. CASQA will continue to seek opportunities to support DPR's efforts across the SPM focus areas, and work with BACWA on areas of shared priority.

Section 4. Assessment of Progress

Since the mid-1990s, CASQA (and its predecessor organization the Stormwater Quality Task Force) has worked toward a future in which the pesticide regulatory structure at the state and federal level regulates pesticide uses to protect water quality. CASQA's long-term pesticide program activities focus less on specific pesticides and more on instilling systematic process improvements. A central aspect of achieving these changes involves supporting key initiatives at EPA, DPR, and the Water Boards that make progress toward these changes

4.1 STATE-LEVEL PROGRESS

At the state level, significant progress has been made by DPR in addressing current problems with pesticides in surface waters receiving urban runoff. DPR continues to implement improved registration processes and responses to observed water quality problems. DPR also continues to implement and evaluate mitigation measures for observed problems with pyrethroids and fipronil.

DPR's transition to Sustainable Pest Management (SPM) offers promising opportunities to reshape how pesticides are used and evaluated in California. SPM is a holistic, systems-based approach that integrates pest control with broader goals related to environmental protection, public health, and economic vitality. DPR released its final SPM Roadmap in January 2023, outlining four key leverage points for urban implementation:[20]

1. Enhance data and information collection for urban pesticide use
2. Advance research and outreach on urban pest management issues
3. Make SPM the preferred choice for both licensed and unlicensed users
4. Refocus urban design, building codes, and regulations to enhance pest prevention

Furthermore, in 2014, the State Water Board established an urban pesticides reduction project (now titled the Statewide Urban Pesticide Provisions or UPP) as a top priority under the comprehensive stormwater strategy, known as "Strategy to Optimize Resource Management of Stormwater" or STORMS. CASQA has been actively supporting the development of the UPP since their inception.

Overall, DPR has a system in place that is reasonably effective at addressing pesticide toxicity in urban water bodies, although improvement is needed to better coordinate this process with the requirements of the Clean Water Act and MS4 permits. The goal is to embody this process in the State's UPP and the Management Agency Agreement (MAA) between DPR and the Water Boards

4.2 FEDERAL-LEVEL PROGRESS

CASQA's engagement with EPA focuses on promoting the standardization in labeling, enhancing modeling of pesticide use and water quality impacts, and ensuring Endangered Species Act (ESA) considerations are incorporated into regulatory decisions. Our regulatory activities, as described by Table 2, show moderate success in addressing pesticide registration decisions. However, EPA analyses do not show a clear understanding of key urban uses, and it is still unclear if upcoming risk management decisions for pyrethroids, fipronil, and imidacloprid and other neonicotinoids will provide any additional protection of urban water bodies. Consequently, further engagement on pesticide registration decisions is necessary to effectively communicate the impacts of urban use pesticides to water quality.

[20] https://www.cdpr.ca.gov/docs/sustainable_pest_management_roadmap/spm_executive_summary.pdf

Section 5. Looking Forward

In the coming year, CASQA will continue to address near-term pesticide concerns and seek long-term regulatory change. In the coming year, CASQA will continue engagement on specific regulatory actions for priority pesticides at the federal level, while continuing to support DPR in their rollout of the SPM initiative and their proposed Pesticide Prioritization Process. The pesticide program's priority focus areas include:

(1) Seek near-term changes in pesticide regulatory actions:

- Support completion of DPR action on fipronil water pollution, including implementation of effective education for professional users regarding restrictions on its outdoor urban use.
- Advocate for the enforcement of DPR's existing mitigation measures for pyrethroids and fipronil and recommend adoption of additional mitigation measures as warranted.
- Support completion of DPR's evaluation of the impacts of neonicotinoid pesticides on aquatic organisms.
- Continue to respond to EPA pesticide registration decisions, including the eight proposed new active ingredients slated for review in the coming fiscal year.

(2) Seek long-term changes in the pesticide regulatory structure:

- Continue engagement with EPA regarding incorporating their ESA obligation in registrations and re-registrations, including recommending the use of pictograms in labels, and seeking opportunities in California for EPA's future regional and vulnerable species pilot programs.
- Continue engagement with DPR regarding the SPM Roadmap specific to urban implementation programs and opportunities.
- Support DPR's proposed pesticide prioritization process as an effective pathway to prioritize pesticides under their continuous reevaluation process.
- Encourage and assist the Water Boards to continue to implement its MAA with DPR to prevent and mitigate pesticide impairments through more effective pesticide regulation.

CASQA will continue to seek opportunities to coordinate on high-priority regulatory actions with the Water Boards and other water quality stakeholders to take advantage of efficiencies and increased effectiveness. Attachment 1: June Pesticides Regulatory Action Items details the prioritization and estimated schedule of future pesticide regulatory items, which serves as the basis for planning future pesticide regulatory activities.

Attachment 1: Pesticides Regulatory Action Items

Estimated CA DPR Schedule (Next 12 months):

Priority	Topic	Estimated Due Date	Wastewater / Stormwater	Item	Water Quality Issue
2	Non-agricultural neonics (acetamiprid, clothianidin, dinotefuran, & thiamethoxam)	Q2 2025		DPR Draft Human Health Assessment	High toxicity, monitoring data, 303(d) listings
2	Non-agricultural neonics (acetamiprid, clothianidin, dinotefuran, & thiamethoxam)	Q3 2025		DPR Draft Environmental Assessment for aquatic organisms	High toxicity, monitoring data, 303(d) listings

Estimated US EPA Schedule (Next 12 months):

Priority	Topic	Estimated Due Date	Wastewater / Stormwater	Item	Water Quality Issue
unknown	New Antimicrobials	various		various	Varied; many of these pesticides are showing up for the first time at the PID level; review is needed to screen these for water quality issues
2	2,4-D	2025		PID	Pesticide with dioxins impurity
1	Fipronil	2025		PID	Monitoring data; Anticipated 303(d) listings
1	Imidacloprid	2025		Re-release of PID (ESA process)	High toxicity, monitoring data, 303(d) listings
2	Thiamethoxam	2025		Re-release of PID (ESA process)	High toxicity, monitoring data, 303(d) listings
2 3	Clothianidin	2025		Re-release of PID (ESA process)	High toxicity, monitoring data, 303(d) listings
3	Bioban P-1487	2025		RA	Antimicrobial
3	Bronopol	2025		RA	Antimicrobial
3	Dichlorvos (DDVP)	2025		PID	Organophosphate insecticide
3	Naled	2025		PID	Degrades to DDVP
3	Diuron	2025		PID (Re-release of PID)	303(d) listings
3 4	Isothiazolinones (includes DCOIT, BBIT, BIT, MIT, OIT)	2025		RA	Antimicrobials. Uses include paints.
3 5	Dinotefuran	2025		PID	Neonicotinoid. Toxicity.
4	Dicamba	2025		PID	Toxicity, stormwater monitoring data
4	Peroxy Compounds (peroxyacetic acid)	2025		PID (re-release)	Fountain chemical
4	Sodium percarbonate	2025		PID	Pool chemical
4	Bacillus thuringiensis (Bt)	2025		Draft RA	Used in pools, spas, and fountains.
4	Piperonyl butoxide (PBO)	2025		PID	Pyrethroid synergist

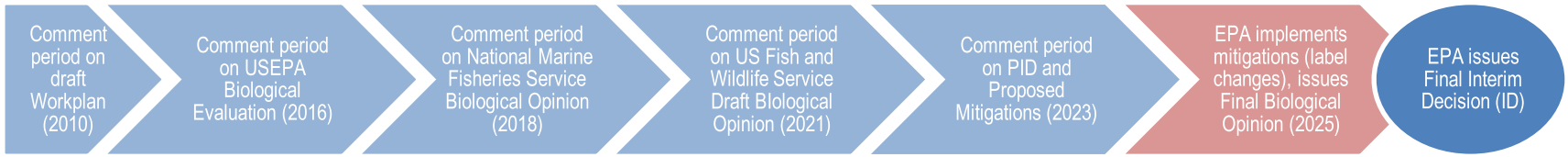
Priority	Topic	Estimated Due Date	Wastewater / Stormwater	Item	Water Quality Issue
4	Pyrethrins	2025		PID	Related to pyrethroids, but less stable and less toxic
4	Tebuconazole	2025		PID	Fungicide
4	MGK-264	Reissue in 2025		PID	Pyrethroid synergist
5	Acetamiprid	2025		PID	Neonicotinoid. Toxicity.

Key: RA = Risk Assessment; PID = Proposed Interim Decision; BE (ESA) = Biological Evaluation (Endangered Species Act)

Attachment 2: Regulatory Participation Outcomes and Effectiveness Assessment Summary Tables

Carbaryl Regulatory Participation Outcome and Effectiveness Assessment Summary Table

Pesticide:	**Carbaryl** (EPA–HQ–OPP–2014–0004)
Use:	Insecticide
Why we care:	Toxicity; use pattern; monitoring data
Actions taken:	CASQA commented on the Workplan (Nov. 2010) and the Proposed Interim Decision/ Draft Evaluation Supporting Proposed Mitigations Predicted to Avoid Jeopardy and Adverse Modification of Designated Critical Habitat and Reduce Take for Four Federally Listed Endangered and Threatened Species (Feb 2023).
Status:	EPA released the Final Biological Opinion and the Required Label Changes document on April 9, 2025.



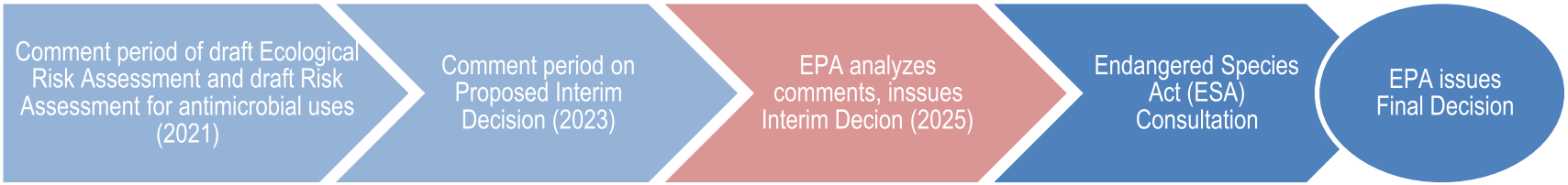
Next steps: EPA will release the final Interim Decision (ID), expected late 2025. (No comment period.)

CASQA Feb 14, 2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
Comment #1: CASQA Supports EPA's Proposed Mitigation Measures for Carbaryl CASQA provided support for EPA's proposed label language mitigations for carbaryl. These mitigations include use deletions, spray drift management measures, general environmental protection measures (including water protection statements), and updated environmental hazard statements.	EPA included the Proposed Interim Decision (PID) agreements in the Final Biological Opinion (BiOp).	Yes.
Comment #2: CASQA Suggests Label Mitigation Measures for Consistency CASQA recommended edits to label mitigation measures for consistency. These recommendations included clarification of	EPA included the reduced rates of application for turf, golf courses, and ornamental plants/trees in the Final BiOp. (Final BiOp, p.40-41)	Yes.

CASQA Feb 14, 2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
application statement on pervious surfaces. CASQA also asked that EPA correct the application rates in the PID mitigations to be consistent with the mitigations stated in the November 2022 Biological Evaluation Memorandum titled, Draft Evaluation Supporting Proposed Mitigations Predicted to Avoid Jeopardy and Adverse Modification of Designated Critical Habitat and Reduce Take for Four Federally Listed Endangered and Threatened Species: • The PID notes [p.41] that: "Reducing the maximum annual application rate for turf to 16 lbs. ai / acre (currently labeled maximum annual application rate for residential turf and golf courses is 36 lbs. ai / acre and 32 lbs ai / acre for sod)" • However, the BE Memo documents the pesticide registrants' recommendations [Appendix C. Summary of Mitigations from Carbaryl Registrants for Listed Species, p. 85]: o Ornamental Trees and Plants 1. Maximum Annual Amount: 4 lbs. ai / acre (currently 6 lbs. ai / acre) 2. Maximum Annual Number of Applications: 4 (currently 6 lbs. ai / acre) o Turfgrass (Golf Turf, Sports Fields, Sod Farms, Domestic and Commercial Lawns, Cemeteries, Parks, Campsites, Recreational Areas) 1. Maximum Annual Amount: 10 lbs. ai / acre (currently 16 lbs. ai / acre) 2. Maximum Application Rate: 5 lbs. ai / acre (currently 8 lbs. ai / acre)		

Chlorothalonil Regulatory Participation Outcome and Effectiveness Assessment Summary Table

Pesticide: **Chlorothalonil** (EPA–HQ–OPP–2011–0840)
Use: Fungicide
Why we care: Central Valley Water Board high relative risk; 303(d) listings (dioxins); Contains Clean Water Act Priority Pollutant (Dioxins)
Actions taken: CASQA submitted a comment letter on the Preliminary Ecological Risk Assessment (Sept. 2021) and the Proposed Interim Decision (2023).
Status: EPA released the Interim Decision in January 2025. There is no public comment period at this stage.



Next steps: EPA will release Endangered Species Act (ESA) ESA Consultation.

CASQA 1/17/2024 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?

Comment #1: Include mitigation measures for antimicrobial uses
• Include mitigation measures for the antimicrobial uses of chlorothalonil, specifically uses that occur outdoors, with potential exposure to rain, such as paints, coatings, and wood treatments. Label mitigations, similar to those for conventional uses, could include:
  • Advisory Statement: "This product is toxic to fish, aquatic-phase amphibians, and aquatic invertebrates." (PID, Appendix B, p.80)
  • Surface Water Advisory Statement: "Surface Water Advisory. This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils
	"EPA thanks CASQA for their comment on the PID. Due to chlorothalonil's niche use as one of the few remaining preservatives for solvent-based paints, low risks to human health and the extremely conservative nature of the ecological risk assessment for chlorothalonil treated products, EPA did not identify a need to include additional mitigation language on labels for chlorothalonil-treated products. Additionally, EPA does not regulate language on product labels for exempt pesticide-treated products, including chlorothalonil-treated paints or building materials. These products fall under the "treated article exemption" as long as the inclusion of the pesticide active ingredient is only intended to preserve the	The EPA noted that the "treated article exemption" gap is an area they will consider in the future. However, EPA did not include the requested additional mitigation language on chlorothalonil-treated products.

CASQA 1/17/2024 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
and soils with shallow ground water. This product is classified as having a [medium/large] potential for reaching both surface water and aquatic sediment via runoff for several months or more after application." (PID, Appendix B, p.80) • Ecological Incidents Statement: "REPORTING ECOLOGICAL INCIDENTS: For guidance on reporting ecological incidents, including death, injury, or harm to plants and animals, including bees and other non-target insects, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents or call (registrant phone number)." (PID, Appendix B, pp.83-84) • Consistent with other recent EPA pesticide label updates, all warning and advisory labels should be provided in both English and Spanish.	material itself and not objects that may be painted with or otherwise come into contact with the treated articles. However, EPA has solicited comments on the issue of including label language on treated paint cans in a recent Advanced Notice of Proposed Rulemaking (ANPRM) that was released for public comment. The Office of Pesticide Programs (OPP) continues to look into this issue. Finally, EPA does not require registrants to use specific units when describing application rates of antimicrobial pesticide products. As these products are often being used in the manufacture of chlorothalonil-treated products, EPA defers to product registrants who are more familiar with the manufacturing settings to choose how application rates should be communicated. That being said, EPA converts all application rates to parts per million (PPM) for the purposes of assessing risk, so product application rates may be compared to one another." (ID, pp.37-38)	
Comment #2: For both conventional and antimicrobial uses, revise label language for consumer use • Revise the proposed label improvements for the maximum annual application rate for consumer products to be stated in square feet instead of acreage. • Revise the proposed label improvements for the maximum annual application rate for consumer	"EPA appreciates CASQA's feedback on the annual application rate for non-agricultural/ consumer products containing chlorothalonil. EPA agrees that lbs a.i./acre is not a meaningful unit of measure for residential non-commercial agriculture products. However, the Agency notes that the application rates are not listed in lbs a.i./ acre on these types of products, and that products intended for	EPA agreed that consumer product directions should be in smaller units that make sense to consumers. Individual manufacturers of these consumer products can include these smaller units in their registration/ reregistration applications or label updates to EPA.

CASQA 1/17/2024 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
products to be stated fluid ounces instead of pounds for liquid formulations. • Revise antimicrobial labels to units that are more intelligible for consumers. For example, instead of 0.12 pounds of pesticide product per 100 pounds of adhesive [EPA Reg #:53883-186], we suggest that this be scaled to amounts used by consumers, in the units proportional to that amount, such as ounces instead of pounds of pesticide product.	residential use express the application rate in smaller units, such as ounces, teaspoons/gallon, or pounds/square foot." (ID, pp. 28-29)	
Comment #3: Adopt a 48-hour warning instead of the proposed 24-hour warning for conventional uses Use a 48-hour rain advisory instead of the proposed 24-hour rain advisory in following label sections: • For Liquid Concentrate Products: "To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 - 48 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems." • For Granule Products: "To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 48 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Sweeping any product that lands on a driveway,	"EPA appreciates CASQA's proposal to extend the period prior to rainfall where application is prohibited from 24 hours to 48 hours and acknowledges that 24-hour rainfall statement included in this ID for chlorothalonil is inconsistent with the 48-hour rainfall statements included in registration review decisions for other active ingredients. Rainfall statements, like other mitigation measures, are developed on a case-by-case basis by considering the risks and benefits of the pesticide. EPA identified that a 24-hour interval was appropriate for chlorothalonil. Fungicides, including chlorothalonil, are often used as protectants and require applications be made immediately prior to anticipated rain events to prevent disease from occurring or worsening due to wet conditions. The rainfastness, or the interval between a fungicide application and a rain event for which a pesticide product maintains effectiveness, for most fungicides varies from	EPA did not adjust the 24-hour warning as requested. EPA noted that it makes exceptions to the typical 48-hour warning on a case-by-case basis.

CASQA 1/17/2024 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
sidewalk, or street, back onto the treated area of the lawn or garden will help to prevent run off to water bodies or drainage systems." • For Ready to Use Products: "To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 48 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area."	15 minutes to 24 hours. For this reason, EPA modified the interval from the standard 48 hours to 24 hours for chlorothalonil to maintain fungicidal effectiveness while also providing protection against runoff." (ID, p. 29)	
Comment #4: CASQA supports proposed label improvements for conventional uses CASQA supports EPA's proposed label improvements for conventional uses of chlorothalonil (PID, Appendix B, pp.79-98), including: • Updated Non-Target Organism Advisory Statement: "This product is toxic to fish, aquatic-phase amphibians, and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas." • Ecological Incidents Statement: "REPORTING ECOLOGICAL INCIDENTS: For guidance on reporting ecological incidents, including death, injury, or harm to plants and animals, including bees and other non-target insects, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents or call (registrant phone number)." • Updated Surface Water Label Advisory: "Surface Water Advisory. This product may impact surface water quality	"EPA thanks SRSWPP and CASQA for their support of the mitigation measures proposed in the PID." (ID, p.28)	The supported mitigation measures remain in the final ID.

CASQA 1/17/2024 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a medium potential for reaching both surface water and aquatic sediment via runoff for several months or more after application."		

Thiophanate-methyl and Carbendazim Regulatory Participation Outcome and Effectiveness Assessment Summary Table

Pesticide:	**Thiophanate-methyl and Carbendazim** (EPA–HQ–OPP–2014–0004)
Use:	Fungicide
Why we care:	Thiophanate-methyl and carbendazim are registered as conventional pesticides for outdoor urban use on turf, ornamentals, and ornamental trees and large woody shrubs. Carbendazim is also registered for antimicrobial uses as a fungicide for exterior coatings, paints, sealants, caulks, and plastics. Thiophanate-methyl and carbendazim are highly toxic to aquatic life.
Actions taken:	CASQA sent a comment letter to EPA on the Proposed Interim Registration Review Decision (PID) in 2023.
Status:	EPA released the Interim Decision in January 2025. There is no public comment period at this stage.

Next steps: EPA will release Endangered Species Act (ESA) ESA Consultation.

CASQA 3/23/2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
EPA's proposed mitigation measures for Thiophanate-methyl and Carbendazim are appropriate and necessary to protect aquatic life. 1. **Ornamental commercial spot treatment restriction for thiophanate-methyl (TM):** "Broadcast uses of TM for ornamentals with rates of 26 lbs ai/A and 20 lbs ai/A are limited in application to spot treatment only. Spot treatment is defined as a small, localized area (not to exceed 1,000 sq ft per acre where pests are found)." [PID, p.88]	"EPA thanks CASQA and SSQP for their comments on CWA compliance and comments supporting the proposed mitigation." (ID, pp.17-18) EPA made considerable changes to the list of mitigations since the PID was published in 2022. (ID, p.7 and pp. 103-124) Changes relevant to CASQA include: • Updated mitigation for use on turf (now allows a higher use rate [0.1232 lbs.	EPA included many of the proposed mitigation measures outlined in the PID and our comment letter. Although the reduction in active ingredient in paint and building materials is not as large as expected, it still results in a significant reduction given that these materials are currently being sold at 3,450 ppm. (The new requirements will reduce materials down to 2,000-2,500ppm.)

CASQA 3/23/2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
2. **Maximum application rates and numbers of applications**. "Set the maximum annual application rates and number of applications for the following to: Turf: 0.78 lbs ai/A at 2 applications per year. Residential ornamentals: 1.8 lbs ai/A at 2 applications per year." [PID, p.88] 3. **Updated Environmental Hazard Statement and Surface Water Advisory Statement**. "For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment washwater or rinsate". and "This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching aquatic sediment via runoff for several months or more after application. A level, well-maintained buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of TM and MBC. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff." [PID, p.93] 4. **Deletion of Use of MBC Materials Preservative in Vinyl Flooring (includes outdoor vinyl flooring)**. "This product is not to be used as a material preservative intended for use in polyvinyl	ai/A] if resident applies once per year instead of twice per year) (See #2 in column to the left) • Updated mitigation for use on ornamentals to reduce the concentration of pesticide allowed but to allow it to be used over a greater area. [Reduce the maximum application rate from 26 lb ai/A to 12.5 lb ai/A and increase the size of the treatment area from 1,000 to 5,000 sq ft. Add new directions to label: (1) Don't apply more than 0.287 lb ai/A to a 1,000 sq ft treatment area, (2) Don't apply more than 5,000 sq ft treatment area in an acre and (3) Don't apply more than 1.435 lb in an acre per year. (See #1 in column to the left) • Updated rate reductions in paints, caulks, plasters, sealants, and adhesives. Instead of reducing the concentration of the pesticide in paints and caulks/plasters/sealants/adhesives (See #5 in column to the left), EPA instead reduced the concentration in paints to 2,500 ppm and the concentration in caulks/plasters/sealants/adhesives to 2,000 ppm. EPA stated that, "Although risk remains with this change, the risk considerations are balanced with the results of the benefits assessment and	

CASQA 3/23/2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
chloride (PVC) flooring." Remove all references (including, but not limited to, all use directions) to polyvinyl chloride (PVC) flooring within material preservation section." [PID, p.101] 5. **Rate reduction to 1,265 ppm for paint preservative uses**. "Maximum application rate for paint, caulk, plaster, sealants, and inks must not exceed 1,265 ppm (or equivalent)." [PID, p.101]• "Treat surfaces to ensure thorough coverage but avoid runoff."	the Agency has determined that lowering the rate to 1,265 ppm as previously proposed would create undue burden to end-users." (ID, p.20) • Added incident reporting language for ecological incidents with EPA's new incident reporting website as well as a placeholder space for the pesticide registrant's phone number. • Removed MBC use in <u>all</u> plastic, not just vinyl flooring. EPA stated that, "In order to mitigate risks from MBC-treated vinyl flooring, the Agency determined that the plastics (PVC) use needs to be deleted from registered products." (ID, p.93) • EPA kept the same environmental hazard statement and surface water advisory statement as drafted in the PID. (See #3 in column to left)	
As noted in Sacramento County's 2020 comment letter, MBC is commonly detected in California surface waters. As summarized in that letter, California DPR's surface water quality (SURF) database contains numerous water quality monitoring detections of carbendazim in urban creeks, including many approaching or exceeding the lowest Aquatic Life Benchmark (0.99 ppb, for fish/chronic).	EPA acknowledged that MBC is often detected in California surface waters. (ID, p. 18)	EPA acknowledged CASQA's comment about monitoring data.

CASQA 3/23/2023 Comments to EPA	EPA Response	Did EPA incorporate CASQA's comment?
EPA should develop PRZM modeling scenario to quantitatively assess risks to aquatic life from antimicrobials used in building materials preservation EPA should adapt its existing standard surface water quality modeling approach by modifying the Residential Scenario running under PRZM/PWC to enable risk assessment for antimicrobial pesticides, such as carbendazim, that are used outdoors for protection of building materials.	No response.	EPA did not respond to this comment.

DPR Draft Strategic Plan Comment Letter Outcome Summary Table

Pesticide-related issue:	**California Department of Pesticide Regulation (DPR) Draft 2024-2028 Strategic Plan**
Why we care:	The Strategic Plan, updated every 5 years by DPR, sets the priorities for pesticide-related work for the State of California.
Actions taken:	CASQA submitted a comment letter to DPR on November 10, 2023.
Status:	DPR released a final 2024-2028 Strategic Plan in December 2024.
Next steps:	No action needed at this time. The next strategic plan update is expected in 2028.

CASQA 11/10/2023 Comments to DPR	Did DPR incorporate CASQA's comment?
CASQA SUPPORTS DPR'S PLAN FOR GREATER ENGAGEMENT, COLLABORATION, AND TRANSPARENCY. CASQA appreciates that collaboration is a core value in the Draft Strategic Plan. Collaboration is demonstrated throughout the document, with goals for greater engagement and transparency. Similarly, CASQA has identified potential partners, including DPR, whose missions are complementary to achieving CASQA's Vision. As a collaborative partner, CASQA can provide stormwater-sector expertise and perspective, especially as it relates to the development of a SPM advisory group (Goal 1.1). Furthermore, we are also encouraged by Goal 1.1 to "enhance and modernize the collection of information and data to improve program policies, procedures, and priorities" as doing so provides transparency to the pesticide regulatory process. Transparency is further established through the development of a SPM Certification program (Goal 1.1) and the issuance of timeline projections for scientific data evaluations (Goal 1.2). We support increased outreach to local urban communities outlined in Goal 3, including: • Goal 3.1: Broaden opportunities for regular, transparent, and meaningful access to DPR.	DPR kept all the goals and details on engagement, collaboration, and transparency from the draft plan in the final plan.

CASQA 11/10/2023 Comments to DPR	Did DPR incorporate CASQA's comment?
• Goal 3.2: Improve information access and data sharing. • Goal 3.3: Launch a statewide restricted material pesticide application notification system. • Goal 3.4: Expand language access throughout California in collaboration with federal, state and local partners. CASQA hopes that this greater engagement, collaboration, and transparency will specifically include stormwater agencies since stormwater agencies may have primary responsibility for the adverse environmental impacts of pesticides in waterways.	
CASQA SUPPORTS DPR'S COMMITMENT TO DIVERSITY, EQUITY, AND INCLUSION (DEI). CASQA supports DPR's commitment to (DEI), especially as it relates to Goal 2.1 to increase access to information and data collection. DPR's support of sustainable pest management in disadvantaged communities has the dual effect of reducing pesticide-related health impacts within vulnerable populations and reducing the burden of pesticide run-off on aquatic life. CASQA encourages outreach to occur through local partners, who have established trust and understand community-specific needs, in collaboration with governmental agencies and County Agricultural Commissioners.	The final plan has a large section on DPR's commitment to DEI.
REVISE GOAL1.3 TO REFLECT A GROUP-BASED PESTICIDE PRIORITIZATION PROCESS RATHER THAN BY ACTIVE INGREDIENT. CASQA recommends that DPR focus on categories of pesticides by use, rather than individual pesticide active ingredient. CASQA encourages DPR to move forward with a use group-based analysis for pesticide prioritization, rather than an individual analysis by active ingredient. As a result, CASQA recommends that Goal 1.3, 2nd, 3rd and 4th Bullets be revised to state: • By 202_, establish a use group-based pesticide prioritization process, informed by a diverse, cross-sector SPM advisory group and	DPR revised Goal 1.3 in the final plan: Goal 1.3: Develop and implement a science-based prioritization process for reviewing, identifying and evaluating high-risk pesticides, their alternatives and related mitigation measures. • By 2025, annually release a report that includes a list of pesticide risk assessments, reevaluations and mitigation efforts, and progress toward meeting their identified target completion dates.

CASQA 11/10/2023 Comments to DPR	Did DPR incorporate CASQA's comment?
consultation, external engagement, and public input, to take expeditious action on risk determinations and to identify and evaluate the availability of alternatives. • By 202_, begin an annual process of initiating formal mitigation for at least two identified priority pesticide~~s~~ uses. • By 202_, begin an annual process of completing formal mitigation for at least two identified priority pesticide~~s~~ uses.	• By 2025, establish a science-based pesticide prioritization process, informed by a diverse, cross-sector advisory committee, external engagement, and public input, to prioritize pesticide use risks, identify and evaluate the availability and feasibility of alternatives, and take expeditious action for completing mitigation. • By 2025, initiate reevaluation for at least one pesticide each year, increasing to at least two pesticides each year in 2029. • By 2025, where DPR has identified potential adverse effects through a reevaluation, adopt any necessary mitigation measures within two years.

GSA Regulations.Gov Comment Letter Outcome Summary Table

Pesticide-related issue:	**Problems with Regulations.gov (website managed by the U.S. General Services Administration ("GSA")** The 2021 version of Regulations.gov limits public access and impaired CASQA's ability to access data and provide comments.
Why we care:	The federal government's Regulations.gov website is where almost all the pesticide-related information is released by the EPA.
Actions taken:	CASQA submitted a comment letter to GSA on issues with the regulations.gov website on July 29, 2021.
Status:	GSA updated the regulations.gov website in late 2024.
Next steps:	No action needed at this time.

CASQA 7/29/2021 Comments to GSA	GSA Response
Docket subscription service termination. The subscription services feature formerly available on Regulations.gov is essential to CASQA, as it undoubtedly is to countless interested parties attempting to track changes in federal rules and regulations. Subscribing to a docket is the only reasonably efficient way to know when USEPA posts something on the docket, such as a comment period extension notice…The subscription feature is not currently functioning—no new subscriptions can be added. Subscriptions that CASQA enrolled in several years ago are still functioning, but there is no ability to add new subscriptions.	GSA docket subscription services resumed operations in 2022.
Search non-functional. The new Regulations.Gov docket's search engine is essentially non-functional. CASQA has attempted many searches, including trying to look up historical comment letters on a pesticide docket. While the previous version of the Regulations.Gov site was easy to search, the new version's search engine does not provide any results. We request that the search function be revised to provide meaningful search results	GSA fixed the search function in 2022.
Search cannot handle standard dash formats. In the prior version of Regulations.Gov, CASQA could easily cut and paste a docket number from the	GSA updated the system so that standard dash formats could be used in late 2024.

CASQA 7/29/2021 Comments to GSA	GSA Response
Federal Register to the Regulations.Gov site to search for that docket. The current Regulations.Gov site does not allow this easy cut and paste search, as it does not recognize the long dashes used in the Federal Register. This means that we must alter each and every long dash to a short dash to search just one docket number. Given that we monitor over 100 dockets, this can add a lot of extra time just to complete a simple search. We request that the search function be revised to correctly find dockets when either long or short dashes are used in the docket name.	
User Interface Hides Prior Comments and Obfuscates Access to All Documents in Dockets: The previous version of the Regulations.Gov docket had a straightforward user interface that allowed CASQA to quickly sort and view all files. The new version of the Regulations.Gov site has a confusing user interface where items like public comment letters and USEPA's multiple scientific analyses are essentially hidden in different tabs. In the new design the file organization structure is not easy to navigate and is not searchable. We have found that files that were previously available appear to be missing from the site, including historical public comments.	GSA updated the system so that previous comments and all documents can be accessed in 2024.

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 9-5

CASQA Our Water Our World 2025 Annual Report – August 2025

California Stormwater Quality Association®

Dedicated to the Advancement of Stormwater Quality Management, Science and Regulation

Our Water Our World 2025 Annual Report

Prepared by the California Stormwater Quality Association

August 2025

Acknowledgements

OWOW is funded by CASQA, the organizations implementing the program (see Table 1 in Section 2 of this report), and is sponsored by the Bay Area Clean Water Agencies (BACWA).

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Table of Contents

Preface **2**
Section 1. Introduction **5**
Section 2. Program Elements **5**
2.1 Integrated Pest Management (IPM) Advocates 5
2.2 Educational Materials 5
2.3 Trade Shows 6
Section 3: Partnerships **6**
Section 4. Annual Program Implementation **10**
4.1 IPM Advocates 10
4.2 Educational Outreach Materials 10
4.3 Vendor Outreach 12
4.4 Training and Outreach for Retailers and Consumers 13
4.5 Retailer e-Newsletter 13
Section 5. Program Development **14**
5.1 Updates in Progress 14
5.2 Future Considerations 14
Appendix A: Example Outreach Materials
Appendix B: The Home Depot Support Letter

Section 1. Introduction

Our Water, Our World (OWOW) is an award-winning partnership between municipal agencies, garden centers, and hardware stores that sell pest control products. Initiated in 1998, the program focuses on less-toxic, eco-friendly products and techniques, as many common pesticides harm sensitive species and ecosystems when they reach local creeks, bays, and the ocean.

OWOW started as a pilot project in 1998, in just a handful of stores, initiated by the Central Contra Costa County Sanitation District, the City of Palo Alto Regional Water Quality Control Plant, and the Marin Countywide Stormwater Pollution Prevention Program. The program quickly grew and was administered by the former Bay Area Stormwater Management Agencies Association from 1999 to 2021. During that time, over 130 agencies in 16 counties implemented the program, working in approximately 239 stores. Starting in January 2022, the program was transferred to the California Stormwater Quality Association (CASQA), to provide statewide access to this important and successful outreach program.

From a stormwater management perspective, OWOW is an excellent opportunity and cost-efficient way to educate the public and reduce toxicity in waterways from current use pesticides. Several municipalities utilize OWOW to meet permit requirements, including the San Francisco Bay Area Municipal Regional Permit,[2] the Central Valley Region-wide MS4 Permit,[3] and the Phase II – Small MS4 General Permit.[4]

Section 2. Program Elements

The OWOW program consists of several elements that are integral to its effectiveness.

2.1 INTEGRATED PEST MANAGEMENT (IPM) ADVOCATES

IPM Advocates are individuals who have been trained on how to engage with retailers and the public. They provide local implementation of the program on behalf of participating agencies. Local implementation generally consists of coordinating with participating retailers to offer in-store displays, shelf tags, in-store presentations and training for store employees, and advice to customers about pest management methods that are healthier for people and the environment.

2.2 EDUCATIONAL MATERIALS

In the store, consumers are directed to less-toxic products and techniques through:

- Fact sheet displays near pest products to educate the public on various pest management topics.
- Shelf tags to guide customers to less-toxic products.
- Display posters with QR codes linking directly to the OWOW website and fact sheets.

[2] Municipal Regional Stormwater NPDES Permit, California Regional Water Quality Control Board – San Francisco Bay Region, 2022. Order R2-2022-0018, NPDES NO. CAS612008, as amended, CA.
[3] NPDES Permit and Waste Discharge Requirements General Permit for Discharges from MS4s, California Regional Water Quality Control Board – Central Valley, 2016. Order R5-2016-0040, NPDES NO. CAS0085324, CA
[4] NPDES Permit and Waste Discharge Requirements for Storm Water Discharges from Small MS4s, California State Water Resources Control Board, 2013. Water Quality Order 2013-0001-DWQ, NPDES General Permit No. CAS000004, as amended, CA.

On the OWOW website, consumers can view the following:

- All 18 fact sheets.
- Stores participating in the OWOW program.
- A database of less-toxic products and their active ingredients.

2.3 TRADE SHOWS

OWOW representatives provide exhibits annually at trade shows to educate store buyers on less-toxic products. Participation in these events helps ensure stores carry less-toxic products.

Section 3: Partnerships

The program is administered by CASQA, and implemented by local cities and counties. IPM Advocates and University of California Statewide IPM Program (UC IPM) serve as collaborative partners.

CASQA manages and provides the central services necessary to operate and maintain the OWOW program, including the development of education materials (e.g., less-toxic product lists, label files, and active ingredient lists), creation and updates of outreach materials, operation and updates to the OWOW website, vendor (i.e., retail partners and pesticide distributors) outreach, preparation of an annual report, fulfillment of outreach materials orders, and program management and development.

Municipal agencies subscribe to OWOW through CASQA and implement the OWOW program in their local retail stores by contracting with IPM Advocates, using municipal staff, or other contractors. Implementation may occur by a single agency at stores within their jurisdiction or organized at a regional scale, where agencies combine resources to implement the OWOW program at select stores used by multiple jurisdictions. In addition, municipal agencies conduct outreach to inform residents about the OWOW program. Table 1 provides the list of agencies implementing OWOW as of June 30, 2025. Bay Area Clean Water Agencies (BACWA) continues to support the OWOW program as a sponsor.

IPM Advocates are trained individuals who support the local implementation of the OWOW program. They provide retail stores, nurseries, hardware stores, and garden centers with direct-to-consumer information, IPM tools, products, and practices. IPM Advocates are the link between the municipalities and the retailers where they reach consumers. The active IPM Advocates include Suzanne Bontempo, Julie Barbour, and Maris Sidenstacker.

UC IPM provides research and expertise on IPM practices promoted throughout the state and maintains a website of less-toxic IPM practices for nearly 1,000 home, garden, landscape, and turf pests. Karey Windbiel-Rojas, Associate Director for Urban and Community IPM, UC IPM has been involved with the IPM Advocate program since its inception and continues to assist with advocate training, technical resources on pest management practices, and as a liaison with the University of California resources.

Table 1. Agencies Implementing OWOW

Bay Area and Northern California

Alameda County
Alameda County Flood Control & Water Conservation District
Alameda Countywide Clean Water Program
City of Alameda
City of Albany
City of American Canyon
City of Antioch
City of Belmont
City of Belvedere
City of Benicia
City of Berkeley
City of Brentwood
City of Brisbane
City of Burlingame
City of Calistoga
City of Campbell
City of Clayton
City of Cloverdale
City of Concord
City of Cotati
City of Cupertino
City of Daly City
City of Dublin
City of East Palo Alto
City of El Cerrito
City of Emeryville
City of Fairfield
City of Foster City
City of Fremont
City of Half Moon Bay
City of Hayward
City of Healdsburg
City of Hercules
City of Lafayette
City of Larkspur
City of Livermore
City of Los Altos
City of Martinez
City of Menlo Park
City of Mill Valley
City of Millbrae
City of Milpitas
City of Monte Sereno
City of Mountain View
City of Napa
City of Newark
City of Novato
City of Oakland
City of Oakley
City of Orinda
City of Pacifica
City of Palo Alto
City of Petaluma
City of Piedmont
City of Pinole
City of Pittsburg
City of Pleasant Hill
City of Pleasanton
City of Redwood City
City of Richmond
City of San Bruno
City of San Carlos
City of San José
City of San Leandro
City of San Mateo
City of San Pablo
City of San Rafael
City of San Ramon
City of Santa Clara
City of Santa Rosa
City of Saratoga
City of Sausalito
City of Sebastopol
City of South San Francisco

Bay Area and Northern California (Continued)

City of St. Helena
City of Suisun City
City of Sunnyvale
City of Ukiah
City of Union City
City of Vallejo
City of Walnut Creek
Contra Costa Clean Water Program
Contra Costa County
Contra Costa County Flood Control and Water Conservation District
Fairfield-Suisun Sewer District
Marin County
Marin County Flood Control and Water Conservation District
Marin Countywide Stormwater Pollution Prevention Program
Mendocino County
Napa County
Napa County Flood Control and Water Conservation District
Napa Countywide Stormwater Pollution Prevention Program
Russian River Watershed Association
San Mateo County
San Mateo Countywide Water Pollution Prevention Program
Santa Clara County
Santa Clara Valley Urban Runoff Pollution Prevention Program
Santa Clara Valley Water District (Valley Water)
Solano Stormwater Alliance
Sonoma County
Sonoma County Water Agency
The San Mateo County Flood and Sea Level Rise Resiliency District
Town of Atherton
Town of Colma
Town of Corte Madera
Town of Danville
Town of Fairfax
Town of Hillsborough
Town of Los Altos Hills
Town of Los Gatos
Town of Moraga
Town of Portola Valley
Town of Ross
Town of San Anselmo
Town of Tiburon
Town of Windsor
Town of Woodside
Town of Yountville
Vallejo Flood and Wastewater District
Zone 7 Water Agency

Central Valley, Tahoe, and Inland Areas

Butte County
City of Ceres
City of Citrus Heights
City of Davis
City of Dixon
City of Elk Grove
City of Escalon
City of Folsom
City of Galt
City of Lathrop
City of Lincoln
City of Lodi
City of Manteca
City of Merced
City of Modesto
City of Newman
City of Patterson
City of Rancho Cordova
City of Ripon
City of Riverbank
City of Rocklin
City of Roseville
City of Sacramento
City of Stockton
City of Tracy
City of Turlock
City of Woodland

Central Valley, Tahoe, and Inland Areas (Continued)

City of Yuba City
El Dorado County
Fresno Metropolitan Flood Control District
Mountain House Community Service District
Sacramento County
Sacramento Stormwater Quality Partnership
San Joaquin County
Stanislaus County

Central Coast

City Buellton
City of Buellton
City of Carmel-by-the-Sea
City of Carpinteria
City of Del Rey Oaks
City of Goleta
City of Guadalupe
City of Lompoc
City of Marina
City of Monterey
City of Pacific Grove
City of Sand City
City of Santa Barbara
City of Santa Maria
City of Seaside
City of Solvang
Monterey Regional Storm Water Management Program
Monterey County
Santa Barbara County

Southern California

City of Santa Clarita

Sponsor

Bay Area Clean Water Agencies

Section 4. Annual Program Implementation

This section describes the OWOW outreach services conducted between July 2024 and June 2025.

4.1 IPM ADVOCATES

Several municipalities contracted with IPM Advocates to implement the OWOW program at local stores. IPM Advocates shared their knowledge with store staff and held educational events for customers.

During the 2024-2025 reporting year, demand from municipalities for IPM Advocate services exceeded availability capacity, limiting coverage of some retail locations. In response, CASQA has initiated a program planning initiative to improve support and guide future growth (see Section 5. Program Development for more information).

In-Store Coordination

An in-store coordination meeting was held in August 2024 to build on the progress made in 2023-2024 to begin sharing and memorializing in-store best practices, such as contacting prospective retail stores, onboarding retail stores, and setting up shelf displays. All OWOW Subscribers were invited to this in-store coordination meeting, including contractors that implement the in-store component of the OWOW program, to learn best practices for developing and maintaining store partnerships.

4.2 EDUCATIONAL OUTREACH MATERIALS

Educational materials include fact sheets on specific pests, gardening, and pesticide applications, shelf tags to identify eco-friendly products in stores, and the OWOW website that makes the materials accessible to the public. Examples of OWOW outreach materials are provided in Appendix A and all are accessible on the OWOW website.

Fact Sheets

The OWOW program has 18 fact sheets. Between July 2024 and June 2025, the *Cockroaches, Aphids, Mosquitos,* and *Spiders* fact sheets were revised and translated into Spanish. Currently, 11 of the 18 fact sheets are available in Spanish, and efforts are underway to translate the entire fact sheet series. Additionally, QR codes were added to the revised and translated factsheets to help consumers easily navigate to the OWOW website.

In January 2022, posters with trackable QR codes were developed to encourage consumers to digitally access the OWOW fact sheets in pesticide aisles. These trackable QR codes record which fact sheets consumers view in retail stores. Based on the tracking data collected between July 2024 and June 2025, the three most viewed fact sheets were *Ants*, *Aphids*, and *Rats and Mice*. Table 2 presents a summary of QR code scans for each fact sheet. Additionally, Figure 2: *OWOW by the Numbers* provides an overview of engagement with our educational outreach materials, including total QR code scans, fact sheet views, and website activity.

Website

The OWOW website provides public access to fact sheets, the less-toxic product database, and the Store Finder, an interactive map allowing users to search for participating stores. Updates to the Store Finder are made quarterly. During the 2024 – 2025 reporting year, three stores were added to the OWOW program and made available on the Store Finder. Website visitors increased 9%, from 17,467 unique visitors between July 2023 and June 2024 to 19,076 unique visitors between July 2024 and June 2025. Figure 2 shows the monthly website visitor history since May 2021.

Less-Toxic Pest Product Database

In August 2024, enhancements were made to both the less-toxic product lists and the OWOW website to develop an integrated less-toxic product database hosted on the OWOW website. The database enhances accessibility for both IPM Advocates, who rely on the database to identify less-toxic products, and the general public, who can now easily search for products using their phones.

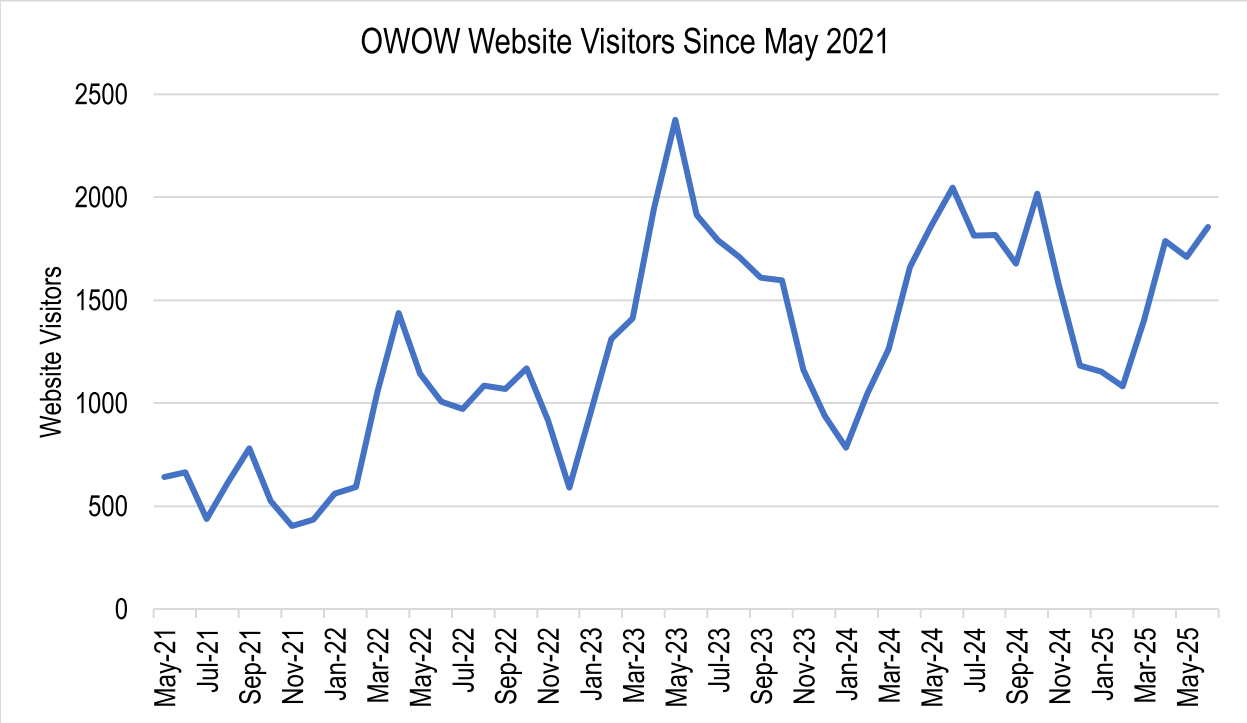
The store-specific product lists will continue to be updated as needed to support the printing of shelf tag labels. Each year, new products are reviewed, and updates are made in consultation with subject matter experts to ensure the information remains current and accurate.

Table 2. QR Code Scans by OWOW Product from July 2024 to June 2025

OWOW Product	QR Code Scans	OWOW Product	QR Code Scans
Ants	196	Bed Bugs	70
Rats & Mice	179	10 Most Wanted	64
Aphids	162	Healthy Gardens	62
Moles, Voles, & Gophers	161	Weeds	53
Cockroaches	145	Yellowjackets	51
OWOW Website	130	Spanish Fact Sheets	29
Mosquitoes	115	Lawns	27
Fleas	112	Hiring a Pest Company	25
Spiders	98	Pesticide Use & Disposal	18
Snails & Slugs	92	Pesticides & Water Quality	16
Roses	74		
Total QR Code Scans		**1,879**	

Figure 1. OWOW by the Numbers

Figure 2. OWOW Website Visitors Since May 2021



4.3 VENDOR OUTREACH

Education of vendors and retailers on less-toxic products is a critical step to ensure stores carry less-toxic products.

Retail Partners

The OWOW program added three new retail partners during the 2024–2025 reporting year. However, due to store closures and a reconciliation of the list of participating stores, the total number of active stores decreased from 288 to 281. The Home Depot Corporate continues to be a model retail partner and OWOW strives to replicate this partnership with other retailers and vendors. In January 2025, The Home Depot Corporate delivered an internal memorandum to California store managers to facilitate OWOW collaboration in The Home Depot stores (see Appendix B). In addition to The Home Depot, OWOW retail partners include Outdoor Supply Hardware, Ace Hardware, and independent hardware and garden centers throughout California.

Trade Show Booths

Attending trade shows provides an opportunity to meet pesticide buyers and vendors, learn about the new products coming to the California marketplace, answer questions, and provide mentorship to the retail pesticide buyers and vendors. In 2024 – 2025, OWOW representatives attended the following trade show event:

- BFG Marketplace Expo, Reno, NV, October 2024 – Retailer Show

4.4 TRAINING AND OUTREACH FOR RETAILERS AND CONSUMERS

IPM Advocates and local municipal agency staff/consultants conduct OWOW outreach activities to educate pesticide retailers and consumers at the local level. Local OWOW implementation activities vary between agencies. Many agencies receive tailored OWOW reports from their contracted IPM Advocate with a summary of their local OWOW data (for example, the number of trainings, the number of staff trained, and/or the number of fact sheets distributed).

IPM Advocates and local municipal agency staff/consultants provided OWOW services to approximately 281 participating retailers throughout California. Table 3 provides a summary of outreach activities between July 2024 and June 2025, which were funded by local municipalities' stormwater programs

Table 3. Summary of Outreach Activities

Audience	OWOW Outreach Activity
Retailers	281 retailers participated in the OWOW program
	48 trainings conducted
	266 retail staff trained
Consumers	30 in-person classes, presentations, or workshops (1,025 persons in attendance)
	130 public outreach events
	6,296 person interactions

IPM Advocates and local municipal agency staff/consultants conducted 48 trainings and trained 266 retail store staff. The training topics include IPM and strategies for managing pest problems with less-toxic and eco-friendly products. Additionally, of the 136 public outreach events to consumers, 30 were classified as in-person classes, presentations, or workshops, reaching a combined total of 1,025 attendees. The remaining consumer outreach, most often in the form of tabling at public outreach events, included 106 reported events, with 6,296 person interactions.

4.5 RETAILER E-NEWSLETTER

After receiving training, retail store associates can opt into the OWOW Retailer e-Newsletter. This biannual newsletter is emailed at the beginning of spring and fall and contains information on seasonal pest problems and eco-management solutions. These newsletters help store staff, including managers, stay current on pest problems that might be affecting their customers. Many of the managers print the OWOW newsletter and post it for all staff to review. The newsletter is delivered to 301 retail associates.

Section 5. Program Development

To support a growing demand for OWOW outreach material and IPM Advocates, efforts are underway to advance the OWOW program.

5.1 UPDATES IN PROGRESS

Fact Sheets

In 2025, the *Moles, Voles, and Gophers*, *Finding a Pest Control Company*, and *Snails and Slugs* fact sheets are being reviewed by subject matter experts and a public communications specialist. Additionally, these fact sheets will be translated into Spanish and made available on the OWOW website. Once these fact sheet updates are complete, 14 of the 18 OWOW fact sheets will have Spanish translations. While not considered part of the fact sheet series, the 10 Most Wanted brochure will also be updated and translated into Spanish.

Program Planning

To support statewide scalability and long-term sustainability, the OWOW program is currently undergoing a structured planning process. This effort includes a Subscriber Survey and market research to inform the development of a comprehensive Program Plan that defines the program's goals, strategies, and implementation tactics. The Program Plan will also outline priority actions to guide execution. This program planning initiative is expected to be completed in early 2026.

The primary objective of the Program Plan is to promote consistency and uniformity in OWOW program implementation while increasing flexibility to support diverse implementation across California.

5.2 FUTURE CONSIDERATIONS

IPM Advocate Training Program

In 2022, CASQA began developing an outline for the IPM Advocate Training Program. In September 2023, CASQA met with Department of Pesticide Regulation (DPR) representatives to discuss collaboration and funding opportunities for the OWOW program. The development of an IPM Advocate Training Program will require outside funding support and collaboration with partners such as UC-IPM. Work on advancing the IPM Advocate Training Program is on hold pending the outcomes of the Program Plan, which is currently in development.

Appendix A: Example Outreach Materials

Figure A1. Trackable QR Code Poster in Store Aisle

EFFECTIVE ECO-FRIENDLY PEST CONTROL • LESS-TOXIC PRODUCTS

CONTROLLING ANTS IN YOUR HOME

ANT CONTROL IS EASY AS 1–2–3!

1. Seal the source

- Store food in sealed containers
- Caulk and weatherstrip cracks and gaps

2. Bait them

- Use bait stations and sticky traps, which are more effective than sprays
- Choose a bait station with borax (tetraborate decahydrate) or hydramethylnon

3. Monitor

- After ants are gone, watch for new ant activity
- To avoid a new ant invasion, spread desiccating dust in areas where you see ants
- Avoid sprays, which only temporarily get rid of ants

Argentine ants are frequent invaders in California homes. Their small size (1/8 inch) allows them to enter the home through cracks and crevices. They typically arrive a few at a time at first (the scouts), and then in long lines, following scent trails to a food source.

A QUICK FIX FOR AN ANT EMERGENCY

1. Find what ants are after (usually food or water) and where they are entering the room (usually through a crack in the wall).
2. Spray lines of ants with soapy water and wipe up. Clean up any food or spills.
3. Block entry points temporarily with a smear of petroleum jelly or a piece of tape.
4. If you can't find an entry point, place a bait station in an out-of-the-way spot on the line the ants have been following. Remember to remove the bait station when the line of ants has disappeared so you don't attract more ants into the house. (See *Tips for Using Ant Baits.*)

TIPS FOR USING ANT BAITS

Bait stations are much safer for humans, pets, and the environment than sprays. Ants carry small quantities of bait back to the nest to share, reducing the local ant population.

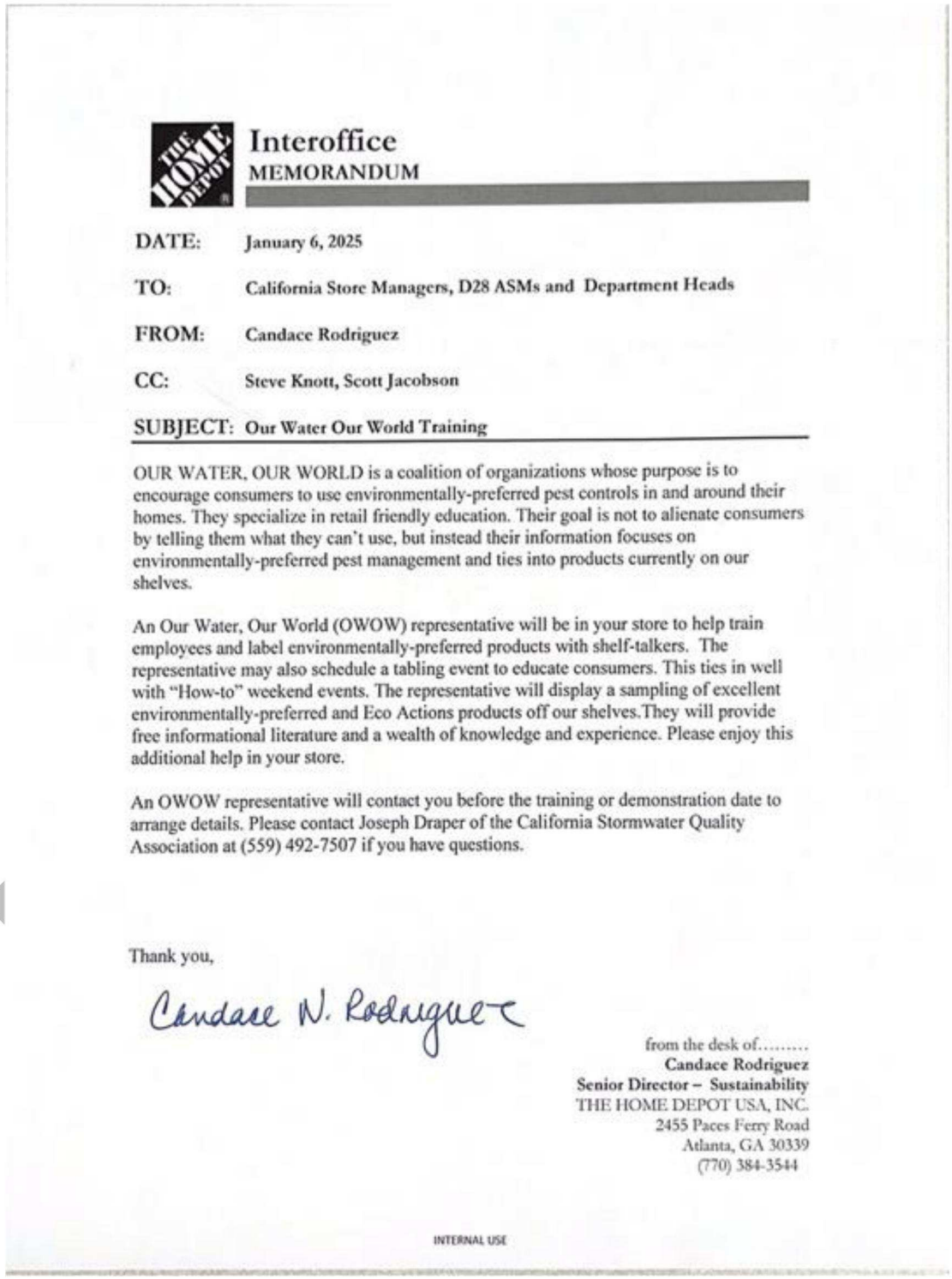
- Use baits with active ingredients borax/tetraborate decahydrate. Bait stations with hydramethylnon should be enclosed.
- Argentine ants change their food preferences frequently. If one bait is not working, try another type. Wait at least a day to see if ants take the bait.
- Place bait stations out of reach from children and pets. Do not spray insecticide around the bait; it will repel the ants.
- Baits may take several weeks to kill the ants. At first you may see more ants coming to the bait, but after a few days to a week you should see fewer ants.
- When ants are gone, remove the bait so you don't attract more ants. Return enclosed bait stations to the original box to save and use again. Put the box inside a sealed plastic bag, and store away from children and pets.

OUR WATER OUR WORLD

Choose eco-friendly products for your home and garden. Look for this symbol before you buy.

Figure A2: Ants Fact Sheet (Front)

Appendix B: The Home Depot Support Letter



Interoffice
MEMORANDUM

DATE: January 6, 2025

TO: California Store Managers, D28 ASMs and Department Heads

FROM: Candace Rodriguez

CC: Steve Knott, Scott Jacobson

SUBJECT: Our Water Our World Training

OUR WATER, OUR WORLD is a coalition of organizations whose purpose is to encourage consumers to use environmentally-preferred pest controls in and around their homes. They specialize in retail friendly education. Their goal is not to alienate consumers by telling them what they can't use, but instead their information focuses on environmentally-preferred pest management and ties into products currently on our shelves.

An Our Water, Our World (OWOW) representative will be in your store to help train employees and label environmentally-preferred products with shelf-talkers. The representative may also schedule a tabling event to educate consumers. This ties in well with "How-to" weekend events. The representative will display a sampling of excellent environmentally-preferred and Eco Actions products off our shelves.They will provide free informational literature and a wealth of knowledge and experience. Please enjoy this additional help in your store.

An OWOW representative will contact you before the training or demonstration date to arrange details. Please contact Joseph Draper of the California Stormwater Quality Association at (559) 492-7507 if you have questions.

Thank you,

Candace N. Rodriguez

from the desk of.....
Candace Rodriguez
Senior Director – Sustainability
THE HOME DEPOT USA, INC.
2455 Paces Ferry Road
Atlanta, GA 30339
(770) 384-3544

INTERNAL USE

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Appendix 11-1

Mercury and PCBs Control Measures Report Version 3.0 (2025)

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

MRP 3.0 Mercury and PCBs Control Measures Report

Version 3.0 (2025)

Submitted in Compliance with NPDES Permit No. CAS612008 - Provisions C.11.a.iii(2)/C.12.a.iii(2) by the Santa Clara Valley Urban Runoff Pollution Prevention Program on behalf of all Co-permittees in Santa Clara County

DRAFT

September 30, 2025

This report is submitted by the agencies participating in the

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

City of Campbell	City of Milpitas	City of Santa Clara
City of Cupertino	City of Monte Sereno	City of Saratoga
City of Los Altos	City of Mountain View	City of Sunnyvale
Town of Los Altos Hills	City of Palo Alto	County of Santa Clara
Town of Los Gatos	City of San José	Santa Clara Valley Water District

Prepared for:

Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP)

Prepared by:

EOA, Inc.
1410 Jackson St., Oakland, CA 94612

TABLE OF CONTENTS

TABLE OF CONTENTS ..... **III**
LIST OF TABLES ..... **V**
LIST OF ATTACHMENTS ..... **V**
LIST OF ABBREVIATIONS ..... **VI**
SECTION 1 -INTRODUCTION **1**
REGULATORY BACKGROUND 1
PURPOSE OF CONTROL MEASURES REPORT 1
APPROACH TO CONTROL MEASURE IMPLEMENTATION AND TRACKING 1
ROLES AND RESPONSIBILITIES FOR CONTROL MEASURE IMPLEMENTATION 2
ORGANIZATION OF THE REPORT 2
SECTION 2 -SOURCE PROPERTY INVESTIGATION & ABATEMENT **4**
CONTROL MEASURE DESCRIPTION 4
Source Investigation Process 4
CONTROL MEASURE IMPLEMENTATION 6
Continuation of MRP 2.0 Actions for Load Reduction Credit 6
Source Investigations Conducted During MRP 3.0 to date 7
Source Property Referrals 11
SECTION 3 -GREEN STORMWATER INFRASTRUCTURE AND OTHER STORMWATER TREATMENT CONTROLS 13
CONTROL MEASURE DESCRIPTION 13
Green Stormwater Infrastructure (GSI) 13
Other Stormwater Treatment Devices 13
CONTROL MEASURE IMPLEMENTATION 14
Continuation of MRP 2.0 Actions for Load Reduction Credit 14
Green Stormwater Infrastructure Projects Completed During MRP 3.0 to Date 14
Other Stormwater Treatment Systems Completed During MRP 3.0 to Date 15
SECTION 4 -CONTROLLING PCBS FROM BRIDGES AND OVERPASSES **28**
CONTROL MEASURE DESCRIPTION 28
CONTROL MEASURE IMPLEMENTATION 28
Continuation of MRP 2.0 Actions for Load Reduction Credit 28
Implementation During MRP 3.0 to Date 28
SECTION 5 -CONTROLLING PCBS FROM ELECTRICAL UTILITIES **29**
CONTROL MEASURE DESCRIPTION 29
CONTROL MEASURE IMPLEMENTATION 29
Continuation of MRP 2.0 Actions for Load Reduction Credit 29
Implementation during MRP 3.0 to Date 29

SECTION 6 -MANAGING PCBS DURING BUILDING DEMOLITION 35
CONTROL MEASURE DESCRIPTION 35
CONTROL MEASURE IMPLEMENTATION 36
Continuation of MRP 2.0 Actions for Load Reduction Credit 36
Implementation During MRP 3.0 to Date 36
SECTION 7 -MERCURY COLLECTION AND RECYCLING 37
CONTROL MEASURE DESCRIPTION 37
CONTROL MEASURE IMPLEMENTATION 37
Continuation of MRP 2.0 Actions for Load Reduction Credit 37
Implementation During MRP 3.0 to Date 37
SECTION 8 -MERCURY AND PCBS LOADS REDUCED DURING MRP 3.0 39
APPROACH TO REPORTING PCBS AND MERCURY LOADS REDUCED 39
PCBS LOADS REDUCED 39
MERCURY LOADS REDUCED 39
SECTION 9 -REFERENCES 40

LIST OF TABLES

TABLE 2.1. LIST OF PCBS SOURCE PROPERTIES IN THE SANTA CLARA VALLEY THAT WERE REFERRED TO THE REGIONAL WATER BOARD DURING MRP 2.0 FOR FOLLOW-UP INVESTIGATION AND ABATEMENT. 7
TABLE 2.2. CURRENT OUTCOMES OF SOURCE INVESTIGATIONS CONDUCTED IN THE SANTA CLARA VALLEY, CA DURING MRP 3.0 TO DATE (I.E., FYS 2022-23 THROUGH 2024-25) BASED ON THE ACRES INVESTIGATED.[A,B,C,D,E] 8
TABLE 2.3. PCBS SOURCE PROPERTIES REFERRED TO THE REGIONAL WATER BOARD DURING MRP 3.0 TO DATE....12
TABLE 3.1 LAND AREAS TREATED BY PUBLIC GREEN STREET PROJECTS CONSTRUCTED IN THE SANTA CLARA VALLEY DURING MRP 3.0 TO DATE (FY 2021-22 – FY 2024-25). 16
TABLE 3.2. LAND AREAS TREATED BY PARCEL-BASED GREEN STORMWATER INFRASTRUCTURE/LOW IMPACT DEVELOPMENT (GSI/LID) PROJECTS CONSTRUCTED IN THE SANTA CLARA VALLEY DURING MRP 3.0 TO DATE (FY 2021-22 – FY 2024-25). 16
TABLE 3.3. LAND AREAS TREATED BY HIGH FLOW CAPACITY STORMWATER TREATMENT DEVICES INSTALLED IN THE SANTA CLARA VALLEY DURING MRP 3.0 TO DATE....22
TABLE 3.4. LAND AREAS TREATED BY INLET-BASED STORMWATER TREATMENT DEVICES INSTALLED IN THE SANTA CLARA VALLEY DURING MRP 3.0 TO DATE. 23
TABLE 5.1. SUMMARY OF CITY OF PALO ALTO UTILITY (CPAU) REMOVAL OF POTENTIALLY PCBS-CONTAINING OIL-FILLED ELECTRICAL EQUIPMENT (OFEE)[A] SINCE 2002 AND ASSOCIATED PCBS LOADS TO STORMWATER AVOIDED. 30
TABLE 5.2. SUMMARY OF SILICON VALLEY POWER (SVP) REMOVAL OF POTENTIALLY PCBS-CONTAINING OIL-FILLED ELECTRICAL EQUIPMENT (OFEE)[A] SINCE 2002 AND ASSOCIATED PCBS LOADS TO STORMWATER AVOIDED. 33
TABLE 7.1. ESTIMATED MERCURY MASS COLLECTED BY THE SANTA CLARA COUNTY HHW PROGRAM SINCE THE START OF MRP 3.0. ...38

LIST OF ATTACHMENTS

A - MAPS OF ALL GSI/LID AND OTHER STORMWATER TREATMENT CONTROLS BUILT/INSTALLED IN THE SANTA CLARA VALLEY THROUGH FY 2024-2025

B - PROGRAM FOR MANAGEMENT OF PCBS DURING BUILDING DEMOLITION – DATA SUMMARY THROUGH FY 2024-25 FOR SANTA CLARA VALLEY MRP PERMITTEES

LIST OF ABBREVIATIONS

BAMSC	BAY AREA MUNICIPAL STORMWATER COLLABORATIVE
BASMAA	BAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION
BMP	BEST MANAGEMENT PRACTICE
CWA	CLEAN WATER ACT
FY	FISCAL YEAR
GIS	GEOGRAPHIC INFORMATION SYSTEM
GSI	GREEN STORMWATER INFRASTRUCTURE
HDS	HYDRODYNAMIC SEPARATOR UNIT
HHW	HOUSEHOLD HAZARDOUS WASTE
LID	LOW IMPACT DEVELOPMENT
MRP	MUNICIPAL REGIONAL PERMIT
MS4	MUNICIPAL SEPARATE STORM SEWER SYSTEM
NPDES	NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM
O&M	OPERATION AND MAINTENANCE
PPM	PARTS PER MILLION
PCBS	POLYCHLORINATED BIPHENYLS
PG&E	PACIFIC GAS AND ELECTRIC
POC	POLLUTANT OF CONCERN
PROGRAM	SANTA CLARA VALLEY URBAN RUNOFF POLLUTION PREVENTION PROGRAM
RAA	REASONABLE ASSURANCE ANALYSIS
REGIONAL WATER BOARD	SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD
ROW	RIGHT-OF-WAY
SCVURPPP	SANTA CLARA VALLEY URBAN RUNOFF POLLUTION PREVENTION PROGRAM
TMDL	TOTAL MAXIMUM DAILY LOAD
USEPA	UNITED STATED ENVIRONMENTAL PROTECTION AGENCY
VALLEY WATER	SANTA CLARA VALLEY WATER DISTRICT
WMA	WATERSHED MANAGEMENT AREA

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SECTION 1 - INTRODUCTION

REGULATORY BACKGROUND

Fish tissue monitoring in San Francisco Bay (Bay) has revealed the bioaccumulation of Polychlorinated Biphenyls (PCBs), mercury, and other pollutants in Bay sportfish. The levels found are thought to pose a health risk to people consuming these fish and as a result, an interim advisory has been issued on the consumption of sportfish from the Bay. The advisory led to the Bay being designated as an impaired water body on the Clean Water Act (CWA) "Section 303(d) list" due to elevated levels of PCBs and mercury. In response, the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) has developed Total Maximum Daily Load (TMDL) water quality restoration programs targeting PCBs and mercury in the Bay. The general goals of the TMDLs are to identify sources of PCBs and mercury to the Bay, implement actions to control the sources, and restore water quality.

The PCBs and mercury TMDLs indicate that reductions in PCBs and mercury from urban stormwater runoff to the Bay are needed (based on 2002 loading estimates) to achieve water quality standards and restore beneficial uses. Provisions C.11 and C.12 of the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit no. CAS612008 (MRP 3.0; Order R2-2022-0018) implement the urban runoff requirements of the mercury and PCBs TMDLs. These provisions require Co-permittees to plan, implement and report on control programs during the permit term to reduce the urban runoff loads of these pollutants.

PURPOSE OF CONTROL MEASURES REPORT

This **Mercury and PCBs Control Measures Report** (Control Measures Report) was developed to comply with the reporting requirements identified in MRP 3.0 Provisions C.11 and C.12. Each year of the permit, Co-permittees are required to track and report on the implementation of the control programs described in Provisions C.11.b through C.11.e and C.12.b through C.12.g. The associated mercury and PCBs load reductions reduced or avoided due to implementation of these control programs must be reported in the fourth year of the permit (2026). Loads avoided/reduced will be assessed following the methodologies identified in the *Source Control Load Reduction Accounting for Reasonable Assurance Analysis* (BASMAA 2022) and modeling conducting through a revised Reasonable Assurance Analysis (RAA) to be conducted by the Program in 2025/2026.

This Control Measures Report (Version 3.0) is the third version submitted under MRP 3.0 and documents the control measure programs that were implemented in the Santa Clara Valley to date during MRP 3.0 (i.e., through Fiscal Year (FY) 2024-25). This Control Measures Report will be updated each subsequent year of the permit to provide new or revised information on control measure program implementation.

APPROACH TO CONTROL MEASURE IMPLEMENTATION AND TRACKING

MRP 3.0 provides a renewed focus on implementing mercury and PCBs control measures in old industrial land use areas and/or areas that have moderate to high mercury or PCBs. Old industrial land use areas are defined as parcels that were industrialized prior to 1980 and continued to have industrial activities through at least 2002 (i.e., the approximate start of the PCBs TMDL). Because PCBs were more heavily used in older industrial areas, these areas are believed to contribute much higher masses of PCBs per unit area than newer urban land use areas. The Program has identified and mapped all old industrial land use parcels present in 2002 within the Santa Clara Valley. As these parcels are redeveloped into new urban land uses, or other control measures applied, the masses of mercury and PCBs contributed by these areas is

expected to substantially reduce. Therefore, the majority of control measure planning and implementation described in this Control Measures Report is focused in catchments containing old industrial parcels.

Stormwater catchments were chosen as the primary geographical scale at which planning, implementation and tracking of control measures is conducted. Catchment areas are based on the Program's current understanding of the stormwater and runoff patterns and hydrology in the Basin. In the Santa Clara Valley, catchments where control measures are planned and implemented are identified as Watershed Management Areas (WMAs). All mercury and PCBs control measures that are implemented across the Santa Clara Valley are tracked and reported by WMA for each Co-permittee.

During MRP 2.0, the Program developed a web-based data management system with a connection to its GIS platforms for tracking and mapping the extent of Green Stormwater Infrastructure (GSI) and other stormwater treatment implementation in the Santa Clara Valley. This tracking system is called the "Stormwater Treatment Measure Data Portal" or STM Data Portal. During MRP 3.0, the Program will continue to track all completed GSI projects in the STM Data Portal. The STM Data Portal can be accessed through a user-friendly website: (https://scvurppp.org/gsi/index.php).This website allows the general public to access maps and other information on GSI and stormwater treatment measures currently implemented in the Santa Clara Valley. This Control Measures Report provides data on existing PCBs and mercury control measures implemented during MRP 3.0 to date based on the information currently incorporated into the Program's STM Data Portal, as well as information gathered from Co-permittees on other types of control measures.

Roles and Responsibilities for Control Measure Implementation

SCVURPPP Co-permittees are responsible for the implementation of PCBs and mercury control measures, or causing control measures to be implemented by other parties. Depending on the size and complexity of the public agency and the type of control measure, implementation can occur via an array of Co-permittee Departments and Divisions.

SCVURPPP (Program) provides assistance to Co-permittees by developing guidance on control measure implementation, assisting with the identification and prioritization of control measure types and locations, conducting investigations and monitoring to identify areas with elevated mercury or PCBs, and tracking, monitoring and reporting on control measures and the resulting load reduction benefits. SCVURPPP does not directly implement PCBs and mercury control measures.

Similar to SCVURPPP, the former BASMAA, and now the Bay Area Municipal Stormwater Collaborative (BAMSC), did not directly implement control measures. BASMAA conducted projects of regional benefit that developed guidance and tools to assist Co-permittees with control measures implementation. Regional projects have typically been conducted to reduce costs and/or to develop regional consistency. BAMSC continues to conduct projects of regional benefit to support Co-permittees implementation of control measures and other MRP requirements.

Organization of the Report

The remainder of this Control Measures Report is organized as follows:

- Section 2 – Source Property Identification and Abatement
- Section 3 – Green Stormwater Infrastructure and Other Stormwater Treatment Controls
- Section 4 – Controlling PCBs from Bridges and Overpasses

- Section 5 – Controlling PCBs from Electrical Utilities
- Section 6 – Managing PCBs-Containing Materials and Wastes During Building Demolition
- Section 7 – Mercury Collection and Recycling
- Section 8 – Mercury and PCBs Loads Reduced

Section 2 through Section 7 each describe the applicable control measure program, document continuation of actions completed during MRP 2.0 for which load reduction credit was received (if any), and document the actions completed during MRP 3.0 to date (i.e., through FY 2024-25) by providing all supporting data required to calculate the mercury and PCBs loads reduced. Within each control measure section, any controls implemented in old industrial land use areas, and other areas where elevated mercury or PCBs concentrations have been documented, are also highlighted. Section 8 describes the accounting methods that will be used during MRP 3.0 to calculate mercury and PCBs loads reduced for all control measures described in the report. In the FY 2025-26 version of this report, Section 8 will also present the calculated mercury and PCBs loads reduced for all controls implemented during MRP 3.0.

The information provided in this Control Measures Report includes all information on control measures compiled by SCVURPPP to-date, but may not include all existing or planned control measures implemented in the Santa Clara Valley. The inventory of control measures implemented or caused to be implemented by Co-permittees will continue to be updated and refined as additional information becomes available and as new or enhanced actions are implemented.

SECTION 2 - SOURCE PROPERTY INVESTIGATION & ABATEMENT

This section describes the Source Property Investigation and Abatement control program, documents continuation of actions completed during MRP 2.0 for which load reductions credit was received, and provides documentation of the actions completed during MRP 3.0 to date (i.e., through FY 2024-25), including all supporting data required to calculate any mercury and PCBs loads reduced.

CONTROL MEASURE DESCRIPTION

PCBs and mercury source properties are those that disproportionately contribute elevated pollutants to MS4s. PCBs are considered elevated if PCBs concentrations[1] in sediment are ≥ 0.2 mg/kg, if stormwater particle ratios are ≥ 0.2 mg/kg, or if stormwater concentrations are ≥ 36 ng/L (i.e., the top 15% of concentrations measured in stormwater across the Bay Area). Mercury is considered elevated if the concentration in sediment (or the stormwater particle ratio) is ≥ 0.3 mg/kg. Land areas that contribute elevated PCBs (or mercury) to the MS4 require control measures to reduce or abate the sources. Identification and subsequent abatement of these properties and/or focused control measure implementation on properties to reduce pollutant release and/or in the public right-of-way (ROW) in source areas to remove historically deposited pollutants can provide an opportunity for meaningful PCBs and mercury stormwater load reductions. Reductions occur through the abatement of properties via referrals to the Water Board or through enforcement actions brought against property owners by Co-permittees.

SCVURPPP Co-permittees have identified and referred PCBs and mercury source properties to the Water Board in the recent past, and continue to conduct source investigations. Source investigations are typically conducted in older industrial land areas or in other areas where mercury or PCBs were historically used, disposed of, or released. SCVURPPP's source investigation efforts during MRP 3.0 are primarily focused on old industrial land use areas that have not already been investigated, and that have not already been addressed via green stormwater infrastructure (GSI)/low impact development (LID), or source property abatement. At a minimum, SCVURPPP's source investigations will investigate 913 acres of old industrial land use areas by the end of the permit term.

SOURCE INVESTIGATION PROCESS

Source investigations use research and monitoring data to identify land areas or parcels that are contributing elevated levels of PCBs (or mercury) to the MS4. The Program has developed a tiered investigation approach that starts with screening-level monitoring at the catchment or sub-catchment scale and moves to more site-specific monitoring at the parcel scale. Investigations of the unaddressed old industrial land use areas in the Santa Clara Valley will proceed through the investigation process until each parcel can be grouped into one of the following four categories based on sampling data:

- **High PCBs Source Properties** – Parcels associated with high PCBs (≥ 1.0 mg/kg), typically identified through on-site sampling. These parcels are prioritized for abatement actions to reduce/prevent the release of high PCBs to the MS4.

[1] PCBs, with regards to source property identification and abatement, refers to the total sum of the RMP 40 PCBs congeners. The RMP 40 PCB congeners include: PCB-8, PCB-18, PCB-28, PCB-31, PCB-33, PCB-44, PCB-49, PCB-52, PCB-56, PCB-60, PCB-66, PCB-70, PCB-74, PCB-87, PCB-95, PCB-97, PCB-99, PCB-101, PCB-105, PCB-110, PCB-118, PCB-128, PCB-132, PCB-138, PCB-141, PCB-149, PCB-151, PCB-153, PCB-156, PCB-158, PCB-170, PCB-174, PCB-177, PCB-180, PCB-183, PCB-187, PCB-194, PCB-195, PCB-201, PCB-203.

- **Moderate PCBs-Contributing Properties (MPCPs)** – Parcels associated with moderate PCBs (≥ 0.2 and < 1.0 mg/kg) typically identified through onsite sampling. These parcels are prioritized for on-site control measures to reduce/prevent the release of moderate PCBs to the MS4 and/or controls in the adjacent public ROW to remove historically deposited PCBs (or mercury).
- **Low PCBs-Contributing Properties** - Parcels associated with low PCBs (< 0.2 mg/kg). These areas are considered unlikely to contribute elevated PCBs to the MS4, and no PCBs control measures are required at this time.
- **Undetermined Status** – Parcels associated with unknown PCBs concentrations. These areas include parcels that have not yet been screened, and parcels associated with elevated public ROW PCBs concentrations, but on-site samples have not been collected due to lack of property/business owner cooperation, or lack of viable sampling locations.

The three investigation phases (tasks) that are followed to categorize each old industrial parcel are summarized below.

Task 1: Screening-Level Investigation. The purpose of this task is to identify catchments or sub-catchments that have elevated PCBs in stormwater or MS4 sediment. These areas require further investigation (Task 2 and/or Task 3) to determine the source(s) of these pollutants in the catchment. This task involves collecting screening-level stormwater or sediment samples in locations that drain entire catchments or sub-catchments containing old industrial land use parcels. Samples are collected in the MS4, typically at outfalls (if possible) or further upstream in areas that drain a defined sub-catchment or specific parcels. If any screening-level samples have elevated PCBs, that catchment area is prioritized for more targeted investigation (Task 2).

Task 2: Targeted Public ROW Investigation. The purpose of this task is to investigate the parcels within catchments/sub-catchments where elevated screening-level samples were found in Task 1. This task is focused on gathering information in the public ROW to determine if adjacent properties are potential sources of PCBs to the MS4 and require on-site investigation. Samples collected during this step will target smaller drainages and/or specific properties. Typically, this task focuses on collection of MS4 sediment samples but can also include collection of stormwater samples. Samples are collected in locations within the public ROW that represents drainage or sediment release from specific old industrial properties. If any public ROW samples have elevated PCBs (≥ 0.2 mg/kg), the old industrial parcels draining or contributing sediment to that location are prioritized for on-site investigation (Task 3). There may be catchments that had elevated screening-level samples, but subsequent public ROW sampling of old industrial properties does not point to any specific property(ies). In some cases, there may not be appropriate or accessible sampling locations within the public ROW that represent drainage from a given old industrial property. The Program will work with the appropriate municipality to determine next steps in those cases, which may include on-site investigation (Task 3).

Task 3: On-Site Property Investigation. The purpose of this task is to conduct on-site investigation of specific properties to determine if the property is a source of PCBs to the MS4. This task will coordinate access to properties through a municipality's existing stormwater inspection programs. The on-site investigation will gather information about the property, including locations of on-site storm drain infrastructure that is directly connected to the MS4 and/or locations of potential sediment release from the property to public ROWs. Sediment samples will be collected from these locations with the consent and cooperation of property/business owners. If on-site samples have elevated PCBs (≥ 0.2 mg/kg), the property is confirmed as a source of moderate or high PCBs to the MS4. If samples are not collected on a given property, either because appropriate sample collection locations are not found on-site or because

property/business owners refuse permission, the property is categorized as undetermined priority for PCBs.

Information collected during source investigations regarding pollutant concentrations observed, evidence of transport to the MS4, previous stormwater violations, and other pertinent information is used to confirm a high PCBs source property or Moderate PCBs-Contributing Property (MPCP). Both PCBs Source Properties and MPCPs require follow-up actions to prevent the release of PCBs from these properties.

The next steps for confirmed high PCBs Source Properties include one of the following:

1. Submit a referral to the Regional Water Board (or other regulatory agency) for follow-up investigation and abatement. Referrals must include a plan for enhanced operation and maintenance (O&M) in the public ROW adjacent to or downstream of the source property that the City will implement or cause to be implemented until the time the property is deemed abated.
2. Abate or cause the property to be abated directly, without referral to a regulatory agency. For this option, the City will work directly with the property owner to ensure the property is fully abated.

The next steps for MPCPs will entail Co-permittees working directly with the property owner to require implementation of appropriate controls on the property to reduce/prevent the release of moderate PCBs from the property to the MS4.

Control Measure Implementation

Continuation of MRP 2.0 Actions for Load Reduction Credit

During MRP 2.0, Co-permittees submitted three PCBs source property referrals to the Regional Water Board for follow-up investigation and abatement (Table 2.1). Co-permittees received 183 g/yr of PCBs load reduction credit and 57 g/yr of mercury load reduction credit during MRP 2.0 for these referrals. This credit represents 50% of the total load reduction available for abatement of the source properties, and has been contingent on continued implementation of enhanced O&M measures in the vicinity of each referred source property. Although to date, none of these three referred properties have been fully abated, Co-permittees have continued to implement (or caused the implementation of) enhanced O&M measures since the referrals were submitted. The enhanced O&M actions that have been ongoing at each property since the referrals were submitted are described in Table 2.1. These activities will continue until the properties have been fully abated.

Table 2.1. List of PCBs source properties in the Santa Clara Valley that were referred to the Regional Water Board during MRP 2.0 for follow-up investigation and abatement.

Co-permittee	WMA	Location/APN	Area (Acres)	Referral FY	Enhanced O&M Description
San José	083CTC990	Leo Avenue Cul-de-Sac Railroad Right-Of-Way	5.0	FY 2015-16	Installation and maintenance of a high-flow capacity stormwater treatment system (i.e., HDS unit) that treats drainage from the source property and adjacent areas. Installation and maintenance of a reinforced fence and temporary sediment barriers at the edge of the railroad property in the Leo Avenue cul-de-sac. Enhanced street sweeping on Leo Avenue.
Sunnyvale	049SVE900	401 East Hendy Ave; APNs: 204-47-001, 204-47-002, 204-48-028, 204-46-008	74	FY 2017-18	Weekly enhanced street sweeping in the public streets adjacent to the property. The City conducts sweeping every other week and the property owner's contractor conducts sweeping during the weeks the City is not sweeping.
Santa Clara	066GAC150	335 Brokaw Road	12.25	FY 2018-19	Annual video and cleanout of the main storm drain line adjacent to the property.

SOURCE INVESTIGATIONS CONDUCTED DURING MRP 3.0 TO DATE

Table 2.2 presents the data on acres of old industrial parcels that have been investigated through stormwater or sediment sampling during MRP 3.0 to date (i.e., FY 2022-23 through FY 2024-25) and the current outcomes of these investigations. All of the source investigations conducted during MRP 3.0 to date have focused on old industrial land use areas. Note, investigations are considered complete if an old industrial property is identified as a moderate or high source of PCBs, or if the property is associated with low PCBs (i.e., an unlikely source property). During MRP 3.0 to date, the Program has started or continued investigations of **995 acres** of old industrial parcels. Of these, investigations are completed on **587 acres**, including **98 acres** identified as moderate or high PCBs source properties, and **489 acres** associated with low PCBs. This information demonstrates that Co-permitttees have completed about 60% of the required 913 acres that must be investigated during MRP 3.0. Investigations are continuing on another **50 acres** that are associated with elevated PCBs in the public ROW, but investigations are continuing because the sources have not yet been identified. The remaining **318 acres** currently under investigation were sampled in FY 2024-25, but the results are not yet available. The Program expects the number of acres of completed investigations will increase once the pending results are available. Follow-up for all parcels associated with elevated PCBs will continue during FY 2025-26.

Table 2.2. Current outcomes of source investigations conducted in the Santa Clara Valley, CA during MRP 3.0 to date (i.e., FYs 2022-23 through 2024-25) based on the acres investigated.[a,b,c,d,e]

Co-Permittee	WMA	Source Property		Sample Type								TOTALS
				On-site Sediment			Public ROW Sediment			Stormwater		
		Referred During MRP 3.0	Referral Pending	Mod/High PCBs	Low PCBs	Results Pending	Mod/High PCBs	Low PCBs	Results Pending	Low PCBs	Results Pending	
Milpitas	036PCL800	--	--	--	--	--	--	--	--	0.1	--	**0.1**
Mountain View	017XXX010	--	--	--	--	--	32	21	2.0	--	--	**55**
	032PMC200	--	--	--	--	--	--	17	--	--	--	**17**
	032SVC400	--	--	20	--	--	--	--	--	--	--	**20**
	032SVC470	--	--	--	--	--	--	--	1.7	--	--	**1.7**
	047SVC150	--	--	--	--	--	--	--	2.5	--	--	**2.5**
	Other - Mountain View	--	--	--	--	--	--	--	42	--	--	**42**
	SVC-A	--	--	--	--	--	--	--	9.3	--	--	**9.3**
Palo Alto	017XXX010	--	--	--	--	--	18	0.9	--	--	--	**19**
	031SCH250	19	--	--	--	--	--	--	--	--	--	**19**
	Other – Palo Alto	--	--	--	--	--	--	--	12	--	--	**12**
San Jose	036PCL800	--	--	--	--	--	--	--	--	63	--	**63**
	036PCL810	--	--	--	--	--	--	--	--	18	--	**18**
	050CTC100	--	--	--	--	--	--	--	22	--	--	**22**
	050GAC020	--	--	--	--	17	--	--	--	--	--	**17**
	051CTC150	--	--	--	--	--	--	--	2.8	--	--	**2.8**
	051CTC275	3.5	--	--	--	--	--	--	--	--	--	**3.5**
	051CTC400	--	7.3	--	--	--	--	--	--	--	--	**7.3**
	051CTC450	--	1.6	--	--	--	--	--	--	--	--	**1.6**
	051CTC950	--	--	--	--	--	--	--	1.3	--	--	**1.3**
	066GAC110	--	--	--	--	--	--	--	--	17	--	**17**
	066GAC152	--	--	--	--	32	--	--	3.1	--	--	**35**
	066GAC810	--	--	--	--	--	--	--	15	--	--	**15**

Co-Permittee	WMA	Source Property		Sample Type								TOTALS
		Referred During MRP 3.0	Referral Pending	On-site Sediment			Public ROW Sediment			Stormwater		
				Mod/High PCBs	Low PCBs	Results Pending	Mod/High PCBs	Low PCBs	Results Pending	Low PCBs	Results Pending	
San Jose	066GAC850	--	--	--	--	0.8	--	--	--	--	--	**0.8**
	066GAC900	--	--	--	--	0.1	--	--	--	--	--	**0.1**
	067CTC030	--	--	--	--	14	--	--	--	--	--	**14**
	067CTC150	--	--	--	--	8.9	--	1.2	12.1	--	--	**22**
	067CTC250	--	--	8	16.7	2.3	--	--	--	--	--	**27**
	067GAC190	--	--	--	--	15	--	--	--	--	--	**15**
	067SCL080	10	--	--	--	--	--	--	--	--	--	**10**
	083CTC350	--	--	--	--	--	--	--	15	--	--	**15**
	083CTC650	--	--	--	--	--	--	--	4.5	--	--	**4.5**
	083GAC800	--	--	--	--	--	--	--	7.2	--	--	**7.2**
	083GAC900	27	--	--	--	9.0	--	--	--	--	--	**36**
	083LGC225	--	--	--	--	--	--	--	9.5	--	--	**9.5**
	083LGC430	--	--	--	--	--	--	--	0.7	--	--	**0.7**
	083LGC525	--	--	--	--	--	--	--	--	11	--	**11**
	129CNC165	--	--	--	--	--	--	--	7.0	--	--	**7.0**
	130CNC022	--	--	--	--	--	--	--	29	--	--	**29**
	Other - San Jose	--	--	--		--	--	8.5	21	--	--	**30**
Santa Clara	049CZC800	--	--	--	--	--	--	1.4	--	--	--	**1.4**
	049STA050	--	--	--	--	--	--	--	--	51	--	**51**
	049STA300	--	--	--	--	--	--	9.8	--	--	--	**9.8**
	049STA500	--	--	--	--	--	--	--	--	27	--	**27**
	049STA600	--	--	--	--	--	--	--	--	0.01	--	**0.01**
	049STA800	--	--	--	--	--	--	--	--	10	--	**10**
	050GAC400	--	--	--	--	--	--	22	--	--	--	**22**
	050GAC580	--	--	--	--	--	--	85	--	--	--	**85**

Co-Permittee	WMA	Source Property		Sample Type								TOTALS
				On-site Sediment			Public ROW Sediment			Stormwater		
		Referred During MRP 3.0	Referral Pending	Mod/High PCBs	Low PCBs	Results Pending	Mod/High PCBs	Low PCBs	Results Pending	Low PCBs	Results Pending	
	066GAC150	--	1.9	--	--	--	--	7	--	--	--	**8.9**
	Other - Santa Clara	--	--	--	--	--	--	--	--	7.9	--	**7.9**
Santa Clara County	049STA710	--	--	--	--	--	--	4.6	--	--	--	**4.6**
	Other - Santa Clara County	--	--	--	--	--	--	0.9	--	--	--	**0.9**
	PMC-D1	--	--	--	--	--	--	6.6	--	--	--	**6.6**
Sunnyvale	034BFL230B	--	--	--	12	--	--	--	--	--	--	**12**
	034SVE490	--	--	--	--	-	--	1.4	--	--	--	**1.4**
	048SVE395	--	--	--	3	--	--	--	--	--	--	**3**
	048SVW998	--	--	--	--	--	--	22	--	--	--	**22**
	049CZC800	--	--	--	--	--	--	15	--	--	--	**15**
	049ECS900	--	--	--	--	--	--	7.1	--	--	--	**7.1**
	049SVE410	--	--	--	10	--	--	--	--	--	--	**10**
	Other - Sunnyvale	--	--	--	0.6	--	--	11	--	--	--	**11.6**
Subtotals		*60*	*11*	*28*	*42*	*99*	*50*	*242*	*219*	*205*	*0*	*955*
Total Acres - Completed Investigations		**60**	**11**	**28**	**42**	**--**	**--**	**242**	**--**	**205**	**--**	**587**
Total Acres - Continuing Investigations		**--**	**--**	**--**	**--**	**99**	**50**	**--**	**219**	**--**	**--**	**368**

a – Investigation of old industrial parcels with low PCBs (< 0.2 mg/kg) are considered complete. No additional investigation is planned during MRP 3.0.

b – Old industrial parcels associated with elevated PCBs (≥ 0.2 mg/kg) during screening sampling will require additional investigation to identify the specific source(s).

c – Source investigations that find moderate PCBs on-site at a property are considered complete. Next steps include abatement of the property.

d – Source property referrals are considered complete. No additional investigation is required during MRP 3.0.

e – The PCBs and mercury concentration data for sediment and stormwater samples collected during MRP 3.0 as part of these source investigations is reported each Water Year in the Program's Urban Creeks Monitoring Reports (SCVURPPP 2023, 2024a, 2025).

SOURCE PROPERTY REFERRALS

To date, Co-permittees have submitted seven PCBs source property referrals (**59 acres**) to the Regional Water Board during MRP 3.0 for follow-up investigation and abatement (Table 2.3). Co-permittees will receive 124 g/yr of PCBs load reduction credit during MRP 3.0 for these referrals. This credit represents 50% of the total load reduction available for abatement of the source properties, and is contingent on implementation of enhanced O&M measures in the vicinity of each referred source property. The enhanced O&M actions for each source property are described in Table 2.3. These activities will continue until the properties have been fully abated.

Table 2.3. PCBs source properties referred to the Regional Water Board during MRP 3.0 to date.

Co-permittee	WMA	Location/APN	Area (Acres)	Submittal Date	Enhanced O&M Description	PCBs Load Reduction Credit (g/yr)	
						During MRP 3.0	After Abatement
Palo Alto	032SCH250	3100-3130 Hansen Way and 1001 Page Mill Road; APNs: 14220092; 14220093; 14220096.	19.3	January 2024	Annual cleanout of the main storm drain line between 3100 Hanover Street and 607 Hansen Way to remove historically deposited sediment from the line and any sediment released from the property and deposited in the storm drain line during the abatement process.	48.5	97.1
San José	051CTC275	1645 Old Bayshore Highway; APN: 23727033	0.24	June 2024	Installation and ongoing maintenance of a large high flow capacity stormwater treatment system (i.e., hydrodynamic separator (HDS) unit) downstream of the confirmed source properties that will provides treatment for all stormwater flows into public ROW areas in the catchment.	0.6	1.2
		1726 Rogers Avenue; APNs 23709127; 23709128.	1.4	June 2024		3.4	6.8
		1788 Rogers Avenue; APN 23709133.	1.9	June 2024		4.7	9.4
	083GAC900	1775 Monterey Road; APNs: 45607001, 45607002, 45607003, 45607004, 45607005, 45607006, 45613002.	13	June 2024	Installation and ongoing maintenance of a large high-flow capacity stormwater treatment system (i.e., hydrodynamic separator (HDS) unit) downstream of the confirmed source properties that will provides treatment for all stormwater flows into public ROW areas in the catchment.	32.6	65.2
		1800-1900 Monterey Road; APNs: 47724017, 47724040, 47724041, 47724043, 47724042, 47724038, 47724039, 47723011.	14	June 2024		34.4	68.9
	067SCL080	520 North Marburg Way; APNs: 25403010 and 25403046.	9.8	June 2024	None	--	38.7
		Totals	**59**			**124.3**	**287.3**

SECTION 3 - GREEN STORMWATER INFRASTRUCTURE AND OTHER STORMWATER TREATMENT CONTROLS

This section describes GSI and other stormwater treatment controls (i.e., full trash capture) that provide load reduction benefits for mercury and PCBs, demonstrates continuation of controls implemented during MRP 2.0, and provides documentation of the projects built and installed during MRP 3.0 to date (i.e., between July 1, 2021 and June 30, 2025). All supporting data required to calculate the mercury and PCBs loads reduced for these treatment systems are also described. All projects that treat old industrial land use areas are identified.

CONTROL MEASURE DESCRIPTION

GREEN STORMWATER INFRASTRUCTURE (GSI)

GSI facilities are stormwater management systems that use vegetation, soils, and natural processes to capture and treat stormwater runoff and improve water quality. Examples of GSI include bioretention, low impact development (LID), green/complete streets, and other systems that generally use the natural filtration or infiltration of stormwater.

There are three main categories of GSI facilities, which are largely based on their location and extent of upstream catchment area:

1. **Parcel-based New Development and Redevelopment Projects**. These projects include LID treatment measures that are designed to capture/treat runoff generated on a parcel. LID measures are implemented during development or re-development of a parcel and are currently required by the MRP for any project creating or replacing greater than 10,000 square feet of impervious area. These projects can be located on either publicly- or privately-owned parcels.
2. **Public Green Street Projects**. These projects include GSI facilities that are located along or within a street or public ROW. They are typically designed to capture and treat runoff from the street and possibly portions of adjacent parcels.
3. **Regional Projects**. These projects include parcel-based GSI measures that capture runoff from off-site areas. Typically located on publicly owned lands, development and implementation of regional projects may involve collaboration among multiple municipalities and/or public agencies to construct large facilities that capture and treat stormwater from large drainage areas. Collaboration among multiple jurisdictions may allow for larger projects with greater economies of scale, specifically cost-sharing opportunities and greater flood control and pollutant reduction capacity.

The most common types of GSI facilities that are constructed in urban areas include bioretention, stormwater tree well filters, pervious pavement, infiltration facilities, green roofs, and rainwater harvesting and use facilities.

OTHER STORMWATER TREATMENT DEVICES

High-flow capacity and inlet-based stormwater treatment systems are devices or series of devices that trap all particles retained by a 5 mm mesh screen and have a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the tributary drainage catchment area. The State and Regional Water Boards have approved a variety of proprietary stormwater treatment devices as achieving full trash capture. These systems are grouped into two general categories - "large devices" (i.e., high-flow capacity systems), treating hundreds of acres, and "small devices" (i.e., catch basin inserts), typically

treating an acre or less of land. Examples of large devices include hydrodynamic separator (HDS) devices, debris-separating baffle boxes (DSBBs) and in-line gross solid removal devices (GSRDs). Small inlet-based devices are generally screens or baskets that are installed in storm drain catch basins or inlets.

CONTROL MEASURE IMPLEMENTATION

The locations of GSI projects and other stormwater treatment systems are illustrated on control measure maps included as **Attachment A**. These maps include all stormwater treatment projects implemented to date within the Santa Clara Valley since the start of the PCBs TMDL (i.e., ~2002).

CONTINUATION OF MRP 2.0 ACTIONS FOR LOAD REDUCTION CREDIT

During MRP 2.0, Co-permittees were credited with 2,519 g/yr mercury and 227 g/yr PCBs load reduction for implementation of GSI/LID and other stormwater treatment controls, as reported in the SCVURPPP FY 2021-22 Annual Report (SCVURPPP 2022). This included treatment of more than 4,000 acres by GSI/LID, and treatment of more than 16,000 acres via other stormwater treatment systems (e.g., hydrodynamic separators). These projects are identified in each municipality on the maps provided in Attachment A. To continue to receive load reduction credit for these controls, Co-permittees must conduct inspections to ensure GSI/LID projects built according to C.3 regulations are properly maintained and operated. Co-permittees have continued to implement their ongoing C.3 inspection programs to ensure appropriate maintenance for all C.3 regulated projects. Co-permittees report on inspections conducted each year at C.3 regulated projects in their Annual Reports to the Water Board. In addition, Co-permittees conduct the appropriate maintenance to ensure proper functioning of all public green street projects and other stormwater treatment systems located within the public ROW. These efforts are fully documented in Co-permittees Annual Reports submitted in September of each year to the Regional Water Board.

GREEN STORMWATER INFRASTRUCTURE PROJECTS COMPLETED DURING MRP 3.0 TO DATE

Co-permittees continue to track and report on all completed GSI projects in the Santa Clara Valley via SCVURPPP's Stormwater Treatment Measures Data Portal. The information on these projects in the data portal provides all the information that will be needed to estimate the mercury and PCBs load reductions associated with these projects. Those estimates will be based on updated Reasonable Assurance Analysis modeling that will be conducted in FY 2025-26. The data collected on all GSI projects that have been completed for credit during MRP 3.0 to date (i.e., since July 1, 2021)[2] are summarized in Table 3.1 for public green streets and Table 3.2 for parcel-based C.3 redevelopment projects. These projects are also shown on Co-permittee maps in Attachment A. The information available for the current reporting year is considered preliminary, as the data on all projects completed in FY 2024-25 may not be available until after FY 2024-25 annual reporting. However, Co-permittees will continue to gather this information as it becomes available and subsequent Annual Reports will be updated as needed. To ensure Co-permittees document all newly completed GSI projects within their jurisdictions during MRP 3.0, all projects completed since the start of FY 2021-22 are included in this table. Green streets constructed during MPR 3.0 to date treat a total of 21 acres, including 19 acres of old industrial land use areas. Parcel-based GSI/LID redevelopment projects constructed during MRP 3.0 to

[2] Data on projects that were built during previous fiscal years (FY 21-22, FY 22-23, and FY 23-24) but were not reported in V.2 of this Control Measures Report because the information was not yet available are documented in this Control Measure Report. These are projects for which load reduction credit under C.11/12 will be achieved during MRP 3.0.

date address 1,746 acres, including the treatment of nearly 300 acres of old industrial land use areas.

OTHER STORMWATER TREATMENT SYSTEMS COMPLETED DURING MRP 3.0 TO DATE

Co-permittees continue to track and report on all completed high-flow capacity and inlet-based stormwater treatment systems/devices that have been installed during MRP 3.0 to date in the Santa Clara Valley (Tables 3.3 and 3.4). These devices and treatment systems are also shown on Co-permittee maps in Attachment A. The data required to calculate mercury and PCBs load reductions for these projects, including the device type, and the area treated by land use category are provided in Table 3.3. Some portion of the areas treated by the systems/devices shown in Tables 3.3 may also be addressed by GSI/LID projects. Any overlapping areas will be removed from the load reduction calculations for other stormwater treatment systems that will be conducted at the end of the permit term. There are a total of 3,300 acres across the Santa Clara Valley that are being treated by small, inlet-based devices installed during MRP 3.0 to date, including treatment of 363 acres of old industrial land uses. There are 7,148 acres treated via high-flow capacity stormwater treatment systems installed during MRP 3.0 to date in the Santa Clara Valley, including treatment of 391 acres of old industrial land use areas.

Table 3.1 Land areas treated by public green street projects constructed in the Santa Clara Valley during MRP 3.0 to date (FY 2021-22 – FY 2024-25).

Co-Permittee	Fiscal Year (FY) Built	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban - Comm/Trans	Old Urban/ Residential	New Urban	Ag/ Open
San Jose	FY 2021-22	066GAC152	14	13	0.5	--	--	--
		Other - San Jose	0.4	--	0.1	0.3	--	--
		San Jose Total	***14***	***13***	***0.6***	***0.3***	--	--
Santa Clara	FY 2021-22	066GAC150	6.5	6.1	0.4	--	--	--
	FY 2022-23	Other - Santa Clara	0.1	--	0	--	--	0.1
		Santa Clara Total	***6.6***	***6.1***	***0.4***	--	--	***0.1***
Santa Clara County	FY 2023-24	Other-SC County	0.4	--	--	--	--	0.4
		Santa Clara County Total	***0.4***	--	--	--	--	***0.4***
		Total Green Streets	**21**	**19**	**1.0**	**0.3**	--	**0.5**

Table 3.2. Land areas treated by parcel-based Green Stormwater Infrastructure/Low Impact Development (GSI/LID) projects constructed in the Santa Clara Valley during MRP 3.0 to date (FY 2021-22 – FY 2024-25).

Co-Permittee	Fiscal Year (FY) Built	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban Comm/ Trans	Old Urban/ Residential	New Urban	Ag/ Open
Campbell	FY 2022-23	113LGC565	0.3	0.3	--	--	--	--
		Other - Campbell	5.4	--	2.5	2.9	--	--
		Subtotal	5.7	0.3	2.5	2.9	--	--
	FY 2023-24	113LGC900	0.2	--	0.2	--	--	--
		Other - Campbell	4.3	--	4.3	--	--	--
		Subtotal	*4.5*	--	*4.5*	--	--	--
		Campbell Total	*10*	***0.3***	***7***	***2.9***	--	--
Cupertino	FY 2024-25	Other - Cupertino	3	--	3	--	--	--
		Cupertino Total	***3***	--	***3***	--	--	--
Los Altos	FY 2021-22	Other - Los Altos	0	--	0	--	--	--
		Los Altos Total	***0***	--	***0***	--	--	--
Los Altos Hills	FY 2021-22	Other - Los Altos Hills	13	--	--	0	--	13
	FY 2022-23	Other - Los Altos Hills	0.4	--	0	0.4	--	--
		Los Altos Hills Total	***13***	--	***0***	***0.4***	--	***13***
Los Gatos	FY 2021-22	Other - Los Gatos	1.7	0.9	--	--	--	0.7
		Los Gatos Total	***1.7***	***0.9***	--	--	--	***0.7***
Milpitas	FY 2021-22	036PEC800	3.4	3.4	--	--	--	--

Co-Permittee	Fiscal Year (FY) Built	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban Comm/ Trans	Old Urban/ Residential	New Urban	Ag/ Open
		036PEC822	1.3	--	1.3	--	--	--
		Other - Milpitas	46	0	3.3	--	9.8	33
		Wrigley Creek	6	--	--	--	6	--
		Subtotal	*57*	*3.4*	*4.6*	--	*16*	*33*
	FY 2022-23	Other - Milpitas	24	0	11	0	3.8	9.4
		Wrigley Creek	2.4	0	--	--	2.4	--
		Subtotal	*27*	*0*	*11*	*0*	6.2	*9.4*
	FY 2023-24	036PCL800	6.9	--	--	--	6.9	*0*
		Other - Milpitas	5.3	--	--	--	--	*5.3*
		Wrigley Creek	9.6	0	--	--	9.6	--
		Subtotal	*22*	*0*	*0*	*0*	*16*	*5.3*
	Milpitas Total		***106***	***3.4***	***16***	***0***	***38***	***48***
Monte Sereno	FY 2022-23	Other - Monte Sereno	4.3	--	4.3	--	--	--
	Monte Sereno Total		***4.3***	--	***4.3***	--	--	--
Mountain View	FY 2021-22	017XXX010	1.2	0	0.1	1.1	--	--
		032SVC400	31	--	0	--	31	0
		032SVC490	0.6	--	0.6	--	--	--
		047SVC150	4	--	4	--	--	--
		Other - Mountain View	11	--	6.8	3.4	--	0.6
		Subtotal	*48*	*0*	*12*	*4.5*	*31*	*0.6*
	FY 2022-23	017PMC600	0.1	--	--	--	--	0.1
		017XXX010	4	--	0	4	--	--
		047SVC150	5.4	2.4	3	0	--	--
		Other - Mountain View	12	2	7	3.1	--	--
		Subtotal	*22*	*4.4*	*10*	*7.1*	--	*0.1*
	FY 2023-24	017SVC450	1.5	0	--	--	1.5	--
		017SVC500	7.7	--	--	--	7.7	--
		017XXX010	4.1	--	4.1	--	--	--
		Other - Mountain View	0.9	--	0.9	0	--	--
		SVC-A	0	0	--	--	0	--
		Subtotal	*14*	*0*	*5*	*0*	9.2	--
	Mountain View Total		***84***	***4.4***	***27***	***12***	***41***	***0.7***

Co-Permittee	Fiscal Year (FY) Built	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban Comm/ Trans	Old Urban/ Residential	New Urban	Ag/ Open
Palo Alto	FY 2021-22	031MTC410	1.7	1.7	--	--	--	--
		Other - Palo Alto	5.6	0.6	2	2.9	--	0
		Subtotal	*7.2*	2.3	2	2.9	--	*0*
	FY 2023-24	Other - Palo Alto	0.5	--	0.1	0.4	--	--
		SCH-K	3.8	3.8	--	--	--	--
		Subtotal	*4.2*	3.8	*0.1*	*0.4*	--	--
		Palo Alto Total	***11***	***6.1***	***2.1***	***3.3***	--	***0.0***
San Jose	FY 2021-22	050GAC020	108	21	0.6	0.2	60	25
		050GAC020E	21	15	--	--	3.9	2.1
		051CTC275	18	--	0	--	0.4	17.2
		051CTC400	0.1	0.1	--	--	--	--
		051CTC850	0	0	--	0	--	--
		066GAC110	7.4	--	1.9	--	5.5	--
		066GAC550	0.5	0.4	0	0	--	0
		067CTC030	1.5	1.5	--	0	--	--
		067GAC190	0.5	--	0.1	0.2	--	0.2
		067SCL066	1.6	0.9	0.6	--	--	--
		083CTC350	11	11	0	--	--	--
		083CTC990	4.8	--	0.1	--	--	4.7
		083GAC900B	15	9.6	2.4	--	--	3.3
		100CTC190	1.8	--	1.7	--	--	0.2
		100CTC400	1.7	--	1.7	--	--	--
		100CTC500	2.5	2.5	0	--	--	--
		130CNC022	67	4.1	6.7	0	54	2
		Other - San Jose	34	0.2	16	7.8		9.5
		Subtotal	*295*	*67*	*32*	*8.2*	*124*	*64*
	FY 2022-23	034AVS120	4.9	0.2	0.3	--	2.2	2.2
		035GAC015	74	73	0.1	--	0.2	--
		051CTC450	0.1	--	--	--	0.1	--
		066GAC110	1.1	--	1.1	--	--	--
		066GAC152	234	11	223	--	--	--

Co-Permittee	Fiscal Year (FY) Built	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban Comm/ Trans	Old Urban/ Residential	New Urban	Ag/ Open
		066GAC550	7.5	--	7.5	--	--	--
		066GAC810	1.0	--	1	--	--	0
		066GAC850	7.9	5.1	2.8	--	--	--
		066GAC900	0.1	0.1	--	--	--	--
		067GAC190	0.3	0	0.3	--	--	--
		068SCL230	1.8	--	1.8	--	--	--
		083CTC990	4.3	4.3	--	--	--	--
		083GAC240	1.2	1.1	0.1	--	--	--
		083GAC900	0	0	--	--	--	--
		083LGC525	0.8	0.1	--	0.7	--	--
		113LGC010	7.8	0	7.7	0.1	--	--
		130CNC022	8.1	--	0.5	--	7.6	--
		Miguelita Creek	1	--	1	--	--	--
		Other - San Jose	465	29	82	16	7.8	330
		Subtotal	*820*	*124*	*330*	*17*	*18*	*332*
	FY 2023-24	050GAC020	35	--	--	--	--	35
		050GAC020B	4.7	--	--	--	4.7	--
		051CTC275	6.2	4.5	1.7	--	--	--
		066GAC550	3.5	3.2	0.4	0	--	--
		067GAC190	1.5	1.4	0.1	--	--	--
		067SCL066	2.6	--	--	2.6	--	--
		083GAC246	0.5	0.5	--	--	--	--
		083GAC575	0.7	--	0.5	0.1	--	--
		099LGC180	0.7	--	0.7	--	--	--
		113LGC010	0.5	--	0.5	0	--	--
		129CNC165	2	--	2	0	--	--
		Miguelita Creek	9.3	8.7	0.1	0.5	0	--
		Other - San Jose	4.3	0.4	3.4	0.5	--	0
		Subtotal	*72*	*19*	9.3	*3.8*	*4.7*	*35*
	San Jose Total		***1187***	***210***	***371***	***29***	***146***	***432***
Santa Clara	FY 2021-22	049STA050	1.2	--	0.4	--	0.8	--

Co-Permittee	Fiscal Year (FY) Built	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban Comm/ Trans	Old Urban/ Residential	New Urban	Ag/ Open
		049STA500	5.2	--	5.2	--	--	--
		049STA550	7.5	4.4	2.8	--	0.4	--
		049STA600	0.9	--	0.9	--	--	--
		050GAC030	2.1	2.1	0	--	--	--
		050GAC600	8	1.6	5	1.3	--	--
		066GAC150	4.4	0.3	3.9	0.2	--	--
		Other - Santa Clara	16	0.1	16	0.3	0.3	0
		Subtotal	*46*	*8.5*	*34*	*1.8*	*1.5*	*0*
	FY 2022-23	035GAC150	1.4	0	--	--	1.3	0.1
		050GAC030	1.3	1.3	--	--	0	--
		050GAC580	4.8	0.3	4.5	--	0	--
		066GAC150	36	--	36	--	--	--
		Other - Santa Clara	19	0.4	1.6	--	14	3.1
		Subtotal	*63*	*2*	*42*	*0*	*15*	*3.1*
	FY 2023-24	049STA600	3	--	3	--	--	--
		049STA710	0.2	--	0.2	--	--	--
		050GAC400	0.6	--	0.6	--	--	--
		050GAC580	7.9	7.9	--	--	--	--
		050GAC600	1.5	--	1.5	--	--	--
		Other - Santa Clara	6	--	0.7	2.8	--	2.4
		Subtotal	*19*	*7.9*	*5.9*	*2.8*	--	*2.4*
	FY 2024-25	Other - Santa Clara	0.3	--	--	0.3	--	--
		Subtotal	*0.3*	*0*	*0*	*0.3*	*0*	*0*
		Santa Clara Total	***128***	***18***	***82***	***4.9***	***17***	***5.6***
Santa Clara County	FY 2021-22	Other - Santa Clara County	0	--	--	--	0	--
	FY 2022-23	Other - Santa Clara County	0	--	--	0	--	--
	FY 2023-24	Other-SC County	1	--	--	1	--	--
		PMC-D1	3.9	--	--	--	--	3.9
		Santa Clara County Total	***4.9***	--	--	***1***	***0***	***3.9***
Saratoga	FY 2021-22	Other - Saratoga	3.5	--	--	--	--	3.5

Co-Permittee	Fiscal Year (FY) Built	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban Comm/ Trans	Old Urban/ Residential	New Urban	Ag/ Open
	FY 2022-23	Other - Saratoga	0.2	--	--	--	--	0.2
		Saratoga Total	***3.7***	--	--	--	--	***3.7***
Sunnyvale	FY 2021-22	033SVW950	2	--	2	--	--	--
		033SVW955	4.4	--	1.9	--	2.5	--
		034BFL230A	3.0	3	--	--	--	--
		034SVE490	0.5	0	0	--	0.4	--
		048SVW998	16	--	14	2	--	--
		049CZC200	8.7	--	--	--	--	8.7
		049CZC800	5.2	0.8	4.4	--	--	--
		049CZC900	1.1	--	1.1	--	--	--
		049SVE720	0.5	--	--	0.5	--	--
		049SVE900	1	--	1	--	--	--
		Other - Sunnyvale	25	--	1.7	16	0.1	7.5
		Sunnyvale West	0.3	--	0.3	--	--	--
		Subtotal	*68*	*3.8*	*27*	*18*	*3.1*	*16*
	FY 2022-23	034BFL230B	7.1	3.7	0.8	--	2.6	--
		034BFL230C	11	--	7.2	--	3.3	--
		049CZC200	34	--	4.5	--	30	--
		049CZC800	2.7	2.6	0.1	--	--	--
		Other - Sunnyvale	3.5	0.0	0.1	--	3.4	--
		Subtotal	*58*	*6.2*	*13*	--	*39*	--
	FY 2023-24	034BFL230A	30	10	20	--	0	0
		034BFL230B	19	1.9	13	--	3.7	--
		049CZC800	7.8	6.8	1	--	--	--
		Other - Sunnyvale	6.3	--	0.8	5.5	--	--
		Subtotal	*63*	*19*	*35*	*5.5*	*3.7*	--
		Sunnyvale Total	***189***	***29***	***74***	***24***	***46***	***16***
TOTAL - All Co-Permittees			**1,746**	**272**	**586**	**77**	**288**	**523**

[a] Projects reported for FY 2023-24 were completed during FY 2023-24, but were not reported in the Program's 2024 Annual Report due to data being unavailable at the time of reporting. Any projects built during FY 2024-25, but not reported here because data are unavailable will be reported in the FY 2025-26 Annual Report.

Table 3.3. Land areas treated by high flow capacity stormwater treatment devices installed in the Santa Clara Valley during MRP 3.0 to date.

Co-Permittee	Fiscal Year (FY) Installed	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban - Comm/Trans	Old Urban - Residential	New Urban	Ag/ Open
Campbell	FY 21-22	Other - Campbell	0.1	--	0.1	0	--	--
Palo Alto	FY 22-23	Other - Palo Alto	317	4	105	84	34	89
San Jose	FY 21-22	051CTC275	0.1	--	0.1	--	--	--
		051CTC400	0.1	0	0	--	0	--
		051CTC850	0.6	0.2	0.1	0.3	--	--
		066GAC110	0.3	--	0.2	0	0	--
		066GAC550	1471	241	315	864	41	10
		066GAC810	1.3	--	1.0	0	0.3	0
		067CTC030	1.5	0	1.5	--	--	--
		067CTC150	1.7	0.2	1.6	0	--	--
		067CTC250	0.3	0.1	0.1	--	--	--
		067CTC351	0.1	0	0	--	--	--
		067SCL066	25	--	24	0.7	--	--
		083CTC350	0	--	0	0	--	--
		083LGC525	1	--	0.3	0.6	--	--
		083LGC686	0.1	0.1	--	--	--	--
		099LGC180	1106	9.3	364	720	4	8.3
		100CTC500	0	--	0	--	--	--
		100CTC600	731	--	168	507	6.2	50
		Other - San Jose	923	0.5	245	657	15	5
	FY 22-23	068SCL230	422	5.2	74	329	--	15
		068SCL270	0	--	--	0	--	--
		Other - San Jose	253	3.9	56	189	2.5	1.9
	FY 23-24	Other - San Jose	1179	--	174.8	628	66	310
Santa Clara County	FY 22-23	Other - Santa Clara County	0	--	--	--	--	--
Santa Clara County	FY 22-23	Other - Santa Clara County	0.4	--	--	--	0.4	--
Sunnyvale	FY 22-23	049CZC200	702	123	296	32	239	12
		049CZC800	2.7	1.9	0.8	--	--	--
		049SVE410	1.7	1.1	0	0	0.6	--
		Other - Sunnyvale	7.2	0.3	4.2	0.2	2.4	0.1
High-Flow Capacity Device Totals			**7,148**	**391**	**1,832**	**4,011**	**413**	**501**

Table 3.4. Land areas treated by inlet-based stormwater treatment devices installed in the Santa Clara Valley during MRP 3.0 to date.

Co-Permittee	Fiscal Year (FY) Installed	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban - Comm/Trans	Old Urban/ Residential	New Urban	Ag/ Open
Campbell	FY 21-22	Other - Campbell	28	--	3.7	24	--	--
	FY 22-23	113LGC140	0.5	--	0	0.5	--	--
		Other - Campbell	9.7	--	6.8	2.9	--	--
	FY 23-24	113LGC140	1.7	--	0.6	1.1	--	--
		Other - Campbell	9.5	--	8.3	1.2	--	--
	FY 24-25	113LGC030	6.5	0	5.2	1.3	--	--
		113LGC510	0.1	0	0.1	--	--	--
		113LGC140	6.3	0	3	3.2	--	--
		Other - Campbell	42	0.9	19	21	0.8	0
Cupertino	FY 21-22	Other - Cupertino	9	2.5	6.1	0	--	0.4
	FY 22-23	080JSC600	4.3	--	3.9	0.4	--	--
		Other - Cupertino	15	4.4	3.3	4.6	0.9	2
	FY 23-24	Other - Cupertino	27	0.3	21	6.3	0	0.1
	FY 24-25	Other - Cupertino	0	--	0	0	--	--
Los Gatos	FY 21-22	Other - Los Gatos	12	--	10	1.7	--	--
	FY 23-24	Other - Los Gatos	4.5	--	3.6	0.9	--	--
	FY 24-25	Other - Los Gatos	7.4	--	3.3	4.1	--	--
Milpitas	FY 21-22	036PCL576	2.9	--	1.2	--	1.7	--
		036PCL800	0.1	--	0.1	--	0	--
		Other - Milpitas	2.1	--	0.6	0	1.5	--
	FY 24-25	036PCL800	0.8	--	0.4	--	0.4	--
		Other - Milpitas	6.5	--	2.3	1.7	2.3	0.1
		Other - San Jose	5.7	--	5.7	0.1	--	--
		Wrigley Creek	0	0	--	--	0	--
Mountain View	FY 24-25	017SVC500	0.1	--	--	--	0.1	--
		032PMC200	0.5	0.3	0.2	--	--	--
		032SVC400	3.6	1.5	1.5	--	0.5	--
		032SVC470	19	8.9	6.5	1.2	2.8	--
		Other - Mountain View	15	0.1	8.5	6.2	--	--
		SVC-A	0	--	0	--	--	--
Palo Alto	FY 22-23	016MTC910	4.9	--	4.2	0.7	--	--

Co-Permittee	Fiscal Year (FY) Installed	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban - Comm/Trans	Old Urban/ Residential	New Urban	Ag/ Open
		Other - Palo Alto	0.2	--	0.2	--	--	--
San Jose	FY 22-23	066GAC900	2.9	--	--	2.6	--	0.3
		113LGC010	8	2.3	3.8	0	1.8	--
		Other - San Jose	0.0	--	0	0	--	--
	FY 23-24	Other - San Jose	0.4	--	0.4	0	--	0
	FY 24-25	034AVS120	1.5	--	0.6	0.9	0	0
		051CTC400	2.4	0.7	0.8	--	--	0.9
		051CTC450	4	--	3.2	--	0.7	--
		051CTC850	0	0	0	0	--	--
		066GAC152	2.4	0.9	1.5	--	--	--
		066GAC850	3.4	0.3	1.8	1.4	--	--
		066GAC900	3.2	--	2.7	0.6	--	--
		067CTC030	2.1	2.1	0	0	--	--
		067CTC750	11	1.5	3.5	6.1	--	0.1
		067CTC810	0	0	0	0	--	--
		067GAC075	0.4	0.3	0.1	--	--	--
		067GAC150	0	0	0	--	--	--
		067GAC190	0.2	--	0.1	0.1	--	--
		067SCL063	4.4	0.2	1.7	2.4	--	0.1
		067SCL066	0	--	--	0	--	--
		068SCL150	0.1	--	0.1	--	--	--
		068SCL230	5.7	--	2	3.7	--	--
		083CTC350	0.1	--	0	0.1	--	--
		083CTC990	6.2	6.2	0	--	--	--
		083GAC246	0.1	--	0.1	--	--	--
		083GAC300	0.3	0.3	--	--	--	--
		083GAC575	5.9	0.1	1.6	4.2	--	0
		083GAC800	0.4	--	--	0.4	--	--
		083GAC900	0	0	0	--	--	0
		083LGC090	3.1	1.6	1	0.5	0	0
		083LGC225	5	4.6	0.2	0.1	--	--
		083LGC686	2.4	1.9	0.5	--	--	0
		099GAC240	26	11	8.8	1	5.2	0.2
		099GAC500	0	--	0	0	--	--

Co-Permittee	Fiscal Year (FY) Installed	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban - Comm/Trans	Old Urban/ Residential	New Urban	Ag/ Open
		099LGC180	14	1.5	7.1	4.5	0.5	0
		100CTC190	15	0.1	2.4	12	--	0
		100CTC400	2	0	0.4	1.6	--	0.1
		113LGC010	23	7	11	3.6	1.6	--
		128GAC490	2.3	0	2.2	--	--	0.1
		GAC-B	4.8	0.3	1.9	2.3	--	0.3
		LGC-C3	8.7	3.6	3.9	1	0.2	0.2
		Miguelita Creek	29	0.9	2.4	25	--	0
		Other - San Jose	419	1.4	167	216	30	4.2
Santa Clara	FY 22-23	049CZC690	3.5	--	2.1	--	1.4	0
		049CZC810	3.1	0.3	2.8	--	0	--
		049STA050	4.4	0.8	2.1	1.1	0.3	0
		049STA300	11	2.2	7.4	--	1.4	0
		049STA500	0.8	0.4	0.4	--	0	--
		049STA550	39	16	21	--	2.4	0.4
		049STA600	3.4	1.6	1.8	--	--	--
		049STA710	35	15	13	6.9	0.1	0.1
		049STA800	16	3.4	11	1.6	--	--
		050GAC030	8.2	1.6	6.6	0	--	0
		050GAC190	6.9	2.4	4.3	--	--	0.2
		050GAC400	230	36	82	111	0.1	0.6
		050GAC410	2	1.1	0.8	0		0
		050GAC580	84	65	14	0.2	4.4	0
		050GAC600	72	19	46	6.7	0.1	0.1
		066GAC150	25	5.8	17	1.2	0.9	0
		Other - Santa Clara	352	1.7	135	181	30	4.3
	FY 23-24	Other - Santa Clara	0	--	--	0	--	--
	FY 24-25	035GAC150	0.2	--	--	--	0.2	--
		049CZC810	9.6	--	9.5	--	0	--
		049STA050	31	13	9.0	0.3	8	0.2
		049STA300	31		9.0	--	22	--
		049STA500	11	5.7	3.9	--	1.8	0
		049STA550	14	0.4	12	--	1.9	--
		049STA600	1.1	0.5	0.6	--	--	--

Co-Permittee	Fiscal Year (FY) Installed	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban - Comm/Trans	Old Urban/ Residential	New Urban	Ag/ Open
		049STA710	2.1	1	0.3	0.8	--	--
		049STA800	3.3	0.4	2.9	0	--	--
		050GAC030	19	6.2	12	0.8	0	--
		050GAC190	16	2.3	13	0	--	--
		050GAC400	59	16	30	8	5.1	0
		050GAC410	0	0	--	--	--	0
		050GAC580	30	11	6	--	12	--
		050GAC600	5.1	0	3.8	1.3	--	--
		066GAC150	2.7	0	1.9	0.8	--	0
		Other - Santa Clara	199	0.6	66	78	47	6.5
Santa Clara County	FY 21-22	Non MRP area	22	--	22	0.4	--	--
	FY 22-23	Other - Santa Clara County	0	--	--	0	--	--
	FY 23-24	Non MRP area	24	--	22	2.4	--	--
	FY 24-25	Non MRP area	7	--	6.9	0.2	--	--
		Other - Santa Clara County	0	--	0	0	--	--
Saratoga	FY 23-24	Other - Saratoga	0.2	--	0.1	0.1	--	--
	FY 24-25	Other - Saratoga	4.5	--	4.1	0.4	--	0.1
Sunnyvale	FY 21-22	Other - Sunnyvale	0	--	--	0	--	--
	FY 22-23	034BFL230B	0	--	0	--	--	--
		034CZC155	55	7	41	0.1	6.5	0
		049CZC800	26	10	15	--	0	0.1
		049CZC900	0.8	0.4	0.5	--	--	--
		049CZC910	1	0.2	0.8	--	--	0
		049SVE720	5.8	--	0.3	5.5	--	0
		Other - Sunnyvale	12	0	6.9	2.5	0.8	1.8
		Sunnyvale West	3.6	0.8	2.8	--	--	0
	FY 23-24	033SVW955	1	--	0	--	1.0	0
		034CZC155	21	5.7	11	1.1	3.2	0
		034SVE490	7.8	0.6	3.7	3.4	0	0.1
		048SVE395	6.3	3.7	2.6	--	--	--
		048SVE550	3	0.8	1.7	0.5	0	0
		048SVW998	91	1.6	48	41	0.4	--
		048SVW999	1.1	0.1	0.3	0.7	0	--

Co-Permittee	Fiscal Year (FY) Installed	WMA ID	Total Area (Acres)	Area by Land Use Category (Acres)				
				Old Industrial	Old Urban - Comm/Trans	Old Urban/ Residential	New Urban	Ag/ Open
		049CZC200	0	0	0	--	--	--
		049CZC800	41	17	17	0	6	--
		049CZC900	3.0	0.3	2.7	--	--	--
		049SVE410	0.9	0	0.9	0	--	--
		049SVE720	61	0	8.8	52	--	0.1
		049SVE900	109	9.2	39	60	0.5	0.2
		Other - Sunnyvale	484	2	220	256	0	5.1
	FY 24-25	034SVE490	2.5	--	0.6	1.9	--	--
		048SVW998	3.1	--	1.7	1.3	0.1	--
		049CZC800	5.8	3	2.8	--	0.1	--
		049CZC900	1	0.2	0.8	--	--	--
		049CZC910	0.4	0.4	0	--	--	0
		049ECS900	3.1	1.6	0.2	1.2	--	--
		049SVE720	7.7	--	1.4	6.2	--	--
		049SVE900	24	--	22	2.5	--	--
		Other - Sunnyvale	74	0	18	49	7.5	0.3
		Inlet-based Devices Total	**3,306**	**363**	**1,435**	**1,262**	**217**	**30**

SECTION 4 - CONTROLLING PCBS FROM BRIDGES AND OVERPASSES

This section describes the Program for Controlling PCBs from Bridges and Overpasses that will provide load reduction benefits for PCBs. Future versions of this report will also provide documentation of implementation of this control measure during bridge and overpass replacement.

CONTROL MEASURE DESCRIPTION

The program for controlling PCBs in bridges and overpasses will implement a new Caltrans specification for removal and handling of potentially PCBs-containing materials during bridge and overpass replacement projects for applicable structures (i.e., those built prior to 1980 when PCBs-containing joint sealants and caulk were available). Use of the new specification will prevent or reduce the release of PCBs into the environment by detailing appropriate methods for the removal, handling, and disposal of caulk or sealant materials during infrastructure replacement or joint maintenance projects for applicable structures.

CONTROL MEASURE IMPLEMENTATION

CONTINUATION OF MRP 2.0 ACTIONS FOR LOAD REDUCTION CREDIT

This is a new control measure in MRP 3.0, therefore no controls (or associated load reduction credits) were implemented by Co-permittees during MRP 2.0. The new actions implemented during MRP 3.0 to date are described below.

IMPLEMENTATION DURING MRP 3.0 TO DATE

During FY 2022-23, Co-permittees developed inventories of applicable bridges and overpasses within their jurisdiction which included bridge ownership and replacement schedules. These inventories were submitted with the Program's FY 2022-23 Annual Report.

As of the end of FY 2024-25, the Caltrans specification was not yet available. Co-permittees will maintain their bridge inventories and in the future, after the Caltrans specification has been finalized, will implement or cause to be implemented the Caltrans specification during all applicable bridge projects that are under the direction of Co-permittees.

In the absence of an appropriate Caltrans specification, the Program began working with other BAMSC agencies in FY 2024-25 to develop draft guidance materials that Co-permittees will be able to use to determine when controls for PCBs are needed during municipally-owned bridge replacement or demolition activities. These draft guidance materials, which are under development, are based on the Caltrans *Standard Operating Procedure (SOP) for Inspecting, Removing and Reporting Materials Containing Polychlorinated Biphenyls (PCBs) Prior to Demolition or Renovation of Structures,* which was released in 2024 (Caltrans 2024). Although not a specification that Co-permittees can provide with bid documents for bridge repair/demolition contracts, the Caltrans SOP, and the BAMSC draft guidance can be used by Co-permittees to identify bridges slated for demolition that will require removal and special handling of PCBs-containing materials prior to demolition.

SECTION 5 - CONTROLLING PCBS FROM ELECTRICAL UTILITIES

This section describes the Program for Controlling PCBs from Electrical Utilities that will provide load reduction benefits for PCBs, demonstrates controls measures implemented by Co-permittees during MRP 3.0 to date (i.e., FY 2022-23 - FY 2024-25), and includes all supporting data required to calculate the PCBs loads avoided due to implementation of this control measure.

CONTROL MEASURE DESCRIPTION

For this control measure, municipally-owned electrical utilities will implement the following actions to further avoid/reduce the release of PCBs from oil-filled electrical equipment (OFEE):

1. Develop and implement improved spill response and reporting procedures for PCBs-containing OFEE;
2. Develop and implement a plan to remove all PCBs-containing OFEE from active service; and
3. Document the removal of PCBs-containing OFEE since the start of the PCBs TMDL and in the future until all PCBs-containing OFEE have been removed from active service.

Additionally, it is anticipated that non-municipally owned regional electrical utilities that are not currently subject to PCBs load reduction requirements (i.e., PG&E) have been and will continue to remove PCBs-containing OFEE and document these efforts, past and present, consistent with methods used by applicable MRP permittees.

CONTROL MEASURE IMPLEMENTATION

CONTINUATION OF MRP 2.0 ACTIONS FOR LOAD REDUCTION CREDIT

This is a new control measure in MRP 3.0, therefore no controls (or associated load reduction credits) were implemented by Co-permittees during MRP 2.0.

IMPLEMENTATION DURING MRP 3.0 TO DATE

Although this is a new control measure in MRP 3.0, activities that remove potentially PCBs-containing electrical equipment at municipal electrical utilities have been ongoing for decades. The data required to calculate the PCBs loads avoided, along with estimates of the PCBs loads avoided since 2002 due to these ongoing efforts by the City of Palo Alto Utilities (CPAU) and Silicon Valley Power (SVP) are provided in Tables 5.1 and 5.2, respectively. These two utilities are the only municipally-owned electrical utilities in the Santa Clara Valley. Since 2002, due to the ongoing municipal utility maintenance programs and system upgrades, these utilities have removed more than 1,500 pieces of potentially PCBs-containing OFEE (i.e., equipment purchased and installed prior to 1985) that contained between 20 and 180 kg of PCBs. These actions have avoided approximately 100 to 900 mg/yr of PCBs loads in stormwater to the Bay. During MRP 3.0 to date, these utilities have removed 172 pieces of OFEE that contained between 3.5 and 18 kg of PCBs, and avoided 17 to 90 mg/yr of PCBs loads in stormwater to the Bay.

Table 5.1. Summary of City of Palo Alto Utility (CPAU) removal of potentially PCBs-containing oil-filled electrical equipment (OFEE)[a] since 2002 and associated PCBs loads to stormwater avoided.

Year Removed	Equipment Type	kVA rating	Equipment Counts	Mass of Oil (Kg)	PCBs in Oil (g)		PCBs Loads Avoided (mg/yr)	
					Min	Max	Min	Max
2002 - June 2022 (i.e., Prior to MRP 3.)	Padmount Single Phase Transformer	15	1	136	7	68	0.03	0.34
		25	8	1,635	82	816	0.41	4.08
		37.5	5	1,022	51	510	0.26	2.55
		50	2	477	24	238	0.12	1.19
	Padmount Three Phase Transformer	75	15	7,665	383	3,825	1.92	19.13
		112.5	11	6,371	319	3,179	1.59	15.90
		150	18	13,798	690	6,885	3.45	34.43
		225	13	8,858	443	4,420	2.21	22.10
		300	15	12,009	600	5,993	3.00	29.96
		500	8	7,359	368	3,672	1.84	18.36
		750	10	12,094	605	6,035	3.02	30.18
		1000	7	9,182	459	4,582	2.30	22.91
		1500	5	8,006	400	3,995	2.00	19.98
	Poletop Transformer	5	7	119	6	60	0.03	0.30
		7.5	2	51	3	26	0.01	0.13
		10	37	1,261	63	629	0.32	3.15
		15	147	7,512	376	3,749	1.88	18.74
		25	282	19,215	961	9,588	4.80	47.94
		37.5	86	7,325	366	3,655	1.83	18.28
		50	58	4,940	247	2,465	1.23	12.33
		75	51	5,213	261	2,601	1.30	13.01
		100	13	1,993	100	995	0.50	4.97
		167	19	3,560	178	1,777	0.89	8.88
		250	3	613	31	306	0.15	1.53
		500	3	715	36	357	0.18	1.79
	Underground Commercial Distribution Transformer	75	1	954	48	476	0.24	2.38
		112.5	1	784	39	391	0.20	1.96
		150	6	4,804	240	2,397	1.20	11.99
		167	2	1,669	83	833	0.42	4.17

Year Removed	Equipment Type	kVA rating	Equipment Counts	Mass of Oil (Kg)	PCBs in Oil (g)		PCBs Loads Avoided (mg/yr)	
					Min	Max	Min	Max
		225	5	4,344	217	2,168	1.09	10.84
		300	6	5,724	286	2,856	1.43	14.28
		500	4	4,361	218	2,176	1.09	10.88
	Underground Residential Distribution Transformer	15	7	477	24	238	0.12	1.19
		25	29	4,940	247	2,465	1.23	12.33
		37.5	9	1,840	92	918	0.46	4.59
		45	1	204	10	102	0.05	0.51
		50	55	11,243	562	5,610	2.81	28.05
		75	7	1,550	78	774	0.39	3.87
		100	7	1,550	78	774	0.39	3.87
		167	1	341	17	170	0.09	0.85
	Subtotal 2002-June 2022		***967***	***185,913***	***9,296***	***92,771***	***46***	***464***
FY 22-23	Padmount Three Phase Transformer	150	1	767	38	383	0.19	1.91
		300	1	801	40	400	0.20	2.00
		500	1	920	46	459	0.23	2.30
	Poletop Transformer	10	2	68	3	34	0.02	0.17
		15	2	102	5	51	0.03	0.26
		25	9	613	31	306	0.15	1.53
		50	1	85	4	43	0.02	0.21
	Underground Commercial Distribution Transformer	225	1	869	43	434	0.22	2.17
	Underground Residential Distribution Transformer	15	1	68	3	34	0.02	0.17
		50	1	204	10	102	0.05	0.51
	Subtotal FY 22-23		***20***	***4,497***	***225***	***2,244***	***1.12***	***11***
FY 23-24	Poletop Transformer	10	1	34	2	17	0.01	0.09
		15	1	51	3	26	0.01	0.13
		25	6	409	20	204	0.10	1.02
		50	1	85	4	43	0.02	0.21
	Underground Residential Distribution Transformer	25	2	341	17	170	0.09	0.85
	Subtotal FY 23-24		***11***	***920***	***46***	***459***	***0.23***	***2.30***

Year Removed	Equipment Type	kVA rating	Equipment Counts	Mass of Oil (Kg)	PCBs in Oil (g)		PCBs Loads Avoided (mg/yr)	
					Min	Max	Min	Max
FY24-25	PM1=Padmount Single Phase	37.5	1	204	10	102	0.05	0.51
	PM3=Padmount Three Phase	500	1	920	46	459	0.23	2.30
	PT=Poletop	10	1	34	2	17	0.01	0.09
		15	18	920	46	459	0.23	2.30
		25	14	954	48	476	0.24	2.38
		37.5	8	681	34	340	0.17	1.70
		50	2	170	9	85	0.04	0.43
	URD=Underground Residential Distribution	37.5	1	204	10	102	0.05	0.51
	Subtotal FY 24-25		***46***	***4,088***	***204***	***2,040***	***1***	***10***
	Totals Since 2002		**1,044**	**195,418**	**9,771**	**97,514**	**49**	**488**

[a] Potentially PCBs-containing oil-filled electrical equipment include all equipment purchased and/or installed prior to 1985.

[b] Measured PCBs concentrations were used to calculate the PCBs mass in oil removed, when available. Assumed PCBs concentrations ranging from 50 to 499 mg/kg were used to calculate the minimum and maximum mass of PCBs in OFEE if measured PCBs concentrations were not available.

Table 5.2. Summary of Silicon Valley Power (SVP) removal of potentially PCBs-containing oil-filled electrical equipment (OFEE)[a] since 2002 and associated PCBs loads to stormwater avoided.

Year Removed	Equipment Type	kVA rating	Equipment Counts	Mass of Oil (Kg)	PCBs in Oil (g)		PCBs Loads Avoided (mg/yr)	
					Min	Max	Min	Max
2002-2022	PM1=Padmount Single Phase	37.5	2	307	14	106	0.07	0.53
		50	4	954	48	476	0.24	2.4
		75	1	273	14	136	0.07	0.68
	PM3=Padmount Three Phase	112.5	44	26,880	1,373	13,212	6.9	66
		225	33	31,479	1,574	15,708	7.9	79
		300	7	6,672	334	3,330	1.7	17
		500	12	10,970	522	4,759	2.6	24
		750	7	6,403	320	3,195	1.6	16
		1000	15	13,287	664	6,630	3.3	33
		1500	9	14,411	721	7,191	3.6	36
	PT=Poletop	10	4	136	7	68	0.03	0.34
		15	56	2,812	153	1,369	0.76	7
		25	108	4,492	475	2,347	2.4	12
		37.5	44	4,497	223	2,197	1.1	11
		50	33	2,708	203	1,312	1.0	6.6
		75	28	2,862	140	1,379	0.70	6.9
		100	34	5,570	307	2,579	1.5	13
		167	1	187	0	0	0	0
	URD=Underground Residential Distribution	100	3	664	33	332	0.17	1.7
	2002-2022 Total		***445***	***135,566***	***7,124***	***66,326***	***36***	***332***
2022-23	PT=Poletop	37.5	1	102	5	51	0.03	0.26
	22-23 Total		***1***	***102***	***5***	***51***	***0.03***	***0.26***
2023-24	Padmount Vacuum Switch		2	1,281	0	0	0.00	0.00
	PM3=Padmount Three Phase	112.5	4	2,453	184	1,010	0.92	5.1
		225	7	6,677	754	3,323	3.8	17
		1500	1	1,601	80	799	0.40	4.0
	PT=Poletop	15	1	51	3	26	0.01	0.13
		25	1	41	2	20	0.01	0.10
		37.5	6	613	11	103	0.06	0.52
		50	1	85	4	43	0.02	0.21
		75	3	307	15	153	0.08	0.77
	23-24 Total		***26***	***13,110***	***1,053***	***5,477***	***5.3***	***27***

Year Removed	Equipment Type	kVA rating	Equipment Counts	Mass of Oil (Kg)	PCBs in Oil (g)		PCBs Loads Avoided (mg/yr)	
					Min	Max	Min	Max
2024-25	Oil Switch		2	1,363	64	640	0.32	3.20
	Padmount Vacuum Switch		2	1,281	68	681	0.34	3.4
	PM3=Padmount Three Phase	112.5	11	6,746	446	1,823	2.2	9.1
		225	5	4,770	963	963	4.8	4.8
		300	2	1,898	95	947	0.5	4.7
		500	3	2,831	142	1,413	0.7	7.1
	PT=Poletop	15	12	613	24	231	0.1	1.2
		25	15	613	26	228	0.1	1.1
		37.5	6	613	48	277	0.2	1.4
		50	5	426	55	169	0.3	0.8
		75	4	409	20	204	0.1	1.0
		100	1	153	8	77	0.04	0.4
	24-25 Total		**68**	***21,715***	***1,960***	***7,653***	***10***	***38***
Totals Since 2002			**540**	**170,493**	**10,142**	**79,508**	**51**	**398**

[a] Potentially PCBs-containing oil-filled electrical equipment include all equipment purchased and/or installed prior to 1985.

[b] Measured PCBs concentrations were used to calculate the PCBs mass in oil removed, when available. Assumed PCBs concentrations ranging from 50 to 499 mg/kg were used to calculate the minimum and maximum mass of PCBs in OFEE if measured PCBs concentrations were not available.

SECTION 6 - MANAGING PCBS DURING BUILDING DEMOLITION

This section describes the Program for Managing PCBs Containing Materials and Wastes during Building Demolition that provides load reduction benefits for PCBs, demonstrates control measures implemented by Co-permittees during MRP 3.0 to date (i.e., through FY 2024-25), and includes all supporting data required to calculate the PCBs loads avoided.

CONTROL MEASURE DESCRIPTION

Co-permittees developed and began implementing PCBs in Building Materials control programs by July 1, 2019, as required by MRP 2.0 Provision C.12.f, and are continuing to implement these programs in MRP 3.0. The programs include the following processes:

- Municipalities inform applicable demolition permit applicants that their projects are subject to the program for managing materials with PCBs, necessitating, at a minimum, an initial screening for priority PCBs–containing materials.
- For every applicable demolition project, applicants implement the BASMAA protocol for identifying building materials with PCBs concentrations of 50 ppm and then complete and submit a version of BASMAA's model "PCBs Screening Assessment Form" (Screening Form) or equivalent to the municipality.
- The municipality reviews the Screening Form to make sure it is filled out correctly and is complete and works with the applicant to correct any deficiencies.
- The municipality then issues the demolition permit or equivalent, according to its procedures.
- The municipality sends each completed Screening Form for applicable structures and any supporting documents to its countywide program. The countywide program compiles the forms and works with the other MRP countywide programs to manage and evaluate the data, and to assist Permittees with associated MRP reporting requirements.

Beginning July 1, 2023, Co-permittees made updates to the PCBs in Building Materials control programs process as required by MRP 3.0 to include the following:

- The municipalities require demolition contractors of applicable structures containing building materials with PCBs concentrations of 50 ppm or greater to provide notification to the municipalities, the Water Board, and U.S. EPA at least one week before any demolition is to occur.
- The municipalities have enhanced their construction site control programs to inspect construction sites of applicable structures containing building materials with PCBs concentrations of 50 ppm or greater during demolition, to minimize migration of PCBs into the MS4.
- For demolished Applicable Structures that had building materials with PCBs concentrations ≥50 ppm, the municipalities are requiring verification that materials from demolished buildings were appropriately managed and disposed appropriately according to state/federal regulations.

Applicants that determine, through implementation of the BASMAA protocol, that PCBs exist in priority building materials must follow applicable federal and state laws for handling and disposal. This may include reporting to U.S. Environmental Protection Agency (USEPA), the San Francisco Bay Regional Water Quality Control Board, and the California Department of Toxic Substances Control (DTSC). These agencies may require additional sampling and abatement of PCBs.

Depending on the approach for sampling and removing building materials containing PCBs, the applicant may need to notify or seek advance approval from USEPA before building demolition. Even in circumstances where advance notification to or approval from USEPA is not required before the demolition activity, the disposal of PCBs waste is regulated under Toxic Substances Control Act (TSCA). For example, TSCA requires manifesting the waste for transportation and disposal. (See 40 Code of Federal Regulations (CFR) 761 and 40 CFR 761, Subpart K.) TSCA-regulated does not equate solely to materials containing PCBs at or above 50 ppm. There are circumstances in which materials containing PCBs below 50 ppm are subject to regulation under TSCA. (See 40 CFR 761.61(a)(5)(i)(B)(2)(ii).). 40 CFR 761.3 provides information relative to disposal of PCBs-containing building materials, including definitions of PCBs bulk product wastes and PCBs remediation wastes. Further information is provided in a memorandum "PCB Bulk Product Waste Reinterpretation" from the Office of Resource Conservation and Recovery, EPA . Additionally, the disposal of PCBs waste is subject to California Code of Regulations (CCR) Title 22, Section Division 4.5, Chapter 12, Standards Applicable to Hazardous Waste Generators.

Control Measure Implementation

Continuation of MRP 2.0 Actions for Load Reduction Credit

All Co-permittees have continued to implement their PCBs in Building Materials control programs through the present date. During MRP 2.0, Co-permittees were credited with 627 g/yr PCBs load reduction as a result of implementing these programs. Co-permittees provided all required data on the implementation of these programs during MRP 2.0 with the Program's Annual Report submitted in September 2022 (SCVURPPP 2022). This information has included the following data: (a) number of applicable structures that applied for a demolition permit during the reporting year, and (b) a running list of the applicable samples from structures that applied for a demolition permit since the start of the PCBs control protocol that had material(s) with PCBs at 50 ppm or greater, with the address, demolition date, and brief description of PCBs control method(s) used. **Attachment B** provides all the data gathered during MRP 2.0 to document implementation of this program. These data demonstrate that Co-permittees continue to implement their building demolition programs consistent with the load reduction credits that were received during MRP 2.0.

Implementation During MRP 3.0 to Date

Attachment B provides the countywide data compiled through FY 2024-25 to document ongoing implementation of this program in the Santa Clara Valley. Additional information on inspections conducted and hazardous waste manifests received are reported in Co-permittees' Annual Reports for FY 2024-25.

SECTION 7 - MERCURY COLLECTION AND RECYCLING

This section describes the Program for Mercury Collection and Recycling that provides load reduction benefits for mercury, demonstrates control measures implemented by Co-permittees during MRP 3.0 to date (i.e., through FY 24-25), and includes all supporting data required to calculate the mercury loads avoided.

CONTROL MEASURE DESCRIPTION

Many types of devices and equipment (e.g., thermometers, switches, and fluorescent lamps) contain substantial amounts of mercury. The Mercury Collection and Recycling control measure includes programs to promote, facilitate, and/or participate in collection and recycling of mercury containing consumer products, devices, and equipment. Management of these mercury-containing devices during disposal reduces and prevents the release of mercury into the environment.

Control measures currently implemented by Co-permittees that address the potential for mercury releases include: 1) the support of policies and laws that reduce the mass of mercury in specific devices/equipment; and 2) the implementation of recycling programs that reduce the risk of mercury from being released during the end-of-life of these devices and equipment.

The Mercury Device Recycling Programs implemented by Co-permittees include three types of programs that promote and facilitate the collection and recycling of mercury-containing devices and products:

- Permittee-managed household hazardous waste (HHW) drop-off facilities and curbside or door-to-door pickup;
- Private business take-back and recycling programs (e.g., Home Depot); and,
- Private waste management services for small and large businesses.

CONTROL MEASURE IMPLEMENTATION

CONTINUATION OF MRP 2.0 ACTIONS FOR LOAD REDUCTION CREDIT

Co-permittees have conducted mercury collection and recycling as described above since MRP 1.0 and even earlier. However, because this control measure was not a requirement under MRP 2.0, Co-permittees did not receive mercury load reduction credits for these actions during MRP 2.0. The actions implemented during MRP 3.0 to date are described below.

IMPLEMENTATION DURING MRP 3.0 TO DATE

Collection/Recycling of Mercury-Containing Products, Devices, and Equipment

Co-permittees have continued to participate in the Santa Clara County Environmental Health Department's Household Hazardous Waste Program (HHW Program) during MRP 3.0 (i.e., FY 2022-23 - FY 2024-25) to reduce mercury in stormwater. The amount of mercury collected via these activities and the estimated mass of mercury collected during MRP 3.0 to date is reported in Table 7-1. The estimated mass of mercury collected is estimated 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.

Table 7.1. Estimated mercury mass collected by the Santa Clara County HHW Program since the start of MRP 3.0.

Fiscal Year (FY)	Mercury Containing Device/Equipment	Total Amount of Devices Collected	Estimated Mass of Mercury Collected (kg)
FY 2022-23	Fluorescent Lamps (linear feet)[a]	463,522	0.96
	CFLs (each)[b]	65,624	0.3
	Thermostats (pounds)[c,d]	115	0.61
	Thermometers (each)[e,f]	115	0.07
	Total Mass of Mercury Collected During FY 2022-23:		**1.94**
FY 2023-24	Fluorescent Lamps (linear feet)[a]	507,052	1.05
	CFLs (each)[b]	48,291	0.22
	Thermostats (pounds)[c,d]	90	0.48
	Thermometers (each)[e,f]	90	0.05
	Total Mass of Mercury Collected During FY 2023-24:		**1.80**
FY 2024-25	Fluorescent Lamps (linear feet)[a]	499,713	1.04
	CFLs (each)[b]	47,592	0.21
	Thermostats (pounds)[c,d]	107	0.57
	Thermometers (each)[e,f]	107	0.07
	Total Mass of Mercury Collected During FY 2023-24:		**1.88**
	Total Mass of Mercury Collected During MRP 3.0 to Date:		**5.62**

[a] 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.

[b] 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.

[c] Each thermostat recycled is assumed to contain approximately 4.0 g (04 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 05333 kg of mercury is recycled for every pound of thermostat recycled (1.333*04= 05333). Source: Average weight of thermostat obtained from retail websites - www.amazon.com.

[d] It is estimated that approximately 50 % of elemental mercury collected by household hazardous waste facilities is thermostats. Thermostats are shipped to the Thermostat Recycling Corporation for recycling. Fifty percent of 214 pounds is 107 pounds. Therefore, 107 pounds of thermostats were shipped in FY 24-25. Source: personal communication, Dermot Casey, San Mateo County Hazardous Materials Specialist, August 20, 2012.

[e] USEPA reports that glass mercury fever thermometers contain about 0.61 g (0061 kg) of mercury. Source: USEPA 2012. Thermometers. Available at http://www.epa.gov/mercury/thermometer-main.html. Accessed April 11, 2012.

[f] It is estimated that approximately 25 % of elemental mercury collected by household hazardous waste facilities is thermometers. Twenty-five percent of 214 pounds is approximately 54 pounds. Two thermometers equal one pound. Two thermometers per pound is equal to 107 thermometers. Therefore, 107 thermometers were shipped in FY 24-25. 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.

SECTION 8 - MERCURY AND PCBS LOADS REDUCED DURING MRP 3.0

Co-permittees in the Santa Clara Valley began implementing and accounting for PCBs and mercury control measures with the adoption of the PCBs and Mercury TMDLs. Enhanced control measure implementation throughout MRP 3.0 primarily focuses on: 1) conducting source investigation projects that will likely lead to referrals to the Water Board for further investigation and abatement, and/or identify properties contributing moderate PCBs to the MS4 for abatement; 2) implementation of green stormwater infrastructure and other treatment controls on both public and private property, and in the public ROW; 3) implementing other types of control measures in old industrial land use areas; 4) implementing a program to manage PCBs-containing joint caulking during bridge or roadway overpass rehabilitation or major repair; 5) reducing the release of PCBs from oil-filled electrical equipment; 6) continuing to implement a protocol to manage PCBs in building materials during demolition, and 7) continuing to collect and recycle mercury-containing products. In the 2026 Annual Report, Co-permittees will report the annual PCBs and mercury load reductions achieved due to implementation of these control measures each year of MRP 3.0.

APPROACH TO REPORTING PCBS AND MERCURY LOADS REDUCED

The data needed to calculate the loads reduced for each control measure are provided in Sections 2-7 of this report. These data include the total acres (and associated land-uses) addressed by each type of control measure. The methods used to calculate the loads reduced are consistent with the methodologies and data collection programs that were developed by BASMAA member agencies in consultation with the Regional Water Board, and in accordance with MRP provisions C.11.B.iii(1) and C.12.B.iii(1). These methods were fully described in the *Source Control Load Reduction Accounting for Reasonable Assurance Analysis* (BASMAA 2022), which was approved by the Regional Water Board's Executive Officer in Spring 2022 for use by Co-permittees during MRP 3.0.

Note: Due to the timing of MRP reporting, not all GSI facilities constructed during the current reporting year (FY) are reported in this document. As data become available, control measures implemented in FY 24-25 will be fully reported in future Annual Reports.

PCBS LOADS REDUCED

PCBs loads reduced for the control measured implemented in the Santa Clara Valley during MRP 3.0 will be reported in the 2026 Annual Report.

MERCURY LOADS REDUCED

Mercury loads reduced for the control measured implemented in the Santa Clara Valley during MRP 3.0 will be reported in the 2026 Annual Report.

SECTION 9 - REFERENCES

Bay Area Stormwater Management Agencies Association (BASMAA) (2022). Source Control Load Reduction Accounting for Reasonable Assurance Analysis. January 2022. Prepared for BASMAA by Geosyntec Consultants, Inc. and EOA, Inc.

Caltrans, 2024. Standard Operating Procedure (SOP) for Inspecting, Removing and Reporting Materials Containing Polychlorinated Biphenyls (PCBs) Prior to Demolition or Renovation of Structures. CTSW-OT-23-407.05.1. June 2023, revised January 2024.

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Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). (2023). *Urban Creeks Monitoring Report – Water Quality Monitoring – Water Year 2022 (October 2021 – September 2022)*. March 31, 2023.

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Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). (2024c). *Final-Revised Control Measure Plan to Reduce PCBs and Mercury in Urban Runoff from Old Industrial Areas*. September, 2024.

Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). (2025). *Urban Creeks Monitoring Report – Water Quality Monitoring – Water Year 2024 (October 2023 – September 2024)*. March 31, 2025.

Attachment A

Maps of all GSI/LID and Other Stormwater Treatment Controls built/installed in the Santa Clara Valley through FY 2024-2025

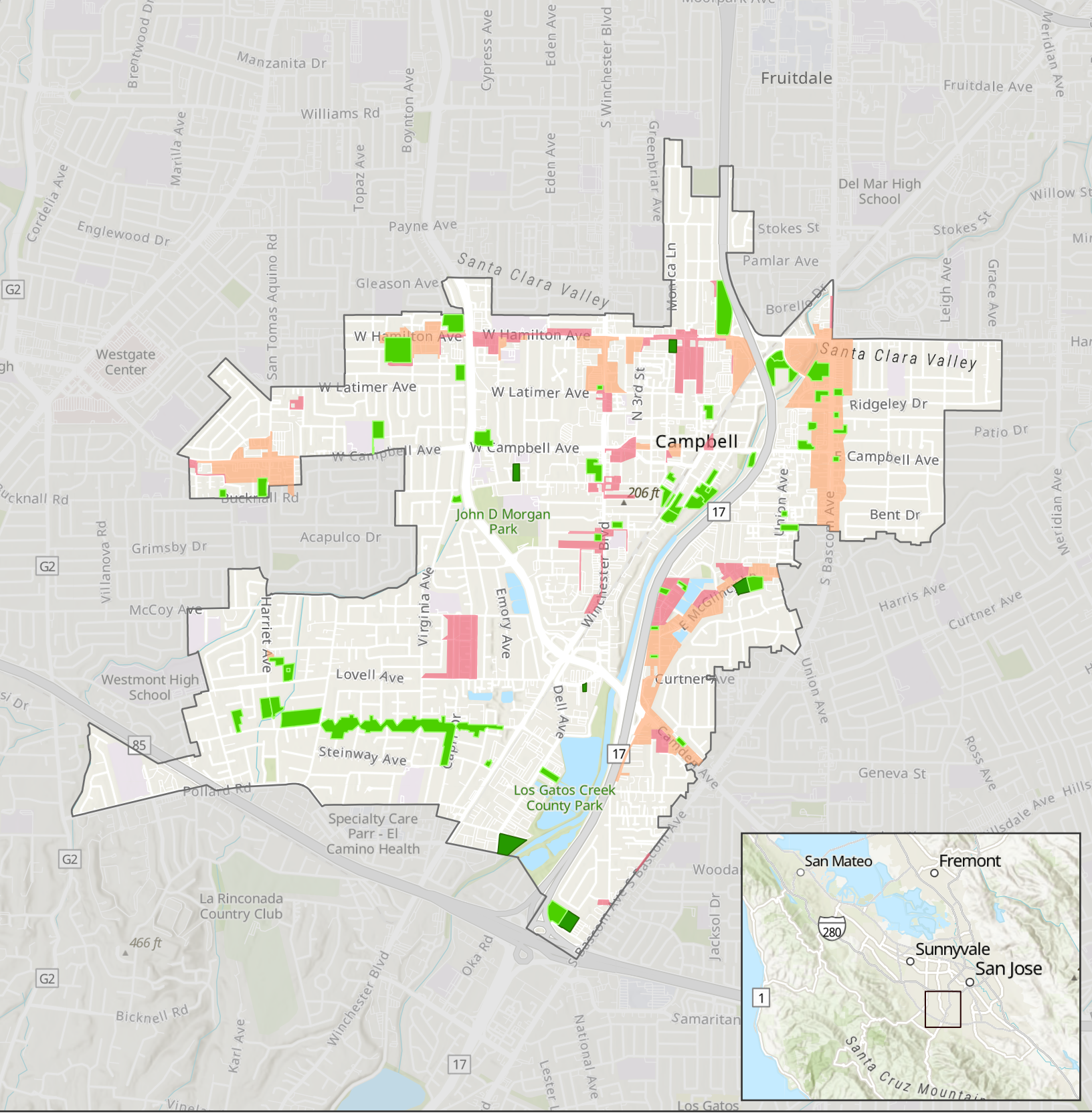


Figure A-1: GSI/LID and Other Stormwater Treatment Systems in Campbell

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 0.5 1 Mile

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

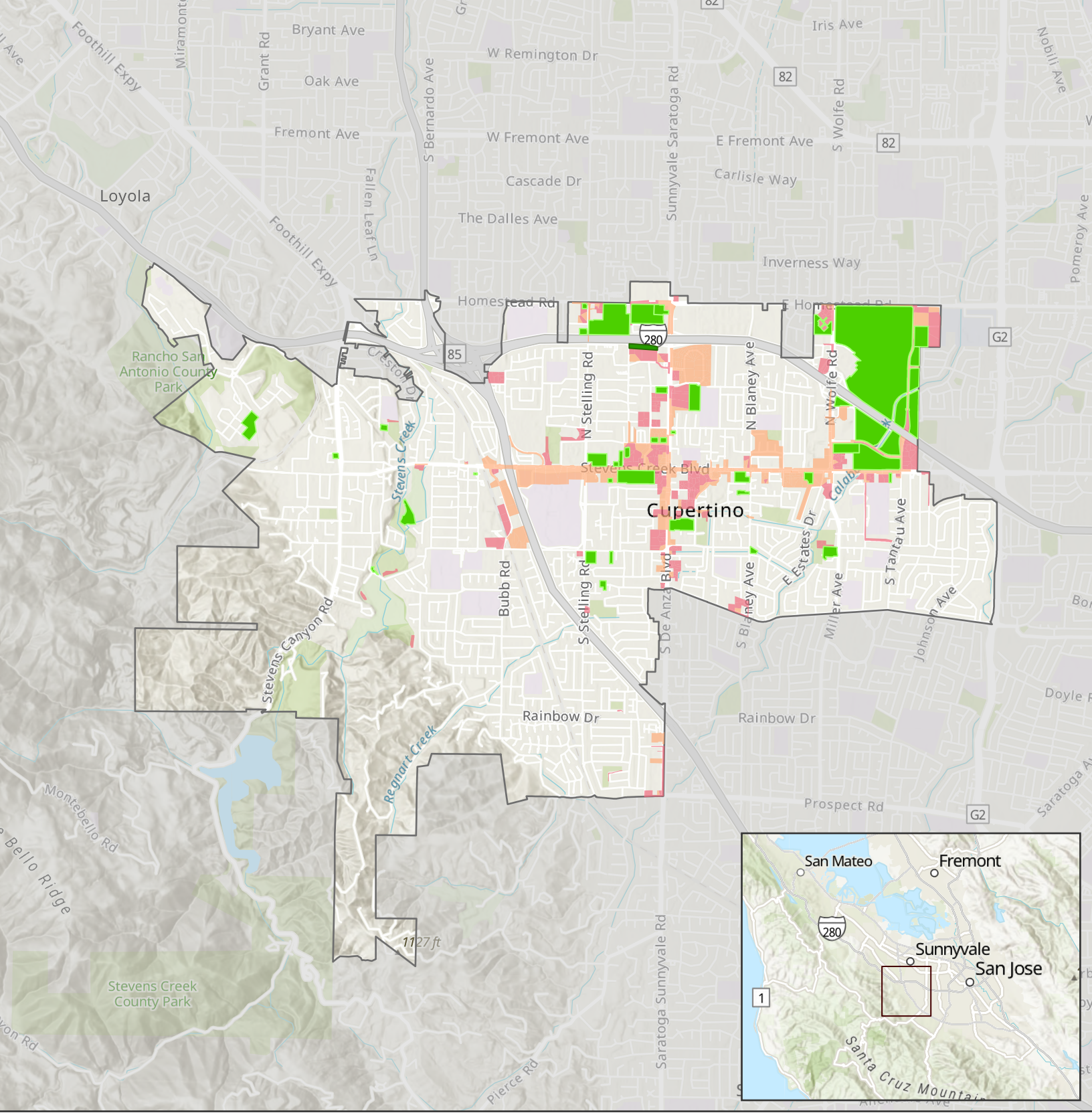


Figure A-2: GSI/LID and Other Stormwater Treatment Systems in Cupertino

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 0.5 1 Mile

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

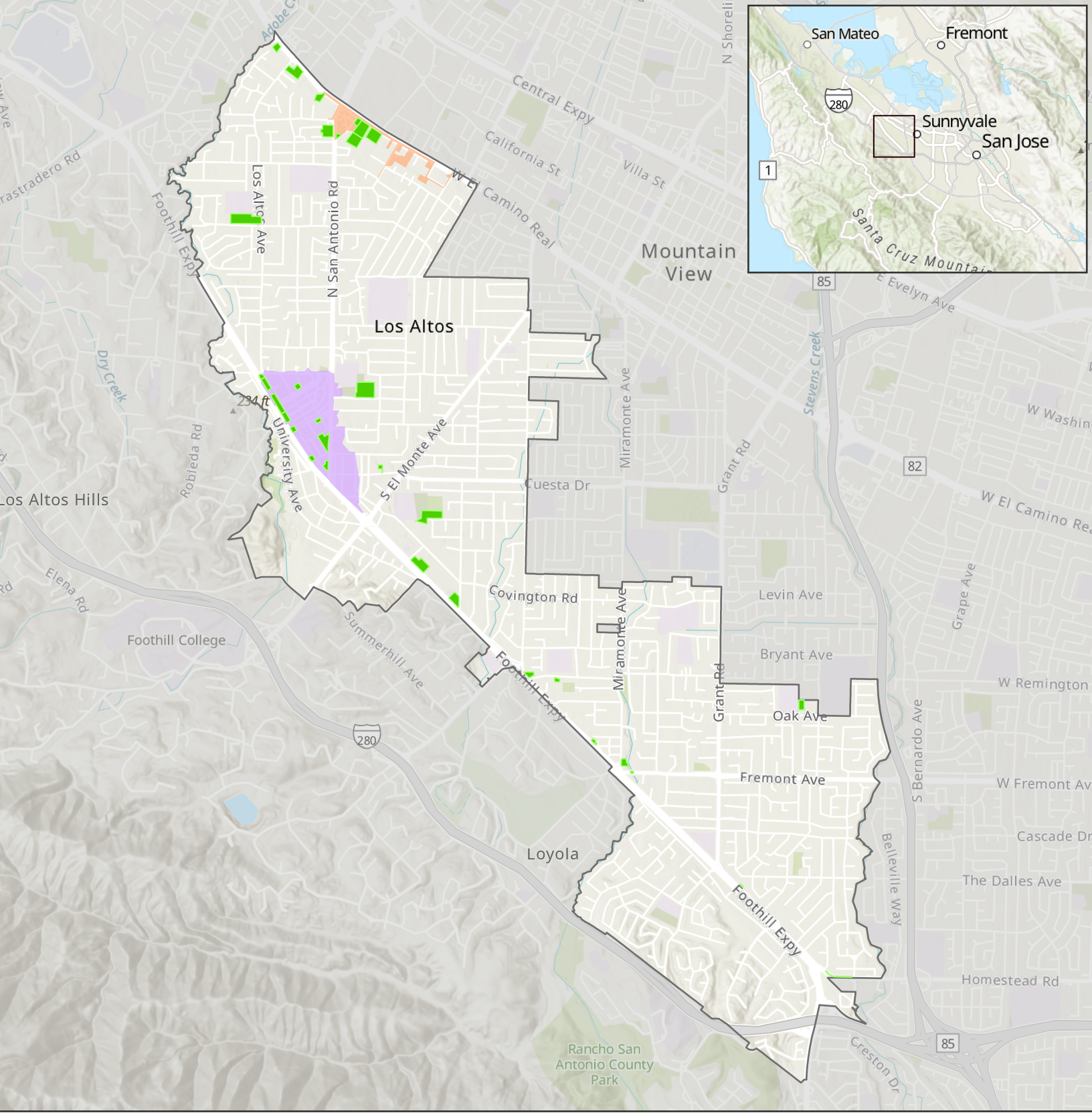


Figure A-3: GSI/LID and Other Stormwater Treatment Systems in Los Altos

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 0.5 1 Mile

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

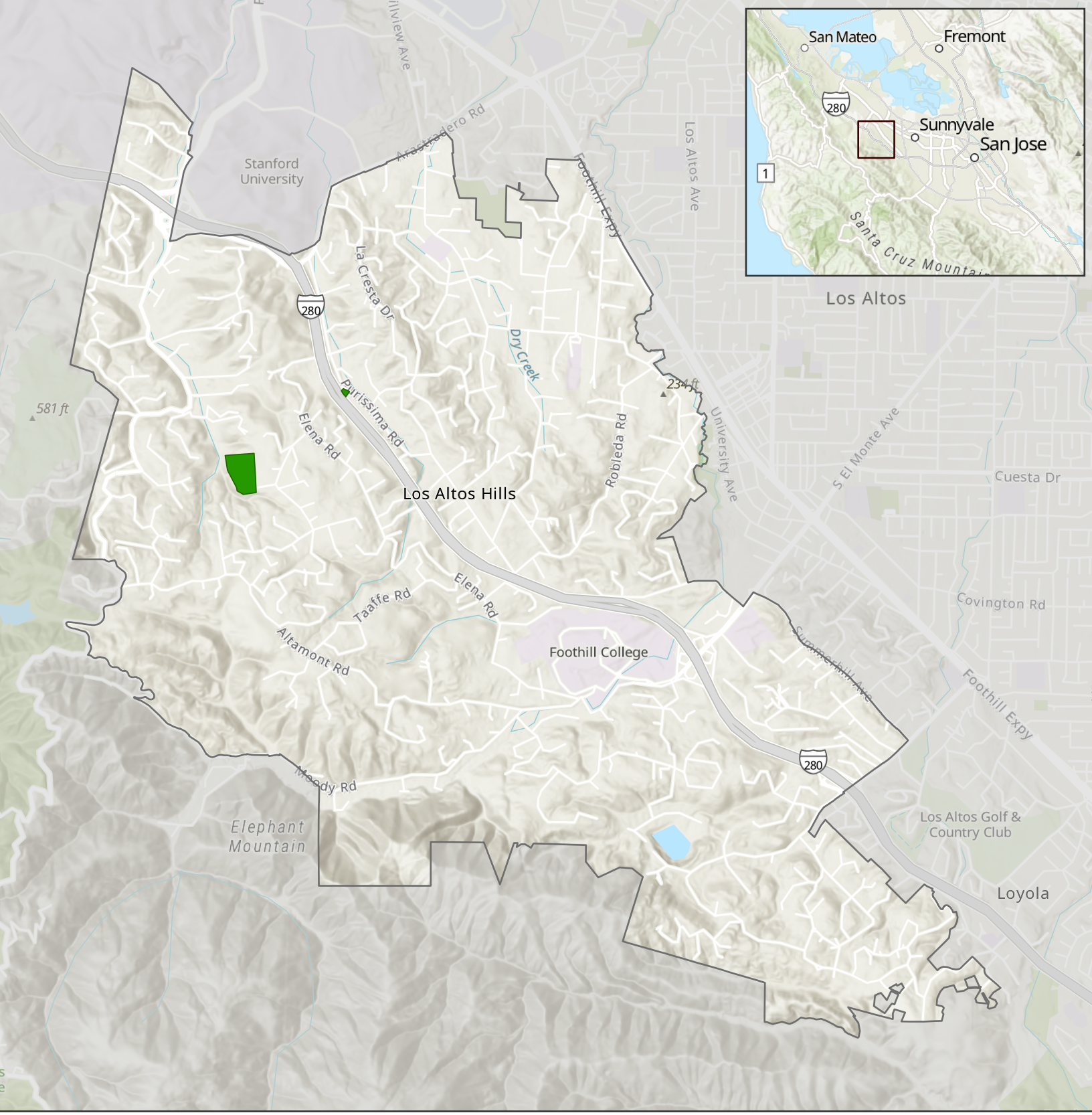


Figure A-4: GSI/LID and Other Stormwater Treatment Systems in Los Altos Hills

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- Town Boundary

0 0.5 1 Mile

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

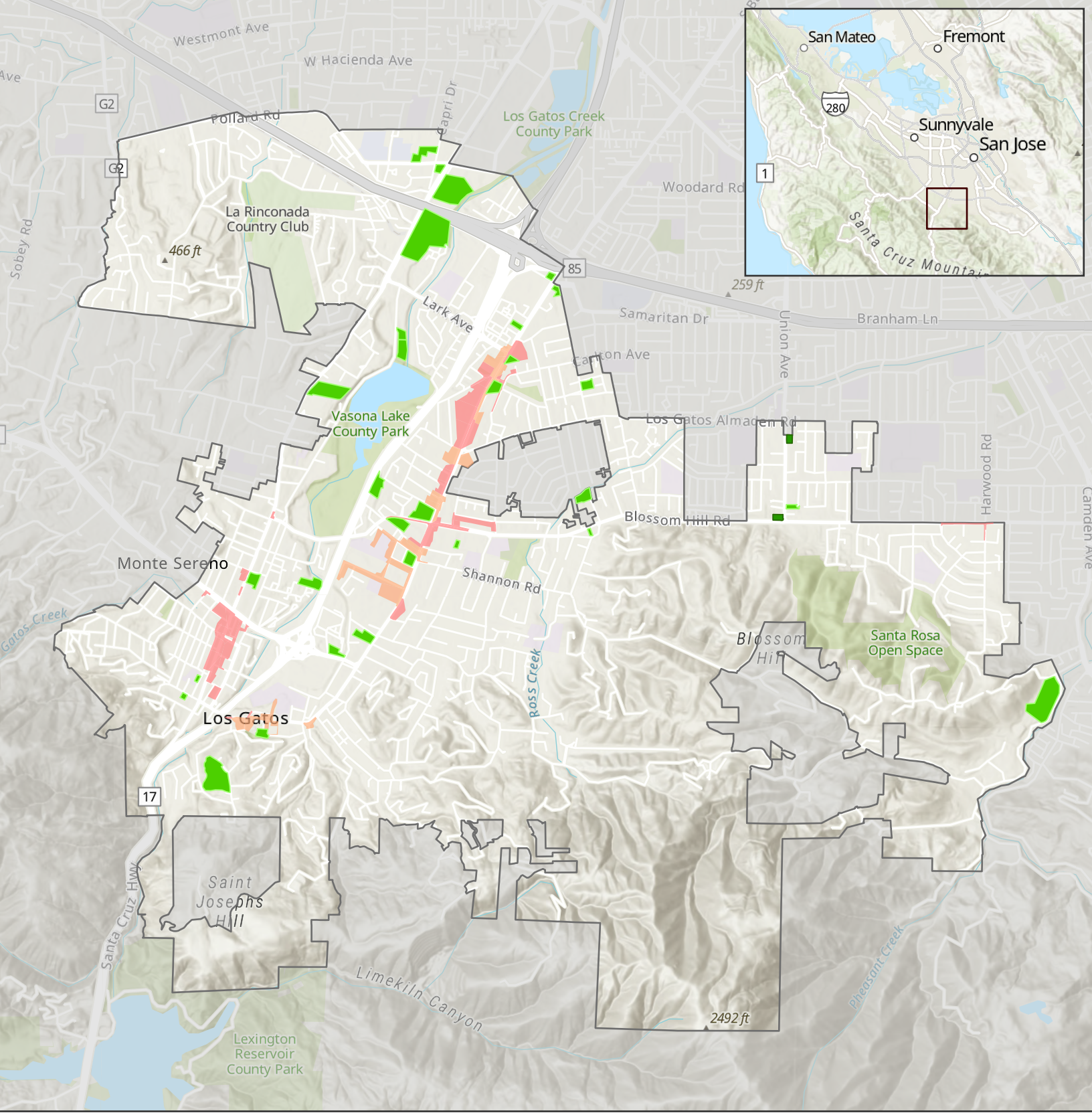


Figure A-5: GSI/LID and Other Stormwater Treatment Systems in Los Gatos

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- Town Boundary

0 0.5 1 Mile

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

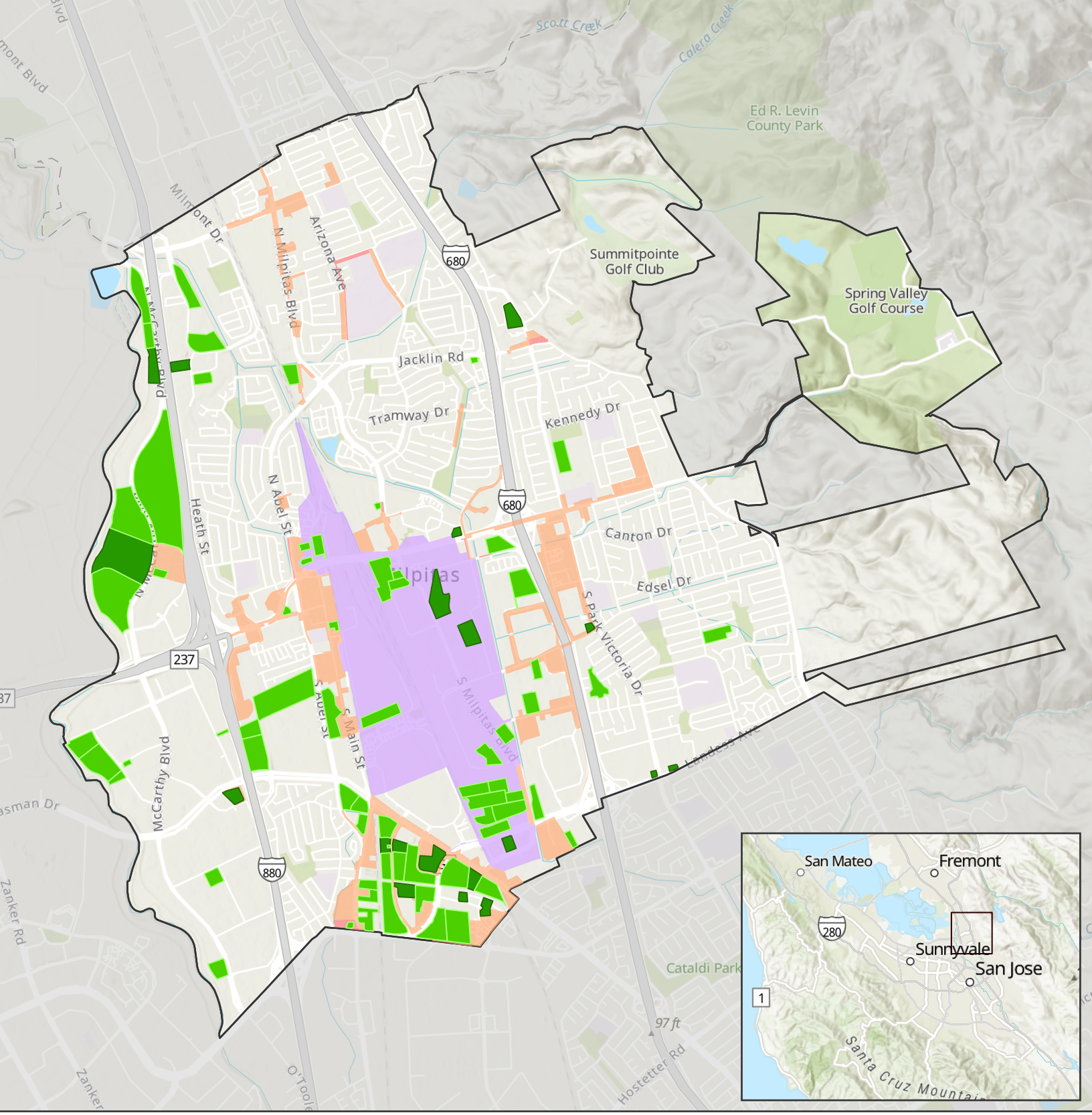


Figure A-6: GSI/LID and Other Stormwater Treatment Systems in Milpitas

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 0.5 1 Mile

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

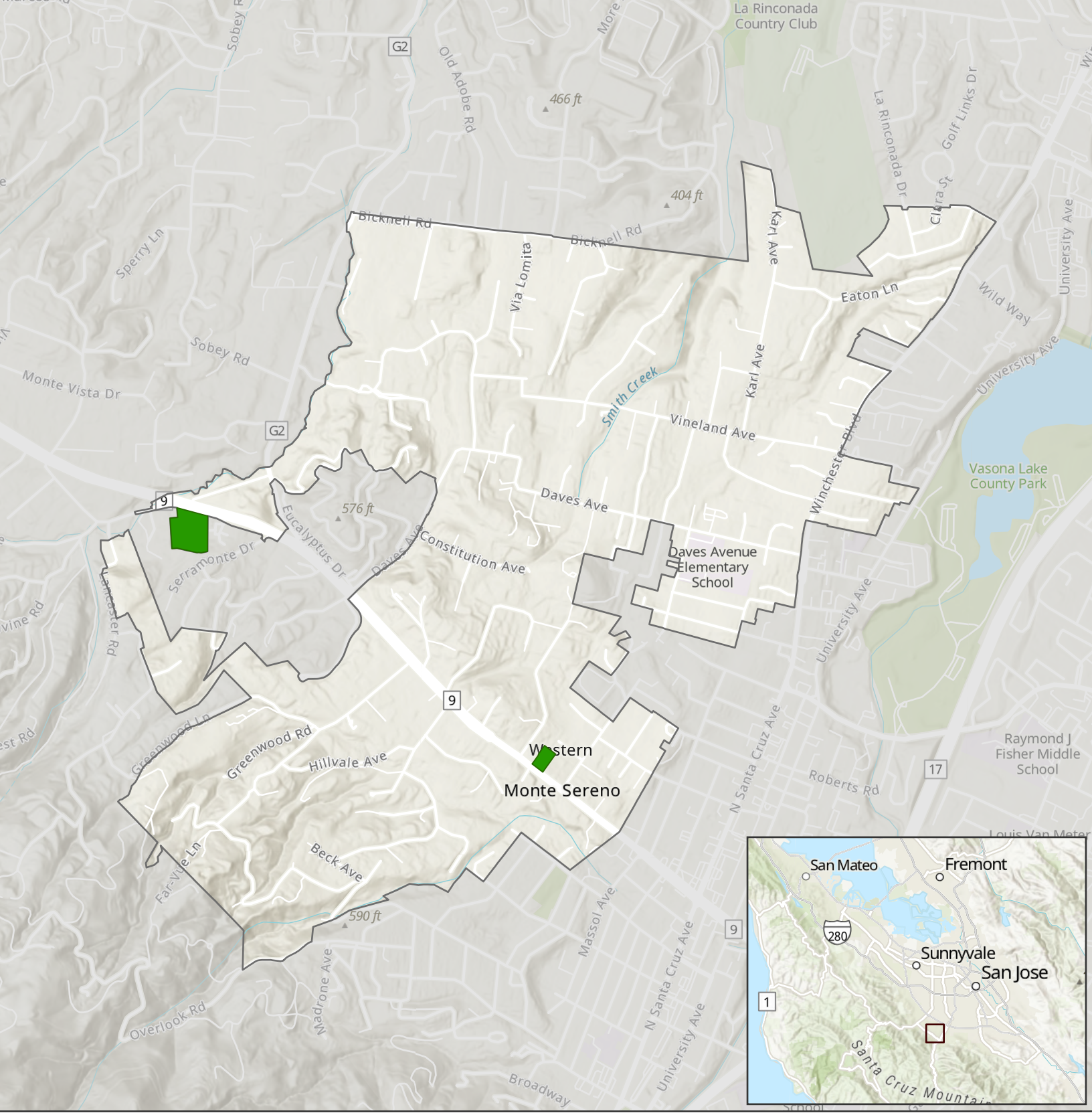


Figure A-7: GSI/LID and Other Stormwater Treatment Systems in Monte Sereno

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 0.25 0.5 Mile

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

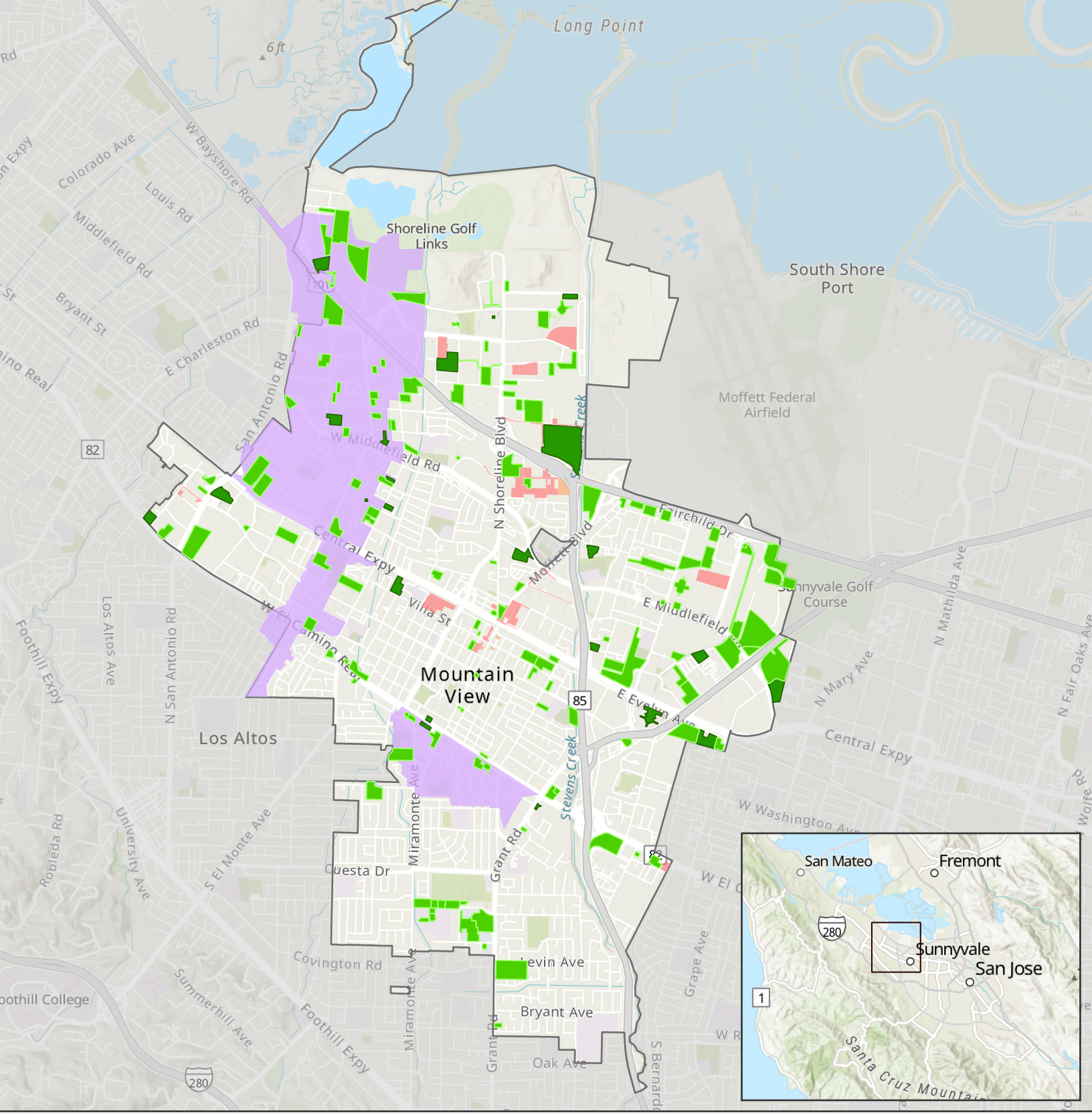


Figure A-8: GSI/LID and Other Stormwater Treatment Systems in Mountain View

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 0.5 1 Mile

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

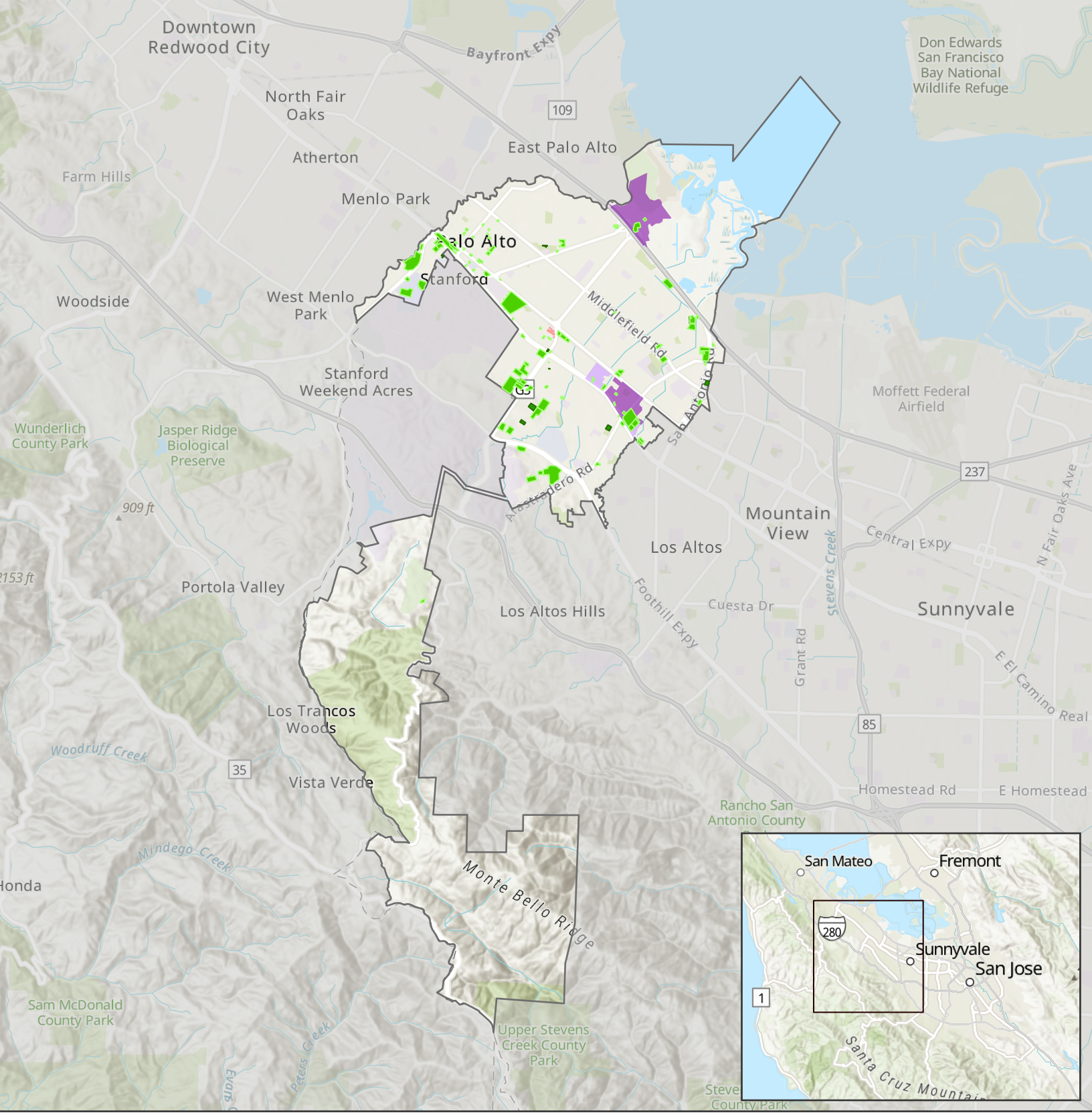


Figure A-9: GSI/LID and Other Stormwater Treatment Systems in Palo Alto

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 1.25 2.5 Miles

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

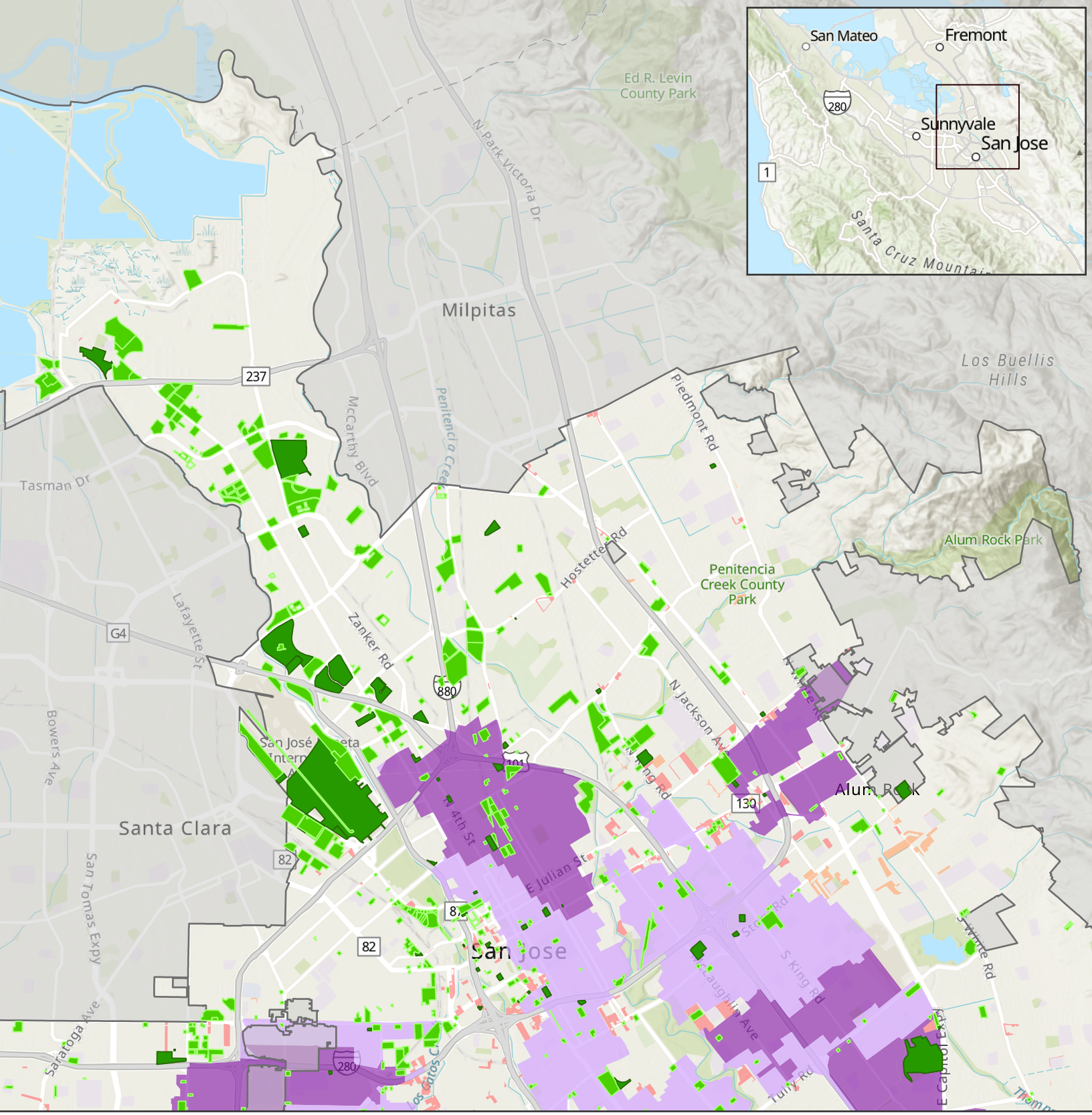


Figure A-10: GSI/LID and Other Stormwater Treatment Systems in San José - North

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 0.5 1 2 Miles

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

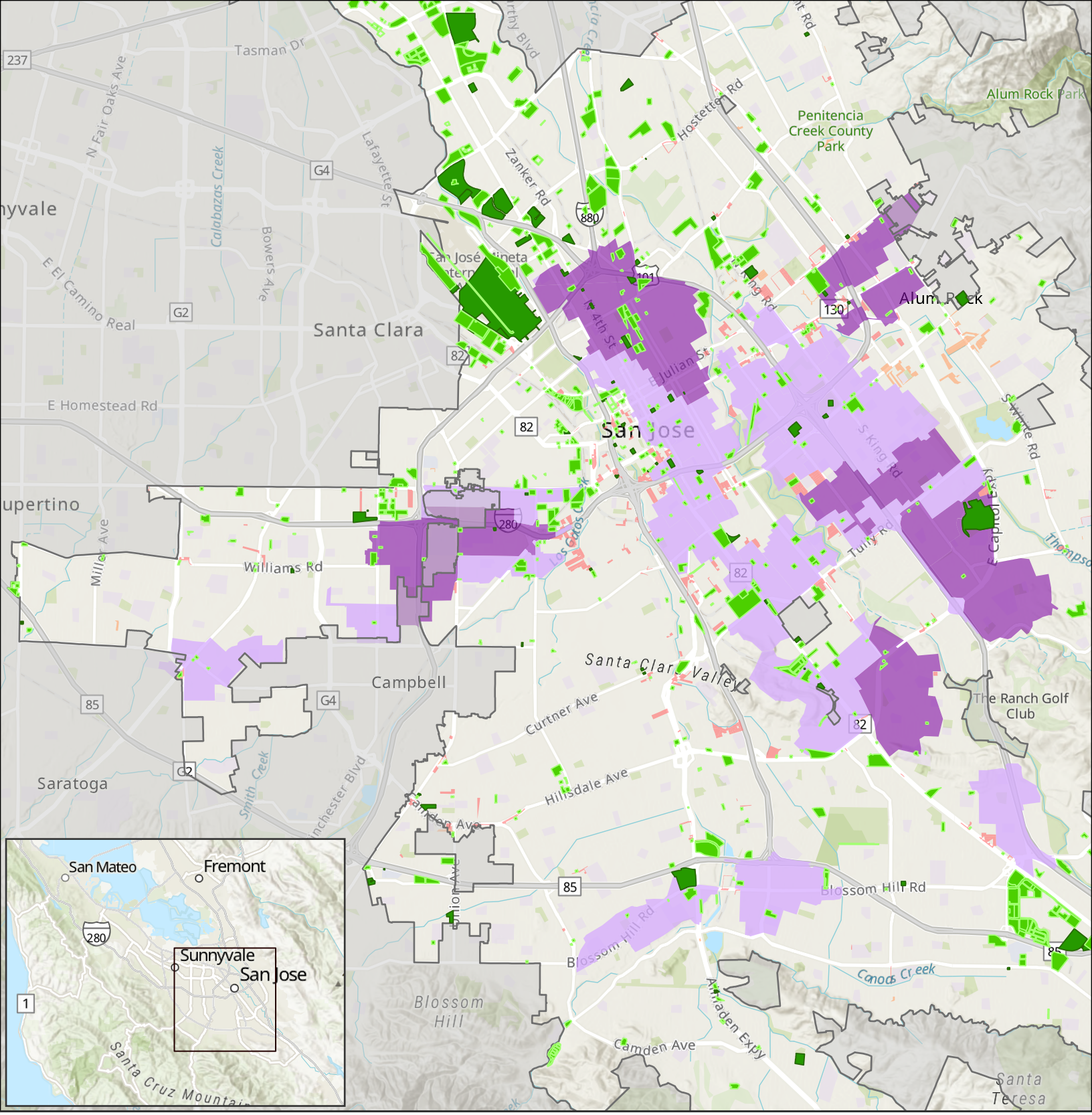


Figure A-11: GSI/LID and Other Stormwater Treatment Systems in San José - West

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

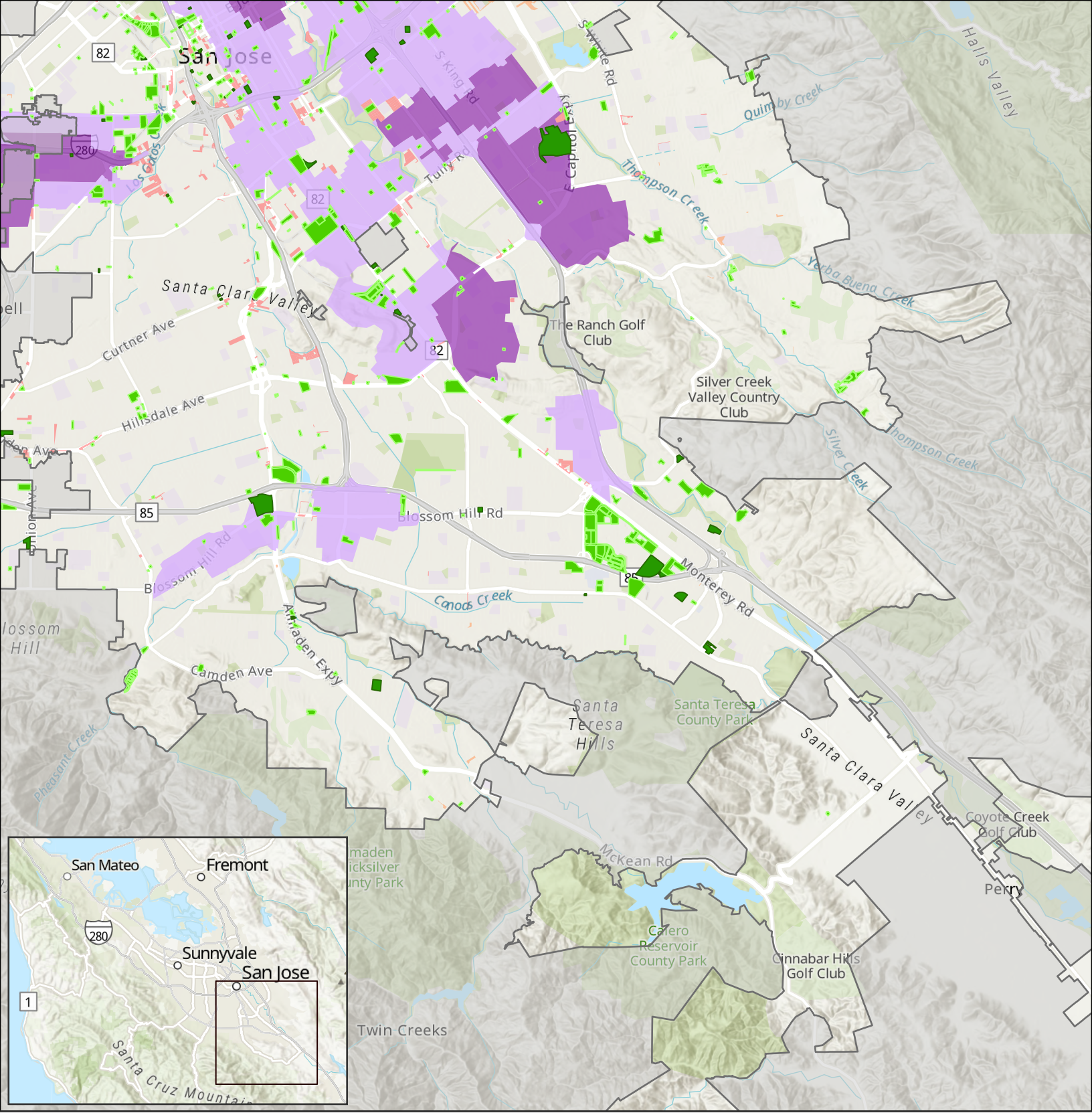


Figure A-12: GSI/LID and Other Stormwater Treatment Systems in San José - South

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 0.5 1 2 Miles

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

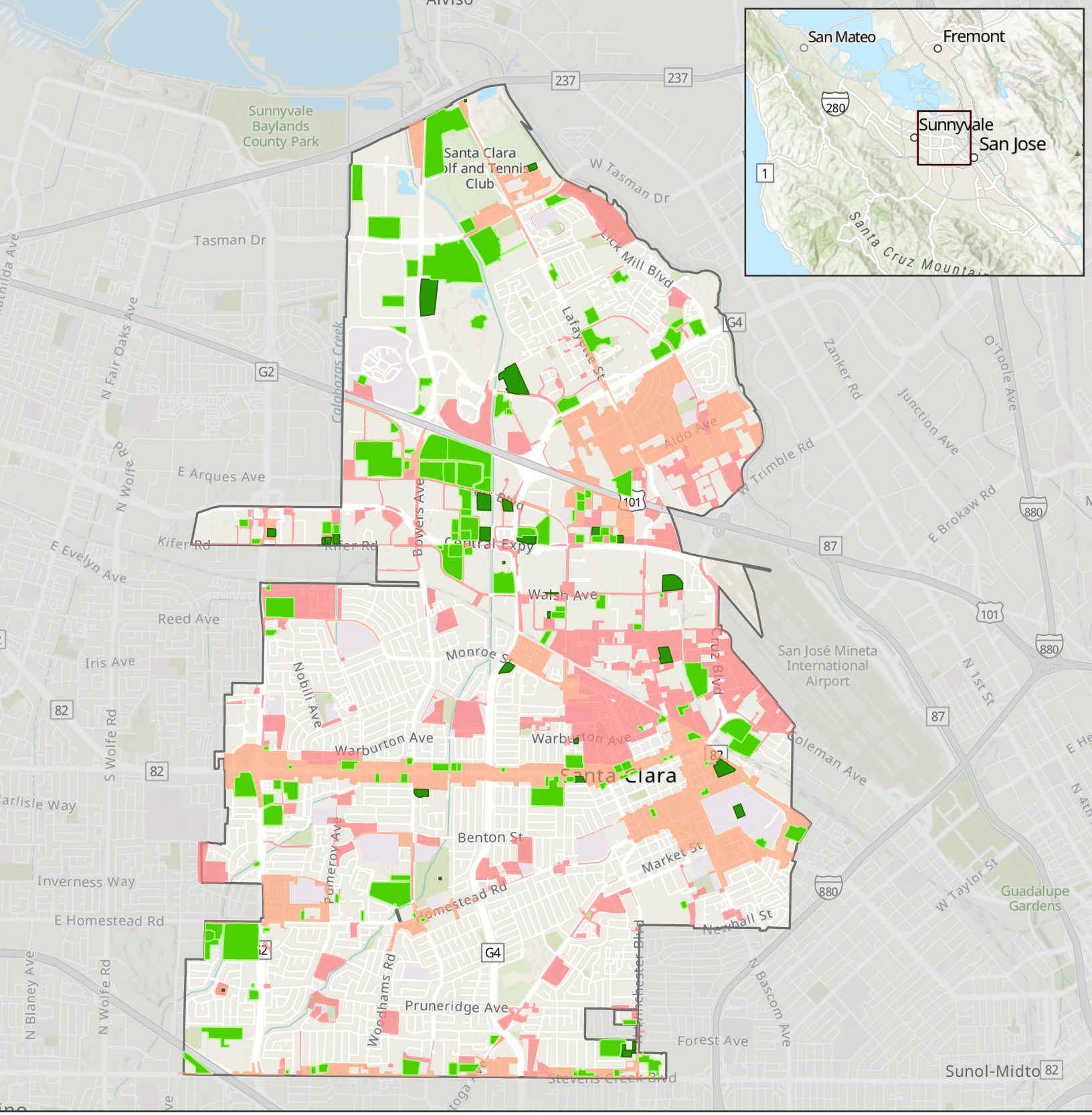


Figure A-13: GSI/LID and Other Stormwater Treatment Systems in Santa Clara

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 0.5 1 Mile

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

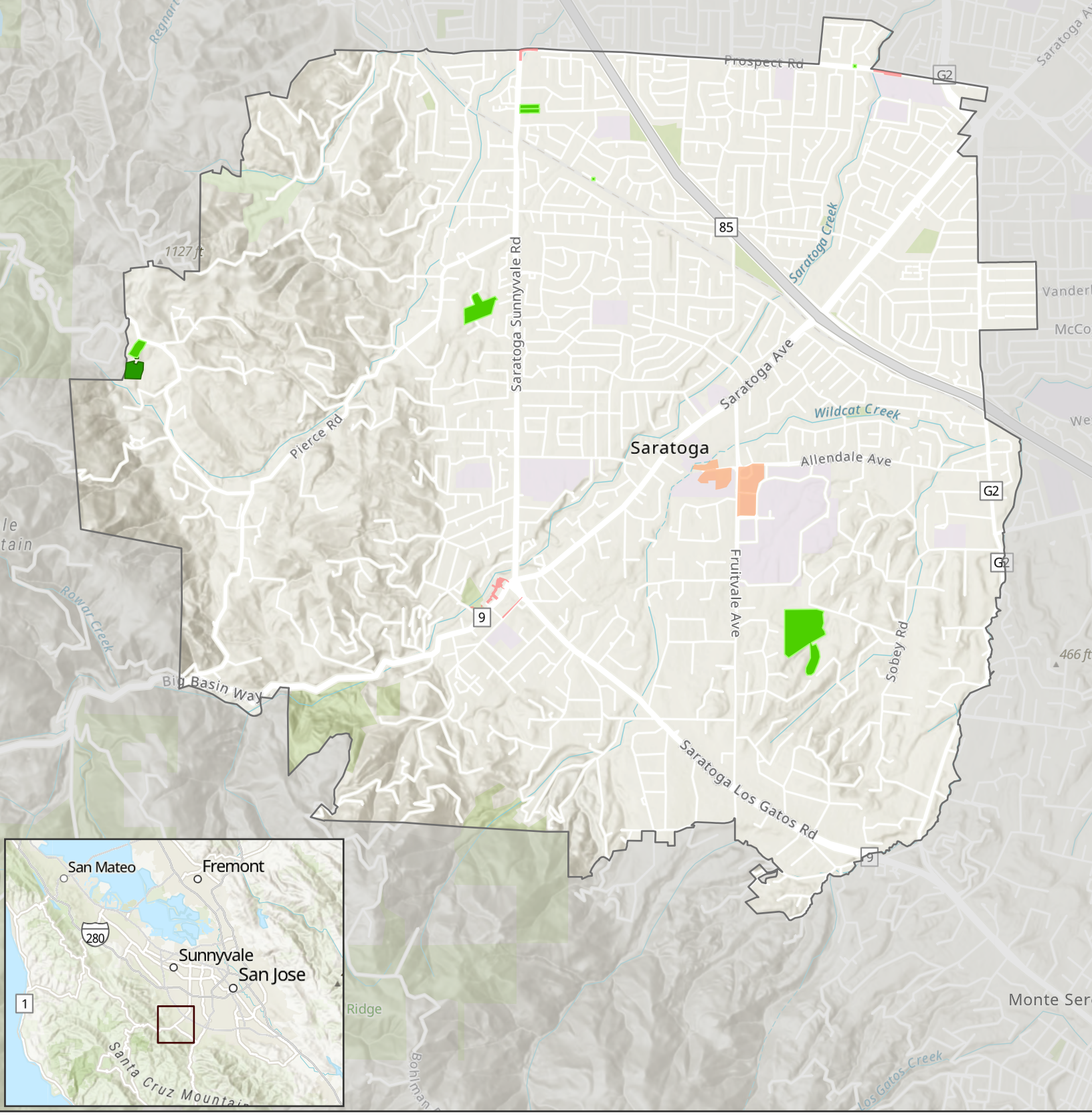


Figure A-14: GSI/LID and Other Stormwater Treatment Systems in Saratoga

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

0 0.5 1 Mile

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

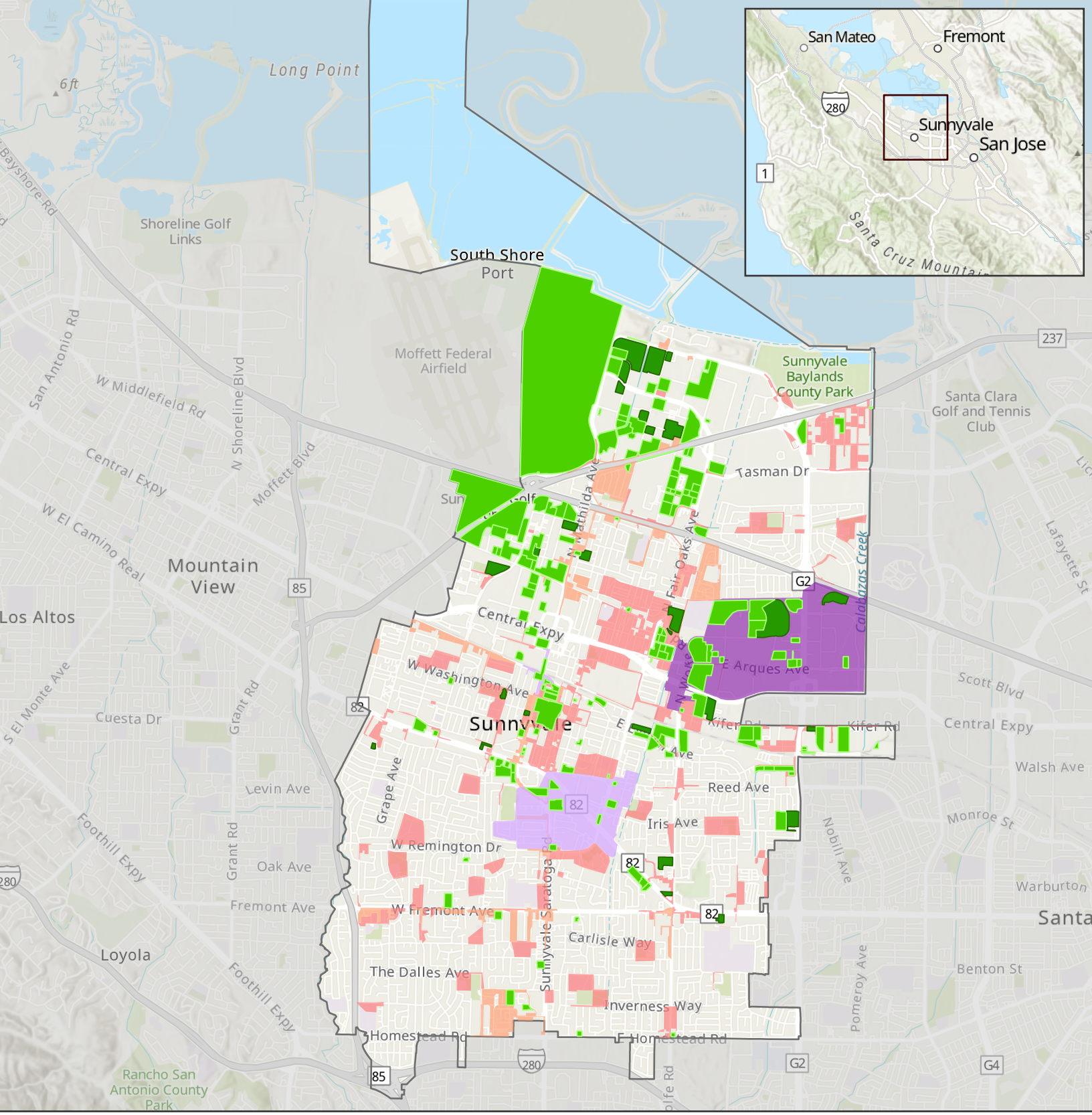


Figure A-15: GSI/LID and Other Stormwater Treatment Systems in Sunnyvale

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- City Limits

N

0 0.5 1 Mile

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

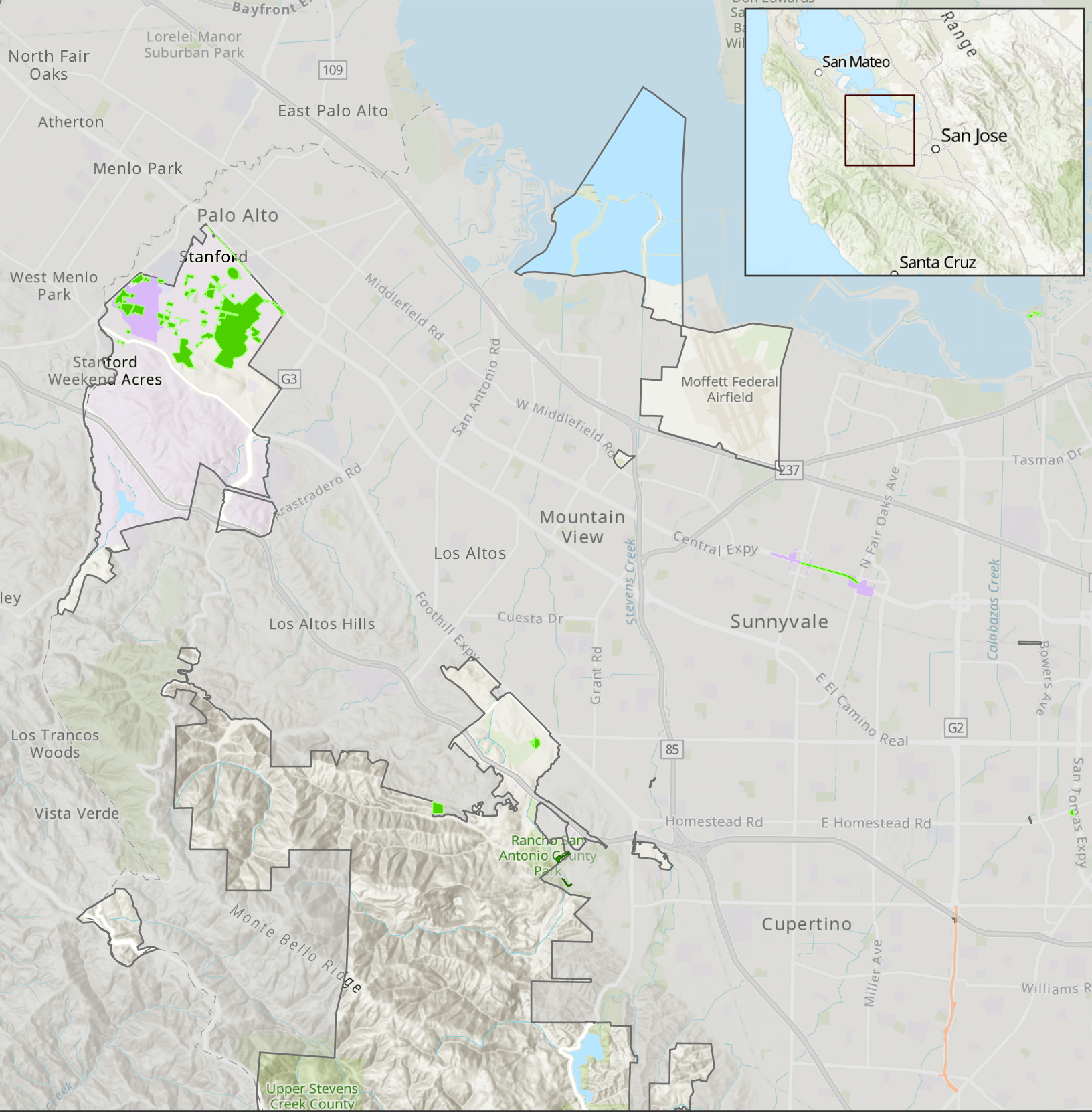


Figure A-16: GSI/LID and Other Stormwater Treatment Systems in Unincorporated SCC - West

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- Unincorporated Area

0 1.25 2.5 Miles

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

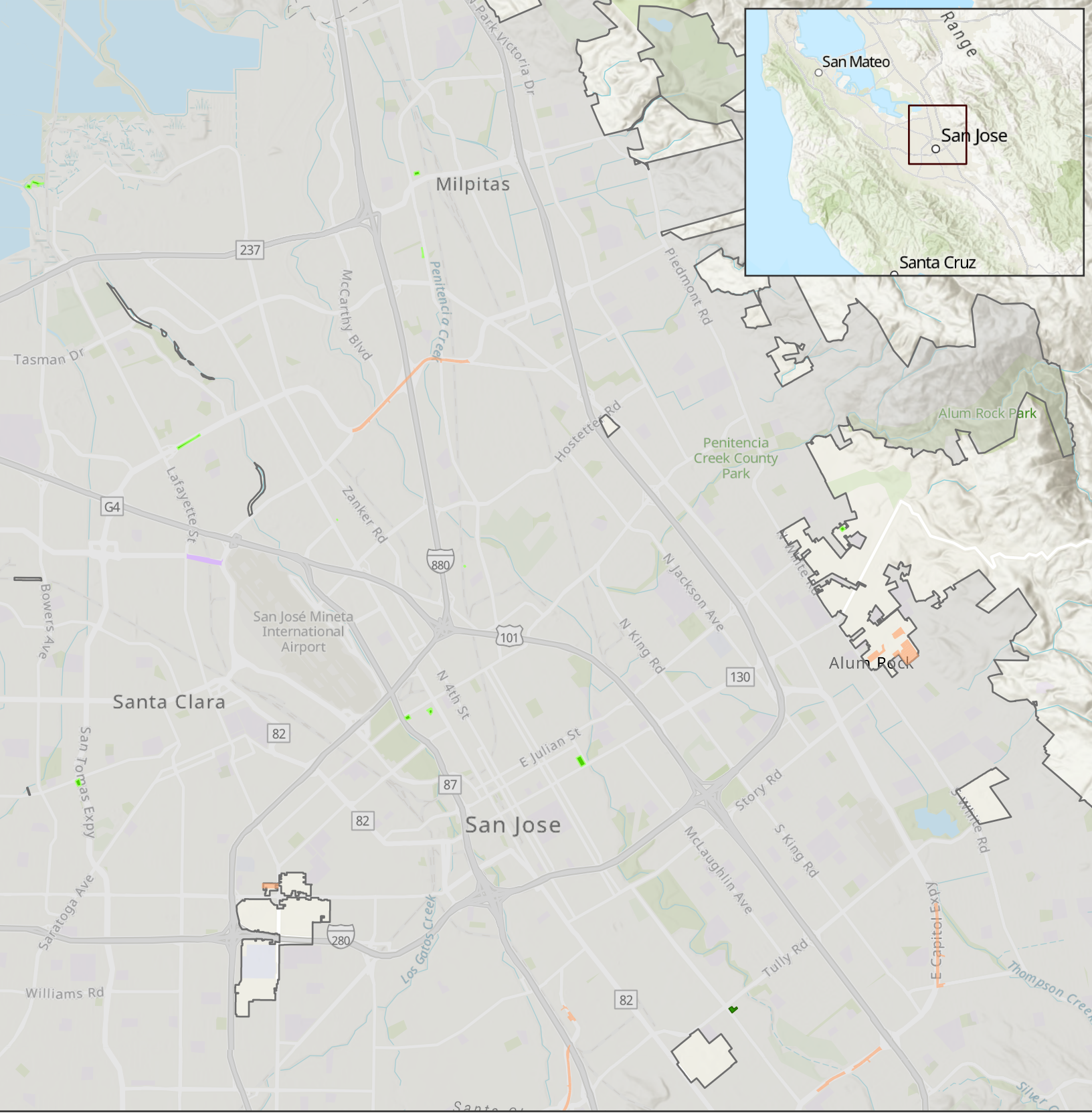


Figure A-17: GSI/LID and Other Stormwater Treatment Systems in Unincorporated SCC - East

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- Unincorporated Area

0 1 2 Miles

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

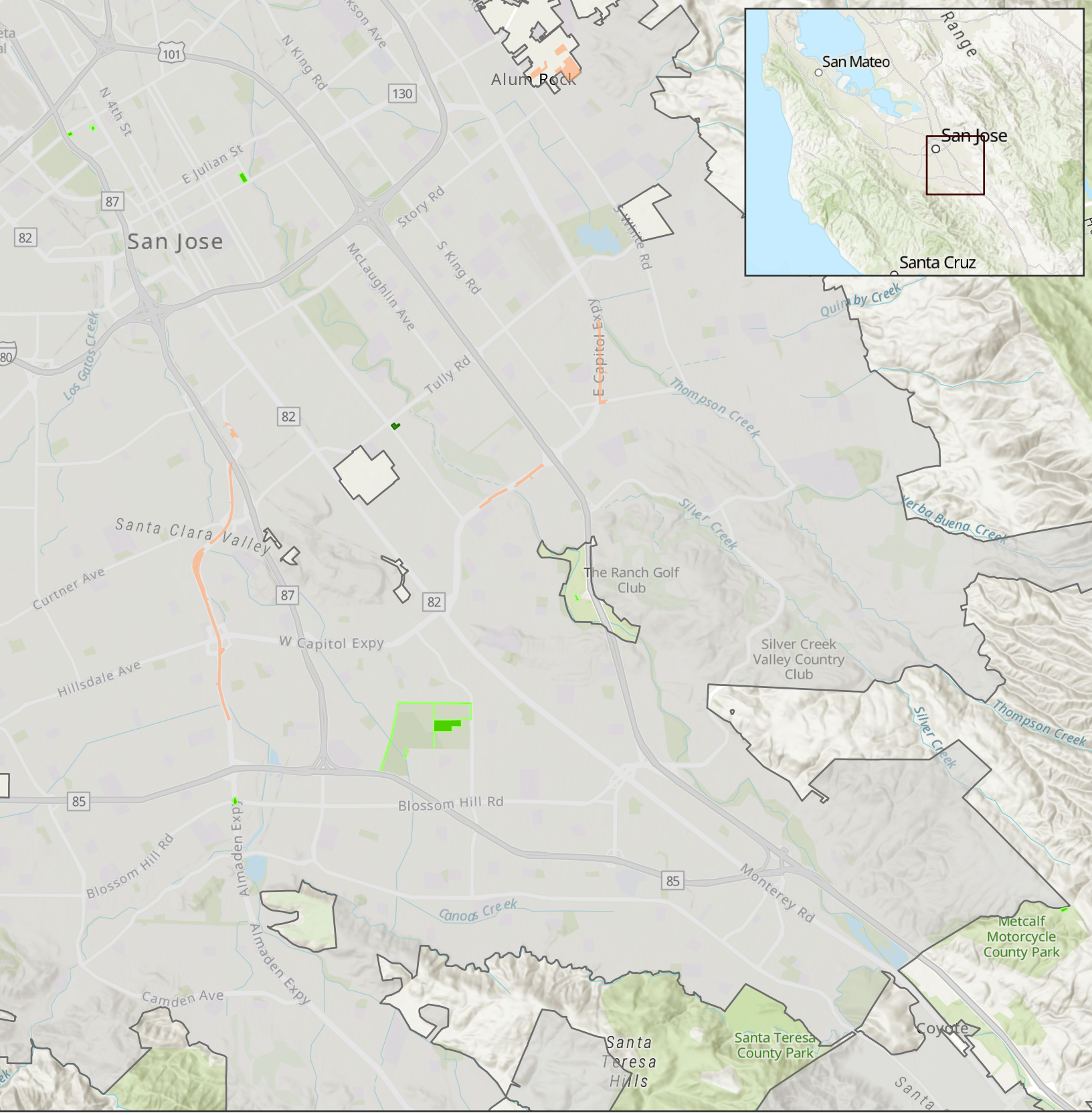


Figure A-18: GSI/LID and Other Stormwater Treatment Systems in Unincorporated SCC - South

- Pre-MRP 3.0 GSI/LID Projects
- MRP 3.0 GSI/LID Projects
- Pre-MRP 3.0 High-Flow Capacity Systems
- MRP 3.0 High-Flow Capacity Systems
- Pre-MRP 3.0 Catch Basin Inserts
- MRP 3.0 Catch Basin Inserts
- Unincorporated Area

0 1 2 Miles

N

Map Created by EOA, Inc., August 2025

Data Sources: Jurisdiction Boundaries - Santa Clara County, Basemap - ESRI

Attachment B

Program for Management of PCBs during Building Demolition – Data Summary through FY 2024-2025 for Santa Clara Valley MRP Permittees

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

TO:	SCVURPPP Pollutants of Concern Ad Hoc Task Group (AHTG)
FROM:	Program Staff
DATE:	September 30, 2025
SUBJECT:	Fiscal Year 2024-25 Data Summary for the SCVURPPP Co-permittees PCBs in Building Demolition Management Program

Background

Provision C.12.g. of the Municipal Regional Permit (MRP 3.0)[1] requires Permittees to manage PCBs-containing materials and wastes during building demolition activities. Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Co-permittees and other MRP Permittees have developed and implemented a program for managing materials with PCBs concentrations of 50 mg/kg or greater[2] in applicable structures at the time the structures undergo demolition. Applicable structures are defined as buildings constructed or remodeled between the years 1950 and 1980 that are undergoing full-building demolition. Single-family residential and wood frame structures are exempt.

For the purpose of annual reporting, this technical memorandum documents the following items for Santa Clara Valley MRP Co-permittees:

- The number of demolition permits for applicable structures that project applicants applied for during fiscal year (FY) 24-25, the sixth year of the program, and during previous FYs (data from FY 2019-20 through FY 2023-24);
- A running list of the applicable structures (with the address and demolition date for each structure) for which a demolition permit was applied for by project applicants since July 1, 2019 (the date the PCBs control program began implementation) that had material(s) with total PCBs concentration ≥ 50 mg/kg;
- For data provided in FY 2024-25 by project applicants that had total PCBs concentrations ≥ 50 mg/kg, the PCBs concentration in each sample and a brief description of PCBs-containing materials that were sampled;
- The number of building material samples collected from applicable structures during the past six fiscal years (FY 2019-20 through FY 24-25), categorized by PCBs concentration; and
- The distribution of samples collected among three PCBs concentration categories.

[1]NPDES Permit No. CAS612008, Order No. R2-2022-0018.
[2]While the MRP specifies the units of measurement as ppm, mg/kg is the unit used throughout this report as it is the unit that analytical laboratories report their values for PCBs analysis and are equivalent to ppm.

Number of Applicable Structure Applications

Table 1 summarizes the number of applicable structure demolition permit applications for FY 2019-20 through FY 2024-25 by each Co-permittee and the number of associated building material samples with PCBs concentrations equal to or greater than 50 mg/kg.

Table 1. Number of applications received by SCVURPPP Co-permittees in FYs 19-20 through 24-25 for demolition of applicable structures.

Co-permittee	# of Applicable Structures[a]						# of Samples with Total PCBs ≥ 50 mg/kg[b]					
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Campbell	0	1	1	0	0	0	NA	0	0	NA	0	0
Cupertino	0	2	2	0	0	0	NA	0	0	NA	0	0
Los Altos	0	0	0	0	0	0	NA	NA	NA	NA	0	0
Los Altos Hills	0	0	0	0	0	0	NA	NA	NA	NA	0	0
Los Gatos	0	0	0	0	0	0	NA	NA	NA	NA	0	0
Milpitas	0	0	0	1	0	0	NA	NA	NA	0	0	0
Monte Sereno[c]	0	0	0	0	0	0	NA	NA	NA	NA	0	0
Mountain View	3	2	3	5	3	0	1	0	0	21	0	0
Palo Alto	2	1	0	4	1	0	4	NA	NA	0	0	0
San Jose	6	4	11	8	8	2	4	0	1	12	4	0
Santa Clara	1	0	0	0	6	2	0	NA	NA	NA	8	0
Santa Clara County	0	1	3	2	6	3	NA	0	16	0	0	4
Saratoga	0	0	0	0	0	0	NA	NA	NA	NA	0	0
Sunnyvale	28	12	2	2	5	1	4	7	0	2	2	2
Total	**40**	**23**	**22**	**22**	**29**	**8**	**13**	**7**	**17**	**35**	**14**	**6**

NA – Not Applicable (i.e., No applicable structures, therefore no associated samples were reported).

[a]The number of applicable structures previously reported in FY 22-23 and FY 23-24 have been updated to reflect application materials received by SCVURPPP after submittal of the FY 22-23 and FY 23-24 Annual Reports.

[b]The number of samples with PCBs ≥ 50 mg/kg in FY 23-24 have been updated to reflect application materials received by the SCVURPPP after the submittal of the FY 23-24 Annual Report.

[c]The City of Monte Sereno applied for an exemption to Provision C.12.g of the MRP which was approved by Regional Water Quality Control Board on January 23, 2024.[3]

[3] San Francisco Bay Regional Water Quality Control Board (SFRWQCB). 2024. Exemption from Provision C.12.g of the Municipal Regional Stormwater NPDES Permit. January 23, 2024.

List of Applicable Structures

Table 2 provides a running list of the applicable structures for which a project applicant applied for a demolition permit since July 1, 2019 that had materials with PCBs concentrations ≥ 50 mg/kg. For each applicable structure, the address, estimated demolition date, number of samples with PCBs concentrations ≥ 50 mg/kg, and the range of PCBs concentrations in those samples are included.

Table 2. List of applicable structures in SCVURPPP Co-permittee jurisdictions between FYs 19-20 and 24-25 for which project applicants applied for a demolition permit and samples collected were greater than or equal to 50 mg/kg.

Fiscal Year (FY)	Co-permittee	SCVURPPP Building ID	Address	Estimated Demolition Date	# of Samples with PCBs ≥ 50 mg/kg	PCBs Concentration Range for Samples with PCBs ≥ 50 mg/kg
2019-20	Palo Alto	SC-005	180 El Camino Real	Mar 2020	4	676 – 14,250
	Mountain View	SC-003B	1885 Miramonte Ave	Oct 2020	1	81
	Sunnyvale	SC-028	650 Vaqueros Ave.	Jul 2020	1	1,100
	Sunnyvale	SC-031	525 Del Rey Ave.	Jul 2020	2	490 – 630
	Sunnyvale	SC-043	390 Caribbean Dr.	Unknown	1	91
	San Jose	SC-053	170 Park	May 2020	4	63 – 2,400
2020-21	Sunnyvale	SC-063	755 N. Mary Ave.	Sep 2020	2	1,200 – 1,400
	Sunnyvale	SC-064	845 Del Rey Ave. / 610 Palomar Ave.	May 2021	5	2,000 – 6,400
2021-22	San Jose	SC-089	5601 Great Oaks Parkway	Aug 2022	1	2,300
	SC County	SC-091	580 Jane Stanford Way	Nov 2021	16	240 – 310,000
2022-23	San Jose	SC-099	145 S Montgomery Street	Oct 2022	12	58 – 430,000
	Sunnyvale	SC-103	456, 505, & 650 W Olive Ave; 603 All America Way	May 2023	2	53 – 41,000
	Mountain View	SC-109	590 Castro St.	Unknown	21	180 – 510,000
2023-24	San Jose	SC-126	2880 Alum Rock Ave.	Apr 2024	3	66.1 – 300
	Sunnyvale	SC-136	242 Commercial St.	Oct 2023	2	540 – 860
	Santa Clara	SC-141	80 Saratoga Avenue	Mar 2024	7	57 – 288
2024-25	SC County	SC-155	520 Galvez Mall	Sep 2025	4	1,600 – 3,300
	Sunnyvale	SC-156	190 Commercial St.	Nov 2024	2	210 – 860

List Building Material Samples Reported During MRP 3.0 with PCBs ≥ 50 mg/kg

Table 3 provides a list of building material samples with PCBs ≥ 50 mg/kg as reported by project applicants during MRP 3.0 (FYs 2022-23 through 2024-25). Table 3 also includes the PCBs concentration in each sample and a brief description of the PCBs-containing materials that were sampled.

Table 3. List of fiscal year (FY) 22-23 through FY 24-25 Samples with PCBs ≥ 50 mg/kg.

Sample Name	PCBs Concentration (mg/kg)	Material Description
Building ID SC-109: 590 Castro Street, Mountain View (FY 2022-23):		
P 01 Miscell. (Caulk)	150,000	Caulk
P 02 Miscell. (Caulk)	240,000	Caulk
P 03 Miscell. (Caulk)	500,000	Caulk
P 04 Miscell. (Caulk)	450,000	Caulk
P 05 Miscell. (Caulk)	510,000	Caulk
P 06 Miscell. (Gasket)	1,700	Rubber Window Gasket
P 07 Miscell. (Gasket)	270	Rubber Window Gasket
P 08 Miscell. (Gasket)	300	Rubber Window Gasket
P 09 Miscell. (Gasket)	490	Rubber Window Gasket
P 10 Miscell. (Gasket)	290	Rubber Window Gasket
P 11 Miscell. (Gasket)	210	Rubber Window Gasket
P 12 Miscell. (Gasket)	270	Rubber Window Gasket
P 13 Miscell. (Gasket)	180	Rubber Window Gasket
P 14 Miscell. (Gasket)	320	Rubber Window Gasket
P 15 Miscell. (Gasket)	350	Rubber Window Gasket
P 16 Miscell. (Mastic)	290	Adhesive Mastic
P 17 Miscell. (Mastic)	200	Adhesive Mastic
P 18 Miscell. (Mastic)	180	Adhesive Mastic
P 19 Miscell. (Mastic)	230	Adhesive Mastic
P 20 Miscell. (Mastic)	240	Adhesive Mastic
P 37 Miscell. (Caulking)	148	Caulk
Building ID SC-126: 2880 Alum Rock Avenue, San Jose (FY 2023-24):		
P043	300	Thermal Insulation
P067	67	Thermal Insulation
P069	66.1	Thermal Insulation
Building ID SC-136: 242 Commercial Street, Sunnyvale (FY 2023-24):		
PCB-4A Exterior Light Gray Expansion Joint Exterior Wall Joints	860	Caulk
PCB-4B Exterior Light Gray Expansion Joint Exterior Wall Joints	540	Caulk
Building ID SC-141: 80 Saratoga Avenue, Santa Clara (FY 2023-24):		
P018 Caulk/Sealant Expansion Joint, Building-Sidewalk	66	Caulk
P008 Gasket Exterior Windows	100	Rubber Window Gasket
P013 Gasket Exterior Windows	57	Rubber Window Gasket
P014 Gasket Exterior Windows	288	Rubber Window Gasket
P027 Gasket Interior Doors	79	Rubber Window Gasket
P028 Gasket Interior Doors	79	Rubber Window Gasket
P029 Gasket Interior Doors	78	Rubber Window Gasket
Building ID SC-155: 520 Galvez Mall, Stanford (FY 2024-25):		
CK-4-3	1,900	Caulk
GK-8-1	3,300	Caulk
GK-8-2	1,600	Caulk
GK-8-3	3,300	Caulk
Building ID SC-156: 190 Commercial St., Sunnyvale (FY 2024-25):		
PCB-6A	210	Adhesive Mastic
PCB-7A	860	Rubber Window Gasket

Summary of PCBs Observed in Building Material Samples During FYs 2019-20 through 2024-25

Figure 1 summarizes the number of building material samples collected from applicable structures in SCVURPPP Co-permittee jurisdictional areas during the past five fiscal years (FYs 2019-20 through 2024-25), categorized by PCBs concentration:

- PCBs Not Detected (ND)
- PCBs <50 mg/kg
- PCBs ≥50 mg/kg

Figure 2 summarizes the total number of building material samples, distributed among the above three PCBs concentration categories.

Figure 1. Santa Clara County Building Materials PCBs Sampling Results by Fiscal Year (FY) and PCBs Concentration Category

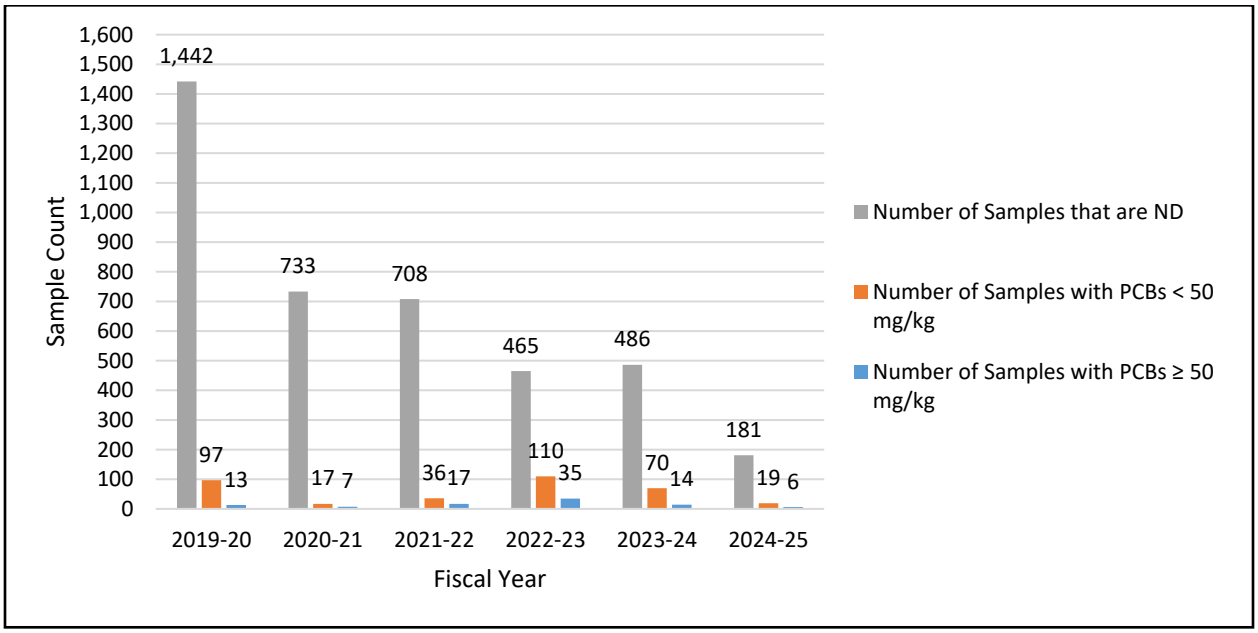
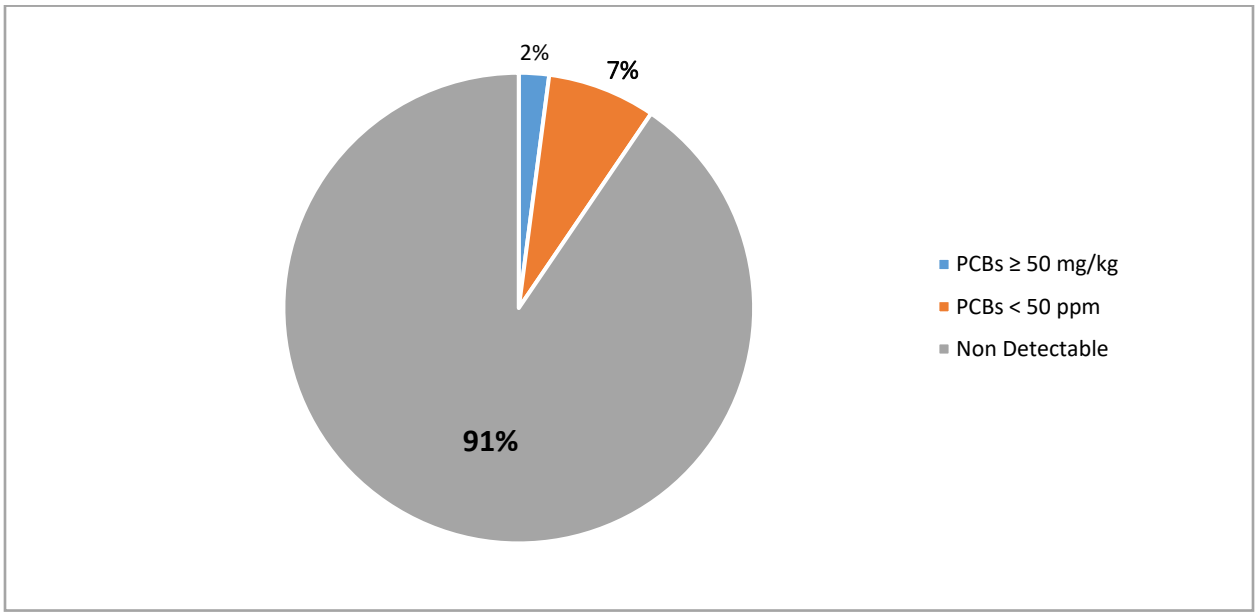


Figure 2. Santa Clara County Building Materials PCBs Sampling Results - Percentage Distribution Among PCBs Concentration Categories.



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 2024-2025
- Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Copper and Nickel – FY 2024-2025
- Summary of Co-permittee Street Sweeping Activities and Estimated Mean Pollutant Load Reduction for Lead and Zinc – FY 2024-2025

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Summary of Co-permittee Street Sweeping Activities - FY 2024-2025

Municipality	Miles of Paved Streets	Total Miles Swept	Volume of Material Collected	Removal Rate Vol./ Mile	Leaves Collected	Yard Waste Collected
City of Cupertino[1,2,3,14,15]	308	8,336	4,467 yd^3	0.54 yd^3/miles		8,042 tons
City of Los Altos[18,19]	108	5,000	2,906 yd^3	0.58 yd^3/miles		
Town of Los Altos Hills[1,2]	57	1,364	26 yd^3	0.019 yd^3/miles		3,689 yd^3
City of Milpitas	126	8,365	1,938 yd^3	0.232 yd^3/miles		19,683 yd^3
City of Mountain View	340	7,940	7,998 yd^3	1.01 yd^3/miles	556 yd^3	
City of Palo Alto[7]	419	19,803	1,387 yd^3	0.07 yd^3/miles	1,200 yd^3	15,007 yd^3
City of San José[1,2,8,14]	6,930	53,041	6,412 yd^3	0.12 yd^3/miles	30,240 tons	95,685 tons
City of Santa Clara[9,16]	247	28,900	7,268 yd^3	0.25 yd^3/miles	yd^3	9,689 yd^3
City of Sunnyvale[4,17,20,21]	734	7,141	12,365 yd^3	1.73 yd^3/miles	904 yd^3	
West Valley Communities						
City of Campbell[5,6,10,14]	149	6,004	2,169 yd^3	0.36 yd^3/miles		9,529 tons
Town of Los Gatos[14]	110	3,792	1,823 yd^3	0.48 yd^3/miles		9,220 tons
City of Monte Sereno[14]	28	153	25 yd^3	0.16 yd^3/miles		1,321 tons
City of Saratoga[2,11,14]	275	5,316	1,176 yd^3	0.22 yd^3/miles		10,173 tons
County of Santa Clara	232	10,529	1,956 yd^3	0.19 yd^3/miles		
Santa Clara Valley Water District[12]	---	---	---	---	---	---
TOTALS	**10,063 miles**	**165,682 miles**	**51,915 yd^3 (33,719 tons)[13]**		**2,660 yd^3** / **30,240 tons**	**133,970 tons** / **48,067 yd^3**
AVERAGE		**11,834 miles**	**3,708 yd^3**	**0.31 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. Regenerative air equipment is used for sweeping.
4. Report total miles covered by sweepers including areas operated in tandem or repeated.
5. Heavy leaf areas are swept weekly.
6. Heavy leaf sweeping conducted in November, December, and January.
7. Food scraps are collected as part of yard waste collection program.
8. DOT uses a small parking lot sweeper for cleaning small tight areas. .
9. Annual Cleanup Campaign - residential streets are only swept once during the duration of the Cleanup Campaign (4 weeks).
10. Performed two enhanced sweeps per month in areas of heavy parking traffic. (e.g., apartment complexes and commercial buildings).
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 33,719 tons is calculated when 51,915 cubic yards is converted over to tons (51,915 cubic yards* .6495 tons/cubic yard= 33,719 tons).
14. Co-permittees co-mingle leaf litter with yard trimmings. The value reported represents the total weight or total volume of yard waste collected by individual Co-permittees. Co-perrmittees do not have the ability to separate the weight or volume of leaves from this waste stream.
15. As in previous years, the City of Cupertino promoted leaf collection. Advertisements were placed on social media to promote moving cars to allow access to the curb. Door hangers were placed in certain parts of a neighborhood to promote extra leaf collection. Additional sweeping was added to a section of Foothill Expressway to control gravel debris. □
16. Leaf Season is November and December. During the annual clean-up campaign, street sweeping crews were reassigned to follow clean-up campaign crews
17. The Street Operation Department has eliminated “make-up” street sweeping routes missed during the City’s holiday schedule. The Department does not have sufficient resources to efficiently and effectively complete additional routes separate from the regular street sweeping schedule. Parking lots are included with residential routes) (All major arterials are included with the Commercial routes. The volume of leaves removed by City/Town crews are accounted in the volume of material collected. Certain routes are posted with no parking restrictions during regular sweeping schedules in the winter months.
18. A summary of FY 24-25 street sweeping and yard waste data is not availalble.
19. Two cycles of sweeping. Additional twelve miles for holiday event sweeping.
20. Posted "No Parking" restrictions on Ayala Drive, and on Hendy to allow sweepers to pick up all debris.
21. All major arterials are included in our commercial routes.

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 2024-2025

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	5,802	2,534	---	8,336	3,282	1,185	---	4,467	66.88	23.87	---	90.75	132.19	47.25	---	179.44
City of Los Altos	108	2,837	2,163	---	5,000	1,808	1,098	---	2,906	36.83	22.12	---	58.95	72.80	43.78	---	116.58
City of Los Altos Hills	57	1,364	---	---	1,364	26	---	---	26	0.53	---	---	0.53	1.05	---	---	1.05
City of Milpitas	126	4,142	4,223	---	8,365	964	974	---	1,938	19.63	19.63	---	39.26	38.81	38.85	---	77.66
City of Mountain View	340	5,109	1,673	1,157	7,940	5,147	1,685	1,166	7,998	104.88	33.93	126.07	264.88	207.31	67.17	24.40	298.88
City of Palo Alto	419	12,142	5,993	1,668	19,803	862	415	110	1,387	17.57	8.36	11.89	37.81	34.72	16.55	2.30	53.57
City of San José	6,930	33,457	19,584	---	53,041	3,878	2,534	---	6,412	79.02	51.04	---	130.06	156.19	101.03	---	257.22
City of Santa Clara	247	20,712	---	8,188	28,900	4,949	---	2,319	7,268	100.85	---	250.67	351.51	199.34	---	48.52	247.86
City of Sunnyvale	734	13	4,967	2,161	7,141	8,483	2,683	1,200	12,365	172.86	54.04	129.66	356.55	341.68	106.96	25.10	473.73
West Valley Communities																	
City of Campbell	149	3,604	2,400	---	6,004	1,514	655	---	2,169	30.85	13.19	---	44.05	60.98	26.12	---	87.10
Town of Los Gatos	110	2,792	1,000	---	3,792	1,233	590	---	1,823	25.13	11.88	---	37.01	49.66	23.52	---	73.19
City of Monte Sereno[4]	28	153	---	---	153	25	---	---	25	0.51	---	---	0.51	1.01	---	---	1.01
City of Saratoga	275	5,316	---	---	5,316	1,176	---	---	1,176	23.96	---	---	23.96	47.37	---	---	47.37
County of Santa Clara	232	180	---	---	180	34	---	---	34	0.69	---	---	0.69	1.36	---	---	1.36
Santa Clara Valley Water District[1]																	
TOTALS	**10,063**	**97,622**	**44,537**	**13,174**	**155,333**	**33,380**	**11,819**	**4,795**	**49,993**	**680**	**238**	**518**	**1,437**	**1,344**	**471**	**100**	**1,916**

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: (3282*23.51*6.43*0.785*0.85)/(0.00495*1000*1000) =66.88

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: (1808*46.47*6.43*0.785*0.85)/(0.00495*1000*1000)= 72.80

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 2024-2025

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	5,802	2,534	---	8,336	3,282	1,185	---	4,467	124.60	114.01	---	238.60	167.72	80.78	---	248.50
City of Los Altos	108	2,837	2,163	---	5,000	1,808	1,098	---	2,906	68.62	105.64	---	174.26	92.37	74.85	---	167.22
City of Los Altos Hills	57	1,364	---	---	1,364	26	---	---	26	0.99	---	---	0.99	1.33	---	---	1.33
City of Milpitas	126	4,142	4,223	---	8,365	964	974	---	1,938	36.58	93.75	---	130.33	49.24	66.43	---	115.67
City of Mountain View	340	5,109	1,673	1,157	7,940	5,147	1,685	1,166	7,998	195.40	162.07	118.27	475.75	263.03	114.84	97.34	475.21
City of Palo Alto	419	12,142	5,993	1,668	19,803	862	415	110	1,387	32.72	39.93	11.16	83.81	44.05	28.29	9.18	81.52
City of San José	6,930	33,457	19,584	---	53,041	3,878	2,534	---	6,412	147.22	243.79	---	391.01	198.17	172.74	---	370.91
City of Santa Clara	247	20,712	---	8,188	28,900	4,949	---	2,319	7,268	187.88	---	235.17	423.05	252.91	---	193.54	446.45
City of Sunnyvale	734	13	4,967	2,161	7,141	8,483	2,683	1,200	12,365	322.05	258.09	121.64	701.78	433.51	182.87	100.11	716.49
West Valley Communities																	
City of Campbell	149	3,604	2,400	---	6,004	1,514	655	---	2,169	57.48	63.02	---	120.49	77.37	44.65	---	122.02
Town of Los Gatos	110	2,792	1,000	---	3,792	1,233	590	---	1,823	46.81	56.76	---	103.57	63.01	40.22	---	103.23
City of Monte Sereno[4]	28	153	---	---	153	25	---	---	25	0.95	---	---	0.95	1.28	---	---	1.28
City of Saratoga	275	5,316	---	---	5,316	1,176	---	---	1,176	44.65	---	---	44.65	60.10	---	---	60.10
County of Santa Clara	232	180	---	---	180	34	---	---	34	1.28	---	---	1.28	1.72	---	---	1.72
Santa Clara Valley Water District[1]																	
TOTALS	**10,063**	**97,622**	**44,537**	**13,174**	**155,333**	**33,380**	**11,819**	**4,795**	**49,993**	**1,267**	**1,137**	**486**	**2,891**	**1,706**	**806**	**400**	**2,912**

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: (3282*43.8*6.43*0.785*0.85)/(0.00495*1000*1000)= 124.60

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: (1808*58.96*6.43*0.785*0.85)/(0.00495*1000*1000)=92.37

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 13-1

Bay Area Municipal Stormwater Collaborative Firefighting Emergency Discharges Report – September 2025

BAY AREA MUNICIPAL
STORMWATER (BAMS) COLLABORATIVE

Regional Firefighting Emergency Discharges Report

Submitted in compliance with the San Francisco Bay Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, Order No. R2-2022-0018, Provision C.15.b.iii.(2)

Prepared on behalf of:

Alameda Countywide Clean Water Program

Contra Costa Clean Water Program

San Mateo Countywide Water Pollution Prevention Program

Santa Clara Valley Urban Runoff Pollution Prevention Program

Solano Stormwater Alliance

September 30, 2025

TABLE OF CONTENTS

1 INTRODUCTION 1

1.1 Purpose and Structure of the Regional Report 1

1.1.1 Best Management Practices for Addressing Firefighting Discharges 2

1.2 Regulatory Background 3

1.2.1 MRP Fact Sheet 4

1.3 Regional Work group 5

1.4 Water Quality 6

1.4.1 Potable Water Discharge 6

1.4.2 Firefighting Foams 7

1.4.3 Senate Bill 1044: PFAS Ban 8

1.5 Complexity of Issue 9

1.5.1 Prioritization and Urgency 9

1.5.2 Organizational and Structural Complexities 10

1.5.3 Funding Constraints 11

2 FIREFIGHTING FOAM BMPS 12

2.1 Determining least environmentally harmful foams 12

2.1.1 Phase out PFAS containing foam 12

2.1.2 Selecting Environmentally Friendly Firefighting Foam 13

2.2 Proper Disposal 14

2.3 Proper use of firefighting foam 15

2.3.1 Avoid the use of firefighting foam when it is not necessary 15

2.3.2 When firefighting foam is used, limit the amount used 16

2.3.3 Use the proper firefighting foam, depending on the type of fire 16

2.3.4 Discourage the use of firefighting foam where it may discharge to receiving waters..... 17

3 EMERGENCY FIREFIGHTING ACTIVITIES 17

3.1 Coordination and Communication 17

3.2 Categorizing fire types and establishing BMP/SOG implementation based on categorization 19

3.3 Resources available to determine potential receiving water impact 19

3.4 Discharge BMPs 20

3.4.1 Plugging storm drain inlets 20
3.4.2 Dechlorinating discharges 21
3.4.3 Coordination with containment/cleanup crews 21
4 REPORTING 22
5 OUTREACH MATERIALS 23
6 CONCLUSIONS AND RECOMMENDATIONS 24
7 REFERENCES 27

List of Figures

Figure 1-1 Interrelationship of Firefighting Emergency Discharge BMPs 3
Figure 2-1 Process for Switching Foam Products 13

List of Tables

Table 1-1- Bay Area Fire Departments by Permittee 10

1 INTRODUCTION

This Regional Firefighting Emergency Discharges Report (Regional Report) was prepared by the Bay Area Municipal Stormwater Collaborative (BAMS Collaborative) to address discharges associated with emergency firefighting activities. The Regional Report was developed in compliance with the Municipal Regional Permit (MRP) for urban stormwater, adopted on May 22, 2022, by the San Francisco Bay Regional Water Quality Control Board (Permit Order No. R2-2022-0018, MRP 3.0), Provision C.15.b.iii. Emergency Discharges of Firefighting Water and Foam. Overall, the MRP regulates stormwater discharges from municipal separate storm sewer systems (MS4s) owned and/or operated by 79 cities, counties, and other public agencies (i.e., Permittees) in the San Francisco Bay Area.

The BAMS Collaborative represents 103 stormwater management agencies in the San Francisco Bay Area, including 88 cities and towns, eight counties, and seven special districts. The BAMS Collaborative is focused on regional challenges and opportunities to improve the quality of stormwater flowing to our local creeks, the Delta, San Francisco Bay, and the Pacific Ocean. The BAMS Collaborative was organized in 2021 by the Board of Directors for the Bay Area Stormwater Management Agencies Association (BASMAA) to continue the information sharing and permittee advocacy functions of BASMAA after BASMAA's dissolution. The BAMS Collaborative continues BASMAA's mission to encourage information sharing and cooperation, and to develop products and programs that are required and/or more cost-effectively completed regionally than locally. The BAMS Collaborative has collectively developed this Regional Report in fulfillment of MRP Provision C.15.b.iii.

1.1 PURPOSE AND STRUCTURE OF THE REGIONAL REPORT

The purpose of the Regional Report is to describe progress on, and recommendations regarding the implementation of items in MRP Provision C.15.b.iii.(2), which is intended to address discharges of firefighting water and foam associated with emergency firefighting activities that may impact water quality as described in the next section.

This Regional Report does not address discharges of firefighting water and foam associated with non-emergency firefighting activities, such as training. These discharges are neither exempted nor conditionally exempted by Provision C.15. If there are discharges to storm drain systems or watercourses of firefighting water and/or foam (or other non-stormwater) associated with non-emergency (e.g., training) firefighting activities, then Permittees would address those illicit discharges under their Illicit Discharge Detection and Elimination (IDDE) programs as required in MRP Provision C.5.

The Regional Report summarizes key discussions from the Regional Firefighting Discharges Work Group (Regional Work Group) meetings (described in Section 1.3), along with insights gathered from separate meetings with local firefighting departments and post-fire restoration contractors. The sections and sub-sections of the Regional Report directly align with the best management practices (BMPs) outlined in C.15.b.iii.(2) and the MRP Fact Sheet. Specific scenarios discussed and important findings from the Regional Work Group are highlighted in text boxes for clarity.

1.1.1 Best Management Practices for Addressing Firefighting Discharges

Firefighting discharge BMPs described in the Regional Report can be broadly grouped into three categories:

- **Procedural BMPs**: These involve operational steps and communication protocols, such as incident notification procedures, and inter-agency coordination.
- **Administrative BMPs:** These BMPs guide operational choices during firefighting incidents, and include staff training on environmentally responsible foam use, procurement policies for eco-friendly foams, and recordkeeping and reporting systems for discharge events.
- **Structural BMPs**: These are physical or engineered solutions to prevent or mitigate water quality impacts, such as storage and disposal of unused foam, use of dechlorination tablets, and storm drain protection during post-fire cleanup.

Additionally, emergency firefighting operations can be categorized into pre-emergency operations, emergency operations, and post-emergency operations. Firefighting discharge BMPs differ based on the phase of the operation, as described in the below examples.

- **Pre-Emergency BMPs:** Staff training, communication and reporting procedures, Standard Operating Guidelines[1] (SOGs), and foam procurement.
- **Firefighting BMPs:** Using foam only when necessary and applying the minimum effective amount of foam.
- **Post-Fire BMPs:** Collecting and properly disposing of residual foam and water, following appropriate documentation and reporting procedures.

The BMPs implemented before, during, and after emergency firefighting activities all play a role in addressing water quality impacts from emergency discharges of firefighting foam and water as shown in Figure 1-1. Recommendations or suggested BMPs in this Report do not override the priorities of fire departments during an emergency, i.e., preservation of life and property before the environment. This effort is intended to support BMPs to limit the impact of fire-fighting related discharges, with an emphasis on containment and cleanup as well as appropriate communication/procedures to reduce water quality impacts.

[1] The MRP calls for Standard Operating Procedures (SOPs) to be developed, but this type of documentation is not common or recommended for firefighting activities. Given the unique and variable conditions presented with each fire event, SOGs are the more common and preferred approach for firefighting, not Standard Operating Procedures (SOPs).

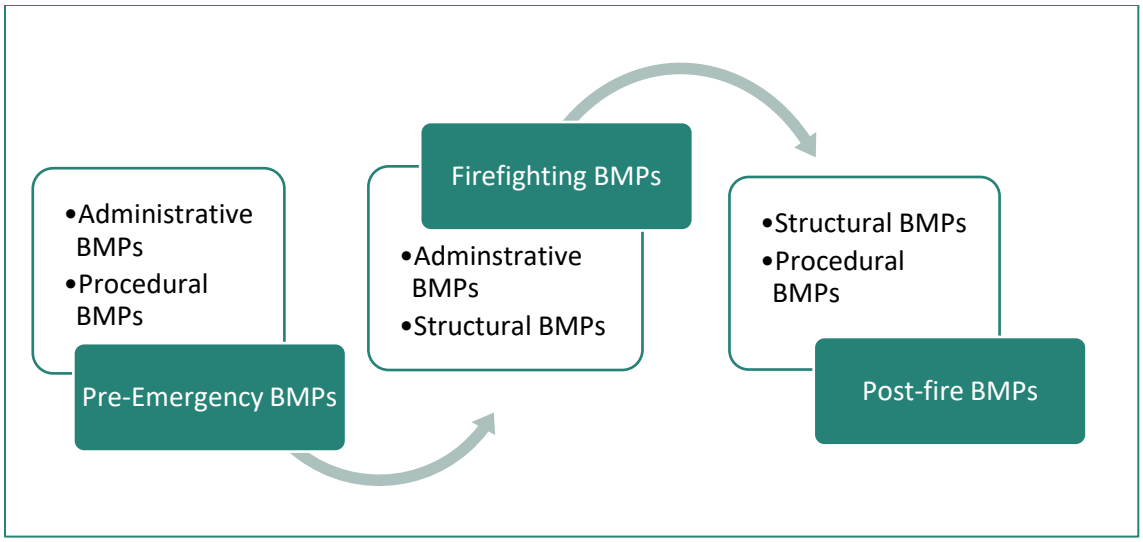


Figure 1-1 Interrelationship of Firefighting Emergency Discharge BMPs

The discussions of BMPs/SOGs and resulting recommendations are intended as examples for local municipalities and firefighting departments when evaluating strategies to mitigate the impact of emergency firefighting foam and water. These recommendations should not be regarded as standard practices for all municipalities or firefighting departments. The Regional Work Group plans to continue exploring this issue and will develop additional guidance as needed.

1.2 REGULATORY BACKGROUND

MRP Provision C.15.b.iii.(2) requires Permittees to collectively convene the Regional Work Group with Regional Water Board staff to identify and evaluate opportunities to reduce the impacts of emergency discharges to the MS4 associated with firefighting activity. It also requires the Regional Work Group to address the following:

- Assessment of existing BMPs to address the potential adverse water quality impacts of firefighting water and foam discharged during emergencies (e.g., containment and cleanup), including coordination within and between municipal departments, districts and jurisdictions, coordination between firefighting personnel and containment and cleanup crews, coordination with contracted staff, and coordination with relevant agencies (e.g., CalFire), as appropriate.
- Based on this assessment, identification of the adequacy of existing BMPs. If needed, suggest changes to those BMPs or develop new model BMPs. Types of BMPs referenced include:
    - Using least environmentally harmful firefighting foams.
    - Proper disposal of more environmentally harmful firefighting foams.
    - Reducing the use of firefighting foams during emergencies.

- Assessment of the adequacy of existing resources (e.g., MS4 maps and maps that identify environmentally sensitive areas) used to determine if and how firefighting water and foam discharged during emergencies will impact receiving waters.
- Investigation into which firefighting foams are the least environmentally harmful.
- Discussion on reporting on emergency discharges of firefighting water and foam.
- Development of outreach materials on containment and cleanup BMPs for contractors hired by private parties.
- Development of outreach materials with good housekeeping practices and preventive measures for sites that are prone to firefighting emergencies.

As required by the MRP, the Regional Work Group must develop this Regional Report and submit it to the Regional Water Board by September 30, 2025. The MRP also requires implementation of the Regional Report recommendations to begin following the submittal.

1.2.1 MRP Fact Sheet

The MRP Fact Sheet provides additional explanations, reasoning, and references to support the inclusion of provisions in the MRP. For Provision C.15.b.iii, the Fact Sheet references 40 CFR and 64 Fed. Reg., which states that discharges or flows from firefighting activities are excluded from the effective prohibition against non-stormwater and need only be addressed where they are identified as significant sources of pollutants to waters of the United States. The regulation indicates that significance is determined with reference to the category of discharges, not individual fires. Specifically, the 64 Fed. Reg. text states that if an MS4 is concerned that flows from firefighting are, as a category, contributing substantial amounts of pollutants to their system, they can develop a program to address those flows prospectively. While the Fact Sheet acknowledges the intent described in 40 CFR and 64 Fed. Reg., it deviates by asserting that water quality impacts from individual fires can illustrate the significance of the category of discharges. To support this, it lists 11 examples (not an exhaustive list) of potable water discharges from non-fire-related activities (e.g., water providers) over a 14-year period and cites one fire-related example, described further below.

The Fact Sheet presents a more proactive approach to addressing concerns with discharges or flows from firefighting activities and aligns with the US EPA's PFAS Strategic Roadmap (US EPA, 2021). Provision C.15.b.iii provides an opportunity for Permittees to collectively gain a better understanding of the significance of the discharge type and potential adverse water quality impacts of firefighting water and foam discharged during emergencies.

Berkeley Incident

In April 2019, Berkeley firefighters were called to an emergency involving a cardboard recycling truck that had caught fire on the 1600 Block of Rose Street near the intersection of McGee Avenue. Prior to arrival of firefighters, those present on the scene attempted to stop the fire by using a handheld extinguisher and then compressing the contents of the truck, neither of which were successful. Initially, firefighters attempted to extinguish the fire solely with water. However, because there were gas tanks in proximity to the fire, they made the decision to use foam due to the explosion hazard associated with the gas tanks. Approximately, 20 gallons of Class A firefighting foam was used to extinguish the fire safely.

Cleanup. Once the fire was extinguished, the City's Public Works crews used vactor trucks and street sweepers to clean up the foam remaining onsite. When it was discovered that foam reached the storm drain and reached Codornices Creek, firefighters from both Berkeley and Albany tried to remove the top layer of foam from the creek surface utilizing equipment such as absorbent booms.

Reporting. The Fire Department had reporting protocols already in place. As a result, more than 20 local, regional, state and federal agencies were contacted by the Berkeley Fire Department to notify them of the incident. The City of Berkeley also sent Environmental Health and Toxics Management staff to investigate the incident further.

1.3 REGIONAL WORK GROUP

As required by the MRP, the Regional Work Group was established to discuss the requirements in MRP and collectively develop this Regional Report. The Regional Work Group consists of:

1. Municipal stormwater staff from MRP Permittee agencies.
2. Countywide Stormwater Program representatives from the Alameda Countywide Clean Water Program, Contra Costa Clean Water Program, San Mateo Countywide Water Pollution Prevention Program, Santa Clara Valley Urban Runoff Pollution Prevention Program, and Solano Stormwater Alliance.
3. Firefighting and Certified Unified Program Agencies (CUPA) agencies who provided additional insight and information on BMPs designed to address non-stormwater discharges associated with firefighting activities, including the use of foams.
4. Representatives from regulatory agencies including the Regional Water Board and U.S Environmental Protection Agency (EPA) Region 9.
5. Outside agencies and organizations[2] that were contacted to request information and/or invited to participate. Organizations that participated and contributed information

[2] Other organizations that were contacted to request information and/or invited to participate in the Regional Work Group include the following: California Department of Forestry and Fire Protection (Cal Fire), Fire Fighting Foam Coalition (FFFC), California Department of Toxic Substance Control (DTSC), National Fire Protection Association (NFPA), The Academy (South Bay Regional Public Safety Training), and Petro-Chemical Mutual Aid Organization (PMAO).

include Toxic-Free Future, Clean Production Action, and Texas A&M University-San Antonio Institute for Water Resources Science and Technology.

The Regional Work Group met twice in each of Fiscal Years (FY) 22-23, 23-24, and 24-25.[3] In addition, separate meetings were held with individual local firefighting departments and post-fire restoration contractors to obtain their input. The Regional Work Group will continue to meet annually after the submission of the Regional Report.

The intent of the Regional Work Group meetings was to:

- Inform firefighting staff about the requirements in the MRP;
- Learn about existing BMPs for preventing stormwater pollution from firefighting activities;
- Understand the use of firefighting foam applications, including proper storage and disposal; and
- Obtain information on post-fire cleanup operations.

The information gathered from the Regional Work Group meetings has informed Sections 3 and 4 of this report. The information gathered in the Regional Work Group meetings has been supplemented with additional communication and research by Regional Work Group members outside of meetings.

1.4 WATER QUALITY

The MRP identifies discharges of potable water disinfectants, such as chlorine or chloramines, and pollutants associated with firefighting foams as the primary concerns that Provision C.15.b.iii is intended to address. A summary of potential water quality impacts of these pollutants is described below.

Since PFAS-containing foams are banned in California, any mention of pollutants associated with firefighting foams in the Regional Report refers exclusively to non-PFAS foams.

1.4.1 Potable Water Discharge

Firefighting activities may result in discharges of potable water to the storm drain system and ultimately, into creeks or rivers. EPA requires all water suppliers to treat drinking water with disinfectants, such as chlorine and chloramine, to kill pathogenic organisms (EPA, 2023). Chloramine contains both chlorine and ammonia, produces significantly lower levels of disinfectant byproduct, and remains in the water for a longer period.

Chlorine may become toxic to aquatic life at or above certain concentrations in the receiving water. Chlorine can damage the cells of fish gills, thereby reducing their ability to absorb dissolved oxygen from the water. Chloramine does not directly impact the gills; however, it will chemically bind to iron in the hemoglobin of red blood cells, which reduces the ability for oxygen to attach to blood cells. Concentrations of chloramine as low as 0.07 mg/L have been shown to be lethal to coho salmon in 96-hour studies (SFPUC, 2010).

[3] Meetings were held on the following dates: March 14, 2023, June 1, 2023, March 26, 2024, June 17, 2024, January 14, 2025, and April 22, 2025.

In the environment, chlorine and chloramine are relatively unstable and neutralized upon reaction with air, sunlight, landscaping, paved surfaces, and the storm sewer. For example, small discharges of potable water will interact with the soil particles found in the flow path, removing residual chlorine or chloramine (a process called "chloramine demand") before it enters the waterway. In these cases, dechlorination can occur passively (with no chemical addition) (CA-NV AWWA, 2019). Larger volumes of potable water that are discharged in close proximity to a waterway may pose an acute health risk to aquatic life without BMPs in place.

1.4.2 Firefighting Foams

There are two classes of firefighting foam typically used by fire departments: Class A and Class B. Class A firefighting foams are generally used on -flammable non-liquid materials, such as wood, paper, brush, and vegetation (e.g., wildland) and are widely used by many fire departments for structure fires. Class B firefighting foams are typically used only for flammable liquid fires (e.g., gasoline, oil, and jet fuel). The properties of the two classes of foams are described below.

Class A Firefighting Foams. Class A foam is formulated from hydrocarbon-based surfactants and increases the wetting effectiveness, which allows for greater penetration into the fire. It also gives water a foaming ability, which allows water to remain and cling to surfaces without runoff and absorbs more heat. Class A foams are generally considered nontoxic when used in a diluted form and will biodegrade over time (National Wildfire Coordinating Group, 1993).

Class B Firefighting Foams. There are two types of Class B foams used for fires: protein-based and synthetic.

Protein-based firefighting foams have three forms: Regular Protein Foam (PF); Fluoroprotein Foam (FP); and Film-Forming Fluoroprotein Foam (FFFP). Protein-based foams are formulated from hydrolyzed proteins, typically derived from natural animal by-products or other protein-rich materials. The hydrolyzed protein acts as the primary foaming agent, forming a thick, cohesive, and heat-resistant foam blanket. Since they are derived from natural proteins they can decompose naturally. This makes them more environmentally benign, especially compared to synthetic foams, though fluorinated variants may still pose environmental concerns.

Synthetic foams fall into three general categories: Aqueous Film Forming Foams (AFFF); alcohol-resistant aqueous film-forming foams (AR-AFFF); and fluorine-free foams (FFF, also called F3). The AFFF type foams typically contain perfluorooctanesulfonic acid (PFOS) or perfluorooctanoic acid (PFOA), which are part of the broader family of Polyfluoroalkyl substances (PFAS). These chemicals are highly persistent in the environment and are termed 'forever chemicals.' PFAS are highly mobile in soil and water allowing them to spread easily through the environment and making them difficult to find and remediate (Clean Production Action, 2021). Many PFAS bioaccumulate, or increase in concentration, up the food chain. A recent study conducted by the U.S. Centers for Disease Control and Prevention (CDC) outlines a host of health effects associated with PFAS exposure, including cancer, liver damage, decreased fertility, and increased risk of asthma and thyroid disease (Clean Production Action, 2021). PFAS foams are no longer allowed to be used in California (see Section 1.4.3 below). Fluorine-free foams are mostly based on hydrocarbon surfactants and are free of any fluorosurfactant. Although the

fluorine free foams do not contain PFAS, they still contain other unknown proprietary chemicals. However, the toxic effects for both fluorine and non-fluorine foams are considered relatively low. Fluorine free foams also tend to be biodegradable and do not persist in the environment or bioaccumulate, thus making them more environmentally benign than PFAS containing foams (Clean Water Action, 2024).

REGIONAL WORK GROUP FINDING:
In the Bay Area, Type 1 fire engines typically carry Class A foams.
Class B foams are used infrequently by municipal firefighting agencies. Many fire department representatives present at the Regional Work Group stated they rely on mutual aid (i.e., assistance from other nearby fire departments) in the rare instances where Class B foams are required. Class B foams are required at refineries and airports due to the likelihood of flammable liquid fires presenting risk to human safety and property at these locations.

1.4.3 Senate Bill 1044: PFAS Ban

In September 2020, due to the highly toxic and persistent nature of PFOS and PFAS (found in Class B firefighting foams), California passed and signed Senate Bill 1044 into law. This legislation banned the manufacture, sale, and use of PFAS in Class B firefighting foams in most applications starting on January 1, 2022. As a result, chemical manufacturers have started to develop substitute foams that do not contain PFOS or PFAS. Many of these types of foams do not contain fluorine. The law provides exemptions with later deadlines for facilities that meet various criteria, including the following:

- Terminals and oil refineries may apply for exemptions until January 1, 2028, for use on flammable liquid storage tanks greater than 120 square meters in surface area or for use on fuel-in-depth pools. Further extensions may be issued for terminals and oil refineries in cases where no clear, effective substitute is available. These extensions may be granted in two-year terms until January 1, 2032.

This law additionally sets reporting procedures for the use of PFAS-containing Class B foams and identified requirements for minimizing discharges of PFAS-containing Class B foams to the environment. All uses of PFAS-containing Class B foams must be reported to the State Fire Marshal's office within five business days, and the report should include the following:

- Identity of the foam,
- Quantity used,
- Total PFAS concentration,
- Application for which the foam was used, and
- Duration of the fire.

In addition, the use of PFAS-containing Class B foam must not allow any release to the environment, contain all releases onsite, implement containment procedures such as berms and ponds, dispose of all wastes in a manner that prevents environmental discharge, and report if any wastes are discharged to the environment. Since the legislation banned the manufacture, sale, and use of PFAS in Class B firefighting foams, these requirements now apply only to exempt facilities.

REGIONAL WORK GROUP FINDING:
Foam is typically preloaded into fire engines but, in general, fire departments avoid excessive use. One reason is that foams are expensive. The actual use of foam during emergency firefighting operations is determined by the incident commander for a particular fire and can vary on the scene. For some common fire types, such as vehicle fires, foam application is not the default as certain materials cannot be penetrated. Foam is typically stored on fire engines in five-gallon containers of concentrate. Firefighters use a batch mixing process to mix foam with water.

1.5 COMPLEXITY OF ISSUE

The Regional Work Group recognizes the significant value of regional collaboration, knowledge sharing, and resource exchange on the topic of emergency firefighting discharges. During the development of the Regional Report, participants expressed concerns that the Regional Water Board's proposed strategies in the MRP Fact Sheet do not fully address the underlying complexities, emphasizing that the challenges are more intricate than they appear. This section highlights several key factors that influence the implementation of the recommendations in this Regional Report.

1.5.1 Prioritization and Urgency

Managing emergency firefighting discharges, including water and foam, is highly complex with multiple, often competing considerations. The urgency inherent in firefighting operations significantly limits the time and focus available for addressing water quality during emergencies. Firefighting personnel, including municipal staff and contractors, are tasked with controlling immediate threats from the fire, leaving little time or resources to focus on managing potential discharges from water and foam used during suppression efforts. As outlined in the MRP, the priorities for firefighting operations are the protection of life, property, and the environment (in that order). In an emergency, firefighters need to balance the urgency of rapid, effective firefighting with the unpredictable nature of each situation. While mitigating water quality impacts are an important operational consideration, effectively deploying stormwater pollution prevention BMPs during emergency activities is difficult and in some cases in opposition to fighting the fire or saving lives.

Furthermore, the unpredictable nature of firefighting operations poses additional logistical challenges that complicate the execution of stormwater BMPs. Firefighters are often required

to leave the scene for other emergencies before they could address the environmental impacts of fire-related discharges. Each firefighting incident is unique, and the actions and decisions made in the moment can vary significantly based on the specific circumstances at hand. While stormwater programs implement established BMPs and SOPs for stormwater quality management , fire departments rely more on guidelines for pollution prevention due to the unique nature of fires and the evolving nature of each situation.

1.5.2 Organizational and Structural Complexities

The diverse structure of firefighting agencies in the Bay Area adds another layer of complexity to managing firefighting discharges as shown in Table 1-1. Not all fire departments are municipal entities; many are organized within special districts or county-level services. For example, the City of Emeryville is served by the Alameda County Fire Department; areas like Livermore and Pleasanton are served by the Livermore-Pleasanton Fire Department, a Joint Powers Authority; the cities of Moraga and Orinda are served by the Moraga-Orinda Fire Department, a special fire district, and the City of Los Altos contracts with the Santa Clara County Fire Department. In some jurisdictions the fire department may be the CUPA agency, that performs stormwater inspections or responds to hazardous material spills. In these instances, there may be a better internal understanding of stormwater pollution prevention, whereas other fire departments may not have any ongoing interaction with stormwater programs. These structural differences result in varying levels of resource availability, operational coordination, and organizational approaches, which have the potential to complicate containment and cleanup efforts in the context of emergency firefighting operations.

In the Bay Area, where fires (both municipal and wildfires) can be frequent and mutual aid from multiple fire departments is common, staffing shortages can further limit the availability of personnel to assist with post-fire discharge cleanup, making BMP implementation even more difficult.

Table 1-1- Bay Area Fire Departments by Permittee

Fire Department	Permittee(s) Being Served
Alameda County	
Alameda Fire Department	City of Alameda
Albany Fire Department	Albany
Berkeley Fire Department	Berkeley
Alameda County Fire Department	Dublin, Emeryville, Newark, San Leandro, Union City, and Unincorporated Alameda County
Fremont Fire Department	Fremont
Hayward Fire Department	Hayward
Livermore-Pleasanton Fire Department	Livermore and Pleasanton
Oakland Fire Department	Oakland
Piedmont Fire Department	Piedmont
San Mateo County	
Menlo Park Fire Department	Atherton, East Palo Alto, and Menlo Park
San Mateo Consolidated Fire Department	Belmont, Foster City, and City of San Mateo
San Mateo County Fire Department	Unincorporated San Mateo County

Fire Department	Permittee(s) Being Served
Central County Fire Department	Burlingame, Hillsborough, and Millbrae
Coastside Fire Protection District	Half Moon Bay
Colma Fire Department	Colma
North County Fire Authority	Brisbane, Daly City, and Pacifica
Redwood City Fire Department	Redwood City and San Carlos
San Bruno Fire Department	San Bruno
South San Francisco Fire Department	South San Francisco
Woodside Fire Protection District	Portola Valley and Woodside
Santa Clara County	
Santa Clara County Fire Department	Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, Saratoga, and Unincorporated Santa Clara County
Milpitas Fire Department	Milpitas
City of Mountain View Fire Department	Mountain View
City of Palo Alto Fire Department	Palo Alto
San Jose Fire Department	San Jose
Santa Clara Fire Department	City of Santa Clara
City of Sunnyvale Fire Department	Sunnyvale
Contra Costa County	
Contra Costa County Fire Protection District	Antioch, Brentwood, Clayton, Concord, Lafayette, Martinez, Oakley, Pinole, Pittsburg, Pleasant Hill, San Pablo, Walnut Creek, and Unincorporated Contra Costa County.
El Cerrito Fire Department, Kensington Fire Protection District	El Cerrito
Richmond Fire Department	Richmond
Moraga/Orinda Fire District	Moraga and Orinda
Rodeo/Hercules Fire District	Hercules
San Ramon Valley Fire Protection District	Danville and San Ramon
Solano County	
Suisun City Fire Department	Suisun City
Fairfield Fire Department	Fairfield
Vallejo Fire Department	Vallejo

1.5.3 Funding Constraints

Another major challenge lies in funding and the financial constraints posed by laws such as Proposition 218, which limits local governments' ability to raise funds for stormwater management. This constraint means that the costs associated with developing and implementing new BMPs for managing emergency firefighting discharges will increase the financial burden on municipalities. This is especially problematic given the existing stormwater management expenses municipalities already face. As a result, BMPs must be feasible, effective, and cost-efficient to ensure they are realistic and sustainable in the long term.

2 FIREFIGHTING FOAM BMPs

Section 1.4 describes the two main types of firefighting foams, i.e., Class A and Class B. Section 2 discusses the BMPs outlined in the MRP.

2.1 DETERMINING LEAST ENVIRONMENTALLY HARMFUL FOAMS

The MRP required the Regional Work Group to investigate which firefighting foams are the least environmentally harmful (i.e., have the least adverse water quality and beneficial use effects, including those related to biodegradation, biomagnification, bioaccumulation, and acute and chronic toxicity), for both Class A foams and Class B foams. Based on this evaluation, the Regional Work Group was then required to develop BMPs that: (1) prioritize the use of the least environmentally harmful foams during emergency responses and provide guidance for their appropriate disposal; and (2) minimize the overall use of firefighting foams without compromising the protection of life or property.

2.1.1 Phase out PFAS containing foam

As described in Section 1.4, Senate Bill 1044 banned the use of PFAS in Class B firefighting foams in most applications starting January 1, 2022. In the Regional Work Group, municipal firefighting departments reported they had already discontinued the use of firefighting foams with PFAS. The transition for airports took a longer period because the Federal Aviation Administration (FAA) had to approve the use of alternative foams.

In December 2022, the FAA was directed to develop a Transition Plan (termed the Aircraft Firefighting Foam Transition Plan) to transition from PFAS firefighting foam to a replacement firefighting foam (FAA, 2023). The FAA considers foams that meet the Department of Defense (DoD) fluorine-free foam military specification published on January 6, 2023, and certified by DoD to be acceptable.[4] In addition to identifying acceptable replacement foam, the Transition Plan includes research on cleaning procedures for equipment and vehicles with residual PFAS.

Regional Work Group Example Scenario:

The City of San José is currently in the process of procuring fluorine-free foam (F3) for the San José Airport Fire Department based on FAA guidance. San José will be following the guidance on properly cleaning and disposing of the old Aqueous Film-Forming Foam (AFFF) as provided in the FAA Cert Alert (National Part 139 CertAlert May 8, 2024 Department of Defense's (DoD's) Memorandum on Rinsing Aircraft Rescue Firefighting (ARFF) Vehicles Transitioning from Aqueous Film Forming Foam (AFFF) to Fluorine-Free Foam (F3). The Cert Alert recommends draining AFFF and then rinsing equipment once with water. However, it does not provide guidance on disposal and refers airports to their local jurisdictions. The City of San José opted to engage with an existing consultant for support on developing an approach to remove/dispose of old AFFF, clean all impacted equipment, and transition to a new F3 product.

[4] The DoD certified F3 foams can be found in the Qualified Products Database.

2.1.2 Selecting Environmentally Friendly Firefighting Foam

During Regional Work Group discussions, some fire departments expressed that they are already using or intend to use or purchase environmentally friendly firefighting foams. Safety Data Sheets (SDS) provided by manufacturers are used to make this determination.

Another tool to assist with the selection of environmentally-friendly firefighting foam is the use of products recommended by GreenScreen® for Safer Chemicals. Representatives from Toxic-Free Future and Clean Production Action presented information on the selection criteria for GreenScreen Certified® at a Regional Work Group meeting. The GreenScreen® certification aims to prevent regrettable substitutions for PFAS-containing firefighting foams and guarantees the absence of PFAS chemicals. Additionally, manufacturers of GreenScreen Certified® products have disclosed their entire formulation to GreenScreen® for Safer Chemicals. All formulations for certified products have been checked for potentially harmful chemicals including organohalogens, siloxanes, alkyl phenols, and over 2000 other chemicals of high concern. GreenScreen Certified® products have also been examined for acute aquatic toxicity in concentrate form. GreenScreen® has identified several potential replacement chemicals that should be avoided due to their persistent, bioaccumulative, and toxic effects to aquatic organisms. These include organohalogens, Siloxanes (D4, D5, and D6), Alkyl Phenols & Alkylphenol Ethoxylates and over 2,000 other chemicals of high concern . (GreenScreen Certified® Firefighting Foam fact sheet). The list of GreenScreen Certified® foams is available at this link: https://www.greenscreenchemicals.org/certified/products/category/firefighting

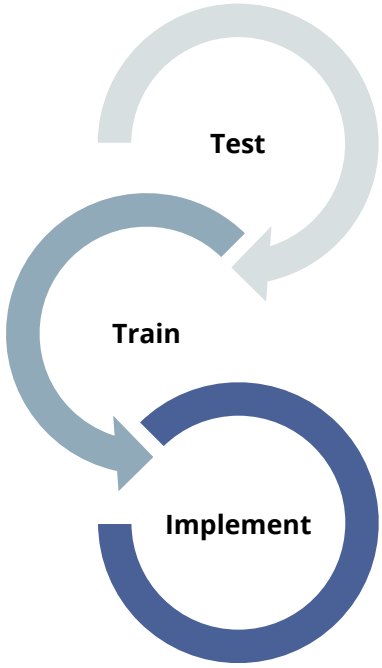


Figure 2-1 Process for Switching Foam Products

Discussions with a Firefighting Foam Coalition (FFFC) representative, a non-profit trade association representing foam manufacturers and distributors, stated that while some member manufacturers have opted into GreenScreen® certification, some manufacturers may be hesitant to disclose the entirety of their formulations to third party organizations. Discussions with both FFFC and GreenScreen® representatives illustrated that while presence on the GreenScreen Certified® products list may suggest lower potential for environmental harm, absence from the list does not suggest higher potential as there are many reasons that a product may be absent from the list unrelated to potential for environmental harm.

Making the switch to a new type of firefighting foam can be challenging. Decisions such as these have the potential to impact public and firefighter safety and, as such, cannot be made lightly. It is recommended that fire departments and their municipal partners thoroughly vet the SDS of potential foam products. To simplify the selection process, firefighting agencies may

consider choosing a GreenScreen® Certified product such as Micro Blaze-Out which has been implemented successfully in the Bay Area on several different fire types. Products such as this offer foam quality that can match Class A and B in most scenarios. The Alameda County Fire Department was one of the first in the Bay Area to switch to the Micro Blaze-Out foam. As shown in Figure 2-1, their approach can be broadly broken down into three phases, and may be used for other firefighting agencies looking to switch to environmentally-friendly foams:

Phase I: Test. Once a product is selected, obtain a small amount. Review the SDS and test the product with a qualified lab. Then, identify scenarios in which the product could be tested in the field. Start off slow and focus on small fires for testing. Obtain testimonials from firefighters on their experience.

Phase II: Train. Following testing of the product train firefighting staff on the new product. These trainings are generally provided by foam manufacturers. The method of application of the new product may be different and the way the foam looks on a fire may be different. The fluorine-free foam products are likely to look and act differently than the thick Class B foam that may be more familiar.

Phase III: Implement. Once the product demonstrates effectiveness through testing and training has been provided, plan for wider use and larger fires. Continue to collect testimonials to expand the understanding of effectiveness in different fires and incorporate processes for use.

2.2 PROPER DISPOSAL

Firefighting foam may need to be disposed of if it is deemed unsuitable (e.g., expired) or if it contains PFAS and can no longer be used. All types of firefighting foam should be properly stored with the appropriate BMPs in place to prevent contamination of stormwater runoff until they have been disposed. In preparation for disposal, coordination with solid and hazardous waste municipal departments can be an important first step. It is also typical to use private environmental contractors to remove and dispose of foam concentrates. In addition to stored foam, residue on equipment should be rinsed and disposed of properly. As mentioned earlier, guidance is available from the FAA regarding properly cleaning equipment and disposing of the rinsate and the foam.

As mentioned previously, the use of PFAS in firefighting foams in most applications was banned in California as of January 1, 2022. Any remaining PFAS containing firefighting foams need to be disposed. In 2024, the EPA developed interim guidance for destruction and disposal of PFAS containing materials. The guidance considers hazardous waste combustion facilities as an option for liquid PFAS. However, it notes that there are still uncertainties around the recommended disposal and destruction methods and their ability to prevent migration into the environment.

While most fire departments have disposed of PFAS-containing firefighting foam, there may be some remaining that have not. These departments could refer to the *Solutions for Firefighting Foam Transition* webinar, by CDM Smith, or the FAA Transition Plan research for guidance, and coordinate with the appropriate municipal staff handling solid and/or hazardous waste. If PFAS-

containing firefighting foam is determined to still be stored onsite, then proper labeling/signage must be provided and BMPs such as berms and covers must be implemented to avoid accidental use or spills.

REGIONAL WORK GROUP FINDING:
The majority of Bay Area fire departments have already disposed of all PFAS-containing Class B foams through enlistment of private environmental contractors or through Mutual Aid/Petrochemical Mutual Aid Association. They reported significant costs to dispose of the foams. Trade association representatives to the Regional Work Group noted that environmental waste disposal groups currently store hazardous PFAS-containing Class B foams in accordance with local regulations, but these organizations are currently awaiting further guidance from regulators about proper methods for disposal.

2.3 PROPER USE OF FIREFIGHTING FOAM

Foam can rapidly extinguish fires, has saved many lives, and has reduced the loss of property. Rapid fire extinguishment also reduces some environmental impacts, especially related to air quality. Use of foam can also reduce the amount of water needed to extinguish a fire. Firefighters are trained on foam application basics in the Firefighter I curricula. The use of foam during emergency firefighting operations is determined by the firefighter Incident Commander (IC). The person who assumes the role of IC varies based on the incident, department, and qualifications of personnel. While pre-planning foam usage prior to arriving at an emergency event is not always possible given the unpredictable nature of emergencies, there are some BMPs that can be incorporated generally into firefighting practices and applied as appropriate and feasible based on unique scenarios. These BMPs are described in Sections 2.3.1-2.3.4.

The MRP calls for SOPs to be developed, but it should be noted that this type of documentation is not common or recommended for firefighting activities. Given the unique and variable conditions presented with each fire event, SOGs are the more common and preferred approach for firefighting. These allow for incident command to have onsite flexibility to make decisions freely using best professional judgement based on the particular conditions and with an emphasis on securing the safety of life and property as quickly as appropriate.

2.3.1 Avoid the use of firefighting foam when it is not necessary

From discussions with the Regional Work Group and individual representatives it is understood that, generally, Bay Area fire engines are pre-loaded with Class A foams. Firefighters are trained on the use of the proper firefighting foam depending on the type of fire in the Firefighter I curricula.

Incident command and firefighters should consider incorporating the use of foam into adaptive management planning for emergencies if they do not already.

Some fire departments incorporate certain levels of pre-planning prior to arriving at the emergency scene and plan to use only water if the conditions are appropriate. For example, if

the type of fire can typically be extinguished with water alone and there is sufficient water supply then a water-only approach is implemented. Based on whether the water-only approach is effective or whether conditions change making it less optimal, a new approach that includes the use of foam may be necessary.

Fire departments are investigating and piloting alternative BMPs for extinguishing challenging fires (e.g., battery fires), such as fire blankets, submersion pits, and cutter extinguishers. These methods can help reduce the volume of firefighting foam and water used, thereby minimizing the potential for runoff containing toxic materials.

2.3.2 When firefighting foam is used, limit the amount used

From discussion with Regional Work Group members, it is understood that incident command can incorporate consideration of the amount of foam needed for extinguishing a fire as time allows. The preferred approach is that just enough foam be applied to accomplish the task and ideally, no more. The Regional Work Group found that fire departments typically avoid excessive use of foam primarily because they are expensive. However, environmental conditions should continue to be acknowledged and enhanced as an influencing factor for following training guidelines on the amount of foam to use.

Firefighters responsible for mixing the foam with water in the field and application of foam receive additional training.

2.3.3 Use the proper firefighting foam, depending on the type of fire

As described earlier, the two main types of firefighting foams are Class A and Class B. Class A generally poses a less significant impact on the environment and is generally prioritized when it is an option. Examples of when Class A foams can generally be prioritized, include, but are not limited to wildland fires, residential, and structural fires.

Class B foam is generally limited only to situations that pose a significant flammable liquid hazard to reduce environmental impacts. Examples of where significant flammable liquid hazards may be present include airport operations, storage tanks, terminals and petroleum/chemical processing, highway and rail transportation, marine and military applications, industrial facilities, and some power generating facilities. Class B foams may not be necessary for smaller flammable liquid threats such as automobile fires without a significant fuel spill, or electric vehicle fires caused by batteries, and these should be evaluated for water or Class A foam use by the incident command (Firefighting Foam Coalition, 2016).

REGIONAL WORK GROUP FINDING:
Some fire departments do not have Class B foam which makes the decision to use it more strategic as they would need to specifically call for mutual aid. In this case, the Class B foam is still limited based on incident command guidance.

Firefighters are trained on the selection and use of firefighting foam based on the type of fire in the Firefighter I curricula.

2.3.4 Discourage the use of firefighting foam where it may discharge to receiving waters.

Firefighting foam usage depends on the type of fire and material burning. In general, applying BMPs focused on avoiding, limiting, and proper use of firefighting foam is a robust approach supporting areas discharging to receiving waters, including those that may have sensitive habitat, such as habitat for special status species. To further avoid impacts on receiving waters, BMPs related to Emergency Firefighting Activities (Section 3) should be emphasized and training and/or outreach should be provided to inform firefighters on environmental considerations.

Regional Work Group Example Scenario:

The Alameda County Fire Department responded to a fire directly adjacent to the Bay at the San Leandro Marina. The firefighter in incident command had been informed of the environmental impacts of foam to receiving waters and implemented a water-only approach. It proved to be effective for the particular fire scenario and, as a result, prevented the likely discharge of Class A foam to the Bay.

Firefighting training on the use of foams is a standard for fire departments. If water quality considerations are not included in the training platforms or resources currently being used by the fire department, municipal staff could work with the fire departments to develop training or outreach materials. These materials would provide a connection between the training fire department personnel receive on the appropriate use of foam and how implementing that training also benefits water quality.

3 EMERGENCY FIREFIGHTING ACTIVITIES

As stated previously, and throughout this Regional Report hereafter, the focus of firefighters during an emergency fire response is on protecting life, property, and the environment (in that order). To address the protection of the environment, this section describes the coordination between municipal departments, firefighting agencies, and cleanup crews before, during, and after an emergency. This section also discusses the BMPs for managing stormwater pollution from emergency firefighting discharges.

3.1 COORDINATION AND COMMUNICATION

The MRP identifies communication and coordination between both municipal staff (e.g., fire, public works, environmental services) and external responding agencies (e.g., CalFire, special district fire departments) as a possible BMP. The Regional Work Group identified coordination and communication between responding fire departments and relevant municipal staff as a crucial BMP.

Coordination opportunities, processes, and level of effort may vary widely among municipal jurisdictions given the varied organizational structures of fire departments serving communities and size and resources of the municipality. For example, the City of Emeryville is served by the Alameda County Fire Department. In addition to coordinating with the Alameda County Fire Department, they may also need to coordinate with the cities of Dublin, Newark, San Leandro, and Union City, and Alameda County, who are also served by the Alameda County Fire Department, to ensure consistent objectives.

Regional Work Group discussions suggest that the first step for establishing coordination between municipalities and fire departments is to identify key contacts within each agency. As contacts are identified, their roles and responsibilities can be considered within the context of emergency fire discharges. From there, an organization or contact chart can be created, and updated as needed. Several agencies have established procedures for ongoing coordination (e.g., as-needed meetings or emailed updates) as changes to contacts, policies, and procedures occur. These meetings offer opportunities to debrief on lessons learned either via incident report sharing or other internal coordination (e.g., meetings).

Regional Work Group Example Coordination Scenario:

The City of San José Environmental Services Department has identified representatives from the City of San José Fire Department and City of San José Airport Fire Department to attend periodic meetings. The purpose of these meetings is to review implementation of the MRP requirements, review any recent CalOES reported discharges, and discuss lessons learned.

Based on conversations within the Regional Work Group and individual conversations with fire departments, there are instances when additional coordination beyond fire department and municipal staff is needed. There are many local, regional, state, and federal agencies that may need to be notified at different points during or following an emergency fire discharge event. These may include county health departments, California Department of Fish and Wildlife (CDFW), Regional Water Board, or the EPA. In Regional Work Group discussions, it was noted that fire response teams often initiate this external coordination.

Municipal staff can work with their fire departments to designate municipal points of contact and establish clear lines of communication. This collaboration can support the development of mutually agreed-upon policies or procedures that may be necessary during emergency firefighting responses (see Section 3.2).

Some general topics identified in emergency response policies or procedures may require regular review, maintenance, and updates at defined intervals. If not already incorporated into existing agency protocols, municipalities can develop a coordination strategy to document key components such as points of contact, roles and responsibilities, organizational structure, urgency thresholds, and coordination topics or meeting schedules. Where appropriate, municipal staff may be able to leverage or integrate existing procedures and contacts from their illicit discharge detection and elimination programs or Hazardous Materials Response Teams to support this effort.

3.2 CATEGORIZING FIRE TYPES AND ESTABLISHING BMP/SOG IMPLEMENTATION BASED ON CATEGORIZATION

To further support the process described in Section 2.3, municipal staff can work with fire departments to understand different types of fires at a high level and identify appropriate BMPs for each.

While each fire event will be different and present unique challenges, there may be an opportunity to establish general guidelines or BMPs for categories or types of fires. For example, fire departments could contact the identified municipal point-of-contact if foam is used in certain situations, and communicate other stormwater-relevant details, as determined in the coordination process.

Regional Work Group Example Scenario:

The City of Berkeley Department of Public Works has requested the Berkeley Fire Department contact them when foam is used in fighting fires.

Municipal staff are encouraged to coordinate with their local fire departments to define reasonable thresholds and categories of fire incidents that would warrant notifying the municipality. This could be done when developing policies and procedures (see Section 3.1). The determinations will differ based on variables such as the size of the jurisdiction, the frequency of firefighting emergencies, and the type of land uses/facilities/structures. Determinations of when fire departments communicate with municipal staff will also differ based on the established outcomes needed of municipal staff involvement (e.g., deploying staff or contractors to assist with BMPs for post-fire cleanup, making observations of potential receiving water impacts, being notified of additional fire department response activities, etc.).

3.3 RESOURCES AVAILABLE TO DETERMINE POTENTIAL RECEIVING WATER IMPACT

Municipalities maintain MS4 maps, which can be valuable tools for understanding the location of fire incidents in relation to creeks, stormwater infrastructure, and sensitive habitats. These maps may help determine appropriate BMPs to implement to protect nearby water bodies. For example, “proximity to a creek” could serve as a key incident category for selecting BMPs during emergency response efforts. MRP Provision C.5.f. requires permittees to review current MS4 maps, identify missing information and develop a plan and schedule for updating the maps. The plans are due with the September 2026 Annual Reports. Through this process permittees can ensure they have adequate MS4 maps to assist with their determination of appropriate BMPs based on the location of the fire (e.g., proximity to creek). Depending on the communication procedures established with local fire departments, these maps could be made available to dispatch personnel, fire department incident commanders, designated municipal contacts or other outside agencies that may be involved in illicit discharge responses (CDFW, California Office of Emergency Services (CalOES), etc.), as determined when coordinating the communication plan.

In accordance with MRP Provision C.5.c.ii.(5), municipalities are required to maintain and regularly update a spill, dumping, and complaint response system. This includes a phone

number and a response flowchart or phone tree that outlines the roles and contact information of various agencies responsible for responding to incidents that exceed the Permittee's immediate capabilities. Municipalities may consider sharing these tools with their fire departments to support more coordinated and informed responses to discharges of firefighting water and foam, particularly those with the potential to impact receiving waters.

Additional resources for responding to and mitigating impacts from emergency fire discharges include municipal staff in stormwater programs, county hazardous materials departments, and public works, police, and fire departments. Each of these entities can play a supporting role in identifying, preventing, and reducing pollutant discharges to creeks and the Bay during emergency firefighting activities.

3.4 DISCHARGE BMPS

The MRP requires the Regional Work Group to discuss BMPs for the containment and cleanup of discharges of firefighting water and foam associated with emergency firefighting activities. This section summarizes the discussions and Regional Work Group findings.

3.4.1 Plugging storm drain inlets

Plugging storm drain inlets is not always the preferred BMP during emergency activities for preventing discharges to the issues highlighted below:

- **Flooding and Safety Risks:** Blocking storm drain inlets can cause street flooding, which poses serious hazards for first responders. Flooded streets can impede victim evacuation, cause fall/slip hazards, disrupt emergency vehicle and firefighter movement, and compromise overall response effectiveness.
- **Limited Equipment Space**: Fire apparatus is designed to carry essential health and safety equipment. Due to space constraints, there is typically no room to store materials needed for blocking or plugging storm drains.
- **Operational Priorities**: Firefighters must remain focused on life-saving operations. Diverting attention to storm drain management without adequate personnel can interfere with critical emergency response duties.

REGIONAL WORK GROUP FINDING: *Firefighting and municipal personnel have expressed significant concerns regarding the impacts that plugging storm drains could have such as safety hazards, flooding, property damage, traffic and access issues. Therefore, implementation of BMPs such as plugging storm drain inlets to keep water and foam onsite are considered after emergency actions being taken by fire department personnel have ceased.*

Considering the challenges associated with fire personnel implementing BMPs related to storm drain protection, emphasis should be placed on improving coordination such that response times from cleanup crews that can implement BMPs after emergency activities are over is improved.

All firefighters receive the First Responder Awareness (FRA) training, which includes information on blocking storm drain inlets. Information on containment is also included in the hazardous materials training for firefighters (e.g., Fire Fighter 1B Course Plan). . In addition, several fire departments host or send staff to Firefighter Academy trainings. However, the Regional Work Group was not able to obtain copies of the training curriculum to review these trainings' stormwater protection BMPs.

As previously mentioned in Section 2.3.4, an emphasis should be placed on stormwater pollution prevention training or outreach for firefighters. As awareness of stormwater pollution prevention is improved, better decisions can be made during emergencies that could result in municipal staff and/or cleanup crews responding in an efficient and timely manner. Training or outreach to firefighters on important aspects like surveying onsite drainage patterns associated with firefighting activities could help minimize polluted discharges during fire response and abatement. This training can empower firefighters to direct containment or cleanup crews appropriately as they anticipate the need, based on the emergency location drainage.

3.4.2 Dechlorinating discharges

With emphasis on prioritizing the use of water only to extinguish fires, it is important to consider BMPs to address chlorinated or chloraminated water runoff. Some fire departments have considered the use of dechlorination tablets or mats, which take up minimal space on fire engines and can be placed in the flow path (e.g., curb and gutter) when emergencies occur near sensitive water bodies. However, in most cases, if large volumes of water are being discharged, during an active emergency, it is likely that fire department personnel will be focused on the protection of life and property. Therefore, practical implementation of active dechlorination during such events may be limited.

Passive dichlorination may occur when there is enough time and/or distance between the discharge and the receiving water. The effectiveness of passive dechlorination will be different for water disinfected with free chlorine than chloramine, which is more persistent in the environment.

3.4.3 Coordination with containment/cleanup crews

Based on discussions within the Regional Work Group and individual conversations with fire departments, there is general recognition of the importance of clearly identifying roles and responsibilities when emergency discharges of water or foam affect the public right of way. Effective coordination between firefighting crews and containment or cleanup personnel can help support timely and appropriate response actions.

Some agencies have found that response efficiency can be improved through clear workflows and thresholds for engaging internal or external cleanup support. This may be addressed through established guidance, emergency response plans, or informal coordination strategies.

In certain cases, making this information accessible to firefighters in the field, or automating response actions based on fire alarm levels[5], has proven useful.

Where staff capacity or equipment limitations exist, some municipalities have explored the use of contractors to assist with spill containment and cleanup. In these cases, administrative contracts, interagency agreements, or pre-qualified contractor lists have been used to help expedite response times of the contractors when needed. These tools generally support the administrative process and do not incur costs unless services are activated.

Existing emergency procedures developed by other departments, as well as stormwater programs, related to spills, illegal dumping, and complaints may offer useful models for establishing internal processes that enable timely response. Where used, response contracts may include scopes of work that provide access to best management practice expertise, equipment, and supplies (such as absorbent booms, berms, or storm drain inlet covers), along with required incident documentation and reporting deliverables.

4 REPORTING

In California, the Comprehensive Environmental Response, Compensations, and Liability Act (CERCLA) requires immediate reporting by the responsible person of any significant release or threatened release of a hazardous material to Cal OES State Warning Center (800) 852-7550.[6]

The Cal OES State Warning Center provides a standard Hazardous Materials Spill Report that is filled out and submitted by the person responsible, which may include fire personnel in the case of emergency firefighting discharges that include foam concentrate. The MRP fact sheet states for firefighting personnel, the reportable quantity of hazardous material released to the environment is five gallons and that five gallons of firefighting foam is the size of a typical concentrated foam container). . The form includes a section for a description of the incident, substance type, and amount discharged. This form also serves as a mechanism for triggering reporting for other agencies and includes a section for the contact information of the applicable agency representatives. As was exemplified in the Berkeley incident, the Fire Department had reporting protocols in place and, as a result, more than 20 local, regional, state and federal agencies were notified of the incident by the Berkeley Fire Department.

The Cal OES Spill Release Reporting Notification Guidance recommends notifying the appropriate Regional Water Board for significant waterway spills or releases. A review of Cal OES records from 2019-2024 show that firefighting water and foam discharges are routinely reported in Cal OES. The Cal OES State Warning Center provides a standard report that provides agencies (including the Regional Water Board) with a transparent source of information about the usage of firefighting water and foam when it reaches a creek. In previous years, Regional

[5] Fire alarm levels are used by fire departments to communicate the severity of a fire, the number of firefighters needed, and how long it will take to reach the fire. The levels range from one to five, with each level requiring more resources than the previous.

[6] https://www.caloes.ca.gov/office-of-the-director/operations/response-operations/fire-rescue/hazardous-materials/spill-release-reporting/

Water Board staff have followed up with municipal Permittees to request more information regarding emergency firefighting discharges reported through CalOES, demonstrating CalOES is a sufficient reporting method. The State's system and Spill Release Archive Files webpage serves as a tool that can be used for tracking incidents of foam discharge over time.

Senate Bill 1044, which banned the manufacture, sale, and use of PFAS in Class B firefighting foams in most applications, sets reporting procedures for use of PFAS-containing Class B foams and identifies requirements for minimizing discharges of PFAS-containing Class B foams to the environment. All uses of PFAS-containing Class B foams are to be reported to the State Fire Marshal's office within five business days, and the report should include the following:

- Identity of the foam,
- Quantity used,
- Total PFAS concentration,
- Application for which the foam was used, and
- Duration of the fire.

A public records request submitted to CalFire indicated that California firefighting agencies have not reported any use of PFAS-containing foam in 2022, 2023, and 2024. This indicates that the use of PFAS-containing firefighting foam has been phased out.

Regional Water Board and local municipalities receive CalOES reports that meet the intended purpose for reporting as described in the MRP, and discharges of PFAS foam are reported to the State Fire Marshal's office. Therefore, additional reporting through the MRP stormwater annual reports is not required.

5 OUTREACH MATERIALS

The MRP requires the development and distribution of the following outreach materials:

- Containment and cleanup BMPs for contractors that are hired by private parties to participate in the containment and cleanup of discharges of firefighting water and foam associated with firefighting activities.
- Good housekeeping practices and preventive measures for sites that are prone to firefighting emergencies.

Regional Work Group representatives met with two fire restoration contractors to obtain information on standard procedures for containment and cleanup operations. Based on this information, additional research, and knowledge of typical spill prevention and clean up BMPs, standard BMPs for these operations were developed. The standard BMPs were provided to Countywide Stormwater Program representatives for internal review. The BMPs were formatted according to each Program's standard fact sheet/brochure template and revised based on comments received from member agencies. Each Countywide Stormwater Program distributed the fact sheets/brochures to local fire restoration contractors in the summer of 2025. Some fire restoration contractors operate in multiple locations and have received fact sheets from more than one Countywide Stormwater Program. The Regional Work Group agreed that this duplication is appropriate, as it highlights the regional scope of the requirement and

ensures that contractors have access to contact information specific to each Countywide Stormwater Program.

Regional Work Group Countywide Program leads shared BMPs developed for good housekeeping practices and preventive measures for sites that are prone to firefighting emergencies, as identified by individual Permittee agencies and/or at the Countywide level. These BMPs focus on ongoing practices that minimize the flow of firefighting water, foam, and other debris into the storm drain system during emergency firefighting activities. The Countywide Stormwater Programs provided BMP fact sheets on this topic to their member agencies for internal review, and revised BMPs according to feedback received. Individual Permittees have distributed their corresponding countywide program fact sheets to facilities they identified within their jurisdictions through direct mailing or inspection programs.

6 CONCLUSIONS AND RECOMMENDATIONS

As required by the MRP, a Regional Work Group consisting of municipal staff, firefighting agency representatives, regulatory agency representatives, and other interested parties was formed to discuss emergency discharges (i.e., water and foam) associated with firefighting that impact water quality and develop recommendations for addressing these discharges. The Regional Work Group met a total of six times from FY 22-23 to FY 24-25. Based on the discussions at the Regional Work Group meetings and additional conversations with fire department representatives, it appears that discharges of foam and water during firefighting activities are being controlled to the extent possible, i.e., without hindering firefighting operations. PFAS containing foam was banned in 2022, foam is used only as needed, and several fire departments have reported using environmentally friendly firefighting foams. The Regional Work Group's information sharing identified BMPs, including programmatic improvements, that could be implemented by fire departments and municipal staff to reduce the impact on water bodies from emergency firefighting discharges. These recommendations are summarized below.

Recommendations for Managing Discharges from Emergency Firefighting Operations:
Information regarding storm drain protection BMPs and water quality impacts is included in the basic training received by all California firefighters. Deployment of stormwater management BMPs during an emergency firefighting situation depends on the conditions at the site and is not always recommended or feasible. The priorities for firefighting operations are the protection of life, property, and the environment (in that order). Therefore, as described previously, it is also essential to implement pre-emergency BMPs and post-fire BMPs. To address the protection of the environment, the Regional Report recommends the following:

- Municipal staff and firefighting agencies should consider reviewing their coordination and communication procedures for ensuring proper coordination between municipal departments, firefighting agencies, and cleanup crews to manage discharges to the MS4 that may impact water quality after the emergency is over.
- Municipal staff should maintain a spill, dumping, and complaint response flow chart, phone tree, or contact list that shows the various responsible agencies and their contacts, and who would be involved in illicit discharge incident response that goes

beyond the Permittee's immediate capabilities according to MRP Provision C.5.c.ii.(5). Municipalities can use this contact list or provide it to the fire department for use, as needed, for responding to discharges of firefighting water and foam that impact receiving water.

- Municipal staff and firefighting agencies should consider incorporating resource-sharing practices, such as providing access to drainage system maps and identifying critical drainage release points, where appropriate. This information can support, help prioritize, and potentially mitigate water quality impacts of firefighting activities.
- Passive dechlorination may be an acceptable BMP used to reduce chlorine in firefighting water discharges.
- Plugging/covering storm drain inlets is not recommended during active emergency firefighting activities due to the risk of flooding, street or traffic hazards, and potential infrastructure damage.
- If conditions allow, dechlorination tablets and storm drain covers/plugs may be considered during post-fire cleanup efforts in the public right of way as a tool to help prevent harmful discharges from reaching nearby waterways.
- Municipal staff and firefighting agencies should consider developing and delivering training materials or outreach on water quality impacts and applicable stormwater BMPs if not already available. These trainings or outreach should be made available to firefighters, municipal staff, and contractors involved in the containment and cleanup of discharges from firefighting emergencies.

Use of Foam during Emergency Firefighting Operations: PFAS containing foams are banned in California and all firefighting agencies that participated in the Regional Work Group confirmed that they have phased out the use of these foams. Foam is used because it can rapidly extinguish fires, has saved many lives, and has reduced the loss of property. Rapid fire extinguishment also reduces other environmental impacts, especially related to air quality. Use of foam can also reduce the amount of water needed to extinguish a fire. All firefighters receive training on foam application and are trained to use foam only when necessary. The Regional Report recommends the following for proper foam application guidelines to prevent water quality impacts:

- Firefighting agencies should continue to purchase and use the least environmentally harmful foams. Municipal staff can assist by making the resources identified in the Regional Report (e.g., Safety Data Sheets, GreenScreen Certified® products, example procedure for choosing the least environmentally harmful foams) available to their local fire departments.
- For those departments that have not yet disposed of PFAS-containing foams, it is recommended that they refer to *Solutions for Firefighting Foam Transition* webinar, by CDM Smith, or the FAA Transition Plan research for guidance, and coordinate with the appropriate municipal staff handling solid and/or hazardous waste.
- Fire departments should continue to ensure that personnel making decisions on the use of foam and overseeing deployment of foam are properly trained on the use of foam.

Reporting: In California, CERCLA requires immediate reporting of any significant release or threatened release of a hazardous material to the CalOES State Warning Center (800) 852-7550, and either UPA or 911. Senate Bill 1044, which banned the manufacture, sale, and use of PFAS in Class B firefighting foams in most applications, requires that all PFAS-containing Class B foams be reported to the State Fire Marshal's office within five business days. Therefore, additional reporting is not recommended. Municipal staff can work with their local fire departments to ensure the CalOES and State Fire Marshal's reporting systems are being utilized.

In conclusion, firefighting agencies recognize the importance of protecting water quality during emergency firefighting activities and are actively transitioning toward using environmentally friendly foams. In addition, programmatic improvements, such as increased coordination and communication with municipal agencies, and ongoing training will help address the water quality impacts from emergency firefighting activities. The combination of procedural, administrative and structural BMPs implemented pre-emergency (e.g., training), during emergency firefighting activities (e.g., appropriate use of foam) and post-fire cleanup (e.g., protection of storm drains) will address concerns with water quality impacts while ensuring fire department personnel prioritize the protection of life, property, and the environment(in that order).

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