

September 30, 2021

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

**SUBJECT: SUBMITTAL OF THE SAN MATEO COUNTYWIDE WATER POLLUTION PREVENTION PROGRAM'S FY 2020/21 ANNUAL REPORT**

Dear Mr. Montgomery:

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), a program of the City/County Association of Governments of San Mateo County (C/CAG), is pleased to submit the attached Fiscal Year 2020/21 Annual Report. The report has been uploaded to San Mateo County Permittee SMARTS accounts, along with the individual Permittee Annual Reports. This report describes Municipal Regional Permit (MRP) compliance activities conducted at the regional and countywide levels on behalf of San Mateo County municipalities. It also incorporates by reference and includes as appendices three reports prepared via the Bay Area Municipal Stormwater Collaborative (BAMSC) on behalf of all Bay Area MRP Permittees.

I certify under penalty of law that the SMCWPPP FY 2020/21 Annual Report was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my enquiry of the person or persons who manage the system, or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SMCWPPP and the 22 municipal agencies in San Mateo County look forward to continuing to work with you and your staff on implementation of the MRP. If you have any questions or comments, please email me at [rbogert@smcgov.org](mailto:rbogert@smcgov.org).

Sincerely,



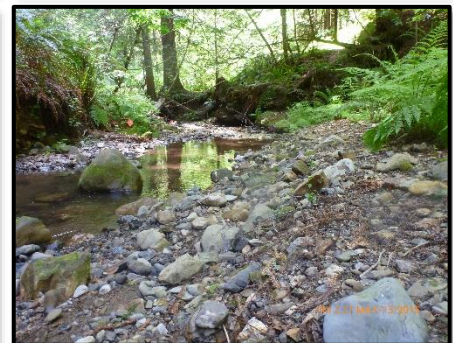
Reid Bogert  
Stormwater Program Specialist

Attachment: SMCWPPP FY 2020/21 Annual Report



SAN MATEO COUNTYWIDE  
**Water Pollution  
Prevention Program**  
Clean Water. Healthy Community.  
[www.flowstobay.org](http://www.flowstobay.org)

# FY 2020/2021 Annual Report



**September 30, 2021**

# Credits

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This report is being submitted by the participating agencies in the



Town of Atherton

City of Belmont

City of Brisbane

City of Burlingame

Town of Colma

City of Daly City

City of East Palo Alto

City of Foster City

City of Half Moon Bay

Town of Hillsborough

City of Menlo Park

City of Millbrae

City of Pacifica

Town of Portola Valley

City of Redwood City

City of San Bruno

City of San Carlos

City of San Mateo

County of San Mateo

San Mateo County Flood and

Sea Level Rise Resiliency District

City of South San Francisco

Town of Woodside

*Prepared for:*

**San Mateo Countywide Water Pollution Prevention Program (SMCWPPP)**

**555 County Center, Redwood City, CA 94063**

*A Program of the City/County Association of Governments (C/CAG)*

*Prepared by:*

**EOA, Inc.**

**1410 Jackson St., Oakland, CA 94610**



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- FY 2020/21 Regional Supplement for Training and Outreach, San Francisco Bay Area, Municipal Regional Stormwater Permit, Bay Area Municipal Stormwater Collaborative, September 2021.

# LIST OF ACRONYMS

<b>BASMAA</b>	Bay Area Stormwater Management Agencies Association
<b>BAWSCA</b>	Bay Area Water Supply and Conservation Agency
<b>BMPs</b>	Best Management Practices
<b>BSM</b>	Biotreatment Soil Mix
<b>C3TG</b>	C.3 Stormwater Technical Guidance
<b>CALBIG</b>	California Building Inspectors Group
<b>CASQA</b>	California Stormwater Quality Association
<b>C/CAG</b>	City/County Association of Governments of San Mateo County
<b>CEH</b>	County Environmental Health
<b>CEQA</b>	California Environmental Quality Act
<b>CII</b>	Commercial/Industrial/Illicit Discharge
<b>DC</b>	Development Committee
<b>DIY</b>	Do-It-Yourself
<b>DO</b>	Dissolved Oxygen
<b>DPR</b>	Department of Pesticide Regulation
<b>EPA</b>	Environmental Protection Agency
<b>FY</b>	Fiscal Year
<b>GSRD</b>	Gross Solids Removal Device
<b>GI</b>	Green Infrastructure
<b>GIS</b>	Geographic Information System
<b>IPM</b>	Integrated Pest Management
<b>IMR</b>	Information Monitoring Report
<b>JPA</b>	Joint Powers Authority
<b>LID</b>	Low Impact Development
<b>MRP</b>	Bay Area Stormwater NPDES Municipal Regional Permit
<b>MS4</b>	Municipal Separate Storm Sewer System
<b>NDS</b>	New Development Subcommittee
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>OAL</b>	California Office of Administrative Law
<b>O&amp;M</b>	Operations and Maintenance
<b>OWOW</b>	Our Water Our World

<b>PCBs</b>	Polychlorinated Biphenyls
<b>PIP</b>	Public Information and Participation
<b>POC</b>	Pollutants of Concern
<b>POTW</b>	Publicly-Owned Treatment Works (sewage treatment plants)
<b>RFQ</b>	Request for Qualifications
<b>RMP</b>	San Francisco Estuary Regional Monitoring Program
<b>SAP</b>	Sampling and Analysis Plan
<b>SCVURPPP</b>	Santa Clara Valley Urban Runoff Pollution Prevention Program
<b>SFEP</b>	San Francisco Estuary Partnership
<b>SFEI</b>	San Francisco Estuary Institute
<b>SMC</b>	San Mateo County
<b>SMCWPPP</b>	San Mateo Countywide Water Pollution Prevention Program
<b>SOP</b>	Standard Operating Procedure
<b>STLS</b>	Small Tributaries Load Strategy
<b>SWRP</b>	Stormwater Resource Plan
<b>SWPPP</b>	Stormwater Pollution Prevention Plan
<b>TAC</b>	Technical Advisory Committee
<b>TMA</b>	Trash Management Area
<b>TMDL</b>	Total Maximum Daily Load
<b>WLA</b>	Waste Load Allocation
<b>WY</b>	Water Year

# EXECUTIVE SUMMARY

## INTRODUCTION

This FY 2020/21 Annual Report was developed in compliance with the reissued National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit (referred to as the MRP)<sup>1</sup> for stormwater runoff discharges from San Mateo County and certain other San Francisco Bay Area communities. It summarizes stormwater management activities implemented by the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP or Countywide Program) in FY 2020/21. SMCWPPP's activities benefit 22 municipal agencies in San Mateo County: 15 cities, five towns, the County of San Mateo, and the San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD). Each of these agencies also separately submits an individual Annual Report to the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) focusing on that agency's stormwater management activities during FY 2020/21.

SMCWPPP is a program of the City/County Association of Governments (C/CAG) of San Mateo County. C/CAG is a Joint Powers Authority (JPA) that addresses issues of regional importance to San Mateo County jurisdictions such as congestion management and water quality. The C/CAG Board of Directors is comprised of a local elected city council representative from each city and town in San Mateo County, a member of the County Board of Supervisors, and representatives from the transit district and transportation authority. A 1993 amendment to the JPA Agreement made C/CAG responsible for assisting San Mateo County municipalities with complying with the municipal stormwater NPDES permit, including its latest incarnation as the MRP. Stormwater management-related activities of C/CAG and its various related committees and workgroups are described below.



## C/CAG Board of Directors

Throughout FY 2020/21, the C/CAG Board of Directors received presentations, updates, and took actions on various stormwater-related issues, as summarized below (all C/CAG Board of Directors meeting agenda materials and minutes are available at [www.ccag.ca.gov/board-of-directors](http://www.ccag.ca.gov/board-of-directors)):

- September 2020 – Appointed Lisa Petersen (Pacifica) to the C/CAG Stormwater Committee;
- October 2020 – Received a presentation from the San Francisco Estuary Institute's Regional Monitoring Program for Water Quality in San Francisco Bay on "How Healthy is the Bay?"; Received a presentation providing an annual update on the Countywide Program;

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<sup>1</sup>NPDES Permit No. CAS612008 (Order No. R2-2015-0049), dated November 19, 2015. The MRP has a five-year term: effective January 1, 2016 and expires December 31, 2020. However, the permit term has been administratively extended during the currently ongoing permit reissuance process. July 1, 2022 is the anticipated effective date of the reissued permit.



- December 2020 – Approved agreements with Geosyntec Consultants (\$110,750) to develop a business case and collaborative framework for regional stormwater management and Craftwater Engineering (\$89,250) to identify, prioritize, and develop concepts for regional stormwater capture projects; Approved agreements with WaterNow Alliance and American Rivers / Corona Environmental to evaluate funding/financing options for regional-scale stormwater management and feasibility of a stormwater credit trading marketplace in San Mateo County; Received presentation on the Draft Countywide Sustainable Streets Master Plan;
- January 2021 – Received a copy of executed Task Order with Urban Rain Design for outreach materials on green infrastructure (GI) implementation; Appointed Azalea Mitch (City of San Mateo) to the C/CAG Stormwater Committee; Orientation for new C/CAG Board members, including overview of C/CAG’s countywide stormwater program (SMCWPPP);
- February 2021 – Appointed Dante Hall (Foster City) to the C/CAG Stormwater Committee; Adopted the final Countywide Sustainable Streets Master Plan;
- March 2021 – Approved executing an agreement with Bay Tree Design (\$97,761) for the Resilient San Carlos Schoolyards Project to develop concept designs for integrating GI into school campuses for climate resilience and water quality improvement; Received an update on MRP reissuance;
- April 2021 – Annual C/CAG Forum, including a [breakout session](#) discussing stormwater funding shortfall solutions;
- May 2021 – Approved extensions to four technical consultant contracts, extending the term through September 2022 to account for the MRP reissuance timeframe; Received draft FY 2021/22 C/CAG Budget, including budget for the Countywide Program;
- June 2021 – Appointed Hae Won Ritchie (San Bruno) to the C/CAG Stormwater Committee; Approved FY 2021/22 final C/CAG Budget; Received amendments to funding agreements providing time extensions for construction of the Pacifica and East Palo Alto Safe Routes to School / Green Stormwater Infrastructure pilot projects; Approved revised funding allocations for Measure M vehicle registration fees, including a 3% increase in allocation to the Countywide Program (approximately \$190k annually); Approved amendments to consultant Task Orders and Funding Agreements.

## **Program Manager and Stormwater Program Specialist**

C/CAG’s Program Manager oversees the overall Countywide Program, serving as staff to the C/CAG Board and liaison among San Mateo County municipalities, technical consultants, committees, the Bay Area Stormwater Management Agencies Association (BASMAA)<sup>2</sup> and its successor organization (Bay Area Municipal Stormwater Collaborative), the California Stormwater Quality Association (CASQA), and Regional Water Board staff. The Program Manager represents San Mateo County municipalities at regional and statewide meetings and manages technical consultants that support programmatic activities. C/CAG’s Stormwater Program Specialist (Specialist) supports the Program Manager in implementing the Countywide Program. In addition to providing regular staff support, agenda reports, and presentations to

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<sup>2</sup>The Bay Area Stormwater Management Agencies Association (BASMAA) recently dissolved as a formal non-profit organization, but its members continued to meet as an informal organization called the Bay Area Municipal Stormwater Collaborative (BAMSC).

the C/CAG Board and the Stormwater Committee, the Program Manager and Specialist participated in the following activities during the FY 2020/21 reporting year:

- **BASMAA:** The Program Manager continued representing the Countywide Program on the Board of Directors (continued serving as Chair). Program Manager and Specialist participated in Board meetings, BASMAA regional project meetings, and BASMAA committee meetings. Over the course of the fiscal year the Specialist served as both Chair and Vice Chair of the Monitoring and Pollutants of Concern Committee and also represented stormwater programs on the San Francisco Bay Regional Monitoring Program (RMP) Emerging Contaminant Work Group (ECWG). BASMAA formally dissolved as a non-profit organization at the end of FY 2020/21 and was succeeded by an informal collaborative called the Bay Area Municipal Stormwater Collaborative.
- **CASQA:** The Program Manager and Specialist attended and presented at the annual CASQA conference and participated in the CASQA Funding Committee.
- **San Francisco Estuary Partnership Implementation Committee:** The Program Manager continued serving on the committee representing the municipal stormwater perspective, participating in quarterly meetings.
- **Green Infrastructure Funding Academy:** The Program Manager participated in the Academy which is sponsored by American Rivers, Corona Environmental, and WaterNow Alliance, along with other national municipal GI practitioners. The Academy focused on innovative approaches to funding/financing GI implementation, resulting in additional pro-bono support to C/CAG during Calendar Year 2021 to further explore specific funding and financing alternatives for San Mateo County, including evaluation of the feasibility of a stormwater credit trading marketplace (further described in the subsequent Grant-funded Project Activities section).
- The Program Manager / Specialist gave presentations and provided comments via organizations such as the Bay Area Regional Collaborative, Metropolitan Transportation Commission, Green Infrastructure Leadership Exchange, and CASQA on a variety of topics such as stormwater management, sustainable streets, and GI.

### ***Grant-funded Project Activities***

The Program Manager continued representing BASMAA on the Urban Greening Bay Area grant from EPA (Water Quality Improvement Fund) to the San Francisco Estuary Partnership / Association of Bay Area Governments. Although BASMAA's grant project finished in FY 2018/19, additional unused funding from other grant tasks was shifted to the BASMAA Roundtable effort to further advance the specific actions to prioritize sustainable streets in funding sources. The Program Manager, working with the project consultant and Roadmap Implementation Committee, finalized a fact sheet that clarifies the eligibility of GI in transportation funding programs for the Metropolitan Transportation Commission's One Bay Area Grant Program and developed a draft fact sheet for the California Transportation Commission's SB-1 funding programs.

In addition, the Program Manager and Specialist began implementing C/CAG's Regional Stormwater Collaborative project funded by a \$200,000 grant from the California Natural Resources Agency and in collaboration with the County of San Mateo's Office of Sustainability and \$100,000 in grant funds from US EPA (Water Quality Improvement Fund). These funds are allocated to Geosyntec Consultants and Craftwater Engineering, in conjunction with additional pro-bono support from American Rivers / Corona Environmental and the WaterNow Alliance. The multi-pronged partnership project is intended to advance implementation of regional-scale stormwater management in San Mateo County. Regional-scale

stormwater management is defined to include large-scale regional retention facilities as well as programmatic implementation of smaller, distributed-scale stormwater facilities such as through the C/CAG's countywide rain barrel / cistern / rain garden rebate and incentive program. The four interrelated project components and associated consultants/partners are summarized below.

1. **Building the Business Case for Regional-Scale Stormwater Management** (Geosyntec Consultants)
  - Drivers and Objectives: Establishes the “What” in terms of what can be achieved through regional-scale stormwater management through establishing key drivers and associated objectives. The Drivers and Objectives feed into the prioritization analysis, below, establishing the goals prioritized opportunities will need to address. The C/CAG Stormwater Committee approved the final Drivers and Objectives report at the May 2021 meeting.
  - Business Case: Establishes the “Why” in terms of why C/CAG's member agencies would benefit from countywide collaboration on regional-scale stormwater management. The Business Case will be informed by the prioritized opportunities determined below, including quantitative analyses of the potential benefits provided through those opportunities.
  - Collaborative Framework: Establishes the “How” in terms of how C/CAG's member agencies can collaborate across jurisdictional lines on regional scale stormwater management.
2. **Prioritizing and Conceptualizing Regional-Scale Stormwater Management Opportunities** (Craftwater Engineering / County of San Mateo)
  - Identify and Prioritize Opportunities: This will update analyses done for the San Mateo County Stormwater Resource Plan to find the best opportunities throughout the county for regional-scale stormwater management to address the Drivers and Objectives established above.
  - Project Concepts: Five new project concepts will be developed, showcasing high-priority stormwater capture opportunities throughout the county that directly address the above Drivers and Objectives. The project concepts are being funded in partnership with San Mateo County through the Office of Sustainability and its separate grant funding from the U.S. Environmental Protection Agency.
3. **Credit Trading Marketplace Analysis** (American Rivers / Corona Environmental): This project will evaluate the potential for creating a stormwater credit trading marketplace in San Mateo County that would allow private developers or C/CAG member agencies to buy and sell stormwater management credits to increase rates of implementation and progress toward achieving the Drivers and Objectives identified above.
4. **Innovative Funding and Financing Analysis** (WaterNow Alliance): This project will evaluate innovative funding and financing options for all scales of stormwater management, from large regional capture facilities to small-scale rainwater harvesting rebate and incentive programs, including key considerations when structuring potential funding initiatives to maximize flexibility for implementation on public and private properties.

In addition, the C/CAG Board of Directors adopted the final Countywide Sustainable Streets Master Plan in February 2021, which was funded via a \$986,300 Caltrans Climate Adaptation Planning grant. This plan prioritizes street segments for including GI with other planned investments, such as bike/pedestrian and complete streets projects, safe routes to school improvements, and pavement rehabilitation. As part of the plan, C/CAG's consultant team performed precipitation-based climate change modeling, public outreach/engagement, developed 12 project concepts, developed model policy implementation

mechanisms, updated C/CAG's library of design details and specifications, and created a robust web-based GI tracking tool.

Finally, C/CAG staff awarded a consultant support contract to Bay Tree Design for the Resilient San Carlos Schoolyards project funded via a \$97,000 grant from the California Resilience Challenge. The project kicked off at the end of FY 2020/21 and will develop concept designs for multiple school sites in the San Carlos School District showing how GI can be integrated to help reduce runoff, improve water quality, recharge groundwater, and reduce urban heat islands.

## **Stormwater Committee**

C/CAG's stormwater management-related decisions are generally made in consultation with the NPDES Stormwater Committee. At its November 2012 meeting, the C/CAG Board authorized reconvening this committee to include director-level appointees with decision-making authority for implementing stormwater management programs within San Mateo County municipalities in compliance with requirements in the MRP. The Committee meets on an approximate bimonthly basis (depending on need) on the third Thursday of the month at the San Mateo County Transit District Office in San Carlos. Public notices for Committee meetings are posted in accordance with Brown Act requirements on the ground floor of the same location.

The Stormwater Committee met nine times during FY 2020/21 to assist with planning and organizing SMCWPPP's stormwater management activities including MRP compliance actions. Appendix 1 includes a table summarizing attendance at the Stormwater Committee meetings held during FY 2020/21. Details on Stormwater Committee meeting agendas, minutes, and presentations can be found on the Committee's [website](#).

It should also be noted that at its March 2021 meeting, the Stormwater Committee reinstated C/CAG's Funding and Financing Workgroup to build off of the 2014 countywide funding initiative activities led by C/CAG.

## **Technical Advisory Committee and Subcommittees**

The Stormwater Committee provides direction to and receives feedback and recommendations from the Technical Advisory Committee (TAC). During FY 2012/13, the TAC transferred its former policy-related functions to the Stormwater Committee and transitioned to a quarterly workshop format. The new format allowed more detailed discussion of MRP compliance topics, including check-ins on what jurisdictions should be focused on in the coming quarter and what should have been accomplished and documented in the preceding quarter. The TAC did not meet in FY 2020/21 but received regular emails from the Program Manager and staff with updates on key permit compliance topics and occasional requests for feedback.

SMCWPPP has established various subcommittees and work groups to the TAC to help implement the different aspects of MRP. The subcommittees and work groups met regularly during FY 2020/21.

## **Flood and Sea Level Rise Resiliency District**

[AB 825](#) (Mullin) became law on January 1, 2020, officially revamping the San Mateo County Flood Control District to become the San Mateo County Flood and Sea Level Rise Resiliency District. The FSLRRD is

intended to address sea level rise, coastal erosion, flooding, and regional stormwater management. As such, assuming the FSLRRD can secure long-term, sustainable funding during the startup period, it will likely play a key role in helping to design, build, and maintain regional stormwater facilities that will help achieve water quality goals in the MRP. The three-year funding commitment by the County and cities/towns (\$4.5 million over three years) is an important step forward for achieving integrated water management in San Mateo County.

The C/CAG Board appointed the five city/town elected officials to the governing board. The County Board of Supervisors appointed the two supervisors. The seven governing board members representing the different geographic areas in the county are:

- North: Donna Colson, City of Burlingame
- Central: Diane Papan, City of San Mateo
- South: Lisa Gauthier, City of East Palo Alto
- Coast: Debra Ruddock, City of Half Moon Bay
- At-Large: Maryann Derwin, Town of Portola Valley
- Coast Supervisor: Don Horsley
- At-Large Supervisor: Dave Pine

Len Materman (former San Francisquito Creek Joint Powers Authority Executive Director) was brought on as Chief Executive Officer in May 2020. Information on the FSLRRD can be found at its website, [www.oneshoreline.org](http://www.oneshoreline.org). The FSLRRD inherits the MRP permittee responsibilities of the prior Flood Control District, with those duties currently contracted to the County Department of Public Works for implementation and reporting. The FSLRRD will need to be included as a replacement permittee under the MRP with its reissuance in 2021.

## Municipal Regional Permit Reissuance

It is anticipated that the MRP will be reissued in 2022. The reissued permit is referred to as MRP 3.0 (the current permit is referred to as MRP 2.0). During FY 2020/21, SMCWPPP and San Mateo County Permittee staff continued to participate in the ongoing reissuance process. The process facilitates Regional Water Board, Bay Area countywide stormwater program, and MRP Permittee staff, and representatives from other organizations, working together through an overarching Steering Committee and several workgroups specific to MRP provisions/topics. For example, SMCWPPP and San Mateo County Permittee staff participated in the MRP 3.0 C.3/GI Work Group to discuss, internally and with Regional Water Board staff, issues to be addressed in Provision C.3 (New Development and Redevelopment) of MRP 3.0. SMCWPPP staff helped to lead these efforts and co-led the Work Group. In FY 2020/21, the C.3/GI Work Group met approximately monthly, including 10 meetings held with Regional Water Board staff and several internal meetings. Key issues discussed included: regulated project thresholds, regulation of single-family homes, regulation of road reconstruction projects, alternative compliance options, Special Projects provisions, asset management, and future GSI requirements. During FY 2020/21, the Program Manager, SMCWPPP, and Permittee staff also participated in the Steering Committee and several other MRP 3.0 work groups (e.g., C.4/5, C.8, C.10, and C.11/12). In addition, SMCWPPP staff co-led the MRP 3.0 C.8 (Water Quality Monitoring) Work Group.

In February 2021, the Regional Water Board released an Administrative Draft of the MRP for Permittees to review. C/CAG staff worked with Permittee representatives and other countywide stormwater programs to prepare a SMCWPPP comment letter on the Administrative Draft that was dated April 8, 2021.

## **ORGANIZATION OF REPORT**

This FY 2020/21 Annual Report is structured around the following major provisions of the MRP:

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

The following sections briefly summarize how SMCWPPP assisted in FY 2020/21 in implementing the MRP for each of the above provisions.

### **C.2 Municipal Operations**

The objective of MRP Provision C.2 is “to ensure development and implementation of appropriate Best Management Practices (BMPs) by all Permittees to control and reduce discharges of non-stormwater and stormwater runoff pollutants to storm drains and watercourses during operation, inspection, repair and maintenance activities of municipal facilities and infrastructure.” Most MRP-required Provision C.2 Municipal Operations tasks are implemented individually by each Permittee in San Mateo County. The Countywide Program helps agency staff to understand MRP requirements and develops various tools that assist agency staff to effectively plan, implement, and report on compliance activities. SMCWPPP’s assistance and the implementation of Municipal Operations tasks are coordinated through the SMCWPPP Public Works Municipal Maintenance Subcommittee.

SMCWPPP performs a number of tasks to assist San Mateo County Permittees with implementation of Provision C.2, with input and assistance provided by the Public Works Municipal Maintenance Subcommittee. FY 2020/21 accomplishments included the following:

- Held two Public Works Municipal Maintenance Subcommittee meetings; and
- Updated a pesticide tracking template, in coordination with SMCWPPP's Parks Maintenance and IPM Work Group, to assist San Mateo County Permittees comply with pesticide tracking and reporting requirements in MRP Provision C.9.a.

### C.3 New Development and Redevelopment

During FY 2020/21, SMCWPPP continued to provide compliance assistance with MRP Provision C.3, New Development and Redevelopment, through the New Development Subcommittee (NDS).

In support of the GI Plan requirement in the MRP and to help plan for precipitation-based climate change impacts to the transportation network in San Mateo County, C/CAG finalized its San Mateo Countywide Sustainable Streets Master Plan (SSMP). The SSMP was developed under a Caltrans Adaptation Planning Grant. It provides an implementation-level approach to achieving water quality goals in the MRP and other community benefits associated with GI. C/CAG also continued its collaboration with the Cities of Redwood City, Belmont, San Bruno, the County of San Mateo, and the California Natural Resources Agency to advance design and environmental review for three multi-benefit regional-scale stormwater capture projects. C/CAG also continued its partnership with the County Office of Sustainability to develop a business case and framework for collaborating at a countywide scale on regional-scale stormwater management, including an updated prioritization of regional project opportunities and five new project concepts. In conjunction with that work, C/CAG began working with the WaterNow Alliance, American Rivers, and Corona Environmental on pro-bono support efforts looking at innovative funding and financing mechanisms for stormwater management and the feasibility of a stormwater credit trading marketplace. C/CAG also expanded its partnership with the Bay Area Water Supply and Conservation Agency to provide additional rebates for rainwater harvesting systems that provide greater storage capacity than rain barrels and new incentives for incorporating rain gardens in lawn replacement projects. Lastly, C/CAG initiated its Resilient San Carlos Schoolyards project under a \$97,000 grant from the Bay Area Council's California Resilience Challenge Grant to develop schoolyard greening concepts.

SMCWPPP's accomplishments during FY 2020/21 include the following tasks to assist San Mateo County municipalities with implementation of Provision C.3:

- Held four meetings of the New Development Subcommittee (NDS) to assist municipal agencies in San Mateo County to comply with MRP Provisions C.3 (New Development and Redevelopment) and C.6 (Construction Controls).
- SMCWPPP's facilitation of the NDS meetings and related review of work outside of the meetings allowed SMCWPPP to help advance key elements of San Mateo County Permittee GI Plans, including the adoption of new GI-related policies, review of proposed project opportunities, integration with deliverables in the Countywide Sustainable Streets Master Plan, and implementation of C.3 requirements.
- Completed a significant update to the C.3-C.6 Development Review Checklist, including the addition of new data pages to the Excel and PDF-Form versions of the document to improve tracking of GI and LID.

- Participated in the BASMAA Development Committee<sup>3</sup> and coordinated fall and spring meetings of the BASMAA Development Committee BSM Tree-Design Work Group.
- Conducted a variety of GI outreach activities, including promotion of a rain barrel program, publishing newsletter articles, and posting on social media. C/CAG staff also attended classroom presentations and participated in efforts to engage schools via programs led by the San Mateo County Office of Education, including the [C/CAG-funded Sustainable Watersheds](#) teacher fellowship program and the Community Based Environmental Literacy Partners Program. C/CAG staff also supported local and regional implementation of GI, through presenting on the SSMP project at the California Stormwater Quality Association annual conference in September 2020, the Green Streets for Sustainable Communities Symposium in September 2020, the Annual Silicon Valley Bike Summit in August 2021, the Green Infrastructure Leadership Exchange in October 2020 and May 2021 and in regional planning meetings with the Metropolitan Planning Commission. The MPC meetings focused on identifying funding nexuses among stormwater and transportation programs, including integrating GI with active transportation projects and funding. C/CAG staff has also stayed engaged in other regional and statewide efforts, including staying involved in the Green Infrastructure Leadership Exchange and the Green Streets for Sustainable Communities Symposium and providing comments regarding the importance of Sustainable Streets and GI for adapting roadways to the impacts of climate change to the California Transportation Agency on the State's draft Climate Adaptation Plan for Transportation Infrastructure and to the Metropolitan Transportation Commission on the draft Plan Bay Area 2050. Other outreach on GI included maintaining the redesigned [flowstobay.org website](http://flowstobay.org), which includes several webpages focused on raising awareness about GI in San Mateo County, as well as piloting a Green Streets Stewardship Program in partnership with the Master Gardeners of San Francisco and San Mateo Counties to help maintain public GI and provide engagement opportunities for Master Gardener volunteers.

## C.4 Industrial and Commercial Site Controls

A primary goal of SMCWPPP's Commercial, Industrial and Illicit Discharge (CII) component is to assist San Mateo County Permittees in controlling the discharge of pollutants in stormwater from commercial and industrial businesses to the maximum extent practicable. San Mateo County Permittees are responsible for complying with various business inspection requirements under MRP Provision C.4. SMCWPPP's CII component assists San Mateo County Permittee staff with understanding these MRP requirements and develops various related tools, templates, reporting forms, and other MRP compliance support materials. SMCWPPP's assistance with MRP Provision C.4 is coordinated through the CII Subcommittee, which met four times in FY 2020/21, with good participation by municipal staff.

During FY 2020/21, SMCWPPP performed a variety of tasks to assist San Mateo County Permittees with implementation of MRP Provision C.4, with input and assistance provided by the CII Subcommittee. Accomplishments included the following:

- Held a Commercial/Industrial Stormwater Inspector workshop on-line;
- Held a group exercise training on-line; and

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<sup>3</sup>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.



- Updated the business stormwater inspector contact list on the SMCWPPP website.

## C.5 Illicit Discharge Detection and Elimination

Another important goal of SMCWPPP's CII component is to assist San Mateo County Permittees effectively prohibit the discharge of illicit, non-stormwater discharges to the municipal storm drain system. San Mateo County Permittees are responsible for controlling non-stormwater discharges prohibited by MRP Provision C.5. SMCWPPP's CII component assists San Mateo County Permittee staff with understanding these MRP requirements and develops various related tools, templates, reporting forms, and other MRP compliance support materials. SMCWPPP's assistance with MRP Provision C.5 is coordinated through the CII Subcommittee.

During FY 2020/21, SMCWPPP performed a number of tasks to assist San Mateo County Permittees with implementation of MRP Provision C.5, with input and assistance provided by the CII Subcommittee. Accomplishments included the following:

- Updated the table of stormwater enforcement actions against mobile businesses to share countywide with stormwater inspectors;
- Held a group exercise training on-line for illicit discharge inspectors; and
- Updated the Illicit Discharge contact list on the SMCWPPP website.

## C.6 Construction Site Control

This component of SMCWPPP assists San Mateo County municipalities in complying with MRP Provision C.6 (Construction Site Control). This assistance continued to be provided through the New Development Subcommittee. SMCWPPP's accomplishments during FY 2020/21 include the following tasks to assist San Mateo County municipalities with implementation of MRP Provision C.6:

- Conducted a construction site controls and inspection training for the California Building Inspectors Group (CALBIG) on October 14, 2020;
- Conducted a construction site inspector training for municipal staff, and consultants representing municipalities, on March 16, 2021;
- Discussed at the February 2021 NDS meeting proposed changes to requirements in Provision C.6 Construction Site Control based on the Administrative Draft of MRP 3.0 and distributed a summary of proposed changes to the Statewide Construction General Permit based on its Administrative Draft; and
- Printed 1,650 copies of the Construction Site Inspection Form and distributed them to the Subcommittee members;

## C.7 Public Information and Outreach

The SMCWPPP PIP Subcommittee oversees the development of outreach and educational materials and guides the implementation of the PIP component of the program. The Subcommittee met two times in FY 2020/21 with good participation by municipal staff. SMCWPPP's PIP accomplishments during FY 2020/21 included the following:

- Partnered with the Bay Area Water Conservation Supply Agency (BAWSCA) to restructure the countywide rain barrel program into a three-tiered system so that rebate applicants received higher rebate incentives with a higher barrel capacity. The supporting Rain Barrel outreach campaign received 6,877 website page views (a 46% increase from FY 19/20). Received 66 rebate applications from residents (a 126% increase from FY 19/20) for a total of 98 rain barrel installations (197% increase from FY 19/20). Over 2,100 rain barrels have been installed to-date in San Mateo County under the rebate program.
- Completed the planning of and implemented a new rain garden rebate as part of the BAWSCA Lawn Be Gone! Rebate. Launched a campaign to promote the rebate, which included a webinar. Results of the campaigns include one rain garden rebate, 22,343 total reach on social media posts.
- Partnered with and promoted the San Mateo County Office of Education's "San Mateo Environmental Solutionary Teacher Fellowship." This resulted in 5 teachers who completed the fellowship and reaching a total of 211 students, grades K to 12.
- Promoted Coastal Cleanup Day for 1,507 volunteers, raising awareness of the event and the consequences of littering behaviors resulting in 9710 pounds of litter reported being picked up.
- Promoted efforts that San Mateo County Environmental Health Services (EHS) is involved in, which included: campaign to reduce littering of cigarette butts, update to the Reusable Bag Ordinance, and HHW Collection Program.
- Promoted Caltrans educational materials regarding uncovered loads in English and Spanish.
- Gained 400 new Facebook fans and a total page reach of 159,756 and 4,892 interactions with stormwater pollution prevention Facebook messaging.
- Sent 19 e-newsletters to a list of 3,787 active, opt-in subscribers with topics covering eco-friendly gardening practices, local cleanup events and stormwater pollution prevention information and tips. Gained 419 new email subscribers and had an average open rate of 40.28%.
- Received 30,582 visitors to the SMCWPPP website, which focuses on stormwater pollution prevention messaging and resources. This is an increase of 25.6% from FY19/20.
- Participated in 12 webinars as public outreach events during COVID-19 restrictions. In total, we had 741 attendees, 1,507 registrants, an average attendee rate of 47.8%, and received 298 responses to our feedback surveys. The webinars provided educational content to residents and allowed residents to have their questions answered live. We experienced much greater reach for our information than in-person events and also hosted our first family-friendly webinar.
- Participated in a countywide stormwater-focused teacher fellowship program in coordination with the County Office of Education. In addition, we supported and facilitated the on-campus installation of 2 rain barrels and conducted 2 online classroom programs to teach students about watersheds and rainwater capture.

- Performed point-of-purchase outreach with Our Water Our World materials to 10 hardware stores in San Mateo County while engaging residents and employees with eco-friendly alternatives to pesticides.
- Promoted outreach messaging to residents regarding eco-friendly alternatives to pesticides in SMCWPPP's newsletter, website, and social media channels.
- Participated in a May 27, 2021 Facebook live event with the San Mateo County Office of Sustainability entitled Pandemic Pollution Prevention. The 1.5-hour event reached 347 people with a total of 137 engagements (likes, comments, shares).

## C.8 Water Quality Monitoring

On behalf of its member agencies, SMCWPPP performs water quality monitoring activities in compliance with MRP Provision C.8. Per Provision C.8, a complete documentation of all water quality monitoring data collected from October 1, 2020 through September 30, 2021 (i.e., Water Year 2021 or WY 2021) will be presented in SMCWPPP's Urban Creeks Monitoring Report, which will be submitted to the Regional Water Board by March 31, 2022.

In addition, in accordance with MRP Provision C.8.f., Pollutants of Concern (POC) Monitoring, SMCWPPP will submit by October 15, 2021 a report describing the POC Monitoring tasks accomplished in WY 2021 and the planned allocation of sampling effort for POC Monitoring in WY 2022. The report will include monitoring locations, number and types of samples collected, a description of the objectives of the sampling (i.e., management question addressed), and the analytes measured. However, per Provision C.8.h., the results of the monitoring will not be included, but instead will be documented in the Urban Creeks Monitoring Report, as described above.

## C.9 Pesticides Toxicity Control

During FY 2020/21, SMCWPPP performed a number of tasks to assist San Mateo County Permittees with implementation of Provision C.9, with input and assistance provided by the Parks Maintenance and IPM Work Group. SMCWPPP's accomplishments included the following:

- Held one meeting of the Parks Maintenance and IPM Work Group.
- Conducted SMCWPPP's Annual Landscape IPM Training Workshop in March 2021.
- Continued coordinating with San Mateo County Agriculture / Weights and Measures.
- Updated the pesticides tracking template with the current two years of pesticide product data from the Department of Pesticide Regulation (DPR) website.
- Participated in relevant BASMAA/BAMSC and CASQA activities.
- Continued to maintain retail partnerships at 10 top-tier stores (e.g., Home Depot and Hassett Ace Hardware) within San Mateo County. Tasks included ordering materials, organizing outreach collateral, checking in with store managers, and providing outreach to residents.

- Conducted four online webinars with an IPM Advocate in association with Our Water Our World to educate residents about less toxic alternatives to commercial pesticides and fertilizers. This was a pivot the SMCWPPP team made while in-person outreach events were on hold due to the COVID-19 pandemic. The webinars had 796 registrants and 339 attendees, and 171 feedback surveys were taken. Survey respondents of the four webinars scored their overall experience on average as 4.5 on a scale of 1 to 5. A “5” indicates that participants were “very satisfied.”
- Co-hosted an online IPM webinar with a retail partner for the first time (Lyngso Garden Materials, Inc.).
- Updated license status information in the database of San Mateo County pest control operators.
- Sent an email or mailed a letter to active licensed pest control operators in San Mateo County that 1) described the critical role pest control professionals in San Mateo County play in keeping pesticides out of our waterways, 2) encouraged pest control professionals to adopt IPM practices to help minimize the negative effects on water quality and aquatic life, and 3) provided information on the steps for certifications.

### C.10 Trash Load Reduction

Provision C.10 of the MRP addresses stormwater discharges of trash. San Mateo County Permittees are required to demonstrate that trash loads have been reduced from their stormwater conveyance systems. SMCWPPP helps Permittee agency staff to understand trash load reduction requirements and develops various tools needed to effectively plan, implement, and report on compliance with C.10 requirements. SMCWPPP accomplishments during FY 2020/21 included the following:

- Coordinated and facilitated four meetings of SMCWPPP’s Trash Subcommittee and two meetings of SMCWPPP’s Litter Work Group;
- Assisted San Mateo County Permittees in delineating trash full capture treatment areas and managing trash full capture information in GIS (currently > 10,000 acres are treated by full capture systems in San Mateo County);
- Continued to implement SMCWPPP’s Trash Assessment Strategy, including conducting 788 On-land Visual Trash Assessments (OVTAs) at 226 sites and maintaining the Countywide Program’s online OVTA database to allow San Mateo County Permittees access to timely load reduction estimates;
- Continued providing guidance to San Mateo County Permittees on MRP operation and maintenance requirements and standard operating procedures for trash full capture systems;
- Compiled and standardized data from 42 trash hot spot assessments and cleanups, and entered the data into the SMCWPPP hot spot database;
- Continued to work with San Mateo County Permittees and haulers to distribute the New Development Projects Litter Reduction Fact Sheet summarizing the best practices of the Litter Reduction Toolkit for Multi-family Dwellings;
- Coordinated with the SMCWPPP Public Information and Participation (PIP) Subcommittee on public outreach efforts targeting litter reduction;
- Responded to Regional Water Board staff requests for information on existing, planned, and potential locations for trash full capture systems that are mutually beneficial to San Mateo County Permittees and Caltrans;

- Coordinated with Caltrans on trash capture efforts, including the installation of trash full-capture systems through cooperative implementation agreements; and
- Assisted San Mateo County Permittees in developing information necessary for reporting trash load reductions with their FY 2020/21 Annual Reports.

## C.11 Mercury Controls

MRP Provision C.11 Mercury Controls implements stormwater runoff-related actions required by the San Francisco Bay mercury Total Maximum Daily Load (TMDL) water quality restoration program. SMCWPPP performs a variety of activities to address mercury in stormwater runoff in compliance with MRP Provision C.11. Please note that efforts that address both PCBs and mercury are described in this section rather than the following section (Section 12, PCBs Controls). Section 12 focuses on efforts that address PCBs only.

Efforts by SMCWPPP and San Mateo County municipalities to address MRP Provisions C.11/12.a., Implement Control Measures to Achieve Mercury/PCBs Load Reductions, are described in a separate report (*Updated Control Measures Plan for PCBs and Mercury in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021*) that is presented in Appendix 11.

MRP Provisions C.11/12.b., Assess Mercury/PCBs Load Reductions from Stormwater, required Permittees to submit in their 2015/16 Annual Report for Executive Officer approval an assessment methodology. The purpose of the assessment methodology is to quantify in a technically sound manner mercury and PCBs loads reduced through implementation of a variety of pollutant controls, including pollution prevention, source control, and stormwater runoff treatment measures such as green infrastructure. SMCWPPP and San Mateo County municipalities helped develop the assessment methodology through participation in a BASMAA regional project. The methodology developed via the BASMAA regional project is referred to as the Interim Accounting Methodology and has been approved by the Executive Officer of the Regional Water Board.

Permittees must report on the use of the methodology to demonstrate progress toward achieving mercury and PCBs load reductions. San Mateo County load reductions are described in the separate report mentioned in the previous section (*Updated Control Measures Plan for PCBs and Mercury in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021*). Appendix 11 contains the report.

Permittees were required to submit in their FY 2019/20 Annual Report an estimate of the amount and characteristics of land area that will be treated through green infrastructure implementation by 2020, 2030, and 2040, including all data used and a full description of models and model inputs relied on to generate this estimate.

Permittees were also required to submit in their FY 2019/20 Annual Report a Reasonable Assurance Analysis (RAA) to demonstrate quantitatively that mercury reductions of at least 10 kg/yr will be realized by 2040 through implementation of green infrastructure projects. The MRP requires this submittal to include all data used and a full description of models and model inputs relied on to make the demonstration and documentation of peer review of the RAA.

San Mateo County Permittees fulfilled the above MRP requirements via development of a separate report that was submitted with SMCWPPP's FY 2019/20 Annual Report (*Pollutant Control Measures*

*Implementation Plan and Reasonable Assurance Analysis for San Mateo County, California, Scenarios to Achieve PCBs and Mercury San Francisco Bay TMDL Wasteload Allocations, September 30, 2020).*

MRP Provisions C.11/12.d. require that Permittees prepare a plan and schedule for mercury and PCBs control measure implementation and a corresponding RAA demonstrating quantitatively that sufficient control measures will be implemented to attain the mercury and PCBs TMDL wasteload allocations by 2028 and 2030, respectively. The plan must:

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

San Mateo County Permittees fulfilled this requirement via development of a separate report that was submitted with SMCWPPP's FY 2019/20 Annual Report (*Pollutant Control Measures Implementation Plan and Reasonable Assurance Analysis for San Mateo County, California, Scenarios to Achieve PCBs and Mercury San Francisco Bay TMDL Wasteload Allocations, September 30, 2020*).

MRP Provisions C.11.e and C.12.h require Permittees to conduct an ongoing risk reduction program to address public health impacts of mercury and PCBs in San Francisco Bay fish. The fish risk reduction program is required to include 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 fishers and their families. The program is required to have the potential to reach 3,000 individuals annually (Bay Area-wide total for all MRP 2.0 Permittees) who are likely consumers of San Francisco Bay-caught fish. Permittees are required to report on the status of the risk reduction program in each of their Annual Reports, 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.

SMCWPPP is assisting San Mateo County municipalities comply with the risk reduction program requirements by coordinating with and reporting on the Fish Smart program conducted by San Mateo County Environmental Health Services (EHS). Fish Smart builds upon the San Francisco Bay Fish Project ([sfei.org/sfbfp#sthash.eOcfwrhA.dpbs](https://sfei.org/sfbfp#sthash.eOcfwrhA.dpbs)), a risk reduction framework developed regionally in the previous permit term. The Fish Project funded Bay Area community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities about how to reduce their exposure to mercury and PCBs from consuming San Francisco Bay fish.

During FY 2020/21, EHS continued to conduct a variety of activities that target at-risk populations (e.g., subsistence fisherman) via the Fish Smart program. Various quantitative measures of outreach and outcomes were documented (e.g., numbers of brochures distributed, numbers of people interacted with at outreach events, numbers of people receiving electronic newsletters, and social media postings impressions and reach). Fish Smart has succeeded over the past several years in providing outreach about potential health impacts of consuming certain types of fish caught in San Francisco Bay. It is likely these efforts have led to reduced health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence fishers and their families.

## C.12 PCBs Controls

MRP Provision C.12, PCBs Controls, implements stormwater runoff-related actions required by the San Francisco Bay PCB Total Maximum Daily Load (TMDL) water quality restoration program. SMCWPPP performs a variety of activities to address PCBs in stormwater runoff in compliance with MRP Provision C.12. Please note that efforts that address both PCBs and mercury are described in the previous section (Section 11, Mercury Controls). This section focuses on efforts that address PCBs only.

Efforts by SMCWPPP and San Mateo County municipalities to address MRP Provisions C.11/12.a., Implement Control Measures to Achieve Mercury/PCBs Load Reductions, are described in a separate report (*Updated Control Measures Plan for Mercury and PCBs in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021*) that is presented in Appendix 11.

For a description of efforts by SMCWPPP and San Mateo County municipalities to address MRP Provisions C.11/12.b., Assess PCBs Load Reductions from Stormwater, please see Section 11 (C.11 Mercury Controls) and the separate report mentioned previously (*Updated Control Measures Plan for PCBs and Mercury in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021*). Appendix 11 contains the report.

It is important to note that per the documentation in SMCWPPP's FY 2019/20 Annual Report, the estimated PCBs load reduction across the permit area over the time period of FY 2013/14 through FY 2019/20 was 3,017 g/yr, indicating that the MRP regional performance criterion of 3,000 g/yr of PCBs load reduced by July 2020 was achieved.<sup>4</sup>

Permittees were required to submit in their FY 2019/20 Annual Report an estimate of the amount and characteristics of land area that will be treated through green infrastructure implementation by 2020, 2030, and 2040, including all data used and a full description of models and model inputs relied on to generate this estimate.

Permittees were also required to submit in their FY 2019/20 Annual Report a Reasonable Assurance Analysis (RAA) to demonstrate quantitatively that PCBs reductions of at least 3 kg/yr will be realized by 2040 through implementation of green infrastructure projects. The MRP requires this submittal to include all data used and a full description of models and model inputs relied on to make the demonstration and documentation of peer review of the RAA.

San Mateo County Permittees fulfilled the above MRP requirements via development of a separate report that was submitted with SMCWPPP's FY 2019/20 Annual Report (*Pollutant Control Measures Implementation Plan and Reasonable Assurance Analysis for San Mateo County, California, Scenarios to Achieve PCBs and Mercury San Francisco Bay TMDL Wasteload Allocations, September 30, 2020*).

As described in more detail in Section 11 (C.11 Mercury Controls), MRP Provisions C.11/12.d require that Permittees prepare a plan and schedule for mercury and PCBs control measure implementation and a corresponding RAA demonstrating quantitatively that sufficient control measures will be implemented to attain the mercury and PCBs TMDL wasteload allocations by 2028 and 2030, respectively. San Mateo County Permittees fulfilled this requirement via development of a separate report that was submitted with SMCWPPP's FY 2019/20 Annual Report (*Pollutant Control Measures Implementation Plan and*

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<sup>4</sup>It is important to note that the MRP allows Permittees to meet the regional criterion as a group – criteria for individual counties would only apply when the regional group criterion was not met.

*Reasonable Assurance Analysis for San Mateo County, California, Scenarios to Achieve PCBs and Mercury San Francisco Bay TMDL Wasteload Allocations, September 30, 2020).*

MRP 2.0 Provision C.12.e. requires that Permittees collect samples of caulk and other sealants used in storm drains and between concrete curbs and street pavement and investigate whether PCBs are present in such material and in what concentrations. BASMAA has completed a regional investigation that addresses this requirement. SMCWPPP reported on the results of the investigation in its FY 2017/18 Annual Report.

MRP Provision C.12.f. requires that Permittees develop and implement or cause to be developed and implemented an effective protocol for managing materials with PCBs concentrations of 50 parts per million or greater in applicable structures<sup>5</sup> at the time such structures undergo demolition, so that PCBs do not enter municipal storm drain systems. A Permittee is exempt from this requirement if it provided evidence acceptable to the Executive Officer in its FY 2016/17 Annual Report that the only buildings that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame buildings.<sup>6</sup>

Permittees were required to develop a protocol by June 30, 2019 that includes each of the following components, at a minimum:

- The necessary authority to ensure that PCBs do not enter municipal storm drains from PCBs-containing materials in applicable structures at the time such structures undergo demolition;
- A method for identifying applicable structures prior to their demolition; and,
- Method(s) for ensuring PCBs are not discharged to the municipal storm drain from demolition of applicable structures.

By July 1, 2019 and thereafter, Permittees are required to:

- Implement or cause to be implemented the PCBs management protocol for ensuring PCBs are not discharged to municipal storm drains from demolition of applicable structures via vehicle track-out, airborne releases, soil erosion, or stormwater runoff; and,
- Develop an assessment methodology and data collection program to quantify in a technically sound manner PCBs loads reduced through implementation of the protocol for controlling PCBs during demolition of applicable structures.

On behalf of MRP Permittees, BASMAA conducted a multi-year regional project to assist MRP Permittees to address Provision C.12.f. The BASMAA project, which began in FY 2016/17 and was completed in March 2019, assisted Permittees in developing local programs to manage PCBs-containing materials during building demolition. It developed guidance materials, tools and training materials and conducted outreach. SMCWPPP actively participated in the project, including providing BASMAA's project manager.

At the outset of the project, a BASMAA Steering Committee was convened to provide project oversight and guidance during the project. The Steering Committee included BASMAA Directors, countywide stormwater program staff, and Permittee staff from various relevant municipal departments. The Steering

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<sup>5</sup>Applicable structures are buildings built or remodeled from January 1, 1950 through December 31, 1980, with the following exemptions: single-family residential buildings, wood-framed buildings, and partial building demolitions.

<sup>6</sup>The City of Clayton in Contra Costa County provided acceptable evidence and is exempt from this provision.



Committee met periodically throughout the project. In addition, a project TAG, a small balanced advisory group formed from industry, regulatory, and Permittee representatives to provide review and input on selected project work products, was convened. The TAG was comprised of representatives from industry and state/federal regulatory agencies, and Permittees. Other efforts to engage key stakeholders included an industry stakeholder roundtable meeting (August 2017) and two larger stakeholder group meetings (December 2017 and May 2018) that included industry, regulatory and municipal representatives. During FY 2018/19, Permittees tailored the BASMAA products for local use, adopted the program (e.g., via local policy or ordinance), and trained local staff to implement the new program starting July 1, 2019.

Key BASMAA project deliverables provided to each Permittee to use as appropriate given local procedures and needs included:

- A protocol for pre-demolition building survey for priority PCBs-containing building materials;
- Model language for municipal adoption (e.g., ordinance) of the new program to manage PCBs materials during building demolition and model supporting staff report and resolution;
- CEQA strategy and model notice of exemption;
- Supplemental demolition permit model application materials, including forms, process flow charts, and applicant instructions; and
- An analysis to assist municipalities that pursue cost recovery.

Other project deliverables included:

- A coordination/communication strategy for the project;
- A technical memorandum summarizing any new information & decisions needed by BASMAA at outset, including an annotated table of regulatory drivers and relevant requirements;
- A technical memorandum with the state of the practice for identifying PCBs-containing building materials (developed to inform development of the pre-demolition building survey protocol listed below);
- Industry stakeholder outreach materials and a fact sheet for municipal staff;
- A spreadsheet tool used to develop the prioritized list of potential PCBs-containing building materials that the demolition program will focus on;
- A conceptual approach for an assessment methodology and data collection program to quantify PCBs loads reduced through managing PCBs-containing materials during building demolition.

During FY 2018/19, the BASMAA project concluded by conducting the following outreach and training tasks:

- Prepared training materials for municipal staff on adoption and implementation of the new program;
- Developed outreach materials and a standard presentation to inform industry stakeholders including developers, planning firms, urban planning non-governmental organizations, demolition firms, property owners, property managers, and realtors about the new program to manage PCBs in building materials during demolition;

- Using the above training materials, conducted training workshops (in-person and a webinar) for key municipal and countywide stormwater program staff;
- Conducted a webinar for industry stakeholders; and
- Developed a list of Bay Area opportunities, including contact information and dates, for municipal and/or stormwater program staff to conduct additional outreach to industry stakeholders using the above industry outreach materials.

In addition, during FY 2018/19 and FY 2019/20, San Mateo County and other MRP Permittees worked together through the BASMAA Monitoring and Pollutants of Concern Committee (MPC) to develop a framework to comply with data collection/evaluation and reporting requirements under Provision C.12.f. As mentioned previously, these requirements include developing an assessment methodology and data collection program to quantify PCBs loads reduced through implementation of the new program. The regional process developed includes the following steps:

1. The municipality informs demolition permit applicants that their projects are subject to the MRP Provision C.12.f requirements, necessitating, at a minimum, an initial screening for priority PCBs–containing materials.
2. For every demolition project, applicants complete and submit a version of BASMAA’s model “PCBs Screening Assessment Form” (Screening Form) or equivalent to the municipality.
3. 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.
4. The municipality then issues the demolition permit or equivalent, according to its procedures.
5. For Applicable Structures only, the municipality submits completed Screening Forms and any supporting documents (consultant’s report from PCBs building survey, QA/QC checklist, and lab reports) to its countywide program; forms for exempt sites need not be submitted. Forms should be submitted to the countywide programs electronically if feasible, and at a minimum annually, but quarterly is preferred.
6. The countywide programs compile the completed Screening Forms and any supporting documents. The countywide program then works with the other MRP countywide programs through BASMAA to manage and evaluate the data, and to assist Permittees with associated MRP reporting requirements.

All San Mateo County Permittees began implementing the program on or before July 1, 2019. Appendix 12 includes a memorandum prepared by SMCWPPP in compliance with MRP reporting requirements in Provision C.12.f. iii(4). The memorandum provides documentation of (a) the number of applicable structures that applied for a demolition permit during the reporting year, and (b) a running list of the applicable structures that applied for a demolition permit (since the date the PCBs control protocol was implemented) 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 (*Program for Management of PCBs during Building Demolition – Data Summary through FY 2020/21 for San Mateo County MRP Permittees*).

MRP Provision C.12.g. requires Permittees to conduct or cause to be conducted studies concerning the fate, transport, and biological uptake of PCBs discharged from urban runoff to San Francisco Bay margin areas. This requirement is being addressed through a multi-year project by the RMP to develop a series of conceptual models of PCBs in Priority Margin Units (PMUs). SMCWPPP’s FY 2016/17 Annual Report

included a workplan developed by BASMAA that describes how these information needs will be accomplished, including the studies to be performed and a preliminary schedule. SMCWPPP's March 30, 2020 Integrated Monitoring Report includes a summary of the findings and results of the studies completed, planned, or in progress and the implications of the studies on potential control measures to be investigated, piloted, or implemented in future permit cycles.

SMCWPPP is assisting San Mateo County municipalities to comply with the risk reduction program requirements by coordinating with and reporting on the Fish Smart program conducted by San Mateo County Environmental Health Services (EHS). Please see Section 11 above for additional details.

### C.13 Copper Controls

Provision C.13 of the MRP addresses copper control measures identified in the San Francisco Bay Basin Water Quality Control Plan (commonly referred to as the Basin Plan) that the Regional Water Board has deemed necessary to support copper site-specific objectives in San Francisco Bay. SMCWPPP's accomplishments during FY 2020/21 include the following tasks to assist San Mateo County Permittees with implementation of Provision C.13:

- Continued to train municipal inspectors on the MRP requirements and BMPs for architectural copper installation, cleaning, and treating. The trainings utilized a SMCWPPP factsheet entitled "Requirements for Architectural Copper: Protect water quality during installation, cleaning, treating, and washing!" which targets suppliers and installers of copper materials and is available on the SMCWPPP website ([flowstobay.com](http://flowstobay.com)). Municipal construction site stormwater inspectors received the information from a presentation at the SMCWPPP Construction Site Stormwater Inspections Training on March 6, 2021.
- Provided information through the SMCWPPP website, via a fact sheet entitled *Best Management Practices for Pools, Hot Tubs, and Fountain Water Discharges*, and social media posts related to managing discharges from pools, spas and fountains that includes information on avoiding the use of copper-based algaecides.
- Provided information through the SMCWPPP website on ensuring through routine industrial facility inspections that proper BMPs are in place at industrial facilities likely to use copper or have sources of copper.

### C.15 Exempted and Conditionally Exempted Discharges

The objective of MRP Provision C.15, Exempted and Conditionally Exempted Discharges, is to exempt unpolluted non-stormwater discharges from the MRP's general non-stormwater discharge prohibition (Provision A.1) and to conditionally exempt non-stormwater discharges that are potential sources of pollutants. SMCWPPP helps municipal staff understand the MRP's requirements and makes various MRP compliance support materials available for their use. SMCWPPP's PIP component conducts selected activities to assist San Mateo County Permittees comply with outreach requirements in Provision C.15.b.iv. (Individual Residential Car Washing Discharge), C.15.b.v (Swimming Pool, Hot Tub, Spa and Fountain Water), and Provision C.15.b.vi. (Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering).

SMCWPPP performs a variety of activities to assist San Mateo County Permittees with implementation of Provision C.15. SMCWPPP's FY 2020/21 accomplishments included the following:

- Continued outreach efforts through social media posts to encourage residents to use car washes rather than washing their cars at home;
- Conducted social media outreach to mobile car wash businesses and residents to educate them on the hazards of dumping their used wash waters down storm drains and related BMPs;
- Using a BMP fact sheet for swimming pools, hot tubs, spas, and fountain water discharges, promoted these types of BMPs through social media posts;
- Continued conducting outreach to San Mateo County residents, via social media, the SMCWPPP e-newsletter and blog, and through SMCWPPP's point-of-purchase program, to support and promote eco-friendly alternatives to toxic pesticides and help avoid pollutants in groundwater and surface water discharges;
- Promoted planting of drought tolerant, native vegetation via social media, and the SMCWPPP e-newsletter and blog; and
- Continued to promote water-saving tips via social media and conducted a webinar on May 27, 2021 titled "Water Wise Gardening and Landscaping."

# SECTION 1

## INTRODUCTION

### BACKGROUND

This FY 2020/21 Annual Report was developed in compliance with the reissued National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit (referred to as the MRP)<sup>1</sup> for stormwater runoff discharges from San Mateo County and certain other San Francisco Bay Area communities. It summarizes stormwater management activities implemented by the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP or Countywide Program) in FY 2020/21. SMCWPPP's activities benefit 22 municipal agencies in San Mateo County: 15 cities, five towns, the County of San Mateo, and the San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD). Each of these agencies also separately submits an individual Annual Report to the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) focusing on that agency's stormwater management activities during FY 2020/21.

The organizational structure of SMCWPPP is shown on Figure 1-1. SMCWPPP is a program of the City/County Association of Governments (C/CAG) of San Mateo County. C/CAG is a Joint Powers Authority (JPA) that addresses issues of regional importance to San Mateo County jurisdictions such as congestion management and water quality. The C/CAG Board of Directors is comprised of a local elected city council representative from each city and town in San Mateo County, a member of the County Board of Supervisors, and representatives from the transit district and transportation authority. A 1993 amendment to the JPA Agreement made C/CAG responsible for assisting San Mateo County municipalities with complying with the municipal stormwater NPDES permit, including its latest incarnation as the MRP. Stormwater management-related activities of C/CAG and its various related committees and workgroups are described below.



### C/CAG Board of Directors

Throughout FY 2020/21, the C/CAG Board of Directors received presentations, updates, and took actions on various stormwater-related issues, as summarized below (all C/CAG Board of Directors meeting agenda materials and minutes are available at [www.ccag.ca.gov/board-of-directors](http://www.ccag.ca.gov/board-of-directors)):

- September 2020 – Appointed Lisa Petersen (Pacifica) to the C/CAG Stormwater Committee;

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<sup>1</sup>NPDES Permit No. CAS612008 (Order No. R2-2015-0049), dated November 19, 2015. The MRP has a five-year term: effective January 1, 2016 and expires December 31, 2020. However, the permit term has been administratively extended during the currently ongoing permit reissuance process. July 1, 2022 is the anticipated effective date of the reissued permit.

- October 2020 – Received a presentation from the San Francisco Estuary Institute’s Regional Monitoring Program for Water Quality in San Francisco Bay on “How Healthy is the Bay?”; Received a presentation providing an annual update on the Countywide Program;
- December 2020 – Approved agreements with Geosyntec Consultants (\$110,750) to develop a business case and collaborative framework for regional stormwater management and Craftwater Engineering (\$89,250) to identify, prioritize, and develop concepts for regional stormwater capture projects; Approved agreements with WaterNow Alliance and American Rivers / Corona Environmental to evaluate funding/financing options for regional-scale stormwater management and feasibility of a stormwater credit trading marketplace in San Mateo County; Received presentation on the Draft Countywide Sustainable Streets Master Plan;
- January 2021 – Received a copy of executed Task Order with Urban Rain Design for outreach materials on green infrastructure (GI) implementation; Appointed Azalea Mitch (City of San Mateo) to the C/CAG Stormwater Committee; Orientation for new C/CAG Board members, including overview of C/CAG’s countywide stormwater program (SMCWPPP);
- February 2021 – Appointed Dante Hall (Foster City) to the C/CAG Stormwater Committee; Adopted the final Countywide Sustainable Streets Master Plan;
- March 2021 – Approved executing an agreement with Bay Tree Design (\$97,761) for the Resilient San Carlos Schoolyards Project to develop concept designs for integrating GI into school campuses for climate resilience and water quality improvement; Received an update on MRP reissuance;
- April 2021 – Annual C/CAG Forum, including a [breakout session](#) discussing stormwater funding shortfall solutions;
- May 2021 – Approved extensions to four technical consultant contracts, extending the term through September 2022 to account for the MRP reissuance timeframe; Received draft FY 2021/22 C/CAG Budget, including budget for the Countywide Program;
- June 2021 – Appointed Hae Won Ritchie (San Bruno) to the C/CAG Stormwater Committee; Approved FY 2021/22 final C/CAG Budget; Received amendments to funding agreements providing time extensions for construction of the Pacifica and East Palo Alto Safe Routes to School / Green Stormwater Infrastructure pilot projects; Approved revised funding allocations for Measure M vehicle registration fees, including a 3% increase in allocation to the Countywide Program (approximately \$190k annually); Approved amendments to consultant Task Orders and Funding Agreements:
  - Amendment No. 1 to Task Order EOA-12 with EOA, Inc. for completion of Water Year 2021 water quality monitoring activities;
  - Task Orders EOA-13 and EOA-14 with EOA, Inc. for FY 2021/22 general program support and Water Year 2022 water quality monitoring activities, respectively;
  - Task Order LWA-07 with Larry Walker Associates for FY 2021/22 GI and Reasonable Assurance Analysis (RAA) support;
  - Task Order SGA-07 with S. Groner Associates for FY 2021/22 outreach support;
  - Task Order URD-03 with Urban Rain Design for FY 2021/22 GI outreach support; and
  - Amendment No. 6 to the Bay Area Water Supply and Conservation Agency funding agreement, adding \$10,000 and extending term through FY 2021/22 for countywide rain barrel/cistern and rain garden rebate/incentive programs.

## Program Manager and Stormwater Program Specialist

C/CAG's Program Manager oversees the overall Countywide Program, serving as staff to the C/CAG Board and liaison among San Mateo County municipalities, technical consultants, committees, the Bay Area Stormwater Management Agencies Association (BASMAA) and its successor organization (Bay Area Municipal Stormwater Collaborative), the California Stormwater Quality Association (CASQA), and Regional Water Board staff. The Program Manager represents San Mateo County municipalities at regional and statewide meetings and manages technical consultants that support programmatic activities. C/CAG's Stormwater Program Specialist (Specialist) supports the Program Manager in implementing the Countywide Program.

### ***Participation in Relevant Regional and Statewide Organizations and Activities***

In addition to providing regular staff support, agenda reports, and presentations to the C/CAG Board and the Stormwater Committee, the Program Manager and Specialist participated in the following activities during the FY 2020/21 reporting year:

- BASMAA: The Program Manager continued representing the Countywide Program on the Board of Directors (continued serving as Chair). Program Manager and Specialist participated in Board meetings, BASMAA regional project meetings, and BASMAA committee meetings. Over the course of the fiscal year the Specialist served as both Chair and Vice Chair of the Monitoring and Pollutants of Concern Committee and also represented stormwater programs on the San Francisco Bay Regional Monitoring Program (RMP) Emerging Contaminant Work Group (ECWG). BASMAA formally dissolved as a non-profit organization at the end of FY 2020/21 and was succeeded by an informal collaborative called the Bay Area Municipal Stormwater Collaborative.
- CASQA: The Program Manager and Specialist attended and presented at the annual CASQA conference and participated in the CASQA Funding Committee.
- San Francisco Estuary Partnership Implementation Committee: The Program Manager continued serving on the committee representing the municipal stormwater perspective, participating in quarterly meetings.
- Green Infrastructure Funding Academy: The Program Manager participated in the Academy which is sponsored by American Rivers, Corona Environmental, and WaterNow Alliance, along with other national municipal GI practitioners. The Academy focused on innovative approaches to funding/financing GI implementation, resulting in additional pro-bono support to C/CAG during Calendar Year 2021 to further explore specific funding and financing alternatives for San Mateo County, including evaluation of the feasibility of a stormwater credit trading marketplace (further described in the subsequent Grant-funded Project Activities section).
- Presentations/Actions/Activities by the Program Manager / Specialist:
  - C/CAG's Program Manager presented as part of a panel to the Bay Area Regional Collaborative on January 15, 2021 on reissuance of the Municipal Regional Permit and focus on resilient GI. The panel included Keith Lichten from the Water Board, Josh Bradt from SFEP, and Robin Grossinger from SFEI.
  - Program Manager presented on stormwater capture and use at the June 9, 2021 US EPA and Water Environment Federation webinar "Achieving Multiple Benefits through Stormwater Capture and Use," focusing on the regional stormwater capture project under construction at Orange Memorial Park in South San Francisco.

- Program Manager presented approaches to using GIS to prioritize Sustainable Streets opportunities at the Green Infrastructure Leadership Exchange in October 2020 and May 2021, with a focus on the San Mateo Countywide Sustainable Streets Master Plan.
- Program Manager presented to the EPA Region 9 Stormwater Integration Workgroup on November 19, 2020 on stormwater infrastructure and Sustainable Streets in San Mateo County.
- Program Manager, Specialist, and consultant team presented a two-hour training workshop at the 2020 CASQA conference on “How to Create a Sustainable Streets Master Plan Linking Stormwater Goals with Transportation Planning.”
- Program Manager presented on the San Mateo Countywide Sustainable Streets Master Plan at the Metropolitan Transportation Commission’s January 21, 2021 Active Transportation Working Group and March 18, 2021 Local Streets and Roads Project Delivery Workgroup (Joint Partnership Working Group).
- California Stormwater Quality Association, Annual Conference (“Sustainable Planning for Climate Change Resiliency – Assessing the Benefits of Green Streets to Mitigate Future Stormwater Impacts,” “Development of a System to Track and Visualize the Benefits of Green Infrastructure in San Mateo County,” “How to Create a Sustainable Streets Master Plan Linking Stormwater Goals with Transportation Planning,” “The Future Is Digital: How To Revamp Your Online Stormwater Outreach,” September 2020).
- California Water Action Committee, San Francisco Bay Working Group: “Resilient Schoolyards: Managing Stormwater with Green Infrastructure” May 2021).
- C/CAG Resource Management and Climate Protection Committee: “Advancing Countywide Collaboration on Regional-Scale Stormwater Management,” March 2021)
- Provided comments regarding the importance of Sustainable Streets and GI for adapting roadways to the impacts of climate change in C/CAG’s May 19, 2021 letter to the California Transportation Agency on the State’s draft Climate Adaptation Plan for Transportation Infrastructure.
- Provided comments regarding the importance of Sustainable Streets and GI for adapting roadways to the impacts of climate change in C/CAG’s July 2021 comment letter to the Metropolitan Transportation Commission on the draft Plan Bay Area 2050.

### ***Grant-funded Project Activities***

The Program Manager continued representing BASMAA on the Urban Greening Bay Area grant from EPA (Water Quality Improvement Fund) to the San Francisco Estuary Partnership / Association of Bay Area Governments. Although BASMAA’s grant project finished in FY 2018/19, additional unused funding from other grant tasks was shifted to the BASMAA Roundtable effort to further advance the specific actions to prioritize sustainable streets in funding sources. The Program Manager, in conjunction with the project consultant and Roadmap Implementation Committee, finalized a fact sheet that clarifies the eligibility of GI in transportation funding programs for the Metropolitan Transportation Commission’s One Bay Area Grant Program and developed a draft fact for the California Transportation Commission’s SB-1 funding programs.

In addition, the Program Manager and Specialist began implementing C/CAG’s Regional Stormwater



Collaborative project funded by a \$200,000 grant from the California Natural Resources Agency and in collaboration with the County of San Mateo's Office of Sustainability and \$100,000 in grant funds from US EPA (Water Quality Improvement Fund). These funds are allocated to Geosyntec Consultants and Craftwater Engineering, in conjunction with additional pro-bono support from American Rivers / Corona Environmental and the WaterNow Alliance. The multi-pronged partnership project is intended to advance implementation of regional-scale stormwater management in San Mateo County. Regional-scale stormwater management is defined to include large-scale regional retention facilities as well as programmatic implementation of smaller, distributed-scale stormwater facilities such as through the C/CAG's countywide rain barrel / cistern / rain garden rebate and incentive program. The four interrelated project components and associated consultants/partners are summarized below.

1. **Building the Business Case for Regional-Scale Stormwater Management** (Geosyntec Consultants)
  - Drivers and Objectives: Establishes the "What" in terms of what can be achieved through regional-scale stormwater management through establishing key drivers and associated objectives. The Drivers and Objectives feed into the prioritization analysis, below, establishing the goals prioritized opportunities will need to address. The C/CAG Stormwater Committee approved the final Drivers and Objectives report at the May 2021 meeting.
  - Business Case: Establishes the "Why" in terms of why C/CAG's member agencies would benefit from countywide collaboration on regional-scale stormwater management. The Business Case will be informed by the prioritized opportunities determined below, including quantitative analyses of the potential benefits provided through those opportunities.
  - Collaborative Framework: Establishes the "How" in terms of how C/CAG's member agencies can collaborate across jurisdictional lines on regional scale stormwater management.
2. **Prioritizing and Conceptualizing Regional-Scale Stormwater Management Opportunities** (Craftwater Engineering / County of San Mateo)
  - Identify and Prioritize Opportunities: This will update analyses done for the San Mateo County Stormwater Resource Plan to find the best opportunities throughout the county for regional-scale stormwater management to address the Drivers and Objectives established above.
  - Project Concepts: Five new project concepts will be developed, showcasing high-priority stormwater capture opportunities throughout the county that directly address the above Drivers and Objectives. The project concepts are being funded in partnership with San Mateo County through the Office of Sustainability and its separate grant funding from the U.S. Environmental Protection Agency.
3. **Credit Trading Marketplace Analysis** (American Rivers / Corona Environmental): This project will evaluate the potential for creating a stormwater credit trading marketplace in San Mateo County that would allow private developers or C/CAG member agencies to buy and sell stormwater management credits to increase rates of implementation and progress toward achieving the Drivers and Objectives identified above.
4. **Innovative Funding and Financing Analysis** (WaterNow Alliance): This project will evaluate innovative funding and financing options for all scales of stormwater management, from large regional capture facilities to small-scale rainwater harvesting rebate and incentive programs, including key considerations when structuring potential funding initiatives to maximize flexibility for implementation on public and private properties.

In addition, the C/CAG Board of Directors adopted the final Countywide Sustainable Streets Master Plan in February 2021, which was funded via a \$986,300 Caltrans Climate Adaptation Planning grant. This plan prioritizes street segments for including GI with other planned investments, such as bike/pedestrian and complete streets projects, safe routes to school improvements, and pavement rehabilitation. As part of the plan, C/CAG's consultant team performed precipitation-based climate change modeling, public outreach/engagement, developed 12 project concepts, developed model policy implementation mechanisms, updated C/CAG's library of design details and specifications, and created a robust web-based GI tracking tool. See Section 3 of this report (C.3 New Development and Redevelopment) for more details.

Finally, C/CAG staff awarded a consultant support contract to Bay Tree Design for the Resilient San Carlos Schoolyards project funded via a \$97,000 grant from the California Resilience Challenge. The project kicked off at the end of FY 2020/21 and will develop concept designs for multiple school sites in the San Carlos School District showing how GI can be integrated to help reduce runoff, improve water quality, recharge groundwater, and reduce urban heat islands.

## Stormwater Committee

C/CAG's stormwater management-related decisions are generally made in consultation with the NPDES Stormwater Committee. At its November 2012 meeting, the C/CAG Board authorized reconvening this committee to include director-level appointees with decision-making authority for implementing stormwater management programs within San Mateo County municipalities in compliance with requirements in the MRP. The Committee meets on an approximate bimonthly basis (depending on need) on the third Thursday of the month at the San Mateo County Transit District Office in San Carlos. Public notices for Committee meetings are posted in accordance with Brown Act requirements on the ground floor of the same location.

The Stormwater Committee met six times during FY 2020/21 (August, September, November, April, May, and June) to assist with planning and organizing SMCWPPP's stormwater management activities including MRP compliance actions. Appendix 1 includes a table summarizing attendance at the Stormwater Committee meetings held during FY 2020/21. Details on Stormwater Committee meeting agendas, minutes, and presentations can be found on the Committee's [website](#).

It should also be noted that at its March 2021 meeting, the Stormwater Committee reinstated C/CAG's Funding and Financing Workgroup to build off of the 2014 countywide funding initiative activities led by C/CAG.

The below sections describe the Stormwater Committee's mission statement, membership criteria, and roles and responsibilities.

### ***Mission Statement***

The Stormwater Committee provides policy and technical advice and recommendations to the C/CAG Board of Directors and direction to technical committees (described below) on all matters relating to stormwater management and compliance with associated regulatory mandates from the State and Regional Water Boards.

### **Membership**

The Stormwater Committee is comprised of one director-level representative from each San Mateo County municipality, recommended by City/Town/County Managers, with decision-making authority and primary responsibility for implementing stormwater management programs within their jurisdictions, and one non-voting executive management representative from the Regional Water Board staff, all appointed by the C/CAG Board. There are no term limits and members may be removed and replaced as needed.

### **Roles & Responsibilities**

The role of the Stormwater Committee is to provide policy and technical advice, recommendations to the C/CAG Board, and direction to stormwater technical committees on matters related to stormwater management and associated regulatory requirements. While the Stormwater Committee may consider any item reasonably related to stormwater and associated regulatory requirements, the following issues are the primary focus of the Stormwater Committee:

- Review and provide recommendations for SMCWPPP's annual budget as part of the overall C/CAG budget approval process;
- Authorize submittal of countywide and regional compliance documents on behalf of their respective agencies for activities performed via C/CAG through SMCWPPP or BASMAA;
- Convey relevant program and compliance information and direction to appropriate staff and departments within their agencies;
- Form ad-hoc work groups to address stormwater-related issues on an as-needed basis (e.g., permit reissuance);
- Discuss and provide policy recommendations on stormwater issues, such as:
  - Funding stormwater compliance activities at the local and countywide level;
  - Unfunded mandate test claims;
  - Permit appeals and litigation;
  - Reissuance of the MRP;
  - Permit requirements, especially those related to new and redevelopment, GI, monitoring, and pollutants of concern, including trash, mercury, PCBs, and pesticides;
  - Training and technical support needs for municipal staffs; and
  - Legislation and statewide policy issues impacting San Mateo County municipalities.

### **Technical Advisory Committee and Subcommittees**

The Stormwater Committee provides direction to and receives feedback and recommendations from the Technical Advisory Committee (TAC). During FY 2012/13, the TAC transferred its former policy-related functions to the Stormwater Committee and transitioned to a quarterly workshop format. The new format allowed more detailed discussion of MRP compliance topics, including check-ins on what jurisdictions should be focused on in the coming quarter and what should have been accomplished and documented in the preceding quarter. The TAC did not meet in FY 2020/21 but received regular emails from the Program Manager and staff with updates on key permit compliance topics and occasional requests for feedback.

SMCWPPP has established various subcommittees and work groups to the TAC to help implement the different aspects of MRP, as shown on Figure 1-1. The subcommittees and work groups met regularly during FY 2020/21 and are discussed further in the remaining sections of this report.

## Flood and Sea Level Rise Resiliency District

[AB 825](#) (Mullin) became law on January 1, 2020, officially revamping the San Mateo County Flood Control District to become the San Mateo County Flood and Sea Level Rise Resiliency District. The FSLRRD is intended to address sea level rise, coastal erosion, flooding, and regional stormwater management. As such, assuming the FSLRRD can secure long-term, sustainable funding during the startup period, it will likely play a key role in helping to design, build, and maintain regional stormwater facilities that will help achieve water quality goals in the MRP. The three-year funding commitment by the County and cities/towns (\$4.5 million over three years) is an important step forward for achieving integrated water management in San Mateo County.

The C/CAG Board appointed the five city/town elected officials to the governing board. The County Board of Supervisors appointed the two supervisors. The seven governing board members representing the different geographic areas in the county are:

- North: Donna Colson, City of Burlingame
- Central: Diane Papan, City of San Mateo
- South: Lisa Gauthier, City of East Palo Alto
- Coast: Debra Ruddock, City of Half Moon Bay
- At-Large: Maryann Derwin, Town of Portola Valley
- Coast Supervisor: Don Horsley
- At-Large Supervisor: Dave Pine

Len Materman (former San Francisquito Creek Joint Powers Authority Executive Director) was brought on as Chief Executive Officer in May 2020. Information on the FSLRRD can be found at its website, [www.oneshoreline.org](http://www.oneshoreline.org). The FSLRRD inherits the MRP permittee responsibilities of the prior Flood Control District, with those duties currently contracted to the County Department of Public Works for implementation and reporting. The FSLRRD will need to be included as a replacement permittee under the MRP with its reissuance in 2021.

## Municipal Regional Permit Reissuance

It is anticipated that the MRP will be reissued in 2022. The reissued permit is referred to as MRP 3.0 (the current permit is referred to as MRP 2.0). During FY 2020/21, SMCWPPP and San Mateo County Permittee staff continued to participate in the ongoing reissuance process. The process facilitates Regional Water Board, Bay Area countywide stormwater program, and MRP Permittee staff, and representatives from other organizations, working together through an overarching Steering Committee and several workgroups specific to MRP provisions/topics. For example, SMCWPPP and San Mateo County Permittee staff participated in the MRP 3.0 C.3/GI Work Group to discuss, internally and with Regional Water Board staff, issues to be addressed in Provision C.3 (New Development and Redevelopment) of MRP 3.0. SMCWPPP staff helped to lead these efforts and co-led the Work Group. In FY 2020/21, the C.3/GI Work

Group met approximately monthly, including 10 meetings held with Regional Water Board staff and several internal meetings. Key issues discussed included: regulated project thresholds, regulation of single-family homes, regulation of road reconstruction projects, alternative compliance options, Special Projects provisions, asset management, and future GSI requirements. During FY 2020/21, the Program Manager, SMCWPPP, and Permittee staff also participated in the Steering Committee and several other MRP 3.0 work groups (e.g., C.4/5, C.8, C.10, and C.11/12). In addition, SMCWPPP staff co-led the MRP 3.0 C.8 (Water Quality Monitoring) Work Group.

In February 2021, the Regional Water Board released an Administrative Draft of the MRP for Permittees to review. C/CAG staff worked with Permittee representatives and other countywide stormwater programs to prepare a SMCWPPP comment letter on the Administrative Draft that was dated April 8, 2021.

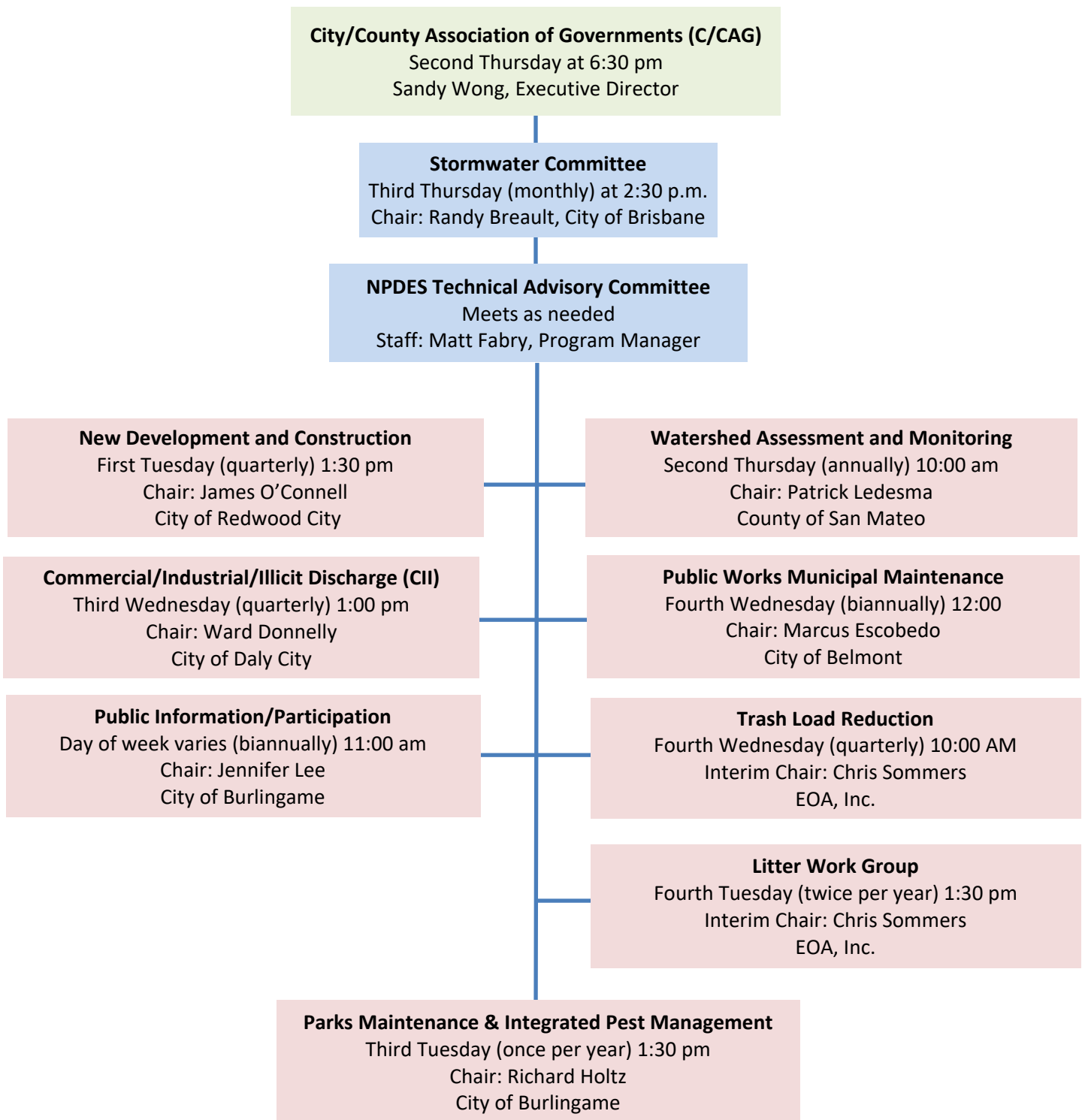
## **ORGANIZATION OF REPORT**

The remainder of this FY 2020/21 Annual Report is structured around the following major provisions of the reissued MRP:

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

The following sections of this report summarize how SMCWPPP assisted San Mateo County Permittees with implementing the MRP in FY 2020/21 for each of the above provisions. Each section includes three sub-sections: 1) Introduction, 2) Implementation of MRP Actions, and 3) Future Actions.

Figure 1-1. Organizational Structure and FY 2020/21 Meeting Schedule.



# SECTION 2

## C.2 MUNICIPAL OPERATIONS

### INTRODUCTION

The objective of MRP Provision C.2 is “to ensure development and implementation of appropriate Best Management Practices (BMPs) by all Permittees to control and reduce discharges of non-stormwater and stormwater runoff pollutants to storm drains and watercourses during operation, inspection, repair and maintenance activities of municipal facilities and infrastructure.”

Most MRP-required Provision C.2 Municipal Operations tasks are implemented individually by each Permittee in San Mateo County. The Countywide Program helps agency staff to understand MRP requirements and develops various tools that assist agency staff to effectively plan, implement, and report on compliance activities. SMCWPPP’s assistance and the implementation of Municipal Operations tasks are coordinated through the SMCWPPP Public Works Municipal Maintenance Subcommittee.

### IMPLEMENTATION OF MRP PROVISIONS

SMCWPPP performs a number of tasks to assist San Mateo County Permittees with implementation of Provision C.2, with input and assistance provided by the Public Works Municipal Maintenance Subcommittee. FY 2020/21 accomplishments included the following:

- Held two Public Works Municipal Maintenance Subcommittee meetings; and
- Updated a pesticide tracking template, in coordination with SMCWPPP’s Parks Maintenance and IPM Work Group, to assist San Mateo County Permittees comply with pesticide tracking and reporting requirements in MRP Provision C.9.a.

More information on each of these accomplishments is provided below.

#### Public Works Municipal Maintenance Subcommittee

The Public Works Municipal Maintenance Subcommittee provides the opportunity for sharing information about municipal operations related MRP requirements and methods for achieving compliance. The meetings provided a forum to share experiences with implementing MRP provisions and applying associated BMPs related to activities such as:

- Street and road repair maintenance activities;
- Sidewalk/plaza maintenance and pavement washing;
- Graffiti removal;
- Corporation yard activities; and
- Stormwater pump station monitoring and inspections.

Marcus Escobedo from the City of Belmont continued to chair the Subcommittee during FY 2020/21. The Subcommittee generally meets twice during each fiscal year. The Subcommittee met in March and June 2021, with good participation by municipal staff, as shown by the attendance list (Appendix 2).

Countywide Program staff also facilitated discussions at meetings about a variety of pertinent topics, including storm drain markers, mosquito and vector control coordination, newly installed trash full capture devices, and with the upcoming reissuance of the MRP 2.0, proposed changes to requirements in Provision C.2 Municipal Operations based on the Administrative Draft of MRP 3.0. At one meeting, municipal staff received a presentation on the SB1383 Short-Lived Climate Pollution Reduction Strategy procurement requirements for municipalities.

## Program Materials

Since the first version of the MRP was adopted in 2009, SMCWPPP staff has developed a variety of materials to assist municipal maintenance agency staff with implementing Provision C.2. These materials are all available on the SMCWPPP website ([flowstobay.org](http://flowstobay.org)) and continue to be useful tools that assist agency staff to achieve permit compliance. The materials are described below.

In FY 2009/10, SMCWPPP developed a Stormwater Pollution Prevention Plan (SWPPP) template for use by San Mateo County Permittees in tailoring, updating, or creating SWPPPs for their corporation yards, satellite facilities, and maintenance facilities.

In FY 2010/11, SMCWPPP prepared the “Municipal Corporation Yard Inspection Form.” This form provides detailed checklists for the types of BMPs recommended in the corporation yard SWPPP template. During FY 2010/11, SMCWPPP also prepared “Sources of Stormwater BMP information for Maintenance Activities Listed in MRP’s Provision C.2,” to assist San Mateo County Permittees with complying with the following Provision C.2 requirements: Provision C.2.a. Street and Road Repair and Maintenance; Provision C.2.b. Sidewalk/Plaza Maintenance and Pavement Washing; Provision C.2.c. Graffiti Removal; and Provision C.2.f. Corporation Yards. The sources of BMP information used to develop these materials were CASQA’s Stormwater BMP Handbook Municipal and Caltrans’ Storm Water Quality Handbook Maintenance Staff Guidance.

Also during FY 2010/11, SMCWPPP developed the “Stormwater Pump Station Dry Season DO Monitoring and Inspection Form” to assist San Mateo County Permittees in developing a systematic and efficient way to collect dissolved oxygen (DO) monitoring and inspection information. The following twelve agencies in San Mateo County operate stormwater pump stations: Cities of Belmont, Burlingame, East Palo Alto, Foster City, Menlo Park, Millbrae, Pacifica, Redwood City, San Carlos, San Mateo, and South San Francisco, and the San Mateo County FSLRRD.

In FY 2015/16, SMCWPPP developed a trash full capture device inspection and cleaning field form template, a Small Full Capture Device O&M Standard Operating Procedure (SOP), a Hydrodynamic Separator O&M SOP, and a Trash Full-Capture Device O&M Verification Program Template and Guidance document. These materials were developed in coordination with the Trash Subcommittee to help municipal staff comply with new requirements in MRP Provision C.10.b.i., Full Trash Capture Systems. These requirements include certifying that trash full capture systems are operated and maintained to meet full trash capture system requirements and keeping associated maintenance records.



In FY 2016/17, SMCWPPP developed a trash full capture device inspection and cleaning data tracking Microsoft Excel template to assist with tracking and reporting requirements in MRP Provision C.10.b.i. Also in FY 2016/17, SMCWPPP developed a template in Excel to assist with pesticide tracking and reporting requirements in MRP Provision C.9.a. The pesticides tracking template utilizes a lookup list of pesticides and active ingredients compiled from data tables available on the Department of Pesticide Regulation (DPR) website. In coordination with the Parks Maintenance and IPM Work Group, the template was updated during FY 2020/21 with the current two years of pesticide product data from the DPR website.

## **FUTURE ACTIONS**

FY 2021/22 activities planned by SMCWPPP to assist San Mateo County Permittees comply with MRP requirements in Provision C.2 include the following:

- Continue holding Public Works Municipal Maintenance Subcommittee meetings;
- Update tracking templates and guidance materials, as needed; and
- Coordinate with SMCWPPP's New Development Subcommittee to provide guidance on GI maintenance and related training materials.

# SECTION 3

## C.3 NEW DEVELOPMENT AND REDEVELOPMENT

### INTRODUCTION

This section describes SMCWPPP's activities to assist municipal agencies in San Mateo County to comply with MRP Provision C.3, New Development and Redevelopment. SMCWPPP continued to provide compliance assistance with MRP Provision C.3 (and Provision C.6 Construction Site Controls – see Section 6) through the New Development Subcommittee (NDS). SMCWPPP also obtained input and direction from agency representatives through the NDS. During FY 2020/21, James O'Connell with the City of Redwood City continued to chair the NDS. The NDS met four times in FY 2020/21 with good participation by municipal staff, as shown by the attendance list (Appendix 3).

In support of the Green Infrastructure (GI) Plan requirement in the MRP and to help plan for precipitation-based climate change impacts to the transportation network in San Mateo County, C/CAG finalized its San Mateo Countywide Sustainable Streets Master Plan (SSMP). The SSMP was developed under a Caltrans Adaptation Planning Grant. It provides an implementation-level approach to achieving water quality goals in the MRP and other community benefits associated with GI. C/CAG also continued its collaboration with the Cities of Redwood City, Belmont, San Bruno, the County of San Mateo, and the California Natural Resources Agency to advance design and environmental review for three multi-benefit regional-scale stormwater capture projects. C/CAG also continued its partnership with the County Office of Sustainability to develop a business case and framework for collaborating at a countywide scale on regional-scale stormwater management, including an updated prioritization of regional project opportunities and five new project concepts. In conjunction with that work, C/CAG began working with the WaterNow Alliance, American Rivers, and Corona Environmental on pro-bono support efforts looking at innovative funding and financing mechanisms for stormwater management and the feasibility of a stormwater credit trading marketplace. C/CAG also expanded its partnership with the Bay Area Water Supply and Conservation Agency to provide additional rebates for rainwater harvesting systems that provide greater storage capacity than rain barrels and new incentives for incorporating rain gardens in lawn replacement projects. Lastly, C/CAG initiated its Resilient San Carlos Schoolyards project under a \$97,000 grant from the Bay Area Council's California Resilience Challenge Grant to develop schoolyard greening concepts.

### IMPLEMENTATION OF MRP PROVISIONS

SMCWPPP's accomplishments during FY 2020/21 include the following tasks to assist San Mateo County municipalities with implementation of Provision C.3:

- Held four meetings of the NDS to assist municipal agencies in San Mateo County to comply with MRP Provisions C.3 (New Development and Redevelopment) and C.6 (Construction Controls). Each meeting was well attended (see Appendix 3 for the FY 2020/21 NDS attendance record).

- SMCWPPP’s facilitation of the NDS meetings and related review of work outside of the meetings allowed SMCWPPP to help advance key elements of San Mateo County Permittee GI Plans, including the adoption of new GI-related policies, review of proposed project opportunities, integration with deliverables in the Countywide Sustainable Streets Master Plan, and implementation of C.3 requirements.
- Completed a significant update to the C.3-C.6 Development Review Checklist, including the addition of new data pages to the Excel and PDF-form versions of the document to improve tracking of GI and LID.
- Participated in the BASMAA Development Committee<sup>1</sup> and coordinated fall and spring meetings of the BASMAA Development Committee BSM Tree-Design Work Group.
- Continued promoting the Green Infrastructure Design Guide (GI Design Guide) for use by San Mateo County Permittees and external partners. The GI Design Guide includes broad guidance on the design and implementation of various green stormwater infrastructure treatment measures and typical details and standard specifications for numerous GI design options and settings.
- Conducted a variety of GI outreach activities, including promotion of a rain barrel program, publishing newsletter articles, and posting on social media. C/CAG staff also attended classroom presentations and participated in efforts to engage schools via programs led by the San Mateo County Office of Education, including the [C/CAG-funded Sustainable Watersheds](#) teacher fellowship program and the Community Based Environmental Literacy Partners Program. C/CAG staff also supported local and regional implementation of GI, through presenting on the SSMP project at the California Stormwater Quality Association annual conference in September 2020, the Green Streets for Sustainable Communities Symposium in September 2020, the Annual Silicon Valley Bike Summit in August 2021, the Green Infrastructure Leadership Exchange in October 2020 and May 2021 and in regional planning meetings with the Metropolitan Planning Commission. The MPC meetings focused on identifying funding nexuses among stormwater and transportation programs, including integrating GI with active transportation projects and funding. C/CAG staff has also stayed engaged in other regional and statewide efforts, including staying involved in the Green Infrastructure Leadership Exchange and the Green Streets for Sustainable Communities Symposium and providing comments regarding the importance of Sustainable Streets and GI for adapting roadways to the impacts of climate change to the California Transportation Agency on the State’s draft Climate Adaptation Plan for Transportation Infrastructure and to the Metropolitan Transportation Commission on the draft Plan Bay Area 2050. Other outreach on GI included maintaining the redesigned [flowstobay.org website](http://flowstobay.org), which includes several webpages focused on raising awareness about GI in San Mateo County, as well as piloting a Green Streets Stewardship Program in partnership with the Master Gardeners of San Francisco and San Mateo Counties to help maintain public GI and provide engagement opportunities for Master Gardener volunteers.

Additional details about the above accomplishments are provided below.

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<sup>1</sup> The Bay Area Stormwater Management Agencies Association (BASMAA) recently dissolved as a formal non-profit organization, but its members continued to meet as an informal organization called the Bay Area Municipal Stormwater Collaborative (BAMSC). The BASMAA Development Committee was renamed the BAMSC Development Subcommittee and continues to meet approximately quarterly.

### C.3 Implementation and Outreach Products

With the assistance of the NDS, SMCWPPP developed, updated and/or assisted with the following technical and outreach products:

- Biotreatment Soil Media (BSM) Products – SMCWPPP updated the BSM Supplier List (Appendix 3). The NDS approved the update in June 2021 and the document is posted on the SMCWPPP website ([flowstobay.org](http://flowstobay.org)).
- Wood Mulch for Biotreatment Areas Supplier List – SMCWPPP created a new list of Bay Area suppliers of wood mulch products appropriate for biotreatment areas (Appendix 3). The list was posted on the SMCWPPP website ([flowstobay.org](http://flowstobay.org)).
- Composted Wood Mulch for Biotreatment Area Specification – SMCWPPP created a new specification and guidance for a composted wood mulch product for biotreatment areas that was completed in June 2021 (Appendix 3). The list was posted on the SMCWPPP website ([flowstobay.org](http://flowstobay.org)).

### New Development (C.3) Workshops

The FY 2020/21 New Development Workshop was originally scheduled for June 2021 but was postponed until August 2021. It will be described in SMCWPPP's FY 2021/22 annual report. SMCWPPP plans to hold the FY 2021/22 New Development Workshop in June of 2022.

### Green Infrastructure Outreach

During FY 2020/21, SMCWPPP continued performing a variety of GI-related outreach, including the following efforts:

- Promoted the [Green Infrastructure](#), [Green Infrastructure Story Map](#), [Green Infrastructure Design Guide](#), and the [Sustainable Streets Master Plan](#) pages on the redesigned SMCWPPP website ([flowstobay.org](http://flowstobay.org)).
- Partnered with the Bay Area Water Conservation Supply Agency (BAWSCA) to restructure the countywide rain barrel program into a three-tiered system so that rebate applicants received higher rebate incentives for increased barrel capacity. Received 66 rebate applications from residents (a 126% increase from FY 2019/20) for a total of 98 rain barrel installations (197% increase from FY 2019/20). Over 2,100 rain barrels have been installed to-date in San Mateo County under the rebate program.
- Completed the planning of and implemented a new rain garden rebate as part of the BAWSCA Lawn Be Gone! Rebate. Residents undergoing lawn replacement projects were eligible to receive \$300 towards their project if they included a rain garden. Launched a campaign to promote the rebate, which included a webinar. The initial pilot year resulted in one rain garden rebate installation, and staff will continue to maintain the additional incentive next fiscal year.
- Sent 9 (of 19 total) e-newsletters to a list of 3,787 active, opt-in subscribers with topics featuring GI, such as water-wise gardening tips and rain barrel/rain garden installation guidance and resources. Gained 419 new email subscribers and had an average open rate of 40.28%.
- Developing a four-part video series focusing on GI at different scales in San Mateo County, including Overall GI, Sustainable Streets, Schools and Homes.

- Partnered with and promoted the San Mateo County Office of Education’s “San Mateo Environmental Solutionary Teacher Fellowship,” with a focus on Sustainable Watersheds and advancing green stormwater infrastructure curriculum and project implementation at schools. Five teachers completed the fellowship, reaching a total of 211 students, grades K to 12. SMCWPPP provided two participating schools with a full-service rainwater harvesting installation as part of the program and conducted two online classroom programs to teach students about watersheds and rainwater capture.
- Participated in 10 webinars as public outreach events during COVID-19 restrictions, four of which were focused on GI opportunities at home, including a “Rain Barrels 101,” “Rain Gardens 101” and “Lawn Be Gone/Master Gardeners Consultation.” Also hosted a Sustainable Streets Master Plan “Virtual Open House” to release the public draft of the document for comment and to engage community members on the development and finalization of the master plan. Collectively, approximately 290 public members attended these four webinars.
- Promoted outreach messaging to residents regarding GI via social media channels, including Facebook and Instagram. For example: “Green Streets serve the dual purpose of beautifying neighborhoods AND helping our communities deal with a slew of other issues—from adapting to climate change by absorbing and storing water, to protecting pedestrians and bikers by creating buffers from the street, to reducing the heat island effect, and much much more. You can read about how the County is using Green Streets and Green Infrastructure more broadly as part of its climate change adaptation strategy, here: [bit.ly/Asapting2ClimateChange](https://bit.ly/Asapting2ClimateChange).”

## San Mateo Countywide Stormwater Resource Plan

In response to the State’s legislative mandate for Stormwater Resource Plans in order to compete for voter-approved bond funds, C/CAG worked with its member agencies to develop the [San Mateo County Stormwater Resource Plan](#) in 2017. The plan utilized various metrics to prioritize opportunities for stormwater capture at varying scales. Since that time, San Mateo County Permittees have been working to advance implementation of stormwater management measures at three primary scales:

- 1) the parcel scale, where only the rain falling on a site is managed (primarily new and redevelopment projects);
- 2) the street scale, where stormwater runoff from public roadways and sidewalks and adjacent parcel run-on to the streets is managed via green street features; and
- 3) the regional scale, where runoff from watershed or drainage areas is managed in large, centralized facilities.

## Reasonable Assurance Analysis (RAA) for Green Infrastructure

As required under Provisions C.11 and C.12, C/CAG developed a countywide pollutant transport/hydrology model coupled with GI scenario modeling to provide Permittees with quantitative details on how much GI would be needed spatially to meet the MRP goal for pollutant load reduction via GI by 2040. The RAA helped Permittees recognize:

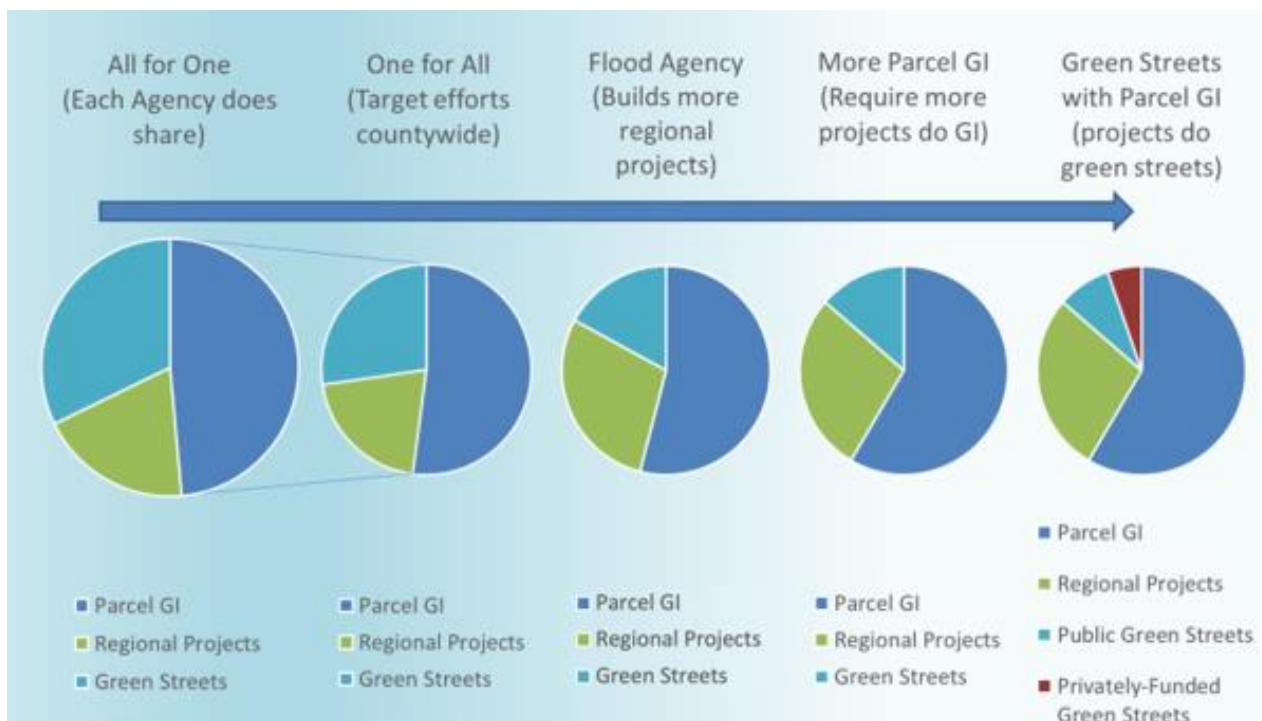
- 1) The rate of GI implementation via new and redevelopment is generally outside the control of municipalities, but the extent of projects subject to stormwater requirements is governed by both MRP and local requirements;

- 2) Meeting GI and stormwater treatment targets on a countywide basis instead of proportionally within each jurisdiction can result in overall cost savings by implementing projects where it makes most sense;
- 3) Regional-scale projects, while costly, can be very cost effective in terms of the overall volume managed vs. equivalent levels of small-scale distributed systems, especially in regard to operations and maintenance. These larger scale projects can also provide other significant benefits such as flood risk reduction and water supply augmentation, and are often competitive multi-benefit/multi-jurisdictional projects for state and federal grant programs; and
- 4) Green street implementation is likely to be the most impactful on local Permittee resources, both for capital expenses and long-term operations and maintenance given that it is most likely to be funded by the limited local allocations of transportation dollars and result in many distributed bioretention facilities requiring ongoing maintenance. This contrasts with parcel-scale projects funded primarily by private developers or regional-scale projects likely to be funded by significant state or federal grants due to the integrated, multi-benefit nature.

As a result, C/CAG and its member agencies began looking at options to meet water quality and treatment requirements while reducing the financial burden of green streets on local agencies when evaluating approaches for meeting long-term water quality goals. As detailed in Figure 3-1 (moving from left to right, focus is on increasing cost-effectiveness), key strategies include:

- 1) Working collaboratively at a countywide and/or watershed scale instead of jurisdiction by jurisdiction;
- 2) Working with the new San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD) to advance regional-scale stormwater capture projects to the greatest extent possible to help with flooding, climate resiliency, and water quality;
- 3) Increasing the number of new and redevelopment projects subject to stormwater treatment requirements to get more parcel-scale GI by targeting key development sectors not addressed by MRP triggers;
- 4) Increasing implementation of green street projects in conjunction with new and redevelopment to get more street-scale projects built and maintained via private funding; and
- 5) For public green street investments, integrating GI with planned transportation improvements when and where it makes sense to create multi-benefit projects. The following sections detail efforts to make progress on all these strategies.

**Figure 3-1. Strategies for Cost-Effective Stormwater Management**



## Regional-Scale Stormwater Management and Countywide Collaboration

### ***South San Francisco (Orange Memorial Park)***

This project, currently under construction as of March 2021, will provide water quality improvements to help meet the MRP requirements related to mercury, PCBs, and trash. The City anticipates completing construction in early 2022. The project includes an instream diversion and pre-treatment structure (trash screen and sediment removal chamber) in the upper end of the Colma Creek flood control channel within Orange Memorial Park. Pretreated water gravity drains to an underground stormwater reservoir where it is stored until either infiltrating or being further treated for non-potable reuse (i.e., irrigation). When storage capacity is exceeded, treated overflow is discharged back into the channel. Originally conceptualized in the Stormwater Resource Plan, the project will divert approximately 16% of the annual drainage from approximately 6,500 acres of land in the City of South San Francisco, Town of Colma, the City of Daly City, and a portion of unincorporated San Mateo County, of which 9% will be treated to remove trash/sediment before being returned to the channel, 6% infiltrated into the Westside groundwater basin (approximately 240 acre-feet/year), and 1% treated and used onsite and in nearby linear parks for irrigation purposes (approximately 45 acre-feet/year). The project is anticipated to capture 100 tons of sediment, 10 grams of PCBs, and 30 grams of mercury, annually. The project is funded through a \$15.5M Cooperative Implementation Agreement with Caltrans to help satisfy its pollutant load reduction requirements.

### ***Belmont Project (Twin Pines Park)***

The Belmont project was originally conceptualized in the Stormwater Resource Plan as a small-scale regional facility capturing runoff from a small neighborhood. Since then, the Cities of Belmont and San Carlos and the County of San Mateo, through its Flood Resilience Program, jointly developed a Watershed

Management Plan for Belmont Creek. In this plan, the Twin Pines Park project was increased in scale to be comparable to the other regional projects (~20 acre-feet of storage capacity), with an underground storage/infiltration gallery conceptualized beneath the Twin Pines Park parking lot. C/CAG, in conjunction with the California Natural Resources Agency, allocated \$913,000 of a \$2.94M State budget allocation to advance regional stormwater projects in San Mateo County to the Belmont project for preliminary design and environmental review. Currently, the project is being combined with a separate \$1M grant from the Department of Water Resources to restore Belmont Creek within Twin Pines Park. The City of Belmont anticipates releasing a Request for Proposals for design services to advance both the stormwater capture project and creek restoration in the fall of 2021.

### ***San Bruno Project (I-280/380 Interchange)***

Subsequent to the project concepts developed for the Stormwater Resource Plan, C/CAG worked with its member agencies to develop additional regional project concepts to help reduce the potential green streets burden on cities indicated as needed by the RAA modeling to meet water quality goals. San Bruno had identified the need for retention within the Crestmoor Canyon watershed to address storm drain system capacity deficiencies. Ultimately, C/CAG and the City collaborated to conceptualize an approximately 20-acre-foot regional underground stormwater capture facility on Caltrans property within the large vacant land area within the I-280/380 interchange. Similar to the Belmont project, C/CAG worked with the Natural Resources Agency to provide \$913,000 to San Bruno for preliminary design and environmental review for the project. In addition, the County of San Mateo received a U.S. EPA Water Quality Improvement Fund (WQIF) grant under which \$200K is provided to the San Bruno project for preliminary design, for a total of \$1.13M between the two funding sources. San Bruno participated in the joint Request for Proposals process with C/CAG, Redwood City, and the County of San Mateo and has contracted with a design consultant and executed a project oversight cooperative agreement with Caltrans. The City is currently in the pre-design phase with an encroachment permit issued by Caltrans, performing site and utility surveys, identifying site constraints, and developing preliminary design alternatives.

### ***Redwood City Project (Red Morton Park)***

Like the San Bruno project, C/CAG worked with Redwood City staff to identify a regional project opportunity to help the City reduce its potential green streets burden identified through the RAA modeling. A two-phase project was conceptualized for Red Morton Park, with underground storage systems proposed beneath two playing fields, with a combined storage capacity of ~43 acre-feet. As with the San Bruno and Belmont projects, C/CAG worked with the Natural Resources Agency to provide \$913,000 to do preliminary design and environmental review. Redwood City also participated in the joint Request for Proposals process and has contracted with a design consultant. Like San Bruno, the County of San Mateo is providing an additional \$200,000 from its U.S. EPA grant for preliminary design, for a total of \$1.13M between the two funding sources. The City received a preliminary design report in June 2021 that identified three primary potential project alternatives: one that is sized to treat the 85<sup>th</sup> percentile design storm (9.5 acre-feet of storage capacity), one that maximizes the size of the storage beneath the first playing field (23.5 acre-feet of storage), and a third that maximizes potential storage, including additional storage beneath the second field (30 acre-feet of storage). These alternatives ranged from \$13 - 35M, depending on size and need for pumped vs. gravity diversion systems. Due to elevated groundwater levels, the project is not expected to be able to provide for infiltration of captured water and instead focuses on storage and treatment for return to the storm drain system. Additional project alternatives, including capability to utilize captured water for onsite irrigation and toilet flushing, diversion



to sanitary sewer, permeable pavement in the adjacent parking lot, and a recirculating surface stream were also evaluated.

## Regional Project Planning and Collaborative Framework

As mentioned above, C/CAG worked with its state legislative delegation to secure a \$3M (\$2.94M after deducting the State's administrative costs) grant to advance regional stormwater capture opportunities. The bulk of those funds were allocated to initial design and environmental review of the Belmont, San Bruno, and Redwood City regional projects, described above. C/CAG directed the remaining funds (\$200,000) from the state budget allocation to a collaborative effort to further advance regional-scale stormwater management opportunities. C/CAG worked with its member agencies and stakeholders to develop drivers and objectives for regional-scale stormwater management and is developing a business case and collaborative framework for San Mateo County Permittees to work together to share costs and benefits of these large-scale regional projects, in conjunction with the FSLRRD and other partners. While the drivers and objectives are intended to address "what" can be achieved through regional-scale stormwater management, the business case and collaborative framework will address "why" San Mateo agencies may want to work collaboratively and "how" that collaboration could be achieved. The collaborative framework will build on the alternative compliance framework San Pablo is developing with Contra Costa County partners under another EPA WQIF grant.

In conjunction with this effort, C/CAG and the County of San Mateo (\$100,000 from EPA WQIF) are partnering to prioritize the next iteration (beyond the Stormwater Resource Plan) of regional stormwater capture opportunity sites that help address the identified drivers and objectives and develop five new project concepts. This process will help quantify what can be achieved through regional-scale projects and set the stage for the next phase of developing regional-scale projects.

In addition, C/CAG is receiving pro-bono support from American Rivers and Corona Environmental to explore the feasibility of implementing a stormwater credit trading marketplace in San Mateo County that would potentially allow public or private entities to buy and sell credits for stormwater management. This analysis will support discussions on potential countywide systems to better enable alternative compliance for Provision C.3-mandated stormwater treatment or future volume-based climate resilience needs and will support local agency efforts to expand the scope of parcel-based stormwater requirements and provide options for development projects that may face challenges in meeting obligations on-site. The results of this work will be integrated with work described below to develop a business case and collaborative framework for regional-scale stormwater management.

C/CAG is also working with the WaterNow Alliance to evaluate innovative funding and financing options for all scales of stormwater management, from large regional capture facilities to small-scale rainwater harvesting rebate and incentive programs, including key considerations when structuring potential funding initiatives to maximize flexibility for implementation on public and private properties.

Collectively, these efforts address the strategies in Figure 3-1 of working collaboratively at a countywide scale rather than jurisdiction by jurisdiction and maximizing regional-scale multi-benefit stormwater capture opportunities.

## Parcel-Scale Stormwater Management

### ***Expanded New/Redevelopment Requirements***

An increasing number of San Mateo County Permittees are subjecting currently non-regulated new and redevelopment projects to stormwater management requirements. This effort to go beyond what is currently required in MRP 2.0. It is intended to help meet the long-term goals of stormwater quality improvements and greening of infrastructure while lessening the financial burden to the municipalities. For example, Redwood City requires substantial commercial remodels and any new commercial or residential building to incorporate stormwater treatment measures sized in accordance with Provision C.3. Atherton, with the adoption of its Green Infrastructure Plan, requires full-site single family residential development project that create or replace 10,000 square feet of impervious area to incorporate C.3-sized stormwater treatment measures. C/CAG has supported agencies following suit by providing details on these types of approaches to all member agencies for consideration.

### ***Rainwater Harvesting Rebates/Incentives***

C/CAG has been partnering with BAWSCA to implement a joint rebate/incentive program for rainwater harvesting since late 2014. Under this program, C/CAG provides a countywide rebate of \$50/barrel that is matched by many of the water purveyors in the county. Starting this fiscal year, C/CAG expanded its incentives to provide rebates for larger storage systems, offering \$100 for systems between 100-199 gallons and \$150 for over 200 gallons, all of which continue to be combined with \$50/system rebates from participating water purveyors. In addition, C/CAG added a new stacked \$300 rain garden incentive on top of rebates from participating water purveyors for BAWSCA's "Lawn Be Gone!" turf replacement program. Over 2,100 rain barrels have been installed to-date in San Mateo County under the rebate program.

### ***California Resilience Challenge Grant – Resilient San Carlos Schoolyards***

C/CAG received one of 12 California Resilience Challenge grants in the state to develop resilient schoolyard concept plans for multiple sites in the San Carlos School District to show how GI can be integrated to build climate resilience while also improving water quality, increasing shading and greening on campuses, enhancing outdoor learning environments, and making curriculum connections with teachers and students. This builds on existing school-related efforts that C/CAG has been implementing, including partnership with the County Office of Education on its environmental literacy program and providing funding for integrated Safe Routes to School / Green Infrastructure projects further described below in the Street-Scale Stormwater Management section. C/CAG kicked off the project at the end of the fiscal year.

### ***Green Infrastructure Design Guide***

As reported last year and described above, C/CAG created a new comprehensive GI Design Guide detailing how GI can be effectively incorporated into both parcel- and street-scale projects, including a library of typical design details. C/CAG continued to educate and inform member agencies of its availability and supported its access via the flowstobay.org website.

## Street-Scale Stormwater Management

### ***Green Streets via New/Redevelopment***

Multiple permittees in San Mateo County are now requiring implementation of street-scale GI as part of new/redevelopment projects, effectively increasing the acreage of impervious area treated through private funds, and in many cases also including long-term operations and maintenance. Increasingly, San Mateo County Permittees are requiring frontage improvements that include GI to treat runoff from public rights-of-way, including Redwood City, Atherton, South San Francisco, San Mateo, and Menlo Park. It is important to note that these policies should help address PCBs in adjacent public right-of-way areas during redevelopment in priority old industrial areas. C/CAG worked to promote this approach among its member agencies by highlighting these efforts at New Development Subcommittee meetings and C.3/GI trainings, and through development of model policy documents in the Sustainable Streets Master Plan.

### ***Countywide Sustainable Streets Master Plan***

C/CAG was awarded a nearly \$1M Caltrans Climate Adaptation Planning grant to develop the San Mateo Countywide Sustainable Streets Master Plan (SSMP) that prioritizes opportunities to integrate GI with planned transportation projects to help adapt the roadway network to a changing climate while simultaneously improving water quality. The SSMP prioritizes identified transportation needs (pulled from active transportation and Complete Streets plans, Safe Routes to School walk audits, Specific Plans, etc.) for GI integration using numerous technical suitability and co-benefit criteria. As part of the SSMP, C/CAG modeled future climate impacts on precipitation patterns, advancing the county's understanding of how storm intensity and frequency may change under future climate conditions. The SSMP includes 11 project concepts illustrative of different Sustainable Street typologies and geographically distributed throughout the county. Included in the appendices is a new Intersection Assessment Tool that allows municipalities to rapidly determine the feasibility of incorporating stormwater curb extensions at an intersection, as well as a complete library of typical design details for Sustainable Street projects. High-resolution drainage delineations were developed for the entire county, further advancing San Mateo permittees' digital mapping of storm drain catchments down to the catch basin scale. The SSMP also includes model Sustainable Street policy language for Permittees to consider adopting, including model Sustainable Streets language for policy documents, a model Sustainable Streets resolution and policy to go beyond typical Complete Streets policies, a model resolution for GI development standards for new buildings, and model conditions of approval for development projects to require Sustainable Streets implementation as part of private development.

The project team and C/CAG staff presented on several project deliverables at the California Stormwater Quality Association Annual Conference in September 2020, including a 2-hour workshop designed to walk participants through the entirety of developing a SSMP. Staff also presented the SSMP at the Green Streets for Sustainable Communities Symposium in September 2020, the Green Infrastructure Leadership Exchange in October 2020 and May 2021, the Annual Silicon Valley Bike Summit in August 2021 and in multiple regional planning meetings with the Metropolitan Planning Commission. To facilitate the roll-out of the plan, in December 2020 C/CAG staff and consultants created a virtual "Engagement Hub" for the SSMP that summarized the SSMP project and allowed the public to provide direct comments/feedback ([www.sustainablestreetssmc.org](http://www.sustainablestreetssmc.org)). In addition, C/CAG staff developed a dedicated SSMP page on the [flowstobay.org](http://flowstobay.org) website where the SSMP documents were posted with a link to the tracking tool, along with an online "flipbook" version of the SSMP that could be viewed directly on the site ([www.flowstobay.org/ssmp](http://www.flowstobay.org/ssmp)). C/CAG hosted a virtual "open house" via Zoom on December 8, which was attended by approximately 100 people.

From the MRP perspective, the SSMP prioritizes integration of GI with planned transportation investments to achieve multiple benefits and make the most of limited agency resources, consistent with the strategies outlined above in Figure 3-1. For the 11 project concepts included in the plan, the total drainage management area that would be treated by the projects is just over 18 acres at a total cost of over \$27M (please note that these are integrated complete/green street projects, so costs include features not specific to stormwater treatment). While it is uncertain whether the 11 concepts will proceed to implementation, they are examples of projects that have existing local momentum and are now better situated for pursuing grant funding as a result of the concepts.

### ***Safe Routes to School / Green Infrastructure Pilot Projects***

C/CAG awarded just over \$2M to 10 pilot projects throughout the County integrating Safe Routes to School and GI. These projects were funded with equal shares of Safe Routes to School and stormwater program funds, with funds from C/CAG covering up to 85% of construction costs. Eight of the ten projects have been constructed, to-date, and C/CAG staff has been compiling information from each of the projects detailing total costs, relative shares of Safe Routes to School and stormwater costs, and impervious area treated. These results are summarized in Table 3-1.

Table 3-1 shows that the average cost per acre treated is approximately \$300,000 when using just the estimated GI project costs (which are often difficult to clearly separate given the integrated nature of things like paving, concrete gutter work, etc.) or \$590,000 when using total project costs. The costs also vary, with the projects treating the largest areas being most cost effective, which highlights the importance of incorporating GI into projects where it will have the most benefit in terms of area treated. While these costs are still preliminary as C/CAG and member agency staffs are finalizing results of the pilot program, they are illustrative of likely costs to treat an acre of impervious area within the public right of way.

### ***Non-Regulated Green Infrastructure Projects***

C/CAG and its member agencies have been proactively building non-regulated GI projects since C/CAG provided its first pilot project funding to four projects in 2007. During the current permit term, municipalities have continued implementing voluntary GI projects consistent with the MRP requirement for “no missed opportunities,” primarily street-scale projects integrated with transportation improvements. C/CAG maintains a [GIS Story Map](#) detailing public GI projects (note: not all are non-regulated). C/CAG also supports its member agencies in tracking GI implementation for purposes of quantifying mercury and PCBs load reductions.

**Table 3-1. San Mateo County Projects Integrating Safe Routes to School and Green Infrastructure**

Project Location	Description/Project Elements	Drainage Area Treated (acres)	Green Infrastructure Project Costs	Safe Routes to School Project Costs	Non-participating/ other costs	Total Project Cost	Cost/Acre Treated (GI Costs Only)	Total Project Cost/Acre Treated
Menlo Park	Two linear planters (both sides of street) w/underdrain, new crossing w/flashing beacons, new sidewalks/paths	1.46	\$291,541	\$240,800	\$44,213	\$576,554	\$199,685.62	\$394,900.00
Pacifica	Two curb extensions (both sides of the street) w/o underdrain, new crossing with island passage and flashing beacon	1.25	\$147,392	\$150,246		\$297,638	\$117,913.60	\$238,110.40
County	One "L" shaped planter behind curb w/o underdrain, one mid-block crossing (no stormwater), one crossing with new valley gutter and sidewalk	0.23	\$146,064	\$153,817	\$8,617	\$308,498	\$629,586.21	\$1,329,732.76
Millbrae	Five curb extension/bulbouts w/underdrain, three crossing improvements	1.95	\$349,663	\$157,190	\$396	\$507,249	\$179,314.36	\$260,127.69
Brisbane	Six curb extension/bulbouts w/underdrain, and an island crossing, eight crossing improvements	0.78	\$343,843	\$510,830		\$854,673	\$439,135.38	\$1,091,536.40
Colma	Two mid-block crossings with three curb extensions/bulbouts, w/underdrains and flashing beacons	1.47	\$185,770	\$121,922		\$307,692	\$126,374.15	\$209,314.29
Half Moon Bay	Three bulbouts with five bioretention areas w/o underdrains, new crossings, and additional midblock crossing w/o bioretention	0.48	\$303,554	\$202,369		\$505,923	\$632,403.75	\$1,054,005.83
Daly City	Two bulbouts with three bioretention areas w/underdrains, new crossings and ramps	1.40	\$118,523	\$61,057		\$179,580	\$84,659.29	\$128,271.43
<b>Average:</b>							<b>\$301,134.04</b>	<b>\$588,249.85</b>

## Tracking and Reporting Progress on Green Infrastructure

During FY 2020/21, SMCWPPP continued to make progress towards development and implementation of methods to track and report implementation of GI in San Mateo County and track associated pollutant load reductions. The ongoing effort to update the associated GI inventory is described in Section 11 (Mercury Controls) of this report.

As mentioned above, C/CAG utilized funding through the San Mateo Countywide SSMP project to create an updated web-based San Mateo County GI tracking tool. The tool is available via the Countywide Program's website at [www.flowstobay.org/ssmp](http://www.flowstobay.org/ssmp). The tool allows for tracking all scales of GI implementation (regional, street, and parcel), and has been preliminarily populated with all GI implemented to-date in the County. Ongoing improvements to the tracking tool are underway, with training for municipal staff in its use for uploading and editing projects planned for FY 2021/22.

## Regional Collaboration

As in past years, throughout FY 2020/21 SMCWPPP participated in BASMAA's Development Committee (now the BAMSC Development Subcommittee). Through the BAMSC Development Subcommittee, SMCWPPP participated in regional projects that assist SMCWPPP and its San Mateo County municipalities in meeting specific requirements of Provision C.3, as described below.

### ***Biotreatment Soil Media (BSM) Specifications***

In FY 2020/21, SMCWPPP continued to support municipal staff, consultants and suppliers who have questions on the review and use of BSM. SMCWPPP staff screened and worked with vendors that are

supplying the BSM product in the Bay Area and wish to be added to the vendor list that is posted on the SMCWPPP website ([flowstobay.org](http://flowstobay.org)). 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. See <https://basmaa.org/wp-content/uploads/2021/02/basmaa-regional-biotreatment-soil-specification-2016.pdf> and [flowstobay.org/newdevelopment](http://flowstobay.org/newdevelopment) for more details.

### ***Biotreatment Soil Media Specifications and Bioretention Design with Trees***

As a result of the Biotreatment Soil Roundtable held on June 30, 2016, a regional work group was formed to discuss designs that incorporate trees into bioretention areas. SMCWPPP staff took the lead on facilitating this BSM Tree-Design Work Group. In FY 2020/21, the BSM Tree-Design Work Group met twice and continued to compile information on various design issues with trees in bioretention areas. Members of the work group include several arborists, GI consultants, and municipal staff from parks departments and stormwater programs. DeepRoot GI staff provided design and maintenance information on their tree well filter systems using Silva Cells. In FY 2021/22, the Work Group will continue to meet and review examples of tree-specific treatment measure designs, discuss soil and maintenance issues, and develop recommendations for design and maintenance of stormwater tree systems.

### ***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 GI measures into local infrastructure projects, including transportation projects. SMCWPPP is tracking and participating in the BASMAA activities to assist Permittees comply with this provision.

#### Urban Greening Bay Area

To support San Mateo County Permittees in complying with the requirements of MRP Provision C.3.j.iii. (Participate in Processes to Promote GI), the Countywide Program continued to participate through BASMAA in the Urban Greening Bay Area Project's activities to implement the 2018 Roadmap of Funding Solutions for Sustainable Streets, which identifies specific actions to improve the funding of projects that include both complete streets improvements and GI. Activities during FY 2020/21 to implement the Roadmap included:<sup>2</sup>

- Continued coordination with transportation agencies – including the Metropolitan Transportation Commission (MTC) and the California Transportation Commission (CTC) – to clarify GI eligibility in regional and state transportation grant programs (Roadmap Specific Actions 1-2 and 1-3).
- On July 29, 2020, BASMAA representatives met with staff from MTC to receive and discuss comments on the One Bay Area Grant (OBAG) regional fact sheet, which focuses on the eligibility of GI in projects funded by the Surface Transportation Block Grant Program (STP) and the Congestion Mitigation and Air Quality Improvement Program (CMAQ) through the OBAG program administered by MTC. The draft regional fact sheet was subsequently reviewed by the Roadmap Team, revised, and finalized.

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<sup>2</sup> See the following BASMAA report for work products and more information: *Annual Reporting for FY 2020-2021, Regional Supplement for New Development and Redevelopment* (Appendix 13).

- The Roadmap Team reviewed, revised, and completed a final draft SB 1 fact sheet – a statewide fact sheet that focuses on the eligibility of GI in projects funded by Senate Bill 1. The Roadmap Team was unable to meet with CTC staff to review and finalize the fact sheet before the grant period expired.
- The Roadmap Team developed an outreach PowerPoint slide deck summarizing the Roundtable process and the final Roadmap of Funding Solutions for Sustainable Streets that can be used by SFEP or stormwater program representatives to educate elected officials or policy makers on the importance of integrating transportation and stormwater investments.

#### Green Streets for Sustainable Communities

C/CAG's Program Manager participated in meetings of the organization Transportation Choices for Sustainable Communities (TCSC), a research and policy institute that supports "sustainable transportation as an essential component of livable communities and cities" and helped plan a "Green Streets for Sustainable Communities" Symposium. The purpose of the symposium was to bring together elected officials, city staff leaders, stormwater experts, complete street/transportation experts, environmental activists, tree and urban ecology experts, and other stakeholders to explore how to better fund, design, build, manage and maintain streets to optimize performance for people and nature. The symposium, originally scheduled for March 2020 but postponed due to COVID-19, was held as three half-day virtual sessions on September 10, September 25, and October 8, 2020. Overall, the symposium attracted approximately 445 unique viewers over the three sessions. Details can be found at <http://transportchoice.org/events/>. C/CAG's Program Manager presented on the Sustainable Streets Master Plan at the symposium.

The Program Manager also continued to participate in meetings of the TCSC Green Streets Work Group during November 2020 – March 2021. The Work Group worked on follow-up actions to the Symposium, including: 1) developed draft language for Sustainable Streets legislation (building on existing State Complete Streets legislation); 2) met with State Senator Josh Becker and his staff several times to promote sustainable streets and encourage introduction of new legislation; 3) developed a presentation to elected officials on the need for and benefits of sustainable streets; and 4) developed a template comment letter promoting integration of sustainable streets goals and strategies into the MTC/ABAG draft Plan Bay Area 2050.

#### Other Activities

The Program Manager participated in various other efforts to promote GI including the following:

- Presented a two-hour training workshop, along with a consultant team, at the 2020 CASQA conference (September 16, 2020) on "How to Create a Sustainable Streets Master Plan Linking Stormwater Goals with Transportation Planning."
- Presented approaches to using GIS to prioritize Sustainable Streets opportunities at the Green Infrastructure Leadership Exchange in October 2020 and May 2021, with a focus on the San Mateo Countywide Sustainable Streets Master Plan.
- Presented to the U.S. EPA Region 9 Stormwater Integration Workgroup on November 19, 2020 on stormwater infrastructure and Sustainable Streets in San Mateo County.

- Met with Kara Oberg of MTC, along with a consultant team, on January 13, 2021 to discuss ways MTC could incorporate Sustainable Street concepts in its upcoming regional Active Transportation Plan. Subsequently presented on the San Mateo Countywide Sustainable Streets Master Plan at MTC’s January 21, 2021 Active Transportation Working Group and March 18, 2021 Local Streets and Roads Project Delivery Workgroup (Joint Partnership Working Group).
- Presented as part of a panel to the Bay Area Regional Collaborative on January 15, 2021 on reissuance of the Municipal Regional Permit and focus on resilient GI. The panel included Keith Lichten from the Water Board, Josh Bradt from SFEP, and Robin Grossinger from SFEI.
- Provided comments regarding the importance of Sustainable Streets and GI for adapting roadways to the impacts of climate change in C/CAG’s May 19, 2021 letter to the California Transportation Agency on the State’s draft Climate Adaptation Plan for Transportation Infrastructure.
- Presented on stormwater capture and use at the June 9, 2021 U.S. EPA and Water Environment Federation webinar “Achieving Multiple Benefits through Stormwater Capture and Use,” focusing on the regional stormwater capture project under construction at Orange Memorial Park in South San Francisco.
- Invited to participate in a Green Infrastructure Funding Academy, co-sponsored by American Rivers, Corona Environmental, and the WaterNow Alliance, during which innovative approaches to funding and financing GI were presented. Presented on stormwater credit trading marketplace considerations for San Mateo County. C/CAG was subsequently selected to receive additional pro-bono support from American Rivers/Corona Environmental to explore the feasibility of a stormwater credit trading marketplace in San Mateo County and the WaterNow Alliance to look at innovative funding and financing approaches for implementing GI in San Mateo County, as described above.

The BAMSC FY 2020/21 Annual Report Regional Supplement provides additional information on regional participation in processes to promote GI.<sup>3</sup>

## FUTURE ACTIONS

In FY 2021/22, SMCWPPP plans to continue working with the NDS to conduct the following activities to assist San Mateo County municipalities to comply with MRP Provision C.3:

- Continue to exchange information with San Mateo County municipalities on MRP implementation and other timely issues through quarterly NDS meetings and the C.3 workshops.
- Revise checklists and outreach flyers as needed to respond to San Mateo County municipal staff issues, concerns, and suggestions for improvement and to prepare for implementation of MRP 3.0 beginning in July 2022.
- Support San Mateo County municipalities with guidance on GI Plan implementation.
- Conduct GI outreach and education with the public, municipal staff, and elected officials and further raising awareness about GI through the redesigned SMCWPPP website.

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<sup>3</sup> See previous reference.



- Continue to coordinate with other related SMCWPPP subcommittees as needed (e.g., Litter Workgroup and distribution of the Litter Reduction for New Development Projects Fact Sheet, Public Information and Participation Subcommittee to engage on GI outreach).
- Continue updating and improving the web-based Green Infrastructure Tracking Tool developed as part of the Sustainable Streets Master Plan, including training on use for Permittees, and updating the database of projects.
- Continue to collaborate with the Bay Area Municipal Stormwater Collaborative (BAMSC) and Bay Area countywide stormwater programs on MRP 3.0 implementation, particularly GI implementation and guidance, updates to the BSM specifications and BSM suppliers list, and development of designs for biotreatment areas with trees.
- Plan and conduct two C.3 workshops for municipal staff (the first was conducted August 18, 2021 and the second is scheduled for June 2022), building on the trainings conducted in previous years. Topics may include implementation of GI Plans, using SMCWPPP resources such as the GreenSuite, and example reviews of development project plans.
- Continue advancing the Regional Project Planning and Collaborative Framework, including completion of a final white paper that will include: 1) Drivers and Objectives for Regional-Scale Stormwater Management, 2) Business Case for Regional-Scale Stormwater Management, 3) Collaborative Framework for Regional-Scale Stormwater Management, 4) Innovative Funding and Financing Options, 5) Credit Trading Marketplace Feasibility Evaluation, 6) Prioritized Regional Project Opportunities, and 7) five new regional project concepts. Continue supporting, as needed, the Cities of San Bruno, Belmont, and Redwood City on advancing designs and environmental review for regional projects, as well as South San Francisco on collaborative approaches to addressing long-term operations and maintenance of the Orange Memorial Park project once it becomes operational.
- Continue implementing the Resilient San Carlos Schoolyards Project via the California Resilience Challenge Grant, including outreach and engagement with the San Carlos School District and key partners and development of initial school site concept materials. The project is scheduled for completion by end of Calendar Year 2022.
- Continue supporting member agencies in pursuing funding for implementing projects identified in the Sustainable Streets Master Plan, including the 11 project concepts.
- Support completion of the remaining two (of 10 total) integrated Safe Routes to School and Green Streets Infrastructure Projects in Pacifica and East Palo Alto, funded by C/CAG's local vehicle registration fee.
- Continue administering the rainwater harvesting rebates and additional incentives for residential rain garden installations as part of the Lawn Be Gone! rebate program, in partnership with the Bay Area Water Supply and Conservation Agency. The rain barrel rebate program will include a pilot bulk-order campaign to provide greater incentives and broader participation in the program.
- Plan to present at the annual CASQA conference in October 2021 on the Sustainable Streets Master Plan for a Sustainable Stormwater Program/Project, as well as participate in a panel presentation on the Advancing Regional Stormwater Management in San Mateo County Project and a panel on Stacked Incentives/Rebates featuring the Rain Barrel and Rain Garden Rebate Program (in partnership with the Bay Area Water Supply and Conservation Agency).

# SECTION 4

## C.4 INDUSTRIAL AND COMMERCIAL SITE CONTROLS

### INTRODUCTION

A primary goal of SMCWPPP's Commercial, Industrial and Illicit Discharge (CII) component is to assist San Mateo County Permittees in controlling the discharge of pollutants in stormwater from commercial and industrial businesses to the maximum extent practicable. San Mateo County Permittees are responsible for complying with various commercial and industrial business facility inspection requirements under MRP Provision C.4. SMCWPPP's CII component assists San Mateo County Permittee staff with understanding these MRP requirements and develops various related tools, templates, reporting forms, and other MRP compliance support materials. The CII component also assists San Mateo County Permittees to comply with other MRP provisions that are discussed in other sections of this report (Sections 5, Illicit Discharge Detection and Elimination and Section 13, Copper Controls).

SMCWPPP's assistance with MRP Provision C.4 and other CII component provisions is coordinated through the CII Subcommittee.

### IMPLEMENTATION OF MRP PROVISIONS

SMCWPPP performs a variety of tasks to assist San Mateo County Permittees with implementation of MRP Provision C.4, with input and assistance provided by the CII Subcommittee. FY 2020/21 accomplishments included the following:

- Held four CII Subcommittee meetings;
- Held a Commercial/Industrial Stormwater Inspector workshop on-line;
- Held a group exercise training on-line; and
- Updated the business stormwater inspector contact list on the SMCWPPP website.

More information on each of these accomplishments is provided below.

#### CII Subcommittee

The CII Subcommittee provides the opportunity for sharing information about MRP requirements related to commercial/industrial facility inspections and methods for achieving compliance. The Subcommittee met four times during FY 2020/21 with good participation by municipal staff, as shown by the attendance list (Appendix 4). Ward Donnelly from the City of Daly City continued to chair the CII Subcommittee during FY 2020/21.

The meetings provided the opportunity for municipal staff to share their experiences with implementing MRP provisions related to the CII component, including Provision C.4. During FY 2020/21 meetings, there were discussions about conducting inspection activities during the COVID-19 pandemic, data management, illicit discharges and business inspections, and with the upcoming reissuance of the MRP 2.0, proposed changes to requirements in Provision C.4 Industrial and Commercial Site Controls based on the Administrative Draft of MRP 3.0.

## Program Materials

In FY 2017/18 Countywide Program staff updated the SMCWPPP Stormwater Inspection Form Template and developed a Stormwater Inspection Tracking Excel Template for cities to track their stormwater inspection data, if needed.

In FY 2020/21, Countywide Program staff continued to make outreach materials available on the SMCWPPP website ([flowstobay.org](http://flowstobay.org)).

## CII Training Workshops

The Commercial/Industrial Stormwater Inspector Training Workshop was held on September 17, 2020 on-line and was attended by 32 people. The workshop covered the basics of regulatory requirements and a commercial and industrial facility stormwater inspection and resources available to stormwater inspectors. Appendix 4 includes a copy of the workshop agenda, attendance list and evaluation form summary. Based on the evaluation forms submitted, attendees generally found that the workshop was useful and met their expectations. Recordings of this training are available to new inspectors on the SMCWPPP members only webpage.

A Commercial/Industrial/Illicit Discharge Stormwater Inspector group exercise training was held on May 17, 2021 on-line and was attended by 40 people. During the training staff were divided into several breakout rooms to discuss nine inspection case studies. Staff reviewed and discussed inspection issues and corrective actions taken. Appendix 4 includes a copy of the attendance list and evaluation form summary. Based on the evaluation forms submitted, attendees generally found that the training exercise was beneficial.

## FUTURE ACTIONS

FY 2021/22 activities planned by SMCWPPP to assist San Mateo County Permittees comply with MRP requirements in Provision C.4 include the following:

- Continue holding quarterly CII Subcommittee meetings;
- Continue to update existing or develop new business outreach materials as needed;
- Hold an inspector training workshop; and
- Assist San Mateo County Permittees with the implementation of commercial and industrial stormwater inspection tasks, including continuing to assist with Business Inspection Plans (BIPs) and associated prioritizing of inspections, data management, and Enforcement Response Plans (ERPs).

# SECTION 5

## C.5 ILLICIT DISCHARGE DETECTION AND ELIMINATION

### INTRODUCTION

A primary goal of SMCWPPP's Commercial, Industrial and Illicit Discharge (CII) component is to assist San Mateo County Permittees to effectively prohibit the discharge of illicit, non-stormwater discharges to the municipal storm drain system. San Mateo County Permittees are responsible for controlling non-stormwater discharges prohibited by MRP Provision C.5. SMCWPPP's CII component assists San Mateo County Permittee staff with understanding these MRP requirements and develops various related tools, templates, reporting forms, and other MRP compliance support materials. SMCWPPP's CII component also assists Permittees to comply with other MRP provisions that are discussed in other sections of this report (see Sections 4, Industrial and Commercial Site Controls, and 13, Copper Controls).

SMCWPPP's CII component is coordinated through the CII Subcommittee. See Section 4 for further details about the CII Subcommittee.

### IMPLEMENTATION OF MRP PROVISIONS

During FY 2020/21, SMCWPPP performed a number of tasks to assist San Mateo County Permittees with implementation of MRP Provision C.5, with input and assistance provided by the CII Subcommittee. Accomplishments included the following:

- Updated the table of stormwater enforcement actions against mobile businesses to share countywide with stormwater inspectors;
- Held a group exercise training on-line for illicit discharge inspectors (see Section 4 for details); and
- Updated the Illicit Discharge contact list on the SMCWPPP website.

More information on these accomplishments is provided below.

#### Countywide Program Materials

SMCWPPP has developed a variety of materials to assist municipal agency staff with implementing Provision C.5. These materials are all available on the SMCWPPP website ([flowstobay.org](http://flowstobay.org)) and continue to be useful tools that assist agency staff to achieve permit compliance. The materials include an Illicit Discharge Investigation Field Form template, an Illicit Discharge Tracking Excel Template, and outreach items.

Also available on the password protected section of the SMCWPPP website is the countywide inventory of mobile businesses operating in San Mateo County. The mobile businesses identified in the inventory

fall into the following categories: carpet cleaners, auto washers, steam cleaners, power washers, and pet care providers. The county inventory of mobile businesses is also periodically updated. Beginning in FY 2013/14, the CII Subcommittee surveyed San Mateo County agencies and compiled information on mobile businesses that were subject to stormwater enforcement actions during that fiscal year. This information was compiled in a table and made available on the password protected section of the SMCWPPP website. The table is periodically updated with additional enforcement action information, including an update that was conducted during FY 2020/21.

In addition, BASMAA<sup>1</sup> has a long-standing Surface Cleaner Training and Recognition program that focuses on improving the use of BMPs for businesses that clean surfaces (i.e., sidewalks, plazas, parking areas and building exteriors). San Mateo County Permittees have continued to refer cleaners to BASMAA's website for surface cleaning training materials.

## FUTURE ACTIONS

During FY 2021/22, SMCWPPP will assist San Mateo County Permittees comply with the requirements in MRP Provision C.5 by continuing to:

- Hold CII Subcommittee meetings;
- Assist with the implementation of illicit discharge detection and elimination tasks, including updating existing or developing new outreach materials as needed, Enforcement Response Plans (ERPs), and complaint tracking and follow-up; and
- Assist Permittees comply with the requirements for controlling mobile sources in MRP Provision C.5.e., including providing updated information on mobile business BMPs as needed, sharing enforcement information, periodically updating the regional enforcement inventory, and conducting outreach activities.

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<sup>1</sup> BASMAA was recently dissolved as a 501(c)(3) non-profit organization but many of its functions are informally continuing via the Bay Area Municipal Stormwater Collaborative.

# SECTION 6

## C.6 CONSTRUCTION SITE CONTROL

### INTRODUCTION

This component of SMCWPPP assists San Mateo County municipalities in complying with MRP Provision C.6 (Construction Site Control). This assistance continued to be provided through the New Development Subcommittee (NDS, see Section 3 for more details). SMCWPPP staff also obtained input and direction from municipal agency representatives through the NDS when planning the trainings and other compliance assistance activities described below.

### IMPLEMENTATION OF MRP PROVISIONS

SMCWPPP's accomplishments during FY 2020/21 include the following tasks to assist San Mateo County municipalities with implementation of MRP Provision C.6:

- Conducted a construction site controls and inspection training for the California Building Inspectors Group (CALBIG) on October 14, 2020;
- Conducted a construction site inspector training for municipal staff, and consultants representing municipalities, on March 16, 2021;
- Discussed at the February 2021 NDS meeting proposed changes to requirements in Provision C.6 Construction Site Control based on the Administrative Draft of MRP 3.0 and distributed a summary of proposed changes to the Statewide Construction General Permit based on its Administrative Draft; and
- Printed 1,650 copies of the Construction Site Inspection Form and distributed to Subcommittee members.

### CALBIG Training Meeting

In FY 2020/21, SMCWPPP continued its partnership with CALBIG, a group in which many building inspectors from San Mateo County municipalities participate. At the group's October 14, 2020 meeting, which was held virtually because of the Covid-19 pandemic, SMCWPPP staff gave a presentation covering an overview of the MRP and Provisions C.3 and C.6, current stormwater requirements for construction sites, proper implementation of construction BMPs, Provision C.13.a. (architectural copper), tips for keeping construction inspection programs in compliance, and the program to manage PCBs during building demolition. Approximately 33 people attended the training, including agency inspectors, local stormwater program staff, and contractors. The attendance list is provided in Appendix 6.

### 2021 Construction Site Inspector Workshop

The 2021 Construction Site Inspector Workshop was held on March 16, 2021. It was held virtually due to the COVID-19 pandemic. Eighty-four municipal and consultant staff attended the training. The

workshop included presentations on MRP requirements, the municipal use of compost and mulch for stormwater and zero waste, construction site best management practices, and SB 1383 procurement requirements. In addition, the workshop included videos from the County of San Diego on erosion and sediment controls, how to protect storm drains, and how to install fiber rolls. A breakout session was held for attendees to discuss how the COVID-19 pandemic impacted stormwater inspections. The attendance record, agenda, and evaluation summary are included in Appendix 6. Video recordings of the presentations are available on SMCWPPP's website ([flowstobay.org](http://flowstobay.org)). Based on the evaluation forms submitted, attendees generally found that the workshop was beneficial and met their expectations.

## Construction Site Inspection Form

In August 2020, SMCWPPP staff printed and distributed 1,650 copies in triplicate form of the SMCWPPP Construction Site Inspection Report to San Mateo County municipalities.

## FUTURE ACTIONS

In FY 2021/22, SMCWPPP staff plans to work with the NDS to conduct the following activities to assist San Mateo County municipalities comply with MRP Provision C.6:

- Continue to share information about construction site controls among San Mateo County municipalities through quarterly NDS meetings;
- Plan and conduct a Construction Site Inspector Workshop focusing on BMP inspections, Enforcement Response Plans and/or other topics of interest to the NDS; and
- Continue to coordinate with partner organizations, such as CALBIG, to provide additional training on construction-related stormwater issues.

# SECTION 7

## C.7 PUBLIC INFORMATION AND PARTICIPATION

### INTRODUCTION

The primary goals of SMCWPPP's Public Information and Participation (PIP) component are to:

- Educate the public about the causes of stormwater pollution and its adverse effects on water quality in local creeks, lagoons, shorelines, and neighborhoods;
- Encourage residents to adopt less polluting and more environmentally beneficial practices; and
- Increase residents' participation and involvement in SMCWPPP activities.

PIP is essential for controlling and reducing the source of pollution since many preventable pollutants are associated with the everyday residential activity. Stormwater pollution may be reduced when residents are educated and motivated by the benefits of reducing pollutants. Public education and motivation is a cost-effective approach that helps to meet the goal of reducing pollutants in stormwater to the maximum extent practicable.

### Summary of Accomplishments in FY 2020/21

The SMCWPPP PIP Subcommittee oversees the development of outreach and educational materials and guides the implementation of the PIP component of the program. The Subcommittee met two times in FY 2020/21 with good participation by municipal staff, as shown by the attendance list (Appendix 7).

SMCWPPP's PIP accomplishments during FY 2020/21 included the following:

- Partnered with the Bay Area Water Conservation Supply Agency (BAWSCA) to restructure the countywide rain barrel program into a three-tiered system so that rebate applicants received higher rebate incentives with a higher barrel capacity. The supporting Rain Barrel outreach campaign received 6,877 website page views (a 46% increase from FY 2019/20). The program received 66 rebate applications from residents (a 126% increase from FY 2019/20) for a total of 98 rain barrel installations (197% increase from FY 2019/20). Over 2,100 rain barrels have been installed to-date in San Mateo County under the rebate program.
- Completed the planning of and implemented a new rain garden rebate as part of the BAWSCA Lawn Be Gone! rebate. Launched a campaign to promote the rebate, which included a webinar. Results of the campaigns include one rain garden rebate, with a 22,343 total reach on social media posts.



- Partnered with and promoted the San Mateo County Office of Education’s “San Mateo Environmental Solutionary Teacher Fellowship.” This resulted in 5 teachers who completed the fellowship and reaching a total of 211 students, grades K through 12.
- Promoted Coastal Cleanup Day for 1,507 volunteers, raising awareness of the event and the consequences of littering behaviors resulting in 9,710 pounds of litter reported being picked up.
- Promoted efforts that San Mateo County Environmental Health Services (EHS) is involved in, which included: campaign to reduce littering of cigarette butts, update to the Reusable Bag Ordinance, and Hazardous Household Waste (HHW) Collection Program.
- Promoted Caltrans educational materials regarding uncovered loads in English and Spanish.
- Gained 400 new Facebook fans and a total page reach of 159,756 and 4,892 interactions with stormwater pollution prevention Facebook messaging.
- Sent 19 e-newsletters to a list of 3,787 active, opt-in subscribers with topics covering eco-friendly gardening practices, local cleanup events, and stormwater pollution prevention information and tips. Gained 419 new email subscribers and had an average open rate of 40%.
- Received 30,582 visitors to the SMCWPPP website, which focuses on stormwater pollution prevention messaging and resources. This is an increase of 25.6% from FY 2019/20.
- Participated in 12 webinars as public outreach events during COVID-19 restrictions. In total, we had 741 attendees, 1,507 registrants, an average attendee rate of 47.8%, and received 298 responses to our feedback surveys. The webinars provided educational content to residents and allowed residents to have their questions answered live. We experienced much greater reach for our information than in-person events and also hosted our first family-friendly webinar.
- Participated in a countywide stormwater-focused teacher fellowship program in coordination with the County Office of Education. In addition, we supported and facilitated the on-campus installation of two rain barrels and conducted two online classroom programs to teach students about watersheds and rainwater capture.
- Performed point-of-purchase outreach with Our Water Our World materials to 10 hardware stores in San Mateo County while engaging residents and employees with eco-friendly alternatives to pesticides.
- Promoted outreach messaging to residents regarding eco-friendly alternatives to pesticides in SMCWPPP’s newsletter, website, and social media channels.
- Participated in a May 27, 2021 Facebook live event with the San Mateo County Office of Sustainability entitled Pandemic Pollution Prevention. The 1.5-hour event reached 347 people with a total of 137 engagements (likes, comments, shares).

## **IMPLEMENTATION OF MRP PROVISION C.7**

### **C.7.b. Outreach Campaigns**

#### ***Rain Barrel Outreach Program***

As a result of the California drought and to pursue alternative approaches to public engagement, SMCWPPP partnered with the BAWSCA in 2014 to implement a pilot countywide rain barrel rebate program. During FY 2020/21, SMCWPPP continued its partnership with BAWSCA to promote the

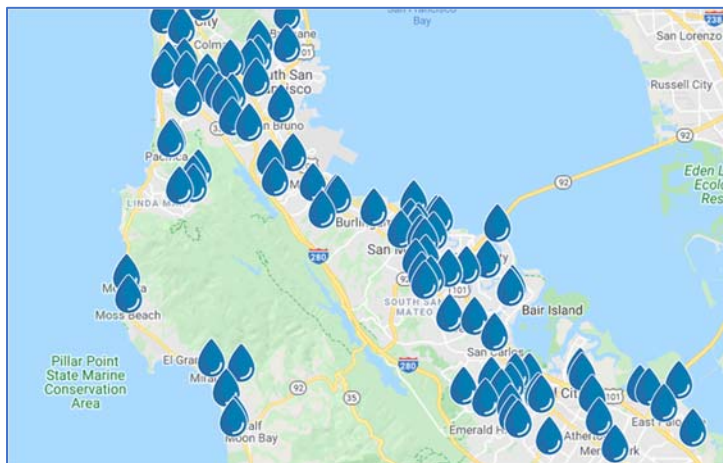
program, which subsidizes the cost of purchasing a rain barrel by providing rebates up to \$150 depending on barrel capacity. This fiscal year, the program was restructured as a tiered rebate program to allow for a larger rebate with larger rain barrel capacity.

The program objectives include: 1) educate residents about the benefits of rain barrels to water conservation and water quality efforts, 2) promote green infrastructure tools for keeping local waters clean, and 3) encourage residents to participate in the Rain Barrel Rebate Program.

Prior to this partnership, the only agency in San Mateo County offering rain barrel rebates was the City of Millbrae. C/CAG previously provided BAWSCA with an additional \$25,000 to subsidize the rebates for San Mateo County residents, which, like BAWSCA's other water conservation programs, is a subscription-based program in which BAWSCA's member agencies (water supply agencies that receive water from the San Francisco Public Utilities Commission) can choose to participate. Those funds were still being used in FY 2019/20 to supplement countywide residential rebates. The program provides rebates for up to two rain barrels for single-family residential and four for multi-family/commercial properties. C/CAG's funding provides rebates of \$50 (for 50 to 99-gallon barrels), \$100 (for 100 to 199-gallon barrels), and \$150 (for barrels 200 gallons or greater) countywide. An additional \$50 rebate is paid in areas of the county where a water supply agency is a participating agency of the program for a possible total of \$200 per rebate.

During FY 2020/21, SMCWPPP's PIP component continued efforts to promote the rain barrel program and inspire San Mateo County residents to join the rainwater harvesting movement. SMCWPPP conducted outreach to inform residents about the rebate and also the non-monetary benefits. The outreach strategy consisted of promoting the rain barrel rebate program through various online tactics. Due to COVID-19, we were not able to carry out our usual offline tactic to distribute rebate information at community outreach events.

Online tactics included an "opt-in" map hosted on the rain barrel page of the SMCWPPP website. The "opt-in" map allows users to enter their location onto a map to demonstrate that they have installed a rain barrel and place themselves on a map of San Mateo County. By placing themselves on the map, all website visitors will see how many rain barrels are being used throughout the County. This helps to establish the social norm of rainwater harvesting and encourage others to join the movement. The opt-in map (Figure 7-1) can be viewed at [flowstobay.org/rainbarrel](http://flowstobay.org/rainbarrel).



**Figure 7-1. Rain Barrel Opt-in Map ([flowstobay.org/rainbarrel](http://flowstobay.org/rainbarrel))**

SMCWPPP also promoted the rain barrel rebate program via our social media channels on Facebook and Instagram. Educational posts were created to inform residents about the functions and benefits of rain barrels. SMCWPPP used posts showing photos of various rain barrels, while encouraging use of the “opt-in” map, promoting the updated tiered rebate program, and using ads to reach a wider audience (Figure 7-2).

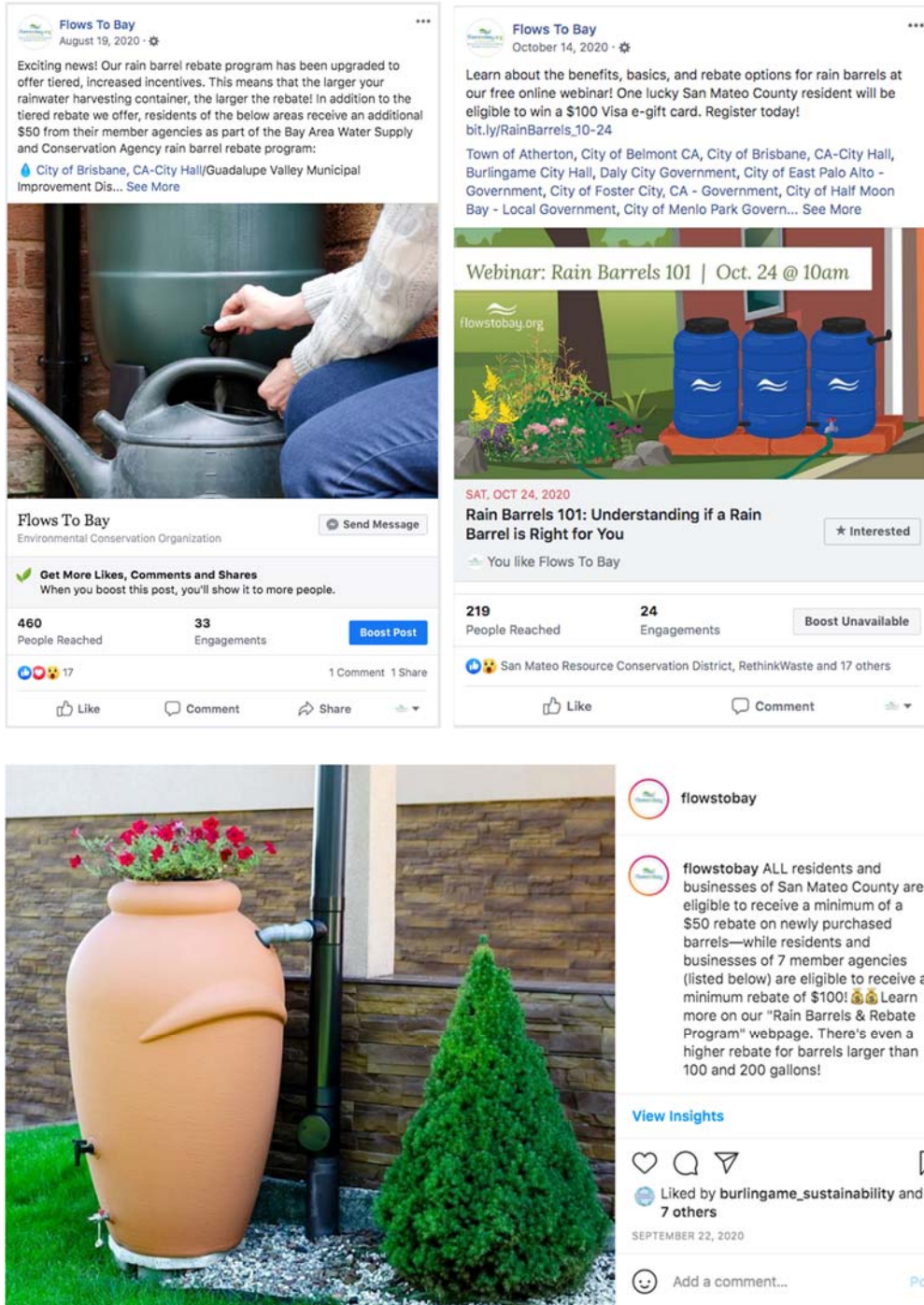


Figure 7-2. Examples of Rain Barrel Social Media Posts

SMCWPPP also hosted an online rain barrel webinar on October 24, 2020, which was titled, “Rain Barrels 101: Understanding if a rain barrel is right for you” where attendees learned about the benefits, installation, and maintenance of rain barrels.

Results for the webinar promotional campaign included 58 attendees from a total of 117 registrations and 7,335 reach combined on Facebook and Instagram.

FY 2020/21 also included our first Instagram giveaway, which had a prize for a free 50-gallon rain barrel to promote rain barrel installation during the rainy season. SMCWPPP launched a promotional campaign to promote the giveaway through Facebook and Instagram posts, announcement via e-Newsletter to our mailing list, direct outreach to partners and PIP members, and two Facebook/Instagram Ads campaigns to separately target people who follow or have visited our Facebook page and San Mateo County residents with related interests.

Results included: A) 67 accounts entered our giveaway, B) Gained 154 Instagram followers C) 331 clicks and 11,539 reach total for both Ads campaigns, and D) 705 views and 123 clicks on the e-Newsletter with information about the Rainy Season Giveaway on our Instagram account.

#### Campaign Evaluation

The Rain Barrel Campaign achieved measurable and impressive results in FY 2020/21 even while facing COVID-19 challenges.

#### *Partnerships*

SMCWPPP partnered and cross-promoted these opportunities with multiple local organizations and partners, including Grassroots Ecology, the San Mateo Resource Conservation District (RCD), Sea Hugger, and the SMC Office of Sustainability. Also, a new partnership with BlueBarrel Rainwater Catchment Systems gave San Mateo County residents a discount code for 10% off to further promote the behavior of residents installing rain barrels.

#### *Rebate Applications & Installations*

Over 2,100 rain barrels have been installed to-date in San Mateo County under the rebate program, and in FY 2020/21, a total of 98 rain barrel rebates were issued from 66 applications; this is an increase of 197% and 126%, respectively, from the previous year’s efforts.

#### *Website & Rain Barrel Opt-in Map*

As a result of the campaign and accompanying promotional strategies, the rain barrel webpage garnered a total of 6,877 page views, a 46% increase from FY 2019/20. A website tool used for analyzing the success of our outreach was the signups received on our online rain barrel opt-in map (as seen in Figure 7-1). As a result of this is campaign, our rain barrel opt-in map saw growth of 13 new “pins” during the fiscal year.

#### *Workshop*

Workshop attendees (Table 7-1) were asked to fill out a survey designed to gauge previous knowledge of the countywide rain barrel rebate program and their rating of the class, amongst other questions. The overall results of the survey were favorable, with the majority of survey participants indicating they

are likely to purchase/use a rain barrel in the next 6 months and apply for the rain barrel rebate if they purchase a new rain barrel. Based on the post-workshop survey, 78% of attendees responded that they were likely or very likely to purchase or use a rain barrel within the next 12 months.

**Table 7-1. Rain Barrel Webinar Zoom event results**

Source	Views	Registrations
Zoom	2,325	117

Tables 7-2 to 7-5 highlight a portion of the survey results below for the October 24 webinar. Full survey results can be viewed in Appendix 7.

**Table 7-2. Response Percentages of “Do you already have a rain barrel or cistern installed at your property?”**

(1 - Yes, 2 – No)

	1	2
Attendees	5.4%	94.6%

**Table 7-3. Response Percentages of “How likely are you to purchase/use a rain barrel in the next 6 months?”**

(1 - Unlikely, 2 – Neither Likely Nor Unlikely, 3 – Likely, 4 – Very Likely)

	1	2	3	4
Attendees	2.8%	19.4%	55.6%	22.2%

**Table 7-4. Response Percentages of “How likely are you to apply for the rain barrel rebate if you do purchase a new rain barrel?”**

(1 - Unlikely, 2 – Neither Likely Nor Unlikely, 3 – Likely, 4 – Very Likely)

	1	2	3	4
Attendees	2.7%	5.4%	5.4%	86.5%

**Table 7-5. Response Percentages of “Your overall rating of the class:”**

(1 - Very dissatisfied, 2 – Satisfied, 3 – Very Satisfied)

	1	2	3
Attendees	2.8%	19.4%	77.8%

Table 7-6 summarizes the results of the Rain Barrel Instagram Giveaway promotion.

**Table 7-6. Rain Barrel Instagram Giveaway promotion results:**

Campaign Audience	Reach	Clicks
Page Visitors and Followers	3,781	162
SMC Residents	7,758	169
<b>TOTAL</b>	<b>11,539</b>	<b>331</b>

**Rain Garden Outreach Program**

In September 2020, SMCWPPP completed the planning of a new [Rain Garden rebate](#) as part of the BAWSCA Lawn Be Gone! (LBG) rebate. The rebate provided a flat rate amount of \$300 to residents in the participating BAWSCA member agency jurisdictions. Our efforts throughout the fiscal year included:

- Hosting a free online 2-hour webinar about rain gardens;
- Launching a digital geo-targeted advertising campaign;
- Creating online video resources;
- Posting rain garden-related posts on social media; and
- Partnering with PIP members who are also BAWSCA rain barrel rebate participating agencies to help promote the new rain garden rebate.



We created and launched a new page on our website focused on rain gardens. The page helps explain what rain gardens are and their benefits, interactive “before” and “after” photos to demonstrate how the rebate can be implemented into residents’ yards, information about the Lawn Be Gone! (LBG) Rebate with rain garden addition, shorter video clips about specific topics discussed during the October 10<sup>th</sup> webinar, and additional resources. The web page can be viewed at [flowstobay.org/rain-gardens](http://flowstobay.org/rain-gardens).

There was a total of one rain garden rebate submitted to BAWSCA for FY 2020/21.

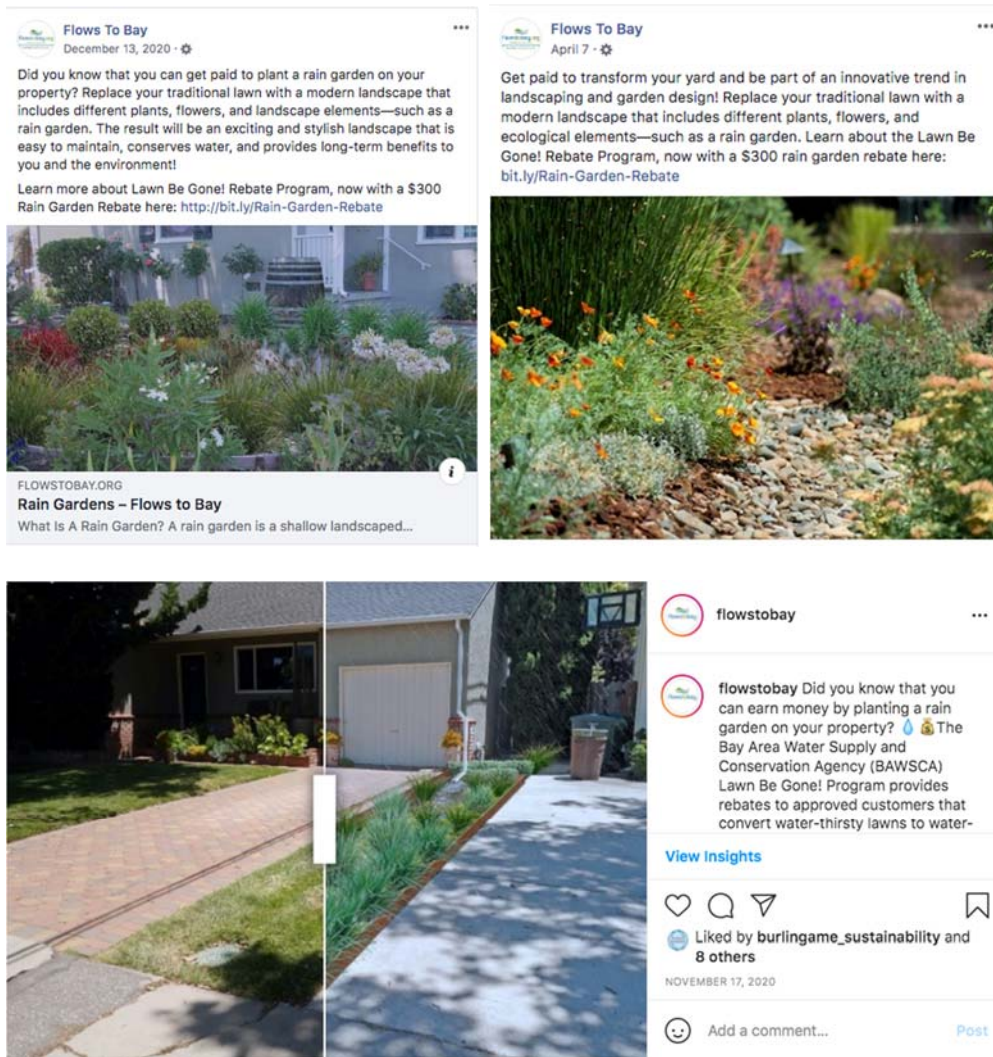
During FY 2020/21, SMCWPPP’s PIP component promoted the rain garden rebate program and inspired San Mateo County residents to install a rain garden at their home. SMCWPPP conducted outreach to inform residents about the rebate and also the non-monetary benefits. The outreach strategy consisted of promoting the LBG rebate program through various online tactics. Due to COVID-19, we were not able to conduct an offline tactic to distribute information at community outreach events.

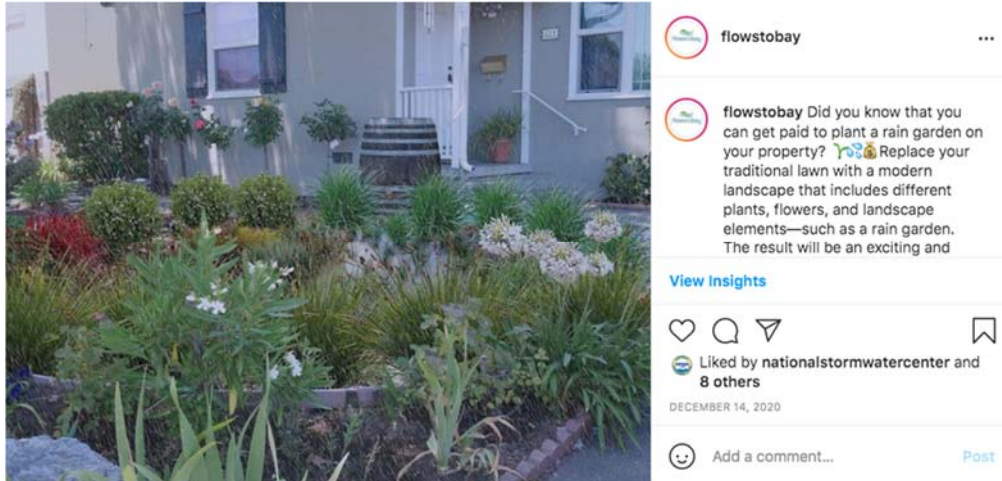
SMCWPPP promoted the LBG Rebate program via our social media channels on Facebook and Instagram. Educational posts were created to inform residents about the functions and benefits of rain gardens.

As part of this campaign, the City of Burlingame, BAWSCA, and SMCWPPP co-sponsored and hosted a free Rain Garden Workshop on October 10, 2021 entitled, “Rain Gardens 101.” This online webinar was

tailored for residential homeowners who wanted to build a rain garden but didn't know where to start. This workshop covered design, implementation, and maintenance, and it was taught by Kevin Perry (one of the authors of the SMCWPPP GI Design Guide) and Haven Kiers, assistant professor from UC Davis.

We also had a promotional push this fiscal year to encourage San Mateo County residents to share information and photos about them installing a rain garden. This information could be shared via a form at the bottom of the "Water Wise Home Projects" page. SMCWPPP highlighted the actions of a resident living in San Mateo from the form response received and followed up with the resident for more information. This community champion feature was published on our website's blog and promoted via our e-Newsletter and accounts for Instagram and Facebook (Figure 7-3).





**Figure 7-3. Examples of Rain Garden Social Media Posts**

### Campaign Evaluation

As a new rebate in partnership with BAWSCA, the Rain Garden Campaign achieved positive results for its campaign introduction in FY 2020/21 (Tables 7-7 and 7-8).

We had a total of 212 registrants and 100 total attendees for the day of the event.

Of the attendees, 55 completed a post-workshop survey. Some key takeaways from the survey included:

- 82% attended to learn about water efficient practices to protect the environment
- 87% strongly agreed that the instructors demonstrated knowledge of the topic and presented practical information you can use
- 78% rated themselves very satisfied with the workshop (96% rated satisfied and very satisfied)
- 65% were San Mateo County residents
- When asked that the biggest obstacle to installing a rain garden was, attendees' top three answers included: Cost, lack of space, and labor
- 53% of respondents said they were likely to very likely going to install a rain garden in the next 6 months, with 18 responding that they would like to participate in the Master Gardener workshop.

Webinars attendees were asked to fill out a survey designed to learn about barriers faced to installing a rain garden, likelihood of installing a rain garden in the next six months, and their rating of the class, amongst other questions. The overall results of the survey were favorable, with a slight majority of survey participants indicating they are likely to purchase/use a rain barrel in the next six months.



**Table 7-7. Rain Garden Webinar promotion results**

Source	Reach	Result
Facebook Event	5,026	108 Event Responses
Facebook/IG Ads	12,372	446 clicks

**Table 7-8. Rain Garden Submissions Facebook/Instagram Ads Campaign results:**

	Reach	Landing Page Views
Campaign	7,642	74

Tables 7-9 to 7-11 highlight a portion of the survey results below for the October 10<sup>th</sup> webinar. Please review Appendix 7 for the event invites as well as full survey results.

**Table 7-9. Response Percentages of “Your overall rating of the class:”  
(1 - Unsatisfied, 2 – Satisfied, 3 – Very Satisfied)**

	1	2	3
Attendees	1.9%	16.7%	81.5%

**Table 7-10. Response Percentages of “The workshop was what you expected.”  
(1 - Yes, 2 – No)**

	1	2
Attendees	95%	5%

**Table 7-11. Response Percentages of “How likely are you to install a rain garden in the next 6 months?”  
(1 – Very Unlikely, 2 - Unlikely, 3 – Neither Likely Nor Unlikely, 4 – Likely, 5 – Very Likely)**

	1	2	3	4	5
Attendees	3.6%	14.5%	29.1%	32.7%	20.0%

***San Mateo Countywide Sustainable Street Master Plan Outreach***

Outreach efforts focused on the San Mateo Countywide Sustainable Streets Master Plan with the online “Virtual Open House” event on December 8th, launch of the [virtual Community Engagement Hub](#), and

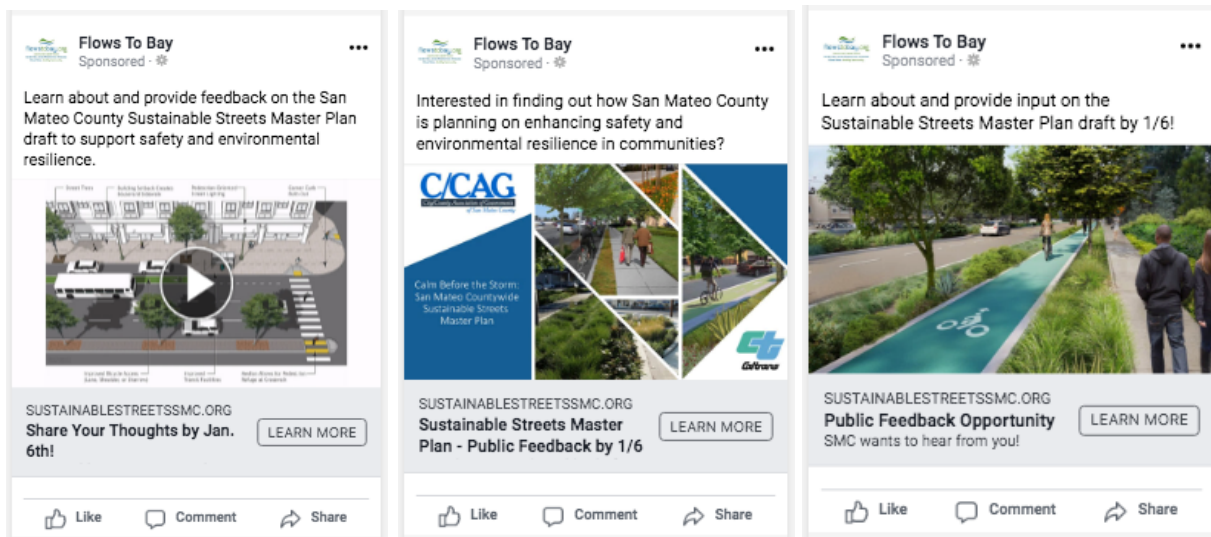
public outreach campaign for feedback on the Master Plan draft by January 6th. The virtual Community Engagement Hub for the Sustainable Streets Master Plan ([sustainablestreetssmc.org](http://sustainablestreetssmc.org)) includes the public review draft of the Master Plan, all the technical appendices, and a link to the public facing version of the GI Tracking Tool.

### “Virtual Open House” - December 8

The December 8 Sustainable Streets Master Plan “Virtual Open House” was an online event that allowed the public to have a greater understanding of the tools and resources for municipalities to advance sustainable streets in San Mateo County, explore example design concepts for potential project opportunities via a web-based [Sustainable Streets Master Plan Community Engagement Hub](http://Sustainable Streets Master Plan Community Engagement Hub), learn how to provide input on the public draft Master Plan by January 6th, and ask questions about the Sustainable Streets Master Plan. We received a total of 177 registrations and 101 attendees (57% attendance rate). A recording of the December 8th “Virtual Open House” can be viewed at [flowstobay.org/ssmp](http://flowstobay.org/ssmp).

### Sustainable Streets Master Plan Digital Campaign for Public Outreach

To garner public feedback on the Master Plan draft by January 6, we also launched a public outreach campaign. The Facebook Ads campaign targeted residents of San Mateo County, launched on December 16th, and will end on January 6th (the last day to submit input). We will include this campaign’s results in the Q3 PIP Update. Figure 7-4 shows three out of the four ads used in the campaign



**Figure 7-4. Ads used in Facebook/Instagram Ads campaign for SSMP public outreach**

### Campaign Evaluation

The online event and public outreach campaign raised public awareness about the San Mateo Sustainable Streets Master Plan Project. Both efforts had promotional campaigns to enhance awareness of the opportunities. The promotional tactics included: creating an event on our website’s events calendar, publishing posts on our Facebook account, creating and boosting Facebook events, launching a

Facebook/Instagram Ads campaigns, launching an e-Newsletter to our mailing list, and connecting with local partners and PIP members for promotional support.

The SSMP Virtual Open House (Tables 7-12 and 7-13) promotion for October 8 webinar garnered 800 total reach on Facebook posts and 59 total Instagram reach; 1,417 total reach and 87 total clicks to Zoom registration page for two newsletters; 11,614 reach and 127 event responses on the Facebook event; the event on the our website’s Events Calendar received 35 page views. There were 101 attendees from its 177 registrants (57% attendee rate).

**Table 7-12. SSMP Virtual Open House Zoom event results**

Source	Views	Registrations
Zoom	2,207	147

**Table 7-13. SSMP Virtual Open House promotion results**

Source	Reach	Result
Facebook Event	11,614	127 Event Responses
Facebook/IG Ads	3,342	0 Landing Page Views

***Green Streets Stewards Pilot Program***

The goal of Green Streets Stewards (GSS) Program was to pilot a foundational program to support current and ongoing GSI facility maintenance needs across different jurisdictions while also engaging and educating residents, students, and community groups on the function and value of green stormwater infrastructure (GSI).

The GSS pilot program was initially intended to run in FY 2019/20, but due to COVID-19, this program did not launch. Instead, we partnered with the UC Master Gardeners and the City of Half Moon Bay to launch this pilot during the second half of FY 2020/21. This pilot aimed to educate residents and community groups on the function and value of GSI, and to promote sustainable stormwater management by empowering residents and community groups to perform basic maintenance on their local GSI in cooperation with the local municipal government agencies.

Campaign Evaluation

FY 2020/21 marked the first year of the Green Streets Stewards Pilot Program. Despite the limitations imposed by the COVID-19 pandemic, we successfully met the project objectives:

- Created a training curriculum and a community science protocol ([training recording link](#))
- Set up digital data collection using the ESRI Survey123 app

- Recorded data such as vegetation condition, debris/sedimentation, soil compaction and soil infiltration
- Trained a cadre of GSI gardeners (UC Master Gardener volunteers) as well as 4-H youth members
- Tended and cared for the GI facilities in Half Moon Bay (Figure 7-5)
- Engaged with the community to discuss GSI, its benefits, and its stewardship
- Acquired 24 email sign-ups to receive updates on the GSS program and volunteer opportunities

We will continue this pilot in FY 2021/22, with the goal of expanding the pilot program to additional green stormwater infrastructure projects and broadening member agency participation.



Figure 7-5. Photo taken during one of three stewardship events in Half Moon Bay during FY 2020/21.

### C.7.c. Stormwater Pollution Prevention Education

SMCWPPP continued to use social media, the FlowsToBay.org website, and the electronic newsletter to promote stormwater pollution prevention messages.

#### ***Social Media***

SMCWPPP continued to maintain the social media platform Facebook. This platform was used as a tool for two-way communication and has continued to be an effective method to engage with residents in the absence of face-to-face interactions—especially throughout COVID. To make up for the lack of in-person engagement, this fiscal year we experimented with Facebook Live and launched the usage of a new social media platform—Instagram.

With the addition of Instagram, we hoped to maximize the effectiveness of our social media efforts and to broaden our reach within a different audience type, mainly, a younger demographic. The SMCWPPP Instagram team established partnerships with various San Mateo County-based accounts where we mutually shared each other's content—allowing our messages to reach each other's networks.

By the end of the fiscal year, we gained 552 followers on this new platform. We also published 125 posts with a total of 1,347 likes, 118 comments, 192 shares, 76 saves on our posts, and reached 13,144 accounts.

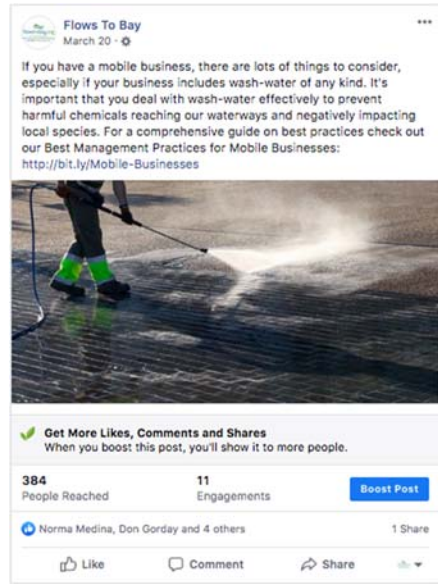
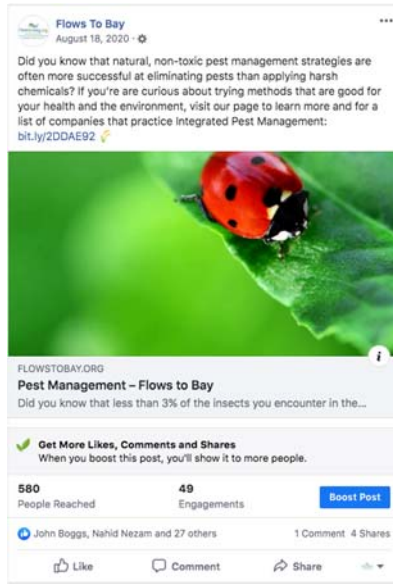
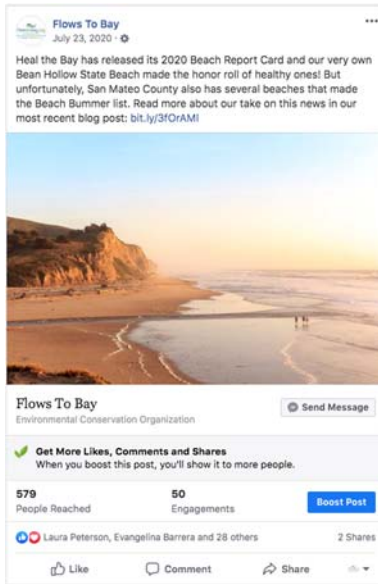
We also managed to gain 400 total Facebook Page Likes reaching a total of 26,574 Page Likes between July 1, 2019 and June 30, 2020.

Facebook and Instagram were used to publicize stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives. The platforms were primarily used to inform the public of online environmental outreach events, to promote a shift towards incorporating sustainable behaviors into daily lifestyles, and to provide environmental and marine news relevant to San Mateo County pollution prevention. The accounts were monitored on a daily basis throughout the fiscal year. As part of the overall effort to enhance social presence and engagement with followers, we wrote blogs, posted about “community champions” (i.e., residents of San Mateo County who had gone above and beyond to be environmental stewards in their communities), and we responded to residents' questions—often directing them to resources on our website.

The following is a breakdown of tasks and evaluation metrics associated with social media activity for FY 2020/21:

- Continued utilizing Facebook as a two-way communication tool to share and exchange information between SMCWPPP residents, businesses, nonprofits, and community stakeholders within San Mateo County on pollution prevention messages. Specific program messages included watershed protection, water pollution and Bay area marine news, wash water pollution prevention, the benefits of Green Infrastructure, household hazardous waste, and used motor oil & filter recycling content.
- Launched a focus on utilizing Instagram to broaden our reach and maximize the effectiveness of our social media efforts.
- Continued to utilize Facebook as the SMCWPPP website's advertising platform to further promote messages (Figure 7-6).
- Facebook metrics:
  - Gained 400 Facebook Page Likes (for followers gained minus followers lost), reaching a total of 26,574 Page Likes.
  - Garnered 256,567 total page impressions (number of people that viewed our page).
  - Reached a total of 159,756 people (number of people who had content from our page enter their screen).
  - Garnered 4,892 interactions (likes, comments, and shares).
  - Published a total of 221 Facebook posts.
- Instagram metrics:

- Gained 552 followers.
- Garnered 14,628 total page impressions (number of people that viewed our page).
- Garnered 1,657 interactions (likes, comments, and shares).
- Received 76 saves on posts.
- Received 75 website clicks from posts.
- Published a total of 125 Instagram account posts (Figure 7-7).
- Published a total of 109 Instagram Story posts.



**Flows To Bay**  
September 14, 2020 · 🌐

Green Streets serve the dual purpose of beautifying neighborhoods AND helping our communities deal with a slew of other issues — from adapting to climate change by absorbing and storing water, to protecting pedestrians and bikers by creating buffers from the street, to reducing the heat island effect, and much much more. You can read about how the County is using Green Streets and Green Infrastructure more broadly as part of its climate change adaptation strategy, here: [bit.ly/Adapting2ClimateChange](http://bit.ly/Adapting2ClimateChange)



**Flows To Bay**  
Environmental Conservation Organization

Send Message

Get More Likes, Comments and Shares  
When you boost this post, you'll show it to more people.


731 People Reached    76 Engagements    Boost Post

Diana Harris, Valentine Flores and 48 others    2 Shares

Like    Comment    Share

**Flows To Bay**  
October 11, 2020 · 🌐

🚗💧 Commercial car washes are better for the environment than the DIY approach. If you choose to wash your car at home, make sure water drains to grass, gravel, or landscaped areas, so it soaks into the ground and doesn't enter stormdrains! It's also a good idea to first clean your wheels with a rag to remove any dust from break pads, which can contain copper - a hazardous metal. Click here for well-tuned automotive information: [bit.ly/2VTkspa](http://bit.ly/2VTkspa)



**Flows To Bay**  
Environmental Conservation Organization

Send Message

Get More Likes, Comments and Shares  
When you boost this post, you'll show it to more people.

511 People Reached    20 Engagements    Boost Post

Jon Konnan, Dorothy Oder and 15 others    1 Share

Like    Comment    Share

**Flows To Bay**  
November 16, 2020 · 🌐

80% of all litter in our waterways originated from land. So, what can we do to help keep our waterways clean?

Bringing your own reusable bags, water bottles, and coffee mugs help reduce new plastic entering into the system. Supporting eco-friendly manufacturers sets a precedence. And planting native, water-efficient gardens help improve the watershed infrastructure at a local level. Find out more efforts you can do to keep our water clean and take our litter pledge today fo... See More




**Flows To Bay**  
Environmental Conservation Organization

Send Message

Get More Likes, Comments and Shares  
When you boost this post, you'll show it to more people.

600 People Reached    37 Engagements    Boost Post

👍👏 21    1 Comment 2 Shares

Like    Comment    Share

**Flows To Bay**  
May 23 · 🌐

Interested in sprucing up your yard? Be sure to find a landscaping professional with knowledge and care for the environment and you can make your yard the talk of the town. Find more info at <http://bit.ly/Landscaping-Pro>



**Flows To Bay**  
Environmental Conservation Organization

Send Message

Get More Likes, Comments and Shares  
When you boost this post, you'll show it to more people.

1,145 People Reached    16 Engagements    Boost Post

👍👏 Lucy Topham, Marina Soto and 8 others

Like    Comment    Share

Figure 7-6. Examples of FY 2020/21 Facebook Posts

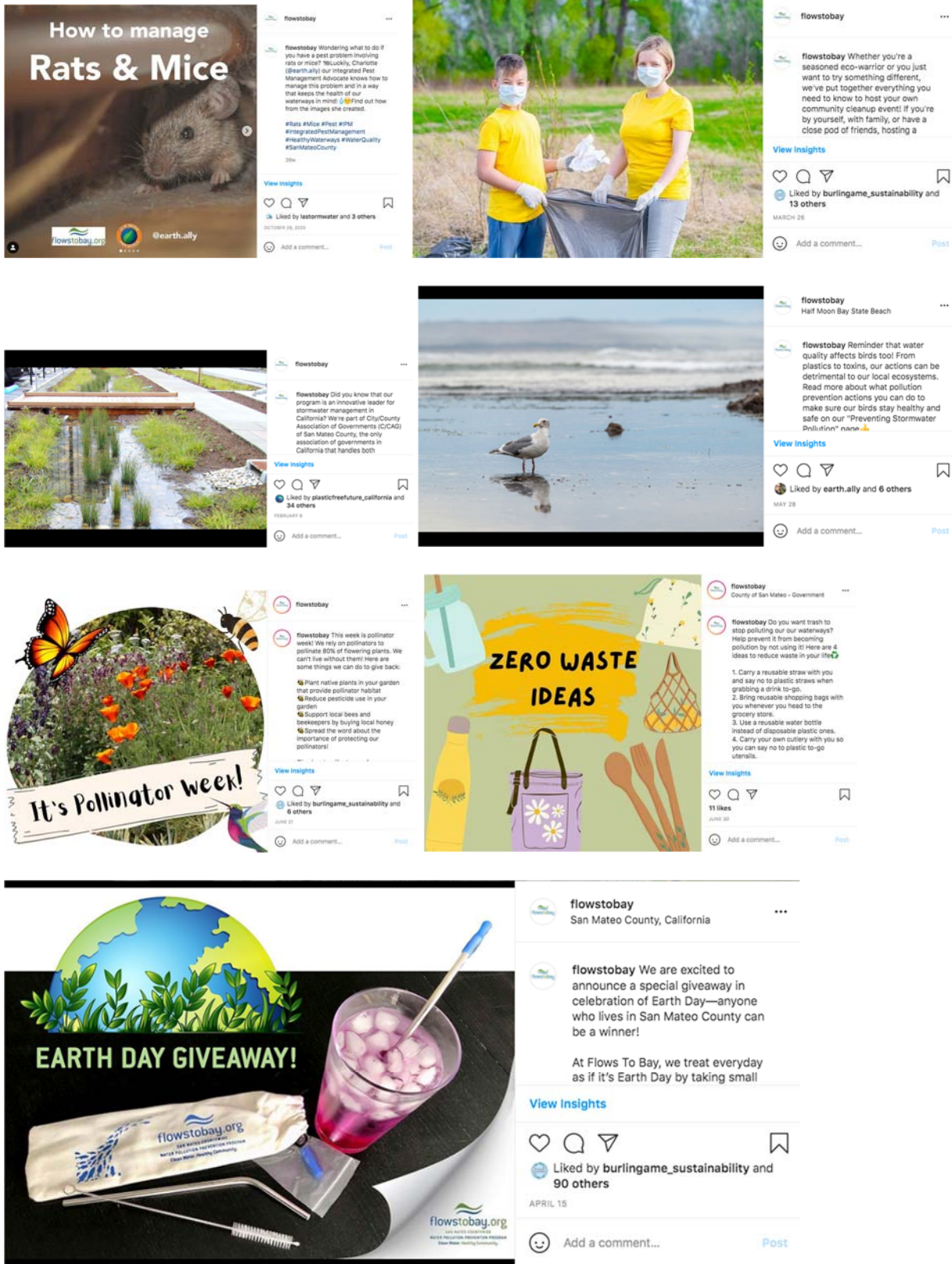


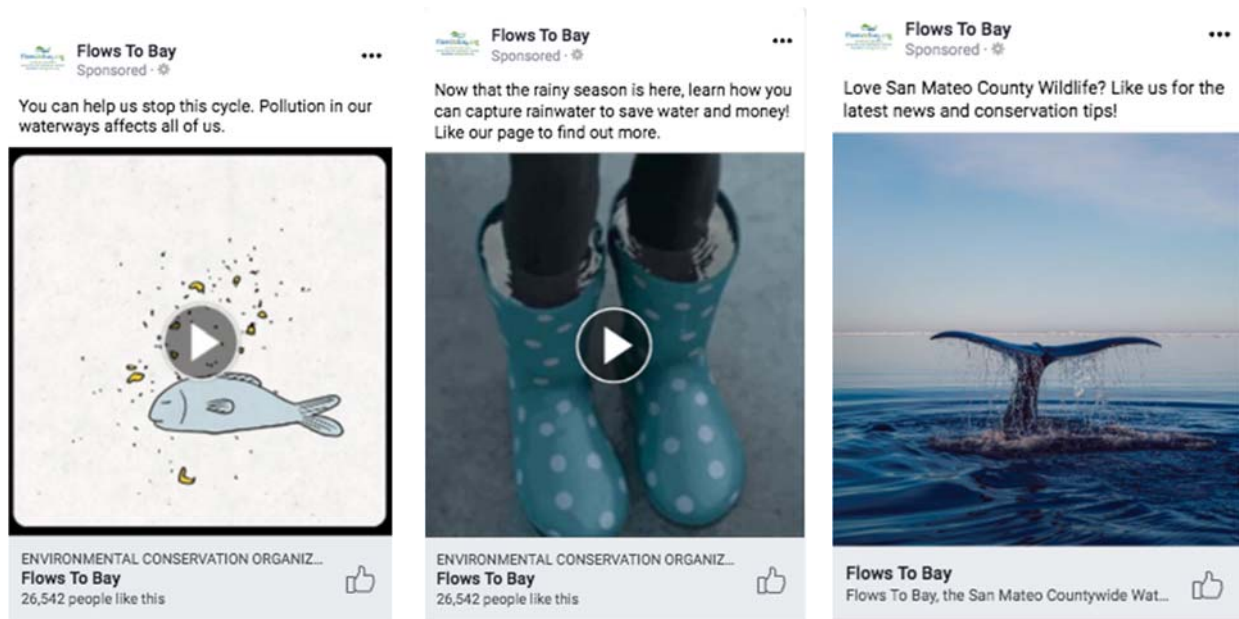
Figure 7-7. Examples of FY 2020/21 Instagram Posts



In addition to the standard Facebook social media activity, Facebook Ads Campaigns consistently ran from July 1, 2020 – June 30, 2021. These campaigns ran on an appropriate monthly budget approved by SMCWPPP and increased SMCWPPP’s reach to potential community members through the use of audience location and interest targeting.

Facebook Ads (Figure 7-8) in FY2020/21 resulted in a total of:

- Received 780 likes to our page
- 290 total post shares
- 9,326 total link clicks
- 20,657 total clicks
- 147,080 total reach
- 861,429 total impressions
- \$0.82 average cost per click



**Figure 7-8. Examples of FY 2020/21 Facebook Advertisements.**

SMCWPPP also participated in a May 27, 2021 Facebook live event with the San Mateo County Office of Sustainability entitled Pandemic Pollution Prevention. The 1.5-hour event reached 347 people with a total of 137 engagements (likes, comments, shares).

### **Newsletter**

The SMCWPPP newsletter was utilized to publicize stormwater issues, watershed information, upcoming webinars, and stormwater pollution prevention options to residents. A total of nineteen e-newsletters were sent out to our community newsletter subscriber list. SMCWPPP’s subscriber list reached a total of 3,787 subscribers in FY 2020/21—adding a total of 452 new subscribers, a 112.8% increase from the

previous fiscal year. We also had an average open rate of 40.3% and average click rate of 4.6%, which is higher than the government industry average of 28.8% and 4.0%, respectively.

During the fiscal year, we launched a Valentine Pet Waste Campaign (Figure 7-9) to engage San Mateo County residents in the action of preventing water quality problems related to pet waste by completing a pet waste pledge and receiving a free dog waste bag canister. This campaign allowed subscribers to send a free digital valentine and dog bag dispenser to someone in San Mateo County spreading the pollution prevention message of picking up after your pets and providing people the opportunity to sign up for our “Scoop the Poop” pledge. This multi-layer engagement campaign resulted in 158 recipients of a digital valentine and dog bag dispenser. From this campaign, we received 47 new subscribers to our mailing list.




**Figure 7-9. Digital Valentine gram from the Valentine Pet Waste Campaign**

For examples of the newsletter, please see Appendix 7. Table 7-14 provides a breakdown for each newsletter in the FY 2020/21 campaign.

**Table 7-14. SMCWPPP E-Newsletter Metrics for FY 2020/21**

Subject line	E-newsletter content	Send Date	Total Recipients	Open rate	Click through rate	Opened Click Rate
Learn How To Be a Watershed Hero!	Webinar Information Teacher and Parent Resources	6/18/2021	1,755	36.6%	1.1%	3.1%
Opportunity for Teachers in San Mateo County!	SMC Environmental Solutionary Teacher Fellowship	6/4/2021	1,791	42.9%	2.7%	6.4%
Water Wise Webinar and Neighbor Inspiration	Water Wise Webinar SMC Resident Story Facebook Live Event	5/20/2021	1,846	41.8%	5.6%	13.4%
Four Online Spring Events You Don't Want to Miss!	Information about Upcoming Webinars Where to Find More Events	4/29/2021	1,890	32.6%	3.8%	11.6%
Be Part of the Pollution Solution this Earth Day!	Receive a Free Reusable Straw Set 6 Pollution Prevention Tips	4/20/2021	1,525	40.2%	7.4%	18.5%
Learn About Local Water Quality	San Mateo Resource Conservation District's Midcoast Water Quality Webinar	4/16/2021	1,539	41.5%	2.5%	6.0%
Request for Rain Gardens	Share Your Rain Garden With Us	4/7/2021	1,569	50.4%	5.4%	10.8%

Subject line	E-newsletter content	Send Date	Total Recipients	Open rate	Click through rate	Opened Click Rate
Spring Your Garden Into Action	March '21 IPM Webinar	3/11/2021	1,555	42.9%	7.4%	17.1%
Exciting News and Giveaway!	We're on Instagram Rainy Season Giveaway	2/10/21	1,580	44.7%	7.8%	17.4%
A Valentine Treat From Us to You!	Send a Valentine Message and Gift to Someone Take the Pledge and Receive a Treat Why It's Important to Be a Responsible Pet Owner	2/2/21	1,635	44.7%	5.7%	12.8%
Two Rebates for the Rainy Season	Learn More About Rain Barrel Savings Read More About the Rain Garden Rebate	1/7/21	1,683	47.1%	7.0%	14.9%
Special Opportunity for Countywide Public Engagement an	San Mateo Countywide Sustainable Streets Master Plan – "Virtual Open House"	12/3/2020	1,696	41.0%	2.1%	5.0%
Two Informative Webinars to Begin Your December!	Fall/Winter Gardening Essentials San Mateo Countywide Sustainable Streets Master Plan – "Virtual Open House"	11/24/2020	1,750	41.4%	5.2%	12.4%
Kings Tides and Disposable Food Service Ware Ordinance	King Tides: What They Are & Why They Matter SMC Taking Action: There's More to Food Ware Than You Think	11/13/2020	1,831	42.8%	7.0%	16.4%
Action and Education Before the First Rain	Volunteer to Collect Water Samples	10/20/2020	1,828	38.1%	2.5%	6.6%

Subject line	E-newsletter content	Send Date	Total Recipients	Open rate	Click through rate	Opened Click Rate
	Rain Barrel Webinar this Saturday					
Prepare for Rainy Days Ahead	How to Save on a Rain Barrel Webinar: Rain Barrels 101 on October 24 <sup>th</sup> Redwood City Resident Shows that Being a Rain Barrel Owner is Easy	10/13/20	1,942	36.2%	3.1%	8.6%
Rain Garden Workshop Oct. 10	Rain Gardens 101: How to Design, Build, and Maintain a Rain Garden webinar Bay Day Your Way	9/30/2020	1,989	35.9%	3.7%	10.3%
Talking Trash for Cleaner Waterways 	Take the Flows To Bay Litter Pledge Coastal Cleanup Month Special Offer from Sea Hugger and Hassett Hardware	9/15/2020	1,992	27.4%	3.3%	11.9%
Attend our September 19th Webinar	Pest Management Practices that Help Your Garden and Support Pollinators	9/1/2020	2,022	37.2%	3.5%	9.5%

\* Industry average open rate is 28.8% and average click rate on articles is 4.0% (source from July 2021, Mailchimp)

### **SMCWPPP Website**

This fiscal year, we linked content on our website (which was updated in FY 2019/20) through our various communication mediums, such as Facebook, Instagram, e-Newsletter, blogs, and during webinars for resources. We kept our [online community events calendar](#) (Figure 7-10) active with events we hosted and online or COVID-19-safe events from San Mateo County agencies and organizations conducting relevant events to our work. Because of our efforts, the website experienced plenty of traffic.

During FY 2020/21, the flowstobay.org website had the following results:

- 34,349 sessions
- 25,643 new users
- 2,995 returning users
- 55,649 page views
- 64.54% bounce rate



ABOUT FLOWS TO BAY    PREVENTING STORMWATER POLLUTION    DATA & RESOURCES    GET INVOLVED    PERMITTEES

- EVENT
- READ OUR BLOG
- REPORT ILLEGAL DUMPING
- SIGN UP FOR OUR E-NEWSLETTER
- CONTACT

» March							May «
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
28 Linda Mar State Beach Habitat Restoration with Pacific Beach Coalition (Facebook)		29 Master in Local Sustainability Course – Spring 2021 (Online)	30	31	1	2	
						3 HWY Collection Event (South San Francisco) SMC Office of Sustainability: Spring Edible Home Gardening Group Meeting (Online)	
4	5	6 Master in Local Sustainability Course – Spring 2021 (Online)	7	8	9 Spring Edible Series: Good Bug/Bad Bug on Edible Plants (Online) Good Bug/Bad Bug on Edible Plants (Online)	10 Beach Cleanup with Sea Hugger (Half Moon Bay)	
11	12	13 Master in Local Sustainability Course – Spring 2021 (Online)	14 Edible Container Gardening (Online)	15 Playlist Documentary & Panel Discussion (Online)	16 Landscaping with Succulents (Online)	17 Shoreway Virtual Tour 1 (Online) School Garden Leadership Workshop (Online) Shoreway Virtual Tour 2 (Online)	
18	19	20	21	22	23	24	

Figure 7-10. April 2021 calendar partially captured on the flowstobay.org Events Calendar

### C.7.d. Public Outreach and Citizen Involvement Events

#### Virtual Events

Due to COVID-19, we pivoted all outreach events to virtual workshops led by an expert. We're proud to report that we conducted **12 virtual events** this fiscal year (Tables 7-15 and 7-16). Appendix 7 contains the promotional graphic created for each webinar as well as feedback survey responses (when distributed).

The SMCWPPP team honed their promotional campaign process for webinars, which included:

- Create a captivating image for the webinar and in different sizes to use in various mediums.
- Set up Zoom webinar event and registration page. A question asking if the viewer wanted to subscribe to our newsletter was included on the registration page, which is an effective way for our pollution prevention messaging to directly reach the inbox of more residents.
- Set up unique URLs for each promotional source, so we inform promotional strategy for our next webinar. This helped us learn what worked well and what didn't (i.e., Facebook event and

Newsletter have been successful, whereas Google and Instagram Ads weren't and were then removed from our strategy).

- Publish an e-Newsletter that either focuses on or includes the webinar.
- Create and boosted Facebook event. We learned that this was effective strategy because if any user says "Interested" or "Attending," it should show on their timeline, which their network then could see.
- Create and launch a Facebook/Instagram Ads campaign with some ads linking directly to the Facebook event.
- Publish posts on Instagram and Facebook accounts and Story.
- Create calendar event on SMCWPPP's website.
- Prepare and send mini editorial calendar (text, image, link to image) to Public Information and Participation (PIP) subcommittee members and local partners. The SMCWPPP team was pleased with the amount of shares received from this outreach. Shares from PIP members and local partners mainly occurred on Instagram as Story posts (Figure 7-11).





Figure 7-11. Examples of local partner’s shares of our webinars on their Facebook and Instagram accounts, respectively.



**Table 7-15. FY 2020/21 Public Outreach and Citizen Involvement Events and Metrics**

<b>Dates</b>	<b>Event Location</b>	<b>Event Name</b>	<b>Type of Event</b>	<b>Est. Event Attendance</b>	<b>Estimated Reach</b>
9/19/20	Online	Pest Management Practices that Help Your Garden and Support Pollinators	Public Outreach	77	150
10/10/20	Online	Rain Gardens 101	Public Outreach	100	212
10/24/20	Online	Rain Barrels 101: Understanding if a rain barrel is right for you	Public Outreach	58	117
11/7/20	Online	Lawn Be Gone! Rebate Program Q&A with UC Master Gardeners	Public Outreach	30	100
12/2/20	Online	Watershed Presentation to Farallone 2 <sup>nd</sup> grade class	Public Outreach	20	20
12/5/20	Online	Fall/Winter Gardening Essentials	Public Outreach	72	147
12/8/20	Online	Sustainable Streets Master Plan "Virtual Open House"	Public Outreach	101	177
3/20/21	Online	Preparing Your Garden for a Pest-Free Spring	Public Outreach	88	154
4/5/21	Online	Watershed Presentation to El Granada 3 <sup>rd</sup> grade class	Public Outreach	20	20
5/5/21	Online	Non-Toxic Pest Management for the Garden & Home	Public Outreach	102	345
5/10/21	Half Moon Bay	Green Street Stewardship Event	Citizen Involvement + Public Outreach	5	20
5/14/21	Half Moon Bay	Green Street Stewardship Event	Citizen Involvement + Public Outreach	4	20
5/27/21	Online	Water-Wise Gardening and Landscaping	Public Outreach	64	118
6/25/21	Online	How to Be a Watershed Hero: Understanding & Preventing Stormwater Pollution	Public Outreach	9	17

**Table 7-16. Total Results for Virtual Events**

	# of Webinars	Attendees	Registrants	Attendee Rate	Survey Responses
<b>TOTAL</b>	12	741	1,507	47.8%	298

The following support of partnering organizations and PIP events was conducted during FY2020-21 to support related efforts to the work of SMCWPPP throughout San Mateo County:

- Promoted the following online workshops from the San Mateo County Office of Sustainability: 8/1 “Home Composting Workshop,” and 8/8 “Edible Home Gardening Support Group Meeting” with a total Facebook reach of 977 Facebook and 50 page views on the corresponding Flows To Bay website event pages.
- Promoted the November 10 “Extreme Heat and Concurrent Hazards: Lessons Learned” on behalf of the Climate Ready SMC Extreme Heat Task Force through Facebook post (1), Instagram post (1) and event on our website’s Events Calendar. Results included a Facebook reach of 418 Facebook reach, 38 accounts reached on Instagram, and 14 page views on the corresponding Flows To Bay website event page.
- Promoted the following programs from the San Mateo County Office of Sustainability: Youth Climate Ambassadors program and Sustainability Academy’s Master in Local Sustainability course. This resulted in a reach of 700 and 56 on Facebook and Instagram, respectively.
- Promoted Reusable San Mateo County’s June 1<sup>st</sup> event, which resulted in 240 reach on Facebook.
- Promoted the Pandemic Pollution Prevention Facebook Live Event, which was hosted by San Mateo County Office of Sustainability, City/County Association of Governments of San Mateo County, San Mateo County Parks, and the Pacific Beach Coalition. The Facebook event we created for the event had a reach of 2,001 and 19 event responses, our Facebook posts had a reach of 444 for 4 posts, an Instagram post had a reach of 143, and our Facebook Ads had 3,296 impressions. The corresponding Flows To Bay website event page received 36 page views.
- Launched promotional campaigns for the upcoming BAWSCA webinars with the City of Burlingame (2) and City of Millbrae (1) for upcoming webinars with BAWSCA. For the three webinars, we created and boosted a Facebook event, created an event on our website’s Events Calendar, published posts on Instagram and Facebook, and sent a newsletter to our mailing list – the follow are the combined results for the three webinars’ promotional campaigns: 34,932 account reach on Facebook events, 386 Facebook event responses, 5,224 account reach on Facebook posts, 259 reach on Instagram posts, 646 views (opens) on e-Newsletter, and 121 total clicks to “Learn More and Register Here” on the buttons for each event. The corresponding Flows To Bay website event pages received 98 page views.
- Promoted the San Mateo County Office of Education’s “San Mateo Environmental Solutionary Teacher Fellowship.” This resulted in 1,528 account reach on Facebook posts, 252 reach on Instagram posts, 2,369 reach on a Facebook/Instagram Ads campaign, and the following results for an e-Newsletter to promote the Fellowship: 766 views (opens), 45 clicks to the program’s flier, 23 clicks on the Fellowship Program’s web page, 10 clicks on SMC COE’s homepage, and 9 clicks on the link to the YouTube video about the program.

- Featured the East Palo Alto grassroots leaders engaged in sea level rise activism. This received 1,967 account reach on Facebook and 273 account reach on Instagram posts.
- Promoted Coastal Cleanup 2020, a month-long focus in September of self-directed cleanups that are close to home to support residents’ health and encouraging them to stay close to their homes. Our promotional campaign resulted in 544 viewers of e-Newsletter it was included in, 11 clicks on button to “Learn More & Join A Team” on e-Newsletter, 51 page views to Coastal Cleanup 2020 blog, 1,182 account reach on Facebook, and 42 account reach on Instagram.
- Featured the work of San Mateo County Parks and Recreation Department through social media posts about their announcement of 32 new projects aimed at lowering fire risks for over 1,800 acres. This resulted in 378 Facebook reach.
- Promoted efforts that San Mateo County Environmental Health Services (EHS) is involved in, which included: campaign to reduce littering of cigarette butts, update to the Reusable Bag Ordinance, and HHW Collection Program.
- Promoted the San Mateo County Resource Conservation District’s October “First Flush” event and April “Midcoast Water Quality” webinar. This resulted in total of 871 account reach on Facebook, 254 account reach on Instagram, and 1,331 e-Newsletter views.

Table 7-17 summaries the total impact of SMCWPPP’s support of community events, initiatives, and programs from San Mateo County agencies and organizations.

**Table 7-17. Total Results for SMCWPPP’s Community Support FY 2020-21**

	Facebook Reach	Instagram Reach	Views on Website Event	Facebook Ads Impressions	Facebook Event Reach	Views (Opens) on e-Newsletter
<b>TOTAL</b>	13,929	1,317	316	5,665	39,458	3,287

***Outreach Materials***

The following SMCWPPP items are given out by request provided to Permittees, organizations, and residents in San Mateo County (not including the less-toxic pest control items listed in section C.9.h.ii.).

- “You Are The Solution To Water Pollution” pamphlet (English and Spanish)
- Stormwater tip card (English, Mandarin, and Spanish)
- Pet waste tip card (English, Mandarin, and Spanish)
- Microplastics tip card (English, Mandarin, and Spanish)
- Litter tip card (English, Mandarin, and Spanish)
- BAWSCA rain barrel rebate packet
- BAWSCA Lawn Be Gone! & Rain Garden Rebate packet
- “Keep Car Wash Pollution out of the Storm Drain” pamphlet
- “Tarp Your Load” flier (English front, Spanish back)

- Two children’s activity books: “Pest or Pal” (OWOW – Our Water, Our World) and “Discover Storm Water”
- Green Infrastructure Fact Sheet
- Dog waste bag canister
- Branded metal straw with rubber tip and cleaner
- Recycled water bottle pens
- Branded reusable bags
- Sea animal stickers
- Fish erasers

### C.7.f. School-Age Children Outreach

#### **County Office of Education Sustainable Watersheds Fellowship Program**

In FY 2020/21, we partnered with the [San Mateo County Office of Education](#) to implement a comprehensive, standards-aligned learning units that focused on the environmental, social, and economic impacts of stormwater pollution and watershed management. Flows To Bay served in the role of community-based partner, assisting with stormwater content and being available as a resource for teachers. Final teacher case studies may be found [here](#).

The institute (and other program elements) were all shifted to virtual platforms in order to meet COVID-19 safety requirements, and in order to model best practices in distance learning.

Recruitment for this program enrolled nine San Mateo County educators. By the end of the program, five teachers completed the process (Table 7-18) with a total reach of 211 students.

**Table 7-18. San Mateo County Teachers Who Completed the Sustainable Watersheds Program FY 2020/21:**

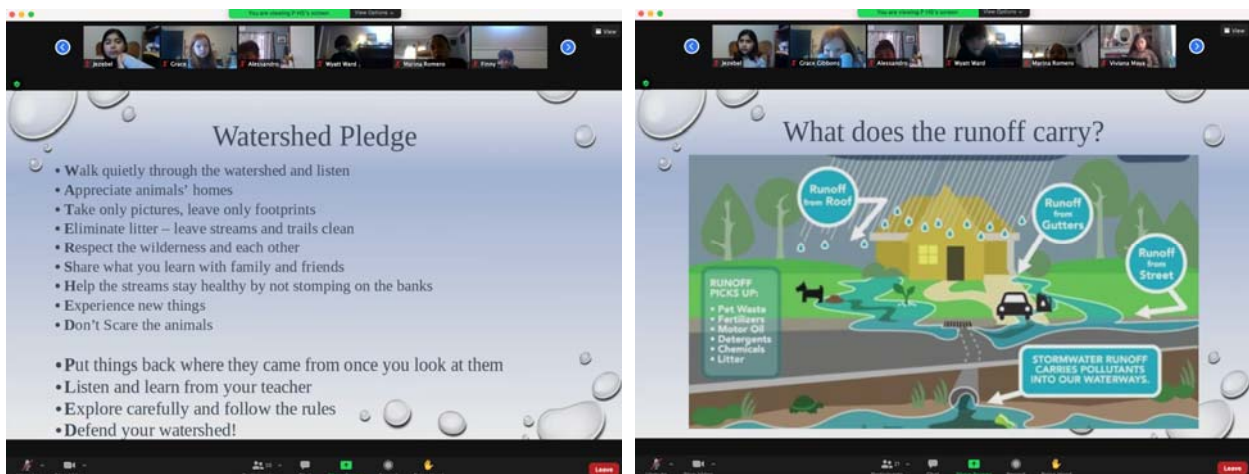
Teacher Name	Grades Taught	School Name	School District
Lauren Smith	9-12 Biology	Terra Nova High	Jefferson UHSD
<b>Pauline Shue*</b>	<b>3-4</b>	<b>El Granada Elementary</b>	<b>Cabrillo USD</b>
Rebecca Jeffs	2	Farallone View Elementary	Cabrillo USD
<b>Kaia Lindberg*</b>	<b>K-4</b>	<b>Farallone View Elementary</b>	<b>Cabrillo USD</b>
Shainna Breslow	K-1	Homeschool Pod	NA

*\*Teachers who we worked with to install rain barrels on campus as noted below.*

In addition, two teachers from El Granada Elementary and Farallone View Elementary opted in to installing rain barrels on their campus. Flows To Bay covered the costs of installing a 265-gallon cistern and drip irrigation system on the Farallone campus on January 20th and a 50-gallon rain barrel on the El Granada campus on April 14, as requested by the schools (Figure 7-12). Students of both teachers also participated in online learning sessions with rain barrel expert Chris Corvetti to discuss watersheds, runoff, and how rain barrels play a role (Figure 7-13).



**Figure 7-12. Photos of completed barrel installations at the Farallone Elementary campus (pictured left) and El Granada Elementary campus (pictured right)**



**Figure 7-13. Screenshots of the class sessions after the on-campus installations**

Benefits to teachers were promoted as the following:

- A \$500 stipend upon completion of the program
- A deep understanding of the environmental, social, and economic issues related to stormwater pollution prevention
- The confidence and ability to successfully use problem-based learning strategies, including: inquiry, systems thinking, and civic engagement
- Connection with local stormwater community-based organizations, and hands-on experiences to enhance classroom teaching
- Increased student engagement and comprehension, and greater and lasting educational impact on your students
- The tools and resources to make a significant impact in your school community towards cleaner waterways
- The chance to collaborate and share best practices with fellow teachers within their cohort

#### Campaign Evaluation

- Survey results showed that for those who completed the program, it was highly successful with 95% reporting the program was very high to extreme satisfaction with the Summer Institutes.
- Over 90% of teacher fellows reported that SMELC Teacher Fellowship program was critical to their success and/or enhanced their ability to teach virtually during the FY 2020/21 school year.
- At the conclusion of the program, Teachers Fellows reported a significant increase in confidence for solutionary PBL, including the EP&Cs into curriculum and instruction, using the environment as a context for learning, civic engagement projects, and integrating systems thinking
- 90% of Fellows reported the overall program components (Summer Institute, Unit Development and Implementation, Coaching, Final Unit Write-up, and Capstone Presentation) as being effective
- 95% of teachers reported that they will teach their solutionary unit again in the future.
- 96% of Teacher Fellows would participant in additional fellowship programs, and 96% would Recommend to Colleagues

## **FUTURE ACTIONS**

In FY 2021/22, SMCWPPP plans to continue working with the PIP Subcommittee to conduct the following activities to assist member agencies to comply with MRP Provision C.7:

- Continue to grow the reach, engagement, and following of SMCWPPP's Facebook and Instagram accounts with posts and advertisements;
- Promote county outreach events through the website and social media;
- Pilot a countywide bulk rain barrel program to distribute low-cost, high-quality rain barrels to residents while promoting the rain barrel rebate;
- Continue facilitating online virtual events while COVID-19 continues to be a challenge for in-person events and outreach;

- Host and facilitate in-person tabling events at hardware stores across the county to support IPM message;
- Maintain and update SMCWPPP's [www.flowstobay.org](http://www.flowstobay.org) website to revise and update the content;
- Continue outreach and promotion of stormwater messaging through the e-newsletter, one of the top performing platforms;
- Growing our e-newsletter subscribership numbers through cross-promotion on the website, social media platforms, giveaways, contests, and paid advertising media;
- Support the new tiered Rain Barrel Rebate Program pilot and Rain Garden Rebate program in partnership with BAWSCA, with C/CAG providing ongoing funding;
- Continue the Green Streets Stewardship Program to encourage learning, stewardship, and cleanup efforts of GI facilities throughout San Mateo County;
- Continue conducting outreach to residents about eco-friendly and stormwater pollution prevention practices and related rebates and providing educational workshops; and
- Host and facilitate four rain barrel and one rain garden installation hands-on workshops on different school campuses to support GSI efforts, education, and outreach.

# SECTION 8

## C.8 WATER QUALITY MONITORING

On behalf of its member agencies, SMCWPPP performs water quality monitoring activities in compliance with MRP Provision C.8. Per Provision C.8, a complete documentation of all water quality monitoring data collected from October 1, 2020 through September 30, 2021 (i.e., Water Year 2021 or WY 2021) will be presented in SMCWPPP's Urban Creeks Monitoring Report, which will be submitted to the Regional Water Board by March 31, 2022.

In addition, in accordance with MRP Provision C.8.f., Pollutants of Concern (POC) Monitoring, SMCWPPP will submit by October 15, 2021 a report describing the POC Monitoring tasks accomplished in WY 2021 and the planned allocation of sampling effort for POC Monitoring in WY 2022. The report will include monitoring locations, number and types of samples collected, a description of the objectives of the sampling (i.e., management question addressed), and the analytes measured. However, per Provision C.8.h., the results of the monitoring will not be included, but instead will be documented in the Urban Creeks Monitoring Report, as described above.



# SECTION 9

## C.9 PESTICIDE TOXICITY CONTROLS

### INTRODUCTION

The primary objective of MRP Provision C.9 Pesticides Toxicity Control is to prevent the impairment of urban streams by pesticide-related toxicity. Provision C.9 therefore helps implement the *TMDL for Diazinon and Pesticide-related Toxicity for Urban Creeks* in the San Francisco Bay region. Permittees are required to implement a pesticide toxicity control program that addresses their own use of pesticides and use by others within their jurisdictions. The focus is on pesticides that pose a threat to water quality, including applications with the potential to enter the municipal stormwater conveyance system.

Most MRP-required Provision C.9 tasks are implemented by each individual San Mateo County Permittee. SMCWPPP helps agency staff to understand MRP requirements and develops various tools that assist agency staff to effectively plan, implement, and report on compliance activities. SMCWPPP's assistance with Provision C.9 is coordinated through SMCWPPP's Parks Maintenance and Integrated Pest Management (IPM) Work Group, except that Provision C.9.h., the public outreach portion of Provision C.9, is implemented via SMCWPPP's Public Information and Participation (PIP) component.

### IMPLEMENTATION OF MRP PROVISIONS

During FY 2020/21, SMCWPPP performed a number of tasks to assist member agencies with implementation of Provision C.9, with input and assistance provided by the Parks Maintenance and IPM Work Group. Accomplishments included the following:

- Held one meeting of the Parks Maintenance and IPM Work Group.
- Conducted SMCWPPP's Annual Landscape IPM Training Workshop in March 2021.
- Continued coordinating with San Mateo County Agriculture / Weights and Measures.
- Updated the pesticides tracking template with the current two years of pesticide product data from the Department of Pesticide Regulation (DPR) website.
- Participated in relevant BASMAA/BAMSC and CASQA activities.
- Continued to maintain retail partnerships at 10 top-tier stores (e.g., Home Depot and Hassett Ace Hardware) within San Mateo County. Tasks included ordering materials, organizing outreach collateral, checking in with store managers, and providing outreach to residents.
- Conducted four online webinars with an IPM Advocate in association with Our Water Our World to educate residents about less toxic alternatives to commercial pesticides and fertilizers. This was a pivot the SMCWPPP team made while in-person outreach events were on hold due to the COVID-19 pandemic. The webinars had 796 registrants and 339 attendees, and 171 feedback surveys were taken. Survey respondents of the four webinars scored their overall experience on average as 4.5 on a scale of 1 to 5. A "5" indicates that participants were "very satisfied."

- Co-hosted an online IPM webinar with a retail partner for the first time (Lyngso Garden Materials, Inc.).
- Updated license status information in the database of San Mateo County pest control operators.
- Sent an email or mailed a letter to active licensed pest control operators in San Mateo County that 1) described the critical role pest control professionals in San Mateo County play in keeping pesticides out of our waterways, 2) encouraged pest control professionals to adopt IPM practices to help minimize the negative effects on water quality and aquatic life, and 3) provided information on the steps for certifications.

More information on each of these accomplishments is provided below.

### **Parks Maintenance and IPM Work Group**

The Parks Maintenance and IPM Work Group provides the opportunity for sharing information about MRP Provision C.9 requirements and approaches for achieving compliance. Richard Holtz from the City of Burlingame chaired the work group. The Parks Maintenance and IPM Work Group met one time in FY 2020/21. The meeting included a training on CalAg Permits, which was approved for Continuing Education Hours from the Department of Pesticide Regulation (DPR). The attendance list is included in Appendix 9.

### **Annual Landscape Integrated Pest Management Workshop**

The annual SMCWPPP Landscape IPM Workshop was held online on March 9, 2021. The workshop was attended by 75 municipal staff and contractors and covered the following topics:

- Pesticides and Water Quality
- IPM for Wildlife in Urban areas
- IPM Techniques for Weed Management in Urban Areas
- Regulatory Update and Common Violations

Evaluation forms completed by the workshop's attendees indicated that overall, the workshop was beneficial and met their expectations. Appendix 9 includes the workshop agenda, attendance list, and a summary of the evaluations. Other workshop materials are available on the SMCWPPP website ([flowstobay.org](http://flowstobay.org)).

### **Coordination with San Mateo County Department of Agriculture**

As in past years, San Mateo County Agriculture / Weights and Measures staff attended the FY 2020/21 meeting of the Parks Maintenance and IPM Work Group and received information on water quality issues and the MRP. In addition, SMCWPPP worked closely with San Mateo County Agriculture / Weights and Measures staff to provide DPR Continuing Education Hours for participants in the Landscape IPM Workshop.

### **Pesticide Tracking Template**

In FY 2016/17, SMCWPPP developed a template in Excel to assist with pesticide tracking and reporting requirements in MRP Provision C.9.a. The pesticides tracking template utilizes a lookup list of pesticides and active ingredients compiled from data tables available on the Department of Pesticide Regulation

(DPR) website. The template was updated during FY 2020/21 with the current two years of pesticide product data from the DPR website.

## Participation in BASMAA and CASQA

MRP Provision C.9.f. requires Permittees to track and participate in regulatory processes relevant to pesticide toxicity control. During FY 2020/21, SMCWPPP accomplished this task by working with BASMAA<sup>1</sup> and CASQA. For additional information, see the *BAMSC FY 20-21 Regional Supplement for Tracking and Participating in Pesticide Regulatory Efforts* included in Appendix 13. In addition, SMCWPPP staff stayed current with pesticide controls and regulatory efforts by participating in selected CASQA meetings.

SMCWPPP also provided funds toward implementing the Regional OWOW Program. SMCWPPP staff participated in the BASMAA PIP Committee (now called the BAMSC PIP Subcommittee) and provided input, as needed. Additional details are included in the *BAMSC FY 20-21 Regional Supplement for Training and Outreach* included in Appendix 13.

## Point of Purchase Outreach

SMCWPPP conducted Point-of-Purchase (POP) outreach to home improvement store consumers at frequently visited stores (e.g., Home Depot and Hassett Ace Hardware), providing tips to residents about the proper use and disposal of pesticides and other lawn and garden chemicals. Program materials for the public were periodically re-stocked at point-of-purchase displays. Additionally, shelf talkers were placed next to products that have been certified as “less toxic” by the Our Water Our World (OWOW) program. All of these efforts helped to promote the regional OWOW program. Table 9-1 lists the 10 stores in San Mateo County that currently participate in the OWOW point-of-purchase program. Charlotte Canner (an IPM Advocate in association with [Our Water Our World](#)) assisted this year with the POP program. Photographs from FY 2020/21 store visits for POP outreach are included in Appendix 9.

The in-person tabling events at Home Depot and Hassett Hardware locations throughout San Mateo County in partnership with the [UCCE Master Gardeners of San Mateo and San Francisco Counties](#) were on hold due to the COVID-19 pandemic. We pivoted to another method to reach San Mateo County residents with the content that would be discussed during tabling events: virtual workshops led by an informed instructor. Charlotte Canner was our expert instructor for the four IPM-focused webinars. The webinars educated residents about proper pesticide use, less toxic pesticide options, and effective alternatives to pesticides. Each webinar had specific topics tailored to the season it was being taught in. Below are the titles and dates of each webinar during FY 2020/21:


- September 19, 2020 - Pest Management Practices that Help Your Garden and Support Pollinators
- December 5, 2020 - Fall/Winter Gardening Essentials
- March 20, 2021 - Preparing Your Garden for a Pest-Free Spring
- May 5, 2021 - Non-Toxic Pest Management for the Garden & Home
  - Co-hosted with Lyngso Garden Materials, Inc.

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<sup>1</sup> The Bay Area Stormwater Management Agencies Association (BASMAA) recently dissolved as a formal non-profit organization, but its members continued to meet via an informal organization called the Bay Area Municipal Stormwater Collaborative (BAMSC).

Figure 9-1 provides examples of multi-image educational posts created by the IPM advocate in association with Our Water Our World.





**Flows To Bay**

October 28, 2020 · 🌐

⋮

Wondering what to do if you have a pest problem involving rats or mice? 🐭 Luckily, Charlotte (@earth.ally) our Integrated Pest Management Advocate knows how to manage this problem and in a way that keeps the health of our waterways in mind! 💧 🤔 Find out how from the images she created.

#Rats #Mice #Pest #IPM #IntegratedPestManagement #HealthyWaterways #WaterQuality #SanMateoCounty

**How to manage Rats & Mice**

Outdoors, mice and rats can devour vegetable gardens, damage structures, and be a nuisance.

To prevent rodents in the yard, clean up wood piles and debris, thin dense shrubs and bushes, remove vines and ivy, and pick up any fruit and nuts fallen on the ground. Make sure compost piles and chicken coops are secured.

Rodents can enter the home through a hole as small as 3/8 inch in diameter, that's the size of a pencil!

Close up any holes with 1/4 inch hardware cloth or sheet metal flashing.

Avoid attracting rodents by cleaning up crumbs, securing food in metal or glass containers, removing pet food dishes, and fixing any leaking faucets.

Snap traps or electric traps are more effective and humane than glue boards. Glue boards don't kill the rodent immediately and can trap cats and other predators.

Avoid using poison baits as they can cause harm to people, pets, and wildlife like hawks and owls. There is also the risk that the poisoned rodent will die in walls or under homes causing odors and attracting flies.

🌱 **Get More Likes, Comments and Shares**

When you boost this post, you'll show it to more people.

**449**  
People Reached

**26**  
Engagements

**Boost Post**

👤 Judy Eidse, Heide Castel and 7 others

2 Shares

👍 Like
💬 Comment
➦ Share
⋮

**Performance for Your Post**

---

**449** People Reached

---

**11** Likes, Comments & Shares 📊

9 Likes	9 On Post	0 On Shares
0 Comments	0 On Post	0 On Shares
2 Shares	2 On Post	0 On Shares

---

**15** Post Clicks

13 Photo Views	0 Link Clicks 📄	2 Other Clicks 📄
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**NEGATIVE FEEDBACK**

1 Hide Post	1 Hide All Posts
0 Report as Spam	0 Unlike Page

---

Reported stats may be delayed from what appears on posts.

**Figure 9-1. Examples of multi-image educational posts created by an IPM advocate in association with Our Water Our World.**

**Table 9-1. FY 2020/21 San Mateo County Participating OWOW Stores**

Store Name	Address	City
Brisbane Hardware	1 Visitacion Ave.	Brisbane
Hassett Ace Hardware	1029 Alameda de las Pulgas	Belmont
Hassett Ace Hardware	545 1 <sup>st</sup> Ave.	San Mateo
Hassett Ace Hardware	111 Main St.	Half Moon Bay
Hassett Ace Hardware	282 Woodside Plaza	Redwood City
Home Depot	2 Colma Blvd.	Colma
Home Depot	303 Lake Merced Blvd.	Daly City
Home Depot	1781 E Bayshore Rd.	East Palo Alto
Home Depot	2001 Chess Dr.	San Mateo
Lyngso Garden Materials, Inc	345 Shoreway Rd.	San Carlos

For each of the four webinars, SMCWPPP:

- In preparation for each webinar, set up a registration page on Zoom, created Facebook and Instagram posts on our feed and Story, and sent an e-newsletter to our mailing list. We also conducted outreach to the PIP members and local organizations to help spread awareness about our webinars. It is noteworthy that we set up unique URLs on the Zoom registration page for each promotional source to inform the promotional strategy for our next webinar. This helped us learn what worked well and what didn't (i.e., Facebook event and Newsletter were very successful; Google and Instagram Ads were less successful). See Appendix 9 for an example of unique URL data from a webinar.
- Conducted the following during the webinar: Polls were launched during the webinar, which attendees responded to. We received questions during the webinar, the majority of which were answered live by the expert instructor.

- Conducted the following after the webinar: A feedback survey was sent shortly after each webinar. As an incentive to take the survey, we had a winner or winners randomly selected to receive a gift card to a local hardware store of their choice to help implement the practices discussed during the webinar. We shared an email to webinar registrants with resources mentioned during the webinar, a recording of the full webinar, and often, shorter tip-focused clips from the webinar recording. Webinar recording and shorter clips were posted on our [YouTube page](#) and [embedded on our website's "Pest Management" page](#). See Figures 9-2 and 9-3 for screenshots from the webinars.

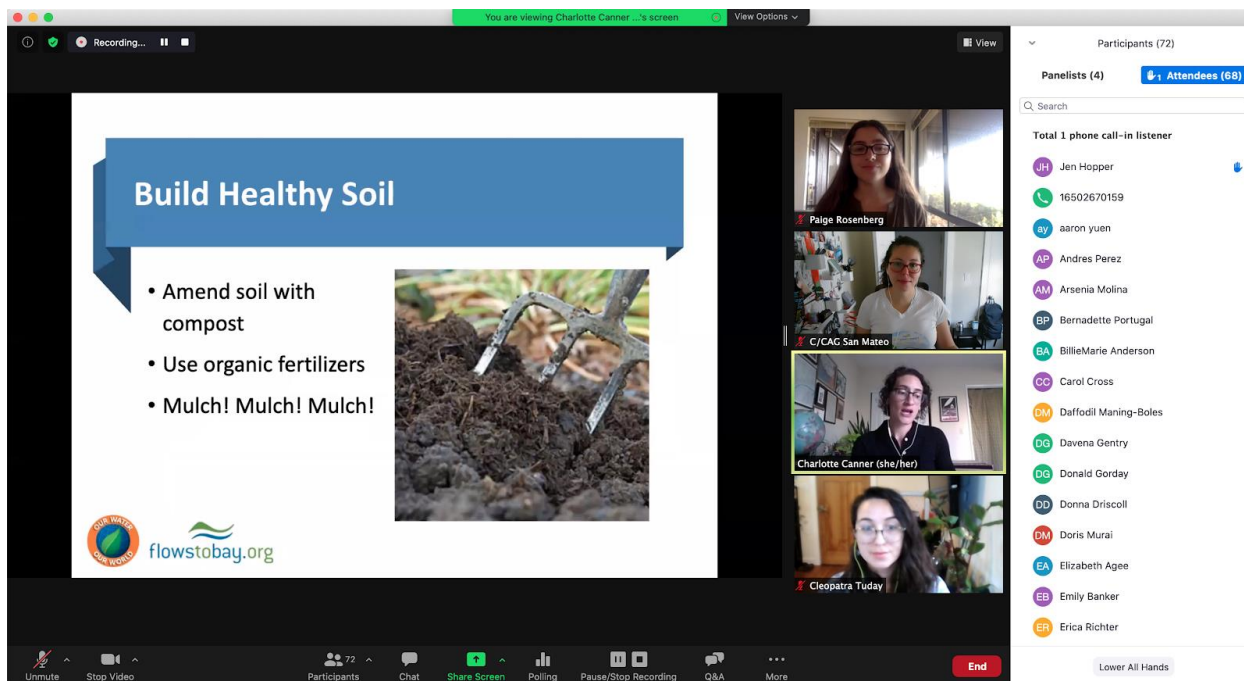


Figure 9-2. Screenshot taken during September 19 IPM webinar

## IPM Videos

The below videos explain the integrated pest management process in detail and provides a lot of great tips and useful content.



**Preparing Your Garden For a Pest-Free Spring**



**Fall/Winter Gardening & Pest Essentials**



**Pest Management Practices That Help Your Garden & Support Pollinators**



**Pest Problem Solving: Fungal Diseases**



**Pest Problem Solving: Weeds**



**Pest Problem Solving: Aphids**



**Pest Problem Solving: Slugs**



**Pest Problem Solving: Ants**





**Pest Problem Solving: Rats & Mice**



**Pest Problem Solving: Gopher Moles Voles Raccoons Squirrels and Other Urban Critters**

**Figure 9-3. Screenshots of the short tip-focused videos creating from our webinar recordings.**

The online events were promoted via Facebook, Instagram, the SMCWPPP event calendar, the SMCWPPP mailing list, and through the PIP Subcommittee members and local partners. Tables 9-2 and 9-3 list data from all four online events held throughout FY 2020/21. See Appendix 9 for compiled survey responses.

**Table 9-2. FY 2020/21 IPM Online Webinars**

Webinar Title	Date of Webinar	Number of Attendees	Number of Registrants	Attendee Rate	Number of Surveys Taken
Pest Management Practices that Help Your Garden and Support Pollinators	09/19/2020	77	150	51%	33
Fall/Winter Gardening Essentials	12/05/2020	72	147	49%	60
Preparing Your Garden for a Pest-Free Spring	03/20/2021	88	154	57%	52
Non-Toxic Pest Management for the Garden & Home	05/05/2021	102	345	30%	26

**Table 9-3. Total Metrics for FY 2020/21 IPM Online Webinars**

Number of Attendees	Number of Registrants	Attendee Rate	Number of Surveys Taken
339	796	46.8%	171

We were able to achieve greater reach with online events as compared to our in-person tabling events pre-COVID. During FY 2019/20, seven in-person tabling events resulted in direct engagement with 188 residents and 49 surveys taken. The four online events during FY 2020/21 resulted in direct engagement with 339 residents (80% increase) and 171 surveys taken (249% increase). We will take this into consideration for FY 2021/22 if the opportunity for in-person events occurs.

Data from survey respondents for the four webinars include:

- 88.6% survey respondents were from San Mateo County.
- Scored their overall experience on average as 4.5 on a scale of 1 to 5. A “5” indicates that participants were “very satisfied.”
- Scored the knowledge of the presenter and way she presented the information on average as 4.5 on a scale of 1 to 5. A “5” indicates that participants “strong agree” that, “The presenter demonstrated knowledge of the topic and presented practical information you can use.”

Survey respondents expressed the following for the two webinars this question was asked:

- “In the last 12 months, have you used pesticides in your home, garden, or lawn?” 34% responded “Yes” and 66% responded “No.” This question was asked on the surveys for the September and December webinars.
- “In the last 12 months, have you used any integrated management practices (i.e., trapping, barriers, beneficial insects, using mulch) in your home, garden, or lawn?” 67% responded “Yes” and 33% responded “No.” This question was asked on the surveys for the March and May webinars.


Promotional campaign results for the four webinars include:

- 2,957 total Facebook reach on posts.
- 731 total Instagram reach on posts.
- 143 total page views on event within SMCWPPP’s website Events Calendar.
- 20,842 total reach for Facebook events about the webinars.
- 606 total event responses for Facebook events about the webinars.
- 2,749 total reach for e-Newsletters about the webinars.
- 387 total clicks to Zoom registration page for the webinars on the relevant e-Newsletters.

## **Pest Control Contracting Outreach**

During FY 2020/21, SMCWPPP also implemented outreach that directly targeted residents and pest control contractors, to (1) encourage San Mateo County communities to reduce their reliance on toxic pesticides that threaten water quality, (2) encourage public and private landscape irrigation practices that minimize pesticide runoff, (3) promote appropriate disposal of unused pesticides, and (4) encourage residents to hire pest control professionals that use IPM practices.

SMCWPPP conducted this outreach via Facebook and Instagram. Examples of Facebook posts are shown in Figure 9-4 and Instagram posts in Figure 9-5.




**Flows To Bay**

August 18, 2020 · 🌐

⋮


Did you know that natural, non-toxic pest management strategies are often more successful at eliminating pests than applying harsh chemicals? If you're curious about trying methods that are good for your health and the environment, visit our page to learn more and for a list of companies that practice Integrated Pest Management: [bit.ly/2DDAE92](http://bit.ly/2DDAE92) 🌱



FLOWSTOBAY.ORG

**Pest Management – Flows to Bay**


Did you know that less than 3% of the insects you encounter in the...

 **Get More Likes, Comments and Shares**  
When you boost this post, you'll show it to more people.


**580**  
People Reached


**49**  
Engagements


[Boost Post](#)


 John Boggs, Nahid Nezam and 27 others

1 Comment 4 Shares

 Like

 Comment

 Share



**Performance for Your Post**

**580** People Reached

**35** Likes, Comments & Shares 📉

<b>29</b> Likes	<b>29</b> On Post	<b>0</b> On Shares
--------------------	----------------------	-----------------------

<b>2</b> Comments	<b>2</b> On Post	<b>0</b> On Shares
----------------------	---------------------	-----------------------

<b>4</b> Shares	<b>4</b> On Post	<b>0</b> On Shares
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**14** Post Clicks


<b>0</b> Photo Views	<b>5</b> Link Clicks 📉	<b>9</b> Other Clicks 📉
-------------------------	---------------------------	----------------------------

**NEGATIVE FEEDBACK**

<b>2</b> Hide Post	<b>1</b> Hide All Posts
--------------------	-------------------------

<b>0</b> Report as Spam	<b>0</b> Unlike Page
-------------------------	----------------------


Reported stats may be delayed from what appears on posts




**Flows To Bay**  
March 7 · 🌐


⋮

Integrated Pest Management (IPM) takes into consideration the entire ecosystem of your garden. By identifying the pest and understanding how to manage the problem in ways with the least environmental impact, IPM certified professionals are able to introduce alternatives to pesticides. These efforts make a huge impact on supporting the health of our creeks, the Bay, and ocean! Learn more at [bit.ly/Pest-Management-IPM](http://bit.ly/Pest-Management-IPM)



**Flows To Bay**  
Environmental Conservation Organization


 Send Message

 **Get More Likes, Comments and Shares**  
When you boost this post, you'll show it to more people.


**463**  
People Reached


**19**  
Engagements


Boost Post


 Joe Hester, Mike Vetter and 5 others

1 Share

 Like

 Comment

 Share



**Performance for Your Post**

**463** People Reached

**8** Likes, Comments & Shares 

7 Likes	7 On Post	0 On Shares
------------	--------------	----------------

0 Comments	0 On Post	0 On Shares
---------------	--------------	----------------

1 Shares	1 On Post	0 On Shares
-------------	--------------	----------------

**11** Post Clicks


1 Photo Views	5 Link Clicks 	5 Other Clicks 
------------------	--	---

**NEGATIVE FEEDBACK**

1 Hide Post	0 Hide All Posts
0 Report as Spam	0 Unlike Page

Reported stats may be delayed from what appears on posts

Post Details
✕




**Flows To Bay**

May 29 · 🌐

⋮

Pesticides were all the craze when they first came out, but now we understand much more about their harmful effects. For instance, when pesticides make their way into our local waterways they can create a toxic environment where animals and humans alike can become ill. They negatively affect our water quality, making outdoor recreation a much less pleasant experience. Learn about less toxic ways of managing pests here <http://bit.ly/Pesticides-No-Thanks>



✔ **Get More Likes, Comments and Shares**  
When you boost this post, you'll show it to more people.

**425**  
People Reached

**9**  
Engagements

Boost Post

👤 Mikeanddeanshow Esso, Jon Konnan and 7 others

👍 Like
💬 Comment
➦ Share
⋮

**Performance for Your Post**

---

**425** People Reached

---

**9** Likes, Comments & Shares 👤

<b>9</b> Likes	<b>9</b> On Post	<b>0</b> On Shares
<b>0</b> Comments	<b>0</b> On Post	<b>0</b> On Shares
<b>0</b> Shares	<b>0</b> On Post	<b>0</b> On Shares

**0** Post Clicks

<b>0</b> Photo Views	<b>0</b> Link Clicks <span style="font-size: 12px;">👤</span>	<b>0</b> Other Clicks <span style="font-size: 12px;">👤</span>
-------------------------	---	--


**NEGATIVE FEEDBACK**


<b>0</b> Hide Post	<b>0</b> Hide All Posts
<b>0</b> Report as Spam	<b>0</b> Unlike Page

Reported stats may be delayed from what appears on posts

**Figure 9-4. Examples of Facebook posts promoting pesticide pollution prevention**



 **flowstobay** ...

 **flowstobay** View the images above to learn how to manage pest 🐛🐜 problems through integrated pest management (IPM)! There's a list of local companies that use IPM practices on our website's "Pest Management" page.

#Pest #IPM  
#IntegratedPestManagement  
#HealthyWaterways #Water  
#SanMateoCounty

52w

[View Insights](#)

👍 🗨️ 📌

👤 Liked by sbcountystormwater and 4 others

JULY 31, 2020

😊 Add a comment... [Post](#)

## IPM Videos

The below videos explain the integrated pest management process in detail and provides a lot of great tips and useful content.



 **flowstobay** ...

 **flowstobay** Even though you may feel like you come across a lot of insects in your garden, only 3% are actually pests! So, rather than using harmful pesticides that easily enter our waterways and harm ecosystems and water quality, try an Integrated Pest Management (IPM) strategy. These methods preserve the natural state of your garden, while targeting only actual pests.

[View Insights](#)

👍 🗨️ 📌

👤 Liked by burlingame\_sustainability and 3 others

DECEMBER 4, 2020

😊 Add a comment... [Post](#)



 flowstobay ...

 flowstobay How do pesticides get into our waterways? 🤔 When pesticides and other pollutants are exposed to rain or irrigation, they can enter into our storm drains, which then flow untreated into creeks, the Bay, and ocean. This unfortunately can cause direct harm to many well-

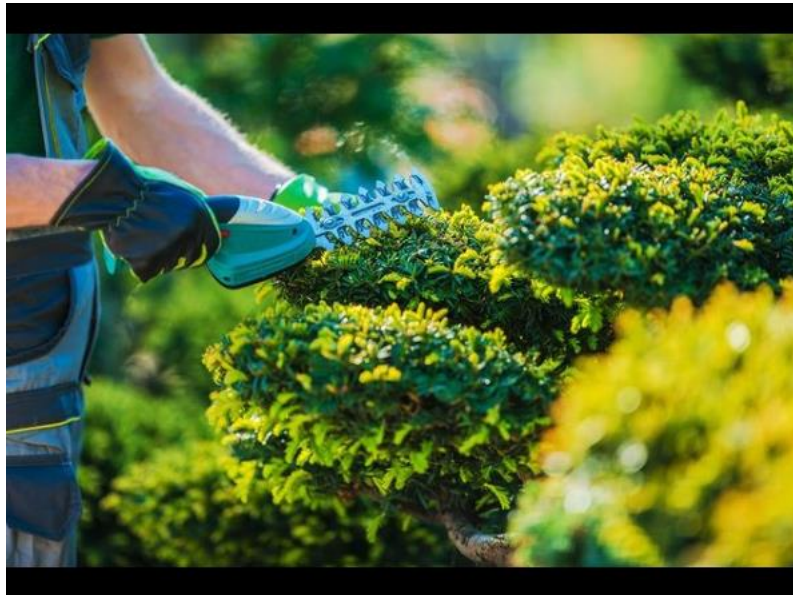
[View Insights](#)


   


 Liked by nationalstormwatercenter and 9 others

MARCH 4





 Add a comment... [Post](#)




 flowstobay ...

 flowstobay If you're looking for some help with your landscaping 🌿 projects, make sure to always find professionals who use environmentally-friendly practices. Not every professional will use best practices such as less toxic alternatives to pesticides. So, make

[View Insights](#)

 Liked by burlingame\_sustainability and 11 others

MARCH 8


 Add a comment... [Post](#)

Figure 9-5. Examples of Instagram posts promoting pesticide pollution prevention

The following is a breakdown of posts related to pest control promoted during FY 2020/21:

- Facebook
  - 39 posts
  - 1,986 Engagements (likes, comments, shares, and link clicks)
  - 42,976 reach
- Instagram
  - 19 posts
  - 2,220 reach

In addition to social media posts, SMCWPPP stocked OWOW fact sheets detailing IPM approaches to various pest-related problems, as well as resources for hiring pest control companies and disposing of pesticides responsibly, in literature racks at the hardware stores listed in Table 9-1.

In addition, to help fulfill the MRP Provision C.9.e.ii.(3) requirement for outreach to pest control operators, the Countywide Program incorporated direct outreach to the operators. The aim of this outreach was to inform pest control operators of the hazards of pesticides and to encourage the reduction of their usage. Prior to outreach, the SMCWPPP team reviewed the Department of Consumer Affairs (DCA) License Database and updated our database of San Mateo County pest control operators accordingly. Research was conducted for active pest control operators' email addresses as needed. We created a page dedicated to pest control professionals on the Flows to Bay website site. The page can be viewed here (screenshots in Figure 9-6): [www.flowstobay.org/preventing-stormwater-pollution/at-home/pestpro](http://www.flowstobay.org/preventing-stormwater-pollution/at-home/pestpro).

The SMCWPPP team then developed content for a letter (see Appendix 9) to be sent via email for active pest control operators with an email address we were able to locate, and those that did not have one listed after conducting research received the letter via mail. The letter: 1) described the critical role pest control professionals in San Mateo County play in keeping pesticides out of our waterways, 2) encouraged pest control professionals to adopt IPM practices to help minimize the negative effects on water quality and aquatic life, and 3) provided information on the steps for certifications. The letter was sent on May 18, 2021.

The results of the outreach to pest control operators are summarized below and in Table 9-4:

- 47 active-licensed pest control operators in our database
- 31 pest control operators received the letter via email
- 5 pest control operators received the letter via mail

**Table 9-4. FY 2020/21 outreach results with licensed pest control operators**

Amount of Active-Licensed Pest Control Operators	Received Letter via Email	Received Letter via Mail
47	31	5





English / Español / 中文 / Tagalog | Events Calendar | Contact | Blog | Search | Facebook | YouTube | Instagram

ABOUT FLOWS TO BAY | PREVENTING STORMWATER POLLUTION | DATA & RESOURCES | GET INVOLVED | PERMITTEES



## Pest Control Professionals

Water quality monitoring data in San Mateo County Show ongoing toxicity impacts in local creeks related to the application of structural pest control products, including pyrethroids and fipronil, among others.

We need your help to protect our waterways from pesticides that may be mobilized during storm events after being applied



English / Español / 中文 / Tagalog | Events Calendar | Contact | Blog | Search | Facebook | YouTube | Instagram

ABOUT FLOWS TO BAY | PREVENTING STORMWATER POLLUTION | DATA & RESOURCES | GET INVOLVED | PERMITTEES

### ON THIS PAGE

**PESTICIDES & WATER QUALITY**

**ABOUT INTEGRATED PEST MANAGEMENT**

**IPM CERTIFICATION FOR PEST CONTROL PROFESSIONALS**

**IPM PEST CONTROL OPERATORS IN SAN MATEO COUNTY**

**SAFE PESTICIDE DISPOSAL**

### SEARCH SITE

SEARCH

## Pesticides & Water Quality

Pest control professionals in San Mateo County play a critical role in keeping pesticides out of our local creeks, the San Francisco Bay, and the Pacific Ocean. **We need your help to protect our waterways from pesticides that may be mobilized during storm events after being applied.**

Water quality monitoring data in San Mateo County Show ongoing toxicity impacts in local creeks related to the application of structural pest control products, including pyrethroids and fipronil, among others. Because of this, we encourage all pest control professionals who work in San Mateo County to adopt Integrated Pest Management (IPM) practices to help minimize the negative effects on water quality and aquatic life.

## About Integrated Pest Management



Figure 9-6. Screenshots of “Pest Control Professionals” web page created during FY 2020/21.

## **FUTURE ACTIONS**

SMCWPPP activities planned for FY 2021/22 to assist member agencies comply with MRP requirements in Provision C.9 include the following:

- Continue to assist member agencies implement their IPM programs and policies, with input and assistance provided by the Parks Maintenance and IPM Work Group;
- Continue holding Parks Maintenance and IPM Work Group meetings once per year;
- Continue conduct annual landscape and/or structural IPM training workshops;
- Continue to coordinate with County Agriculture / Weights & Measures;
- Coordinate and execute additional online events related to water pollution prevention;
- Launch promotional campaigns to promote online events;
- Continue using signage and materials developed by BASMAA for the point-of-purchase program;
- Perform outreach messaging to residents on best practices for hiring pest control contractors certified in IPM via fact sheets, SMCWPPP's website ([flowstobay.org](http://flowstobay.org)), social media posts, and a quarterly newsletter; and
- Send direct mailers and email communications to pest control professionals that encourage IPM certification and education.

# SECTION 10

## C.10 TRASH LOAD REDUCTION

### INTRODUCTION

MRP Provision C.10 Trash Load Reduction tasks are implemented by each San Mateo County Permittee. SMCWPPP helps agency staff to understand trash load reduction requirements and develops various tools needed to effectively plan, implement, and report on compliance with the requirements. Provision C.10 requires Permittees (as applicable) to:

- Reduce trash discharges from 2009 levels by 80% by July 2019;
- Ensure that lands they do not own or operate but that are plumbed directly to their storm drain systems in Very High, High and Moderate trash generation areas are identified and equipped by full capture systems or managed to a level equivalent to full capture systems;
- Install and maintain full capture systems that treat a mandatory minimum acreage;
- Assess trash reductions associated with control measures other than full capture systems using a visual assessment protocol;
- Develop and implement a receiving waters trash monitoring program plan;
- Annually cleanup and assess a mandatory minimum number of creek/shoreline trash hotspots; and
- Maintain a Long-Term Trash Load Reduction Plan designed to achieve 100% trash reduction by July 2022.

### IMPLEMENTATION OF MRP PROVISIONS

SMCWPPP performs a variety of tasks to assist San Mateo County Permittees with implementation of MRP Provision C.10 and the requirements listed above, with input and assistance provided by the SMCWPPP Trash Subcommittee and the SMCWPPP Litter Work Group. FY 2020/21 accomplishments included the following:

- Coordinated and facilitated four meetings of SMCWPPP's Trash Subcommittee and two meetings of SMCWPPP's Litter Work Group;
- Assisted San Mateo County Permittees in delineating trash full capture treatment areas and managing trash full capture information in GIS (currently > 10,000 acres are treated by full capture systems in San Mateo County);
- Continued to implement SMCWPPP's Trash Assessment Strategy, including conducting 788 On-land Visual Trash Assessments (OVTAs) at 226 sites and maintaining the Countywide Program's online OVTA database to allow San Mateo County Permittees access to timely load reduction estimates;

- Continued providing guidance to San Mateo County Permittees on MRP operation and maintenance requirements and standard operating procedures for trash full capture systems;
- Compiled and standardized data from 42 trash hot spot assessments and cleanups, and entered the data into the SMCWPPP hot spot database;
- Continued to work with San Mateo County Permittees and haulers to distribute the *New Development Projects Litter Reduction Fact Sheet* summarizing the best practices of the *Litter Reduction Toolkit for Multi-family Dwellings*;
- Coordinated with the SMCWPPP Public Information and Participation (PIP) Subcommittee on public outreach efforts targeting litter reduction;
- Responded to Regional Water Board staff requests for information on existing, planned, and potential locations for trash full capture systems that are mutually beneficial to San Mateo County Permittees and Caltrans;
- Coordinated with Caltrans on trash capture efforts, including the installation of trash full-capture systems through cooperative implementation agreements; and
- Assisted San Mateo County Permittees in developing information necessary for reporting trash load reductions with their FY 2020/21 Annual Reports.

More information on each of these accomplishments is provided below.

## Trash Subcommittee

SMCWPPP's Trash Subcommittee assists San Mateo County Permittees with the implementation of new or enhanced trash control measures and actions required by the MRP. The Trash Subcommittee generally meets quarterly. Additional meetings are scheduled as necessary to address high priority issues.

During FY 2020/21, SMCWPPP staff facilitated four Trash Subcommittee meetings, which were chaired by Chris Sommers (EOA, Inc.). The Trash Subcommittee continued to have excellent participation by municipal staff and other stakeholders as shown in the FY 2020/21 attendance list (Appendix 10).

During the Trash Subcommittee meetings in FY 2020/21, Subcommittee members discussed and provided input on the following topics/projects:

- C.10 requirements in the MRP;
- MRP 3.0 discussions with Water Board staff on Provision C.10;
- SMCWPPP Litter Work Group activities, reports, and work plan;
- New or planned installations of trash full capture systems in San Mateo County Permittee jurisdictions;
- The FY 2020/21 Annual Report format for Provision C.10;
- Opportunities for collaboration with Caltrans;
- SMCWPPP Trash Assessment Strategy, including OVTAs conducted in Trash Management Areas (TMAs); and
- Trash controls addressing El Camino Real and private drainage areas.

## Demonstration of Trash Load Reductions (C.10.a.ii.)

SMCWPPP developed the *Pilot Trash Assessment Strategy* (Strategy) in FY 2013/14 on behalf of San Mateo County Permittees. The Strategy was submitted to the Regional Water Board on February 3, 2014, as part of San Mateo County Permittee Long-Term Trash Load Reduction Plans and was intended to serve as version 2.0 of the trash tracking method required by the Permit. SMCWPPP began to implement the Strategy in FY 2013/14 and continued to implement it at a full-scale in FY 2020/21 on behalf of (and in collaboration with) all San Mateo County Permittees.

The Strategy is intended to provide information on the magnitude and extent of trash reductions associated with stormwater in the San Mateo County. It is consistent with trash monitoring, assessment and reporting requirements in the MRP and is primarily designed to answer the following core management question:

*Have MS4 trash load reduction targets (i.e., 40%, 70%, and No Adverse Impacts) been achieved by San Mateo County Permittees?*

The primary environmental and programmatic indicators that SMCWPPP and San Mateo County Permittees currently track to answer this core management question are:

1. **Full Capture Systems** – The extent of areas effectively treated by trash full 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 MS4s;
3. **Source Controls** – 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;
4. **Additional Creek and Shoreline Cleanups (Offset)** – The volumes of trash removed via creek and shoreline cleanup events (above and beyond those required by the MRP); and
5. **Direct Discharge Programs (Offset)** – 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 illegal encampments).

In selecting the indicators above, San Mateo County Permittees recognized that no one indicator can provide the information necessary to definitively determine progress made in reducing trash discharged from MS4s. SMCWPPP's methods used to collect or track information on the primary indicators 1 - 4 listed above are briefly described below, along with summaries of associated activities conducted by SMCWPPP in FY 2020/21. Methods used to assess indicator 5 have not been implemented to-date because none of the San Mateo County Permittees has submitted or implemented an optional direct discharge plan as outlined in the MRP. Additional information and the results of data collected to support indicators 1 - 4 are found in Section 10, Provision C.10.b.ii., Parts A and B, of individual San Mateo County Permittee FY 2020/21 Annual Reports.

### 1. Full Capture Systems (Including Operation and Maintenance)

Devices and facilities meeting the trash full capture 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 capture efficiency. Consistent with the Long-Term Plan

Framework and the State Water Board’s Trash Amendments, if a full capture device is maintained effectively then trash from the area draining to the device is effectively reduced to a level of “no adverse impacts” and has achieved the ultimate trash reduction goals outlined in the MRP. Additional trash reductions, therefore, are not needed in areas draining to (and treated by) full capture systems.

From FY 2013/14 through FY 2020/21, SMCWPPP and San Mateo County Permittees have expended considerable time and resources identifying and mapping areas draining to full capture devices, using a combination of fieldwork and desktop Geographical Information System (GIS) analysis. Drainage areas for newly installed full capture devices are delineated and mapped as part of an annual update of individual San Mateo County Permittee full-capture device GIS data layers. As a result, all drainage areas have been delineated for all devices installed to-date in San Mateo County. More than 10,000 acres of land area is currently treated by full capture systems in San Mateo County. Trash reductions associated with these areas are calculated based on the baseline trash generation levels established on San Mateo County Permittee baseline trash generation maps.

Additionally, SMCWPPP completed the development of a Model Trash Full Capture Device O&M Verification Program in FY 2015/16. The O&M Verification Program is intended to ensure that devices are operated at a level necessary to maintain their full capture designation. In FY 2020/21, SMCWPPP continued to provide guidance to San Mateo County Permittees on O&M requirements and standard operating procedures developed for San Mateo County Permittees as part of the Model Verification Program. San Mateo County Permittees with full capture devices have an O&M verification program tailored to fit the types of devices in their stormwater conveyance system and the associated maintenance procedures needed to adequately maintain these devices. Individual San Mateo County Permittee Annual Reports provide information regarding O&M of full capture devices and any associated issues with the devices (see Section 10, Provision C.10.b.i.).

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

In FY 2013/14, SMCWPPP developed a pilot approach to assess trash reductions on land areas that generate substantial levels of trash (i.e., very high, high, or moderate trash generation) and are not treated by full capture devices. The approach uses on-land visual trash assessment (OVTA) protocols to record changes in the levels of trash on streets, sidewalks, and properties over time. The assessment protocols score sites/areas using a 4-tier system (A - D, A being the least amount of trash). The four OVTA scoring categories correspond with the four trash generation rate categories (i.e., very high, high, moderate, and low) and the associated weighting factors included in the MRP.

Consistent with the MRP, OVTAs are conducted at randomly selected street/sidewalk sites representing 10% of the applicable street miles in each trash management area (TMA) where trash reductions are being reported by San Mateo County Permittees. 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 Resources Control Board funded project, conducting between 4 and 6 assessments at a site will allow improvements in trash levels to be detected with an acceptable level of confidence. Currently, SMCWPPP annually conducts roughly three assessments at each site and then averages two years of data to calculate trash load reductions in a given fiscal year. For example, in reporting reductions for FY 2020/21, results from assessments conducted in both FY 2019/20 and FY 2020/21 were averaged and used to represent the “current” levels of trash within the applicable land areas.

During FY 2020/21, SMCWPPP staff conducted 788 OVTAs at 226 assessment sites (averaging 1,000 feet in length). All OVTA sites were assessed at least two times during FY 2020/21 and most were assessed three times. During a typical year, all sites are assessed three times. Table 10-1 summarizes the number of OVTAs conducted each fiscal year from FY 2014/15 through FY 2020/21.

**Table 10-1. Number of OVTAs completed in San Mateo County by fiscal year.**

FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21
601	688	499	827	704	562	788

Assessment results are stored in SMCWPPP’s online OVTA Database. In FY 2020/21, SMCWPPP staff entered assessment results within one week of conducting an assessment, which provided San Mateo County Permittee staff with timely access to the results.

### 3. Source Controls (Via Surveys and Characterization Studies)

San Mateo County Permittees are implementing actions to reduce the sale or distribution of litter-prone items and stop litter at its source. These source controls include the adoption and enforcement of ordinances enacted by San Mateo County Permittees to eliminate the distribution of single-use plastic grocery bags and expanded polystyrene (EPS) food service ware in their jurisdictions. To assist San Mateo County Permittees in determining to what degree these ordinances have reduced the level of these products found in the environment, SMCWPPP used the findings of a study conducted in Santa Clara County between March 2015 and July 2017. As part of the study, debris and trash were collected from large and small full-capture treatment systems within jurisdictions that have installed these devices.

Results from the project, which characterized the number of bags and volume of EPS observed in trash full capture systems pre- and post-ordinance, indicate that on average 72% fewer single-use plastic grocery bags and 74% less EPS food service ware was observed in storm drains systems after the ordinances went into effect. Along with other lines of evidence, these observed average reductions are used by San Mateo County Permittees to demonstrate trash load reductions associated with the implementation of these ordinances. For additional details on results of the project, see the *Storm Drain Trash Monitoring and Characterization Project Technical Report* provided in Appendix 10.1 of the Santa Clara Valley Urban Runoff Pollution Prevention Program’s FY 2015/16 Annual Report.

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

San Mateo County Permittees are also allowed to claim up to a 10% trash load reduction for conducting trash cleanups in local water bodies above and beyond cleanups required by the MRP. SMCWPPP assists San Mateo County Permittees by calculating load reductions associated with these efforts based on the volumes of trash reported. Load reductions associated with these efforts are calculated based on methods described in the MRP and are reported in Section C.10.c. of individual San Mateo County Permittee Annual Reports.

## 5. Direct Discharge Programs

To-date, San Mateo County Permittees have not submitted or implemented an optional direct discharge plan as outlined in the MRP.

### Trash Hot Spot Cleanup and Assessment Guidance

Provision C.10.c.i. of the MRP requires Permittees to clean up trash hot spots to a level of “no visual impact” at least annually over the permit term. To assist Permittees in meeting this requirement, SMCWPPP developed the necessary tools (i.e., guidance memorandum, Trash Hot Spot Cleanup Data Collection Form, and Trash Hot Spot Activity Reports) used to report trash hot spot assessment and cleanup activities conducted during the reporting period. Trash Hot Spot Activity Reports for each Permittee are included in individual San Mateo County Permittee Annual Reports.

During FY 2020/21, San Mateo County Permittees continued conducting annual cleanups and assessments required by the MRP. Results from this year’s annual cleanups indicated that a total of 42 trash hot spot assessments and cleanups were conducted within San Mateo County Permittee jurisdictions. Approximately 101 cubic yards of trash was removed from these hot spots during FY 2020/21.<sup>1</sup> The timing of annual assessments and cleanups vary among hot spots due to the location of the hot spot, potential for natural resource impacts, crew availability, and other site-specific factors.

### BASMAA Final Receiving Water Trash Monitoring Report

Permit Provision C.10.b.v. requires public agencies to develop, submit and test a Receiving Water Trash Monitoring Program Plan (Trash Monitoring Plan). In July 2017, the Bay Area Stormwater Management Agencies Association (BASMAA) submitted the first iteration of the Trash Monitoring Plan to Water Board staff for review and comment. The Final Trash Monitoring Plan that addressed all comments was submitted to Water Board staff in October 2017. Implementation of the Trash Monitoring Plan represents the “pilot-testing phase” of trash receiving water monitoring in the San Francisco Bay Area, during which the pilot protocols and methods were applied during the MRP 2.0-specified timeframe of October 2017 to July 2020.

The results of the testing phase of the Trash Monitoring Plan were submitted to the Water Board as a Final Report on July 1, 2020. The Final Report provides analysis of all information/data collected from trash assessments and monitoring conducted between October 2017 and March 2020. Monitoring Plan objectives and scientific monitoring questions outlined in the Trash Monitoring Plan were used to guide the evaluation of trash monitoring and assessment data results presented in the Final Report.

#### Monitoring Questions

1. Are significantly strong correlations observed between qualitative and quantitative methods?
2. What is the current level of trash deposited in flowing waterbodies in the entire MRP area?
3. What is the range of trash levels observed at sites targeted for cleanup? How do these ranges compare to levels in all flowing waterbodies?

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<sup>1</sup>Only hot spot cleanups and assessments conducted in compliance with MRP provision C.10.b.iii. are included in this estimate. Some SMCWPPP San Mateo County Permittees conduct cleanups at trash hot spots more frequently than the MRP-required annual cleanup, and/or at more sites than the MRP requires. See Section 10, C.10.e. of San Mateo County Permittee Annual Reports for additional information.



4. Do trash levels in flowing waterbodies differ significantly between wet and dry seasons?
5. What percentages of trash observed in receiving waters are attributable to wind/litter, illegal dumping, illegal encampments and other (stormwater/upstream sources)?
6. Do trash levels in flowing waterbodies strongly correlate to trash generation levels depicted on Permittee maps?

The Trash Monitoring Plan primarily focuses on two types of monitoring designs: 1) probabilistic (randomly) selected monitoring sites that are intended to represent the trash conditions in all creek, channel and riverine sites that flow through the urban Bay Area; and 2) targeted sites in urban creeks, channel and river segments and sites along San Francisco Bay shorelines where trash regularly deposits and is periodically removed by MRP Permittees. The design also includes a small number of targeted locations where trash booms are deployed to intercept trash prior to transport downstream to San Francisco Bay.

Two trash assessment tools were developed and applied for the pilot testing phase of the Trash Monitoring Plan. Qualitative trash assessments are visual surveys of trash levels (i.e., conditions). Trained personnel assign a trash condition score from 1 to 12 (12 being the most trash) to a site based on the level of trash that is observed both within the water body and along its banks or shoreline within a defined assessment area. Quantitative trash monitoring entails removing, sorting, and measuring the volume of trash that is found within the assessment area at a targeted site. Both quantitative trash monitoring methods and the qualitative assessment methods were used at targeted sites to allow for the comparison of qualitative and quantitative approaches.

A total of 125 urban creek, channel, and riverine probabilistic sites throughout the MRP Area were qualitatively assessed for trash. A total of 625 qualitative trash assessments were conducted over five sampling events (three during wet season and two during dry season) between October 2017 and March 2020. A total of 100 targeted sites were selected for both qualitative and quantitative trash assessments. A total of 200 trash assessments were conducted over two sampling events at targeted sites. Targeted monitoring was conducted at nine trash boom locations in Alameda, Santa Clara, and San Mateo Counties.

Key findings included the following:

1. Significant correlations were observed between qualitative trash condition scores and trash density (volume per unit area) at both regional and countywide scale. The visual assessment tool is recommended as a valid approach to assess conditions when using volume of trash as the indicator for trash conditions.
2. Regionwide, approximately 77% of the urban stream lengths in the MRP Area exhibit low to moderate levels of trash.
3. Trash condition scores at targeted sites were generally higher (more trash), compared to probabilistic sites.
4. Seasonality appears to have no effect on trash levels observed/measured at receiving water sites. Trash levels were highly similar between the dry and wet seasons. Storm intensity and frequency did not appear to have an influence on trash levels observed during the wet season.
5. Litter/Wind and Other/Stormwater trash pathways were the most frequent pathways reported at all monitoring sites, however, Illegal Encampments and Illegal Dumping trash pathways were associated with largest proportion of trash observed.

An evaluation of methods and monitoring design used during the pilot-testing phase of the Trash Monitoring Plan is provided in the report. This evaluation provides guidance for potential revisions to methods that may be used to monitor trash in receiving waters.

## Coordination with San Mateo Countywide Recycling Committee

To increase coordination among solid waste and recycling programs and San Mateo County Permittee MS4 trash reduction activities, SMCWPPP staff began attending Countywide Recycling Committee meetings in FY 2012/13. SMCWPPP continued to coordinate with the Recycling Committee in FY 2020/21, specifically targeting outreach and coordination with municipally solid waste/recyclables haulers in San Mateo County to reduce trash impacts associated with inadequate waste container management. SMCWPPP staff also coordinated with the Recycling Committee on collection activities, PCBs and demolition regulations, litter reduction and zero waste building design and operation, source reduction policies and zero waste programs.

## Litter Work Group

SMCWPPP's Litter Work Group, which was formed in March 2014, coordinates litter reduction efforts among SMCWPPP, waste and stormwater program staff from San Mateo County municipalities, the San Mateo Countywide Recycling Committee, and franchised waste collection and processing companies serving those jurisdictions. The Litter Work Group met virtually two times in FY 2020/21. Attendees included representatives from thirteen San Mateo County municipalities (especially stormwater and zero waste program staff), representatives from three local hauling companies and staff from Rethink Waste (the South Bayside Waste Management Authority) to work on litter reduction efforts both in Santa Clara and San Mateo Counties. The goals of the Litter Work Group include developing a litter reduction program for San Mateo County related to waste issues and specific to its needs, developing BMPs for the waste collection industry, reducing the prevalence, impacts and cost of illegal dumping, educating the public and those involved with litter control efforts, producing guidance on building design and operation related to litter and waste reduction and coordinating and sharing information with the Zero Litter Initiative (ZLI) in Santa Clara County.

The Litter Work Group completed the following tasks in FY 2020/21:

- Held two Work Group virtual meetings on November 12, 2020, and February 2, 2021. Attendance by municipal staff is provided in the FY 2020/21 attendance list (Appendix 10). In addition to staff from 13 municipalities and the Countywide program, attendees included representatives from Rethink Waste, Recology - San Mateo County, Republic Services and South San Francisco Scavenger Company.
- Provided support to the single-use plastic foodware effort coordinated by Thrive, a San Mateo County non-profit organization that brings together experts on various important issues affecting county residents, businesses and municipalities. The effort is a three phase multi-year campaign to identify the problems with single-use plastic foodware, strategies for reducing the problems and actions that can be taken locally ([thrivealliance.org/env-reduce-rethink](https://thrivealliance.org/env-reduce-rethink)).
- Shared information and coordinated with Upstream, a national organization working to increase the use of reusable foodware and packaging and reduce the use of single-use materials including single-use plastic foodware. Upstream has regional and national municipal committees sharing policy and implementation best practices for reducing waste.

- Completed Phase I of the San Mateo Countywide Litter Characterization Study (Litter Characterization Study) – Sampling and Analysis Plan (SAP) Development. The Litter Characterization Study is intended to provide information to evaluate the effectiveness of existing source control actions implemented by municipalities in San Mateo County to reduce waste and trash in stormwater; and fill gaps in knowledge on the dominant types of litter in San Mateo County to inform future source control measures. The SAP included a summary of existing information on trash types in stormwater, specific management questions to address via the SAP, monitoring site locations, monitoring frequencies, qualitative and quantitative assessment methods (including OVTAs and litter sorting & characterization), and data analysis techniques that will be employed.
- Completed Phase II of the Litter Characterization Study – Monitoring. Two monitoring events were conducted during FY 2020/21. The first event was conducted during the wet season in March 2021. Three months later, a second monitoring event was conducted during the dry season in June 2021. During both events, OVTAs were conducted at each site by walking a defined length of public right-of-way (i.e., monitoring site) and observing the levels of trash >5mm in length. After OVTA scoring, all trash >5mm in length observed within the monitoring site was removed and placed in a labeled, plastic bag and transported to a centralized sorting and characterization site.
- Continued to work with Permittees and haulers to distribute the *New Development Projects Litter Reduction Fact Sheet*, which summarizes the best practices of the *Litter Reduction Toolkit for Multi-family Dwellings* (Toolkit). The Fact Sheet was produced for building and planning permit counter staff to distribute to professionals in the design and construction sector. The Fact Sheet and Toolkit are also useful to designers and the public working with trash haulers, so in addition to being posted on the Flowstobay website, two hauling companies have posted the Fact Sheet on their websites:
  - South San Francisco Scavenger Company website: <https://ssfscavenger.com/guidelines/>
  - Recology San Mateo County: <https://www.recology.com/recology-san-mateo-county/new-development-projects/>
- Coordinated with Caltrans on trash capture efforts, including the installation of trash full-capture systems through cooperative implementation agreements.
- Coordinated litter reduction action and policy development with the Zero Litter Initiative from the Santa Clara Valley.
- Coordinated with SMCWPPP’s PIP Subcommittee on public outreach efforts targeting litter reduction.
- Shared information with the San Mateo Countywide Recycling Committee on litter, trash, stormwater permit requirements and activities/products of the Litter Work Group.
- Coordinated with the Alameda County Illegal Dumping Task Force and their inaugural Statewide Illegal Dumping Virtual Workshop held on April 22, 23, and 24, 2021.
- Coordinated with CalRecycle’s Statewide Illegal Dumping Technical Advisory Committee and attended two quarterly meetings.
- Developed the FY 2021/22 Litter Work Group Work Plan (included in Appendix 10) which includes the following tasks:
  - Supporting ongoing Litter Work Group meetings;

- Coordinating and facilitating a Litter Roundtable on the results of the Litter Characterization Study and coordination with franchised waste haulers and transportation agencies;
- Completing Phase III of the Litter Characterization Study, including litter sorting and characterization, data analysis, interpretation, and reporting on the results and conclusion of the study;
- Coordinating with regional and statewide illegal dumping organizations;
- Sharing information with the ZLI in the Santa Clara Valley;
- Sharing information with the San Mateo Countywide Recycling Committee;
- Assisting SMCWPPP's PIP Subcommittee with outreach efforts to reduce litter; and
- Conducting other countywide coordination efforts.

### **Identification of Existing, Planned and Potential Locations for Trash Full Capture Systems Mutually Beneficial to San Mateo County Permittees and Caltrans**

On February 13, 2019, the Regional Water Board adopted a Cease-and-Desist Order (CDO) against Caltrans, requiring it to significantly increase the rate and extent of control measure implementation to address trash discharges from its right-of-way (ROW). To meet the CDOs required targets, Caltrans is attempting to identify trash full capture systems that would be mutually beneficial to Caltrans and MRP Permittees. In an effort to assist Caltrans in identifying these systems, on April 24, 2019, Regional Water Board staff requested that all MRP Permittees identify the following:

- Mapped drainage areas of municipal jurisdiction that abut Caltrans ROW; and
- A list of already completed, planned, or potential projects in municipal drainage areas that abut Caltrans ROW that control or would control trash from the adjacent Caltrans ROW.

In response to this request, SMCWPPP conducted a preliminary analysis and worked with San Mateo County Permittees to develop a list and series of maps illustrating completed, planned, and potential trash full capture projects in municipal drainage areas in San Mateo County that also address trash in stormwater that is generated on Caltrans ROW. The list included the following preliminary information:

- Estimated Caltrans ROW addressed by San Mateo County Permittees' existing or planned Trash Capture Systems (large and small);
- Whether the Permittee has an existing Cooperative Implementation Agreement with Caltrans on Trash Capture System(s);
- Caltrans ROW within Permittee boundaries that is not addressed by existing systems;
- Estimated Caltrans ROW that may be addressed by potential (future) trash capture systems and should be evaluated further; and
- San Mateo County Permittee contact Information.

This information was submitted to Regional Water Board staff on May 31, 2019, in response to the request.

In FY 2020/21, San Mateo County Permittees with support from SMCWPPP Program staff, continued to discuss potential cooperative agreements and reimbursements with Caltrans for existing, planned, and potential full capture systems that are mutually beneficial to Caltrans and San Mateo County Permittees. A number of meetings between Caltrans and SMCWPPP Permittees were coordinated by SMCWPPP in an effort to continue the discussion. Multiple projects are now being for a cooperative implementation agreement with Caltrans.

## **FUTURE ACTIONS**

FY 2021/22 activities that are planned by SMCWPPP to assist San Mateo County Permittees comply with MRP requirements in Provision C.10 include the following:

- Continued facilitation of SMCWPPP Trash Subcommittee meetings;
- Continued implementation of the SMCWPPP trash assessment strategy designed to demonstrate progress towards MRP trash load reduction goals;
- Continued maintenance of the SMCWPPP online OVTA database;
- Continued support for long-term plan implementation and control actions for trash management;
- Continued calculation and reporting on trash load reductions for each San Mateo County Permittee;
- Continued calculation and reporting on the amount and types of trash removed via creek and/or shoreline cleanups required by the MRP;
- Continued update/revision of trash generation and full capture system maps and GIS data layers in preparation for the FY 2020/21 Annual Report submittal;
- Continued implementation of the Litter Work Group FY 2021/22 Work Plan tasks, including supporting ongoing Litter Work Group meetings, conducting the 5<sup>th</sup> Litter Roundtable, performing litter sorting/characterization, interpretation and reporting as part of the Litter Characterization Study, and informing future source control actions;
- Continued coordination and information sharing with the SMCWPPP PIP Subcommittee on countywide litter reduction efforts;
- Continued coordination and information sharing with the Zero Litter Initiative in Santa Clara County;
- Continued implementation of the Sampling and Analysis Plan (SAP) for conducting a trash characterization study in San Mateo County;
- Continued coordination with Caltrans for trash capture device design review, purchase, installation, and maintenance agreements; and
- Continued coordination with the New Development Subcommittee (and State Water Resources Control Board) on trash load reduction credits for LID facilities.

# SECTION 11

## C.11 MERCURY CONTROLS

### INTRODUCTION

MRP Provision C.11 Mercury Controls implements stormwater runoff-related actions described in the San Francisco Bay mercury Total Maximum Daily Load (TMDL) water quality restoration program. SMCWPPP performs a variety of activities to address mercury in stormwater runoff in compliance with MRP Provision C.11. Some of this work is accomplished through participation in BASMAA<sup>1</sup> regional projects.

Efforts that address PCBs in addition to mercury are described in this section rather than Section 12 (PCBs Controls). Section 12 focuses on efforts that address PCBs only.

### IMPLEMENTATION OF MRP PROVISIONS

#### C.11/12.a. Implement Control Measures to Achieve Mercury/PCBs Load Reductions

Efforts by SMCWPPP and San Mateo County municipalities to address MRP Provisions C.11/12.a., Implement Control Measures to Achieve Mercury/PCBs Load Reductions, are described in a separate report (*Updated Control Measures Plan for PCBs and Mercury in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021*) that is presented in Appendix 11.

#### C.11/12.b. Assess Mercury/PCBs Load Reductions from Stormwater

MRP Provisions C.11/12.b., Assess Mercury/PCBs Load Reductions from Stormwater, required Permittees to submit in their 2015/16 Annual Report for Executive Officer approval an assessment methodology. The purpose of the assessment methodology is to quantify in a technically sound manner mercury and PCBs loads reduced through implementation of a variety of pollutant controls, including pollution prevention, source control, and stormwater runoff treatment measures such as green infrastructure. SMCWPPP and San Mateo County municipalities helped develop the assessment methodology through participation in a BASMAA regional project. The methodology developed via the BASMAA regional project is referred to as the Interim Accounting Methodology and has been approved by the Executive Officer of the Regional Water Board.

Permittees must report on the use of the methodology to demonstrate progress toward achieving mercury and PCBs load reductions. San Mateo County load reductions are described in the separate report mentioned in the previous section (*Updated Control Measures Plan for PCBs and Mercury in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021*). Appendix 11 contains the report, which

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<sup>1</sup> The Bay Area Stormwater Management Agencies Association (BASMAA) recently dissolved as a formal non-profit organization, but its members continued to meet via an informal organization called the Bay Area Municipal Stormwater Collaborative (BAMSC).

includes a description of SMCWPPP's GI inventory and describes the process to update the inventory annually.

### **C.11/12.c. Plan and Implement Green Infrastructure to Reduce Mercury/PCBs Loads**

Permittees were required to submit in their FY 2019/20 Annual Report an estimate of the amount and characteristics of land area that will be treated through green infrastructure implementation by 2020, 2030, and 2040, including all data used and a full description of models and model inputs relied on to generate this estimate.

Permittees were also required to submit in their FY 2019/20 Annual Report a Reasonable Assurance Analysis (RAA) to demonstrate quantitatively that mercury reductions of at least 10 kg/yr will be realized by 2040 through implementation of green infrastructure projects. The MRP requires this submittal to include all data used and a full description of models and model inputs relied on to make the demonstration and documentation of peer review of the RAA.

San Mateo County Permittees fulfilled the above MRP requirements via development of a separate report that was submitted with SMCWPPP's FY 2019/20 Annual Report (*Pollutant Control Measures Implementation Plan and Reasonable Assurance Analysis for San Mateo County, California, Scenarios to Achieve PCBs and Mercury San Francisco Bay TMDL Wasteload Allocations, September 30, 2020*).

### **C.11/12.d. Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations**

MRP Provisions C.11/12.d. require that Permittees prepare a plan and schedule for mercury and PCBs control measure implementation and a corresponding RAA demonstrating quantitatively that sufficient control measures will be implemented to attain the mercury and PCBs TMDL wasteload allocations by 2028 and 2030, respectively. The plan must:

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

San Mateo County Permittees fulfilled this requirement via development of a separate report that was submitted with SMCWPPP's FY 2019/20 Annual Report (*Pollutant Control Measures Implementation Plan and Reasonable Assurance Analysis for San Mateo County, California, Scenarios to Achieve PCBs and Mercury San Francisco Bay TMDL Wasteload Allocations, September 30, 2020*).

### **C.11.e./C.12.h. Risk Reduction Program**

MRP Provisions C.11.e and C.12.h require Permittees to conduct an ongoing risk reduction program to address public health impacts of mercury and PCBs in San Francisco Bay fish. The fish risk reduction program is required to include 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 fishers and their families. The program is required to have the potential to reach 3,000 individuals annually (Bay Area-wide total for all MRP 2.0 Permittees) who are likely consumers of San Francisco Bay-caught fish. Permittees are required to report on the status of the risk reduction program in each of their Annual Reports, 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.

SMCWPPP is assisting San Mateo County municipalities comply with the risk reduction program requirements by coordinating with and reporting on the Fish Smart program conducted by San Mateo County Environmental Health Services (EHS). Fish Smart builds upon the San Francisco Bay Fish Project ([sfei.org/sfbfp#sthash.eOcfwrhA.dpbs](http://sfei.org/sfbfp#sthash.eOcfwrhA.dpbs)), a risk reduction framework developed regionally in the previous permit term. The Fish Project funded Bay Area community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities about how to reduce their exposure to mercury and PCBs from consuming San Francisco Bay fish.

During FY 2020/21, EHS continued to conduct a variety of activities that target at-risk populations (e.g., subsistence fisherman) via the Fish Smart program. Table 11-1 summarizes accomplishments of the Fish Smart program from FY 2015/16 through FY 2020/21. Various quantitative measures of outreach and outcomes are underlined (e.g., numbers of brochures distributed, numbers of people interacted with at outreach events, numbers of people receiving electronic newsletters, and social media postings impressions and reach). The summary illustrates the Fish Smart program’s success over the past several years in providing outreach about potential health impacts of consuming certain types of fish caught in San Francisco Bay. It is likely these efforts have led to reduced health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence fishers and their families.

**Table 11-1. Summary of Fish Smart program accomplishments**

Fiscal Year	Summary of Accomplishments
2015/16	<p>During FY 2015/16, CEH conducted the following activities that target at-risk populations (e.g., subsistence fisherman) via its Fish Smart program:</p> <ul style="list-style-type: none"> <li>▪ Maintained signs that were previously posted by CEH along the Bay’s shore (e.g., at fishing piers) in most cities in San Mateo County.</li> <li>▪ Continued to distribute educational materials (i.e., a Fish Project brochure entitled “Guide to Eating Fish and Shellfish from San Francisco Bay”) at targeted locations: <ul style="list-style-type: none"> <li>• CEH provided <u>100 brochures</u> to the San Mateo Medical Center (a county health services clinic).</li> <li>• CEH provided <u>50 brochures</u> to Save Our Shores, a non-profit that works with boaters.</li> <li>• CEH displayed an example sign and provided brochures at the County Fair and interacted there with about <u>300 persons</u> regarding Fish Smart and other CEH programs.</li> </ul> </li> <li>▪ Conducted a “train the trainer” effort by presenting risk reduction information to nurses with the San Mateo County Health System, including nurses who serve appropriate communities.</li> <li>▪ Presented risk reduction information and handed out brochures at code enforcement and food inspection team meetings.</li> <li>▪ Posted an entry dated June 7, 2016 about Fish Smart on the CEH blog which has been viewed <u>20 times</u> based on a web page analytic report.</li> </ul>
2016/17	<p>During FY 2016/17, CEH conducted the following activities that target at-risk populations (e.g., subsistence fisherman) via its Fish Smart program:</p> <ul style="list-style-type: none"> <li>▪ Maintained signs that were previously posted by CEH at 12 locations along the Bay’s shore (e.g., at fishing piers) in the Cities of Brisbane, Burlingame, Redwood City, San Mateo, and South San Francisco.</li> </ul>



Fiscal Year	Summary of Accomplishments
	<ul style="list-style-type: none"> <li>▪ Provided new signs to the North Fair Oaks Community Center, Docktown Marina, and 9 fishing supply stores</li> <li>▪ Continued to distribute educational materials (i.e., a Fish Project brochure entitled “Guide to Eating Fish and Shellfish from San Francisco Bay”) at targeted locations:               <ul style="list-style-type: none"> <li>• CEH provided <u>50 brochures</u> each to 4 marinas in San Mateo County.</li> <li>• CEH provided <u>50 brochures</u> to Save Our Shores, a non-profit that works with boaters.</li> <li>• CEH attended 6 community health fairs and the San Mateo County Fair, where brochures were provided and where a spinning wheel game was played. <u>Over 1,500 people were reached</u> regarding Fish Smart and other CEH programs.</li> <li>• CEH provided brochures to 11 fishing supply stores in San Mateo County.</li> </ul> </li> <li>▪ Included a Fish Smart article in the Pollution Prevention Post Newsletter which was distributed to <u>over 5,000 people electronically, and 800 people via hard copy.</u></li> <li>▪ Presented the Fish Smart program to 14 San Mateo County employees from various departments.</li> <li>▪ Posted an entry dated March 28th, 2017 about Fish Smart on the CEH blog which has been viewed 17 times based on a web page analytic report.</li> <li>▪ Posted 3 social media posts on the program <u>totaling 16,517 impressions combined.</u></li> <li>▪ Maintained the smchealth.org/fishsmart webpage which <u>received 538 views</u> over a 10-month period</li> </ul> <p><u>Cumulatively, CEH had over 23,000 electronic or in person Fish Smart program impressions for FY 2016-17.</u></p>
2017/18	<p>During FY 2017/18, CEH conducted the following activities that target at-risk populations (e.g., subsistence fisherman) via its Fish Smart program:</p> <ul style="list-style-type: none"> <li>▪ Maintained signs that were previously posted by CEH at 11 locations along the Bay’s shore (e.g., at fishing piers) in the Cities of Brisbane, Burlingame, Redwood City, San Mateo, and South San Francisco.</li> <li>▪ Printed Fish Project brochure “Guide to Eating Fish and Shellfish from San Francisco Bay” in English, Spanish, Chinese, and Tagalog.</li> <li>▪ Continued to distribute educational materials (i.e., a Fish Project brochure entitled “Guide to Eating Fish and Shellfish from San Francisco Bay”) at targeted locations:               <ul style="list-style-type: none"> <li>• CEH provided <u>50 brochures</u> each to 4 marinas in San Mateo County.</li> <li>• CEH attended 17 community health fairs, events, and the San Mateo County Fair, where brochures were provided and where a spinning wheel game was played. <u>Over 4,000 people were reached</u> regarding Fish Smart and other CEH programs.</li> <li>• CEH created a Fish Smart fishing game where children catch fish with a fishing pole and identify if the fish is safe or not safe to each in exchange for a prize.</li> </ul> </li> <li>▪ Presented the Fish Smart program to 30 San Mateo County Family Health Division Women, Infant, and Children (WIC) employees and provided brochures to them to distribute to their clients.</li> <li>▪ Posted 4 social media posts on the program <u>totaling 4,114 impressions combined.</u></li> <li>▪ Maintained the smchealth.org/fishsmart webpage which received 3,800 views over a 11-month period.</li> </ul> <p><u>Cumulatively, CEH had nearly 12,000 electronic or in person Fish Smart program impressions for FY 2017/18.</u></p>
2018/19	<p>During FY 2018/19, CEH conducted the following activities that target at-risk populations (e.g., subsistence fisherman) via its Fish Smart program:</p> <ul style="list-style-type: none"> <li>▪ EHS staff maintained signs posted along the San Francisco Bay shore (e.g., at fishing piers) in the Cities of Brisbane, South San Francisco, San Mateo, Burlingame, and Redwood City. In addition, two new Fish Smart in San Francisco Bay signs were installed at locations where fishing has been observed.</li> <li>▪ The Office of Environmental Health Hazard Assessment (OEHHA) updated its statewide advisory for the California Coast in FY 2018/19. EHS provided signs in English, Spanish, Tagalog, and Chinese to City of Pacifica staff to post at the Pacifica Pier and printed the advisories in four languages to distribute in flyer format.</li> <li>▪ EHS staff <u>spoke with 2,500 residents at 10 events</u> where information on the Fish Smart in San Francisco Bay, California Coast, and Monterey Bay Aquarium’s Seafood Watch Programs was provided.</li> <li>▪ Maintained the smchealth.org/fishsmart webpage which <u>received over 2,700 views.</u></li> </ul>

Fiscal Year	Summary of Accomplishments
	<ul style="list-style-type: none"> <li>▪ EHS created <u>10 social media posts</u> about safe fish consumption guidelines for the Bay and Ocean. <u>Posts combined totaled over 110,000 impressions</u> (number of times a post was on-screen), and <u>over 9,800 engagements</u> (e.g., a link in the post was clicked on).</li> <li>▪ One social media post about surfperch <u>reached over 16,000 people and had over 500 shares</u>.</li> </ul>
2019/20	<p>During FY 2019/20, CEH conducted the following activities that target at-risk populations (e.g., subsistence fisherman) via its Fish Smart program:</p> <ul style="list-style-type: none"> <li>▪ EHS staff maintained signs posted along the San Francisco Bay shore (e.g., at fishing piers) in the Cities of Brisbane, South San Francisco, San Mateo, Burlingame, and Redwood City. One sign was replaced at the Brisbane Lagoon due to the previous sign and pole being knocked down.</li> <li>▪ EHS continued to promote the Fish Smart program using the California OEHHA fish consumption advisories in various languages through flyer distribution at community events, bait and tackle stores, harbormaster offices, and WIC community offices. <u>1,075 flyers in various languages were distributed at 20 locations within the County</u>.</li> <li>▪ EHS staff <u>spoke with 1,128 residents at 4 events</u> where information on the Fish Smart in San Francisco Bay, California Coast, and Monterey Bay Aquarium's Seafood Watch Programs was provided.</li> <li>▪ Maintained the <a href="http://smchealth.org/fishsmart">smchealth.org/fishsmart</a> webpage which <u>received 4,212 views</u>.</li> <li>▪ EHS created three social media posts and shared them on both Facebook and Twitter for a total of six posts. One of the posts was also <u>shared to over 124,000 households countywide</u> on Nextdoor.com. <u>Posts combined had a reach or impression total of 16,961</u>, depending on the platform. <u>Combined, the posts had 1,250 engagements</u>.</li> <li>▪ On February 13th, 2020, 13 surveys were conducted at the Pacifica Pier to discuss the OEHHA fish consumption guidelines. Results showed that 92% of respondents eat the fish they caught and shared at least some types of the fish they caught with their friends or family. <u>When asked if they knew that certain fish were not safe to eat due to high mercury and PCB levels, 84% indicated they were aware of this</u>.</li> </ul>
2020/21	<p>During FY 2020/21, CEH conducted the following activities that target at-risk populations (e.g., subsistence fisherman) via its Fish Smart program:</p> <ul style="list-style-type: none"> <li>▪ Completed annual sign audits and updated and maintained tracking sheet and <a href="#">Google sign location map</a>.</li> <li>▪ Scouted and reached out to potential new posting locations.</li> <li>▪ Added links to the <a href="http://smchealth.org/fishsmart">smchealth.org/fishsmart</a> website for Spanish, Chinese, and Tagalog Coast &amp; Bay safe-to-eat fish guides (PDF format).</li> <li>▪ Provided <u>nine new OEHHA coast signs</u> to State Parks to put up along the coast.</li> <li>▪ Provided <u>one new OEHHA coast sign</u> for Pillar Point Harbor's new fishing pier.</li> <li>▪ Communicated with OEHHA on obtaining Google analytic page views from the Bay Area and discussed salmon on the protected species list concern.</li> <li>▪ Communicated with Alameda County's Fish Smart Program lead to obtain ideas for FY 2021/22.</li> <li>▪ <u>Called, mailed, or visited 15 partner locations</u> to discuss Fish Smart Program promotion and <u>provided 1150 flyers</u> in English, Spanish, Tagalog and Chinese.</li> <li>▪ Sent out a Constant Contact email that linked to an upcoming Monterey Bay Aquarium Seafood Watch webinar as well as the OEHHA bay and coast guidelines PDF. <u>Results: sent to 103 residents with an open rate of 44% (compared to industry average of 28%)</u>.</li> <li>▪ Worked with our contractor SGA to create Google ads that aired in March 2021 in English &amp; Spanish that <u>received a total of 455,724 impressions and 3,676 clicks to the website</u>.</li> <li>▪ As of 6/01/2021, <a href="http://smchealth.org/fishsmart">smchealth.org/fishsmart</a> had <u>2,763 page visits</u> of which 1,848 were new visitors.</li> </ul>

## FUTURE ACTIONS

SMCWPPP activities that are planned for FY 2021/22 to assist San Mateo County municipalities comply with MRP requirements in Provisions C.11/12 to reduce mercury and PCBs loads in stormwater runoff and report on the load reductions are described in the separate report mentioned earlier (*Updated Control Measures Plan for PCBs and Mercury in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021*). Appendix 11 contains the report.

During FY 2021/22, SMCWPPP also plans to continue to assist San Mateo County municipalities comply with the MRP risk reduction program requirements by coordinating with and reporting on the Fish Smart program conducted by EHS:

- EHS will continue to maintain signs and scout new locations to place signs to reach subsistence fishermen. Fish consumption messaging via social media will continue. Discussions with fishermen and their families at local events will continue as well as providing consumption guidelines to marinas and targeted retail and community locations.
- SMCWPPP will continue to work with EHS staff to document the risk reduction program and provide an update in the SMCWPPP FY 2021/22 Annual Report.

# SECTION 12

## C.12 PCBs CONTROLS

### INTRODUCTION

MRP Provision C.12, PCBs Controls, implements stormwater runoff-related actions required by the San Francisco Bay PCB Total Maximum Daily Load (TMDL) water quality restoration program. SMCWPPP performs a variety of activities to address PCBs in stormwater runoff in compliance with MRP Provision C.12. Many of these activities address mercury in addition to PCBs and are described in the previous chapter (Section 11, Mercury Controls) rather than this section.

### IMPLEMENTATION OF MRP PROVISIONS

#### C.11/12.a. Implement Control Measures to Achieve Mercury/PCBs Load Reductions

Efforts by SMCWPPP and San Mateo County municipalities to address MRP Provisions C.11/12.a., Implement Control Measures to Achieve Mercury/PCBs Load Reductions, are described in a separate report (*Updated Control Measures Plan for Mercury and PCBs in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021*) that is presented in Appendix 11.

#### C.11/12.b. Assess Mercury/PCBs Load Reductions from Stormwater

For a description of efforts by SMCWPPP and San Mateo County municipalities to address MRP Provisions C.11/12.b., Assess PCBs Load Reductions from Stormwater, please see Section 11 (C.11 Mercury Controls) and the separate report mentioned previously (*Updated Control Measures Plan for PCBs and Mercury in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021*). Appendix 11 contains the report.

It is important to note that per the documentation in SMCWPPP's FY 2019/20 Annual Report, the estimated PCBs load reduction across the permit area over the time period of FY 2013/14 through FY 2019/20 was 3,017 g/yr, indicating that the MRP regional performance criterion of 3,000 g/yr of PCBs load reduced by July 2020 was achieved.<sup>1</sup>

#### C.11/12.c. Plan and Implement Green Infrastructure to Reduce Mercury/PCBs Loads

Permittees were required to submit in their FY 2019/20 Annual Report an estimate of the amount and characteristics of land area that will be treated through green infrastructure implementation by 2020,

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<sup>1</sup>It is important to note that the MRP allows Permittees to meet the regional criterion as a group – criteria for individual counties would only apply when the regional group criterion was not met.

2030, and 2040, including all data used and a full description of models and model inputs relied on to generate this estimate.

Permittees were also required to submit in their FY 2019/20 Annual Report a Reasonable Assurance Analysis (RAA) to demonstrate quantitatively that PCBs reductions of at least 3 kg/yr will be realized by 2040 through implementation of green infrastructure projects. The MRP requires this submittal to include all data used and a full description of models and model inputs relied on to make the demonstration and documentation of peer review of the RAA.

San Mateo County Permittees fulfilled the above MRP requirements via development of a separate report that was submitted with SMCWPPP's FY 2019/20 Annual Report (*Pollutant Control Measures Implementation Plan and Reasonable Assurance Analysis for San Mateo County, California, Scenarios to Achieve PCBs and Mercury San Francisco Bay TMDL Wasteload Allocations, September 30, 2020*).

### **C.11/12.d. Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations**

As described in more detail in Section 11 (C.11 Mercury Controls), MRP Provisions C.11/12.d require that Permittees prepare a plan and schedule for mercury and PCBs control measure implementation and a corresponding RAA demonstrating quantitatively that sufficient control measures will be implemented to attain the mercury and PCBs TMDL wasteload allocations by 2028 and 2030, respectively. San Mateo County Permittees fulfilled this requirement via development of a separate report that was submitted with SMCWPPP's FY 2019/20 Annual Report (*Pollutant Control Measures Implementation Plan and Reasonable Assurance Analysis for San Mateo County, California, Scenarios to Achieve PCBs and Mercury San Francisco Bay TMDL Wasteload Allocations, September 30, 2020*).

### **C.12.e. Evaluate PCBs Presence in Caulks/Sealants Used in Storm Drain or Roadway Infrastructure in Public Rights-of-Way**

MRP 2.0 Provision C.12.e requires that Permittees collect samples of caulk and other sealants used in storm drains and between concrete curbs and street pavement and investigate whether PCBs are present in such material and in what concentrations. BASMAA has completed a regional investigation that addresses this requirement. SMCWPPP reported on the results of the investigation in its FY 2017/18 Annual Report.

### **C.12.f. Manage PCB-Containing Materials and Wastes during Building Demolition Activities So That PCBs Do Not Enter Municipal Storm Drains**

MRP Provision C.12.f. requires that Permittees develop and implement or cause to be developed and implemented an effective protocol for managing materials with PCBs concentrations of 50 parts per million or greater in applicable structures<sup>2</sup> at the time such structures undergo demolition, so that PCBs do not enter municipal storm drain systems. A Permittee is exempt from this requirement if it provided evidence acceptable to the Executive Officer in its FY 2016/17 Annual Report that the only buildings that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame buildings.<sup>3</sup>

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<sup>2</sup> Applicable structures are buildings built or remodeled from January 1, 1950 through December 31, 1980, with the following exemptions: single-family residential buildings, wood-framed buildings, and partial building demolitions.

<sup>3</sup>The City of Clayton in Contra Costa County provided acceptable evidence and is exempt from this provision.

Permittees were required to develop a protocol by June 30, 2019 that includes each of the following components, at a minimum:

- The necessary authority to ensure that PCBs do not enter municipal storm drains from PCBs-containing materials in applicable structures at the time such structures undergo demolition;
- A method for identifying applicable structures prior to their demolition; and,
- Method(s) for ensuring PCBs are not discharged to the municipal storm drain from demolition of applicable structures.

By July 1, 2019 and thereafter, Permittees are required to:

- Implement or cause to be implemented the PCBs management protocol for ensuring PCBs are not discharged to municipal storm drains from demolition of applicable structures via vehicle track-out, airborne releases, soil erosion, or stormwater runoff; and,
- Develop an assessment methodology and data collection program to quantify in a technically sound manner PCBs loads reduced through implementation of the protocol for controlling PCBs during demolition of applicable structures.

On behalf of MRP Permittees, BASMAA conducted a multi-year regional project to assist MRP Permittees to address Provision C.12.f. The BASMAA project, which began in FY 2016/17 and was completed in March 2019, assisted Permittees in developing local programs to manage PCBs-containing materials during building demolition. It developed guidance materials, tools and training materials and conducted outreach. SMCWPPP actively participated in the project, including providing BASMAA's project manager.

At the outset of the project, a BASMAA Steering Committee was convened to provide project oversight and guidance during the project. The Steering Committee included BASMAA Directors, countywide stormwater program staff, and Permittee staff from various relevant municipal departments. The Steering Committee met periodically throughout the project. In addition, a project TAG, a small balanced advisory group formed from industry, regulatory, and Permittee representatives to provide review and input on selected project work products, was convened. The TAG was comprised of representatives from industry and state/federal regulatory agencies, and Permittees. Other efforts to engage key stakeholders included an industry stakeholder roundtable meeting (August 2017) and two larger stakeholder group meetings (December 2017 and May 2018) that included industry, regulatory and municipal representatives. During FY 2018/19, Permittees tailored the BASMAA products for local use, adopted the program (e.g., via local policy or ordinance), and trained local staff to implement the new program starting July 1, 2019.

Key BASMAA project deliverables provided to each Permittee to use as appropriate given local procedures and needs included:

- A protocol for pre-demolition building survey for priority PCBs-containing building materials;
- Model language for municipal adoption (e.g., ordinance) of the new program to manage PCBs materials during building demolition and model supporting staff report and resolution;
- CEQA strategy and model notice of exemption;

- Supplemental demolition permit model application materials, including forms, process flow charts, and applicant instructions; and
- An analysis to assist municipalities that pursue cost recovery.

Other project deliverables included:

- A coordination/communication strategy for the project;
- A technical memorandum summarizing any new information & decisions needed by BASMAA at outset, including an annotated table of regulatory drivers and relevant requirements;
- A technical memorandum with the state of the practice for identifying PCBs-containing building materials (developed to inform development of the pre-demolition building survey protocol listed below);
- Industry stakeholder outreach materials and a fact sheet for municipal staff;
- A spreadsheet tool used to develop the prioritized list of potential PCBs-containing building materials that the demolition program will focus on;
- A conceptual approach for an assessment methodology and data collection program to quantify PCBs loads reduced through managing PCBs-containing materials during building demolition.

During FY 2018/19, the BASMAA project concluded by conducting the following outreach and training tasks:

- Prepared training materials for municipal staff on adoption and implementation of the new program;
- Developed outreach materials and a standard presentation to inform industry stakeholders including developers, planning firms, urban planning non-governmental organizations, demolition firms, property owners, property managers, and realtors about the new program to manage PCBs in building materials during demolition;
- Using the above training materials, conducted training workshops (in-person and a webinar) for key municipal and countywide stormwater program staff;
- Conducted a webinar for industry stakeholders; and
- Developed a list of Bay Area opportunities, including contact information and dates, for municipal and/or stormwater program staff to conduct additional outreach to industry stakeholders using the above industry outreach materials.

In addition, during FY 2018/19 and FY 2019/20, San Mateo County and other MRP Permittees worked together through the BASMAA Monitoring and Pollutants of Concern Committee (MPC) to develop a framework to comply with data collection/evaluation and reporting requirements under Provision C.12.f. As mentioned previously, these requirements include developing an assessment methodology and data collection program to quantify PCBs loads reduced through implementation of the new program. The regional process developed includes the following steps:

1. The municipality informs demolition permit applicants that their projects are subject to the MRP Provision C.12.f requirements, necessitating, at a minimum, an initial screening for priority PCBs-containing materials.

2. For every demolition project, applicants complete and submit a version of BASMAA’s model “PCBs Screening Assessment Form” (Screening Form) or equivalent to the municipality.
3. 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.
4. The municipality then issues the demolition permit or equivalent, according to its procedures.<sup>4</sup>
5. For Applicable Structures only, the municipality submits completed Screening Forms and any supporting documents (consultant’s report from PCBs building survey, QA/QC checklist, and lab reports) to its countywide program; forms for exempt sites need not be submitted. Forms should be submitted to the countywide programs electronically if feasible, and at a minimum annually, but quarterly is preferred.
6. The countywide programs compile the completed Screening Forms and any supporting documents. The countywide program then works with the other MRP countywide programs through BASMAA to manage and evaluate the data, and to assist Permittees with associated MRP reporting requirements.

All San Mateo County Permittees began implementing the program on or before July 1, 2019. Appendix 12 includes a memorandum prepared by SMCWPPP in compliance with MRP reporting requirements in Provision C.12.f. iii(4). The memorandum provides documentation of (a) the number of applicable structures that applied for a demolition permit during the reporting year, and (b) a running list of the applicable structures that applied for a demolition permit (since the date the PCBs control protocol was implemented) 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 (*Program for Management of PCBs during Building Demolition – Data Summary through FY 2020/21 for San Mateo County MRP Permittees*).

### **C.12.g. Fate and Transport Study of PCBs: Urban Runoff Impact on San Francisco Bay Margins**

MRP Provision C.12.g. requires Permittees to conduct or cause to be conducted studies concerning the fate, transport, and biological uptake of PCBs discharged from urban runoff to San Francisco Bay margin areas. This requirement is being addressed through a multi-year project by the San Francisco Bay Regional Monitoring Program (RMP) to develop a series of conceptual models of PCBs in Priority Margin Units (PMUs). SMCWPPP’s FY 2016/17 Annual Report included a workplan developed by BASMAA that describes how these information needs will be accomplished, including the studies to be performed and a preliminary schedule. SMCWPPP’s March 30, 2020 Integrated Monitoring Report includes a summary of the findings and results of the studies completed, planned, or in progress and the implications of the studies on potential control measures to be investigated, piloted, or implemented in future permit cycles.

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<sup>4</sup> Municipalities should require that applicants fill out and certify a Screening Form for every demolition. For non-Applicable Structures, applicants simply check the boxes, certify, and submit to municipality. Then the municipality can authorize the demolition (e.g., issue a demolition permit). In general, municipalities should have a completed and certified Screening Form before authorizing a demolition, unless they are a small community that is exempt or has some other arrangement with Regional Water Board staff. Municipalities do not need to track non-Applicable Structures otherwise.



### C.12.h. Risk Reduction Program

SMCWPPP is assisting San Mateo County municipalities to comply with the risk reduction program requirements by coordinating with and reporting on the Fish Smart program conducted by San Mateo County Environmental Health Services (EHS). Please see Section 11 for additional details.

## FUTURE ACTIONS

SMCWPPP activities that are planned for FY 2021/22 to assist San Mateo County municipalities comply with MRP requirements in Provisions C.11/12 to reduce mercury and PCBs loads in stormwater runoff and report on the load reductions are described in the separate report mentioned earlier (*Updated Control Measures Plan for PCBs and Mercury in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021*). Appendix 11 contains the report.

During FY 2021/22, SMCWPPP also plans to:

- Continue to participate in the RMP PCBs Work Group to help oversee RMP studies concerning the fate, transport, and biological uptake of PCBs discharged from urban runoff to San Francisco Bay margin areas. A continued focus will be the conceptual model under development for Steinberger Slough in San Mateo County and associated monitoring fieldwork by the RMP.
- Assist San Mateo County municipalities to implement their programs to manage PCBs during building demolition and compile, evaluate and report the new data generated by the programs.
- Assist San Mateo County municipalities to comply with the risk reduction program requirements by coordinating with and reporting on the Fish Smart program conducted by EHS (see Section 11).

# SECTION 13

## C.13 COPPER CONTROLS

### INTRODUCTION

Provision C.13 of the MRP addresses copper control measures identified in the San Francisco Bay Basin Water Quality Control Plan (commonly referred to as the Basin Plan). The Regional Water Board has deemed these controls are necessary to support copper site-specific objectives in San Francisco Bay. C.13 includes 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 2020/21, Permittees and the Countywide Program continued to conduct activities related to complying with Provision C.13. Local copper control actions are documented in each Permittee's individual Annual Report. This section summarizes related activities conducted by the Countywide Program.

### IMPLEMENTATION OF MRP PROVISIONS

#### C.13.a. Copper Architectural Features

Provision C.13.a. requires Permittees to manage waste from cleaning and treating copper architectural features, including copper roofs, during construction and post-construction.

During 2020/21, SMCWPPP continued to train municipal staff on the MRP requirements and BMPs for architectural copper installation, cleaning, and treating. The trainings utilized a SMCWPPP factsheet entitled "Requirements for Architectural Copper: Protect water quality during installation, cleaning, treating, and washing!" which targets suppliers and installers of copper materials and is available on the SMCWPPP website ([flowstobay.org](http://flowstobay.org)). Municipal construction site stormwater inspectors received the information from a presentation at the SMCWPPP Construction Site Stormwater Inspections Training on March 6, 2021 (see Section 6 for more details).

#### C.13.b. Manage Discharges from Pools, Spas and Fountains

Provision C.13.b. requires Permittees to manage discharges from pools, spas and fountains that contain copper-based chemicals by adopting local ordinances. These requirements are implemented by individual Permittees and are reported on in their Annual Reports. Guidance on these requirements for illicit discharge inspectors is provided through SMCWPPP's CII Subcommittee and public outreach on related

BMPs is provided through SMCWPPP's PIP Subcommittee. A fact sheet entitled *Best Management Practices for Pools, Hot Tubs, and Fountain Water Discharges* was developed in FY 2018/19 and includes information on avoiding the use of copper-based algaecides. The fact sheet is available on the SMCWPPP website ([flowstobay.org](http://flowstobay.org)). Section 15 discusses related public outreach by SMCWPPP to promote pool, spa, and fountain discharge BMPs through social media posts.

### C.13.c. Industrial Sources

Provision C.13.c. requires Permittees to ensure through routine industrial facility inspections that proper BMPs are in place at industrial facilities likely to use copper or have sources of copper. SMCWPPP's CII Subcommittee assists San Mateo County municipal agency staff with understanding this MRP requirement and SMCWPPP develops MRP compliance support materials, as necessary. In addition, in June 2010 BASMAA developed pollutants of concern commercial/industrial inspector training materials and a guidance manual that address industrial sources of copper. These materials are available on SMCWPPP's members only website. Industrial inspectors received information on this topic in a guidance document prepared by SMCWPPP entitled *Stormwater Inspector Guidance on Meeting Annual MRP C.4.d Training Requirements* (June 1, 2019).

## FUTURE ACTIONS

FY 2021/22 activities planned by SMCWPPP to assist San Mateo County Permittees comply with MRP requirements in Provision C.13 include the following:

- Continue to provide information on MRP requirements regarding architectural sources of copper to construction site and building inspectors at New Development Subcommittee meetings, SMCWPPP's FY 2021/22 Construction Site Inspector Workshop, and at presentations to CALBIG or other partner organizations;
- Provide guidance to San Mateo County Permittees via SMCWPPP's CII Subcommittee and/or SMCWPPP stormwater business inspector training workshops and materials to assist them with conducting routine industrial facility inspections that ensure proper BMPs are in place at industrial facilities likely to use copper or have sources of copper; and
- Continue to provide outreach material and guidance via SMCWPPP's CII and PIP Subcommittees regarding pool, spa and fountain discharge BMPs.



# SECTION 15

## C.15 EXEMPTED AND CONDITIONALLY EXEMPTED DISCHARGES

### INTRODUCTION

The objective of MRP Provision C.15, Exempted and Conditionally Exempted Discharges, is to exempt unpolluted non-stormwater discharges from the MRP’s general non-stormwater discharge prohibition (Provision A.1) and to conditionally exempt non-stormwater discharges that are potential sources of pollutants. This section describes SMCWPPP’s countywide activities conducted to help its member agencies implement this provision. SMCWPPP helps municipal staff understand the MRP’s requirements and makes various MRP compliance support materials available for their use. The SMCWPPP CII Subcommittee, discussed in Section 4, facilitates and coordinates providing this assistance to the member agencies for a variety of different types of non-stormwater discharges that may be conditionally exempted.

In addition, during FY 2020/21 SMCWPPP’s PIP component conducted selected activities to help San Mateo County Permittees comply with outreach requirements in Provision C.15.b.iv. Individual Residential Car Washing Discharge, C.15.b.v Swimming Pool, Hot Tub, Spa and Fountain Water, and Provision C.15.b.vi. Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering; these activities are described below.

### IMPLEMENTATION OF MRP PROVISIONS


#### Provision C.15.b.iv. Individual Residential Car Washing

During FY 2020/21, SMCWPPP continued previous years’ outreach efforts to encourage residents to use professional car wash companies rather than washing their cars at home through social media posts. Examples are shown in Figure 15-1. The practice of using commercial car washes helps keep soaps, automotive pollutants, and environmental toxins from washing into San Mateo County storm drains. SMCWPPP also utilized social media posts to educate mobile car wash businesses on the hazards of dumping their used wash waters down storm drains and about best management practices. SMCWPPP’s mobile business fact sheet is shown in Figure 15-2 (also available as a PDF on the “Mobile Cleaners & Businesses” page of SMCWPPP’s website) and a screenshot of the “Mobile Cleaners & Businesses” page is shown in Figure 15-3.



**Flows To Bay**  
March 23 · 🌐

Washing your car at home may sound appealing, but you may be unknowingly polluting our waters. When you wash your vehicle on an impervious surface such as a road or driveway, toxic chemicals from the cleaning agents to flow through our storm drains and down to the Bay or ocean. Commercial car washes have systems in place to collect these chemicals before they reach storm drains, making them the truly sustainable option. Find out more: <http://bit.ly/Car-Washes>



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617 People Reached      9 Engagements      [Boost Post](#)

Norma Medina, Charlotte Wade and 3 others      2 Shares

Like    Comment    Share

**Flows To Bay**  
May 18 · 🌐

Car looking a little dirty? Take it to the pros and help keep harmful chemicals from flowing to our waterways. Read about commercial car wash benefits here: <https://bit.ly/Car-Washes>



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413 People Reached      13 Engagements      [Boost Post](#)

Martha J Henderson, Heide Castel and 7 others      1 Share

Like    Comment    Share

**Flows To Bay**  
October 11, 2020 · 🌐

🚗💧 Commercial car washes are better for the environment than the DIY approach. If you choose to wash your car at home, make sure water drains to grass, gravel, or landscaped areas, so it soaks into the ground and doesn't enter stormdrains! It's also a good idea to first clean your wheels with a rag to remove any dust from break pads, which can contain copper - a hazardous metal. Click here for well-tuned automotive information: [bit.ly/2VTkspa](http://bit.ly/2VTkspa)



**Flows To Bay**  
Environmental Conservation Organization      [Send Message](#)

**Get More Likes, Comments and Shares**  
When you boost this post, you'll show it to more people.

511 People Reached      20 Engagements      [Boost Post](#)

Jon Konnan, Dorothy Oder and 15 others      1 Share

Like    Comment    Share

Figure 15-1. Examples of Facebook posts about car washing.



**MEJORES PRÁCTICAS DE GESTIÓN PARA NEGOCIOS MÓVILES**

Limpiadores de alfombras | Lavado de vehículos | Lavado de superficies | Lavado de maquinaria | Lavado de maquinaria pesada | Lavado de maquinaria pesada

Información sobre el uso de las mejores prácticas de gestión (Best Management Practices, BMPs) para evitar que las aguas de lavado y enjuague entren en los sistemas de drenaje pluvial y contaminen las vías fluviales locales, la bahía de San Francisco y el Océano Pacífico.

**¿POR QUÉ DEBERÍAMOS PREOCUPARNOS POR LOS DESECHOS DE AGUA DE LAVADO?**

El agua de lavado de la limpieza móvil NO es solo suciedad y agua. También puede contener jabones, productos químicos tóxicos, metales pesados, aceite y grasa que son perjudiciales para nuestros arroyos y vías fluviales. Los contaminantes que drenan de las actividades de limpieza móvil se lavan en la calle y en el sistema de drenaje pluvial que luego fluye a nuestros arroyos, bahía y océano sin ninguna limpieza ni filtrado.

Las regulaciones federales, estatales y locales prohíben la descarga de cualquier cosa que no sea agua de lluvia en el drenaje pluvial.

La implementación de las mejores prácticas de gestión (BMPs) adecuadas es fácil y es necesaria para el cumplimiento de las regulaciones de prevención de la contaminación de aguas pluviales.

**¿QUÉ PASA CON LOS PRODUCTOS DE LIMPIEZA BIODEGRADABLES Y NO TÓXICOS?**

Los productos de limpieza etiquetados como "no tóxicos" y "biodegradables" todavía pueden dañar la vida silvestre si entran en un sistema de drenaje pluvial. Los peces, por ejemplo, se ven afectados por el plomo común y biodegradable. Sin embargo, si se eliminan en el sistema de alcantarillado sanitario, las plantas de tratamiento de aguas residuales prefieren productos biodegradables antes que limpiadores tóxicos.

**¡Todos los jabones, incluso los biodegradables, son dañinos para los peces!**

**PLANIFIQUE CON ANTICIPACIÓN**

- Determine dónde descargará las aguas residuales antes de comenzar un nuevo trabajo.
- Asegúrese de tener el equipo a mano (es decir, mangueras largas, bomba de sumidero, etc.) para dirigir la descarga a los puntos de acceso de alcantarillado sanitario.
- Asegúrese de que las mangueras sean lo suficientemente largas como para llegar a los puntos de acceso que estén lejos de su tanque de retención.
- Póngase en contacto con sus ferreterías locales o tiendas de materiales de construcción para conocer las herramientas y materiales disponibles para empresas móviles, incluidos aspiradores húmedos/secos y bombas de sumidero, esteras, bolsas de arena o grava, cañas, etc.

**4 PASOS PARA TENER EN CUENTA ANTES DE LIMPIAR**

- Sea un limpiador móvil reconocido por BASMAA.** Realice la capacitación en línea de "limpieza de superficie móvil" de BASMAA (Bay Area Stormwater Management Agencies Association). Este programa lo capacitará sobre cómo limpiar diferentes superficies de una manera aceptable en términos ambientales y publicará su nombre como un limpiador entrenado. Visite [www.basmaa.org](http://www.basmaa.org).
- Identificar ubicaciones de drenaje de tormentas.** Recorra el lugar de trabajo e identifique dónde se encuentran todos los drenajes pluviales. No se debe permitir que el agua de lavado fluya hacia los drenajes pluviales.
- Proteja drenajes y recoja agua.** Póngase en contacto con el inspector de aguas pluviales de la ciudad local para determinar los requisitos específicos de descarga. Obtenga permiso para descargar a la tubería de alcantarillado sanitario a pasajeros del propietario antes de comenzar el trabajo.
- Desheche el agua de lavado.** Póngase en contacto con su planta local de tratamiento de aguas residuales para conocer los requisitos de descarga específicos que ingresan al sistema de alcantarillado sanitario (los números de teléfono se enumeran en la página siguiente). Obtenga permiso del propietario de la propiedad para descargar agua de lavado en el lugar de trabajo o en el lugar de trabajo del contratista.

flowstobay.org Para obtener más información sobre la prevención de la contaminación de aguas pluviales, envíe un correo electrónico a [info@flowstobay.org](mailto:info@flowstobay.org); actualizado EN ABRIL DE 2019

**最佳管理办法- 流动业务**

地铺清洗机 | 洗车机/清洗机 | 电动清洗机 | 宠物护理服务 | 蒸汽清洗机

保护海湾, 保护海洋, 保护你自己! 洗涤水流入暴雨排水道时, 它不经过清洗或过滤, 直接流入当地的小河和旧金山湾或太平洋。

**做好本职工作: BMP一览表**

- 到该区域走一走, 确定是否有暴雨排水道。
- 避开清洗区域, 清除障碍。
- 如果可行, 在有植被或砾石的表面冲洗。洗涤剂可以渗透到地表而不产生径流。
- 使用沙袋、管子、围堰或护堤, 控制清洗区域, 不让洗涤剂顺着街道和排水沟流走。
- 堵塞密封防洪排水入口以及向排水沟排水的斜坡区域, 防止洗涤剂进入防洪排水道。
- 在开始清洗前, 设置暴雨排水道保护装置, 并在离开清洗区前将其移除。
- 用吸尘器或抖动地毯, 将垃圾收入垃圾桶里。
- 尽量减少用水量; 在软管上使用喷嘴。
- 使用毒性较低的清洁产品 (如果可能的话, 不要用肥皂和洗涤剂来清洗)。
- 使用“罐式真空吸尘器”将其中的洗涤剂吸干, 以便正确处理。
- 清除清洗过程中积累的所有碎屑或废物, 并将其置于垃圾桶中; 如果有有害物质, 则妥善处理。

**处理方案**

- 切勿将清洗或洗涤剂排入街道、排水沟、停车场或暴雨排水道。
- 清洗和洗涤剂通常可以通过业主家或企业的排水管道排到生活污水管道, 如公用水槽、地漏、指把洗涤剂槽、清理孔或卫生间。采取预防措施, 防止碎片、危险废物或任何可能引起堵塞的物体进入水坑、厕所或生活污水管道。
- 将水引流回景观或砾石表面。离开清洗区前, 洗涤剂必须完全被吸收。

**污水处理厂**

Burlingame 污水处理设施 Burlingame, Burlingame Mills # Hillsborough	(650) 342-3727
Millbrae 污水处理厂 San Mateo 县环卫局 Daly City # Hillsborough (一分局)	(650) 259-2388 (650) 991-8200
Pacific's Calera 废水处理站 San Mateo 县污水处理厂 Foster City, Hillsborough # San Mateo	(650) 738-4660 (650) 522-7300
Mid Coastside 污水管理局 Half Moon Bay, El Comodoro, Menlo Park, Redwood City, San Bruno, Sausalito, San Francisco, San Geronimo, San Jose, San Mateo, San Simeon, Sausalito, Sausalito, Sausalito, Sausalito	(650) 726-0124 (650) 832-6243
Silicon Valley 净水厂 Belmont, Redwood City, San Carlos, Woodside, # West Bay # 五福湾区 Corte Madera, South San Francisco, San Bruno, San Jose, San Mateo, San Simeon, Sausalito, Sausalito, Sausalito, Sausalito	(650) 877-8555

San Mateo 县水污染预防计划认可 "Santa Clara 河谷城市水污染预防计划", 并制定手册, 以及与水手参与清洗计划的内容。

Figure 15-2. Mobile businesses BMP fact sheet In Spanish and Chinese.

**flowstobay**  
SAN MATEO COUNTYWIDE WATER POLLUTION PREVENTION PROGRAM  
Clean Water. Healthy Community. It's a team effort!

English / Español / 中文 / Tagalog | Events Calendar | Contact | Blog | Search | Facebook | Instagram

ABOUT FLOWS TO BAY | PREVENTING STORMWATER POLLUTION | DATA & RESOURCES | GET INVOLVED | PERMITTEES

**Mobile Cleaners & Businesses**

Wash water from mobile cleaners and businesses can generate stormwater pollution containing soap, oil, solvents, and even paint chips and metals.

Read below for the best practices and additional resources for mobile cleaners.

Figure 15-3. Screenshot of the "Mobile Cleaners & Businesses" page.



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

During FY 2020/21, SMCWPPP continued public outreach and educational efforts to ensure implementation with, and compliance of, the required BMPs in commercial, municipal, and residential facilities. SMCWPPP shared BMP fact sheets with member agencies that are specifically for swimming pools, hot tubs, spas, and fountain water discharges (Figure 15-4), and promoted best practices through social media posts (Figures 15-5 and 15-6).



**BEST MANAGEMENT PRACTICES FOR SWIMMING POOLS, HOT TUBS & FOUNTAIN WATER DISCHARGES**  
Homeowners | Landscapers | Swimming Pool/Spa Service Workers | Contractors

*Information about using Best Management Practices (BMPs) to prevent swimming pool, hot tub, and fountain waters from entering storm drain systems and polluting local waterways.*

**WHY SHOULD WE BE CONCERNED WITH POOL, HOT TUBS, AND FOUNTAIN WATER DISPOSAL?**  
Water from pools, hot tubs, and fountains is NOT just water. It also may contain potential pollutant sources such as chlorine, copper, algaecides, colored dye, chemicals/salts that are harmful to our creeks and waterways. You may never drain your pool water in the street or storm drain system, even if the water is dechlorinated.

**Federal, State, and local regulations prohibit discharge of anything but rain water in the storm drain.**

Implementing the proper Best Management Practices (BMPs) is easy and is required for compliance with stormwater pollution prevention regulations.

**CLEANING**

- Never clean a filter in the street, gutter, or storm drain.
- Rinse cartridge filters onto a dirt area and spade filter residue into the soil.
- Keep backwash discharges out of the street and storm drain. Backwash sand and diatomaceous earth filters onto a dirt area. Dispose of spent filter materials in the trash.
- If you don't have a suitable dirt area, contact your wastewater treatment authority listed on the back of this filter for instructions on discharging to the sanitary sewer.

**DRAINING**

- Never drain into a street, gutter or storm drain.
- Discharge water to a sanitary sewer clean-out.
- If you are on a septic system or have no sanitary sewer clean-out, contact your wastewater treatment authority listed in this brochure for guidance.

**MATERIAL STORAGE & HANDLING**

- Store chemicals in a clean, dry and covered area.
- If landscaping materials are left outside, cover with a tarp or plastic sheeting to protect from urban runoff.

**A PROPERLY MAINTAINED POOL, HOT TUB, AND FOUNTAIN WILL REDUCE THE NEED FOR DRAINING**

**MAINTAINING**

- Clean regularly, maintain proper chlorine levels and maintain water filtration and circulation.
- Manage pH and water hardness to minimize copper pipe corrosion that can stain your pool and end up in our creeks and the Bay.
- Minimize algae buildup to prevent the need for toxic algaecides.
- Ask your pool maintenance service for help resolving persistent algae problems without using copper algaecides.

**DID YOU KNOW...?**  
Copper is a pollutant that threatens aquatic life in our creeks and the Bay. It is used as an algaecide in pools, spas and fountains, and copper pipes are commonly used in pool plumbing.

**flowstobay.org** For More Information About Stormwater Pollution Prevention email [info@flowstobay.org](mailto:info@flowstobay.org)  
UPDATED APRIL 2019



**BEST MANAGEMENT PRACTICES FOR SWIMMING POOLS, HOT TUBS & FOUNTAIN WATER DISCHARGES**  
Homeowners | Landscapers | Swimming Pool/Spa Service Workers | Contractors

*Protect the Bay, the Ocean, and Yourself! Keep swimming pools, hot tub, and fountain water out of storm drains, creeks, and the Bay.*

**DOING THE JOB RIGHT: CHECKLIST OF BMPs**

- Never drain your pool water into the street or storm drain system, even if the water is dechlorinated.
- Always drain your residential pool water into a sewer line. For convenience, use the sewer clean-out connection in your yard.
- You can also access the sewer system drain in your toilet, bathtub or sink inside your home. Be cautious that you do not flood your home if you use this option.
- If you are on a septic system or have no sanitary sewer clean-out, contact your wastewater treatment authority listed in this filter for guidance.
- Filters should be cleaned and rinsed over a dirt area or all rinse water should be captured and filtered to remove any solids prior to being discharged into the sewer system.
- Keep backwash discharges out of the street and storm drain. Backwash sand and diatomaceous earth filters onto a dirt area. Dispose of spent filter materials in the trash.
- Rinse cartridge filters onto a dirt area and spade filter residue into the soil.
- If you don't have a suitable dirt area, contact your wastewater treatment authority listed in this brochure for instructions on discharging to the sanitary sewer.

**4 TIPS FOR FINDING YOUR CLEAN-OUT**

Sanitary sewer clean-outs are most often found along the sewer line, which is usually aligned with the sewer lines for the house. However, not all cities use the same method to mark their sewer systems. If you have trouble locating your clean-out, contact your local wastewater treatment authority. See the "Local Pollution Control Agencies" below.

1. Look for an "S" stamped into the curb or sidewalk near your house. It marks where the sewer line is. Your clean-out may be along it.
2. Look for a slight linear depression in your yard between your house and the street. This is often an indicator of the location of a sewer line, and your clean-out may be on it.
3. If your kitchen or bathroom is on an exterior wall, look outside along that wall for the clean-out.
4. Stand on the sidewalk looking toward your house. Line up the main water sources in your house (bathrooms, kitchens, washers, etc.) The clean-out is often located on that line, in front of or behind your house.

**Wastewater Treatment Plants**

Burlingame Waste Water Treatment Facility .....	(650) 343-3727
Millbrae Water Pollution Control Plant .....	(650) 359-3388
North San Mateo County Sanitation District .....	(650) 991-4200
Pacific's Calera Creek Water Recycling Plant .....	(650) 338-4660
San Mateo Waste Water Treatment Plant .....	(650) 922-7300
Sewer Authority Mid Coastside .....	(650) 726-0124
Silicon Valley Clean Water .....	(650) 832-6243
South San Francisco/San Bruno Water Quality Control Plant .....	(650) 877-8555

**flowstobay.org** The San Mateo Countywide Water Pollution Prevention Program acknowledges the Santa Clara Valley Urban Runoff Pollution Prevention Program for developing and sharing the content of this brochure.


Figure 15-4. Swimming pool, hot tub, spa, and fountain water discharge BMP fact sheet.



## San Mateo Countywide Water Pollution Prevention Program

**Flows To Bay**  
February 23 · 🌐

Hot tubs can contain additional chemicals that are harmful to creek life and water quality. Beyond regulations prohibiting discharge of treated water into our stormwater systems, hot tub and pool owners should never discharge the water into the street because chlorine, copper, and other chemicals can make their way to local waterways and kill off local species. Learn more about how to properly discharge your pool water at [bit.ly/Pool-Discharge](https://bit.ly/Pool-Discharge)



**Flows To Bay**  
Environmental Conservation Organization

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👤 Kelly Heinsohn, Tiffany Hunton and 11 others      1 Comment 2 Shares

👍 Like    💬 Comment    ➦ Share    ⋮

**Flows To Bay**  
June 2 · 🌐

The weather is getting warmer and more and more people are starting to enjoy a relaxing day at the pool. If you have your own pool, be sure to follow these tips and tricks to make sure you're handling pool chemicals properly: <https://bit.ly/Pool-Discharge>



**Get More Likes, Comments and Shares**  
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305 People Reached      2 Engagements      [Boost Post](#)

👤 Don Gorday


👍 Like    💬 Comment    ➦ Share    ⋮

**Flows To Bay**  
June 29 · 🌐

Do you have plans to drain your swimming pool, hot tub, or fountain this summer? Make sure to discharge the water into a sanitary sewer clean-out and NOT into the street or storm drain.

Storm drains flow into our local creeks, the Bay, and Pacific Ocean untreated. If there are chemicals from pools, hot tubs, or fountains that enter our storm drain system, they can make our waterways unsafe for recreational contact and fishing—and unsafe for the living creatures who call these waters home.

Learn more here: [bit.ly/Pool-Discharge](https://bit.ly/Pool-Discharge)



FLOWSTOBAY.ORG

**Swimming Pools, Hot Tubs & Fountains – Flows to Bay**  
Swimming pools, hot tubs, and fountains may contain potential...

👍 **Get More Likes, Comments and Shares**  
When you boost this post, you'll show it to more people.

213 People Reached      3 Engagements      [Boost Post](#)

👤 Norma Medina

👍 Like    💬 Comment    ➦ Share    ⋮

Figure 15-5. Examples of Facebook posts about swimming pool, hot tub, spa, and fountain water discharge.





Figure 15-6. Example of Instagram post about swimming pool, hot tub, spa, and fountain water discharge.

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

In FY 2020/21, SMCWPPP implemented the following outreach activities to promote the use of less-toxic options for pest control and landscape management, and the use of drought tolerant, native vegetation to minimize landscape irrigation demands:

- Conducted outreach to San Mateo County residents to support and promote eco-friendly alternatives to toxic pesticides. This promotion took place on social media, during four webinars we conducted, the SMCWPPP newsletter, and blog. Additional messaging was provided through SMCWPPP’s point-of-purchase program, where OWOW materials were distributed that educate residents about eco-friendly pesticide alternatives. Table 15-1 summarizes results from the Facebook posts made on pesticide pollution prevention and Table 15-2 describes the results for Instagram. Example posts are shown in Figures 15-7 and 15-8.
- Promoted planting of drought tolerant, native vegetation through our online media channels, including social media and the SMCWPPP newsletter and blog. Messaging focused on the environmental benefits of planting native plants, including their tolerance to drought. Table 15-3 summarizes the results of these types of Facebook posts, while Table 15-4 summarizes the results for posts on Instagram. Example posts are shown in Figures 15-9 and 15-10. The SMCWPPP team also launched promotional campaigns to spread awareness about webinars about native plants from local jurisdictions and partners. We promoted the: A) October 21<sup>st</sup> “Native Plant and Pollinator Gardens” webinar with Bay Area Water Supply & Conservation Agency (BAWSCA) and the City of Burlingame and B) May 19<sup>th</sup> “Design It Yourself Native Plant Landscape” webinar with BAWSCA and the City of Millbrae, screenshots of promotional posts are shown in Figures 15-11 and 15-12.



- Continued to promote water-saving tips via social media and conducted a webinar on May 27, 2021 titled “Water Wise Gardening and Landscaping.” SMCWPPP launched a promotional campaign for the webinar, which included posts on Facebook and Instagram, event on SMCWPPP’s events calendar, announcement on our e-Newsletter (Figure 15-13), outreach to PIP members and local organizations about the webinar, and a Facebook/Instagram Ads campaign. We also featured a San Mateo County resident on SMCWPPP’s blog (Figure 15-14) for their water wise yard, which the team learned about from a form submission for “Water Wise Home Projects” and then created the blog based on the resident’s responses to interview questions. The blog was promoted on Instagram, Facebook, and our e-Newsletter.

Table 15-1. Summary of Facebook posts on pesticide pollution prevention topics

Post Focus	Reach	Engagements (likes, comments, and shares)	Clicks
Integrated Pest Management (16 posts)	8,385	251	114
Hiring a Pest Control Operator (5 posts)	2,563	105	61
Links Between Pesticides & Water Quality (6 posts)	2,651	87	18

Table 15-2. Summary of Instagram posts on pesticide pollution prevention topics

Post Focus	Reach	Engagements (likes, comments, shares, and saves)
Integrated Pest Management and Hiring a Pest Control Operator (10 posts)	977	91
Links Between Pesticides & Water Quality (3 posts)	456	45



**Flows To Bay**  
October 13, 2020 · 🌐

Integrated Pest Management (IPM) is an ecosystem-based strategy that focuses on less toxic chemicals and the long-term prevention of pests thus minimizing risks to people and the environment. Check out our website for a list of pest control companies that use eco-friendly IPM strategies and service residents of San Mateo County: [bit.ly/IPMPestControlOperators](http://bit.ly/IPMPestControlOperators)



**Flows To Bay**  
Environmental Conservation Organization

Send Message

Get More Likes, Comments and Shares  
When you boost this post, you'll show it to more people.

798 People Reached    85 Engagements    [Boost Post](#)

Dolly Ward, Steven Dogen and 41 others    1 Comment 5 Shares

Like    Comment    Share

**Flows To Bay**  
March 1 · 🌐

When you use pesticides on your garden you're treating the symptoms and not the cause of pest problems. Worse yet, you're adding to pesticides that are already present in creeks and waterways throughout California. These can be harmful to local wildlife and public health. Find out what you can do to keep pests out of your garden without the use of pesticides: [bit.ly/Pesticides-Water-Quality](http://bit.ly/Pesticides-Water-Quality)



FLOWSTOBAY.ORG

**Pest Management – Flows to Bay**  
Did you know that less than 3% of the insects you encounter in the...

Get More Likes, Comments and Shares  
When you boost this post, you'll show it to more people.

398 People Reached    26 Engagements    [Boost Post](#)

Larry Beuhring, Bayne Sherwood and 17 others    1 Comment

Like    Comment    Share

Figure 15-7. Facebook posts on pesticide pollution prevention topics.

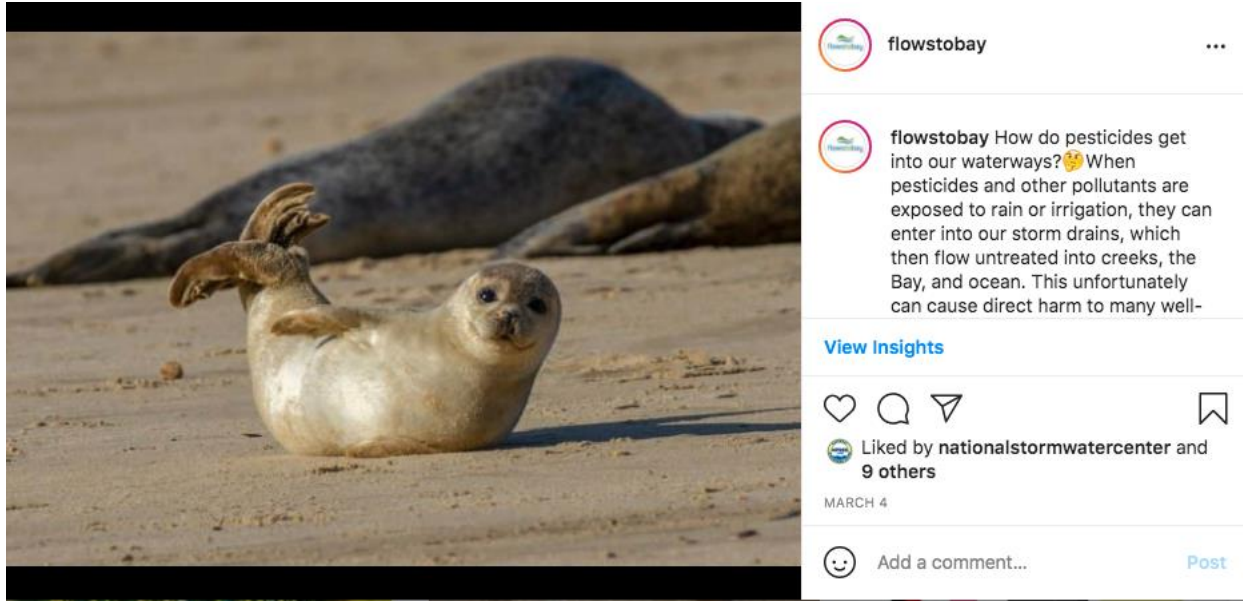


Figure 15-8. Instagram posts on pesticide pollution prevention topics.

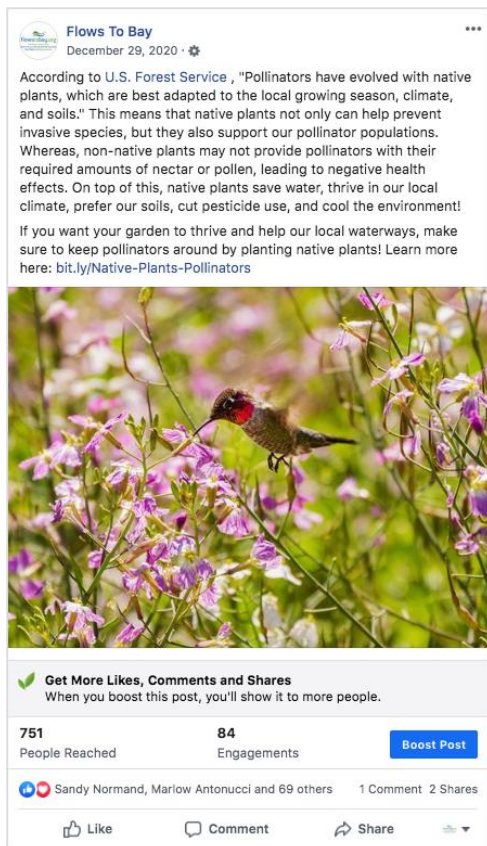


Table 15-3. Summary of Facebook posts promoting landscape management and the use of drought-tolerant, native vegetation

Post Focus	Reach	Engagements (likes, comments, and shares)	Clicks
Drought Tolerant, Native Vegetation (10 posts)	6,419	268	151
Best Practices for Hiring Landscape Professionals (4 posts)	2,927	41	30

Table 15-4. Summary of Instagram posts promoting landscape management and the use of drought-tolerant, native vegetation

Post Focus	Reach	Engagements (likes, comments, shares, and saves)
Drought Tolerant, Native Vegetation (6 posts)	787	114
Best Practices for Hiring Landscape Professionals (1 posts)	170	8





**Flows To Bay**  
June 28 · 🌐

Regenerative landscaping nourishes and gives back to the environment instead of depleting and polluting it. One of the regenerative landscaping principles includes saving water by capturing stormwater, using mulch, and planting drought-resistant plants.

Visit [rescapeca.org](https://rescapeca.org) to learn more and find a directory of qualified regenerative landscapers! ReScape California

👍 **Get More Likes, Comments and Shares**  
When you boost this post, you'll show it to more people.

990 People Reached      25 Engagements      [Boost Post](#)

👤 Janeen Malatesta, Savannah Miner and 11 others      1 Share

👍 Like      💬 Comment      ➦ Share      ⋮

Figure 15-9. Facebook posts promoting landscape management and the use of drought-tolerant, native vegetation.

**flowstobay** ...

flowstobay Interested in redesigning your landscaping? 🌿 Here are some useful tips for finding trustworthy landscaping professionals: [bit.ly/Landscaping-Pros](https://bit.ly/Landscaping-Pros)

#Landscaping #Tips #BestPractices #PollutionPrevention

[View Insights](#)

👍 Liked by [lyngsogardenmaterials](#) and 7 others

MAY 15

😊 Add a comment...      [Post](#)

Figure 15-10. Instagram post promoting landscape management and the use of drought-tolerant, native vegetation.



Figure 15-11. Instagram post promoting the October 21<sup>st</sup> “Native Plant and Pollinator Gardens” webinar with Bay Area Water Supply & Conservation Agency (BAWSCA) and the City of Millbrae.



The image shows a Facebook post from the page 'Flows To Bay' dated May 19. The post text reads: 'Registration closes today at 3:30 for the free online webinar tonight at 7pm! Explore a new and approachable way to develop designs for beautiful, productive, habitat rich, and maintainable native plant landscapes. Learn the steps and principles of creating a native plant landscape design. Register for free here: bit.ly/Native-Plant-Landscape-Webinar... See More'. Below the text is a photograph of a lush garden with various plants and a stone path. The post is categorized as an 'Online Event' titled 'Design It Yourself Native Plant Landscape' and includes an 'Interested' button. The post has 232 people reached and 19 engagements. The analytics panel on the right shows 7 reactions (6 likes, 1 love), 0 comments, 0 shares, 12 post clicks (7 link clicks, 5 other clicks), and 0 negative feedback items (2 hide posts, 0 report as spam, 0 unlike page). The post is liked by Wanda Runyon, Jairo Monar Zuluaga, and 5 others.

Figure 15-12. Facebook post promoting the May 19<sup>th</sup> “Design It Yourself Native Plant Landscape” webinar with BAWSCA and the City of Millbrae.





## Water Wise Webinar and Neighbor Inspiration

Webinar | SMC Resident Story | Facebook Live Event



As we head into the drier months and as **San Mateo County proceeds deeper into a severe drought**, we encourage residents to consider adding water wise gardening and landscaping practices at your home. There are choices each of us can make to help our outdoor spaces retain water and prevent pollution. This can lead to a decreased reliance on limited water supplies and save us money on our water bills—as you’ll see in the webinar it’s also great fun to create your own water wise project! Join our free online webinar on Thursday, May 27th at 5pm to learn about and prepare for your next water wise home project!

[Learn More and Register Here](#)

Figure 15-13. Screenshot of email about “Water Wise Gardening and Landscaping” Webinar.



Inspirational Water Wise Story from a San Mateo Resident

[ MAY 19, 2021 ]

- POST CATEGORIES**
- COMMUNITY CHAMPIONS
  - EVENTS
  - GARDEN & PESTICIDES

San Mateo County has officially entered a severe drought phase according to the **U.S. Drought Monitor**. After the area's last drought in 2015, residents throughout the county sought ways to integrate water wise practices into their gardening and landscaping practices.

Here's an example from one such resident who was kind enough to share her story and project pictures with Flows To Bay. Marlene from San Mateo writes:

Figure 15-14. Screenshot of blog on SWMPPP’s website that featured a water-wise resident.

## FUTURE ACTIONS

In FY 2021/22, SMCWPPP will continue to assist member agencies to comply with MRP 3.0 provision requirements related to conditionally exempt non-stormwater discharges, including conducting selected types of related outreach.

# Appendix 1

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- Stormwater Committee – Attendance List for FY 2020/21

2020-21 Stormwater Committee Attendance														
Agency	Representative	Position	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Atherton	Robert Ovadia	Public Works Director	X	X		X	X		X	X	X	X	X	
Belmont	Peter Brown	Public Works Director	X	X		O	X		X	X	X	X	X	
Brisbane	Randy Breault	Public Works Director/City Engineer	X			X	X		X	X	X	X		
Burlingame	Syed Murtuza	Public Works Director	X	X	C	X	X	C	X	X	X	X	X	C
Colma	Brad Donohue	Director of Public Works and Planning	X	X	A	X	O	A	X	O	O	X	X	A
Daly City	Richard Chiu	Public Works Director	X	X	N	X	X	N	X	X	X	X	X	N
East Palo Alto	Kamal Fallaha	City Engineer			C			C					O	C
Foster City	Dante Hall	Acting Public Works Director	X	X	E	X	X	E			X			E
Half Moon Bay	Maziar Bozorginia	City Engineer	X	X	L	X	O	L	X	X		X	X	L
Hillsborough	Paul Willis	Public Works Director	X	O	E	X	X	E	X	X	X	X	X	E
Menlo Park	Nikki Nagaya	Public Works Director	X		D	X		D	X	X			X	D
Millbrae	Andrew Yang	Senior Engineer	X	X		X	X		X	X		X	X	
Pacifica	Lisa Petersen	Public Works Director/City Engineer	O			X	X		X	X	X	X	X	
Portola Valley	Howard Young	Public Works Director		X		X	X		X		X	X	X	
Redwood City	Saber Sarwary	Supervising Civil Engineer	X			X	X			O		X		
San Bruno	Jimmy Tan	Public Works Director	X	X		X	X		X	X	X	X	O	
San Carlos	Steven Machida	Public Works Director	X	X		X	X		X	X	X	X	X	
San Mateo	Azalea Mitch	Public Works Director	X	X		X	X		X	X	X	X	X	
South San Francisco	Eunejune Kim	Public Works Director										O	X	
Woodside	Sean Rose	Public Works Director	X			X	X		X	X	X	X	X	
San Mateo County	Jim Porter	Public Works Director	X	O		X	X		X	O	X	X	X	
Regional Water Quality Control Board	Tom Mumley	Assistant Executive Officer												

"X" - Committee Member Attended

"O" - Other Jurisdictional Representative Attended

# Appendix 2

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- Municipal Maintenance Subcommittee – Attendance List for FY 2020/21

**SMCWPPP Municipal Maintenance Subcommittee Attendance FY 2020/21**

<b>NAME</b>	<b>MUNICIPALITY</b>	<b>3/10/2021</b>	<b>6/23/2021</b>
Marcus Escobedo	Belmont	✓	✓
Tim Murray	Belmont	✓	
Keegan Black	Brisbane	✓	
Jennifer Lee	Burlingame	✓	✓
Louis Gotelli	Colma	✓	
Sibely Calles	Daly City	✓	
Greg Baeza	Foster City	✓	✓
Hugo Torres	Menlo Park	✓	
Brian Henry	Menlo Park	✓	
Scott Jaw	Menlo Park	✓	
Christopher Falzon	Millbrae	✓	✓
Noel Gantley	Millbrae	✓	
Bernie Mau	Pacifica	✓	
Chris Martin	Pacifica	✓	
Paul Lavorini	Pacifica	✓	
Vicki Sherman	Redwood City	✓	✓
Ted Chapman	San Bruno	✓	✓
Vatsal Patel	San Carlos	✓	
John Allan	San Mateo County	✓	✓
Selena Gonzalez	San Mateo County		✓
Steve Camilleri	City of San Mateo	✓	
Sven Edlund	City of San Mateo	✓	
Casey Stevenson	San Mateo County Mosquito & Vector Control District	✓	
Kelly Carroll	Half Moon Bay/ Colma (CSG)	✓	
Nick Zigler	Half Moon Bay/ Colma (CSG)	✓	
Kristin Kerr	EOA, Inc.	✓	✓
Reid Bogert	SMCWPPP		✓
Peter Schultze-Allan	EOA, Inc.	✓	

## Appendix 3

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- New Development Subcommittee – Attendance List for FY 2020/21
- Biotreatment Soil Media Supplier List 7/1/2021
- Bay Area Suppliers of Wood Mulches for Bioretention Areas
- Wood Mulch Specification for Stormwater Biotreatment Areas



**SAN MATEO COUNTYWIDE**  
**Water Pollution Prevention Program**  
 Clean Water. Healthy Community.

**New Development Subcommittee**

**FY 2020-21 Meeting Attendance**

Representing	Name	Phone Number	Aug	Nov	Feb	May
Atherton	Jake Garcia	650-752-0544	X	X	X	X
Belmont	Anwar Mirza				X	X
	Elizabeth Wada	650-637-2985				X
Brisbane	Ken Johnson	415-508-2120	X	X		
	Julia Ayres			X	X	X
Burlingame	Jennifer Lee	650-558-7381	X	X	X	X
Colma	Muneer Ahmed/Michael Laughlin	650-757-8894	X	X	X	X
	Nick Zigler	650-522-2506	X	X	X	X
County of San Mateo	Camille Leung	650-363-1826	X		X	X
	John Allan	650-363-4071	X	X		X
	Melody Eldridge	650-363-1812	X	X	X	X
C/CAG – SMCWPPP	Matt Fabry	650-599-1419	X	X		X
	Reid Bogert	650-599-1433	X	X	X	X
Paradigm Env. CD+A, URD	Dustin Bambic, Steve Carter, Garrett Ward (Paradigm)	503-928-5522		X		
Daly City	Sibely Calles	650-991-8054	X	X	X	X
	Carmelisa Morales	650-991-8156	X	X	X	X
East Palo Alto	Michelle Daher	650-853-3126				
EOA-SMCWPPP	Jill Bicknell/Kristin Kerr	408-720-8811 x1	X	X	X	X
	Peter Schultze-Allen	510-832-2852 x128	X	X	X	X
Foster City	Vivian Ma	650-286-3270	X	X	X	X
	Stephanie MacDonald	650-286-3274				
Half Moon Bay	Kelly Carroll/Nick Zigler	650-522-2506	X	X	X	X
	Maziar Bozorgina	650-726-7177				
Hillsborough	Natalie Gribben/Kelly Carroll	650-375-7444	X		X	XX
	Doug Belcik/Irfan Aziz	650-375-7444	X	X	X	X
Menlo Park	Rambod Hakhamaneshi	650-330-6740		X	X	X
Millbrae	Andrew Yang/Sam Fielding	650-259-2351		X	X	X
	Jane Kao	650-522-2506		X	X	
	Roscoe Mata/Darcy Smith				X	
	Kelly Carroll	650-522-2506	X	X	X	X
Pacifica	Christian Murdock	650-738-7444				
	Bonny O'Connor	650-738-3767	X	X	X	X
Portola Valley	CheyAnne Brown	650-851-1700	X	X	X	X
Redwood City	James O'Connell/Vicki Sherman	650-780-5923	X	X	X	X
San Bruno	Matt Neuebaumer	650-616-7042	X	X	X	
	David Wong			X	X	X
	Joanna Kwok	650-616-7052	X	X	X	X
San Carlos	Vatsal Patel	650-802-4212	X	X	X	X
San Mateo	Bradley Harms/Gustavo Lopez	650-522-7333	X	X		XX
	Tracy Scramaglia					X
	Leo Chow					X
	Sven Edlund	650-522-7296	X	X	X	X
San Mateo County RCD	Noah Katz	650-712-7765 x117		X		
South S.F.	Daniel Garza	650-829-3882			X	
	Andrew Wemmer	650-829-3840	X	X	X	X
Woodside	Dong Nguyen/Muneer Ahmed	650-851-6790	X	X	X	X



## BIOTREATMENT SOIL MEDIA SUPPLIER LIST

Company	Contact Name	Phone	Address	City	Zip	Email	Website
American Soil & Stone Products Inc.	Ryan Hoffman	510-292-3018	Richmond Annex, 2121 San Joaquin St, Bldg A	Richmond	94804	<a href="mailto:ryan@americansoil.com">ryan@americansoil.com</a>	<a href="http://www.americansoil.com">www.americansoil.com</a>
California Landscape Supply	Ryan Thornberry	209-538-8493	4107 Morgan Road	Ceres	95307	<a href="mailto:ryan@californialandscapesupply.com">ryan@californialandscapesupply.com</a>	<a href="http://www.californialandscapesupply.com">www.californialandscapesupply.com</a>
Evergreen Supply	Aaron Sloan	831-724-5110 408-763-9240	33 Riverside Road	Watsonville	95076	<a href="mailto:aaron@evergreensupplyonline.com">aaron@evergreensupplyonline.com</a>	<a href="http://www.evergreensupplyonline.com">www.evergreensupplyonline.com</a>
L.H. Voss Materials, Inc.	Nyoka Corley	925-676-7910 x102	5965 Dougherty Road	Dublin	94568	<a href="mailto:nyoka.corley@gmail.com">nyoka.corley@gmail.com</a>	<a href="http://www.lhvoss.com">www.lhvoss.com</a>
Lehigh Hanson Aggregates	Chris Stromberg	510-246-0393	4501 Tidewater Ave.	Oakland	94601	<a href="mailto:chris.stromberg@lehighhanson.com">chris.stromberg@lehighhanson.com</a>	<a href="http://www.lehighhanson.com">www.lehighhanson.com</a>
Lyngso Garden Materials, Inc.	Kan Parthiban Erik Aichelen	650-257-9836 650-333-1044 x131	345 Shoreway Road	San Carlos	94070	<a href="mailto:kparthiban@lyngsogarden.com">kparthiban@lyngsogarden.com</a> <a href="mailto:eaichelen@lyngsogarden.com">eaichelen@lyngsogarden.com</a>	<a href="http://www.lyngsogarden.com">www.lyngsogarden.com</a>
Marshall Brothers Enterprises, Inc.	Phillip Marshall	925-449-4020	P.O. Box 2188	Livermore	94551	<a href="mailto:phillip@mbenterprises.com">phillip@mbenterprises.com</a>	<a href="http://www.mbenterprises.com">www.mbenterprises.com</a>
Pleasanton Trucking Inc.	Tom Bonnell	925-449-5400	P.O. Box 11462	Pleasanton	94588	<a href="mailto:tom@ptisoils.com">tom@ptisoils.com</a>	
Recology Blossom Valley Organics	Product Sales	209-602-8325	3909 Gaffery Road	Vernalis	95385	<a href="mailto:recologyorganics@recology.com">recologyorganics@recology.com</a>	<a href="http://www.recology.com/organics">www.recology.com/organics</a>
Soiland Company	Willie Leuzinger	707-889-7800	7171 Stony Point Rd.	Cotati	94931	<a href="mailto:WLeuzinger@SoilandRocks.com">WLeuzinger@SoilandRocks.com</a>	<a href="http://www.SoilandRocks.com">www.SoilandRocks.com</a>
South County Rockery	Todd Quilici	408-842-0022	281 Yamane Dr.	Gilroy	95020	<a href="mailto:todd@southcountyrockery.net">todd@southcountyrockery.net</a>	<a href="http://www.southcountyrockery.net/florite-blend-bioswale">www.southcountyrockery.net/florite-blend-bioswale</a>
TMT Enterprises, Inc.	Matt Moore	408-432-9040	1996 Oakland Road	San Jose	95131	<a href="mailto:info@tmtenterprises.net">info@tmtenterprises.net</a>	<a href="http://www.tmtenterprises.net">www.tmtenterprises.net</a>

As of: 7/1/2021

Disclaimer: SMCWPPP provides this list of biotreatment soil media suppliers for the use of its member agencies, contractors, designers and others in finding suppliers for their projects. Suppliers are listed based on a general review of their soil media product including test results, adherence to the [BASMAA Biotreatment Soil Media specification](#) (required in the MRP) and knowledge of the specification. Therefore users of this SMCWPPP list must make the final determination as to the products and adherence to the BASMAA specification and the MRP. Users of the list assume all liability directly or indirectly arising from use of this list. The listing of any soil supplier is not be construed as an actual or implied endorsement, recommendation, or warranty of such soil provider or their products, nor is criticism implied of similar soil suppliers that are not listed. This disclaimer is applicable whether the information is obtained in hard copy or downloaded from the Internet. Check the SMCWPPP website for the "Biotreatment Soil Mix Verification Checklist" and "Biotreatment Soil Mix Supplier Verification Statement" for assistance in reviewing and approving soil media submittals. [www.flowstobay.org/newdevelopment](http://www.flowstobay.org/newdevelopment)



## Bay Area Suppliers of Wood Mulches for Bioretention Areas

1. American Soil and Stone in Berkeley and Richmond – Urban Mulch:  
<http://www.americansoil.com/index.html>
2. Green Waste Recycle Yard in Richmond – Mixed and Aged Mulch:  
[www.greenwasterecycleyard.com/products.htm](http://www.greenwasterecycleyard.com/products.htm)
3. L.H. Voss in Dublin – Arbor Mulch and Composted Mulch:  
<https://lhvoss.com/>
4. Lyngso Garden Supply in San Carlos – Premium Arbor Mulch:  
<https://store.lyngsogarden.com/products/premium-arbor-mulch-112.html>
5. TMT in San Jose – Organic Composted Mulch and Arbor Mulch:  
<http://www.tmtenterprises.net/products.php>
6. Zanker Landscape Materials in San Jose – Organic Bioretention Mulch and Arbor Mulch:  
[www.zankerlandscapematerials.com/organic-bioretention-mulch](http://www.zankerlandscapematerials.com/organic-bioretention-mulch)  
<https://www.zankerlandscapematerials.com/arbor-mulch>

### Disclaimer:

SMCWPPP provides this list of Bay Area mulch suppliers for the use of its member agencies, contractors, designers and others in finding suppliers of mulch for their projects. There is currently no specification for mulch used in bioretention areas, but aged or composted arbor mulch (made from ground or chipped tree trimmings) is recommended. Suppliers are listed in alphabetical order and inclusion is based on a general review of their mulch products and discussions with representatives of the companies. Therefore users of this SMCWPPP list must make the final determination as to the products. Users of the list assume all liability directly or indirectly arising from use of this list. The listing of any mulch supplier is not to be construed as an actual or implied endorsement, recommendation, or warranty of such mulch supplier or their products, nor is criticism implied of similar mulch suppliers that are not listed. Some of the mulches are listed on the websites below and some are not. Contact each supplier for more information.

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

# COMPOSTED WOOD MULCH SPECIFICATION FOR STORMWATER BIOTREATMENT AREAS

**Overview:** This specification for composted wood-based mulch was developed for use in engineered stormwater biotreatment areas. The specification provides for a consistent mulch product that enhances water quality; improves water retention and plant health; has been treated to reduce any potential pathogens, insects or invasive weed seeds; and has reduced floating and migration potential. There are three parts of the specification: feedstocks, processing and testing.

**A. Feedstocks:** This mulch shall be derived from plant debris with at least 90% consisting of clean (minimal trash) woody vegetation such as “Arbor Mulch” (i.e., tree trunks, branches, stumps, and brush). Up to 10% by volume may be derived from other clean source-separated feed stocks, such food scraps, and/or other woody materials, such as clean uncoated lumber.<sup>1</sup>

**B. Processing:** These feedstock materials shall be: 1) composted; 2) meet the PFRP (Process to Further Reduce Pathogens) standard to reduce weed seeds, pathogens, and deleterious materials under 14 CA Code of Regs §17868.3 (i.e., reaching the required minimum temperature of 55 degrees Celsius for the required length of time<sup>2</sup>); and 3) screened to meet the specifications in Table 1 below<sup>3</sup>. No dyes or gorilla hair (fiber mulch) shall be used in the finished mulch product.

**C. Testing and laboratory-related requirements:** All testing of the mulch product shall be completed within 120 days prior to delivery to the site by an STA Program-approved laboratory<sup>4</sup>. A 3- to 4-gallon sample of the mulch product shall be submitted to the laboratory for testing, to provide enough fines from the product to complete the specific testing procedures.

**Table 1: Specifications for Composted Wood Mulch for Stormwater Biotreatment Areas**

Property	Test Method/Units <sup>5</sup>		Requirement	
1. pH	TMECC 04.11-A	Elastomeric pH 1:5 slurry method (pH units)	6.0 – 8.5	
2. Soluble salts	TMECC 04.10-A	Electrical conductivity 1:5 slurry method (dS/m or mmhos/cm)	≤ 6.0	
3. Moisture Content	TMECC 03/09-A	Total solids & moisture at 70±5 °C (% wet weight basis)	30-55%	
4. Organic matter content	TMECC 05.07-A	Loss-on-ignition organic matter method (% dry weight basis)	≥ 65	
5. Maturity	TMECC 05.05-A	Germination and vigor (% relative to positive control)	--	
		Seed emergence	≥ 80	
		Seedling vigor	≥ 80	
6. Stability	TMECC 05.08-B	Carbon dioxide evolution rate (mg CO <sub>2</sub> -C/g OM per day)	≤ 5	
7. Pathogen	TMECC 07.01-B	Salmonella (MPN per 4 grams, dry weight basis)	< 3	
8. Pathogen	TMECC 07.01-B	Fecal coliform bacteria (MPN per gram, dry weight basis)	< 1,000	
9. Physical contaminants	TMECC 02.02-C	Human-made inert removal and classification: plastic, glass, and metal (% > 4 mm fraction)	combined total: < 0.5%	
10. Physical contaminants	TMECC 02.02-C	Film plastic: (% > 4 mm fraction)	< 0.1%	
11. Sizing	TMECC 02.02-B	Sample sieving for aggregate size classification (% dry weight basis)	<b>Min</b>	<b>Max</b>
		Pass 3-inch sieve	100%	--
		Pass 2-inch sieve	90%	--
		Pass 3/8-inch sieve	20%	40%

<sup>1</sup> Unacceptable feedstocks: dyed mulches, plywood, laminated wood products, glued laminated timber (Glulam), oriented strand board (OSB), painted wood, stained wood, pressure-treated wood or other treated wood waste (TWW), or any other manufactured wood products with non-wood ingredients, such as adhesives, or wood treated with chemicals of any kind. Metal concentrations in compost must not exceed the maximum listed in 14 CA Code of Regs §17868.2.

<sup>2</sup> <https://govt.westlaw.com/calregs> (§17868.3. Pathogen Reduction)

<sup>3</sup> Based on the Caltrans specification for “Coarse Compost” with modifications for use in biotreatment systems.

<sup>4</sup> List of approved testing laboratories: [www.compostingcouncil.org/page/CertifiedLabs](http://www.compostingcouncil.org/page/CertifiedLabs)

<sup>5</sup> TMECC refers to “Test Methods for the Examination of Composting and Compost,” published by the United States Department of Agriculture and the United States Compost Council (USCC).

# Appendix 4

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- CII Subcommittee – Attendance List for FY 2020/21
- CII Stormwater Inspector Workshop – September 17, 2020
  - Workshop Agenda
  - Attendance List
  - Evaluations Summary
- CII Stormwater Inspector Workshop Group Exercise – May 17, 2021
  - Attendance List
  - Evaluations Summary

**SMCWPPP Commercial/Industrial/Illicit Discharge (CII) Subcommittee Attendance – FY 2020/21**

<b>Name</b>	<b>Agency</b>	<b>9/1/20</b>	<b>12/1/20</b>	<b>3/2/21</b>	<b>6/1/21</b>
Jake Garcia	City of Atherton	✓	✓	✓	
Bozhena Palatnik	City of Belmont	✓		✓	✓
Keegan Black	City of Brisbane		✓		
Jennifer Lee	City of Burlingame		✓	✓	✓
Dan Ferah	City of Burlingame (Veolia)	✓	✓	✓	✓
Louis Gotelli	City of Colma		✓		
Ward Donnelly	City of Daly City	✓		✓	✓
Sibely Calles	City of Daly City	✓	✓	✓	✓
Stephanie MacDonald	City of Foster City	✓	✓	✓	
Vivian Ma	City of Foster City		✓		✓
Irfan Aziz	Town of Hillsborough			✓	
Pam Lowe	City of Menlo Park			✓	
Scott Jaw	City of Menlo Park			✓	✓
Clarence Li	City of Menlo Park	✓			
Cliff Ly	City of Millbrae			✓	✓
Lawrence Henriquez	City of Pacifica	✓			
Howard Young	Town of Portola Valley			✓	
Vicki Sherman	City of Redwood City	✓	✓		✓
Summer Utigard	City of Redwood City				✓
Evan Cai	City San Carlos				✓
Vatsal Patel	City of San Carlos			✓	
Richard Kraft	City of San Mateo	✓	✓		
Bradley Harms	City of San Mateo			✓	✓
Gustavo Lopez	City of San Mateo				✓
Sven Edlund	City of San Mateo	✓	✓	✓	
Daniel Garza	South San Francisco		✓	✓	✓
Pat Ledesma	County of San Mateo	✓	✓	✓	
John Allan	County of San Mateo		✓		
Susan Hiestand	Silicon Valley Clean Water (SVCW)	✓	✓	✓	✓
Ben Padua Jr	SVCW	✓	✓		
Kelly Carroll	CSG/Half Moon Bay/Colma/Portola Valley	✓	✓	✓	✓
Nick Zigler	CSG/Colma/Half Moon Bay		✓	✓	✓
Kristin Kerr	EOA, Inc.	✓	✓	✓	✓



## COMMERCIAL/INDUSTRIAL STORMWATER INSPECTOR WORKSHOP

*Sponsored by the Commercial/Industrial/Illicit Discharge (CII) Subcommittee*

**Thursday, September 17, 2020**

Webex Workshop

[Join meeting](#)

### WORKSHOP AGENDA

---

10:00 AM	Welcome	Kristin Kerr, <i>EOA, Inc.</i>
10:10 AM	Regulatory Overview (Module 1)	Recorded Presentation
10:30 AM	Q&A	
10:40 AM	Inspection Process (Module 2)	Recorded Presentation
11:00 AM	Q&A	
11:10 AM	Inspector Resources	Recorded Presentation
11:20 AM	Q&A	
11:30 AM	Summary Remarks, Adjourn	Kristin Kerr, <i>EOA, Inc.</i>

*\*\* Attendance at this workshop is acceptable for 1.5 Contact Hours toward maintaining CWEA certifications. \*\**

**At the end of the Workshop please complete the electronic Workshop Evaluation survey using the following: [link](#)**

**SMCWPPP CII Stormwater Inspector Training Webinar  
September 17, 2020  
Attendance List**

	<b>First Name</b>	<b>Last Name</b>	<b>Agency</b>
1	Reid	Bogert	C/CAG
2	David	Martinez	City of Belmont
3	Vivian	Ma	City of Foster City
4	Stephanie	MacDonald	City of Foster City
5	Evelyn	Moran	City of Half Moon Bay
6	Gwendolyn	White	City of Pacifica
7	Chad	Cattaneo	City of Redwood City
8	Cory	Cattaneo	City of Redwood City
9	Benjamin	Fenech	City of Redwood City
10	Robin	Kim	City of Redwood City
11	Adalberto	Munguia	City of Redwood City
12	Matthias	Nickle	City of Redwood City
13	Vicki	Sherman	City of Redwood City
14	Latu	Taufalele	City of Redwood City
15	Richard	Kraft	City of San Mateo
16	Daniel	Garza	City of South San Francisco
17	Thomas	Siphongsay	City of South San Francisco
18	Christina	Tai	City of South San Francisco
19	Andrew	Wemmer	City of South San Francisco
20	Nelson	Yuk	City of South San Francisco
21	Kelly	Carroll	CSG Consultants
22	Catherine	Chan	CSG Consultants
23	Jen	Chen	CSG Consultants
24	Katherine	Sheehan	CSG Consultants
25	Nick	Zigler	CSG Consultants
26	Susan	Hiestand	Silicon Valley Clean Water
27	Benjamin	Padua	Silicon Valley Clean Water
28	Francis	Rooney	Silicon Valley Clean Water
29	Jacob	Garcia	Town of Atherton
30	Irfan	Aziz	Town of Hillsborough
31	Natalie	Gribben	Town of Hillsborough
32	Howard	Young	Town of Portola Valley



**Summary of Evaluations**  
**Attendance: 33**  
**Evaluations: 20**

**COMMERICAL/INDUSTRIAL STORMWATER INSPECTOR WORKSHOP**

Webinar

Thursday, September 17, 2020

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**1. Training Module 1: Regulatory Overview**

Very Useful **18**                      Somewhat Useful **2**                      Not useful **0**

**2. Training Module 2: Basic Inspection Procedure**

Very Useful **18**                      Somewhat Useful **2**                      Not useful **0**

**3. Training Module 3: Resources**

Very Useful **15**                      Somewhat Useful **4**                      Not useful **1**

**4. Have you attended a SMCWPPP CII Training Workshop before?**    Yes: **9**    No: **7**

**5. Would you recommend the recorded modules to other inspectors?**    Yes: **20**    No: **0**

- The photos included in the modules were very helpful (showed good examples of do's and don'ts).
- First one is best.
- Helpful overview and discussion on the CII business inspections
- It was a good basic review of everything
- Seemed to be a few technical glitches. I didn't get a link to the training and had to contact a co-worker.
- Great visuals!
- I would recommend this to all inspectors as it contains a wide range of information for both beginning inspectors and those more experienced.

**6. Do you prefer online training or in-person training?**

Online training:        2  
 In-person training:    6  
 No Preference:        12

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

- The resources demonstration
- Great overview of C.4 requirements!
- Modules 2 and 3 were very helpful, and a good opportunity to review.
- Modules 2 and 3 were helpful for finding resources and examples of specific findings to make/note.
- Modules 1 and 2. Going over the SMARTS search and how to identify non-filers.



- Module 1
- Module 2
- All
- All of it. There was a lack of interaction. Need to use zoom with breakout groups.
- I most appreciated the specific examples for inspections
- Great visuals and bullet points. Without the audio, I can look at the Powerpoint and understand what information is being shared.
- Great training for any inspectors just beginning in the field
- The photos relating to inspection procedures, ideas on what to look out for during an inspection, subtle signs of improper BMPs

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

- Regulatory more in depth and slower - it was really hard to take notes timed with the slides.
- I think it would be helpful to go through an inspection form and complete it based on photos of a facility. I think there are a lot of interpretations with regards to the numbers associated with BMP effectiveness.
- More discussion of realistic edge cases about whether a site should be part of the IGP, and when violations should be issued for the various categories (trash, debris, messy tallow bins, sediment issues, etc.). Maybe this could be its own 4th module, with photos and discussion of what is being seen and actions that should be taken.
- Construction/building processes and how it relates to stormwater inspections? Different types of erosion control methods.

**9. General Comments?**

- First module should be slower paced for note-taking and understanding of information. Slides were information heavy and very good but moved through too quickly.
- Online works for now, but in person with observations and conversations are more helpful. Since we're in online mode and if this continues, you could create break out groups and have folks have discussions and solve problems together. It would make it more interactive.
- The microphone quality wasn't the greatest during Module 2. I would recommend testing first to ensure good quality audio. Overall though I like the recorded presentations, it is good for saving for later for future new inspectors and refreshing experienced inspectors.
- Great presentation
- I thought the recorded sessions went well. It is still definitely helpful to have staff there for questions that arise. Thank you for setting it up.

## SMCWPPP CII Stormwater Inspector Training - Group Exercise

May 17, 2021

	First Name	Last Name	Agency
1	Reid	Bogert	C/CAG
2	Keegan	Black	City of Brisbane
3	Dan	Farah	City of Burlingame
4	Vivian	Ma	City of Foster City
5	Cliff	Ly	City of Millbrae
6	Michael	Villaflor	City of Pacifica
7	Jason	Claire	City of Redwood City
8	Robin	Kim	City of Redwood City
9	Michael	Patolo	City of Redwood City
10	Vicki	Sherman	City of Redwood City
11	Timote	Vaka	City of Redwood City
12	Sven	Edlund	City of San Mateo
13	Bradley	Harms	City of San Mateo
14	Gustavo	Lopez	City of San Mateo
15	Christina	Tai	City of South San Francisco
16	Nelson	Yuk	City of South San Francisco
17	Kylie	Kammerer	EOA, Inc.
18	Courtney	Siu	EOA, Inc.
19	Matthew	Byrne	EOA, Inc.
20	Nick	Zigler	Many Municipalities
21	Nicole	Cheever	San Mateo County
22	Sabrina	Mih	San Mateo County
23	Andy	Myers	San Mateo County
24	Monica	Banning	San Mateo County Environmental Health
25	Dermot	Casey	San Mateo County Environmental Health
26	Amy	DeMasi	San Mateo County Environmental Health
27	HELEN	GODINEZ	San Mateo County Environmental Health
28	Jennifer	Gonzales	San Mateo County Environmental Health
29	Apollonia	Helm	San Mateo County Environmental Health
30	Dirk	Jensen	San Mateo County Environmental Health
31	Patrick	Ledesma	San Mateo County Environmental Health
32	Annie	Luu	San Mateo County Environmental Health
33	Erin	Thomas	San Mateo County Environmental Health
34	Aris	Veloso	San Mateo County Environmental Health
35	Susan	Hiestand	Silicon Valley Clean Water
36	Mark	Swenson	Silicon Valley Clean Water
37	Jacob	Garcia	Town of Atherton
38	Louis	Gotelli	Town of Colma
39	Irfan	Aziz	Town of Hillsborough
40	Douglas	Belcik	Town of Hillsborough

**SMCWPPP CII STORMWATER INSPECTOR TRAINING – GROUP EXERCISE**

Zoom Meeting

Monday, May 17, 2021

**1. How useful did you find this training exercise**

Very Useful **26**                                      Somewhat Useful **3**                                      Not useful **1**

**2. Would you want to have this training exercise again?**

Yes **26**                                      Yes, but in-person **3**                                      No **1**

**3. How active were your breakout rooms?**

Everyone participated.....**5**  
 Most people participated .....**21**  
 Only a few people actively participated ...**4**

**4. How long have you been doing Stormwater Business Inspections**

<1 year                      4  
 1-2 years                    12  
 3-5 years                    8  
 6-10 years                  5  
 >10 years                    7

**5. General Comments**

- Spent most of the time with technical issues in breakout room, and rest of "training" was just people talking about their own personal opinions instead of anyone providing useful information on what is actually required.
- We had different participation depending on the group facilitator. One facilitator didn't know how to show slide as slide show.
- Great format. Would be helpful too to see larger area. There is wide variation in opinion on violations though.
- A bit heavy on the used oil bins. Maybe more variety of situations (but I realize you're dependent on us to give those).
- Great training for beginning to intermediate inspectors, would be nice to see something geared towards senior inspectors.
- Good training, but felt only a few people spoke up, and I didn't want to dominate conversation either.
- Great idea, time management is always difficult for these.
- Good training and breakout room case studies.
- Much better via zoom - easier to see slides - better participation
- Great training and case scenarios. Very helpful. Thank you.

- Good training. I liked the breakout rooms
- I found this training very useful. I appreciated hearing what others had to say and ideas for best course of action. Thank you!
- Good diversity of opinions on corrective actions
- As a new employee, these sessions are very helpful
- A real pleasure to attend. Very good info and lively groups. Shared info among all of us felt very beneficial to me, and hopefully for everyone else. My thanks.
- Great case studies and great to see how other agencies would respond to these studies. Breakout rooms made it easy and manageable for interaction.
- Great job to everyone
- Great training.

# Appendix 6

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- CALBIG Meeting: Construction Site Stormwater Compliance – October 14, 2020
  - Attendance List
- Construction Site Stormwater Inspections Training – March 16, 2021
  - Workshop Agenda
  - Attendance List
  - Evaluations Summary

CALBIG C.6 Workshop Attendance List - October 14, 2020

	Name	Agency
1	Stephanie MacDonald	City of Foster City
2	Vivian Ma	City of Foster City
3	Ben Corrales	City of Half Moon Bay
4	Romeo Herrera	City of Millbrae
5	Bill Tott	City of Milpitas
6	Vicki Sherman	City of Redwood City
7	Joan Zierott	City of San Bruno
8	Joanna Kwok	City of San Bruno
9	John Murphy	City of San Bruno
10	Evan Cai	City of San Carlos
11	Sophia Lee	City of San Carlos
12	Alice Chen	City of San Mateo
13	Leo Chow	City of San Mateo
14	Michelle Kenyon	City of San Mateo
15	Vivian Seto	City of San Mateo
16	Alan Velasquez	County of San Mateo
17	Alex Zhang	County of San Mateo
18	Camille Leung	County of San Mateo
19	John Schabowski	County of San Mateo
20	Michael Gorman	County of San Mateo
21	Michelle Manalo	County of San Mateo
22	Sina Oshaghi	County of San Mateo
23	Summer Burlison	County of San Mateo
24	Jonathan Kwan	Town of Colma
25	Ed Cooney	Town of Hillsborough
26	Farris Hix	4LEAF
27	Leigh Simpson	Bay Area Electric
28	Catherine Chan	CSG Engineers
29	Jay Gonzales	CSG Engineers
30	Jeff Lee	CSG Engineers
31	Jen Chen	CSG Engineers
32	Mehdi Sharifi	CSG Engineers
33	Rhafaël Herrera	CSG Engineers

**Construction Site Stormwater Inspections**  
**Training for Municipal Inspectors**  
**Tuesday, March 16, 2021**

[Click Here To Join the Zoom Meeting](#)

Call-in option: 1-669-900-6833 Meeting ID: 957 6807 5132 Passcode: 509197

**AGENDA**

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<b>9:00 AM</b>	<b>Welcome</b>	Reid Bogert, C/CAG
9:10 AM	Regulatory Basics	Kristin Kerr, P.E. <i>EOA, Inc.</i>
9:40 AM	Stormwater Strategies: Erosion and Sediment Control	County of San Diego Video
9:50 AM	Municipal Use of Compost and Mulch for Stormwater and Zero Waste	Ron Alexander, <i>R. Alexander Associates, Inc.</i>
10:30 AM	Stormwater Strategies: How to Protect Storm Drains	County of San Diego Video
<b>10:40 AM</b>	<b>BREAK</b>	
10:50 AM	Stormwater Strategies: How to Install Fiber Rolls	County of San Diego Video
11:00 AM	Construction Site Best Management Practices	Peter Schultze-Allen <i>EOA, Inc.</i>
11:15 AM	Covid Impacts on Inspections	Breakout Sessions
11:35 AM	SB 1383 Procurement Requirements	Peter Schultze-Allen <i>EOA, Inc.</i>
11:55 AM	Q&A and Wrap Up	All
<b>12:00 PM</b>	<b>Adjourn</b>	

\*\* Attendance at this workshop is acceptable for 2.5 PDUs toward maintaining CPESC,  
 CESSWI and/or CPSWQ certifications. \*\*

**SMCWPPP Construction Site Municipal Stormwater Inspection Training Workshop**

**March 16, 2021**

**Attendance List**

<b>First Name</b>	<b>Last Name</b>	<b>Organization</b>
Nick	Njuguna	City of Belmont
Keegan	Black	City of Brisbane
Jennifer	Lee	City of Burlingame
Hillary	Tung	City of Burlingame
John	Arellano	City of Daly City
Carmelisa	Morales	City of Daly City
Iqbal	Rai	City of Daly City
Vivian	Ma	City of Foster City
Stephanie	MacDonald	City of Foster City
Theresa	Avedian	City of Menlo Park
Scott	Jaw	City of Menlo Park
Esther	Jung	City of Menlo Park
Rene	Morales	City of Menlo Park
Jason	Santos	City of Menlo Park
Ebby	Sohrabi	City of Menlo Park
Chris	Witschi	City of Menlo Park
Mel	Yambao	City of Menlo Park
Keith	Voong	City of Millbrae
Andy	Wong	City of Millbrae
Ryan	Marquez	City of Pacifica
Michael	Villaflor	City of Pacifica
Paolo	Baltar	City of Redwood City
Alex	Chan	City of Redwood City
Joel	Evora	City of Redwood City
Kahner	Hughes	City of Redwood City
Patti	Schrotenboer	City of Redwood City
Sayed	Zahori	City of Redwood City
Joanna	Kwok	City of San Bruno
Dalia	M	City of San Bruno
Hae	Ritchie	City of San Bruno
Evan	Cai	City of San Carlos
Justin	Erickson	City of San Carlos
Sophia	Lee	City of San Carlos
Ryan	Brunmeier	City of San Mateo
Sven	Edlund	City of San Mateo
Bradley	Harms	City of San Mateo
Calvin	Iwan	City of San Mateo
Michelle	Kenyon	City of San Mateo
Tracy	Scramaglia	City of San Mateo
Daniel	Garza	City of South San Francisco
Thomas	Siphongsay	City of South San Francisco
Christina	Tai	City of South San Francisco
Nelson	Yuk	City of South San Francisco
Zack	Azzari	County of San Mateo



**SMCWPPP Construction Site Municipal Stormwater Inspection Training Workshop**

**March 16, 2021**

**Attendance List**

Scott	Burklin	County of San Mateo
Summer	Burlison	County of San Mateo
Armando	Carlos	County of San Mateo
Julie	Casagrande	County of San Mateo
Tiffany	Deng	County of San Mateo
Melody	Eldridge	County of San Mateo
Theresa	Engle	County of San Mateo
Aaron	Francis	County of San Mateo
Selena	Gonzalez	County of San Mateo
Michael	Gorman	County of San Mateo
Emmett	Jackson	County of San Mateo
Camille	Leung	County of San Mateo
Anthony	Lum	County of San Mateo
Michelle	Manalo	County of San Mateo
Sina	Oshaghi	County of San Mateo
Joshua	Rawley	County of San Mateo
Laura	Richstone	County of San Mateo
John	Schabowski	County of San Mateo
Lawrence	Truong	County of San Mateo
Alan	Velasquez	County of San Mateo
Johnson	Young	County of San Mateo
Alex	Zhang	County of San Mateo
Michelle	Bocalan	CSG Consultants
Kelly	Carroll	CSG Consultants
Catherine	Chan	CSG Consultants
Jen	Chen	CSG Consultants
Steve	Davis	CSG Consultants
Jay	Gonzales	CSG Consultants
Arash	Kimia	CSG Consultants
Mark	Matthews	CSG Consultants
Rudy	Pada	CSG Consultants
Mehdi	Sharifi	CSG Consultants
Nick	Zigler	CSG Consultants
Jacob	Garcia	Town of Atherton
Muneer	Ahmed	Town of Colma
Irfan	Aziz	Town of Hillsborough
Sindhi	Mekala	Town of Woodside
Dan	Farah	Veolia



Summary of Evaluation Forms  
Total attendance: **83**  
Total evaluation forms received: **57**

**SMCWPPP Construction Site Inspection Workshop  
Virtual Workshop (Zoom) - Tuesday, March 16, 2021  
9 a.m. – 12 p.m.**

**What Did You Think of the Following Presentations and Workshop Items?**

- 1. Regulatory Basics** - Kristin Kerr, *EOA, Inc.*  
**51** very useful      **6** somewhat useful      **0** not useful
- 2. Stormwater Strategies: Erosion and Sediment Control** – County of San Diego Video  
**51** very useful      **6** somewhat useful      **0** not useful
- 3. Municipal Use of Compost and Mulch for Stormwater and Zero Waste** – Ron Alexander, *R. Alexander Associates, Inc.*  
**43** very useful      **14** somewhat useful      **0** not useful
- 4. Stormwater Strategies: How to Protect Storm Drains** – County of San Diego Video  
**45** very useful      **10** somewhat useful      **0** not useful
- 5. Stormwater Strategies: How to Install Fiber Rolls** – County of San Diego Video  
**47** very useful      **8** somewhat useful      **0** not useful
- 6. Construction Site Best Management Practices (BMPs)** – Peter Schultze-Allen, *EOA, Inc.*  
**50** very useful      **5** somewhat useful      **0** not useful
- 7. COVID Impacts on Inspections** – Breakout Sessions  
**19** very useful      **24** somewhat useful      **6** not useful
- 8. SB 1383 Procurement Requirements** – Kristin Kerr, *EOA, Inc.*  
**42** very useful      **11** somewhat useful      **0** not useful

**Did this workshop meet your expectations?**      **57** Yes      **0** No

**What did you find the most valuable from the webinar/workshop?** The videos (x7). Variety of BMPs information and real-life examples (x9). Compost presentation (x6). Regulations, SB 1383 & updates on program requirements (x5). Where to find BMP materials. Breakout session discussion (x4). Good review and overall information (x6). Engaging format (variety of live and video presentations, polls, Q&A). Online format (x3).

**What would you like to see in future webinars/workshops?** Inspection strategies & how to achieve compliance (x2). CGP and LUP regulations. More case studies, videos and photos (e.g., of good/bad BMPs, how to install different products, of violations/enforcement level, projects in San Mateo County) (x6). Maybe a poll of the most comment violations. More quizzes to check knowledge. More online workshops in the future (better attendance, better commute, better for environment) (x3). Less sales pitches.

**General Comments:** Great workshop overall, thanks for the training and all the hard work putting to this together (x16). Great refresher. Liked the new topics this year (recycle materials Senate Bill and Compost Info) (x2). Excellent presentations from everyone – informative, interesting, useful, and fun (x4). Could have been improved with more consistent/better audio quality in presentations. San Diego videos seemed somewhat dated. The explanations to the polling questions were very helpful. Fun and engaging mixture of presentations, videos, polls, and the breakout group (x5) (Highlight: “This was probably the best webinar I have been to all year.”). Please provide a copy of the presentations/links (x4).

## Appendix 7

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- Public Information and Participation Subcommittee – Attendance List– FY 2020/21
- Blog Posts Examples and Metric Analytics
- Rain Barrel Webinar
  - Facebook Event Online Media
  - Facebook Ad
  - Workshop surveys
- Rain Garden Webinar
  - Facebook Event Online Media
  - Facebook Ad
  - Workshop surveys
- Flows to Bay Newsletter Examples
- Public Outreach and Citizen Involvement Events

## Appendix 7

### PIP Subcommittee Meetings

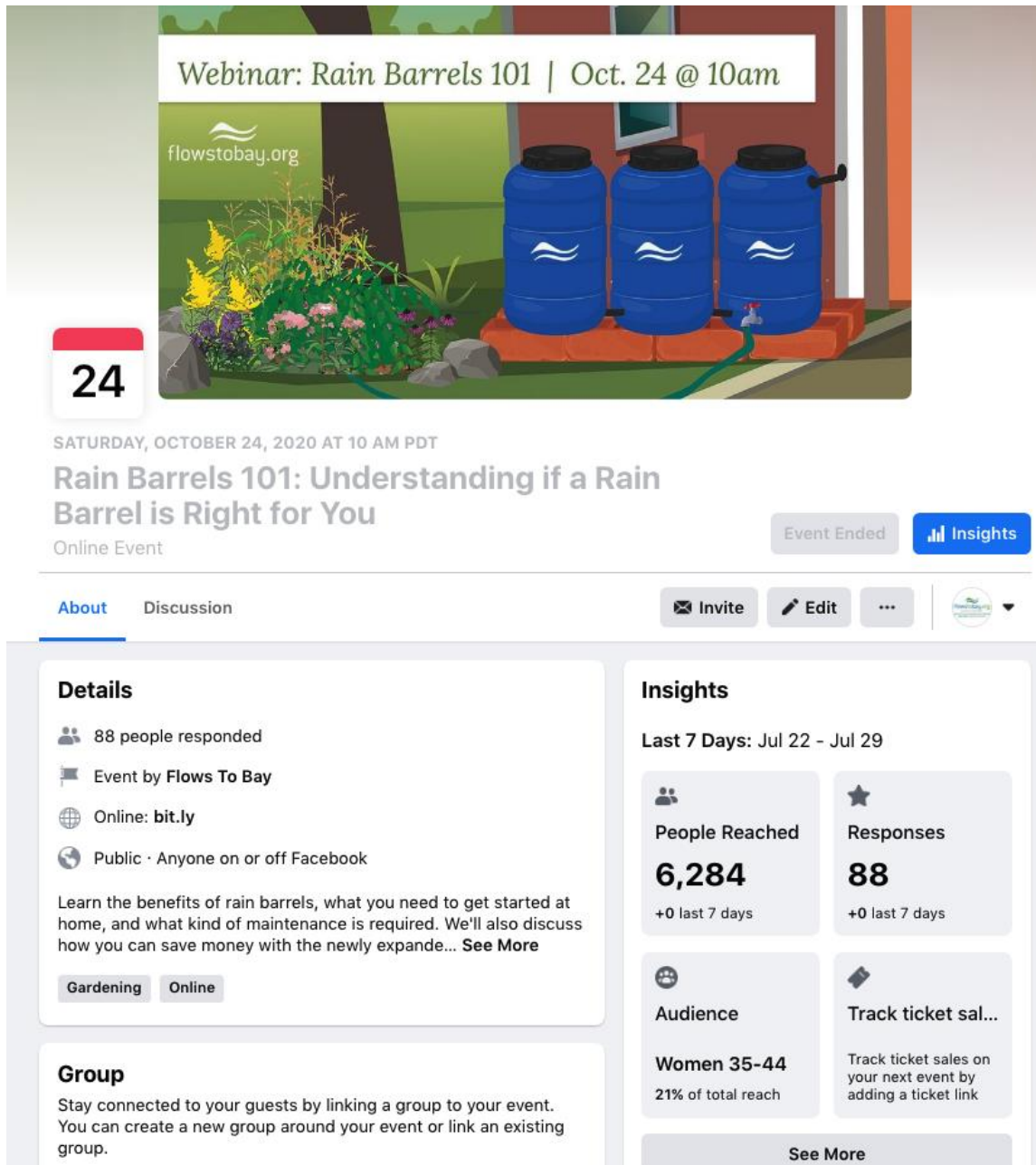
Public Information and Participation Subcommittee		FY 20-21	
AGENCY	NAME	9/22/2020	3/25/21
C/CAG	Matt Fabry		
C/CAG	Reid Bogert		x
Atherton	Nestor Delgado		
Atherton	Jacob Garcia		
Belmont	Diane Lynn		
Belmont	Julie Freitas		
Brisbane	Shelley Romriell		
Burlingame	Jennifer Lee	X	x
CalTrain	Carolyn Critz	X	
Colma	Katherine Sheehan		
Colma	Muneer Ahmed		
Colma	Kelly Carrol		x
Colma	Jeffrey Le	X	
Daly City	Ward Donnelly		
Daly City	Sibely Calles	X	
Daly City	Stephen Stolte		
East Palo Alto	Michelle Daher		
East Palo Alto	Jorge Luna		
East Palo Alto	June Canter	X	
Foster City	Jack Shulze		
Half Moon Bay	Katherine Sheehan		
Half Moon Bay	Mark Lander		
Half Moon Bay	Kelly Carrol		x
Half Moon Bay	Jeffrey Le	X	
Half Moon Bay	Veronika Vostinak	X	x
Half Moon Bay	Colleen Lettire		
Hillsborough	Sara Bachmann		x
Menlo Park	Candice Almendral		
Menlo Park	Alexandria Skoch		
Menlo Park	Scott Jaw		x
Millbrae	Andrea Pappajohn		x
Millbrae	Shelly Reider	X	
Pacifica	Yessika Dominguez		
Pacifica	Michelle Trayer	X	x
Pacifica	Kevin Sandberg (intern)		
Portola Valley	Ali Taghari		
Portola Valley	Brandi de Garmeaux		
Redwood City	Vicki Sherman	X	x
Redwood City	Christopher Fajikos		
Redwood City	Adrian Lee		
San Bruno	Jim Burch		
San Carlos	Kathryn Robertson		
San Carlos	Vatsal Patel	X	
San Mateo City	Sarah Schedit		
San Mateo City	Sven Edlund		x
San Mateo City	Mark Swenson		
San Mateo City	Kellie Benz (Public Works)		
San Mateo City	Rich Kraft	X	
San Mateo City	Bradley Harms (Env Compliance)		
San Mateo County	Aaron Francis		
San Mateo County	Andrea Chow		
San Mateo County	Breann Liebermann		
San Mateo County	Edelzar Garcia		
San Mateo County	Susan Wright	X	
San Mateo County	John Allan	X	x
San Mateo County	Kim Springer		x
San Mateo County Health	Kathryn Cooke		
South San Francisco	Daniel Garza	X	x
South San Francisco	Andrew Wemmer		
South San Francisco	Nelson Yuk	X	
South San Francisco	Christina Tai		
Woodside	Dong Nguyen		
SGA	Suzi Senna	X	x
SGA	Paige Rosenberg	X	x
EOA	Peter Schultz-Allen	X	x

### FY 2020/21 Subcommittee Attendance List

**SMCWPPP Blog**
Blog Analytics

Blog Post Title	Page Views	Page Views (Unique)	Average Time on Page	Bounce Rate
<a href="#">San Mateo County Beach Bummers 2020</a>	181	174	0:02:18	90.00%
<a href="#">Transforming Schools Into Resilience Centers With Green Infrastructure</a>	116	106	0:03:07	88.89%
<a href="#">Adapting To Climate Change With Green Streets</a>	94	88	0:03:18	77.61%
<a href="#">Coastal Cleanup 2020</a>	46	40	0:01:13	71.43%
<a href="#">San Mateo County's Rain Barrel Rebate Program</a>	264	241	0:03:59	63%
<a href="#">Redwood City Resident Shows How Easy It Is To Be a Rain Barrel Owner</a>	299	278	0:02:12	77.96%
<a href="#">4 Tips To Have An Eco-Tastic Halloween!</a>	45	40	0:02:46	84.62%
<a href="#">SMC Taking Action: There's More to Food Ware Than You Think</a>	128	117	0:02:44	78.12%
<a href="#">King Tides: What They Are &amp; Why They Matter</a>	311	279	0:03:54	82.10%
<a href="#">2021: Make it an Environmental Year</a>	31	30	0:01:33	90.91%
<a href="#">Saving Our Ocean...One Piece of Trash at a Time</a>	69	59	0:01:58	77.14%
<a href="#">Solo-cleanup Events For Positive Change</a>	59	51	0:03:46	79.41%
<a href="#">Moderate Drought Brings Water Concerns to San Mateo County</a>	186	177	0:05:07	82.53%
<a href="#">Inspirational Water Wise Story from a San Mateo Resident</a>	159	146	0:02:44	86.89%
<a href="#">Sea Hugger: Protecting Our Ocean Today &amp; For Years To Come</a>	19	19	0:07:17	78.57%

## Rain Barrel Outreach Program



**Webinar: Rain Barrels 101 | Oct. 24 @ 10am**  
flowstobay.org

**24**  
SATURDAY, OCTOBER 24, 2020 AT 10 AM PDT

### Rain Barrels 101: Understanding if a Rain Barrel is Right for You

Online Event

Event Ended [Insights](#)

[About](#) [Discussion](#) [Invite](#) [Edit](#) [...](#)

#### Details

- 88 people responded
- Event by [Flows To Bay](#)
- Online: [bit.ly](#)
- Public · Anyone on or off Facebook

Learn the benefits of rain barrels, what you need to get started at home, and what kind of maintenance is required. We'll also discuss how you can save money with the newly expande... [See More](#)

[Gardening](#) [Online](#)

#### Group

Stay connected to your guests by linking a group to your event. You can create a new group around your event or link an existing group.

#### Insights

Last 7 Days: Jul 22 - Jul 29

<b>People Reached</b> <b>6,284</b> +0 last 7 days	<b>Responses</b> <b>88</b> +0 last 7 days
<b>Audience</b> <b>Women 35-44</b> 21% of total reach	<b>Track ticket sal...</b> Track ticket sales on your next event by adding a ticket link

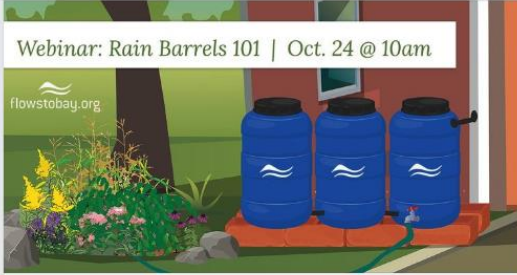
[See More](#)

[Rain Barrel webinar Facebook event page](#)

**Flows To Bay**  
October 14, 2020 · 🌐

Learn about the benefits, basics, and rebate options for rain barrels at our free online webinar! One lucky San Mateo County resident will be eligible to win a \$100 Visa e-gift card. Register today!  
bit.ly/RainBarrels\_10-24

Town of Atherton, City of Belmont CA, City of Brisbane, CA-City Hall, Burlingame City Hall, Daly City Government, City of East Palo Alto - Government, City of Foster City, CA - Government, City of Half Moon Bay - Local Government, City of Menlo Park Govern... See More



**SAT, OCT 24, 2020**  
**Rain Barrels 101: Understanding if a Rain Barrel is Right for You** ★ Interested

👤 You like Flows To Bay

**219** People Reached    **24** Engagements    Boost Unavailable

👤👤 San Mateo Resource Conservation District, RethinkWaste and 17 others

👍 Like    💬 Comment    ⋮

**Performance for Your Post**

**219** People Reached

**19** Reactions, Comments & Shares 📊

<b>18</b> Like	<b>18</b> On Post	<b>0</b> On Shares
<b>1</b> 🤔 Wow	<b>1</b> On Post	<b>0</b> On Shares
<b>0</b> Comments	<b>0</b> On Post	<b>0</b> On Shares
<b>0</b> Shares	<b>0</b> On Post	<b>0</b> On Shares

**5** Post Clicks

<b>0</b> Photo Views	<b>4</b> Link Clicks 📊	<b>1</b> Other Clicks 📊
----------------------	------------------------	-------------------------


**NEGATIVE FEEDBACK**

<b>0</b> Hide Post	<b>0</b> Hide All Posts
<b>0</b> Report as Spam	<b>0</b> Unlike Page

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**Flows To Bay**  
October 23, 2020 · 🌐

Save money, water, and the environment through a rain barrel! Learn if a rain barrel is right for you at our free online workshop TOMORROW to get your questions answered and be entered in a drawing to win a \$100 Visa gift card. Get the details and register here: bit.ly/Oct-24-Webinar



**Flows To Bay**  
Environmental Conservation Organization    📧 Send Message

🌱 **Get More Likes, Comments and Shares**  
When you boost this post, you'll show it to more people.

**330** People Reached    **10** Engagements    Boost Post

👤👤 Jairo Monar Zuluaga, Joan Reif and 6 others

👍 Like    💬 Comment    ➦ Share    ⋮

**Performance for Your Post**

**330** People Reached

**8** Reactions, Comments & Shares 📊

<b>7</b> Like	<b>7</b> On Post	<b>0</b> On Shares
<b>1</b> 🤔 Wow	<b>1</b> On Post	<b>0</b> On Shares
<b>0</b> Comments	<b>0</b> On Post	<b>0</b> On Shares
<b>0</b> Shares	<b>0</b> On Post	<b>0</b> On Shares

**2** Post Clicks

<b>1</b> Photo Views	<b>1</b> Link Clicks 📊	<b>0</b> Other Clicks 📊
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<b>0</b> Report as Spam	<b>0</b> Unlike Page

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**Flows To Bay**  
October 21, 2020 · 🌐

Curious if a rain barrel is right for you? Join our free workshop this Saturday (10/24) at 10am and get your questions answered. Learn the benefits of owning a rain barrel, what you need to get started, and how much you're eligible to receive as part of the countywide rain barrel rebate. Register here: [bit.ly/Oct-24-Webinar](https://bit.ly/Oct-24-Webinar)



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Environmental Conservation Organization Send Message

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**461** People Reached      **22** Engagements Boost Post

Joan Reif, Steven Dogen and 15 others      2 Shares

Like   Comment   Share

**Performance for Your Post**

**461** People Reached

**20** Reactions, Comments & Shares

<b>17</b> Like	<b>16</b> On Post	<b>1</b> On Shares
<b>1</b> Love	<b>1</b> On Post	<b>0</b> On Shares
<b>0</b> Comments	<b>0</b> On Post	<b>0</b> On Shares
<b>2</b> Shares	<b>2</b> On Post	<b>0</b> On Shares

**2** Post Clicks

<b>0</b> Photo Views	<b>0</b> Link Clicks	<b>2</b> Other Clicks
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**NEGATIVE FEEDBACK**

<b>2</b> Hide Post	<b>0</b> Hide All Posts
<b>0</b> Report as Spam	<b>0</b> Unlike Page

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Rain barrel webinar Facebook promotional posts





 **flowstobay** ...

 **flowstobay** Save money, water, and the environment through a rain barrel! 💧♻️🌱 Learn if a rain barrel is right for you at our free online workshop TOMORROW to get your questions answered and be entered in a drawing to win a \$100 Visa e-gift card. Get the details and register here: [bit.ly/RainBarrelWebinar\\_10-24](https://bit.ly/RainBarrelWebinar_10-24)

#Rain #RainBarrell  
#RainwaterHarvesting  
#PollutionPrevention

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OCTOBER 23, 2020

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 **flowstobay** ...

 **flowstobay** Curious if a rain barrel is right for you? 💧♻️🌱 Join our free online 🎥 workshop on Saturday on Oct. 24th at 10am and get your questions answered. Learn the benefits of owning a rain barrel, what you need to get started, and how much you're eligible to receive as part of the countywide rain barrel rebate. One lucky San Mateo County resident will be eligible to win a \$100 Visa gift card. Register by clicking the link in our bio ([bit.ly/RainBarrelWebinar\\_10-24](https://bit.ly/RainBarrelWebinar_10-24))!

@TownOfAtherton,  
@CityOfSausalito, @...

[View Insights](#)

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 flowstobay There are better ways to collect rainwater ☔️ Join our free Rain Barrel workshop 📅 this Saturday (10/24) at 10am and learn the benefits of owning a rain barrel, what you need to get started, and how much you're eligible to receive as part of the countywide rain barrel rebate. Register here (link also in bio): [bit.ly/RainBarrelWebinar\\_10-24](https://bit.ly/RainBarrelWebinar_10-24)

#Rain #RainBarrell  
#RainwaterHarvesting  
#PollutionPrevention  
#ConserveWater #Garden  
#Gardening #HealthyWaterways  
#WaterQuality #Webinar

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49 views


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Learn about the benefits, basics, and rebate options for rain barrels at our free online webinar!

Webinar: Rain Barrels 101 | Oct. 24 




SAT, OCT 24, 2020  
**Rain Barrels 101: Understanding if a Rain Barr...** 


 Hugo Gomez and 11 others

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

**Flows To Bay**  
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Curious if a rain barrel is right for you? Learn about the benefits, basics, and rebate options!




US02WEB.ZOOM.US  
**Free workshop on Saturday, 10/24 at 10am** 

1 Share

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Save money, water, and the environment through a rain barrel! One SMC attendee will win a \$100 Visa gift card. Register [...See More](#)




US02WEB.ZOOM.US  
**Free online workshop on 10/24 will cover the basics!** 


 Janice Tong and 5 others




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**Flows To Bay**  
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There are better ways to collect rainwater. Join our free Rain Barrel workshop on Oct. 24th at 10am and learn if a rain barrel is right for you!



US02WEB.ZOOM.US  
**One lucky SMC resident will win a \$100 Visa gift card!** 

   Arsenia L Hurlbut and 9 ... 3 Shares

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Rain barrel webinar Facebook/Instagram Ads

Rain barrel webinar survey (October 24<sup>th</sup>)

Questions Key:

1. What were your goals for attending this class? (Select all that apply)
2. The instructor demonstrated knowledge of the topic and presented practical information you can use. (Select one between five options: Strongly Agree, Agree, Neither agree or disagree, Disagree, Strongly Disagree)
3. The workshop was what you expected. (select one)
4. What did you find most useful about the workshop? (Type response)
5. What is the biggest obstacle you face when deciding to install a rain barrel? (select one)
6. Do you already have a rain barrel or cistern installed at your property? (select one)
7. How likely are you to purchase/use a rain barrel in the next 6 months? (Select one between five options: Very likely, Likely, Neither likely or unlikely, Unlikely, Very unlikely)
8. Prior to the webinar, have you heard about the countywide rain barrel rebate program? (Select one between three options: Yes I have; No I haven't; I have heard about it and also applied previously)
9. How likely are you to apply for the rain barrel rebate if you do purchase a new rain barrel? (Select one)
10. Your overall rating of the class: (Select one)
11. What type of residence do you live in? (Select one)
12. Your city of residence: (Type response)

**Rain Barrel Webinar – October 12, 2019**

*Note: Responses are typed out how they're types in the feedback form (capitalization, spelling, grammar, punctuation)*

*There were 37 survey respondents out of 58 workshop participants.*

Question Number	Response	Amount of Respondents who Answered
Q1	<p><i>What were your goals for attending this class? (select all that apply)</i></p> <ul style="list-style-type: none"> <li>• To be better prepared for drought: 19</li> <li>• To improve my landscaping: 14</li> <li>• To learn how to save money by reducing my water use: 22</li> <li>• To learn about water efficient practices to protect the environment: 32</li> <li>• Other (please specify below): 2</li> </ul>	37
Q1A	<p><i>“Other” response for Q1</i></p> <ul style="list-style-type: none"> <li>• Educate myself on the rain barrel installation at our local public school</li> <li>• Improving my D.I.Y. efforts on rainwater catch systems</li> </ul>	2
Q2	<p><i>The instructor demonstrated knowledge of the topic and presented practical information you can use.</i></p> <ul style="list-style-type: none"> <li>• Agree: 2</li> <li>• Strongly Agree: 33</li> </ul>	36

Question Number	Response	Amount of Respondents who Answered
Q3	<p>The workshop was what you expected.</p> <ul style="list-style-type: none"> <li>• Yes: 37</li> </ul>	37
Q4	<p><i>What did you find most useful about the workshop?</i></p> <ul style="list-style-type: none"> <li>• Easier than I thought.</li> <li>• Design and planning of water harvesting</li> <li>• Multiple set up examples</li> <li>• Provided good overview and practical details on rain barrel use and system components and maintenance.</li> <li>• Information about the rebates. Also flexibility of the installation.</li> <li>• Everything. I knew next to nothing about the topic and learned so much.</li> <li>• Learned about the different types of rain barrels and the accessories available. Also, I learned that the captured rain water is safe for edible plants.</li> <li>• Learning the structure and care of rain barrels</li> <li>• It was interesting to find out about the Blue Barrels system and availability. The speakers are very well versed about the topic and certainly very knowledgeable.</li> <li>• Learning that the key focus is towards D.I.Y.ers warms my heart.</li> <li>• Explanation of screens, leaf guard, pumps if necessary, benefits to environment, the amount of water you can collect, the rain barrel for tight spaces</li> <li>• Presentation of the process of how a rain barrel is used (the descriptions of the parts of a rain barrel)</li> <li>• The variety of systems from simple to elaborate</li> <li>• Types of rain water harvesting</li> <li>• Learning about the things to consider before designing a system. (In the past I have almost just bought a barrel, without knowing anything.) Also learned about the need to regularly use the water, implying the need for a water garden, perhaps. New info for me. Learning about Blue Barrel, sounds like a very good business.</li> <li>• What you can and can not use rain water for</li> <li>• There are recycled rain barrels for sale</li> <li>• Installation of barrels and how the system works</li> <li>• Information about the options available for rain barrels, i.e., the improvements over the years.</li> <li>• Walking us through all the details of the DIY process</li> <li>• Learning about the first flush after the rain... Also there different types of rain barrel for confined space available.</li> <li>• seeing the different accessories and various set-ups</li> <li>• surprise to know rain barrels can come from used food grade barrel. Repurpose used barrel for preserving environment</li> <li>• Organized speakers Q &amp; A</li> <li>• Learning where to purchase systems</li> <li>• Slides with examples; the blue barrel website</li> <li>• Array of designs and set ups available, and fundamentals of features and requirements.</li> <li>• Learning the basics and benefits of rain barrels, understanding how to proceed as a newbie</li> <li>• Lots of useful information.</li> <li>• The variety of choices available</li> </ul>	34

Question Number	Response	Amount of Respondents who Answered
	<ul style="list-style-type: none"> <li>• General detail</li> <li>• All the information!! Very informative and thorough.</li> <li>• Options for setting up a system</li> <li>• The explanation about the various barrel types and connections available for having a rain barrel. I currently have a drip system and having the drip from a barrel would save on watering costs.</li> </ul>	
Q5	<p><i>What is the biggest obstacle you face when deciding to install a rain barrel?</i></p> <ul style="list-style-type: none"> <li>• Don't really have on obstacle</li> <li>• The cost of a rain barrel was too high</li> <li>• I didn't have the room for it in my home</li> <li>• I didn't have the room for it in my home</li> <li>• Difficulties of the installation</li> <li>• How tonput it together</li> <li>• The cost of a rain barrel was too high</li> <li>• I didn't want to deal with maintenance/upkeep</li> <li>• I need to hear others' opinions before I make up my mind.</li> <li>• Selecting the best location and equipment for the water capture.</li> <li>• My house doesn't have rain gutters yet</li> <li>• I didn't have the room for it in my home</li> <li>• Trying to find somewhere in my yard to put it</li> <li>• I didn't have the room for it in my home</li> <li>• I didn't want to deal with maintenance/upkeep</li> <li>• Wondering if the cost installed is too high.</li> <li>• The cost of a rain barrel was too high</li> <li>• The cost of a rain barrel was too high</li> <li>• aesthetics of the barrel(s), where to place, unsure if this is a DYI for me</li> <li>• I didn't want to deal with maintenance/upkeep</li> <li>• none</li> <li>• The cost of a rain barrel was too high</li> <li>• I didn't want to deal with maintenance/upkeep</li> <li>• seeing that a multi barrel system is most effective, yet I see it least aesthetically pleasing. I don't have a porch to hide it under..</li> <li>• I didn't want to deal with maintenance/upkeep</li> <li>• The cost of a rain barrel was too high</li> <li>• we're renting, and we hesitate to invest in the labor in this location</li> <li>• I didn't want to deal with maintenance/upkeep</li> <li>• The cost of a rain barrel was too high</li> <li>• Plumbing phobia</li> <li>• Mainly installation and all the parts for DIY</li> <li>• The cost of a rain barrel was too high</li> <li>• I didn't want to deal with maintenance/upkeep</li> <li>• The cost of a rain barrel was too high</li> <li>• I didn't have the room for it in my home</li> <li>• when is a good time for me to do this</li> <li>• Tapping into the drain from the roof may be difficult.</li> </ul>	37

Question Number	Response	Amount of Respondents who Answered
Q6	<p><i>Do you already have a rain barrel or cistern installed at your property?</i></p> <ul style="list-style-type: none"> <li>• Yes: 2</li> <li>• No: 35</li> </ul>	37
Q7	<p><i>How Likely are you to purchase/use a rain barrel in the next 6 months?</i></p> <ul style="list-style-type: none"> <li>• Unlikely: 1</li> <li>• Neither Likely Nor Unlikely: 7</li> <li>• Likely: 20</li> <li>• Very Likely: 8</li> </ul>	36
Q8	<p><i>Prior to the webinar, had you heard about the countywide rain barrel rebate program?</i></p> <ul style="list-style-type: none"> <li>• Yes: 12</li> <li>• No: 24</li> <li>• I have heard about it and also applied previously: 1</li> </ul>	37
Q9	<p><i>How likely are you to apply for the rain barrel rebate if you do purchase a new rain barrel?</i></p> <ul style="list-style-type: none"> <li>• Likely: 2</li> <li>• Unlikely: 1</li> <li>• Neither Likely Nor Unlikely: 2</li> <li>• Very likely: 32</li> </ul>	37
Q10	<p><i>Your overall rating of the class:</i></p> <ul style="list-style-type: none"> <li>• Very dissatisfied: 1</li> <li>• Satisfied: 7</li> <li>• Very satisfied: 28</li> </ul>	36
Q11	<p><i>What type of residence do you live in?</i></p> <ul style="list-style-type: none"> <li>• Ranch: 1</li> <li>• Single-family home: 34</li> <li>• Duplex: 1</li> <li>• Ranch with various families with separate houses on the property: 1</li> </ul>	37



**flowstobay**  
San Mateo County, California

**flowstobay** We're happy to announce our first giveaway—and it's an impactful prize! Win a FREE rain barrel by entering our exciting Rainy Season Giveaway (details below) 🌧️🌂 Rain barrels help prevent stormwater pollution and save you money! 🙌👍

How to Enter:  
1) Follow @flowstobay  
2) LIKE this post and then TAG 3 friends in a comment.

Rules:  
•Steps 1 and 2 must be completed to be entered into the giveaway.

[View Insights](#)

👍🗨️📌

🌍 Liked by [burlingame\\_sustainability](#) and **115 others**

FEBRUARY 2

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Rain Barrel Instagram Giveaway Post



## Rain Garden Outreach Program



SATURDAY, OCT. 10 @ 10AM | FREE ZOOM WORKSHOP

### Rain Gardens 101: How to Design, Build, and Maintain A Rain Garden

#### WHEN:

Saturday, October 10  
10:00am - 12:00pm

#### WHERE:

Online Zoom Webinar,  
Registrants will be  
emailed details

#### HOW:

Register online at  
[bit.ly/RainGardenOct10](http://bit.ly/RainGardenOct10)

#### QUESTIONS?

Email [jlee@burlingame.org](mailto:jlee@burlingame.org)

Interested in building a rain garden in your yard but don't know where to start? This workshop will cover the basics of rain garden design, implementation, and maintenance.

Instructors, Kevin Perry and Haven Kiers will take attendees through considerations, helpful tips, and "how to's" for the design, construction, and maintenance of a new rain garden.

The workshop will feature:

- Discussion of the Lawn Be Gone! and Rain Garden Rebate Program
- Information on the "why's" and "how" of designing, building, and maintaining a rain garden
- Interactive Q&A with audience participation
- **PRIZE DRAWING:** One lucky attendee will win a \$100 gift card to their choice of Home Depot, Hassett Ace Hardware, or Lyngso Garden Materials.

Register at [bit.ly/RainGardenOct10](http://bit.ly/RainGardenOct10)



This workshop is brought to you by the City of Burlingame, the Bay Area Water Supply & Conservation Agency, and Flows To Bay, the San Mateo Countywide Water Pollution Prevention Program.

[Flier for rain garden webinar](#)



## Rain Gardens

Rain gardens are an elegant way to capture rain water on your property and prevent stormwater pollution.

Read on to learn more.

### ON THIS PAGE

- [WHAT IS A RAIN GARDEN?](#)
- [LAWN BE GONE! REBATE NOW WITH \\$300 RAIN GARDEN REBATE ADDITION](#)
- [RAIN GARDEN 101 VIDEO SERIES](#)
- [DESIGNER'S LINK](#)

### What Is A Rain Garden?

A rain garden is a shallow landscaped depression that captures, cleans, and absorbs rain water from a roof, driveway or street. This practice mimics natural hydrology by infiltrating and evapotranspiring stormwater runoff as it collects and moves through a rain garden.

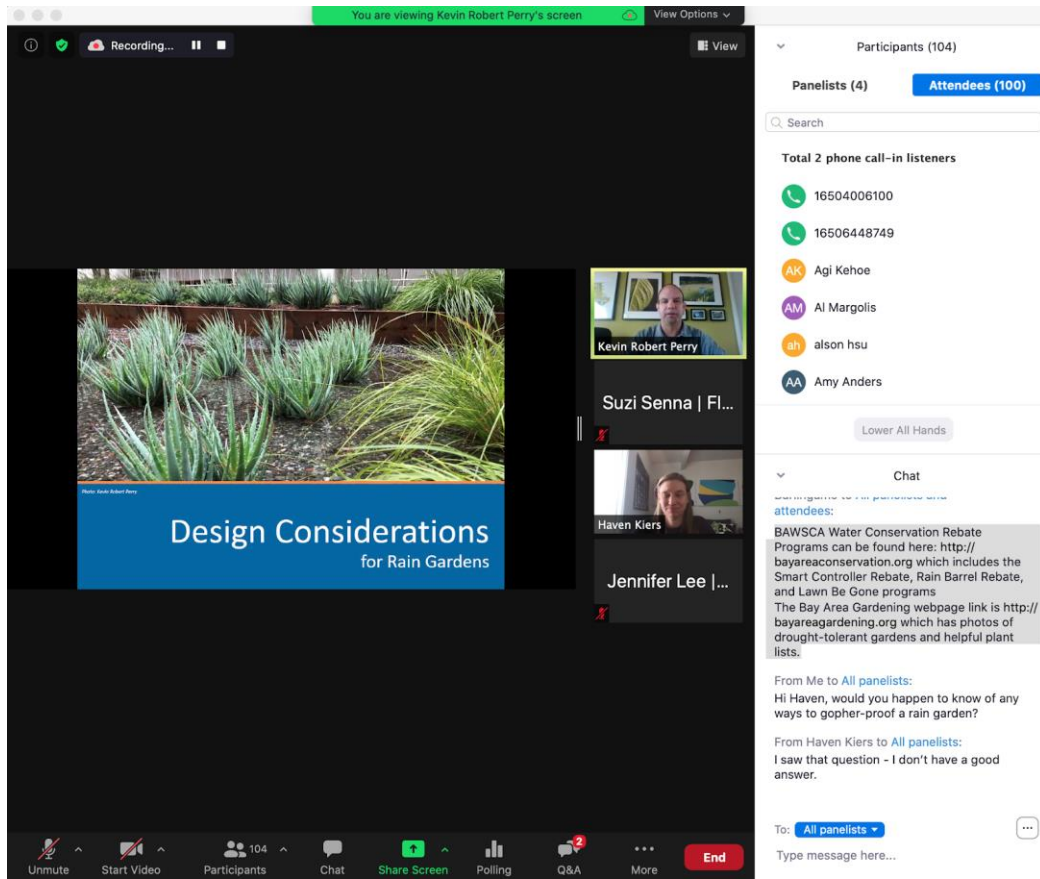
By positioning a rain garden at least 10 feet from your property and directing rain water runoff into the rain garden you **redirect moisture away from your building's foundation**. Rain gardens are a great way to **reduce localized flooding, standing water issues, and stormwater runoff leaving your property**. Planted with deep-rooted native plants, rain gardens help **filter out pollutants in runoff** and **provide food and shelter for pollinators, butterflies, and birds**.

Below are some before and after photos to demonstrate the possibilities! Move the slider left and right to view the images.

Screenshot of rain garden page published on SMCWPPP's website FY20/21



Still images of interactive "before" and "after" demonstration photos of what can be implemented in the yard with the Lawn Be Gone! rebate



Recording... | You are viewing Kevin Robert Perry's screen | View Options

Participants (104)

Panelists (4) | Attendees (100)

Search

Total 2 phone call-in listeners

- 16504006100
- 16506448749
- AK Agi Kehoe
- AM Al Margolis
- ah alson hsu
- AA Amy Anders

Lower All Hands

Chat

attendees:

BAWSCA Water Conservation Rebate Programs can be found here: <http://bayareaconservation.org> which includes the Smart Controller Rebate, Rain Barrel Rebate, and Lawn Be Gone programs

The Bay Area Gardening webpage link is <http://bayareagardening.org> which has photos of drought-tolerant gardens and helpful plant lists.

From Me to All panelists:  
Hi Haven, would you happen to know of any ways to gopher-proof a rain garden?

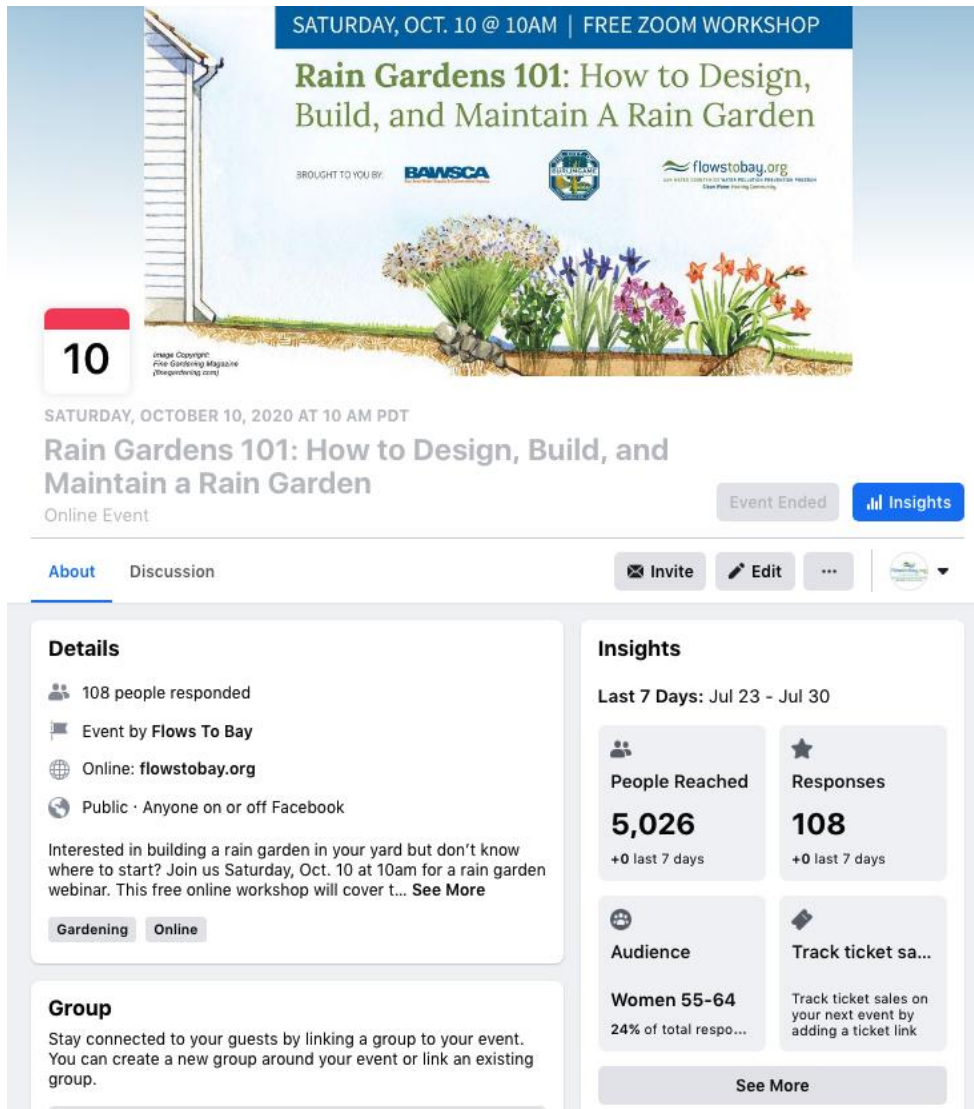
From Haven Kiers to All panelists:  
I saw that question - I don't have a good answer.

To: All panelists

Type message here...

Unmute | Start Video | 104 Participants | Chat | Share Screen | Polling | Q&A | More | End

Screenshot taken during rain garden webinar on October 24, 2021



**SATURDAY, OCT. 10 @ 10AM | FREE ZOOM WORKSHOP**

## Rain Gardens 101: How to Design, Build, and Maintain A Rain Garden





BROUGHT TO YOU BY:   

Image Copyright: Fine Gardening Magazine (@finegardening.com)


SATURDAY, OCTOBER 10, 2020 AT 10 AM PDT


### Rain Gardens 101: How to Design, Build, and Maintain a Rain Garden


Online Event Event Ended Insights


[About](#) [Discussion](#) Invite Edit ... 

#### Details

 108 people responded

 Event by **Flows To Bay**

 Online: [flowstobay.org](https://flowstobay.org)

 Public · Anyone on or off Facebook

Interested in building a rain garden in your yard but don't know where to start? Join us Saturday, Oct. 10 at 10am for a rain garden webinar. This free online workshop will cover t... [See More](#)





[Gardening](#) [Online](#)

#### Group

Stay connected to your guests by linking a group to your event. You can create a new group around your event or link an existing group.

#### Insights

Last 7 Days: Jul 23 - Jul 30

 <b>People Reached</b> <b>5,026</b> +0 last 7 days	 <b>Responses</b> <b>108</b> +0 last 7 days
 <b>Audience</b> <b>Women 55-64</b> 24% of total respo...	 <b>Track ticket sa...</b> Track ticket sales on your next event by adding a ticket link

[See More](#)

[Rain garden webinar Facebook event page](#)

**Flows To Bay**  
September 29, 2020 · 🌐

Interested in building a rain garden in your yard but don't know where to start? Join us Saturday, Oct. 10 at 10am for a rain garden webinar. This free online workshop will cover the basics of rain gardens and take attendees through considerations, helpful tips, and "how to's" for the design, construction, and maintenance of a new rain garden. Learn more and register today at [flowstobay.org/calendar/rain-garden-workshop-online/](http://flowstobay.org/calendar/rain-garden-workshop-online/)

Town of Atherton, City of Belmont CA, City of B... See More



**SATURDAY, OCT. 10 @ 10AM | FREE ZOOM WORKSHOP**

**Rain Gardens 101: How to Design, Build, and Maintain A Rain Garden**

BRUGHT TO YOU BY:  

FLOWSTOBAY.ORG  
**Rain Garden Workshop (Online) – Flows To Bay**  
« All Events Rain Garden Workshop (Online) October 10 @ 10:00 am ...

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**Performance for Your Post**

**645** People Reached

**25** Reactions, Comments & Shares

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<b>5</b> Love	<b>1</b> On Post	<b>4</b> On Shares
<b>3</b> Comments	<b>0</b> On Post	<b>3</b> On Shares
<b>6</b> Shares	<b>6</b> On Post	<b>0</b> On Shares

**10** Post Clicks

<b>0</b> Photo Views	<b>4</b> Link Clicks	<b>6</b> Other Clicks
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**Flows To Bay**  
October 8, 2020 · 🌐

Just a couple more days to register!! Interested in building a rain garden in your yard but don't know where to start? Join us Saturday, Oct. 10 at 10am for a rain garden webinar. This free online workshop will cover the basics of rain gardens and take attendees through considerations, helpful tips, and "how to's" for the design, construction, and maintenance of a new rain garden. Learn more and register today at [flowstobay.org/calendar/rain-garden-workshop-online/](http://flowstobay.org/calendar/rain-garden-workshop-online/)

Town of At... See More



**SATURDAY, OCT. 10 @ 10AM | FREE ZOOM WORKSHOP**

**Rain Gardens 101: How to Design, Build, and Maintain A Rain Garden**

BRUGHT TO YOU BY:  

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« All Events Rain Garden Workshop (Online) October 10 @ 10:00 am ...

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Jimmy Lewis, Antonio Lima and 12 others    2 Shares

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**408** People Reached

**17** Reactions, Comments & Shares

<b>14</b> Like	<b>13</b> On Post	<b>1</b> On Shares
<b>1</b> Love	<b>1</b> On Post	<b>0</b> On Shares
<b>0</b> Comments	<b>0</b> On Post	<b>0</b> On Shares
<b>2</b> Shares	<b>2</b> On Post	<b>0</b> On Shares

**9** Post Clicks

<b>0</b> Photo Views	<b>4</b> Link Clicks	<b>5</b> Other Clicks
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Rain garden webinar Facebook promotional posts



Rain garden webinar Instagram promotional post

Rain garden webinar compiled survey responses  
*55 survey respondents out of 100 workshop participants*

Questions	Responses
<p>Q1. What were your goals for attending this class? (Select all that apply)</p>	<p>To learn how to save money by reducing my water use: 17                      To learn about water efficient practices to protect the environment: 45                      To improve my landscaping: 33                      To be better prepared for drought:                      Other (please specify below): 7</p> <p>Total amount of respondents who answered this question:</p>
<p>Q1A. "Other" response</p>	<ul style="list-style-type: none"> <li>• Planting in higher vs. lower areas of raingarden.</li> <li>• To get my City to adapt some of these policies instead of using \$700 boulders to landscape a center divide!</li> <li>• To learn about the topic in general</li> <li>• To see if this would work in complement to a bee-friendly garden</li> <li>• Learn how to communicate with a landscape architect or designer. To express water-wise ideas and desires</li> <li>• Possibly learn tech for my city's future</li> <li>• How to benefit/help local wildlife</li> </ul>

<p>Q2. The Zoom platform was easy to use</p>	<p>Agree: 15 Strongly agree: 37</p> <p>Total amount of respondents who answered this question: 52</p>
<p>Q3. The instructor demonstrated knowledge of the topic and presented practical information you can use.</p>	<p>Agree: 4 Strongly agree: 48</p> <p>Total amount of respondents who answered this question: 52</p>
<p>Q4. The workshop was what you expected.</p>	<p>Yes: 52 No: 3</p> <p>Total amount of respondents who answered this question: 55</p>
<p>Q4A. If "No," Why?</p>	<ul style="list-style-type: none"> <li>• I've taken other workshops about rain gardens and this one was much better! Exceeded my expectations.</li> <li>• It was better than the usual</li> <li>• I expected it to be geared to the home gardener with more ideas on the "how to". There was a lot of emphasis on "what to do". I think the information was more complicated than I wanted.</li> </ul>
<p>Q5. What did you find most useful about the workshop?</p>	<ul style="list-style-type: none"> <li>• Step by step organization. Resources that were shared.</li> <li>• Design Ideas, Eligibility for rebate</li> <li>• very practical and on-point</li> <li>• extremely passionate and knowledgeable presenters</li> <li>• Better understanding of plotting the area. Reminder about using students as a resource.</li> <li>• Plant choice I'm not sure that many folks on the call could replicate these.</li> <li>• Options presented</li> <li>• The various ways to create a rain garden.</li> <li>• Pictures, easy speak to understand what was being said.</li> <li>• How to implement, and different use cases/examples</li> <li>• Learning that there's much more to the design than simply choosing plants you like.</li> <li>• Two specialists with list of plants helpful</li> <li>• That there was a lot of creativity throughout. I really liked how the instructors were able to paint a big picture and then get really specific.</li> <li>• Detailed descriptions</li> <li>• Understanding the space requirements for a rain garden.</li> <li>• Installation rules and process.</li> <li>• How and when to best plant or transplant.</li> <li>• More options than I expected.</li> <li>• I have been researching rain gardens for the last few months. This class was the best information i've seen. The photos of examples were very helpful. The information on correct mulch and the depth for water flow and to not have rain garden under the tree canopy.</li> <li>• EVERYTHING! I had vaguely heard about rain gardens but these professors from Davis had lots of specifics: charts that told you how far from the house foundation, that rain gardens could be shallow, the plant</li> </ul>

	<p>lists that we will be given, detailed information about leaf litter in the rain garden, make sure there is an outlet for overflow in case of big storms. I liked seeing the photos of where the rain gardens could be -- and then seeing something installed there. Helps my imagination so much! I particularly liked seeing the gutter going over a viaduct to the rain garden. These presenters were so enthusiastic, so organized, so willing to take on any question -- and often gave multiple solutions. I have been to many garden lectures and this was THE BEST! I thought it was only an hour and had made an appointment to pick up library books by appointment. I did not want to leave! I came back to catch the last bit -- and am so glad you are recording this so I can watch it again with my husband.</p> <ul style="list-style-type: none"><li>• that it was presented as a how-to in a step-by-step fashion.</li><li>• It just got me thinking about where I may be able to put a water garden.</li><li>• The design considerations for rainwater landscaping</li><li>• The efficient manner in which the presenters gave the information to attendees.</li><li>• The workshop was even better than I expected. So much information and knowledge and the speakers were so great with their "you can do it" spirit.</li><li>• Learning everything about rain garden and registering for the workshop.</li><li>• How to stop water from draining into the street and keeping it in the garden</li><li>• Everything from Design, Planning and action. Even though I am not a San Mateo County resident, I have relatives there and I appreciate the opportunity to participate.</li><li>• Pictures</li><li>• Before and after pics of normal homes</li><li>• The first half which reviewed design concepts and requirements of a rain garden.</li><li>• Clear information tech ideas to change land watering and use and how to cloolection can be used.</li><li>• Covered many topics under the same umbrella with great detail. There were plenty of technical details that were communicated clearly and easy to follow.</li><li>• The slides were extremely inspiring &amp; helpful!</li><li>• The presenters laid out very practical approaches and methods that I can apply to my landscape.</li><li>• You can design your own rain garden</li><li>• Just realizing how involved a project a rain garden is</li><li>• Cinstruction</li><li>• location needs to follow setback and other factors as determined by your jurisdiction</li><li>• location needs to follow setback and other factors as determined by your jurisdiction</li><li>• All the real-life examples that we were shown, plus walking us through the various steps of the process.</li><li>• Listing of maintenance tasks</li><li>• Inspiring me and teaching me what a rain garden it.</li><li>• Friendly knowledgeable teachers. Enthusiasm</li><li>• I liked seeing the different ideas of how to implement a rain garden. I was able to gather different ideas that will help with what I would like to do with my garden.</li><li>• The specifics detailing location and size of rain gardens. I also really appreciated Haven's specific recommendations for attracting birds, bees, butterflies, and beneficial insects.</li><li>• Lots specific detail about restrictions, practical applications in homes as well as commercial</li></ul>
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	<ul style="list-style-type: none"> <li>• Step-by-step process, photographed examples, very knowledgeable speakers</li> <li>• Great overview of the topic!</li> <li>• Seeing photos of how its done! Design techniques.</li> <li>• The various options and tips in creating a rain garden plan.</li> <li>• Presentation of types of plants for rain garden. Types of mulch. Visuals of design ideas.</li> </ul> <p>Total amount of respondents who answered this question: 51</p>
<p>Q6. What topics would you suggest in the future?</p>	<ul style="list-style-type: none"> <li>• Integration of food crops into urban landscape, with consideration to other drought tolerant parts of garden.</li> <li>• more design ideas, discussion on native plants,</li> <li>• 1. more specifics about CA native plantings -- how to establish and care for them.</li> <li>• 2. bee and other beneficial insect-friendly gardens</li> <li>• Advanced water conservation Easy graywater systems</li> <li>• Nothing</li> <li>• How to save our great small lizards living in our current yards and things we love into our new yards. How an elderly homeowner can change their yard, with out contractors and gobs of \$\$\$\$\$. How yards can be fully accessible for walking into them to maintain plants (ie dead heading)</li> <li>• Eatable garden</li> <li>• all your topics interest me.</li> <li>• Designing a landscape garden.</li> <li>• Specific plant suggestions. Just lists and links would help.</li> <li>• How to divert grey water out to landscape.</li> <li>• Information on native plants with pictures of one gallon plants and them how they would look at full size and in different seasons. I am trying to go native but am not sure which plants I would like in my garden.</li> <li>• Let us know more about plants that survive in drought as well as water.</li> <li>• I don't know</li> <li>• More information on appropriate plant species</li> <li>• Specific California plants for Rain Water Garden</li> <li>• California laws on rainwater collection; nuances and how this might work in the context of rain gardens.</li> <li>• I would love to hear from a group of local nurseries and contractors about past water wise projects and what services they provide.</li> <li>• How to design a raingarden and budget for it.</li> <li>• Maybe designing with plants</li> <li>• Potential use of cisterns used for geothermal heating and cooling.</li> <li>• How to create healthy, water absorbing soil</li> <li>• More info on narrow side yard rain gardens</li> <li>• collection and use of water at home, from older residential (track housing) to small yards in newer home developments 3 story town homes with 4x4 yard.</li> <li>• I would love to better understand the benefit of perennials vs annuals in a garden. Typically outside of edibles beds, my garden is typically a mix of evergreens and perennials which require less maintenance. I tend to feel that purchasing annuals is not worth the cost or effort because they need to be consistently replaced. However I know they have a role to play it the ecosystem and would love to better understand how to better mix natives, annuals and perennials.</li> <li>• Container gardening for small balconies</li> </ul>

	<ul style="list-style-type: none"> <li>• A children's workshop or hands on webinar</li> <li>• More design classes for home owners with no prior experience</li> <li>• Grey water systems</li> <li>• More on CA native plants</li> <li>• --</li> <li>• ways to support local wildlife, garden design for low maintenance, beauty</li> <li>• More about bees and butterflies</li> <li>• I would love to see more specific plant recommendations</li> <li>• Understanding soils, their amendments and what plants work best in which soils.</li> <li>• Permeable paving options</li> <li>• Design techniques by cost and labor intensity</li> <li>• Composting.</li> </ul> <p>Total amount of respondents who answered this question: 38</p>
<p>Q7. Your overall rating of the class</p>	<p>Unsatisfied: 1 Satisfied: 9 Very satisfied: 44</p> <p>Total amount of respondents who answered this question: 54</p>
<p>Q8. How did you learn of the class?</p>	<p>Social media: 10 Flows To Bay: 5 Email: 31 Evite: 1 Friend: 2 BAWSCA Website: 3 Several of the above sources: 1 Rescape events calendar: 1 Other: 1</p> <ul style="list-style-type: none"> <li>• it all started with a Hayward City councilmember and past classes at City hall, so now when I see BAWCA I read it&lt;3</li> </ul> <p>Total amount of respondents who answered this question: 55</p>
<p>Q9. Likelihood of attending another webinar.</p>	<p>Likely: 9 Neither Likely Nor Unlikely: 1 Very likely: 44</p> <p>Total amount of respondents who answered this question: 54</p>
<p>Q10. What is your age?</p>	<p>55 50 120 59 2 79 45 - 4 70 - 6 57 - 2 34 - 2 56 - 2 42 67 66</p>

	<p>75 68 - 2 52 - 2 59 47 79 61 - 2 56 50 34 38 60 - 2 78 79 - 2 32 63 54 41 68 38 - 2 45 69</p> <p>Total amount of respondents who answered this question: 53</p>
<p>Q11. Your city of residence</p>	<p>South San Francisco: 1 Belmont: 2 Palo Alto: 2 Oakland: 1 San Mateo: 6 Roseville: 1 Pacifica: 6 Hayward: 2 Burlingame: 7 94010: 1 Los Angeles: 1 San Bruno: 4 Temecula: 1 Menlo Park: 2 San Rafael: 1 Sacramento: 1 Fremont: 2 San Carlos: 1 Centerport: 1 Somerset: 1 San Jose: 1 San Carlos: 1 Redwood City: 2 Roseville: 2 Foster City: 1 San Francisco: 1 Reno: 1 Daly City: 1 Millbrae: 1</p> <p>Total amount of respondents who answered this question: 55</p>

<p>Q12. What is the biggest obstacle you face when deciding to install a rain garden?</p>	<ul style="list-style-type: none"> <li>• How neighbors respond, existing drainage and retaining wall. Age</li> <li>• to find the right contractors</li> <li>• we have an established garden (no lawn), so lot of inertia to be overcome</li> <li>• Cost</li> <li>• Grading</li> <li>• Labor</li> <li>• Coming up with plans</li> <li>• \$\$\$, strength to dig out areas to add the new stuff, afraid I'd lose the charm I have in my yard to hard rocks and (weed looking grasses) and dry plants not claming looking</li> <li>• cost, esthetics, effectiveness</li> <li>• the design and construction costs</li> <li>• Laying out where can be safely done given trees</li> <li>• Cost</li> <li>• My plot is too small for the setbacks</li> <li>• Cost</li> <li>• Available Landscape space requirements</li> <li>• Cost</li> <li>• Location due to a very high water table in the wenter</li> <li>• Hard clay soil and the cost of rocks</li> <li>• finding a contractor who really knows drainage --- my husband is a physicist and has not been impressed with the people he has encountered. We need to know how to find a specialist in landscape drainage. As for putting in the rain garden, we will do it once we see if our Monterey Pine survives the beetle infestation it has now. We will definitely include a rain garden in our new landscaping -- with the pine or without.</li> <li>• time</li> <li>• Location of the downspouts</li> <li>• Don't know yet. Most likely planting &amp; maintenance of garden</li> <li>• Cost/time equally because even in quarantine, working from home, I don't have a lot of either cash or time.</li> <li>• How to begin, how to plan it out, how to source materials and plants</li> <li>• Cost and know how</li> <li>• design for plants</li> <li>• Cost, because I am too old to do it all by myself.</li> <li>• Convincing clients</li> <li>• Initial layout and design</li> <li>• none</li> <li>• I live on a hill.</li> <li>• digging a new area, tripping, money to/how to move my water. I want to do it, but am physically limited to very slow</li> <li>• Cost of materials</li> <li>• I'm in a condo; maybe the HOA will consider this</li> <li>• Cost to redo current landscape</li> <li>• Can we do it by ourselves, because hiring a professional is too costly</li> <li>• Space because of the setbacks which I wasn't aware of</li> <li>• Who will do the work. Me or hire someone</li> <li>• labor</li> <li>• labor</li> <li>• Would it work in FC, since we are so close to sea level?</li> <li>• space</li> <li>• inertia</li> <li>• location and manual labor</li> </ul>
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	<ul style="list-style-type: none"> <li>• Money</li> <li>• Price</li> <li>• Small amount of space as well as cost</li> <li>• What plants to use.</li> <li>• The manual work involved in creating it</li> <li>• Lack of rain in Reno area, so I'm not sure it's worth the price tag.</li> <li>• My mother</li> <li>• I am a renter. I am a novice when it comes to landscaping and gardening.</li> <li>• how to divert water to rain garden</li> </ul> <p>Total amount of respondents who answered this question: 53</p>
<p>Q13. How likely are you to install a rain garden in the next 6 months?</p>	<p>Very Unlikely: 2          Unlikely: 8          Neither Likely Nor Unlikely: 16          Likely: 18          Very likely: 11</p> <p>Total amount of respondents who answered this question: 55</p>

## E-Newsletters



Grow what you love without the use of harmful pesticides! During September 19th's webinar, our expert will discuss how to manage pests in a way that keeps the health of your plants, our waterways, and yourself in mind—with a focus on supporting pollinators.

[Register for the free webinar](#)

All San Mateo County residents who take a short 3-minute survey after the webinar will be entered into our raffle. You'll have a chance to be **one of two attendees who each win a \$50 gift card** to their choice of either Hassett Ace Hardware, Home Depot, or Lyngso Garden Materials!

[Learn more about the webinar](#)

We look forward to having you in attendance at this insightful and free webinar!

## Examples of FY 2020/21 E-Newsletters



### Prepare for Rainy Days Ahead

How to Save on a Rain Barrel | Webinar: Rain Barrels 101 on October 24th | Redwood City Resident Shows that Being a Rain Barrel Owner is Easy



We can *barrel-y* contain our excitement! The San Mateo Countywide rain barrel rebate program has been upgraded to offer increased incentives based on barrel size. This means the larger your rainwater harvesting system—the larger the rebate! Now through June 30, 2021, all San Mateo County residents are eligible for this tiered rebate program of \$50 - \$150 depending on rain barrel size. Customers of 7 water districts in the County will receive an additional \$50 which means rebates of \$100 - \$200!

There's more! Flows to Bay's partnership with [BlueBarrel Rainwater Catchment Systems](#) provides San Mateo County Residents a 10% discount off purchases in their online store using **discount code FlowsToBay**.

[LEARN HOW TO SAVE HERE](#)





## Two Rebates for the Rainy Season!

Rain Barrels | Rain Gardens

It's that time of year where we find ourselves listening to the soothing sounds of rainfall. All of that rain water, however, could be wasted and become stormwater runoff without a rain barrel or rain garden. Look no further! We're here to tell you how you can incorporate these practices - *cost effectively* - through Countywide rebates that may be available to you!



### Rain Barrels

Have you heard about this year's upgraded [San Mateo Countywide rain barrel rebate program](#)? The larger your rainwater harvesting system, the larger the rebate! Now through June 30, 2021, all San Mateo County residents are eligible for this tiered rebate program of \$50 - \$200 depending on rain barrel size and where you live in the county. Speaking of discounts, Flows to Bay's partnership with [BlueBarrel Rainwater Catchment Systems](#) provides San Mateo County Residents a 10% discount off purchases in their online store using **discount code: FlowsToBay**.

[Learn More About Rain Barrel Savings](#)



## Water Wise Webinar and Neighbor Inspiration

Webinar | SMC Resident Story | Facebook Live Event



As we head into the drier months and as [San Mateo County proceeds deeper into a severe drought](#), we encourage residents to consider adding water wise gardening and landscaping practices at your home. There are choices each of us can make to help our outdoor spaces retain water and prevent pollution. This can lead to a decreased reliance on limited water supplies and save us money on our water bills—as you'll see in the webinar it's also great fun to create your own water wise project! Join our free online webinar on Thursday, May 27th at 5pm to learn about and prepare for your next water wise home project!

[Learn More and Register Here](#)



**Public Outreach and Citizen Involvement Events**



Promotional Graphic for September 19, 2020 webinar, “Pest Management Practices that Help Your Garden and Support Pollinators”.



Promotional Graphic for October 10, 2020 webinar, “Rain Gardens 101”.





Promotional Graphic for October 24, 2020 webinar, “Rain Barrels 101: Understanding if a rain barrel is right for you”.

**Flows To Bay**  
Sponsored · Paid for by Flows To Bay · ✨

San Bruno Residents! Are you interested in replacing your water-thirsty grass lawn with a water-wise landscape? Join the ...See More

**Before**

**After**

Register for the FREE Nov. 7th workshop... SIGN UP

Hani Yaser and 7 others

Like Comment Share

Promotional City-Specific Ads for November 7, 2020 webinar, “Lawn Be Gone! Rebate Program Q&A with UC Master Gardeners”.



Promotional Graphic for December 5, 2020 webinar, “Fall/Winter Gardening Essentials”.



Promotional Graphic for December 8, 2020 webinar, Sustainable Streets Master Plan “Virtual Open House”



## Preparing Your Garden for a Pest-Free Spring

Saturday, March 20  
10-11:30 AM | Online

[flowstobay.org](http://flowstobay.org)

Promotional Graphic for March 20, 2021 webinar, "Preparing Your Garden for a Pest-Free Spring".



## Healthy Gardening for People, Pets, and Our Environment!

Choose less toxic products for a healthy home and garden



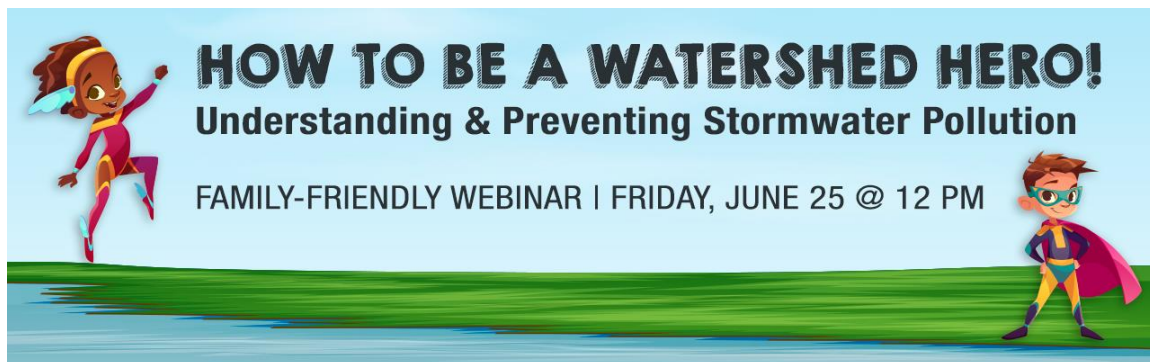
Look for this symbol before you buy!

For more info on managing pests, ask our expert at [www.OurWaterOurWorld.org](http://www.OurWaterOurWorld.org)

Promotional Graphic for May 5, 2021 webinar, "Non-Toxic Pest Management for the Garden & Home".



Promotional Graphic for May 27, 2021 webinar, "Water-Wise Gardening and Landscaping".



Promotional Graphic for family-friendly June 25, 2021 webinar, "How to Be a Watershed Hero: Understanding & Preventing Stormwater Pollution".

Compiled survey responses for September 19<sup>th</sup> webinar  
 33 survey respondents out of 77 workshop participants

Questions	Responses
Q1. What did you hope to learn from attending this class? (select all that apply)	How to improve my garden or lawn: 15 How to get rid of my pests: 18 Less-toxic or nontoxic alternatives to pesticides: 21 How to reduce my pesticide usage: 14 Other: 1  Total amount of respondents who answered this question: 33
Q1A. "Other" response	<ul style="list-style-type: none"> <li>• Great recommendation to visit ourwaterourworld for more info about flees</li> </ul>
Q2. What actions are you going to bring to your garden? (select all that apply)	Have plants in my yard that attract pollinators: 26 Use organic fertilizers and compost: 26 Switch to a less-toxic or non-toxic pesticide alternative: 12 Install an irrigation system: 3 Other: 2  Total amount of respondents who answered this question: 33
Q2A. "Other" response	<ul style="list-style-type: none"> <li>• Solutions for outdoor rats, I know when to apply copper spray to peach and nectarine trees, resources to look things up</li> <li>• This zoom helped boost my confidence in what I am already doing and confirmed I'm on the right track</li> </ul>
Q3. The presenter demonstrated knowledge of the topic and presented practical information you can use.	One (strongly disagree): 2 Two: 2 Three: 1 Four: 4 Five (strongly agree): 23  Total amount of respondents who answered this question: 32
Q4. The workshop was what you expected.	Yes: 30 No: 1  Total amount of respondents who answered this question: 31
Q4A. If "No", Why?	<ul style="list-style-type: none"> <li>• She presented more useful information than what I expected.</li> </ul>
Q5. What did you find most useful about the workshop?	<ul style="list-style-type: none"> <li>• The pest management pyramid. It provided clear steps to take when trying to manage an issue.</li> <li>• Organized series of preventive methods.</li> <li>• Learning about gopher baskets.</li> <li>• I think she presented really useful tips and provides great lists of resources</li> <li>• Various strategies to manage pests</li> <li>• It gave me some suggestions on how to get rid of pest without using chemicals</li> </ul>

	<ul style="list-style-type: none"> <li>• The pointers about pesticides.</li> <li>• I have to change/monitor the ecosystem of my back yard to do pest control.</li> <li>• Various strategies to manage pests</li> <li>• The Q &amp; A and websites that were provided were very helpful. The scope of the workshop gave me an overview of what I should be asking myself about the plants and trees in my garden, and how to control pests without chemicals.</li> <li>• I appreciated all the websites and resources the presenter gave us if we have questions</li> <li>• How I reduce pesticide usage, and resources.</li> <li>• Mulch information. References</li> <li>• Tree care and the use of eco products on my veggies and fruit.</li> <li>• How important compost and good soil are</li> <li>• Information about products and websites</li> <li>• The presentation of the order of pest management going from less harmful to environment to the one to consider last.</li> <li>• The holistic approach: attracting friends which discourages foes, actively supporting soil health, big picture about how my yard affects health of our whole environment</li> <li>• FAR more information than I expected; very wide-ranging &amp; well presented. Most useful was ant control.</li> <li>• The presenter was very knowledgeable without being condescending. Info was presented in a logical sequence. Great links were shared.</li> <li>• Grow healthy plants</li> <li>• Visuals to compliment talk. Specifically beneficial insects and cardboard use in weed barriers</li> <li>• Learning about good bugs and mulching.</li> <li>• Structure of the information into pest mgmt groups - mechanical, chemical. Also the specific tips to prevent pests from the start and then tips to deal with them if they arrive.</li> <li>• I think they're right that too little water affects plant health and susceptibility to pests</li> <li>• all of the helpful tips provided to us and resources</li> <li>• all of the helpful tips provided to us and resources</li> </ul> <p>Total amount of respondents who answered this question: 27</p>
<p>Q6. In the last 12 months, have you used pesticides in your home, garden, or lawn?</p>	<p>No: 23 Yes: 9</p> <p>Total amount of respondents who answered this question: 32</p>
<p>Q7. What topics would you suggest for future workshops?</p>	<ul style="list-style-type: none"> <li>• Soil food web/soil amendments/soil remediation</li> <li>• Installation and/or maintenance of irrigation system especially drip</li> <li>• Cactus and succulent workshop</li> <li>• Soil composition, management, and enhancements</li> <li>• Know more about beneficial bugs and how to attract them to the garden.</li> <li>• How to save water</li> <li>• Encouraging native plant garden. Drought tolerant yard making</li> <li>• Soil composition, management, and enhancements</li> <li>• Best practices for conserving water and still have a beautiful garden. Understanding water tables and how they affect my need to irrigate. Also, the relationship between recycling (how to do it properly) and water</li> </ul>

	<p>pollution.</p> <ul style="list-style-type: none"> <li>• Seasonal flowers, vegetable and fruit plants, how to make a raised beds. Looking forward to the rain barrel in Nov!</li> <li>• I really like ideas to help plants thrive in different climates etc..</li> <li>• Ways to deter, chase away or catch a gopher without hurting wildlife( coyotes , skunks, opossum) dogs and cats. Fragrant oils, etc? Covering traps that don't attract others?</li> <li>• More on what grows well in an and shade in the bay area</li> <li>• Growing vegetables, pitfalls, tips, planning. This year, pandemic year, my raised bed vegetable garden was my sanctuary. I would like to plan it out better though so increase yield.</li> <li>• It would be fun to have a hands on workshop where we build covers for garden. My solutions fail with sprouts become too tall, yet still vulnerable. I mostly do straw bale gardening in my yard and also have a community garden plot. I can tell you the exact life time of aviary wire before gophers chew thru! Also rain harvesting ideas. Mine is rustic and labor intensive.</li> <li>• Weed control. Shade-tree selection.</li> <li>• How to set up a permitted system to use grey water from the home.</li> <li>• Composting</li> <li>• Garden tours demonstrating native gardening and pest management</li> <li>• 1) Seasonal plants and pests. EG: Fall Chard &amp; Beets and battling black flies and leaf miners. 2) What to do in the dormant season to have a successful Spring.</li> <li>• plants to pair together with fruit trees and other plants and or vegetables</li> <li>• plants to pair together with fruit trees and other plants and or vegetables</li> </ul> <p>Total amount of respondents who answered this question: 22</p>
<p>Q8. Please check any of the future webinars you are interested in attending (select all that apply)</p>	<p>Rain Barrels: Are they right for you?: 22  Rain Garden Design, Construction &amp; Maintenance: 23  Winter Gardening &amp; Pest Management: 27  None of these: 3</p> <p>*Two people marked webinar topics AND "None of these"</p> <p>Total amount of respondents who answered this question: 31</p>
<p>Q9. Your overall rating of the class</p>	<p>Three: 4  Four: 7  Five (very satisfied): 21</p> <p>Total amount of respondents who answered this question: 32</p>

Q10. Your city of residence	San Mateo: 4 San Francisco: 2 Oakland: 1 Mountain View: 2 Daly City: 3 Menlo Park: 2 Santa Cruz: 1 San Carlos: 3 Portola Valley: 1 Fresno: 1 Millbrae: 4 Redwood City: 1 San Bruno: 1 Campbell: 1 Redwood City: 1 Half Moon Bay: 1 Pacifica: 1 4157704737: 2  Total amount of respondents who answered this question: 32
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Compiled survey responses for December 5<sup>th</sup> webinar  
60 survey respondents out of 72 workshop participants

Questions	Responses
Q1. What did you hope to learn from attending this class? (select all that apply)	How to improve my garden or lawn: 48 How to get rid of my pests: 38 Less-toxic or nontoxic alternatives to pesticides: 31 How to get rid of my pests: 38 How to reduce my pesticide usage: 14 Other (please specify below)  Total amount of respondents who answered this question: 60
Q1A. "Other" response	<ul style="list-style-type: none"> <li>• Gardening tasks during fall</li> <li>• What to grow in the winter season.</li> <li>• I probably did not read the description carefully, as I thought this was about actual gardening in winter, as in vegetables.</li> <li>• I liked the information about soil and soil improvement with mulch and compost.</li> </ul>
Q2. After attending our webinar, which actions do you plan on bringing to your garden? (select all that apply)	Use compost and organic fertilizers in my garden: 39 Choose plants that attract beneficial insects: 42 Switch to a less-toxic pesticide alternative: 20 Reassess my irrigation practices: 23 None of the above: 2 Other (please specify below): 1  Total amount of respondents who answered this question: 60
Q2A. "Other" response	<ul style="list-style-type: none"> <li>• Eggshell conversation was very interesting to me. I need more information about moles/ gophers.</li> </ul>
Q3. The presenter demonstrated knowledge of the topic and presented practical information you can use.	One: 2 Two: 2 Three: 2 Four: 6 Five (Strongly agree): 48  Total amount of respondents who answered this question: 60
Q4. The workshop was what you expected.	Yes: 51 No: 9  Total amount of respondents who answered this question: 60

<p>Q5. What did you find most useful about the workshop?</p>	<ul style="list-style-type: none"><li>• Lots of good information. Also good amount of time for Q&amp;A.</li><li>• Pest control</li><li>• Tips about keeping rats away and gophers from eating root veggies.</li><li>• details on dealing with each type of pests.</li><li>• the information and referrals to the websites for native plant information</li><li>• Good slides. Interesting info. Quick and to the point</li><li>• Everything</li><li>• The presenter had a terrific knowledge of the subject matter and was appreciated by the numerous questions of the participants.</li><li>• Questions answered - mealy bug eradication, soil types- how to figure out. Info on pests. Website info. Healthy soil info, etc. Thank you!</li><li>• How to identify gopher/mole/vole holes, and how to safeguard your plants.</li><li>• Traps and how to bait them for mice and rats.</li><li>• reinforcing the use of IPM, what services BAWSCA has to offer ie suggestions for watering schedules, ideas for getting rid of pests like rats in a humane way, product referrals ie Good Nature Co2 trap, and many other practical ideas.</li><li>• Her discussion of how to humanely get rid of pests. Use of the cardboard for weed control.</li><li>• Practical information about garden pests</li><li>• better alternatives to handling garden pests</li><li>• Use of mulch, beneficial insects, protecting seedlings with strawberry baskets, using more non toxic products, resources available. All helpful information.</li><li>• soil discussion, shapes of gopher and mole mounds</li><li>• Healthy plants can help prevent pests.</li><li>• how to layer cardboard and that a mouse or baby rat can get in a hole the diameter of a pencil</li><li>• Everything was useful.</li><li>• Much of this was a repeat from other workshops I've attended. It would be good for new attendees.</li><li>• Using less toxic pesticide and organic fertilizer.</li><li>• Examples and the promise to send out links to referenced resources</li><li>• New ideas</li><li>• Resources</li><li>• All of it. She was very informative. This seemed like an overview....but I would like more information in detail on every topic. I see people local to me that feed the animals - deer specifically. I really don't know how to stop this from happening. I liked the idea of bringing beneficial insects. I would like to listen to the program again.</li><li>• Focus on pests.</li><li>• Alternatives to pesticides</li><li>• Pest control information</li><li>• How to take care of pests</li><li>• IPM discussion</li><li>• The breadth of information, and the clarity with which it was presented.</li><li>• Reminder of cover crops.</li><li>• practical tips, helpful Q&amp;A</li><li>• Good tips re mulching, using compost, ridding pests without using toxic chemicals, and using rain water not grey water for my edible plants.</li><li>• Info on non toxic pests and native plants</li><li>• Ideas to garden better--more sustainably and ecologically safer. And to use prevention!</li></ul>
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	<ul style="list-style-type: none"> <li>• Comprehensive well organized presentation of the bay area needs for pests and water savings. learned about mulching and composting. learned to not use birdfeeders and why. Very nicely done. Thanks.</li> <li>• How to treat specific pests and disease</li> <li>• Information about resources to go to when questions arise. I don't have any pest issues at the moment but now I know how to find answers when I do.</li> <li>• Expertise</li> <li>• The wide range of knowledge presented in easy understandable language. Also appreciate the links that I can share with others who have an interest but not able to attend this session.</li> <li>• which beneficial plants are good</li> <li>• The usage of plants that bring in beneficial bugs to your garden.</li> <li>• Learning about humane practices in dealing with rodents.</li> <li>• compost, mulching, non-toxic sources, websites for additional information</li> <li>• Learning about how we can use natural alternatives to managing a garden was very useful. Learning that 90% of insects in the garden are beneficial was nice to learn about.</li> </ul> <p>Total amount of respondents who answered this question: 47</p>
<p>Q6. In the last 12 months, have you used pesticides in your home, garden, or lawn?</p>	<p>Yes: 22 No: 38</p> <p>Total amount of respondents who answered this question: 60</p>
<p>Q7. What topics would you suggest for future workshops?</p>	<ul style="list-style-type: none"> <li>• Seasonal gardening tips (one for Spring/Summer)</li> <li>• Seasonal plants and/or succulent gardens</li> <li>• Mini landscape designs with groupings of plants that have similar water needs.</li> <li>• What fruits and veggies to grow in winter / spring.</li> <li>• local farming</li> <li>• Slopes and retaining walls</li> <li>• Citrus trees, more specific info on types of fertilizer and when to apply it.</li> <li>• surprise me.</li> <li>• You keep the public on their toes with the subject matter and are much appreciated.</li> <li>• Complementary planting. not sure what else.</li> <li>• I am usually interested in anything to do with gardening! :)</li> <li>• Well, I love vegetable gardening, which may not really be the focus of "flowstobay." I'd be very interested to hear what plants do well near other plants.</li> <li>• Seasonal plants</li> <li>• Native plant gardening:             <ul style="list-style-type: none"> <li>• using natives as cover crops, companion native plants for best benefit to attracting wildlife including pollinators, finding out what specific natives actually grew in your area before humans arrived, etc. Basically really delve into the ins and outs of native gardening.</li> </ul> </li> <li>• Pruning of trees and roses.</li> <li>• preparation for Spring planting in winter and for preparing for winter dormancy</li> <li>• plant identification, how to vary the topography of your garden area, any non toxic way to get rid of gophers without having to trap them.</li> <li>• birdbaths attracting birds</li> </ul>

	<ul style="list-style-type: none"> <li>• How to manage your raised beds and what to plant when that you have year round fresh vegetables and herbs.</li> <li>• cement alternatives for walkways and driveways.</li> <li>• More small business resources.</li> <li>• Weed control for garden and hillsides</li> <li>• Indigenous plants and how to tell them apart from invaded species</li> <li>• Soil improvement when you live in rocky to super rocky terrain.</li> </ul> <p>Composting - not fancy. I have composted for years putting all my weeds, garden waste and kitchen waste in areas of my property to build the soil. Very interesting that without turning it takes about five years to really get the compost to be dirt, and it really settles down to about a tenth of the volume.</p> <p>Also, I would like some plant suggestions for dry shade, drought tolerant...and ideally going toward Native Plants. Dry shade is super difficult. So is a western slope.</p> <ul style="list-style-type: none"> <li>• Things that help us grow better gardens - naturally - given that we are surrounded by constructed environments.</li> <li>• Involving children in sustainable gardening</li> <li>• How to find the right plants for my climate</li> <li>• Winter gardening and winter crops</li> <li>• Considering the recent news that chemicals are leaching off car tires and killing Coho salmon in the Delta, and the fact that our local watersheds along the coast are causing high pollution levels at the beach, addressing all our household practices is super important thank you!</li> <li>• weeds vs. plants, how to get ID and get rid of weeds</li> <li>• Ways to capture grey water and reusing it safely for plants.</li> <li>• Flowering native plants</li> <li>• Easy vegetable gardening</li> <li>• Info about types of plants to attract bees, butterflies, hummingbirds, song birds.</li> <li>• I would have loved to learn more about seasonal plants that thrive during fall and winter</li> <li>• How weed killers, fertilizers, pesticides, cleaning substances, etc. (chemicals widely available and utilized by homeowners, gardening and construction crews) get into the watershed and how to avoid this.</li> <li>• Garden planning</li> <li>• Spring/ summer gardening;</li> <li>• Gardening tips and what grows best in San Francisco and Daly City</li> <li>• houseplant care, information on clogged drains and why oil and hair shouldn't go down the drain</li> <li>• Sources for organic edible gardens and for planting best plants for birds, butterflies and hummingbirds</li> <li>• rain water harvesting</li> </ul> <p>Total amount of respondents who answered this question: 42</p>
<p>Q8. Your overall rating of the class.</p>	<p>One (very dissatisfied): 1  Two: 2  Three: 5  Four: 8  Five (very satisfied): 43</p> <p>Total amount of respondents who answered this question: 59</p>

Q9. Your city of residence	San Bruno: 6 San Mateo: 9 Hillsborough: 1 Burlingame: 6 South San Francisco: 3 Millbrae: 2 Pacifica: 3 Menlo Park: 4 San Carlos: 2 Belmont: 1 Redwood City: 5 El Granada: 1 Daly City: 6 Pacifica: 1 San Francisco: 1 Foster City: 1 Woodside: 1 Half Moon Bay: 1 Palo Alto: 1 Reno: 1 Colma: 1  Total amount of respondents who answered this question: 57
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Compiled survey responses for March 20<sup>th</sup> webinar  
 52 survey respondents out of 88 workshop participants

Questions	Responses
Q1. What did you hope to learn from attending this class? (select all that apply)	How to improve my garden or lawn: 33 How to get rid of my pests: 40 How to reduce my pesticide usage and/or switch to less-toxic or nontoxic alternatives to pesticides: 33 Other (please specify below): 1  Total amount of respondents who answered this question: 52
Q1A. "Other" response	<ul style="list-style-type: none"> <li>• How to attract beneficial bugs</li> </ul>
Q2. In the last 12 months, have you used integrated pest management practices (i.e. trapping, barriers, beneficial insects, using mulch) in your home, garden, or lawn?	Yes: 40 No: 12  Total amount of respondents who answered this question: 52
Q3. After attending our webinar, which actions do you plan on bringing to your garden? (select all that apply)	Use compost and organic fertilizers in my garden: 37 Choose plants that attract beneficial insects: 40 Implementing water wise practices in the garden (i.e. mulch, drip irrigation): 30 Switch to a less-toxic pesticide alternative: 18 Other (please specify below):  Total amount of respondents who answered this question: 52
Q3. "Other" response	<ul style="list-style-type: none"> <li>• gopher baskets, yellow jacket traps</li> <li>• Better mulching</li> <li>• Perhaps get professional help analyzing my sprinkler system.</li> <li>• be careful to not water the stems of my plants</li> </ul>
Q4. The presenter demonstrated knowledge of the topic and presented practical information you can use	One (strongly disagree): 4 Two: 1 Three: 1 Four: 7 Five (strongly agree): 39  Total amount of respondents who answered this question: 52
Q5. The workshop was what you expected.	Yes: 49 No: 3  Total amount of respondents who answered this question: 52

Q6. What did you find most useful about the workshop?

- Watering tips
- The time to do the spraying and the different websites which I shall visit
- It was terrific. She really covered so much. I liked the tips on dormant spraying, using compost, preventative actions like cages, nets, and covers. I already mulch and use no pesticides.
- It was a practical approach to pest control
- Tips on eradicating pest from garden!
- This was my first time attending a workshop about alternatives to pesticides. It seemed to cover way more than that, so I think I would have to attend it a second time in order to absorb all the info.
- Learning more about aphids, using traps now to capture yellow jacket queen been, gopher pots, crop coverings
- Description of how aphids feed.
- Ways to prepare soil for plantings
- all of it.
- The reminder that the whole eco system matters - from water, compost, mulch, etc - makes for a healthier garden and a healthy garden attracts less pests.
- Integrated pest management - thinking about the overall health of the garden and how to approach that in different ways. The access to different websites to help with issues, especially those relevant to our area.
- Tips for aphids and ants. I did not know that ants would protect aphids
- Various interesting and useful topics from bay water flow, pesticides, fertilizer, pruning, healthy soil, bacteria and fungi, organic garden products and so much more useful tips and techniques to gardening. Thank you so much! I feel so empowered with the knowledge I've gained this morning and I'm so enthusiastic to begin working on my organic vegetable garden!
- Pest removal
- She went into more detail than I have experienced before. I had never heard that the depth of a mulch layer is helpful as a support of plant resilience. I have never come upon gopher baskets, or known of yellow jacket traps.
- Some tips were new and helpful, like using boiling water for weeds in cracks. Some of the resource links were also helpful. Sometimes finding quality, local information online is hard.
- The mulch advice was very useful for me; I haven't used it before but I plan to now!
- The idea of pouring boiling water on side walk weeds sounds like a great simple idea and none toxic. In general, I am glad that you are sharing this information. I don't think the public understands the issues surrounding water flowing into the Bay (or ground water.) Also the information about the barrel composter was interesting. I do compost....in my back yard area....which is large....but see people using that barrel composter and it always looks like sluge. Now I know why. I think all those composting contraptions are worthless compared to just piling it up, and up, and up with green and brown garden waste, but many people think they need a neat a tidy idea.
- Amount of water to use, how to get rid of weeds in concrete, websites, aphids
- Suggestions on best timing for the strategies presented.
- The proper way of water that is best for your plants and

	<p>conservation by mulching and using wood chops etc.</p> <ul style="list-style-type: none"><li>• The overall hierarchy of pest management, the mulching information (3 layers cardboard, plus mulch), the references to websites on specific plant information, and the information on what to include in composting.</li><li>• The presenters were so knowledgeable and approachable so it did t feel like I was being lectured to.</li><li>• Using barriers. I'll do more of that</li><li>• The approach to informative education about how and why we can all help improve storm water pollution. Gardening specifics how to deal with pests. Information on how to improve our soil. Too hard to pick just one.</li><li>• Clear basic communication of the concepts and reminders for "best practices" I can do at home</li><li>• Avoid mulching around the base of plants; Use compost 2 weeks before planting; Water deeply and infrequently; Water outer edges/dripline and not directly over plants; removing mildew powder on leaves during sunlight; Ridding aphids and gophers</li><li>• Helpful hints on getting rid of insect pests and funguses, adding beneficial nematodes, etc.. How to mulch the garden, etc. The entire program was excellent. Kudos to the presenter!</li><li>• I am having problems with aphids - so her discussion on that topic was super helpful.</li><li>• I attended this seminar previously. What I enjoyed about it is that it didn't sound repetitive and I still went away with learning something new. I'm sorry I had to leave 10 minutes early due to another commitment.</li><li>• watering</li><li>• Presenter offered recommendations for healthier pest remediation</li><li>• use more friendly controls to be safe to the environment and living creatures</li><li>• Really all of it was helpful. The website options for getting more help were great. Product names also helpful.</li><li>• Emphasis on identifying your problem (specific pest or fungus) to guide your course of action. I didn't know that powdery mildew likes dry conditions! I also didn't know that different aphid species had specific targets.</li><li>• The beauty of IPM is that the whole ecosystem is taken into consideration. It reminded me that the "bad" bugs can actually be good in that other critters need them for food. Working with nature instead of against it, can still help alleviate most of the pest problems. I also didn't know about the finch salmonella problem - thank you for that alert!</li><li>• Amount of info</li><li>• watering tips</li><li>• pest management tips</li><li>• Watering, weed control, and pest management.</li><li>• I found the reasoning behind using organic fertilizer to be enlightening.</li></ul> <p>Total amount of respondents who answered this question: 42</p>
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<p>Q7. What topics would you suggest for future workshops?</p>	<ul style="list-style-type: none"> <li>• Artificial turf vs real grass: benefits and risks.</li> <li>• The fall or winter garden would be nice</li> <li>• Some examples of good plants to put in the garden</li> <li>• My main suggestion is about the use of the zoom panelist format. As a participant at large, I was unable to save the chat or even copy or paste anything in it. As a result, the only way I could easily get the URLs was to click on them in the chat, open them in a browser window, and then save them there. If there is a zoom setting where you can enable people to save or copy what's in the chat, and then keep posting the resource URLs in the chat, that would be helpful.</li> <li>• I enjoyed this one and the rain barrel class. It would be great to do something late summer/fall with ways to get the garden set up for winter and keeping the potential run off clean.</li> <li>• Plants that do well in our area (realize San Mateo County has varied microclimates) - drought tolerant, good for attracting birds or butterflies, etc</li> <li>• Garden planning and seed starting</li> <li>• More of this nature would be wonderful and appreciative.</li> <li>• Hummingbird , lady bugs, essential bugs insects</li> <li>• I would be interested in learning of things that can be done to improve hardiness (and life expectancy) of freshly planted plants. I am thinking of several gardens in a place I frequently walk. Some one gallon bougainvillea plants were planted in front of a fence, where there is an afternoon wind. (If asked) I would advise sheltering the plant with a temporary plastic dome to cut down the effect of the wind. Also, what can be done to encourage rose plants which seem hesitant to grow? Or lemon trees which do not produce blooms (and fruit)? etc.</li> <li>• How to combat some more specific pests. More recommendations for beneficial native plants that work best in yards. Comments on creating butterfly habitat vs garden eating caterpillars.</li> <li>• Choosing plants for your garden, maybe? Like, how to judge soil type/quality, what fits in different spaces, what works best with different sun levels, or what plants grow well together.</li> <li>• Discuss not feeding deer (I know that there are people in my area that do.) Maybe plants for butterflies would be cool. Also good birdhouses for owls. And bird houses for Quail. I know there are quail in my area. Could i create a Quail space?</li> <li>• All about Roses</li> <li>• Native plants</li> <li>• You've been providing excellent resources and programs</li> <li>• Narrow topics covered slightly. Seasonal preparation of plants as season approaches. Discuss what makes up proper recycling of items for blue bin and also green bin. I was unaware, I should place diseased leaves into garbage. Thank you for workshop!!</li> <li>• composting and cover cropping - how do you do it?</li> <li>• planning an irrigation system, how to know which heads to use, etc. how much water to give.</li> <li>• She was GREAT! Covered everything that was asked</li> <li>• landscaping</li> <li>• pruning mid-size trees and bushes</li> <li>• Pruning of various plants, shrubs, trees.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Composting information is always welcome</li> <li>• Composting</li> <li>• Not sure</li> <li>• checking the chemical balance of my soil</li> </ul> <p>Total amount of respondents who answered this question: 27</p>
<p>Q8. Your overall rating of the class:</p>	<p>One (very dissatisfied): 1            Three: 1            Four: 6            Five (very satisfied): 44</p> <p>Total amount of respondents who answered this question: 52</p>
<p>Q9. Your city of residence</p>	<p>Redwood City: 10            Rwc: 1            San Mateo: 5            Pacifica: 7            Menlo Park: 5                Portola Valley: 7                Daly City: 2                Moss Beach: 1                Brisbane: 1                Half Moon Bay: 1                San Bruno: 4                San Carlos: 1                Belmont: 3                Burlingame: 3                South San Francisco: 1</p> <p>Total amount of respondents who answered this question: 52</p>

Compiled survey responses for May 5<sup>th</sup> webinar  
 26 survey respondents out of 102 workshop participants

Questions	Responses
Q1. What did you hope to learn from attending this class? (select all that apply)	How to improve my garden or lawn: 9 How to get rid of my pests: 20 How to get rid of my pests: 20 How to reduce my pesticide usage and/or switch to less-toxic or nontoxic alternatives to pesticides: 15 Other (please specify below)  Total amount of respondents who answered this question: 26
Q1A. "Other" response	<ul style="list-style-type: none"> <li>• Get more knowledgeable about pests that are good for the garden</li> </ul>
Q2. In the last 12 months, have you used any integrated management practices (i.e. trapping, barriers, beneficial insects, using mulch) in your home, garden, or lawn?	Yes: 20 No: 6
Q3. After attending our webinar, which actions do you plan on bringing to your garden? (select all that apply)	Use compost and organic fertilizers in my garden: 17 Choose plants that attract beneficial insects: 22 Switch to a less-toxic pesticide alternative: 9 Implementing water wise practices in the garden (i.e. mulch, drip irrigation): 15 Use compost and organic fertilizers in my garden: 17 None of the above: 1 Other (please specify below): 1  Total amount of respondents who answered this question: 26
Q3A. "Other" response	<ul style="list-style-type: none"> <li>• I was mostly interested in ways to control ants (and hence aphids) in the backyard. I now have the name of a product I will try around my metal trough raised beds.</li> </ul>
Q4. The presenter demonstrated knowledge of the topic and presented practical information you can use.	One: 3 Two: 0 Three: 2 Four: 4 Five (Strongly agree): 16  Total amount of respondents who answered this question: 26
Q5. The workshop was what you expected.	Yes: 26 No: 0  Total amount of respondents who answered this question: 26

<p>Q6. What did you find most useful about the workshop?</p>	<ul style="list-style-type: none"> <li>• Regarding hosing off aphids. I always thought “what’s the point? Since they will just crawl back on the plant”. I didn’t realize their lips/suckers stay attached to the plant. The info about cultural controls, soil biology, plant stressors, over or under-watering was helpful. I will pay more attention.</li> <li>• watering and natural pest deterrents</li> <li>• Pesticides overview</li> <li>• Thank goodness for the recorded version. For some reason, I was unable to connect live. Zoom said the host was in another meeting. I tried two devices, tried logging on from eventbrite, from the email sent right before class time - nothing got past the message that the host was in another meeting. I tried ten minutes before start time and waited an additional 45 minutes. Odd.</li> <li>• How to improve and cultivate my fruit orchard.</li> <li>• Gopher info</li> <li>• Lots and lots of links to resources shared in the chat. I've found that when it comes to gardening, there are a lot of anecdotal suggestions available online, so it is hard to separate good resources from your-mileage-may-vary type of resources. I would trust resources shared in this talk over others I might find myself.</li> <li>• I really liked the chat feature. They were really good about answering questions on the chat. I liked that the presenter kept to her schedule. They covered a lot of material in a short amount of time.</li> <li>• Lots of detailed examples.</li> <li>• Resources available to help with specific questions</li> <li>• wise usage of water for gardening</li> <li>• Learning different ways to handle pests</li> <li>• Simple straight forward easy to understand</li> <li>• Specific examples with visuals were presented to make it easier to envision implementation of the recommended</li> <li>• Neem Oils</li> <li>• This was one of the best and most informative workshops I've attended! Very well done!</li> <li>• The detail the presenter went into - absolutely fantastic</li> <li>• Pest info</li> <li>• I already do some of the things mentioned in the webinar but there were some good ideas. I didn't know hosing off aphids would kill them, I thought I was just temporarily removing them. I think I'll need to get a net/cover to keep bugs off my leafy greens this year, mine really suffered last year. I need read up on what plants will attract the good bugs, I have some already though, woohoo!</li> <li>• The links to resources</li> <li>• breath of coverage</li> </ul> <p>Total amount of respondents who answered this question: 21</p>
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<p>Q7. What topics would you suggest for future workshops?</p>	<ul style="list-style-type: none"> <li>• Practical ways to care for the soil and wildlife in urban/suburban yards in ways that are also creative and aesthetically pleasing</li> <li>• How to advocate for soil care/regeneration with friends and neighbors in easy and friendly ways. To help them learn, understand and care without hitting them over the head.</li> <li>• alternatives to lawns plants beneficial to butterflies, plants that grow well near ocean climates</li> <li>• How to measures front yards water use</li> <li>• Companion planting</li> <li>• How to start a vegetable garden.</li> <li>• Edibles</li> <li>• Native plants</li> <li>• Vegetable gardening in raised beds. Pruning various plants. Types of fertilizers for different plants. Native Bay area</li> <li>• How to optimize drip system.</li> <li>• Indoor pest management (at least to the extent that outdoor pest management can have a good or bad impact on indoor pest problems)</li> <li>• More along this theme as this is a common problem. there are many other pests - coddling moths, fruit tree pests, houseplant pests</li> <li>• Pest Control</li> <li>• Propagating plants</li> <li>• Vegetable gardening including rotation of plantings</li> <li>• Fertilizing</li> <li>• Beneficial plants for the birds</li> <li>• This topic was good, but it was way to long. I would ask you to offer it again during the off-season, so winter months and share resources for fruit trees and leaf curl and also how to protect against insects we don't want for FREE.</li> <li>• More on permaculture</li> </ul> <p>Total amount of respondents who answered this question: 18</p>
<p>Q8. Your overall rating of the class.</p>	<p>One (very dissatisfied): 3  Two: 0  Three: 2  Four: 7  Five (very satisfied): 14</p> <p>Total amount of respondents who answered this question: 26</p>
<p>Q9. Your city of residence</p>	<p>San Mateo: 3  San Carlos: 3  San Bruno: 2  Menlo Park: 2  Pacifica: 1  Redwood City: 1  Daly City: 1  Oregon City: 1  Foster City: 1  Woodside: 1  Oakland: 1</p>

	<p>Vallejo: 1 Belmont: 2 Montara: 1 Rowland Heights: 1 Miami, FL: 1 Englewood, CO: 1 United Kingdom: 1 Melbourne AUS: 1</p> <p>Total amount of respondents who answered this question: 26</p>
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Compiled survey responses for May 27<sup>th</sup> webinar  
 33 survey respondents out of 64 workshop participants

Questions	Responses
Q1. What did you hope to learn from attending this class? (select all that apply)	Keeping my plants healthy in drought: 22 Conserving water: 27 Saving money: 7  Other (please specify below)  Total amount of respondents who answered this question: 33
Q1A. "Other" response	N/A
Q2. In the last 12 months, have you used any integrated management practices (i.e. trapping, barriers, beneficial insects, using mulch) in your home, garden, or lawn?	Yes: 20 No: 13
Q3. After attending our webinar, which actions do you plan on bringing to your garden? (select all that apply)	Switch to drip irrigation: 8 Use mulch: 20 Install a rain barrel: 15 Build healthy soil: 18 Install pervious pavement in my driveway, walkway, and/or patio: 5 Create a rain garden: 8 Replace my lawn with drought tolerant landscaping: 7 Other (please specify below): 4  Total amount of respondents who answered this question: 33
Q3A. "Other" response	<ul style="list-style-type: none"> <li>• Deep watering</li> <li>• Incorporate waterwise concepts into future landscape planning</li> <li>• Try to work on making my sprinkler system and timer more efficient. Hopefully, some day change patio to pervious pavement.</li> <li>• Water more carefully, at the drip line</li> </ul>
Q4. The presenter demonstrated knowledge of the topic and presented practical information you can use.	One (strongly disagree): 1 Two: 1 Three: 2 Four: 9 Five (Strongly agree): 20  Total amount of respondents who answered this question: 33
Q5. The workshop was what you expected.	Yes: 32 No: 1  Total amount of respondents who answered this question: 33

<p>Q6. What did you find most useful about the workshop?</p>	<ul style="list-style-type: none"> <li>• I loved learning more about the rain barrel to capture rain water for the garden and the use of native plants for the garden</li> <li>• Saving water and money</li> <li>• How to keep the water in the soil from evaporating by using mulch and deep watering.</li> <li>• Good general overview of waterwise gardening and watering techniques.</li> <li>• Learning about not watering near the crown of the plants, and best practice to water long/deep and less</li> <li>• discussion of soil composition, irrigation systems types, rain gardens, pervious paths, how to water trees, images that illustrated these</li> <li>• The best way to water plants. Compost is important and why. Different drainage systems. That poison just doesn't go away when used in lawn or dumped down sink. Group plant with water needs together.</li> <li>• Difficult to narrow down to most useful, as there was so much great information. First, can't wait to check and move sprinkler heads to drip line. Need to find a specialist to help make system run more efficient.</li> <li>• Sites or links to resources</li> <li>• The numerous effects of mulch &amp; pre thinking garden design according to plant types</li> <li>• Rain barrel info as well as the different types of gardens within the micro climates of our yards</li> <li>• resources which is very helpful for the future</li> <li>• I appreciate receiving the email contacts</li> <li>• Plus the rebate incentives</li> <li>• Good overview with links to resources</li> <li>• Education on soil</li> <li>• Water deeply and infrequently; Water in dripline; Fall is the best time to change from a lawn to a drought tolerant landscape; not to use soapy water in my veggie plants.</li> <li>• Tree watering details</li> <li>• Info on amending existing drip irrigation</li> <li>• How to water plants and trees</li> <li>• Deep watering and water away from tree trunks.</li> </ul> <p>Total amount of respondents who answered this question: 30</p>
<p>Q7. What topics would you suggest for future workshops?</p>	<ul style="list-style-type: none"> <li>• I'd like to learn more about invasive plants - what not to plant in the garden dirt or how contain these plants. Also, companion planting and food gardening are topics of interest to me.</li> <li>• How set up a system to recycle the water you use in your house- shower, washing machine, and dishwasher</li> <li>• Planning/concepts of waterwise gardening along with fire-smart landscaping and defensible space</li> <li>• Avoiding surface runoff and pet hygiene</li> <li>• more resources for how to determine one's own soil composition,</li> </ul>



	<p>resources for water sustainable container gardening and how to purchase soils and soil amendments that help with water retention</p> <ul style="list-style-type: none"> <li>• More classes on edibles, not just ornamental plants</li> <li>• How to install drip into hanging plants.</li> <li>• So far the topics are what I've been wanting to hear about.</li> <li>• Case studies of retrofits.</li> <li>• More info about native Californian plants.</li> <li>• Rain garden specifics</li> <li>• What to do first to get started changing landscape.</li> <li>• Container gardening</li> <li>• Showing best way to install drip line at tree dripline. Just showed wrong way what not to do by trunk.</li> <li>• How to provide habitat for mason bees.</li> <li>• Companion planting.</li> <li>• More detail about rain gardens.</li> <li>• Would love to see something directed to citrus both in containers and in the ground</li> <li>• more resources for how to determine one's own soil composition, resources for water sustainable container gardening and how to purchase soils and soil amendments that help with water retention</li> <li>• good practices for maintaining the garden as it grows and changes</li> <li>• I need to check your website to see what is already offered, but a class of landscaping with drought resistant</li> <li>• I would like more information on how to conserve water, prepare for the droughts and fire season.</li> <li>• Not sure, this was great though! Maybe: greywater (since we are having a drought)</li> <li>• Groundcover replacement for lawns</li> <li>• How to set up rain barrel system?</li> </ul> <p>Total amount of respondents who answered this question: 23</p>
<p>Q8. Your overall rating of the class.</p>	<p>One (very dissatisfied): 1  Two: 0  Three: 4  Four: 11  Five (very satisfied): 17</p> <p>Total amount of respondents who answered this question: 33</p>
<p>Q9. Your city of residence</p>	<p>Pacifica: 5  Belmont: 4  San Bruno: 4  San Mateo: 3  Burlingame: 3  Portola Valley: 2  Redwood City: 2  San Carlos: 2  Millbrae: 2  Menlo Park: 2  Half Moon Bay: 2  Montara: 1  El Granada: 1</p> <p>Total amount of respondents who answered this question: 33</p>

Compiled survey responses for June 25<sup>th</sup> webinar

*2 survey respondents out of 9 workshop participants (+130 views on Facebook Live)*

Questions	Responses
Q1. What did you hope to learn from attending this class? (select all that apply)	What a watershed is: 1 How stormwater pollution happens: 2 The impact of stormwater pollution on waterways and animals: 2 How my family can help our waterways: 2 Other (please specify below): 1  Total amount of respondents who answered this question: 2
Q1A. "Other" response	Ways to help keep trash from getting into the ocean
Q2. In the last 12 months, have you done anything as a family at home or in the community to prevent stormwater pollution?	Yes: 2 No: 0
Q3. After attending our webinar, which actions do you plan on bringing to your garden? (select all that apply)	Pick up litter: 2 Avoid using pesticides for pests: 2 Make water wise choices in our yard: 2 Pick up dog waste and throw away correctly: 1 Other (please specify below): 1  Total amount of respondents who answered this question: 2
Q3A. "Other" response	<ul style="list-style-type: none"> <li>• Research rain barrels and tools to help with watershed health. Think about activities that our local schools can do to make our students more conscious of their actions and inspire adults, too!</li> </ul>
Q4. The presenter demonstrated knowledge of the topic and presented practical information you can use.	Five (Strongly agree): 2  Total amount of respondents who answered this question: 2
Q5. The workshop was what you expected.	Yes: 2 No: 0  Total amount of respondents who answered this question: 2
Q6. What did you find most useful about the workshop?	<ul style="list-style-type: none"> <li>• Helpful to have graphics for the kids, well-run to have someone presenting, another monitoring chat/Q&amp;A, and another sharing resources. Thank you so much!</li> <li>• Learning how long it takes for some everyday waste to decompose, and how we can help to prevent water pollution.</li> </ul> Total amount of respondents who answered this question: 2

<p>Q7. What topics would you suggest for future workshops?</p>	<p>Exploring specific children's activities that may affect (whether positive or negative) our watershed, including water balloons, water soakers, running through sprinklers, sidewalk chalk, sunblock in the runoff(?), backyard vegetable gardens, soapy dish water when sprayed against aphids (when the ladybugs are done doing what they could), pumpkin carving— all those types of outdoor activities that we do with our kids.</p> <p>Total amount of respondents who answered this question: 1</p>
<p>Q8. Your overall rating of the class.</p>	<p>Five (very satisfied): 2</p> <p>Total amount of respondents who answered this question: 33</p>
<p>Q9. Your city of residence</p>	<p>Belmont: 1 Burlingame: 1</p> <p>Total amount of respondents who answered this question: 2</p>

## Appendix 9

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- Parks Maintenance & IPM Work Group Attendance List FY 2020/21
- Landscape Integrated Pest Management (IPM) Workshop – March 9, 2021
  - Workshop Agenda
  - Attendance List
  - Evaluations Summary
- Pest Control Point of Purchase Outreach
- Pest Management Webinar Materials and Surveys
- Pest Control Contracting Outreach

**San Mateo Countywide Water Pollution Prevention Program  
Parks Maintenance IPM Work Group Attendance List - FY 2020/21**

Contact Information			Attendance
MUNICIPALITY	REPRESENTATIVE	EMAIL	11/17/2020
Atherton	Sally Bentz-Dalton	<a href="mailto:sbentz@ci.atherton.ca.us">sbentz@ci.atherton.ca.us</a>	
Belmont	Daniel Ourtiague	<a href="mailto:dourtiague@belmont.gov">dourtiague@belmont.gov</a>	
	Matt Ward	<a href="mailto:mward@belmont.gov">mward@belmont.gov</a>	
Brisbane	Keegan Black	<a href="mailto:kblack@ci.brisbane.ca.us">kblack@ci.brisbane.ca.us</a>	
Burlingame	Rich Holtz	<a href="mailto:Rholtz@burlingame.org">Rholtz@burlingame.org</a>	X
	Bob Disco	<a href="mailto:bdisco@burlingame.org">bdisco@burlingame.org</a>	
Colma	Louis Gotelli	<a href="mailto:Louis.Gotelli@colma.ca.gov">Louis.Gotelli@colma.ca.gov</a>	X
	Brian Dossey	<a href="mailto:brian.dossey@colma.ca.gov">brian.dossey@colma.ca.gov</a>	
Daly City	Chris Caliendo	<a href="mailto:ccaliendo@dalycity.org">ccaliendo@dalycity.org</a>	X
	Jeff Fornesi	<a href="mailto:jfornesi@dalycity.org">jfornesi@dalycity.org</a>	
	Sibely Calles	<a href="mailto:scalles@dalycity.org">scalles@dalycity.org</a>	X
	Dennis Bray	<a href="mailto:dbray@dalycity.org">dbray@dalycity.org</a>	
	Nicholas Crescenzi	<a href="mailto:ncrescenzi@dalycity.org">ncrescenzi@dalycity.org</a>	
	Jeff Templin	<a href="mailto:jtemplin@dalycity.org">jtemplin@dalycity.org</a>	
East Palo Alto	Jay Farr	<a href="mailto:jfarr@cityofepa.org">jfarr@cityofepa.org</a>	
	Lenin Mecgar	<a href="mailto:lmelgar@cityofepa.org">lmelgar@cityofepa.org</a>	
	Mario Pulido	<a href="mailto:pulidomario@sbcglobal.net">pulidomario@sbcglobal.net</a>	
	Michelle Daher	<a href="mailto:mdaher@cityofepa.org">mdaher@cityofepa.org</a>	
Foster City	P Chiamos	<a href="mailto:pchiamos@fostercity.org">pchiamos@fostercity.org</a>	
	Frank Fanara	<a href="mailto:Ffanara@fostercity.org">Ffanara@fostercity.org</a>	X
Half Moon Bay	Katherine Sheehan	<a href="mailto:katherines@csgengr.com">katherines@csgengr.com</a>	X
	Maziar Bozorginia	<a href="mailto:MBozorginia@hmbcity.com">MBozorginia@hmbcity.com</a>	
Hillsborough	Garry Francis	<a href="mailto:gfrancis@hillsca.org">gfrancis@hillsca.org</a>	
	Natalie Asai	<a href="mailto:nasai@HILLSBOROUGH.NET">nasai@HILLSBOROUGH.NET</a>	
Menlo Park	Sheena Ignacio	<a href="mailto:smignacio@menlopark.org">smignacio@menlopark.org</a>	
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	John Gianoli	<a href="mailto:jgianoli@ci.millbrae.ca.us">jgianoli@ci.millbrae.ca.us</a>	
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	Estevan Renteria	<a href="mailto:Lavorinip@ci.pacifica.ca.us">Lavorinip@ci.pacifica.ca.us</a>	
	Raymond Donguines	<a href="mailto:donguinesr@ci.pacifica.ca.us">donguinesr@ci.pacifica.ca.us</a>	
Portola Valley	Howard Young	<a href="mailto:hyoung@portolavalley.net">hyoung@portolavalley.net</a>	
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	Terence Kyaw	<a href="mailto:TKyaw@redwoodcity.org">TKyaw@redwoodcity.org</a>	
	Francisco Espinoza	<a href="mailto:fespinoza@redwoodcity.org">fespinoza@redwoodcity.org</a>	
San Bruno	Rene Walsh	<a href="mailto:rwalsh@ci.sanbruno.ca.us">rwalsh@ci.sanbruno.ca.us</a>	
	Danielle Brewer	<a href="mailto:DBrewer@sanbruno.ca.gov">DBrewer@sanbruno.ca.gov</a>	
	Dan Venezia	<a href="mailto:Dvenezia@sanbruno.ca.gov">Dvenezia@sanbruno.ca.gov</a>	

**San Mateo Countywide Water Pollution Prevention Program  
Parks Maintenance IPM Work Group Attendance List - FY 2020/21**

Contact Information			Attendance
MUNICIPALITY	REPRESENTATIVE	EMAIL	11/17/2020
San Carlos	Arturo Burgueno	<a href="mailto:aburgueno@cityofsancarlos.org">aburgueno@cityofsancarlos.org</a>	
	Chris Zanoni	<a href="mailto:czanoni@cityofsancarlos.org">czanoni@cityofsancarlos.org</a>	
	Jean St. Martin	<a href="mailto:jsaintmartin@cityofsancarlos.org">jsaintmartin@cityofsancarlos.org</a>	
	Luis Estrada	<a href="mailto:lestrada@cityofsancarlos.org">lestrada@cityofsancarlos.org</a>	
	Kathryn Robertson	<a href="mailto:kr Robertson@cityofsancarlos.org">kr Robertson@cityofsancarlos.org</a>	
City of San Mateo	Sarah Scheidt	<a href="mailto:sscheidt@cityofsanmateo.org">sscheidt@cityofsanmateo.org</a>	
	Jim Burch	<a href="mailto:JBurch@sanbruno.ca.gov">JBurch@sanbruno.ca.gov</a>	
	Dennis Pawl	<a href="mailto:dpawl@cityofsanmateo.org">dpawl@cityofsanmateo.org</a>	
	Sven Edlund	<a href="mailto:sedlund@cityofsanmateo.org">sedlund@cityofsanmateo.org</a>	
	Ron Hostick	<a href="mailto:rhostick@cityofsanmateo.org">rhostick@cityofsanmateo.org</a>	X
San Mateo Co. Parks	Sam Herzberg	<a href="mailto:SHerzberg@co.sanmateo.ca.us">SHerzberg@co.sanmateo.ca.us</a>	
	Scott Lombardi	<a href="mailto:slombardi@co.sanmateo.ca.us">slombardi@co.sanmateo.ca.us</a>	
	Julie Casagrande	<a href="mailto:jcasagrande@co.sanmateo.ca.us">jcasagrande@co.sanmateo.ca.us</a>	
	Kim Springer	<a href="mailto:kspringer@smcgov.org">kspringer@smcgov.org</a>	
	Dan Krug	<a href="mailto:dkrug@smcgov.org">dkrug@smcgov.org</a>	
San Mateo Co. Office of Sustainability	John Allan	<a href="mailto:jallan@smcgov.org">jallan@smcgov.org</a>	
SM County PW	Jeff Pacini	<a href="mailto:JPacini@co.sanmateo.ca.us">JPacini@co.sanmateo.ca.us</a>	
	Kevin Lu	<a href="mailto:khlu@smcgov.org">khlu@smcgov.org</a>	
County Agriculture Weights and Measures	Ione Yuen	<a href="mailto:IYuen@smcgov.org">IYuen@smcgov.org</a>	X
	Jeremy Wagner	<a href="mailto:JWagner@smcgov.org">JWagner@smcgov.org</a>	
	Joseph Hannen	<a href="mailto:JHannen@smcgov.org">JHannen@smcgov.org</a>	X
	Fred Crowder	<a href="mailto:fcrowder@co.sanmateo.ca.us">fcrowder@co.sanmateo.ca.us</a>	
	Richard Garcia	<a href="mailto:rgarcia@co.sanmateo.ca.us">rgarcia@co.sanmateo.ca.us</a>	
	Avneet Kakkar	<a href="mailto:akakkar@smcgov.org">akakkar@smcgov.org</a>	
SSF	Donald Louie	<a href="mailto:douald.louie@ssf.net">douald.louie@ssf.net</a>	X
	Greg Mediati	<a href="mailto:Greg.Mediati@ssf.net">Greg.Mediati@ssf.net</a>	
Woodside	Dong Nguyen		
	Sean Rose	<a href="mailto:srose@woodsidetown.org">srose@woodsidetown.org</a>	
UCCE/UC IPM	Andrew Sutherland	<a href="mailto:amsutherland@ucanr.edu">amsutherland@ucanr.edu</a>	
EOA	Jon Konnan	<a href="mailto:jkonnan@eoainc.com">jkonnan@eoainc.com</a>	
	Vishakha Atre	<a href="mailto:vatre@eoainc.com">vatre@eoainc.com</a>	X
SMCWPPP	Matt Fabry	<a href="mailto:mfabry@smcgov.org">mfabry@smcgov.org</a>	
	Reid Bogert	<a href="mailto:rbogert@smcgov.org">rbogert@smcgov.org</a>	X
<b>Other Attendees</b>			
	Dorte Drastrup	<a href="mailto:dortedrastrup@gmail.com">dortedrastrup@gmail.com</a>	
Kelly Carrol	CSG/Half Moon Bay/Colma	<a href="mailto:kellyc@csgengr.com">kellyc@csgengr.com</a>	X



## AGENDA

**Landscape Integrated Pest Management (IPM) Webinar**  
**(Sponsored by SMCWPPP Parks Maintenance and IPM Workgroup)**  
**Tuesday, March 9, 2020**  
**8:30 am – 12:30 pm**

<https://zoom.us/j/96142106200?pwd=aE1iMUhQbFZWYU4zdXIFRIQrVVJuZz09>

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<b>Welcoming Remarks and Instructions for Continuing Education</b> Richard Holtz, <i>City of Burlingame</i>	8:30 am – 8:40 am
<b>Regulatory Update - Pesticides Toxicity Control Requirements in the Municipal Stormwater Regional Permit</b> Vishakha Atre, <i>EOA</i>	8:40 am – 8:50 am
<b>IPM for Wildlife in Urban areas</b> Carolyn Whitesell, Ph.D., <i>UC Cooperative Extension</i>	8:50 am – 10:00 am
<b>Quiz for Continuing Education Hours</b>	10:00 am – 10:15 am
<b>Using IPM Techniques for Weed Management in Urban Areas - Case Studies</b> Lauren Galanes and Cristina Prevarin, <i>Gachina Landscaping</i>	10:15 am – 11:20 am
<b>Regulatory Update, Common Violations</b> Jenny Gossett, <i>San Mateo County Agriculture/Weights and Measures</i>	11:20 am – 12:20 pm
<b>Quiz for Continuing Education Hours</b>	12:20 pm
<b>Adjourn</b>	12:30 pm

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## SMCWPPP Landscape IPM Workshop

March 9, 2021

## Attendance List

FIRST NAME	LAST NAME	Agency/Organization
Alain	Urruty	City of Belmont
Jeffrey	Coffey	City of Belmont
Kieran	Cronin	City of Belmont
Matt	Ward	City of Belmont
Michael	Stevens-Nappi	City of Belmont
Sean	Brosnan	City of Belmont
Joe	Friars	City of Brisbane
Keegan	Black	City of Brisbane
James	Delaney	City of Burlingame
Jennifer	Lee	City of Burlingame
Richard	Holtz	City of Burlingame
Stephen	Pappas	City of Burlingame
Zack	Tschierschky	City of Burlingame
Bob	Siudzinski	City of Campbell
Peri	Newby	City of Campbell
Brian	Gathers	City of Cupertino
Kevin	Greene	City of Cupertino
Paul	Sapudar	City of Cupertino
Jimmy	Vistan	City of Daly City
Chris	Caliendo	City of Daly City
Fernando	Barron	City of Daly City
Jeff	Templin	City of Daly City
Michael	Potter	City of Daly City
Adonis	Travis	City of East Palo Alto
Daniel	Gagliani	City of East Palo Alto
Daniel	Weber	City of Foster City
Frank	Fanara	City of Foster City
Garrett	Gotthardt	City of Foster City
Greg	Baeza	City of Foster City
James	Echeverria	City of Foster city
lava	kioa	City of Foster City
Manuel	Garcia	City of Foster City
Peter	Chiamos	City of Foster City
Salvador	Acevedo	City of Foster City
todd	haena	City of foster city
Will	Ventura	City of foster city
Carlos	Munguia	City of Foster City
Abel	Jimenez	City of Foster City Parks
Dean	Mitchell	City of Los Altos
Barry	Gomez	City of Mountain View
Jakob	Trconic	City of Mountain View
Paul	Lavorini	City of Pacifica
Estevan	Renteria	City of Pacifica
Brian	Aizawa	City of Redwood City



## SMCWPPP Landscape IPM Workshop

March 9, 2021

## Attendance List

<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>Agency/Organization</b>
Cynthia	Calvillo-Mitchell	City of Redwood city
Dominique	Herbert	City of Redwood City
Glenn	Fukudome	City of Redwood City
Arturo	Burgueno	City of San Carlos
Bradley	Harms	City of San Mateo
Donald	Louie	City of South San Francisco
Peter	Shea	City of South San Francisco
Elizabeth	Greenfield	City of Sunnyvale
Leonard	Dunn	City of Sunnyvale
Nupur	Hiremath	City of Sunnyvale
Aaron	Francis	County of San Mateo
Lisa	Di Lorenzo	County of San Mateo
Mark	Chow	County of San Mateo
Mark	Rogers	County of San Mateo
Matthew	Del Carlo	County of San Mateo
Theresa	Engle	County of San Mateo
Daniel	Krug	County of San Mateo
Greg	Escoto	County of San Mateo
Julie	Casagrande	County of San Mateo
Kelly	Carrol	CSG Engineers
Cristina	Prevarin	Gachina Landscaping
Lauren	Gelanes	Gachina Landscaping
Selena	Gonzalez	San Mateo County
Ione	Yuen	San Mateo County Department of Agriculture
Jenny	Gossett	San Mateo County Department of Agriculture
Sally	Bentz	Town of Atherton
Beau	Sauve	Town of Los Gatos
Matt	Lash	Town of Los Gatos
Nathan	Kruschke	Town of Los Gatos
Zach	Orozco	Town of Los Gatos
Julie	Schaer	West Valley Clean Water Program Authority



**Landscape Integrated Pest Management (IPM) Workshop  
(Sponsored by SMCWPPP Parks Maintenance and IPM Workgroup)  
Wind Room, Library Community Center**

**Tuesday, March 9, 2021  
8:30 a.m. – 12:30 p.m.**

**What Did You Think of the Following Presentations?**

- 1. Pesticides Toxicity Control Requirements in the Municipal Regional Permit -**  
Vishakha Atre, *EOA*  
**36** very helpful    **11** somewhat helpful    **0** not helpful
- 2. IPM for Wildlife in Urban areas -** Carolyn Whitesell, Ph.D., *UC Cooperative Extension*  
**36** very helpful    **11** somewhat helpful    **1** not helpful
- 3. Using IPM Techniques for Weed Management in Urban Areas -** Lauren Galanes and Cristina Prevarin, *Gachina Landscaping*  
**38** very helpful    **9** somewhat helpful    **1** not helpful
- 4. Regulatory Update, Common Violations –** Jenny Gossett, *San Mateo County Agriculture/Weights and Measures*  
**38** very helpful    **10** somewhat helpful    **0** not helpful

**Did this workshop meet your expectations?**                      **46** Yes                      **2** No

**Suggestions for future workshop topics:**

- Organic pesticides (what it means exactly, pros and cons).
- Emerging insect and diseases for landscape plants.
- Protection of bees.
- How COVID has affected spraying (i.e., was there less usage and does it show).
- Roadside weed control.
- Building an IPM protocol.
- Bioswale/Bioretenion areas (characteristics, functions, maintenance for compliance).
- Geese control.
- Yellowjacket control and timing to trap queen in early spring.

**General Comments:**

- Thanks.
- Very informative content.
- Good topics.
- Excellent group of speakers. I do suggest a break between speakers.
- Always good to have DPR provide a regulatory presentation.
- I expected a lot more info on IPM techniques and IPM for wasps, ants, flies, and similar pests.
- No tests please.
- No tests before lunch, when hungry.
- Thank you for providing this training in a virtual setting. The content was much appreciated, and I enjoyed the inclusion of the poll feature. I wish there were more ways for presenters to interact with attendees, but that seems to be the downfall of virtual meetings/conferences.
- Great webinar!
- After I figured out the whole zoom thing it wasn't so bad :)
- Can't wait until we meet again in-person!

## Appendix 9

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### Point of Purchase Outreach




Photos from FY 2020/21 store visits for POP outreach.

Invite Attendees

Webinar Size: 100 attendees

Registration Link  
[https://us02web.zoom.us/join/wn\\_hlliaUHTR2OdYyAK9CdthYA](https://us02web.zoom.us/join/wn_hlliaUHTR2OdYyAK9CdthYA)

Source Tracking Link  + Add

Source Name	Tracking Link	Registrations	Visitors		
Newsletter	<a href="https://us02web.zoom.us/webina...">https://us02web.zoom.us/webina...</a>	85	261	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
Facebook Post	<a href="https://us02web.zoom.us/webina...">https://us02web.zoom.us/webina...</a>	1	34	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
Facebook/Instagram Ad Campaign (2 out of 4 ads)	<a href="https://us02web.zoom.us/webina...">https://us02web.zoom.us/webina...</a>	1	162	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
Instagram Post/Story/Bio	<a href="https://us02web.zoom.us/webina...">https://us02web.zoom.us/webina...</a>	8	22	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
PIP Members/Local Partners	<a href="https://us02web.zoom.us/webina...">https://us02web.zoom.us/webina...</a>	15	146	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
Facebook Event (Boosted & linked to 2 out of 4 Ads)	<a href="https://us02web.zoom.us/webina...">https://us02web.zoom.us/webina...</a>	38	806	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
Website Events Calendar	<a href="https://us02web.zoom.us/webina...">https://us02web.zoom.us/webina...</a>	3	18	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>

Screenshot of unique URL data from March 20 webinar.



Promotional Graphic for September 19, 2020 webinar, “Pest Management Practices that Help Your Garden and Support Pollinators”.

**Compiled survey responses for September 19, 2020 webinar.**

33 survey respondents out of 77 workshop participants.

Questions	Responses
<p>Q1. What did you hope to learn from attending this class? (select all that apply)</p>	<p>How to improve my garden or lawn: 15            How to get rid of my pests: 18            Less-toxic or nontoxic alternatives to pesticides: 21            How to reduce my pesticide usage: 14            Other: 1</p> <p>Total amount of respondents who answered this question: 33</p>
<p>Q1A. "Other" response</p>	<ul style="list-style-type: none"> <li>• Great recommendation to visit ourwaterourworld for more info about flees</li> </ul>
<p>Q2. What actions are you going to bring to your garden? (select all that apply)</p>	<p>Have plants in my yard that attract pollinators: 26            Use organic fertilizers and compost: 26            Switch to a less-toxic or non-toxic pesticide alternative: 12            Install an irrigation system: 3            Other: 2</p> <p>Total amount of respondents who answered this question: 33</p>
<p>Q2A. "Other" response</p>	<ul style="list-style-type: none"> <li>• Solutions for outdoor rats, I know when to apply copper spray to peach and nectarine trees, resources to look things up</li> <li>• This zoom helped boost my confidence in what I am already doing and confirmed I'm on the right track</li> </ul>
<p>Q3. The presenter demonstrated knowledge of the topic and presented practical information you can use.</p>	<p>One (strongly disagree): 2            Two: 2            Three: 1            Four: 4            Five (strongly agree): 23</p> <p>Total amount of respondents who answered this question: 32</p>
<p>Q4. The workshop was what you expected.</p>	<p>Yes: 30            No: 1</p> <p>Total amount of respondents who answered this question: 31</p>
<p>Q4A. If "No", Why?</p>	<ul style="list-style-type: none"> <li>• She presented more useful information than what I expected.</li> </ul>
<p>Q5. What did you find most useful about the workshop?</p>	<ul style="list-style-type: none"> <li>• The pest management pyramid. It provided clear steps to take when trying to manage an issue.</li> <li>• Organized series of preventive methods.</li> <li>• Learning about gopher baskets.</li> <li>• I think she presented really useful tips and provides great lists of resources</li> <li>• Various strategies to manage pests</li> <li>• It gave me some suggestions on how to get rid of pest without using chemicals</li> <li>• The pointers about pesticides.</li> </ul>

Questions	Responses
	<ul style="list-style-type: none"> <li>• I have to change/monitor the ecosystem of my back yard to do pest control.</li> <li>• Various strategies to manage pests</li> <li>• The Q &amp; A and websites that were provided were very helpful. The scope of the workshop gave me an overview of what I should be asking myself about the plants and trees in my garden, and how to control pests without chemicals.</li> <li>• I appreciated all the websites and resources the presenter gave us if we have questions</li> <li>• How I reduce pesticide usage, and resources.</li> <li>• Mulch information. References</li> <li>• Tree care and the use of eco products on my veggies and fruit.</li> <li>• How important compost and good soil are</li> <li>• Information about products and websites</li> <li>• The presentation of the order of pest management going from less harmful to environment to the one to consider last.</li> <li>• The holistic approach: attracting friends which discourages foes, actively supporting soil health, big picture about how my yard affects health of our whole environment</li> <li>• FAR more information than I expected; very wide-ranging &amp; well presented. Most useful was ant control.</li> <li>• The presenter was very knowledgeable without being condescending. Info was presented in a logical sequence. Great links were shared.</li> <li>• Grow healthy plants</li> <li>• Visuals to compliment talk. Specifically beneficial insects and cardboard use in weed barriers</li> <li>• Learning about good bugs and mulching.</li> <li>• Structure of the information into pest mgmt groups - mechanical, chemical. Also the specific tips to prevent pests from the start and then tips to deal with them if they arrive.</li> <li>• I think they're right that too little water affects plant health and susceptibility to pests</li> <li>• all of the helpful tips provided to us and resources</li> <li>• all of the helpful tips provided to us and resources</li> </ul> <p>Total amount of respondents who answered this question: 27</p>
<p>Q6. In the last 12 months, have you used pesticides in your home, garden, or lawn?</p>	<p>No: 23 Yes: 9</p> <p>Total amount of respondents who answered this question: 32</p>

Questions	Responses
<p>Q7. What topics would you suggest for future workshops?</p>	<ul style="list-style-type: none"> <li>• Soil food web/soil amendments/soil remediation</li> <li>• Installation and/or maintenance of irrigation system especially drip</li> <li>• Cactus and succulent workshop</li> <li>• Soil composition, management, and enhancements</li> <li>• Know more about beneficial bugs and how to attract them to the garden.</li> <li>• How to save water</li> <li>• Encouraging native plant garden. Drought tolerant yard making</li> <li>• Soil composition, management, and enhancements</li> <li>• Best practices for conserving water and still have a beautiful garden. Understanding water tables and how they affect my need to irrigate. Also, the relationship between recycling (how to do it properly) and water pollution.</li> <li>• Seasonal flowers, vegetable and fruit plants, how to make a raised beds. Looking forward to the rain barrel in Nov!</li> <li>• I really like ideas to help plants thrive in different climates etc..</li> <li>• Ways to deter, chase away or catch a gopher without hurting wildlife( coyotes , skunks, opossum) dogs and cats. Fragrant oils, etc? Covering traps that don't attract others?</li> <li>• More on what grows well in an and shade in the bay area</li> <li>• Growing vegetables, pitfalls, tips, planning. This year, pandemic year, my raised bed vegetable garden was my sanctuary. I would like to plan it out better though so increase yield.</li> <li>• It would be fun to have a hands on workshop where we build covers for garden. My solutions fail with sprouts become too tall, yet still vulnerable. I mostly do straw bale gardening in my yard and also have a community garden plot. I can tell you the exact life time of aviary wire before gophers chew thru! Also rain harvesting ideas. Mine is rustic and labor intensive.</li> <li>• Weed control. Shade-tree selection.</li> <li>• How to set up a permitted system to use grey water from the home.</li> <li>• Composting</li> <li>• Garden tours demonstrating native gardening and pest management</li> <li>• 1) Seasonal plants and pests. EG: Fall Chard &amp; Beets and battling black flies and leaf miners. 2) What to do in the dormant season to have a successful Spring.</li> <li>• plants to pair together with fruit trees and other plants and or vegetables</li> <li>• plants to pair together with fruit trees and other plants and or vegetables</li> </ul> <p>Total amount of respondents who answered this question: 22</p>
<p>Q8. Please check any of the future webinars you are interested in attending (select all that apply)</p>	<p>Rain Barrels: Are they right for you?: 22            Rain Garden Design, Construction &amp; Maintenance: 23            Winter Gardening &amp; Pest Management: 27            None of these: 3</p> <p>*Two people marked webinar topics AND "None of these"</p> <p>Total amount of respondents who answered this question: 31</p>



Questions	Responses
Q9. Your overall rating of the class	Three: 4 Four: 7 Five (very satisfied): 21  Total amount of respondents who answered this question: 32
Q10. Your city of residence	San Mateo: 4 San Francisco: 2 Oakland: 1 Mountain View: 2 Daly City: 3 Menlo Park: 2 Santa Cruz: 1 San Carlos: 3 Portola Valley: 1 Fresno: 1 Millbrae: 4 Redwood City: 1 San Bruno: 1 Campbell: 1 Redwood City: 1 Half Moon Bay: 1 Pacifica: 1 4157704737: 2  Total amount of respondents who answered this question: 32



Promotional Graphic for December 5, 2020 webinar, "Fall/Winter Gardening Essentials".

**Compiled survey responses for December 5, 2020 webinar.**

60 survey respondents out of 72 workshop participants

Questions	Responses
Q1. What did you hope to learn from attending this class? (select all that apply)	How to improve my garden or lawn: 48 How to get rid of my pests: 38 Less-toxic or nontoxic alternatives to pesticides: 31 How to get rid of my pests: 38 How to reduce my pesticide usage: 14 Other (please specify below)  Total amount of respondents who answered this question: 60
Q1A. "Other" response	<ul style="list-style-type: none"> <li>• Gardening tasks during fall</li> <li>• What to grow in the winter season.</li> <li>• I probably did not read the description carefully, as I thought this was about actual gardening in winter, as in vegetables.</li> <li>• I liked the information about soil and soil improvement with mulch and compost.</li> </ul>
Q2. After attending our webinar, which actions do you plan on bringing to your garden? (select all that apply)	Use compost and organic fertilizers in my garden: 39 Choose plants that attract beneficial insects: 42 Switch to a less-toxic pesticide alternative: 20 Reassess my irrigation practices: 23 None of the above: 2 Other (please specify below): 1  Total amount of respondents who answered this question: 60
Q2A. "Other" response	<ul style="list-style-type: none"> <li>• Eggshell conversation was very interesting to me. I need more information about moles/ gophers.</li> </ul>
Q3. The presenter demonstrated knowledge of the topic and presented practical information you can use.	One: 2 Two: 2 Three: 2 Four: 6 Five (Strongly agree): 48  Total amount of respondents who answered this question: 60
Q4. The workshop was what you expected.	Yes: 51 No: 9  Total amount of respondents who answered this question: 60
Q5. What did you find most useful about the workshop?	<ul style="list-style-type: none"> <li>• Lots of good information. Also good amount of time for Q&amp;A.</li> <li>• Pest control</li> <li>• Tips about keeping rats away and gophers from eating root veggies.</li> <li>• details on dealing with each type of pests.</li> <li>• the information and referrals to the websites for native plant information</li> <li>• Good slides. Interesting info. Quick and to the point</li> </ul>

Questions	Responses
	<ul style="list-style-type: none"> <li>• Everything</li> <li>• The presenter had a terrific knowledge of the subject matter and was appreciated by the numerous questions of the participants.</li> <li>• Questions answered - mealy bug eradication, soil types- how to figure out. Info on pests. Website info. Healthy soil info, etc. Thank you!</li> <li>• How to identify gopher/mole/vole holes, and how to safeguard your plants.</li> <li>• Traps and how to bait them for mice and rats.</li> <li>• reinforcing the use of IPM, what services BAWSCA has to offer ie suggestions for watering schedules, ideas for getting rid of pests like rats in a humane way, product referrals ie Good Nature Co2 trap, and many other practical ideas.</li> <li>• Her discussion of how to humanely get rid of pests. Use of the cardboard for weed control.</li> <li>• Practical information about garden pests</li> <li>• better alternatives to handling garden pests</li> <li>• Use of mulch, beneficial insects, protecting seedlings with strawberry baskets, using more non toxic products, resources available. All helpful information.</li> <li>• soil discussion, shapes of gopher and mole mounds</li> <li>• Healthy plants can help prevent pests.</li> <li>• how to layer cardboard and that a mouse or baby rat can get in a hole the diameter of a pencil</li> <li>• Everything was useful.</li> <li>• Much of this was a repeat from other workshops I've attended. It would be good for new attendees.</li> <li>• Using less toxic pesticide and organic fertilizer.</li> <li>• Examples and the promise to send out links to referenced resources</li> <li>• New ideas</li> <li>• Resources</li> <li>• All of it. She was very informative. This seemed like an overview....but I would like more information in detail on every topic. I see people local to me that feed the animals - deer specifically. I really don't know how to stop this from happening. I liked the idea of bringing beneficial insects. I would like to listen to the program again.</li> <li>• Focus on pests.</li> <li>• Alternatives to pesticides</li> <li>• Pest control information</li> <li>• How to take care of pests</li> <li>• IPM discussion</li> <li>• The breadth of information, and the clarity with which it was presented.</li> <li>• Reminder of cover crops.</li> <li>• practical tips, helpful Q&amp;A</li> <li>• Good tips re mulching, using compost, ridding pests without using toxic chemicals, and using rain water not grey water for my edible plants.</li> <li>• Info on non toxic pests and native plants</li> </ul>

Questions	Responses
	<ul style="list-style-type: none"> <li>• Ideas to garden better--more sustainably and ecologically safer. And to use prevention!</li> <li>• Comprehensive well organized presentation of the bay area needs for pests and water savings. learned about mulching and composting. learned to not use birdfeeders and why. Very nicely done. Thanks.</li> <li>• How to treat specific pests and disease</li> <li>• Information about resources to go to when questions arise. I don't have any pest issues at the moment but now I know how to find answers when I do.</li> <li>• Expertise</li> <li>• The wide range of knowledge presented in easy understandable language. Also appreciate the links that I can share with others who have an interest but not able to attend this session.</li> <li>• which beneficial plants are good</li> <li>• The usage of plants that bring in beneficial bugs to your garden.</li> <li>• Learning about humane practices in dealing with rodents.</li> <li>• compost, mulching, non-toxic sources, websites for additional information</li> <li>• Learning about how we can use natural alternatives to managing a garden was very useful. Learning that 90% of insects in the garden are beneficial was nice to learn about.</li> </ul> <p>Total amount of respondents who answered this question: 47</p>
<p>Q6. In the last 12 months, have you used pesticides in your home, garden, or lawn?</p>	<p>Yes: 22 No: 38</p> <p>Total amount of respondents who answered this question: 60</p>
<p>Q7. What topics would you suggest for future workshops?</p>	<ul style="list-style-type: none"> <li>• Seasonal gardening tips (one for Spring/Summer)</li> <li>• Seasonal plants and/or succulent gardens</li> <li>• Mini landscape designs with groupings of plants that have similar water needs.</li> <li>• What fruits and veggies to grow in winter / spring.</li> <li>• local farming</li> <li>• Slopes and retaining walls</li> <li>• Citrus trees, more specific info on types of fertilizer and when to apply it.</li> <li>• surprise me.</li> <li>• You keep the public on their toes with the subject matter and are much appreciated.</li> <li>• Complementary planting. not sure what else.</li> <li>• I am usually interested in anything to do with gardening! :)</li> <li>• Well, I love vegetable gardening, which may not really be the focus of "flowstobay." I'd be very interested to hear what plants do well near other plants.</li> <li>• Seasonal plants</li> <li>• Native plant gardening:</li> <li>• using natives as cover crops, companion native plants for best benefit to attracting wildlife including pollinators, finding out what specific natives actually grew in your area before humans arrived,</li> </ul>

Questions	Responses
	<p>etc. Basically really delve into the ins and outs of native gardening.</p> <ul style="list-style-type: none"> <li>• Pruning of trees and roses.</li> <li>• preparation for Spring planting in winter and for preparing for winter dormancy</li> <li>• plant identification, how to vary the topography of your garden area, any non toxic way to get rid of gophers without having to trap them.</li> <li>• birdbaths attracting birds</li> <li>• How to manage your raised beds and what to plant when that you have year round fresh vegetables and herbs.</li> <li>• cement alternatives for walkways and driveways.</li> <li>• More small business resources.</li> <li>• Weed control for garden and hillsides</li> <li>• Indigenous plants and how to tell them apart from invaded species</li> <li>• Soil improvement when you live in rocky to super rocky terrain. Composting - not fancy. I have composted for years putting all my weeds, garden waste and kitchen waste in areas of my property to build the soil. Very interesting that without turning it takes about five years to really get the compost to be dirt, and it really settles down to about a tenth of the volume. Also, I would like some plant suggestions for dry shade, drought tolerant...and ideally going toward Native Plants. Dry shade is super difficult. So is a western slope.</li> <li>• Things that help us grow better gardens - naturally - given that we are surrounded by constructed environments.</li> <li>• Involving children in sustainable gardening</li> <li>• How to find the right plants for my climate</li> <li>• Winter gardening and winter crops</li> <li>• Considering the recent news that chemicals are leaching off car tires and killing Coho salmon in the Delta, and the fact that our local watersheds along the coast are causing high pollution levels at the beach, addressing all our household practices is super important thank you!</li> <li>• weeds vs. plants, how to get ID and get rid of weeds</li> <li>• Ways to capture grey water and reusing it safely for plants.</li> <li>• Flowering native plants</li> <li>• Easy vegetable gardening</li> <li>• Info about types of plants to attract bees, butterflies, hummingbirds, song birds.</li> <li>• I would have loved to learn more about seasonal plants that thrive during fall and winter</li> <li>• How weed killers, fertilizers, pesticides, cleaning substances, etc. (chemicals widely available and utilized by homeowners, gardening and construction crews) get into the watershed and how to avoid this.</li> <li>• Garden planning</li> <li>• Spring/ summer gardening;</li> <li>• Gardening tips and what grows best in San Francisco and Daly City</li> <li>• houseplant care, information on clogged drains and why oil and hair shouldn't go down the drain</li> <li>• Sources for organic edible gardens and for planting best plants for birds, butterflies and hummingbirds</li> </ul>

Questions	Responses
	<ul style="list-style-type: none"> <li>• rain water harvesting</li> </ul> <p>Total amount of respondents who answered this question: 42</p>
<p>Q8. Your overall rating of the class.</p>	<p>One (very dissatisfied): 1            Two: 2            Three: 5            Four: 8            Five (very satisfied): 43</p> <p>Total amount of respondents who answered this question: 59</p>
<p>Q9. Your city of residence</p>	<p>San Bruno: 6            San Mateo: 9            Hillsborough: 1            Burlingame: 6            South San Francisco: 3            Millbrae: 2            Pacifica: 3            Menlo Park: 4            San Carlos: 2            Belmont: 1            Redwood City: 5            El Granada: 1            Daly City: 6            Pacifica: 1            San Francisco: 1            Foster City: 1            Woodside: 1            Half Moon Bay: 1            Palo Alto: 1            Reno: 1            Colma: 1</p> <p>Total amount of respondents who answered this question: 57</p>



**Promotional Graphic for March 20, 2021 webinar, “Preparing Your Garden for a Pest-Free Spring”.**

**Compiled survey responses for March 20, 2021 webinar.**

*52 survey respondents out of 88 workshop participants.*

Questions	Responses
<p>Q1. What did you hope to learn from attending this class? (select all that apply)</p>	<p>How to improve my garden or lawn: 33                      How to get rid of my pests: 40                      How to reduce my pesticide usage and/or switch to less-toxic or nontoxic alternatives to pesticides: 33                      Other (please specify below): 1</p> <p>Total amount of respondents who answered this question: 52</p>
<p>Q1A. “Other” response</p>	<ul style="list-style-type: none"> <li>• How to attract beneficial bugs</li> </ul>
<p>Q2. In the last 12 months, have you used integrated pest management practices (i.e. trapping, barriers, beneficial insects, using mulch) in your home, garden, or lawn?</p>	<p>Yes: 40                      No: 12</p> <p>Total amount of respondents who answered this question: 52</p>
<p>Q3. After attending our webinar, which actions do you plan on bringing to your garden? (select all that apply)</p>	<p>Use compost and organic fertilizers in my garden: 37                      Choose plants that attract beneficial insects: 40                      Implementing water wise practices in the garden (i.e. mulch, drip irrigation): 30                      Switch to a less-toxic pesticide alternative: 18                      Other (please specify below):</p> <p>Total amount of respondents who answered this question: 52</p>

Questions	Responses
Q3. "Other" response	<ul style="list-style-type: none"> <li>• gopher baskets, yellow jacket traps</li> <li>• Better mulching</li> <li>• Perhaps get professional help analyzing my sprinkler system.</li> <li>• be careful to not water the stems of my plants</li> </ul>
Q4. The presenter demonstrated knowledge of the topic and presented practical information you can use	<p>One (strongly disagree): 4            Two: 1            Three: 1            Four: 7            Five (strongly agree): 39</p> <p>Total amount of respondents who answered this question: 52</p>
Q5. The workshop was what you expected.	<p>Yes: 49            No: 3</p> <p>Total amount of respondents who answered this question: 52</p>
Q6. What did you find most useful about the workshop?	<ul style="list-style-type: none"> <li>• Watering tips</li> <li>• The time to do the spraying and the different websites which I shall visit</li> <li>• It was terrific. She really covered so much. I liked the tips on dormant spraying, using compost, preventative actions like cages, nets, and covers. I already mulch and use no pesticides.</li> <li>• It was a practical approach to pest control</li> <li>• Tips on eradicating pest from garden!</li> <li>• This was my first time attending a workshop about alternatives to pesticides. It seemed to cover way more than that, so I think I would have to attend it a second time in order to absorb all the info.</li> <li>• Learning more about aphids, using traps now to capture yellow jacket queen been, gopher pots, crop coverings</li> <li>• Description of how aphids feed.</li> <li>• Ways to prepare soil for plantings</li> <li>• all of it.</li> <li>• The reminder that the whole eco system matters - from water, compost, mulch, etc - makes for a healthier garden and a healthy garden attracts less pests.</li> <li>• Integrated pest management - thinking about the overall health of the garden and how to approach that in different ways. The access to different websites to help with issues, especially those relevant to our area.</li> <li>• Tips for aphids and ants. I did not know that ants would protect aphids</li> <li>• Various interesting and useful topics from bay water flow, pesticides, fertilizer, pruning, healthy soil, bacteria and fungi, organic garden products and so much more useful tips and techniques to gardening. Thank you so much! I feel so empowered with the knowledge I've gained this morning and I'm so enthusiastic to begin working on my organic vegetable garden!</li> <li>• Pest removal</li> <li>• She went into more detail than I have experienced before. I</li> </ul>



Questions	Responses
	<p>had never heard that the depth of a mulch layer is helpful as a support of plant resilience. I have never come upon gopher baskets, or known of yellow jacket traps.</p> <ul style="list-style-type: none"> <li>• Some tips were new and helpful, like using boiling water for weeds in cracks. Some of the resource links were also helpful. Sometimes finding quality, local information online is hard.</li> <li>• The mulch advice was very useful for me; I haven't used it before but I plan to now!</li> <li>• The idea of pouring boiling water on side walk weeds sounds like a great simple idea and none toxic. In general, I am glad that you are sharing this information. I don't think the public understands the issues surrounding water flowing into the Bay (or ground water.) Also the information about the barrel composter was interesting. I do compost....in my back yard area....which is large....but see people using that barrel composter and it always looks like sluge. Now I know why. I think all those composting contraptions are worthless compared to just piling it up, and up, and up with green and brown garden waste, but many people think they need a neat a tidy idea.</li> <li>• Amount of water to use, how to get rid of weeds in concrete, websites, aphids</li> <li>• Suggestions on best timing for the strategies presented.</li> <li>• The proper way of water that is best for your plants and conservation by mulching and using wood chops etc.</li> <li>• The overall hierarchy of pest management, the mulching information (3 layers cardboard, plus mulch), the references to websites on specific plant information, and the information on what to include in composting.</li> <li>• The presenters were so knowledgeable and approachable so it did t feel like I was being lectured to.</li> <li>• Using barriers. I'll do more of that</li> <li>• The approach to informative education about how and why we can all help improve storm water pollution. Gardening specifics how to deal with pests. Information on how to improve our soil. Too hard to pick just one.</li> <li>• Clear basic communication of the concepts and reminders for "best practices" I can do at home</li> <li>• Avoid mulching around the base of plants; Use compost 2 weeks before planting; Water deeply and infrequently; Water outer edges/dripline and not directly over plants; removing mildew powder on leaves during sunlight; Ridding aphids and gophers</li> <li>• Helpful hints on getting rid of insect pests and funguses, adding beneficial nematodes, etc.. How to mulch the garden, etc. The entire program was excellent. Kudos to the presenter!</li> <li>• I am having problems with aphids - so her discussion on that topic was super helpful.</li> <li>• I attended this seminar previously. What I enjoyed about it is that it didn't sound repetitive and I still went away with learning something new. I'm sorry I had to leave 10 minutes early due to another commitment.</li> <li>• watering</li> </ul>

Questions	Responses
	<ul style="list-style-type: none"> <li>• Presenter offered recommendations for healthier pest remediation</li> <li>• use more friendly controls to be safe to the environment and living creatures</li> <li>• Really all of it was helpful. The website options for getting more help were great. Product names also helpful.</li> <li>• Emphasis on identifying your problem (specific pest or fungus) to guide your course of action. I didn't know that powdery mildew likes dry conditions! I also didn't know that different aphid species had specific targets.</li> <li>• The beauty of IPM is that the whole ecosystem is taken into consideration. It reminded me that the "bad" bugs can actually be good in that other critters need them for food. Working with nature instead of against it, can still help alleviate most of the pest problems. I also didn't know about the finch salmonella problem - thank you for that alert!</li> <li>• Amount of info</li> <li>• watering tips</li> <li>• pest management tips</li> <li>• Watering, weed control, and pest management.</li> <li>• I found the reasoning behind using organic fertilizer to be enlightening.</li> </ul> <p>Total amount of respondents who answered this question: 42</p>
<p>Q7. What topics would you suggest for future workshops?</p>	<ul style="list-style-type: none"> <li>• Artificial turf vs real grass: benefits and risks.</li> <li>• The fall or winter garden would be nice</li> <li>• Some examples of good plants to put in the garden</li> <li>• My main suggestion is about the use of the zoom panelist format. As a participant at large, I was unable to save the chat or even copy or paste anything in it. As a result, the only way I could easily get the URLs was to click on them in the chat, open them in a browser window, and then save them there. If there is a zoom setting where you can enable people to save or copy what's in the chat, and then keep posting the resource URLs in the chat, that would be helpful.</li> <li>• I enjoyed this one and the rain barrel class. It would be great to do something late summer/fall with ways to get the garden set up for winter and keeping the potential run off clean.</li> <li>• Plants that do well in our area (realize San Mateo County has varied microclimates) - drought tolerant, good for attracting birds or butterflies, etc</li> <li>• Garden planning and seed starting</li> <li>• More of this nature would be wonderful and appreciative.</li> <li>• Hummingbird , lady bugs, essential bugs insects</li> <li>• I would be interested in learning of things that can be done to improve hardiness (and life expectancy) of freshly planted plants. I am thinking of several gardens in a place I frequently walk. Some one gallon bougainvillea plants were planted in front of a fence, where there is an afternoon wind. (If asked) I would advise sheltering the plant with a temporary plastic dome to cut down the effect of the wind. Also, what can be done to encourage rose plants which seem hesitant to grow?</li> </ul>

Questions	Responses
	<p>Or lemon trees which do not produce blooms (and fruit)? etc.</p> <ul style="list-style-type: none"> <li>• How to combat some more specific pests. More recommendations for beneficial native plants that work best in yards. Comments on creating butterfly habitat vs garden eating caterpillars.</li> <li>• Choosing plants for your garden, maybe? Like, how to judge soil type/quality, what fits in different spaces, what works best with different sun levels, or what plants grow well together.</li> <li>• Discuss not feeding deer (I know that there are people in my area that do.) Maybe plants for butterflies would be cool. Also good birdhouses for owls. And bird houses for Quail. I know there are quail in my area. Could i create a Quail space?</li> <li>• All about Roses</li> <li>• Native plants</li> <li>• You've been providing excellent resources and programs</li> <li>• Narrow topics covered slightly. Seasonal preparation of plants as season approaches. Discuss what makes up proper recycling of items for blue bin and also green bin. I was unaware, I should place diseased leaves into garbage. Thank you for workshop!!</li> <li>• composting and cover cropping - how do you do it?</li> <li>• planning an irrigation system, how to know which hears to use, etc. how much water to give.</li> <li>• She was GREAT! Covered everything that was asked</li> <li>• landscaping</li> <li>• pruning mid-size trees and bushes</li> <li>• Pruning of various plants, shrubs, trees.</li> <li>• Composting information is always welcome</li> <li>• Composting</li> <li>• Not sure</li> <li>• checking the chemical balance of my soil</li> </ul> <p>Total amount of respondents who answered this question: 27</p>
<p>Q8. Your overall rating of the class:</p>	<p>One (very dissatisfied): 1 Three: 1 Four: 6 Five (very satisfied): 44</p> <p>Total amount of respondents who answered this question: 52</p>
<p>Q9. Your city of residence</p>	<p>Redwood City: 10 Rwc: 1 San Mateo: 5 Pacifica: 7 Menlo Park: 5 Portola Valley: 7 Daly City: 2 Moss Beach: 1 Brisbane: 1</p>

Questions	Responses
	<p>Half Moon Bay: 1 San Bruno: 4 San Carlos: 1 Belmont: 3 Burlingame: 3 South San Francisco: 1</p> <p>Total amount of respondents who answered this question: 52</p>



**Healthy Gardening for People, Pets, and Our Environment!**

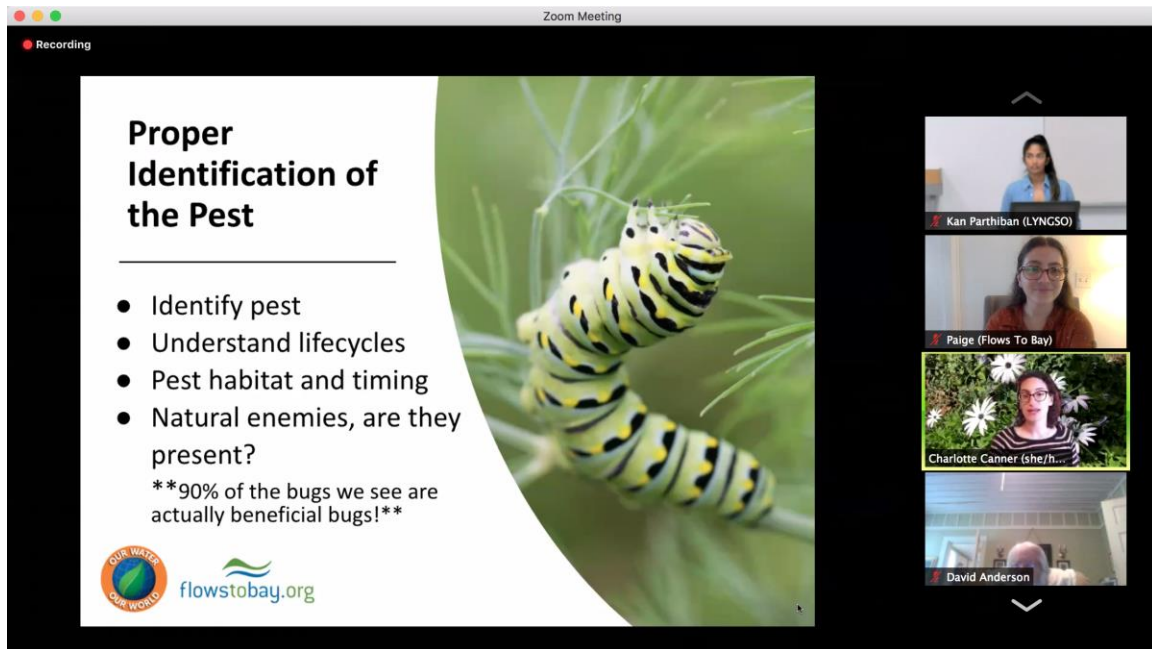
Choose less toxic products for a healthy home and garden



Look for this symbol before you buy!

For more info on managing pests, ask our expert at [www.OurWaterOurWorld.org](http://www.OurWaterOurWorld.org)

Promotional Graphic for May 5, 2021 webinar, “Non-Toxic Pest Management for the Garden & Home” with Lyngso Garden Materials, Inc.



Screenshot taken during May 5, 2021 webinar, “Non-Toxic Pest Management for the Garden & Home” with Lyngso Garden Materials, Inc.

**Compiled survey responses for May 5, 2021 webinar.**

*26 survey respondents out of 102 workshop participants.*

Questions	Responses
Q1. What did you hope to learn from attending this class? (select all that apply)	How to improve my garden or lawn: 9 How to get rid of my pests: 20 How to get rid of my pests: 20 How to reduce my pesticide usage and/or switch to less-toxic or nontoxic alternatives to pesticides: 15 Other (please specify below)  Total amount of respondents who answered this question: 26
Q1A. “Other” response	<ul style="list-style-type: none"> <li>Get more knowledgeable about pests that are good for the garden</li> </ul>
Q2. In the last 12 months, have you used any integrated management practices (i.e. trapping, barriers, beneficial insects, using mulch) in your home, garden, or lawn?	Yes: 20 No: 6

Questions	Responses
<p>Q3. After attending our webinar, which actions do you plan on bringing to your garden? (select all that apply)</p>	<p>Use compost and organic fertilizers in my garden: 17            Choose plants that attract beneficial insects: 22            Switch to a less-toxic pesticide alternative: 9            Implementing water wise practices in the garden (i.e. mulch, drip irrigation): 15            Use compost and organic fertilizers in my garden: 17            None of the above: 1            Other (please specify below): 1</p> <p>Total amount of respondents who answered this question: 26</p>
<p>Q3A. "Other" response</p>	<ul style="list-style-type: none"> <li>• I was mostly interested in ways to control ants (and hence aphids) in the backyard. I now have the name of a product I will try around my metal trough raised beds.</li> </ul>
<p>Q4. The presenter demonstrated knowledge of the topic and presented practical information you can use.</p>	<p>One: 3            Two: 0            Three: 2            Four: 4            Five (Strongly agree): 16</p> <p>Total amount of respondents who answered this question: 26</p>
<p>Q5. The workshop was what you expected.</p>	<p>Yes: 26            No: 0</p> <p>Total amount of respondents who answered this question: 26</p>
<p>Q6. What did you find most useful about the workshop?</p>	<ul style="list-style-type: none"> <li>• Regarding hosing off aphids. I always thought "what's the point? Since they will just crawl back on the plant". I didn't realize their lips/suckers stay attached to the plant. The info about cultural controls, soil biology, plant stressors, over or under-watering was helpful. I will pay more attention.</li> <li>• watering and natural pest deterrents</li> <li>• Pesticides overview</li> <li>• Thank goodness for the recorded version. For some reason, I was unable to connect live. Zoom said the host was in another meeting. I tried two devices, tried logging on from eventbrite, from the email sent right before class time - nothing got past the message that the host was in another meeting. I tried ten minutes before start time and waited an additional 45 minutes. Odd.</li> <li>• How to improve and cultivate my fruit orchard.</li> <li>• Gopher info</li> <li>• Lots and lots of links to resources shared in the chat. I've found that when it comes to gardening, there are a lot of anecdotal suggestions available online, so it is hard to separate good resources from your-mileage-may-vary type of resources. I would trust resources shared in this talk over others I might find myself.</li> <li>• I really liked the chat feature. They were really good about answering questions on the chat. I liked that the presenter kept to her schedule. They covered a lot of material in a short amount of time.</li> <li>• Lots of detailed examples.</li> </ul>


Questions	Responses
	<ul style="list-style-type: none"> <li>• Resources available to help with specific questions</li> <li>• wise usage of water for gardening</li> <li>• Learning different ways to handle pests</li> <li>• Simple straight forward easy to understand</li> <li>• Specific examples with visuals were presented to make it easier to envision implementation of the recommended</li> <li>• Neem Oils</li> <li>• This was one of the best and most informative workshops I've attended! Very well done!</li> <li>• The detail the presenter went into - absolutely fantastic</li> <li>• Pest info</li> <li>• I already do some of the things mentioned in the webinar but there were some good ideas. I didn't know hosing off aphids would kill them, I thought I was just temporarily removing them. I think I'll need to get a net/cover to keep bugs off my leafy greens this year, mine really suffered last year. I need read up on what plants will attract the good bugs, I have some already though, woohoo!</li> <li>• The links to resources</li> <li>• breath of coverage</li> </ul> <p>Total amount of respondents who answered this question: 21</p>

Questions	Responses
<p>Q7. What topics would you suggest for future workshops?</p>	<ul style="list-style-type: none"> <li>• Practical ways to care for the soil and wildlife in urban/suburban yards in ways that are also creative and aesthetically pleasing</li> <li>• How to advocate for soil care/regeneration with friends and neighbors in easy and friendly ways. To help them learn, understand and care without hitting them over the head.</li> <li>• alternatives to lawns plants beneficial to butterflies, plants that grow well near ocean climates</li> <li>• How to measures front yards water use</li> <li>• Companion planting</li> <li>• How to start a vegetable garden.</li> <li>• Edibles</li> <li>• Native plants</li> <li>• Vegetable gardening in raised beds. Pruning various plants. Types of fertilizers for different plants. Native Bay area</li> <li>• How to optimize drip system.</li> <li>• Indoor pest management (at least to the extent that outdoor pest management can have a good or bad impact on indoor pest problems)</li> <li>• More along this theme as this is a common problem. there are many other pests - coddling moths, fruit tree pests, houseplant pests</li> <li>• Pest Control</li> <li>• Propagating plants</li> <li>• Vegetable gardening including rotation of plantings</li> <li>• Fertilizing</li> <li>• Beneficial plants for the birds</li> <li>• This topic was good, but it was way to long. I would ask you to offer it again during the off-season, so winter months and share resources for fruit trees and leaf curl and also how to protect against insects we don't want for FREE.</li> <li>• More on permaculture</li> </ul> <p>Total amount of respondents who answered this question: 18</p>
<p>Q8. Your overall rating of the class.</p>	<p>One (very dissatisfied): 3            Two: 0            Three: 2            Four: 7            Five (very satisfied): 14</p> <p>Total amount of respondents who answered this question: 26</p>
<p>Q9. Your city of residence</p>	<p>San Mateo: 3            San Carlos: 3            San Bruno: 2            Menlo Park: 2            Pacifica: 1            Redwood City: 1            Daly City: 1            Oregon City: 1            Foster City: 1</p>



Questions	Responses
	<p>Woodside: 1                      Oakland: 1                      Vallejo: 1                      Belmont: 2                      Montara: 1                      Rowland Heights: 1                      Miami, FL: 1                      Englewood, CO: 1                      United Kingdom: 1                      Melbourne AUS: 1</p> <p>Total amount of respondents who answered this question: 26</p>

## Pest Control Contracting Outreach



This message is being sent by the [City/County Association of Governments of San Mateo County](#), which administers the San Mateo Countywide Water Pollution Prevention Program.

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**ATTENTION: <<First Name>> <<Last Name>>  
 I <<Business>>**

Pest control professionals in San Mateo County play a critical role in keeping pesticides out of our local creeks, the San Francisco Bay, and the Pacific Ocean.

**We need your help to protect our waterways from pesticides that can be mobilized during storm events after being applied.**

Water quality monitoring data in San Mateo County Show ongoing toxicity impacts in local creeks related to the application of structural pest control products, especially those including pyrethroids and fipronil, among others.

Because of this, we encourage all pest control professionals who work in San Mateo County to adopt Integrated Pest Management (IPM) practices to help minimize the negative effects on water quality and aquatic life.

**Next Steps You Can Take:**

- Become a certified IPM pest control operator through [EcoWise](#), [GreenPro](#), or [Green Shield](#) certification process.
- If your business is already certified, please consider having individual employees certified as well.
- If your business is IPM certified, **please confirm** that you are listed on our [Pest Management Page](#). If you are not listed and would like to be, please [email us](#) with your company's certification information together with the information you would like listed on the site.

**Have Questions?**

If you need more information or have any questions, please contact Reid Bogert at (650) 599-1433 or email [rbogert@smcgov.org](mailto:rbogert@smcgov.org). You can find more information about IPM practices [here](#).

**Copy of Letter Sent to Active-Licensed Pest Control Operators.**

**Partial Database of Pest Control Operators**

Name	Business Name	License Number	License Status	Issuance Date	Expiration Date	Address	City
COHEN, JEROME	SAN FRANCISCO PEST EXPERT	12101	Clear	10/11/2010	6/30/2022	19 HOLIDAY CT PACIFICA CA 94044 SAN MATEO COUNTY	Pacifica
GURNEY, CHARLES LEE	A & R TERMITE CONTROL INC	5315	Clear	9/15/1976	6/30/2021	1118 EAST 5TH AVE SAN MATEO CA 94402 SAN MATEO COUNTY	San Mateo
POWELL, BRIAN	BEST PEST SERVICE INC	11765	Clear	10/20/2008	6/30/2023	218 SHAW ROAD STE G SOUTH SAN FRANCISCO CA 94080 SAN MATEO COUNTY	South San Francisco
HUSTED, BRET DENNING	PREVENTION INSPECTION SERVICES	11737	Clear	8/4/2008	6/30/2023	1748 SWEETWOOD DRIVE DALY CITY CA 94015 SAN MATEO COUNTY	Daly City
COURTEMANCHE, CARL OVIDE	CAM AM PEST CONTROL	10108	Clear	11/12/1999	6/30/2023	332 POPLAR AVENUE REDWOOD CITY CA 94061 SAN MATEO COUNTY	Redwood City
GAVARRETE, CHESETER	WEST VALLEY STRUCTURAL CO	9505	Clear	3/15/1996	6/30/2022	PO BOX 2 SOUTH SAN FRANCISCO CA 94083 SAN MATEO COUNTY	South San Francisco
BOYNTON, WILLIAM	Cook and Associates - Cookton Enterprises Inc DBA	13234	Clear	9/20/2017	6/30/2023	1101 JUDSON STREET BELMONT CA 94002 SAN MATEO COUNTY	Belmont

<b>Name</b>	<b>Business Name</b>	<b>License Number</b>	<b>License Status</b>	<b>Issuance Date</b>	<b>Expiration Date</b>	<b>Address</b>	<b>City</b>
DONOVAN, JAMES EDWARD	DONOVANS PEST CONTROL INC	9728	Clear	7/7/1997	6/30/2021	PO BOX 6910 SAN MATEO CA 94403 SAN MATEO COUNTY	San Mateo
GOSS, JEFFREY	DONOVANS PEST CONTROL INC	12632	Clear	12/27/2013	6/30/2022	PO BOX 6910 SAN MATEO CA 94403 SAN MATEO COUNTY	San Mateo
SU, DAN NOEL	PACIFIC PEST MANAGEMENT	12289	Clear	12/7/2011	6/30/2023	3917 BERESFORD ST #5 SAN MATEO CA 94403 SAN MATEO COUNTY	San Mateo
DIODATI, ARMANDO	GOLDEN GATE TERMITE CONTROL INC	5237	Clear	1/1/1976	6/30/2021	328 LANG ROAD BURLINGAME CA 94010 SAN MATEO COUNTY	Burlingame
DIODATI, GIOVACCHINO	GOLDEN GATE TERMITE CONTROL INC	5272	Clear	1/1/1976	6/30/2021	328 LANG ROAD BURLINGAME CA 94010 SAN MATEO COUNTY	Burlingame
CARR, JAMES PATRICK	EUREKA VALLEY PEST EXCLUSION INC	10446	Clear	6/13/2001	6/30/2021	P O BOX 1896 PACIFICA CA 94044-6896 SAN MATEO COUNTY	Pacifica
OUTMAN, MATTHEW ROBERT	MATT OUTMAN	9048	Clear	10/29/1992	6/30/2022	108 SCENIC DRIVE REDWOOD CITY CA 94062 SAN MATEO COUNTY	Redwood City
HOWLETT, STEVEN JEFFERY	EVEN STEVENS PEST CONTROL	8194	Clear	1/1/1988	6/30/2021	1612 EL VERANO WAY BELMONT CA 94002 SAN MATEO COUNTY	Belmont

Name	Business Name	License Number	License Status	Issuance Date	Expiration Date	Address	City
JAURIGUI, DAVID JOSEPH	ALERT PEST CONTROL CO INC	10739	Clear	6/6/2003	6/30/2023	182 SCHOOL STREET DALY CITY CA 94014 SAN MATEO COUNTY	Daly City
JAURIGUI, JOHN J	ALERT PEST CONTROL CO INC	6999	Clear	1/1/1984	6/30/2022	182 SCHOOL STREET DALY CITY CA 94014 SAN MATEO COUNTY	Daly City
JAURIGUI, MICHAEL JOHN	ALERT PEST CONTROL CO INC  PICK A PRO NOW	10723	Clear	5/9/2003	6/30/2023	182 SCHOOL STREET DALY CITY CA 94014 SAN MATEO COUNTY  950 COMMERCIAL AVE SOUTH SAN FRANCISCO CA 94080 SAN MATEO COUNTY	Daly City; South San Francisco
FLETCHER, JAMES ROBERT	COMPLETE PEST CONTROL	10634	Clear	9/23/2002	6/30/2023	PO BOX 315 REDWOOD CITY CA 94064-0315 SAN MATEO COUNTY	Redwood City
SANCHEZ, ANDY WILLIAMS	GENESIS BUILDING SERVICES INC	13416	Clear	9/13/2018	6/30/2021	P O BOX 25360 SAN MATEO CA 94402 SAN MATEO COUNTY	San Mateo
CHUNG, JOHN	BLUEBIRD TERMITE	13395 and 12432	Clear	8/14/2018	6/30/2021	533 AIRPORT BLVD #400 BURLINGAME CA 94010 SAN MATEO COUNTY	Burlingame
CHUNG, STEVEN	BLUEBIRD TERMITE	8156	Clear	10/21/12	6/30/21	533 AIRPORT BLVD #400	Burlingame

Name	Business Name	License Number	License Status	Issuance Date	Expiration Date	Address	City
KAHNER, BENJAMIN	ELITE BAY AREA TERMITE CONTROL  BENS TERMITE SOLUTIONS	12617	Clear	11/25/2013	6/30/2022	1318 OLD COUNTY RD BELMONT CA 94002 SAN MATEO COUNTY	Belmont
PALMER, KEVIN JAMES	PREMIER TERMITE INC	8400	Clear	7/10/1989	6/30/2022	PO BOX 266/ 116 N CABRILLO HWY HALF MOON BAY CA 94019 SAN MATEO COUNTY	Half Moon Bay
RETTKE, MONTE JOSEPH	J K CONTROL INC	9419	Clear	7/1/1995	6/30/2022	200 VALLEY DRIVE #35 BRISBANE CA 94005 SAN MATEO COUNTY	Brisbane
FUSON, KENNETH JACOB	KEN FUSON PEST MANAGEMENT SERVICES	9794	Clear	12/3/1997	6/30/2021	111 ELM STREET MENLO PARK CA 94025 SAN MATEO COUNTY	Menlo Park
SILVA, ARMANDO	MARINA PEST CONTROL CORPORATION	11539	Clear	7/3/2007	6/30/2022	150 S SPRUCE S SAN FRANCISCO CA 94080 SAN MATEO COUNTY	South San Francisco
MARKOFF, PAUL LINDEN	MARKOFF STRUCTURAL PEST CONTROL CO	4739	Clear	1/1/1973	6/30/2022	6018 MISSION STREET DALY CITY CA 94014 SAN MATEO COUNTY	Daly City
WONG, HENDRICK	ONE SOURCE TERMITE CONTROL  TEAM PEST SOLUTIONS	8468	Clear	11/22/1989	6/30/2022	8 WESTPARK DRIVE DALY CITY CA 94015 SAN MATEO COUNTY	Daly City
IACOPI, PETER	COASTSIDE	9433	Clear	7/31/1995	6/30/2022	P O BOX 116	Half Moon

Name	Business Name	License Number	License Status	Issuance Date	Expiration Date	Address	City
MICHAEL	TERMITE					HALF MOON BAY CA 94019 SAN MATEO COUNTY	Bay
CRUMPTON, RICHARD EARL	POWER PEST CONTROL	8946	Clear	4/21/1992	6/30/2021	P O BOX 451 BELMONT CA 94002 SAN MATEO COUNTY	Belmont
NG, PUI KWONG	TERMITE EXTERMINATOR	9355	Clear	1/11/1995	6/30/2021	1602 ROBERTA DRIVE SAN MATEO CA 94403 SAN MATEO COUNTY	San Mateo
O'HARA, TIMOTHY DAVID	O HARAS PEST CONTROL	8185	Clear	1/1/1988	6/30/2021	P O BOX 6 SAN GREGORIO CA 94074 SAN MATEO COUNTY	San Gregorio
NEUMANN, ROBERT HEINZ	KAPTO TERMITE CONTROL	7622	Clear	1/1/1986	6/30/2022	1530 ARROYO AVENUE SAN CARLOS CA 94070 SAN MATEO COUNTY	San Carlos
WALKER, KEVIN	CRANE PEST CONTROL	13316	Clear	3/12/2018	6/30/2023	2700 GEARY BOULEVARD SAN FRANCISCO CA 94118 SAN FRANCISCO COUNTY	San Francisco
RUSH, MARK STEVEN	ON SITE INSPECTIONS INC	10066	Clear	7/28/1999	6/30/2023	461 ALTA VISTA DRIVE SOUTH SAN FRANCISCO CA 94080 SAN MATEO COUNTY	South San Francisco
FONG, SHERMAN	X PEST EXTERMINATORS	418	Clear	12/17/19	06/30/22	100 NORTH HILL DRIVE #40 BRISBANE CA	Brisbane

Name	Business Name	License Number	License Status	Issuance Date	Expiration Date	Address	City
						94005 SAN MATEO COUNTY	
RUBINA, JOSE LUIS	X PEST EXTERMINAT ORS	5734	Clear	1/1/1978	6/30/2023	100 NORTH HILL DRIVE #40 BRISBANE CA 94005 SAN MATEO COUNTY	Brisbane
CHU, ZON	ZC & ASSOCIATES PEST CONTROL	11614	Clear	11/28/2007	6/30/2022	235 WESTLAKE CENTER #381 DALY CITY CA 94015 SAN MATEO COUNTY	Daly City
GIORGI, DAVID JOHN	ECOTECH PEST ELIMINATION	9288	Clear	7/7/1994	6/30/2021	P O BOX 1418 MILLBRAE CA 94030 SAN MATEO COUNTY	Millbrae
GIORGI, JONATHAN	ECOTECH PEST ELIMINATION INC.	8420	Clear	9/17/19	6/30/22	PO BOX 1418 MILLBRAE CA 94030 SAN MATEO COUNTY SOUTH SAN FRANCISCO CA 94080 SAN MATEO COUNTY	Millbrae
HA, QUANG	BAY AREA PEST CONTROL	11762	Clear	10/17/2008	6/30/2023	110 GLENN WAY #13 SAN CARLOS CA 94070 SAN MATEO COUNTY	San Carlos
HASTIE, HARRY	HASTIE TERMITE COMPANY THE	4704	Clear	1/1/1973	6/30/2022	701 CHESTER WAY HILLSBOROU GH CA 94010 SAN MATEO COUNTY	Hillsborough
PALMIERI, JOSEPH	PALMIERI PEST CONTROL	9912	Clear	7/29/1998	6/30/2022	208 FIRST AVENUE REDWOOD	Redwood City

Name	Business Name	License Number	License Status	Issuance Date	Expiration Date	Address	City
						CITY CA 94063 SAN MATEO COUNTY	
STEWART, RICHARD NORMAN	CHIEF STEWARTS PEST CONTROL INC	8381	Clear	1/1/1989	6/30/2021	139 SANTIAGO AVENUE REDWOOD CITY CA 94061 SAN MATEO COUNTY	Redwood City
STEWART, RICHARD SCOTT	CHIEF STEWARTS PEST CONTROL INC	12099	Clear	10/7/10	6/30/22	139 SANTIAGO AVENUE REDWOOD CITY CA 94061 SAN MATEO COUNTY	Redwood City



# Appendix 10

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- Trash Subcommittee Attendance List – FY 2020/21
- Litter Work Group – Attendance List – FY 2020/21

### Trash Subcommittee Meeting Attendance – FY 2020/21

Name	Agency	Phone	E-Mail	07/29/20	10/19/20	01/14/21	06/28/21
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John Sanchez	City of Daly City	(650) 991-8265	jsanchez@dalycity.org	X	X	X	X
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### Trash Subcommittee Meeting Attendance – FY 2020/21

Name	Agency	Phone	E-Mail	07/29/20	10/19/20	01/14/21	06/28/21
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Sven Edlund	City of San Mateo	(650) 522-7342	sedlund@cityofsanmateo.org			X	X
Richard Kraft	City of San Mateo		rkraft@cityofsanmateo.org	X	X		
Brad Harms	City of San Mateo		bharms@cityofsanmateo.org			X	
Andrew Wemmer	City of So. San Francisco	(650) 829-3883	andrew.wemmer@ssf.net		X	X	X
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Julie Casagrande	County of San Mateo - DPW	(650) 599-1457	jasagrande@co.sanmateo.ca.us	X		X	X
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Kevin Lu	County of San Mateo	(650) 363-4698	khlu@smcgov.org				
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John Fusco	EOA, Inc.	(510) 832-2852 X130	jrfusco@eoainc.com	X	X	X	X
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Peter Schultze-Allen	EOA, Inc.	(510) 832-2852 X128	pschultze-allen@eoainc.com		X	X	
<b>No. Attending</b>				<b>25</b>	<b>29</b>	<b>28</b>	<b>25</b>

**San Mateo Countywide Water Pollution Prevention Program (SMCWPPP)  
Litter Work Group - Fiscal Year 2020/21 - Attendance Record**

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San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) Litter Work Group - Fiscal Year 2020/21 - Attendance Record			
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Mia Rossi <a href="mailto:mrossi@recology.com">mrossi@recology.com</a> Yvette Madera <a href="mailto:ymadera@recology.com">ymadera@recology.com</a>	Recology-SM County	X	
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Chris Sommers <a href="mailto:csommers@eoainc.com">csommers@eoainc.com</a> Peter Schultze-Allen <a href="mailto:pschultze-allen@eoainc.com">pschultze-allen@eoainc.com</a>	EOA Inc.	X  X	X  X

# Appendix 11

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- Updated Control Measures Plan for PCBs and Mercury in San Mateo County Stormwater Runoff, SMCWPPP, September 30, 2021

# Updated Control Measures Plan for PCBs and Mercury in San Mateo County Stormwater Runoff



**September 30, 2021**

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Appendix B – Descriptions of Land Uses Referenced in this Report

## **LIST OF ABBREVIATIONS**

BASMAA	Bay Area Stormwater Management Agencies Association
BMPs	Best Management Practices
CW4CB	Clean Watersheds for a Clean Bay
CWA	Clean Water Act
FY	Fiscal Year
GI	Green Infrastructure
MPC	Monitoring and Pollutants of Concern
MRP	Municipal Regional Permit
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollution Discharge Elimination System
PCBs	Polychlorinated Biphenyls
POC	Pollutant of Concern
POTW	Publicly Owned Treatment Works
RAA	Reasonable Assurance Analysis
RMP	Regional Monitoring Program for Water Quality in San Francisco Bay
SMCWPPP	San Mateo Countywide Water Pollution Prevention Program
TMDL	Total Maximum Daily Load
WY	Water Year
WMA	Watershed Management Area



## **1.0 INTRODUCTION**

Fish tissue monitoring in San Francisco Bay (Bay) has revealed bioaccumulation of polychlorinated biphenyls (PCBs), mercury, and other pollutants. The levels found are thought to pose a health risk to people consuming fish caught in the Bay. As a result of these findings, an interim advisory has been issued on the consumption of fish 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, mercury, and other pollutants. 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 stipulate that a 90% reduction in PCBs and 50% reduction in mercury found in discharges from urban stormwater runoff to the Bay are needed to achieve water quality standards and restore beneficial uses. Provisions C.11 and C.12 of the first Bay Area Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (Municipal Regional Permit, or MRP 1.0; Order R2-2009-0074) required Permittees to implement pilot-scale control measures during the permit term to reduce PCBs and mercury discharges from Municipal Separate Storm Sewer Systems (MS4s) to the Bay. These pilot studies were intended to enhance the collective knowledge about the costs and benefits of different Best Management Practices (BMPs) to control PCBs and mercury.

The reissued (and current) permit (MRP 2.0, Order R2-2015-0049) requires municipal agencies to move from pilot-scale work to focused implementation and defined load reduction goals (e.g., 3 kg/year PCBs across the MRP 2.0 area by June 30, 2020). The strategies and BMPs that will be applied to meet the load reduction goals are anticipated at a minimum to include:

- Stormwater green infrastructure (GI);
- Trash control devices that remove sediments containing PCBs and/or mercury;
- Source property identification and referral for investigation and abatement; and
- Management of PCBs in building materials during demolition.

Permittees may also implement additional types of controls to address the PCBs and mercury reduction goals, such as enhancements to municipal operation and maintenance (O&M) activities that remove sediments containing PCBs and/or mercury.

In compliance with Provisions C.11 and C.12, the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), a program of the City/County Association of Governments (C/CAG) of San Mateo County, is continuing to work with San Mateo County municipal agencies to identify control measures for PCBs and mercury that reduce discharges from their MS4s. This plan documents the approaches taken and progress made to-date, including summaries of:

- The pertinent MRP 2.0 permit requirements;
- The types of control measures typically used to control PCBs and mercury discharges in stormwater runoff from local watersheds surrounding San Francisco Bay;
- Documentation of existing and planned PCBs and mercury control measures for each San Mateo County MRP 2.0 Permittee;

***Updated Control Measure Plan for PCBs & Mercury in San Mateo County Stormwater Runoff (September 2021)***

- Updated estimates of the reductions in PCBs and mercury loads from San Mateo County stormwater runoff during the MRP 2.0 term that have been quantified to-date, calculated using the interim accounting methodology described later (see Section 5.0); and
- Next steps.

This plan provides an update to the information and plan (SMCWPPP 2020b) that were submitted with the FY 2019/20 Annual Report in September 2020, including updated estimates of the PCBs and mercury load reductions achieved in San Mateo County this permit term (including a period immediately preceding the permit term, as explained later, see Section 4.0) that have been quantified to-date. Consistent with the Provision C.11/12 requirements, the information contained within this plan will continue to be updated periodically during MRP 2.0 as new information is developed about control measures and associated pollutant load reductions.

## **2.0 SUMMARY OF PERMIT REQUIREMENTS**

MRP 2.0 Provisions C.11.a.iii. and C.12.a.iii. required Permittees to submit with their FY 2015/16 Annual Reports a prioritized list of watersheds and management areas where control measures for PCBs and mercury are currently implemented or will be implemented during the term of permit along with an implementation schedule (accomplished by SMCWPPP 2016b).<sup>1</sup> Permittees were also required to provide the monitoring data and other information used to select the management areas. In addition to the list of management areas, Permittees were also required to report on the following:

- The number, type, and locations and/or frequency (if applicable) of control measures;
- A cumulative listing of all potentially PCBs-contaminated sites Permittees have discovered and referred to the Regional Water Board to-date, with a brief summary description of each site and where to obtain further information;
- The description, scope and start date of control measures;
- For each structural control and non-structural control BMP, interim implementation progress milestones and a schedule for milestone achievement; and
- Clear statements of the roles and responsibilities of each participating Permittee for implementation of pollution prevention or control measures identified by Permittees.

In subsequent Annual Reports, Permittees are required to provide updates to the initial information presented with the FY 2015/16 Annual Report.

The MRP also requires that Permittees demonstrate and report on achievement of PCBs load reductions and ancillary load reduction benefits for mercury during the term of the Permit. As part of this requirement to report load reductions, MRP Provisions C.11/12.b., Assess Mercury/PCBs Load Reductions from Stormwater, required Permittees to submit with their FY 2015/16 Annual Report for Executive Officer approval an assessment methodology (which was referred to as the interim accounting methodology (BASMAA 2017), that updates the load reduction accounting system outlined in the MRP 2.0 factsheet. Permittees were required to use the assessment methodology to quantify in a technically sound manner PCBs and mercury loads reduced through implementation of pollution prevention and treatment control measures, including source control, stormwater treatment, GI, and other measures. Beginning with their FY 2016/17 Annual Report, Permittees were required to report on the use of the methodology to demonstrate progress toward achieving the PCBs and mercury load reductions required this permit term (accomplished by SMCWPPP 2017b), with updates provided in subsequent Annual Reports (accomplished by SMCWPPP 2018b, SMCWPPP 2019b, SMCWPPP 2020b, and this report).

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<sup>1</sup>The MRP also required submittal of an initial progress report by April 1, 2016 (accomplished by SMCWPPP 2016a).

### **3.0 SUMMARY OF CONTROL MEASURES**

Permittees have implemented a variety of control measures since the development of PCBs and mercury urban stormwater loading estimates incorporated into the TMDLs. Control measures were implemented to reduce PCBs and/or mercury in stormwater and/or other impacts of stormwater runoff. The control measures that have a direct benefit towards reducing the impacts of PCBs and mercury on the Bay are documented in this plan.

The types of control measures implemented to control PCBs and mercury in stormwater runoff generally fall into the following three categories:

- **True Source Controls (Load Avoidance)** – Controls that focus on the original source or use of a potential pollutant. True source controls include regulations and laws adopted to minimize or eliminate the use of a pollutant for specific activities and pollution prevention activities, such as inspections, that identify high risk practices that could release PCBs or mercury into the environment. The one true source control for mercury is the reduction of mercury in devices and equipment as a result of legislation or voluntary reduction by manufacturers. No additional true source controls are currently available for PCBs due to the production of these organic compounds being banned in the 1970s and the tight regulation of PCBs still in use.
- **Source Controls (Load Reduction)** – Source controls are load reduction control measures that reduce the risk of the pollutant entering the environment after it has already been used in devices/materials/equipment, or that intercept the pollutant before it is discharged to a receiving water body. The control measure types that fall into this category include: source property abatement, enhanced street sweeping, MS4 and flood control facility maintenance, mercury device recycling, and the control of PCBs-containing material during building demolition/renovation.
- **Treatment Controls (Load Reduction)** – Treatment controls are load reduction control measures that remove pollutants via physical, biological, or chemical processes. The control measure types that fall into this category include stormwater treatment measures, GI, and diversions of stormwater to Publicly Owned Treatment Works (POTWs).

Control measures needed to address PCBs and mercury load reduction criteria included in MRP 2.0 are currently under development by Permittees based on continued evaluations of sources of these contaminants and load reduction benefits associated with existing control measures. To the extent possible with the available information, control measures implemented to-date and those planned for implementation within each WMA during the term of MRP 2.0 are summarized in Section 4.0, consistent with MRP requirements.

Descriptions of each control measure type that Permittees may implement or cause to be implemented by other responsible parties to control PCBs and/or mercury are provided below.

#### **3.1. Source Property Identification and Abatement**

##### ***Source Property Investigation and Referral Process***

PCBs and mercury source properties discharge these pollutants to the MS4s. One typical mechanism is for on-site contaminated surface soils to be mobilized by stormwater runoff, wind and/or vehicles and enter on-site or off-site storm drains. Identification and subsequent abatement of these properties

and/or focused control measure implementation in the public ROW around source properties can provide an opportunity for PCBs and mercury stormwater load reductions. Reductions occur through the abatement of properties via available mechanisms, including referrals to the Regional Water Board or through enforcement actions brought against property owners by Permittees.

San Mateo County MRP Permittees continue to implement a program to attempt to identify source properties in priority WMAs. These investigations typically include the following tasks:

- 1) Property records and aerial photography review;
- 2) Public ROW surveys and/or property inspections;
- 3) Private property and public ROW soil/sediment sampling; and
- 4) Reporting and planning/identifying control measures (including planning referrals).

As source properties are identified, information regarding pollutant concentrations observed, evidence of transport to the MS4, property ownership, previous stormwater violations, and any other pertinent information is documented. Additionally, the location and geographical extent of the property is delineated in GIS to facilitate the calculation of PCBs and mercury load reductions.

In October 2018, SMCWPPP submitted two source property referrals (both in San Carlos) to the Regional Water Board (Section 4.15). In addition, SMCWPPP and San Mateo County Permittees will continue attempting to identify source properties for referral to the Regional Water Board, based on the evaluation of the results of the WY 2019 POC monitoring program and other appropriate data, as it becomes available.

SMCWPPP's efforts to identify source properties in San Mateo County are described in the Urban Creek Monitoring Reports (UCMRs) submitted annually in March (SMCWPPP 2017a, 2018a, 2019a, 2020a, and 2021).<sup>2</sup>

### ***Review of Contaminated Site Cleanups (Potential Self-Abatements)***

In addition to the source property investigations and referral process described above, SMCWPPP has also been evaluating opportunities to take credit for PCBs and mercury loads avoided due to contaminated site cleanups in San Mateo County that were initiated during 2005 or later, since these cleanups are assumed to reduce urban runoff pollutant loads relative to the PCBs TMDL baseline urban runoff load. The cleanups are referred to as "self-abatements" and are typically a result of enforcement actions with cleanup oversight by federal, state and local regulatory agencies, including United States Environmental Protection Agency (USEPA), California Department of Toxic Substance Control (DTSC), the Regional Water Board, and/or local municipal agencies. In addition, cleanups completed during the MRP 2.0 permit term should result in credit towards MRP 2.0 load reduction requirements. Investigation of contaminated site cleanups may also lead to opportunity to identify additional PCBs source properties that could be referred to the Regional Water Board for further investigation and abatement, either because cleanup at a site was never completed, or because the cleanup standards applied were not adequate relative to TMDL goals for reducing pollutant loads in stormwater runoff.

Regional Water Board staff has compiled a list of contaminated sites that were or are targeted for cleanup of soil and/or groundwater impacts under USEPA, DTSC, Regional Water Board, or local

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<sup>2</sup> An Integrated Monitoring Report was submitted in lieu of a UCMR in March 2020.

municipal agency oversight. The list was compiled primarily from a review of online databases, including DTSC's Envirostor and the State Water Resource Control Board's GeoTracker, and targeted sites that may have been associated with PCBs. The purpose in compiling this list was so that Regional Water Board staff could follow-up with the oversight agencies to ensure stormwater runoff concerns were or will be adequately addressed as part of the cleanups. The list has been updated periodically as new information becomes available. SMCWPPP is reviewing the latest versions of the Regional Water Board list to help identify PCBs and mercury cleanup sites in San Mateo County. SMCWPPP is also in the process of reviewing online databases (Envirostor and GeoTracker) to review site histories and cleanup records, and compile the information needed to determine the cleanup status of the site, justify calculating any pollutant load reductions for the site cleanup, and document the data inputs needed to calculate loads avoided. The following information is being collected, as available:

- Area of the site;
- Current cleanup status;
- Date of cleanup;
- Evidence of PCBs on the site prior to cleanup (i.e., pre-cleanup PCBs concentrations in soils or groundwater);
- Cleanup/abatement methods;
- Evidence of adequate PCBs cleanup at the site (e.g., post-cleanup PCBs concentrations in soils or groundwater);
- Available evidence to justify designation as a potential PCBs source property for referral to Regional Water Board; and
- Documentation of any follow-up needed at the site.

### **3.2. Green Infrastructure and Treatment Control Measures**

#### ***Green Infrastructure***

Green infrastructure (GI) and other treatment controls may be installed in roadway and storm drain infrastructure in the public ROW to treat stormwater runoff (e.g., construction of green streets). GI may be retrofitted into existing infrastructure or included as part of new infrastructure capital improvement projects (e.g., transportation improvements such as street projects). In addition, applicable public and private properties undergoing new or redevelopment are subject to MRP requirements to treat stormwater via GI/LID techniques or equivalent. Installation of GI facilities on private property or public lands in San Mateo County continues to improve stormwater quality and help reduce PCBs and mercury loads. GI facilities include infrastructure that uses vegetation, soils, and natural processes to manage water and create healthier urban environments. Examples of GI include bioretention, LID, green/complete streets, and other systems that generally use the natural filtration or infiltration of stormwater.

MRP 2.0 requires that a 370 grams/year PCBs load reduction is achieved in San Mateo County by the end of this permit term. Of this, at least 15 grams/year must be achieved via GI. These requirements have been met, as documented in SMCWPPP's FY 2019/20 Annual Report.

For the purposes of tracking and crediting pollutant load reductions achieved through GI and stormwater treatment, During FY 2015/16, SMCWPPP staff worked with San Mateo County MRP Permittee staff to

begin developing a database of existing and planned public and private GI and stormwater treatment projects in San Mateo County, including GI/LID measures at redevelopment sites and GI installed in the public ROW during infrastructure projects (SMCWPPP 2016b). The database includes existing and planned GI and treatment facilities constructed in 2005 or later since these facilities are assumed to reduce urban runoff pollutant loads relative to the PCBs TMDL baseline urban runoff load. In addition, 2005 was the year that San Mateo County's municipal stormwater permit was amended to include more stringent Provision C. 3 requirements; thus most new or redevelopment projects constructed in 2005 or later include stormwater treatment.

The types of information in the database of existing and planned public and private GI and stormwater treatment projects in San Mateo County include the following:

- Project name
- Description of GI and stormwater treatment system(s)
- Location - street address or location description and coordinates
- Whether the facility is located on private property or in public ROW
- Area treated by facility (acres)
  - For GI/LID at redevelopment or new developments sites, this is generally assumed to be the project area
  - For Green Street or other retrofits in public ROW, estimated drainage area to facility
- Hydraulic sizing criteria
- Date of construction
  - Existing facilities: date of construction completion (e.g., initial inspection sign-off)
  - Planned facilities: estimated construction completion date

Beginning in FY 2016/17, SMCWPPP has worked with municipal staff each year to update the GI database with available new or revised information. For each San Mateo County Permittee with urban areas that drain to San Francisco Bay, a summary of the information gathered to-date on existing and planned GI and stormwater treatment facilities is presented in Section 4.0 of this report. Approximate load reductions calculated for all GI and stormwater treatment implemented in San Mateo County during the MRP 2.0 permit term are reported in Section 5.0.

The information in this section and Section 4.0 also helps to fulfill the requirement in MRP Provision C.3.j.iv. to report on development and implementation of methods to track and report implementation of GI.

### ***Trash Full Capture Systems***

Trash full capture systems are devices or series of devices that trap all particles retained by a 5mm 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. Examples of full capture systems include storm drain inlet screening devices that treat relatively small areas to hydrodynamic separators and netting devices treating hundreds or thousands of acres.

To-date, a number of large trash full capture system have been retrofitted into the MS4 in urban areas of San Mateo County that drain to the. A summary of the information gathered to-date on these trash full capture systems is presented in Section 4.0 of this report. Preliminary load reductions estimated for these systems are included in Section 5.0.

### **3.3. Municipal O&M Activities that Potentially Remove Sediments with PCBs and/or Mercury**

SMCWPPP is working with San Mateo County MRP Permittees to continue evaluating new or enhanced municipal O&M activities that may remove sediments containing PCBs and/or mercury. SMCWPPP is tracking actions implemented in 2005 or later since these actions are assumed to reduce urban runoff pollutant loads relative to the PCBs TMDL baseline urban runoff load. The types of municipal O&M evaluated are described below. As part of this evaluation SMCWPPP is assessing whether new or enhanced municipal O&M activities were implemented or planned for implementation during the MRP 2.0 permit term.

#### ***Street Sweeping and Flushing***

Most San Mateo County Permittees conduct street sweeping, which along with trash and debris also removes sediments and particle-bound pollutants such as PCBs and mercury to some extent. If enhancements are made by San Mateo County MRP Permittees to street sweeping programs that would increase PCBs and mercury removal from stormwater runoff, the associated pollutant load reductions will be documented.

In addition to traditional street sweeping, street flushing may also provide pollutant reduction benefits in stormwater runoff. Street flushing includes pressure washing and/or the use of water to flush streets of sediment, trash and sediment-associated pollutants, then collecting and properly disposing of the water, sediments and pollutants. A street flushing pilot project was conducted in San Carlos during MRP 1.0 (CW4CB 2017b). However, additional street flushing projects have not occurred in San Mateo County under MRP 2.0 to-date. If street flushing projects are implemented by San Mateo County MRP Permittees in the future, pollutant load reductions associated with this control measure will be documented.

#### ***MS4 Line Flushing***

Occasionally, opportunities present themselves to remove PCBs or mercury associated sediment deposited in MS4 lines. These opportunities typically do not occur often because the traditional MS4 is designed to convey stormwater (and associated sediments) effectively through the system. MS4 line flushing pilot projects have been conducted in the Bay Area, but not in San Mateo County to-date. If MS4 line flushing projects are implemented by San Mateo County MRP Permittees, load reductions associated with this control measure will be documented.

#### ***Storm Drain Inlet Maintenance***

Municipalities periodically conduct storm drain inlet maintenance (e.g., clean-outs of catch basins). Most San Mateo County MRP Permittees inspect and maintain their inlets annually. Through these efforts, sediment, and organic material (and associated pollutants) are removed from the MS4. If enhancements are made by San Mateo County MRP Permittees to inlet maintenance programs that would increase PCBs and mercury removal from stormwater runoff, the associated pollutant load reductions will be documented.



### **Channel and Pump Station Maintenance**

San Mateo County MRP Permittees periodically remove sediment from storm drain channels and pump stations as part of their ongoing maintenance programs. As sediment and organic material are removed, sediment-associated pollutants such as PCBs and mercury are also removed. If enhancements are made by San Mateo County MRP Permittees to channel and pump station maintenance programs that would increase PCBs and mercury removal from stormwater runoff, the associated pollutant load reductions will be documented.

### **3.4. Managing PCBs in Building Materials**

PCBs were used in many applications and materials in buildings, especially those constructed from about 1950 through 1980. MRP 1.0 required the implementation of a pilot project to assist in developing management practices that address legacy caulks containing PCBs. Permittees complied with this requirement by participating in a regional project led by the San Francisco Estuary Partnership (SFEP) that: 1) evaluated PCBs levels in caulk in buildings; and 2) developed preliminary BMPs, a Model Implementation Process, and associated model policies and ordinances to reduce or prevent the release of PCB-laden caulks to the environment during demolition of Bay Area buildings.

Building upon the requirements in MRP 1.0, MRP 2.0 Provision C.12.f requires Permittees to develop and implement or cause to be developed and implemented an effective protocol for managing materials with PCBs concentrations of 50 parts per million or greater in applicable structures<sup>3</sup> at the time such structures undergo demolition, so that PCBs do not enter municipal storm drain systems. A Permittee is exempt from this requirement if it provided evidence acceptable to the Executive Officer in its FY 2016/17 Annual Report that the only buildings that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame buildings.

Permittees were required to develop a protocol by June 30, 2019 that includes each of the following components, at a minimum:

- The necessary authority to ensure that PCBs do not enter municipal storm drains from PCBs-containing materials in applicable structures at the time such structures undergo demolition;
- A method for identifying applicable structures prior to their demolition; and,
- Method(s) for ensuring PCBs are not discharged to the municipal storm drain from demolition of applicable structures.

By July 1, 2019 and thereafter, Permittees are required to:

- Implement or cause to be implemented the PCBs management protocol for ensuring PCBs are not discharged to municipal storm drains from demolition of applicable structures via vehicle track-out, airborne releases, soil erosion, or stormwater runoff; and,
- Develop an assessment methodology and data collection program to quantify in a technically sound manner PCBs loads reduced through implementation of the protocol for controlling PCBs during demolition of applicable structures.

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<sup>3</sup> Applicable structures are buildings built or remodeled from January 1, 1950 through December 31, 1980, with the following exemptions: single-family residential buildings, wood-framed buildings, and partial building demolitions.

***Updated Control Measure Plan for PCBs & Mercury in San Mateo County Stormwater Runoff (September 2021)***

On behalf of MRP Permittees, BASMAA conducted a multi-year regional project to assist MRP Permittees to address Provision C.12.f. The BASMAA project, which began in FY 2016/17 and was completed in March 2019, assisted Permittees in developing local programs to manage PCBs-containing materials during building demolition. It developed guidance materials, tools and training materials and conducted outreach. SMCWPPP actively participated in the project, including providing BASMAA's project manager.

At the outset of the project, a BASMAA Steering Committee was convened to provide project oversight and guidance during the project. The Steering Committee included BASMAA Directors, countywide stormwater program staff, and Permittee staff from various relevant municipal departments. The Steering Committee met periodically throughout the project. In addition, a project TAG, a small balanced advisory group formed from industry, regulatory, and Permittee representatives to provide review and input on selected project work products, was convened. The TAG was comprised of representatives from industry and state/federal regulatory agencies, and Permittees. Other efforts to engage key stakeholders included an industry stakeholder roundtable meeting (August 2017) and two larger stakeholder group meetings (December 2017 and May 2018) that included industry, regulatory and municipal representatives. During FY 2018/19, Permittees tailored the BASMAA products for local use, adopted the program (e.g., via local policy or ordinance), and trained local staff to implement the new program starting July 1, 2019.

Key BASMAA project deliverables provided to each Permittee to use as appropriate given local procedures and needs included:

- A protocol for pre-demolition building survey for priority PCBs-containing building materials;
- Model language for municipal adoption (e.g., ordinance) of the new program to manage PCBs materials during building demolition and model supporting staff report and resolution;
- CEQA strategy and model notice of exemption;
- Supplemental demolition permit model application materials, including forms, process flow charts, and applicant instructions; and
- An analysis to assist municipalities that pursue cost recovery.

Other project deliverables included:

- A coordination/communication strategy for the project;
- A technical memorandum summarizing any new information & decisions needed by BASMAA at outset, including an annotated table of regulatory drivers and relevant requirements;
- A technical memorandum with the state of the practice for identifying PCBs-containing building materials (developed to inform development of the pre-demolition building survey protocol listed below);
- Industry stakeholder outreach materials and a fact sheet for municipal staff;
- A spreadsheet tool used to develop the prioritized list of potential PCBs-containing building materials that the demolition program will focus on;
- A conceptual approach for an assessment methodology and data collection program to quantify PCBs loads reduced through managing PCBs-containing materials during building demolition.

***Updated Control Measure Plan for PCBs & Mercury in San Mateo County Stormwater Runoff (September 2021)***

During FY 2018/19, the BASMAA project concluded by conducting the following outreach and training tasks:

- Prepared training materials for municipal staff on adoption and implementation of the new program;
- Developed outreach materials and a standard presentation to inform industry stakeholders including developers, planning firms, urban planning non-governmental organizations, demolition firms, property owners, property managers, and realtors about the new program to manage PCBs in building materials during demolition;
- Using the above training materials, conducted training workshops (in-person and a webinar) for key municipal and countywide stormwater program staff;
- Conducted a webinar for industry stakeholders; and
- Developed a list of Bay Area opportunities, including contact information and dates, for municipal and/or stormwater program staff to conduct additional outreach to industry stakeholders using the above industry outreach materials.

In addition, during FY 2018/19 MRP Permittees worked together through the BASMAA Monitoring and Pollutants of Concern Committee (MPC) to begin developing a framework to comply with data collection/evaluation and reporting requirements under Provision C.12.f. As mentioned previously, these requirements include developing an assessment methodology and data collection program to quantify PCBs loads reduced through implementation of the new program. The preliminary regional process developed to-date includes the following steps:

1. The municipality informs demolition permit applicants that their projects are subject to the MRP Provision C.12.f requirements, necessitating, at a minimum, an initial screening for priority PCBs-containing materials.
2. For every demolition project, applicants complete and submit a version of BASMAA's model "PCBs Screening Assessment Form" (Screening Form) or equivalent to the municipality.
3. 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.
4. The municipality then issues the demolition permit or equivalent, according to its procedures.<sup>4</sup>
5. For Applicable Structures only, the municipality submits completed Screening Forms and any supporting documents (consultant's report from PCBs building survey, QA/QC checklist, and lab reports) to its countywide program; forms for exempt sites need not be submitted. Forms should be submitted to the countywide programs electronically if feasible, and at a minimum annually, but quarterly is preferred.

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<sup>4</sup> Municipalities should require that applicants fill out and certify a Screening Form for every demolition. For non-Applicable Structures, applicants simply check the boxes, certify, and submit to municipality. Then the municipality can authorize the demolition (e.g., issue a demolition permit). In general, municipalities should have a completed and certified Screening Form before authorizing a demolition, unless they are a small community that is exempt or has some other arrangement with Regional Water Board staff. But there is no need to track non-Applicable Structures otherwise.

6. The countywide programs compile the completed Screening Forms and any supporting documents. The countywide program then works with the other MRP countywide programs through BASMAA to manage and evaluate the data, and to assist Permittees with associated MRP reporting requirements.

Permittees began implementing the program on July 1, 2019. The MRP stipulates a collective PCBs load reduction credit of 246.67 grams/year for San Mateo County Permittees, if all the Permittees implement a program consistent with the permit requirements. See Section 12 and Appendix 12 of SMCWPPP's FY 2020/21 Annual Report for more information including documentation provided per Provision C.12.f. reporting requirements.

### **3.5. Managing PCBs in Storm Drain or Roadway Infrastructure**

Studies in areas outside of the Bay Area have shown that PCBs may be present in storm drain and/or roadway infrastructure due to their use in caulks and sealants in the mid to late 20<sup>th</sup> century. Provision C.12.e of MRP 2.0 requires Permittees to evaluate the presence of PCBs in caulks/sealants used in storm drain or roadway infrastructure in public ROWs by collecting samples of caulk and other sealants used in storm drains and between concrete curbs and street pavement. BASMAA completed a regional project to address this permit requirement on behalf of all MRP Permittees. The results of the study are documented in a project report that was submitted with SMCWPPP's FY 2017/18 Annual Report.

### **3.6. Diversions of Urban Runoff to Wastewater Treatment Facilities**

The diversion of urban runoff (i.e., dry weather flows and/or stormwater runoff) to existing wastewater treatment facilities could potentially reduce PCBs and mercury loads to the Bay. A study was conducted in the City of San Carlos during MRP 1.0 to evaluate diversion of urban runoff to a publicly owned treatment works (POTW). Stormwater runoff collected at the Pulgas Creek Pump Station (PCPS) during WY 2013 and WY 2014 rainfall events was diverted to a regional domestic wastewater treatment plant that is located in Redwood City and operated by Silicon Valley Clean Water (SVCW). The PCPS drains catchments with primarily old industrial land uses with the most elevated concentrations of PCBs in MS4 sediment and stormwater runoff samples collected to-date in San Mateo County. The study included monitoring PCBs and mercury concentrations in the diverted stormwater runoff. In addition, an engineering firm was retained to provide conceptual designs and associated planning-level costs for two full-scale design options (gravity or pumped flow) for diversions from the PCPS to the SVCW treatment plant. The pumped flow design included repurposing an existing sanitary sewer booster pump station located adjacent to the PCSC.

Both designs accounted for capacity limitations in the local sanitary sewer collection system during wet weather conditions. The City of San Carlos' sanitary sewer system is susceptible to overflows during storm events due to infiltration and inflow (I/I) of groundwater and stormwater into the collection system. The City entered a Consent Decree with San Francisco Baykeeper in 2010 which requires implementation of measures to reduce sanitary sewer overflows (SSOs), which led to development of a January 2013 Sewer Collection System Master Plan. For this study, a hydraulic model developed during the master planning process was used to analyze the capacity of the collection system for conveying flows from the PCPS to the SVCW treatment plant during rainfall events. Not surprisingly, the model indicated that the collection system had limited capacity to accept additional flows during wet weather conditions without causing system overflows or surcharge.

Based upon the study monitoring and conceptual designs, the estimated pollutant loads that could be diverted from reaching the Bay by a full-scale pumped or gravity flow diversion from the PCPS to the SVCW treatment plant were relatively low (2 to 5 grams/year of PCBs and < 1 gram/year of mercury). Planning-level estimated costs ranged from \$11,000 to \$23,000 per gram of PCBs diverted to the treatment plant. Given the relatively low effectiveness in terms of pollutant load reduction and the relatively high costs, a full-scale diversion at the PCPS did not appear cost-effective compared to other PCBs controls and was not pursued further (SMCWPPP 2015b).

### **3.7. Addressing Illegal Dumping**

This source control measure category entails addressing illegal dumping of waste (e.g., construction and demolition debris, stockpiles, spilled materials) containing PCBs or mercury to prevent it from entering MS4s. If enhancements are made by San Mateo County MRP Permittees to programs that address illegal dumping and would prevent PCBs or mercury removal from entering stormwater runoff, the associated pollutant load reductions will be documented.

### **3.8. Mercury Reduction via Hazardous Waste Collection Programs**

Many types of devices and equipment (e.g., thermometers, switches, and fluorescent lamps) can contain mercury. When these devices are not adequately managed at their end-of-life, mercury can be released into the environment and become available to stormwater runoff. Control measures currently implemented by 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 at the end-of-life of these devices and equipment.

San Mateo County municipalities participate in San Mateo County Health Department's Household Hazardous Waste (HHW) Program and Very Small Quantity Generator Business Collection (VSQG) Program. The HHW Program offers residents the opportunity to drop-off mercury-containing devices and equipment and other hazardous wastes at designated drop-off points or drop-off events free of charge. The VSQG Program provides an inexpensive hazardous waste disposal option to eligible businesses, non-profits, and other government agencies that generate less than 100 kilograms of waste per month. It operates by appointment only and charges a fee to cover the cost of transportation and disposal. Many San Mateo County municipal agencies promote the availability of the HHW Program and VSQG Program on their agency websites. The estimated mass of mercury collected in FY 2020/21 via these programs is presented in Section 5.0.

## **4.0 EXISTING AND PLANNED CONTROL MEASURES**

SMCWPPP is tracking all existing and planned control measures that should result in pollutant load reduction credits towards meeting the San Mateo County portion of the PCBs and mercury TMDL wasteload allocations and MRP 2.0 load reduction requirements. All existing controls that commenced or were enhanced in 2005 or later are assumed to reduce urban runoff pollutant loads relative to the PCBs TMDL baseline urban runoff load. This year was selected because load reductions due to controls fully implemented before 2005 were already accounted for in the PCBs TMDL baseline urban runoff load estimate. As part of the evaluation SMCWPPP is assessing whether each existing or planned control would represent a new action or an enhancement during the MRP 2.0 permit term, including a period immediately preceding the permit term.<sup>5</sup> In addition to credit towards TMDL goals, such controls should result in credit towards the MRP 2.0 requirement that a 3,000 grams/year PCBs load reduction is achieved across the MRP 2.0 area by the end of the permit term. Of this, an interim 500 grams/year reduction was required by June 2018. These load reductions have been achieved (see SMCWPPP's FY 2019/20 Annual Report for more details). In addition, MRP 2.0 requires that at least 15 grams/year PCBs load reduction in San Mateo County is achieved via GI by the end of the permit term. The permit also requires a 6 grams/year mercury load reduction in San Mateo County via GI by the end of the permit term. The GI load reductions have also been achieved.

The WMAs identified in San Mateo County and the associated control measures currently implemented (i.e., existing) or the control measures under development (i.e., planned) within these WMAs to-date are described for each San Mateo County Permittee in Sections 4.1 through 4.19. Each WMA and the GI/LID facilities within it are mapped in Appendix A, Figures A-1 through A-19. The Cities of Half Moon Bay and Pacifica drain to the Pacific Ocean and therefore were not included below, since this plan is focused on the PCBs and mercury TMDLs for San Francisco Bay. The inventory is organized alphabetically by Permittee and includes information on control measures in each WMA compiled by SMCWPPP to-date. It is important to note that the below summaries may not include all existing or planned control measures. The inventory will continue to be updated and refined as additional information becomes available. The land uses referenced in this report, including in Sections 4.1 through 4.19 below, are described in Appendix B.

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<sup>5</sup>Based on language in the MRP and discussions with Regional Water Board staff, it is assumed that applicable controls implemented from July 1, 2013 through the end of the permit term should result in credit towards these load reduction requirements.

## 4.1. Town of Atherton

### Watershed Management Areas

Table 4.1 lists the five WMA’s identified to-date in the Town of Atherton, and its total land area and associated land uses.

**Table 4.1. Atherton WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
238	San Francisco Bay	8	0%	0%	100%	0%	0%	0%
252	Atherton Creek	10	0%	2%	98%	0%	0%	0%
261	Redwood Creek	882	0%	1%	99%	0%	0%	0%
71	Ravenswood Slough	10	0%	17%	83%	0%	0%	0%
ATH	Multiple	2,314	0%	9%	87%	0%	4%	0%

### Existing and Planned Control Measures Summary

Table 4.2 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the Town of Atherton.

**Table 4.2. Existing (E) and planned (P) PCBs and mercury control measures in Atherton WMAs**

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
238	E			E		E	E			E
252				E		E	E			E
261				E		E	E			E
71	E			E		E	E			E
ATH		E/P		E		E	E			E

**Source Property Investigation**

Source property investigative work has been conducted in the Town of Atherton to-date in WMAs 71 and 238. Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

**Green Infrastructure**

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Atherton treat **25.7 acres** of land comprised of old urban land use. Of this total, **12.6 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020-21) (Table 4.3). An additional **15 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

**Table 4.3 Land area in the Atherton WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>**

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Parcel-Based New & Redevelopment or Retrofit	ATH	12.6		12.6	0.0		
	<i>Subtotal</i>	<b>12.6</b>	<b>0.0</b>	<b>12.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Total All GI</b>		<b>12.6</b>	<b>0.0</b>	<b>12.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

**Other PCBs and Mercury Controls**

The Town of Atherton conducted a one-time desilting of the Atherton Channel at Watkins Avenue and Station Lane in 2004/2005. Approximately 25 cubic yards of sediment was removed during this activity. However, the sediment was not tested for PCBs and mercury. If the Town were to repeat this enhanced municipal O&M activity in the future it may be possible to test the sediment removed for PCBs and mercury and estimate the pollutant loads avoided.

SMCWPPP is also continuing to evaluate whether other relevant PCBs and mercury control measures are present in Atherton or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.



## 4.2. City of Belmont

### Watershed Management Areas

Table 4.4 lists the six WMAs identified to-date in the City of Belmont, and their total land areas and associated land uses.

**Table 4.4. Belmont WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
101	Laurel Creek	10	1%	3%	96%	0%	0%	0%
1011	Steinberger Slough	60	21%	49%	9%	11%	10%	0%
32	Steinberger Slough	27	0%	33%	66%	0%	1%	0%
60	Laurel Creek	270	5%	29%	60%	5%	1%	0%
77	Belmont Creek	59	16%	23%	52%	9%	0%	0%
BEL	Multiple	2,505	0%	12%	62%	2%	24%	0%

### Existing and Planned Control Measures Summary

Table 4.5 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of Belmont.

**Table 4.5. Existing (E) and planned (P) PCBs and mercury control measures in Belmont WMAs.**

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems (Large and Small)	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
101	E		E	E		E	E			E
1011	E	E/P	E	E		E	E			E
32	E		E	E		E	E			E
60	E	E/P	E	E		E	E			E
77		E/P	E	E		E	E			E
BEL		E/P	E	E		E	E			E

**Source Property Investigation**

Source property investigative work has been conducted in the City of Belmont to-date in WMAs 101, 1011, 32, and 60. Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

**Green Infrastructure**

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Belmont treat **32 acres** of land, of which **2.5 acres** are comprised of old industrial land use and another **20 acres** are comprised of old urban land use. Of this total, **19.3 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.6). An additional **38 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction.

Belmont is also planning to construct green streets on public lands or ROWs on Ralston Avenue that will treat up to **11 acres** of land. Belmont is also working with project partners to plan a regional stormwater runoff capture and creek restoration project at Twin Pines Park. This project has received \$900K in funding from C/CAG for design and 1 million in funding from DWR for creek restoration. The project is expected to treat an additional **17 acres** of mostly old urban land uses. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available. *This information to be confirmed by Belmont.*

**Table 4.6 Land area in the Belmont WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>**

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Parcel-Based New & Redevelopment or Retrofit	60	2.7		2.1	0.2		0.4
	77	1.0	1.0	0.0			
	1011	3.4	0.0	0.0		0.0	3.4
	BEL	12.1	1.5	9.7	1.0		
	<b>Subtotal</b>	<b>19.3</b>	<b>2.5</b>	<b>11.8</b>	<b>1.2</b>	<b>0.0</b>	<b>3.8</b>
<b>Total All GI</b>		<b>19.3</b>	<b>2.5</b>	<b>11.8</b>	<b>1.2</b>	<b>0.0</b>	<b>3.8</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

**Municipal Operation and Maintenance Practices**

*Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the City of Belmont has installed a number of small full trash capture devices in public storm drain inlets. These devices treat over **590 acres** distributed across nine WMAs, including **33 acres** of old industrial and **540 acres** of old urban land uses (Table 4.7). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs, mercury.

**Table 4.7. Extent of land area in City of Belmont WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>**

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
60	102.39	12.77	38.92	50.18		0.52
77	17.93	4.22	6.05	7.65	0.01	0.00
1011	20.56	8.62	4.45	0.75	3.93	2.82
BEL	365.78	7.14	71.40	282.95		4.30
SCS	10.86			10.86		
SMO	3.73			3.73		
60B	41.30	0.77	15.04	25.48		
32	24.61		6.18	18.19		0.24
101	2.89		0.13	2.76		
<b>TOTAL</b>	<b>590.06</b>	<b>33.52</b>	<b>142.17</b>	<b>402.56</b>	<b>3.93</b>	<b>7.88</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of Belmont between January 2010 and June 2021.

**Other PCBs and Mercury Controls**

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in Belmont or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

### 4.3. City of Brisbane

#### Watershed Management Areas

Table 4.8 lists the four WMAs identified to-date in the City of Brisbane, and their total land areas and associated land uses.

**Table 4.8. Brisbane WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1004	San Francisco Bay	721	72%	5%	2%	0%	21%	0%
17	Guadalupe Valley Creek	788	25%	11%	30%	0%	34%	0%
350	San Francisco Bay	8	14%	0%	2%	0%	84%	0%
BRI	Multiple	215	1%	10%	7%	25%	57%	0%

#### Existing and Planned Control Measures Summary

Table 4.9 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of Brisbane.

**Table 4.9. Existing (E) and planned (P) PCBs and mercury control measures in Brisbane WMAs.**

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems (Large and Small)	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
1004	E	E/P	E	E		E	E			E
17	E	E/P	E	E		E	E			E
350	E			E		E	E			E
BRI			E	E		E	E			E

### Source Property Investigation

Source property investigative work has been conducted in the City of Brisbane to-date in WMAs 17, 350, and 1004. Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

### Green Infrastructure

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Brisbane treat **39.2 acres** of land which is comprised almost entirely of old industrial land use. All of this GI was built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.10). An additional **66 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

Brisbane was also awarded funding from C/CAG in December 2017 for a Safe Routes to School / Green Streets Infrastructure Pilot Project funded by local Safe Routes to School (SRTS) and stormwater funding, all from vehicle registration fees imposed by C/CAG on registered vehicles in San Mateo County. In 2020, the City completed a number of green infrastructure bio-retention basins along three SRTS walk routes in the city that treat approximately **0.81 acres** of public ROW.

**Table 4.10 Land area in the Brisbane WMAs treated by GI built from July 1, 2013 to June 30, 2021.**<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	17	0.8			0.8		
	<b>Subtotal</b>	<b>0.8</b>			<b>0.8</b>		
Parcel-Based New & Redevelopment or Retrofit	17	21.0	21.0				
	1004	17.4	17.4	0.0			
	<b>Subtotal</b>	<b>38.4</b>	<b>38.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Total All GI</b>		<b>39.2</b>	<b>38.4</b>	<b>0.0</b>	<b>0.8</b>	<b>0.0</b>	<b>0.0</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

### Municipal Operation and Maintenance Practices

#### Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices

In recent years, the City of Brisbane has installed a number of small full trash capture devices in public storm drain inlets. These devices treat nearly 550 acres distributed across six WMAs, including 159 acres

of old industrial and 160 acres of old urban land uses (Table 4.11). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.

**Table 4.11. Extent of land area in City of Brisbane WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>**

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
17	316.34	129.07	62.09	52.48		72.70
1004	48.30	6.10	5.82	11.58		24.79
SMC	3.64					3.64
SSF	0.00				0.00	
1004B	52.70	22.71	11.88			18.11
BRI	128.62	1.13	3.34	14.57	31.20	78.38
<b>TOTAL</b>	<b>549.60</b>	<b>159.02</b>	<b>83.13</b>	<b>78.63</b>	<b>31.20</b>	<b>197.62</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of Brisbane between January 2010 and June 2021.

***Other PCBs and Mercury Controls***

Brisbane may cleanout sediment in mixing basins that are downstream of an area where elevated PCBs in storm drain sediments have been observed. If the City were to conduct this enhanced municipal O&M activity it may be possible to test the sediment removed for PCBs and mercury and estimate the pollutant loads avoided.

SMCWPPP is also continuing to evaluate whether other relevant PCBs and mercury control measures are present in Brisbane or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

#### 4.4. City of Burlingame

##### *Watershed Management Areas*

Table 4.12 lists the 11 WMAs identified to-date in the City of Burlingame, and their total land areas and associated land uses.

**Table 4.12. Burlingame WMAs and associated land uses.**

<b>WMA ID</b>	<b>Outfall Water Body</b>	<b>Total Area (Acres)</b>	<b>% Old Industrial</b>	<b>% Old Urban Commercial</b>	<b>% Old Urban Residential</b>	<b>% New Urban</b>	<b>% Open Space</b>	<b>% Other</b>
1005	San Francisco Bay	18	30%	65%	3%	0%	2%	0%
1006	San Francisco Bay	290	26%	41%	17%	11%	5%	0%
138	San Francisco Bay	15	69%	11%	0%	0%	20%	0%
139	Sanchez Creek	63	8%	2%	90%	0%	0%	0%
141	Easton Creek	62	31%	15%	54%	0%	0%	0%
142	Easton Creek	20	71%	29%	0%	0%	0%	0%
149	San Francisco Bay	81	10%	11%	79%	0%	0%	0%
16	San Francisco Bay	24	31%	0%	0%	0%	69%	0%
164	El Portal Creek	241	49%	22%	28%	0%	0%	0%
85	El Portal Creek	121	48%	51%	0%	0%	0%	0%
BUR	Multiple	1,845	1%	19%	75%	1%	4%	0%

##### *Existing and Planned Control Measures Summary*

Table 4.13 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of Burlingame.

Table 4.13. Existing (E) and planned (P) PCBs and mercury control measures in Burlingame WMAs.

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems (Large and Small)	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
1005	E		E	E		E	E			E
1006	E	E/P	E	E		E	E			E
138				E		E	E			E
139		E/P	E	E		E	E			E
141	E	E	E	E		E	E			E
142	E	E	E	E		E	E			E
149	E	P	E	E		E	E			E
16	E	P		E		E	E			E
164	E	E/P	E	E		E	E			E
85	E	P	E	E		E	E			E
BUR	E	E/P	E	E		E	E			E

**Source Property Investigation**

Source property investigative work has been conducted in the City of Burlingame to-date in the nine WMAs indicated by Table 4.13. Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

**Green Infrastructure**

Based on the information compiled to-date, GI at green streets and new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Burlingame treat **48 acres** of land which is comprised of **7 acres** of old industrial and **40 acres** of old urban land uses. Of this, **14.5 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.14). An additional **82 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction.

Burlingame has seven existing green infrastructure projects on public lands and ROWs. No new projects were constructed during FY 2020-21. However, there are two public projects that are currently under construction. Specifically, the Burlingame Community Center (phase 2) and Village at Burlingame, which includes a new parking structure and housing structure. Additional information will be documented when it becomes available. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.



Table 4.14 Land area in Burlingame WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	139	0.0	0.0	0.0	0.0		
	164	0.8		0.8	0.0		0.0
	BUR	1.5		1.3	0.2		
	<b>Subtotal</b>	<b>2.4</b>	<b>0.0</b>	<b>2.2</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>
Parcel-Based New & Redevelopment or Retrofit	164	4.7	4.2	0.5			
	1006	2.8		2.8			
	BUR	4.6		3.6	1.1		
	<b>Subtotal</b>	<b>12.1</b>	<b>4.2</b>	<b>6.8</b>	<b>1.1</b>	<b>0.0</b>	<b>0.0</b>
<b>Total All GI</b>		<b>14.5</b>	<b>4.2</b>	<b>9.0</b>	<b>1.3</b>	<b>0.0</b>	<b>0.0</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

### **Municipal Operation and Maintenance Practices**

#### *Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the City of Burlingame has installed a number of small full trash capture devices in public storm drain inlets. These devices treat **510 acres** distributed across 11 WMAs, including **218 acres** of old industrial and **434 acres** of old urban land uses (Table 4.15). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.

Table 4.15. Extent of land area in City of Burlingame WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
139	13.24	4.17	1.06	8.02		
141	21.33	15.05	6.01			0.27
142	13.66	10.43	3.23			
149	14.36	5.23	4.74	4.40		
164	96.35	83.09	12.16	1.10		
1005	5.46	0.16	5.30			0.00
1006	97.45	38.84	45.90	12.28		0.44
BUR	151.76	5.00	98.31	46.02		2.43
MIL	0.02		0.01	0.01		
85	93.90	53.87	39.63			0.40
1006A	2.30	1.96	0.34			
<b>TOTAL</b>	<b>509.84</b>	<b>217.79</b>	<b>216.69</b>	<b>71.83</b>		<b>3.54</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of Burlingame between January 2010 and June 2021.

**Other PCBs and Mercury Controls**

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in Burlingame or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

## 4.5. Town of Colma

### Watershed Management Areas

Table 4.16 lists the 3 WMAs identified to-date in the Town of Colma, and their total land areas and associated land uses.

**Table 4.16. Colma WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
181	Colma Creek	21	1%	37%	1%	0%	60%	0%
329	Colma Creek	65	6%	91%	1%	0%	2%	0%
COL	Multiple	1,139	1%	12%	3%	0%	84%	0%

### Existing and Planned Control Measures Summary

Table 4.17 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the Town of Colma.

**Table 4.17. Existing (E) and planned (P) PCBs and mercury control measures in Colma WMAs.**

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
181			E	E		E	E			E
329		E	E	E		E	E			E
COL	E	E/P	E	E		E	E			E

### Source Property Investigation

Source property investigative work has been conducted in the Town of Colma to-date in WMA COL (Table 4.17). Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

### Green Infrastructure

Based on the information compiled to-date, GI at green streets and new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Colma treat **41 acres** of land which includes **28 acres** of old urban land uses. Of this, **23 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.18). An additional **6 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

The Town was also awarded funding from C/CAG in December 2017 for a Safe Routes to School/Green Streets Infrastructure Pilot Project funded by local Safe Routes to School and stormwater funding, all from vehicle registration fees in San Mateo County. Colma has two existing green street projects on public lands or ROWs. The first was constructed on Hillside Blvd in 2015 and treats **0.9 acres** of old urban land use, and a second that was completed on Mission Road in 2020 and treats **1.5 acres** of old urban land use. Colma is currently planning to construct a second green street project on Mission Road.

**Table 4.18 Land area in Colma WMAs treated by GI built from July 1, 2013 to June 30, 2021.**<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	COL	0.9					0.9
	<i>Subtotal</i>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9</b>
Parcel-Based New & Redevelopment or Retrofit	COL	21.5		13.5	0.7		10.6
	DCY	0.2					0.2
	<i>Subtotal</i>	<b>21.8</b>	<b>0.0</b>	<b>13.5</b>	<b>0.7</b>	<b>0.0</b>	<b>10.8</b>
<b>Total All GI</b>		<b>22.73</b>	<b>0.0</b>	<b>13.5</b>	<b>0.7</b>	<b>0.0</b>	<b>11.8</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

### Municipal Operation and Maintenance Practices

#### Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices

In recent years, the Town of Colma has installed a number of small full trash capture devices in public storm drain inlets. These devices treat **108 acres** distributed across four WMAs, including **102 acres** of old urban land uses (Table 4.19). Because of additional maintenance requirements for these devices, the town must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.

Table 4.19. Extent of land area in Town of Colma WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
181	0.19		0.09			0.10
329	43.92		40.07			3.85
COL	63.93	0.00	62.14			1.78
DCY	0.37					0.37
<b>TOTAL</b>	<b>108.40</b>	<b>0.00</b>	<b>102.30</b>			<b>6.10</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the Town of Colma between January 2010 and June 2021.

### **Other PCBs and Mercury Controls**

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in Colma or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

## 4.6. City of Daly City

### Watershed Management Areas

Table 4.20 lists the six WMAs identified to-date in the City of Daly City, and their total land areas and associated land uses.

**Table 4.20. Daly City WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1004	San Francisco Bay	50	5%	68%	24%	0%	3%	0%
181	Colma Creek	28	1%	91%	0%	0%	8%	0%
307	Colma Creek	161	3%	22%	69%	0%	6%	0%
329	Colma Creek	742	0%	46%	45%	0%	9%	0%
350	San Francisco Bay	269	5%	30%	41%	0%	24%	0%
DCY	Multiple	1,131	1%	20%	64%	0%	16%	0%

### Existing and Planned Control Measures Summary

Table 4.21 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of Daly City.

**Table 4.21 Existing (E) and planned (P) PCBs and mercury control measures in Daly City WMAs.**

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
1004	E	P		E		E	E			E
181		P		E		E	E			E
307			E	E		E	E			E
329		E/P	E	E		E	E			E
350	E	P		E		E	E			E
DCY		E/P	E	E		E	E			E

**Source Property Investigation**

Source property investigative work has been conducted in the City of Daly City to-date in WMAs 1004 and 350 (Table 4.21). Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

**Green Infrastructure**

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Daly City treat **nearly 108 acres** of land, which is comprised of mostly old urban land use. All of this GI was built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.22). An additional **100 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

Daly City was also awarded funding from C/CAG in December 2017 for a Safe Routes to School/Green Streets Infrastructure Pilot Project funded by local Safe Routes to School and stormwater funding, all from vehicle registration fees in San Mateo County. The City is currently planning the Mission Street Streetscape improvements which will include stormwater treatment facilities.

**Table 4.22 Land area in the Daly City WMAs treated by GI built from July 1, 2013 to June 30, 2021.**<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Parcel-Based New & Redevelopment or Retrofit	329	103.2		103.2	0.0		
	DCY	4.5	0.4	1.8	2.4		
	<b>Subtotal</b>	<b>107.8</b>	<b>0.4</b>	<b>105.0</b>	<b>2.4</b>	<b>0.0</b>	<b>0.0</b>
<b>Total All GI</b>		<b>107.8</b>	<b>0.4</b>	<b>105.0</b>	<b>2.4</b>	<b>0.0</b>	<b>0.0</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

**Municipal Operation and Maintenance Practices**

*Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the City of Daly City has installed a number of small full trash capture devices in public storm drain inlets. These devices treat **226 acres** distributed across four WMAs, including **1.6 acres** of old industrial and **194 acres** of old urban land uses (Table 4.23). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.

Table 4.23. Extent of land area in City of Daly City WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
307	4.87		3.29	1.03		0.55
329	90.20	0.25	35.85	28.24		25.85
DCY	130.20	1.29	23.47	100.69		4.75
SMC	1.18	0.05	1.01	0.12		
<b>TOTAL</b>	<b>226.45</b>	<b>1.59</b>	<b>63.62</b>	<b>130.09</b>		<b>31.16</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of Daly City between January 2010 and June 2021.

### **Other PCBs and Mercury Controls**

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in Daly City or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.



## 4.7. City of East Palo Alto

### *Watershed Management Areas*

Table 4.24 lists the eight WMAs identified to-date in the City of East Palo Alto, and their total land areas and associated land uses.

**Table 4.24. East Palo Alto WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1015	San Francisco Bay	63	97%	3%	0%	0%	0%	0%
66	Ravenswood Slough	5	0%	1%	99%	0%	0%	0%
67	San Francisco Bay	95	17%	8%	64%	0%	11%	0%
68	San Francisquito Creek	317	1%	24%	70%	0%	4%	0%
70	San Francisco Bay	443	4%	25%	67%	0%	3%	0%
71	Ravenswood Slough	183	1%	20%	79%	0%	0%	0%
72	San Francisco Bay	26	79%	12%	0%	0%	9%	0%
EPA	Multiple	265	2%	18%	63%	0%	17%	0%

### *Existing and Planned Control Measures Summary*

Table 4.25 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of East Palo Alto.

Table 4.25. Existing (E) and planned (P) PCBs and mercury control measures in East Palo Alto WMAs.

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems (Large and Small)	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
1015	E	E/P	E	E		E	E			E
66	E		E	E		E	E			E
67	E	E/P	E	E		E	E			E
68		E	E	E		E	E			E
70	E	E/P	E	E		E	E			E
71	E		E	E		E	E			E
72	E	P	E	E		E	E			E
EPA	E	E	E	E		E	E			E

**Source Property Investigation**

Source property investigative work has been conducted in the City of East Palo Alto to-date in the seven WMAs indicated by Table 4.25. Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

**Green Infrastructure**

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in East Palo Alto treat **35 acres** of land which includes **12 acres** of old industrial and **16 acres** of old urban land uses. Of this, **17.8 acres** was built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.26). An additional **1.62 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

The City was also awarded funding from C/CAG in December 2017 for a Safe Routes to School/Green Streets Infrastructure Pilot Project funded by local Safe Routes to School and stormwater funding, all from vehicle registration fees in San Mateo County. The City is currently planning and/or constructing six green street projects on public lands and/or in public ROW that will treat **1.6 acres**. Additional information will be documented when it becomes available.

Table 4.26. Land area in East Palo Alto WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Parcel-Based New & Redevelopment or Retrofit	67	1.2	1.2				
	68	1.8			1.2		0.6
	70	9.5	3.9	0.9	0.7		3.9
	1015	2.7	2.7				
	EPA	2.6			0.6		2.0
	<b>Subtotal</b>	<b>17.8</b>	<b>7.8</b>	<b>0.9</b>	<b>2.6</b>	<b>0.0</b>	<b>6.5</b>
<b>Total All GI</b>		<b>17.8</b>	<b>7.8</b>	<b>0.9</b>	<b>2.6</b>	<b>0.0</b>	<b>6.5</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

### Large Full Trash Capture Systems

The City of East Palo Alto has installed large full trash capture treatment systems (i.e., public gross solids removal devices). These devices treat **923 acres** of land, including **47 acres** of old industrial and **829 acres** of old urban land uses (Table 4.27). These systems are owned and operated by the City and are distributed over eight WMAs. In addition to the area currently treated by these systems, the City may also install additional large full trash capture systems to treat more land areas in the future. Installation of these devices will not only assist the City in achieving its trash load reduction goals, but will also provide additional load reduction benefits for PCBs and mercury.

Table 4.27. Extent of land area in City of East Palo Alto WMAs that is addressed by publicly owned large full trash capture systems [i.e., Gross Solids Removal Devices (GSRD)].<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
GSRD	67	5.11	2.23	0.43	1.44		1.02
	68	310.48	4.23	76.52	222.47		7.26
	70	480.89	18.90	116.24	331.45		14.30
	71	2.51		0.07	2.44		
	1015	3.93	3.30	0.61			0.02
	EPA	104.31	4.53	11.41	62.83		25.53
	MPK	2.40			2.37		0.03
	72	14.27	13.61	0.59	0.04		0.03
	<b>Subtotal</b>	<b>923.91</b>	<b>46.81</b>	<b>205.87</b>	<b>623.04</b>		<b>48.19</b>
<b>TOTAL</b>	<b>923.91</b>	<b>46.81</b>	<b>205.87</b>	<b>623.04</b>		<b>48.19</b>	

1 – Acres presented may not include all acres currently treated by trash full capture treatment systems.

2 – Trash systems only include gross solids removal devices (GSRDs) that are publicly owned. Inlet based full trash capture devices are described in the operation and maintenance practices section.

3 - Includes all existing full trash capture systems in the City of East Palo Alto that were installed between January 2010 and June 2021.

### Other PCBs and Mercury Controls

The City of East Palo Alto has reported preliminary information about potential opportunities to conduct sediment removal activities from locations that may have elevated PCBs concentrations. A large volume of soil (~150,000 cubic yards) resulting from past remediation activities (e.g., on the Stanford Campus) and believed to contain PCBs was stockpiled on a private property at 391 Demeter Street in East Palo Alto. The owner had stockpiled soils there for decades and the site was under Regional Water Board order until 2008. The City was not responsible for removing this material but believes soils may have migrated into nearby wetlands. In general, the City is addressing this old industrial area as part of its Ravenswood Specific Plan Area. The site may be undergoing redevelopment and the soil stockpiles may have been removed with testing of the soils for PCBs and other pollutants. SMCWPPP is currently in the process of obtaining more information from East Palo Alto staff.

SMCWPPP is also continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M, including channel desilting projects and cleanout of a stormwater pump station located at the east end of O’Connor Street and adjacent stormwater basin) are present in East Palo Alto or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

#### 4.8. City of Foster City

##### Watershed Management Areas

Table 4.28 lists the two WMAs identified to-date in the City of Foster City, and their total land areas and associated land uses.

**Table 4.28. Foster City WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1010	San Francisco Bay	271	19%	19%	1%	49%	11%	0%
FCY	Multiple	2,061	0%	7%	54%	31%	9%	0%

##### Existing and Planned Control Measures Summary

Table 4.29 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of Foster City.

**Table 4.29. Existing (E) and planned (P) PCBs and mercury control measures in Foster City WMAs.**

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
1010		E/P	E	E		E	E			E
FCY		E/P	E	E		E	E			E

##### Source Property Investigation

Source property investigative work has not been conducted in WMAs in the City of Foster City to-date.

##### Green Infrastructure

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Foster City treat **72 acres** of land, which is comprised of **5 acres** of old industrial and **15 acres** of old urban land use. Of this total, **69 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2018/19) (Table 4.30). An additional **29 acres** will be

treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

Foster City is planning a green street project at Chess Drive and Hatch Drive that will feature a bioretention area that will treat **0.4 acres**. The project has completed the permitting process with Caltrans and is tentatively scheduled to bid in December 2021. Construction is anticipated to take place March 2021 - October 2021. Additional information will be documented when it becomes available.

**Table 4.30 Land area in Foster City WMAs treated by GI built from July 1, 2013 to June 30, 2021.**<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Parcel-Based New & Redevelopment or Retrofit	1010	49.8	5.4	2.0		42.4	0.0
	FCY	18.9		10.0		7.1	1.8
	<i>Subtotal</i>	<b>68.7</b>	<b>5.4</b>	<b>12.0</b>	<b>0.0</b>	<b>49.4</b>	<b>1.8</b>
<b>Total All GI</b>		<b>68.7</b>	<b>5.4</b>	<b>12.0</b>	<b>0.0</b>	<b>49.4</b>	<b>1.8</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

***Large Full Trash Capture Systems***

The City of Foster City has installed one large full trash capture treatment system (i.e., public hydrodynamic separator unit, HDS). This device treats nearly **25 acres** of land, including **6.8 acres** of old industrial and **18 acres** of old urban land uses (Table 4.31). The system is owned and operated by the City and the treatment area is distributed over two WMAs. In addition to the area currently treated by this system, the City may also install additional large full trash capture systems to treat more land areas in the future. Installation of these devices will not only assist the City in achieving its trash load reduction goals, but will also provide additional load reduction benefits for PCBs and mercury.

**Table 4.31. Extent of land area in City of Foster City WMAs that is addressed by publicly owned large full trash capture systems [i.e., Hydrodynamic Separators (HDS)].<sup>1,2,3</sup>**

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
HDS	1010	16.06	6.77	9.29			
	FCY	8.57		8.57			
	<b>Subtotal</b>	<b>24.63</b>	<b>6.77</b>	<b>17.86</b>			
<b>TOTAL</b>		<b>24.63</b>	<b>6.77</b>	<b>17.86</b>			

1 – Acres presented may not include all acres currently treated by trash full capture treatment systems.

2 – Trash systems only include hydrodynamic separator (HDS) units that are publicly owned. Inlet based full trash capture devices are described in the operation and maintenance practices section.

3 - Includes all existing full trash capture systems in the City of Foster City that were installed between January 2010 and June 2021.

**Other PCBs and Mercury Controls**

Foster City conducted dredging in its lagoon in 2005 and removed about 100,000 cubic yards of sediment. Prior to this dredging project, in 1996 ten surface sediment samples were collected from locations that were spatially distributed throughout the lagoon. The samples were analyzed for PCBs (as Aroclors) and total mercury. PCBs were not detected in any of the 10 samples (detection limit of 20 µg/kg for each Aroclor). Mercury was detected in only 3 of the ten samples, at a relatively moderate level (0.2 mg/kg in each sample). It should be noted that Foster City was built in the 1960s and land uses, which are primarily residential and commercial/retail, have generally not changed since that time. In general, these land uses are associated with relatively low levels of PCBs and mercury in stormwater runoff. Based on the above data and the City’s land use, it appears unlikely that enhancing efforts to periodically dredge the Foster City lagoon would be a cost-effective measure to reduce loads of PCBs and mercury to the Bay.

SMCWPPP is also continuing to evaluate whether other relevant PCBs and mercury control measures are present in Foster City or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

## 4.9. Town of Hillsborough

### Watershed Management Areas

Table 4.32 lists the one WMA identified to-date in the Town of Hillsborough, and its total land area and associated land uses.

**Table 4.32. Hillsborough WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
HIL	Multiple	3,974	0%	3%	81%	0%	15%	0%

### Existing and Planned Control Measures Summary

Table 4.33 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the Town of Hillsborough.

**Table 4.33. Existing (E) and planned (P) PCBs and mercury control measures in Hillsborough WMAs.**

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
HIL		E/P		E						E

### Source Property Investigation

Source property investigative work has not been conducted in WMAs in the Town of Hillsborough to-date.

### Green Infrastructure

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Hillsborough treat **0.22 acres** of land, all of which is comprised of old urban land use. All of this GI was built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.34). An additional **5 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. The Town constructed an infiltration trench at Crossroads Park that treats **0.1 acres** and was completed during this past fiscal year. It should



be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

**Table 4.34 Land area in Hillsborough WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>**

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	HIL	0.1			0.1		
	<b>Subtotal</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>
Parcel-Based New & Redevelopment or Retrofit	HIL	0.12		0.1	0.0		
	<b>Subtotal</b>	<b>0.12</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Total All GI</b>		<b>0.22</b>	<b>0.0</b>	<b>0.12</b>	<b>0.10</b>	<b>0.0</b>	<b>0.0</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

### ***Other PCBs and Mercury Controls***

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in Hillsborough or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

## 4.10. City of Menlo Park

### Watershed Management Areas

Table 4.35 lists the 12 WMAs identified to-date in the City of Menlo Park, and their total land areas and associated land uses.

**Table 4.35. Menlo Park WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1012	Ravenswood Slough	50	84%	16%	0%	0%	0%	0%
1014	Atherton Creek	102	44%	53%	2%	0%	1%	0%
238	San Francisco Bay	337	39%	32%	28%	0%	1%	0%
239	Atherton Creek	19	84%	16%	0%	0%	0%	0%
247	San Francisquito Creek	118	0%	35%	64%	0%	1%	0%
252	Atherton Creek	98	8%	23%	68%	0%	1%	0%
332	Atherton Creek	9	94%	6%	0%	0%	0%	0%
378	San Francisquito Creek	138	3%	2%	94%	0%	0%	0%
66	Ravenswood Slough	59	54%	9%	0%	36%	1%	0%
70	San Francisco Bay	47	0%	15%	84%	0%	1%	0%
71	Ravenswood Slough	1,041	6%	26%	61%	5%	3%	0%
MPK	Multiple	2,290	1%	23%	56%	1%	18%	0%

### Existing and Planned Control Measures Summary

Table 4.36 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of Menlo Park.

### Source Property Investigation

Source property investigative work has been conducted in the City of Menlo Park to-date in the nine WMAs shown in Table 4.36. Updated results will be provided in the SMCWPPP's UCMR due in March 2022.

Table 4.36. Existing (E) and planned (P) PCBs and mercury control measures in Menlo Park WMAs.

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
1012	E	E/P		E		E	E			E
1014	E	E		E		E	E			E
238	E	E/P		E		E	E			E
239	E	E		E		E	E			E
247		E/P		E		E	E			E
252		E/P	E	E		E	E			E
332	E			E		E	E			E
378			E	E		E	E			E
66	E	E/P		E		E	E			E
70	E	E		E		E	E			E
71	E	P	E	E		E	E			E
MPK	E	E/P	E	E		E	E			E

**Green Infrastructure**

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Menlo Park treat **297 acres** of land, of which **138 acres** is comprised of old industrial and **88 acres** is comprised of old urban land use. Of this total, **184 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.37). An additional **69 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

The City currently has two green street projects that that treat **4.1 acres** of land. The City was also awarded funding from C/CAG in December 2017 for a Safe Routes to School/Green Streets Infrastructure Pilot Project funded by local Safe Routes to School and stormwater funding, all from vehicle registration fees in San Mateo County.

Table 4.37 Land area in Menlo Park WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	238	2.4	2.4				
	MPK	1.6		1.3	0.4		
	<b>Subtotal</b>	<b>4.1</b>	<b>2.4</b>	<b>1.3</b>	<b>0.4</b>	<b>0.0</b>	<b>0.0</b>
Parcel-Based New & Redevelopment or Retrofit	66	15.1	3.8			11.3	
	71	11.0	6.5	1.6	2.8		
	238	60.3	45.5	14.9			
	239	9.7	9.7				
	247	13.0		11.4	1.6		
	252	3.8	1.6	2.3			
	1012	47.4	47.2	0.1			
	1014	9.1	5.2	3.9			
	MPK	10.4	2.1	6.2		2.1	
	SMC	0.7		0.7			
	<b>Subtotal</b>	<b>180.4</b>	<b>121.4</b>	<b>41.1</b>	<b>4.4</b>	<b>13.4</b>	<b>0.0</b>
<b>Total All GI</b>	<b>184.4</b>	<b>123.9</b>	<b>42.3</b>	<b>4.8</b>	<b>13.4</b>	<b>0.0</b>	

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

**Municipal Operation and Maintenance Practices**

*Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the City of Menlo Park has installed a number of small full trash capture devices in public storm drain inlets. These devices treat **266 acres** distributed across five WMAs, including **8 acres** of old industrial and **258 acres** of old urban land uses (Table 4.38). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.

Table 4.38. Extent of land area in City of Menlo Park WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
71	66.08		6.20	59.73		0.14
252	21.65	2.45	11.42	7.41		0.38
MPK	165.20	5.45	74.46	85.29		
SMC	0.66		0.66			
378	12.77			12.74		0.03
<b>TOTAL</b>	<b>266.36</b>	<b>7.90</b>	<b>92.74</b>	<b>165.17</b>		<b>0.55</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of Menlo Park between January 2010 and June 2021.

### Other PCBs and Mercury Controls

Menlo Park removed sediment from a section of the Atherton Channel at Haven Avenue and Bayfront Expressway (Highway 84) in 2007, 2008, 2009, 2011, 2013 and 2015. Each of these years the City removed about 500 cubic yards of sediment, except that only vegetation was removed in 2015. Since 2015, this cleaning has been performed every year and the City anticipates continuing with this schedule. Although the sediment has not been tested for PCBs to-date, the ongoing cleanout schedule provides a potential opportunity for future testing and calculation of load avoidance.

The Facebook West Campus is a 22 acre property located at 312-314 Constitution Avenue in Menlo Park. This site was identified in Envirostor as a voluntary PCBs cleanup site overseen by DTSC. The property is a former Raychem Corporation Facility, which later became Raychem/Tyco. The property was purchased by Facebook in 2011. Initial remedial actions at the site completed in 2007 included the excavation and off-site disposal of 6,561 cubic yards of contaminated soil and installation of a multi-media cap. Further remediation was conducted between 2012 and July 2013, and included excavation and off-site disposal of 1,800 cubic yards of PCBs contaminated soil with > 50 mg/Kg PCBs, and excavation and off-site disposal of 10,600 cubic yards of soil with < 50 mg/Kg PCBs. PCBs concentrations in the soil were as high as 2,600 mg/Kg prior to cleanup. The remediated soil cleanup concentration of <0.74 mg/Kg was achieved except for 100 cubic yards of soil with PCBs > 50 mg/Kg and 500 cubic yards of soil with PCBs < 50 mg/Kg that were left buried in place at 27 - 37 feet below the ground surface. SMCWPPP is evaluating whether a PCBs load reduction credit could be estimated for this site as a self-abatement.

SMCWPPP is also continuing to evaluate whether other relevant PCBs and mercury control measures are present in Menlo Park or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

### 4.11. City of Millbrae

#### Watershed Management Areas

Table 4.39 lists the four WMAs identified to-date in the City of Millbrae, and their total land areas and associated land uses.

**Table 4.39. Millbrae WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1005	San Francisco Bay	241	14%	27%	33%	0%	25%	0%
395	Highline Creek	481	3%	15%	77%	0%	5%	0%
401	Highline Creek	52	13%	69%	16%	0%	2%	0%
MIL	Multiple	1,309	2%	14%	71%	0%	13%	0%

#### Existing and Planned Control Measures Summary

Table 4.40 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of Millbrae.

**Table 4.40. Existing (E) and planned (P) PCBs and mercury control measures in Millbrae WMAs.**

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
1005	E	P	E	E		E	E			E
395		E/P	E	E		E	E			E
401			E	E		E	E			E
MIL		E	E	E		E	E			E

#### Source Property Investigation

Source property investigative work has been conducted in the City of Millbrae to-date in WMA 1005 (Table 4.40). Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

**Green Infrastructure**

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Millbrae treat **nearly 16 acres** of land, which is comprised of old urban land use. Of this total, **1.3 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.41). An additional **32 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

The City was also awarded funding from C/CAG in December 2017 for a Safe Routes to School/Green Streets Infrastructure Pilot Project funded by local Safe Routes to School and stormwater funding, all from vehicle registration fees in San Mateo County. Millbrae currently has one green street project on Taylor Boulevard and Almenar Street that treats **0.5 acres** of land with bioretention facilities. The City is also planning an additional green street project at the intersection of Laurel Avenue and Richmond Avenue that will treat an additional **0.5 acres** of land.

**Table 4.41 Land area in Millbrae WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>**

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	238	0.5		0.0	0.5		
	<i>Subtotal</i>	<b>0.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.5</b>	<b>0.0</b>	<b>0.0</b>
Parcel-Based New & Redevelopment or Retrofit	1005	0.8		0.8			
	<i>Subtotal</i>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Total All GI</b>		<b>1.3</b>	<b>0.0</b>	<b>0.8</b>	<b>0.5</b>	<b>0.0</b>	<b>0.0</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

**Large Full Trash Capture Systems**

The City of Millbrae has installed large full trash capture treatment systems (i.e., public gross solids removal devices). These devices treat **597 acres** of land, including **9 acres** of old industrial and **564 acres** of old urban land uses (Table 4.42). These systems are owned and operated by the City and are distributed over five WMAs. In addition to the area currently treated by these systems, the City may also install additional large full trash capture systems to treat more land areas in the future. Installation of these devices will not only assist the City in achieving its trash load reduction goals, but will also provide additional load reduction benefits for PCBs and mercury.

**Table 4.42. Extent of land area in City of Millbrae WMAs that is addressed by publicly owned large full trash capture systems [i.e., Gross Solids Removal Devices (GSRD)].<sup>1,2,3</sup>**

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
GSRD	238	0.64		0.03	0.61		
	395	432.97	7.84	64.86	340.80		19.47
	1005	29.19	0.08	8.96	19.32		0.83
	MIL	115.05	1.27	33.01	78.13		2.64
	401	18.68	0.25	16.78	1.65		
	<b>Subtotal</b>	<b>596.53</b>	<b>9.45</b>	<b>123.64</b>	<b>440.51</b>		<b>22.93</b>
<b>TOTAL</b>	<b>596.53</b>	<b>9.45</b>	<b>123.64</b>	<b>440.51</b>		<b>22.93</b>	

1 – Acres presented may not include all acres currently treated by trash full capture treatment systems.

2 – Trash systems only include Gross Solids Removal Devices (GSRDs) that are publicly owned. Inlet based full trash capture devices are described in the operation and maintenance practices section.

3 - Includes all existing full trash capture systems in the City of Millbrae that were installed between January 2010 and June 2021.

**Municipal Operation and Maintenance Practices**

*Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the City of Millbrae has installed a number of small full trash capture devices in public storm drain inlets. These devices treat **64 acres** distributed across five WMAs, including **9 acres** of old industrial and **53 acres** of old urban land uses (Table 4.43). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.



Table 4.43. Extent of land area in City of Millbrae WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
395	15.08	1.23	3.55	10.08		0.22
1005	19.46	7.96	11.06	0.00		0.43
BUR	0.01		0.00	0.01		
MIL	16.75	0.00	13.84	2.66		0.25
401	12.85	0.19	5.30	6.25		1.11
<b>TOTAL</b>	<b>64.15</b>	<b>9.39</b>	<b>33.75</b>	<b>18.99</b>		<b>2.01</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of Millbrae between January 2010 and June 2021.

### **Other PCBs and Mercury Controls**

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in Millbrae or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

## 4.12. Town of Portola Valley

### Watershed Management Areas

Table 4.44 lists the one WMA identified to-date in the Town of Portola Valley, and its total land area and associated land uses.

**Table 4.44. Portola Valley WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
PVY	Multiple	5,794	0%	2%	36%	3%	58%	0%

### Existing and Planned Control Measures Summary

Table 4.45 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the Town of Portola Valley.

**Table 4.45. Existing (E) and planned (P) PCBs and mercury control measures in Portola Valley WMAs.**

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
PVY		E		E		E	E			E

### Source Property Investigation

Source property investigative work has not been conducted in WMAs in the Town of Portola Valley to-date.

### Green Infrastructure

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Portola Valley treat **1.7 acres** of land, all of which is comprised of old urban land use. All of this total was built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14

through FY 2020/21) (Table 4.46). It should be noted that the information on GI reported in this section is preliminary and may be revised in the future as additional information becomes available.

**Table 4.46 Land area in Portola Valley WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>**

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Parcel-Based New & Redevelopment or Retrofit	PVY	1.7		1.7			
	<i>Subtotal</i>	<i>1.7</i>	<i>0.0</i>	<i>1.7</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
<b>Total All GI</b>		<b>1.7</b>	<b>0.0</b>	<b>1.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

***Other PCBs and Mercury Controls***

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in Portola Valley or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

### 4.13. City of Redwood City

#### Watershed Management Areas

Table 4.47 lists the 26 WMAs identified to-date in the City of Redwood City, and their total land areas and associated land uses.

**Table 4.47. Redwood City WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1000	San Francisco Bay	143	75%	4%	0%	12%	9%	0%
1011	Steinberger Slough	153	6%	4%	0%	62%	28%	0%
1013	Atherton Creek	38	15%	33%	37%	0%	14%	0%
1014	Atherton Creek	69	1%	16%	83%	0%	0%	0%
1016	Pulgas Creek	6	0%	15%	0%	0%	85%	0%
239	Atherton Creek	17	62%	36%	2%	0%	0%	0%
253	Atherton Creek	193	2%	12%	85%	0%	1%	0%
254	Atherton Creek	37	26%	67%	0%	1%	6%	0%
261	Redwood Creek	432	2%	26%	70%	0%	2%	0%
266	Redwood Creek	91	9%	63%	25%	4%	0%	0%
267	Redwood Creek	74	37%	35%	4%	23%	2%	0%
269	San Francisco Bay	45	9%	0%	0%	74%	16%	0%
323	Redwood Creek	185	1%	41%	57%	0%	0%	0%
324	Redwood Creek	44	8%	42%	50%	0%	0%	0%
325	Redwood Creek	21	15%	29%	56%	0%	0%	0%
327	Redwood Creek	126	19%	52%	29%	0%	1%	0%
333	Redwood Creek	15	29%	18%	0%	53%	0%	0%
334	Redwood Creek	19	48%	3%	0%	39%	10%	0%
335	Redwood Creek	24	73%	23%	0%	0%	4%	0%
336	Redwood Creek	66	24%	66%	10%	0%	1%	0%
337	Redwood Creek	137	17%	31%	52%	0%	0%	0%
379	Atherton Creek	400	27%	43%	30%	0%	0%	0%
388	Redwood Creek	42	2%	48%	50%	0%	0%	0%
405	San Francisco Bay	22	100%	0%	0%	0%	0%	0%
407	San Francisco Bay	18	61%	11%	0%	19%	9%	0%
RCY	Multiple	4,595	1%	8%	55%	21%	15%	0%

#### Existing and Planned Control Measures Summary

Table 4.48 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of Redwood City.

Table 4.48. Existing (E) and planned (P) PCBs and mercury control measures in Redwood City WMAs.

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
80				E		E	E			E
239	E	E		E		E	E			E
253	E	E/P	E	E		E	E			E
254	E	E		E		E	E			E
261		E/P	E	E		E	E			E
266	E	E/P	E	E		E	E			E
267	E		E	E		E	E			E
269				E		E	E			E
323	E		E	E		E	E			E
324	E	E/P	E	E		E	E			E
325		P	E	E		E	E			E
327	E	E/P	E	E		E	E			E
333	E			E		E	E			E
334				E		E	E			E
335				E		E	E			E
336		E/P	E	E		E	E			E
337	E	E	E	E		E	E			E
379	E	E/P	E	E		E	E			E
388	E	E/P	E	E		E	E			E
405				E		E	E			E
407	E		E	E		E	E			E
1000	E	E/P	E	E		E	E			E
1009	E	E	E	E		E	E			E
1011	E	E		E		E	E			E
1013				E		E	E			E
1014	E	E		E		E	E			E
1016	E			E		E	E			E
RCY	E	E/P	E	E		E	E			E
SMC	E	E/P		E		E	E			E
WDE	E	E		E		E	E			E

### **Source Property Investigation**

Source property investigative work has been conducted in the City of Redwood City to-date in the 21 WMAs indicated by Table 4.48. Updated results will be provided in the SMCWPPP's UCMR due in March 2022.

### **Green Infrastructure**

Based on the information compiled to-date, GI at green streets and new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in Redwood City treat **256 acres** of land, of which **37 acres** is comprised of old industrial and **135 acres** is comprised of old urban land use. Of this total, **139 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.49). An additional **72 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

Redwood City has six existing GI projects on public lands and ROWs. One project was constructed in 2008 and treats **3.55 acres**. The remaining five projects were all constructed during MRP 2.0. The City was awarded funding from C/CAG in December 2017 for a Safe Routes to School/Green Streets Infrastructure Pilot Project funded by local Safe Routes to School and stormwater funding, all from vehicle registration fees in San Mateo County. The project was completed in 2019 and treats **1.17 acres** of old urban land use as part of the Kennedy Middle School Safe Routes to School Project. Additional projects completed in the past fiscal year include street segments with bioretention facilities and vegetated swales that treat 6.43 acres of old industrial and old urban land uses. One of these projects was the Middlefield Road Streetscape, which was awarded funding via a Proposition 1 stormwater implementation grant administered by the State Water Resources Control Board. The City is also planning or currently constructing an additional 8 green street projects on public lands or ROWs that will treat **10 acres** of land.

In addition to these green street projects, the City received 1.1 million in funding from C/CAG and the County via funds awarded from the EPA San Francisco Bay Water Quality Improvement Fund to the County for the design of underground storage systems at Red Morton Park that will manage runoff from approximately **1,650 acres**. The City selected a design consultant and moved forward with the designs during FY 2020/21.

Table 4.49 Land area in Redwood City WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	253	2.7			2.7		
	261	1.0			1.0		
	325	2.4	2.4				
	327	0.3		0.3			
	RCY	1.2		0.2	0.9		
	<b>Subtotal</b>	<b>7.6</b>	<b>2.4</b>	<b>0.6</b>	<b>4.7</b>	<b>0.0</b>	<b>0.0</b>
	Parcel-Based New & Redevelopment or Retrofit	239	0.7	0.7	0.0		
253		0.5			0.5		
254		3.9	3.9				
261		7.5	0.5	4.8	1.9		0.3
266		11.6	3.8	7.0		0.9	
324		5.6	1.8	2.8	0.7		0.3
327		12.2	0.9	4.3	1.0	5.6	0.4
336		7.0		1.1	5.9		
337		0.6		0.6			
379		28.6	17.6	11.0	0.0		
388		1.2	0.6	0.6			
1000		1.7	1.7				
1009		0.1		0.1			
1014		1.1	0.1	1.0			
RCY		49.2	0.8	22.7	11.4	11.9	2.3
<b>Subtotal</b>		<b>131.5</b>	<b>32.3</b>	<b>56.1</b>	<b>21.5</b>	<b>18.4</b>	<b>3.3</b>
<b>Total All GI</b>		<b>139.1</b>	<b>34.6</b>	<b>56.7</b>	<b>26.1</b>	<b>18.4</b>	<b>3.3</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

**Municipal Operation and Maintenance Practices**

*Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the City of Redwood City has installed a number of small full trash capture devices in public storm drain inlets. These devices treat **779 acres** distributed across 17 WMAs, including **124 acres** of old industrial and **647 acres** of old urban land uses (Table 4.50). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.

**Table 4.50. Extent of land area in City of Redwood City WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>**

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
111	1.22	1.02	0.18			0.01
253	12.63	1.58	4.16	6.89		
261	66.55	1.47	23.39	40.56		1.13
266	43.38	4.75	19.52	18.33	0.79	
324	12.74	0.99	4.83	6.93		
327	82.00	15.46	41.67	24.52		0.35
336	49.51	13.86	32.38	2.84		0.44
337	38.03	8.38	15.96	13.69		
379	146.66	46.72	57.27	42.33		0.35
388	27.73	0.68	15.09	11.94		0.03
1000	9.50	9.50				
1009	0.17		0.17			
RCY	241.48	8.07	32.73	198.82		1.87
407	0.64	0.44			0.20	
325	11.40	1.22	2.68	7.50		
323	12.25	0.00	9.64	2.61		
267	22.83	9.85	8.17	2.70	2.08	0.04
<b>TOTAL</b>	<b>778.75</b>	<b>124.01</b>	<b>267.82</b>	<b>379.65</b>	<b>3.06</b>	<b>4.22</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of Redwood City between January 2010 and June 2021.



### **Other PCBs and Mercury Controls**

SMCWPPP has also begun to evaluate the load reduction opportunity available through potential future sediment removal actions at a small stormwater detention pond in Redwood City. Areas draining to the pond include a portion of San Carlos with old industrial land uses that are associated with elevated PCBs in street and storm drain sediments, including the Delta Star / Tiegel site, a PCBs source property (see Section 4.15). There are currently no sediment removal actions conducted at the pond.

The stormwater detention pond is located within the Redwood Shores Ecological Reserve (Figure 4.1), which is owned and managed by the California Department of Fish and Wildlife. However, the Redwood City Public Works Department operates a pump station at the pond, including providing daily management of water levels in the pond and pump station maintenance as needed. As water levels in the pond rise, the pumps are turned on and water from the pond is pumped through a discharge pipe at the south-eastern edge of the pond into the adjacent Steinberger slough at discharge point A (Figure 4.1). A second discharge pipe conveys gravity-fed flow from the north-eastern edge of the pond into the Steinberger Slough at discharge point B (Figure 4.1). Both discharge pipe outfalls typically remains below the water surface in the slough, except at low tide.

SMCWPPP previously conducted a site visit to the pond with representatives from Redwood City Public Works and the California Fish and Wildlife Department. Based on the observations made during the visit, SMCWPPP identified several potential tasks that could be implemented as initial steps that would help inform the costs and benefits of implementing enhanced sediment removal activities at the site.

The tasks under consideration include:

- Characterizing PCBs and mercury concentrations in accumulated pond sediments;
- Characterizing concentrations of PCBs and mercury in sediments that have accumulated in the adjacent slough near the pond's outfalls and upstream and downstream, to better understand whether polluted sediment are transported from the pond to the slough;
- Monitoring stormwater flows into and out of the pond for PCBs and mercury to estimate loads into the pond, and subsequently into the slough from the pond.
- Estimate annual stormwater loads of PCBs and/or mercury that flow to the pond from the adjacent old industrial source areas;
- Estimating pollutant loads avoided via one-time or periodic sediment removal actions (e.g., sediment dredging) and the costs of those actions;
- Estimate the mass of PCBs and mercury in annual stormwater flows that are deposited within the pond and could be removed through ongoing sediment-removal actions;

If such monitoring and evaluation indicates that sediment removal actions at the pond would be a cost-effective control for PCBs and mercury, SMCWPPP and/or the City would work with the appropriate agencies (e.g., California Department of Fish and Wildlife) to further identify logistical considerations (e.g., methods, permits, schedules).

SMCWPPP is also continuing to evaluate whether other relevant PCBs and mercury control measures are present in Redwood City or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.



Figure 4.1. Drainage catchment and storm drain lines for the Redwood Shores Ecological Reserve Stormwater Detention Basin in Redwood City (shown in blue). Point A is the pump station discharge pipe location. Point B is the gravity fed discharge pipe location. Both discharge pipes empty to the Steinberger Slough.

## 4.14. City of San Bruno

### *Watershed Management Areas*

Table 4.51 lists the eight WMAs identified to-date in the City of San Bruno, and their total land areas and associated land uses.

**Table 4.51. San Bruno WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1005	San Francisco Bay	301	6%	22%	65%	0%	7%	0%
290	San Bruno Creek	1,773	2%	29%	54%	0%	15%	0%
291	Colma Creek	23	0%	100%	0%	0%	0%	0%
292	Colma Creek	155	23%	56%	21%	0%	0%	0%
296	Colma Creek	573	0%	9%	55%	0%	36%	0%
307	Colma Creek	25	0%	24%	76%	0%	0%	0%
362	San Bruno Creek	3	48%	52%	0%	0%	0%	0%
SBO	Multiple	659	0%	20%	57%	0%	23%	0%

### *Existing and Planned Control Measures Summary*

Table 4.52 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of San Bruno.

### *Source Property Investigation*

Source property investigative work has been conducted in the City of San Bruno to-date in the five WMAs indicated by Table 4.52. Updated results will be provided in the SMCWPPP's UCMR due in March 2022.

Table 4.52. Existing (E) and planned (P) PCBs and mercury control measures in San Bruno WMAs.

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
1005	E	P	E	E		E	E			E
290		E/P	E	E		E	E			E
291	E		E	E		E	E			E
292	E		E	E		E	E			E
296	E			E		E	E			E
307		E		E		E	E			E
362	E			E		E	E			E
SBO				E		E	E			E

### Green Infrastructure

Based on the information compiled to-date, GI at new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in San Bruno treat **23 acres** of land, of which **5.5 acres** is comprised of old industrial and **17 acres** is comprised of old urban land use. Of this total, **13.2 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.53). An additional **68 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

SMCWPPP developed a project concept for a regional retention facility on Caltrans property between the I-280 and I-380 interchange. The project concept was responsive to an identified need for upstream retention in San Bruno’s Storm Drain Master Plan to alleviate downstream flooding. Through C/CAG, the City has secured grants through EPA’s Water Quality Improvement Fund and through the California Natural Resources Agency towards preliminary design of this project. In May 2021, the City entered into agreement with WRECO to advance the design of the regional stormwater capture facility. The City has established a co-op agreement for the project, which will require Caltrans oversight. The City prepared Caltrans Encroachment Permits, RFIs, and survey area maps.

Table 4.53 Land area in San Bruno WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	1005	0.03		.03			
	<b>Subtotal</b>	<b>.03</b>	<b>0</b>	<b>.03</b>	<b>0</b>	<b>0</b>	<b>0</b>
Parcel-Based New & Redevelopment or Retrofit	290	12.2	5.5	2.8	2.9		1.0
	1005	1.0		1.0			
	<b>Subtotal</b>	<b>13.2</b>	<b>5.5</b>	<b>3.8</b>	<b>2.9</b>	<b>0.0</b>	<b>1.0</b>
<b>Total All GI</b>		<b>13.2</b>	<b>5.5</b>	<b>3.8</b>	<b>2.9</b>	<b>0.0</b>	<b>1.0</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

### **Municipal Operation and Maintenance Practices**

#### *Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the City of San Bruno has installed a number of small full trash capture devices in public storm drain inlets. These devices treat **322 acres** distributed across five WMAs, including **30 acres** of old industrial and **286 acres** of old urban land uses (Table 4.54). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.

Table 4.54. Extent of land area in City of San Bruno WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
290	71.84	2.64	33.00	35.19		1.00
291	0.40		0.40			
292	76.21	22.04	22.95	31.11		0.11
1005	173.70	5.74	20.42	143.03		4.51
MIL	0.06		0.01	0.05		
<b>TOTAL</b>	<b>322.22</b>	<b>30.42</b>	<b>76.79</b>	<b>209.39</b>		<b>5.62</b>

***Updated Control Measure Plan for PCBs & Mercury in San Mateo County Stormwater Runoff (September 2021)***

- 1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.
- 2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of San Bruno between January 2010 and June 2021.

***Other PCBs and Mercury Controls***

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in San Bruno or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

## 4.15. City of San Carlos

### Watershed Management Areas

Table 4.55 lists the 11 WMAs identified to-date in the City of San Carlos, and their total land areas and associated land uses.

**Table 4.55. San Carlos WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1011	Steinberger Slough	261	52%	24%	24%	0%	0%	0%
1016	Pulgas Creek	135	74%	26%	0%	0%	0%	0%
207	Steinberger Slough	82	11%	33%	54%	0%	2%	0%
210	Pulgas Creek	141	57%	43%	0%	0%	0%	0%
31	Pulgas Creek	99	69%	15%	16%	0%	0%	0%
32	Steinberger Slough	39	21%	37%	42%	0%	0%	0%
57	Pulgas Creek	63	7%	58%	34%	0%	2%	0%
59	Steinberger Slough	28	88%	12%	0%	0%	0%	0%
75	Steinberger Slough	65	86%	14%	0%	0%	0%	0%
80	Cordilleras Creek	20	8%	82%	10%	0%	0%	0%
SCS	Multiple	2,510	0%	5%	80%	0%	15%	0%

### Existing and Planned Control Measures Summary

Table 4.56 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of San Carlos.

### Source Property Investigation

Source property investigative work has been conducted in the City of San Carlos to-date in the eight WMAs indicated by Table 4.43. WMA 31 and WMA 210, referred to respectively as the Pulgas Creek pump station north and south drainages, have been a particular focus areas for source property investigation work over the past 15 years. These primarily old industrial catchments have the most elevated concentrations of PCBs in MS4 sediment and stormwater runoff samples collected to-date from WMAs in San Mateo County. Collectively they were designated as a “pilot watershed” for the grant funded Clean Watershed for a Clean Bay (CW4CB) project (CW4CB 2017a). Two potential source properties that have been identified in these WMAs to-date are: (1) 977 and 1007/1011 Bransten Road in WMA 31 and (2) 1411 Industrial Road in WMA 210. SMCWPPP and the City of San Carlos have referred the 977 and 1007/1011 Bransten Road Bransten Road property to the Regional Water Board, as described below. SMCWPPP and the City of San Carlos are working with the property owner on next steps at the 1411 Industrial Road property. The property owner is working with Regional Water Board staff and has retained a consultant to investigate potential sources of PCBs associated with the property.

Table 4.56. Existing (E) and planned (P) PCBs and mercury control measures in San Carlos WMAs.

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
1011	E	E	E	E		E	E			E
1016	E	E/P	E	E		E	E			E
207		P	E	E		E	E			E
210	E		E	E		E	E			E
31	E	E/P	E	E		E	E			E
32	E	P	E	E		E	E			E
57		E/P	E	E		E	E			E
59	E	E	E	E		E	E			E
75	E	P	E	E		E	E			E
80			E	E		E	E			E
SCS	E	E/P	E	E		E	E			E

Based on the spatial distribution of PCBs in MS4 and street dirt sediments collected in WMA 31 and WMA 210, it appears that other source(s) remain unidentified in WMA 210. PCBs from unknown sources were previously found in inlets and manholes in the vicinity of Center, Washington and Varian Streets and Bayport Avenue in WMA 210. The PCBs in these samples could have originated from any of about 20 small industries on these streets. During WY 2017, seven additional samples were collected in this area. The results suggested that three properties could be PCBs sources. Two samples collected from the driveways of 1030 Washington Street, a construction business, had elevated PCBs (1.29 and 3.73 mg/kg). A sample from the driveway of 1029 Washington Street was also elevated with a concentration of 5.64 mg/kg. In addition, samples from the driveway of 1030 Varian Street, an unpaved lot used for storage, had an elevated PCBs concentration of 1.84 mg/kg. It should be noted that all of the buildings in this area appear to be of the type and age that may have PCBs in building materials. SMCWPPP is currently working with the City of San Carlos to determine next steps for these properties. Additional sediment sampling conducted during WY 2020 in the vicinity of these properties yielded generally similar results. Additional sampling in the area is planned for September 2021. Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

Another source property identified through SMCWPPP’s investigations is located at 270 Industrial Road / 495 Bragato Road in WMA 1011 in San Carlos. 270 Industrial Road is occupied by the Delta Star facility where transformers are manufactured, including transformers with PCBs historically (from 1961 to 1974).



Adjacent to 270 Industrial Road is 495 Bragato Road (Tiegel Manufacturing), a roughly three-acre site that is largely unpaved. PCBs appear to have migrated to this property from the Delta Star property. In October 2018, SMCWPPP and the City of San Carlos worked together to submit two source property referrals (both in San Carlos) to the Regional Water Board:

- 270 Industrial Road / 495 Bragato Road, San Carlos (Delta Star / Tiegel)
- 977 and 1007/1011 Bransten Road, San Carlos

The total combined acreage of these properties is about 10 acres, resulting in an estimated about 20 g/year load reduction (see Section 5.1 for the calculation methods) when these properties are formally referred and the associated enhanced municipal O&M is implemented, per MRP requirements.

### ***Green Infrastructure***

Based on the information compiled to-date, GI at green streets and new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in San Carlos treat **67.5 acres** of land, of which **51 acres** is comprised of old industrial and **16 acres** is comprised of old urban land use. Of this total, **65 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.57). An additional **17 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

San Carlos also has an existing green street project that was constructed in 2014 in the public ROW along Bransten Road, which is located in an old industrial area (CW4CB 2017c). These bioretention facilities were constructed within curb extensions and treat **0.54 acres** of old industrial land use.

The City is also planning a green street along San Carlos Ave between Wellington Ave and Prospect St. The San Carlos Avenue Pedestrian Project will incorporate flow through planters and trees at various locations along the corridor. As part of this project, the City is also working with Arundel Elementary School to construct bioretention facilities in the school's parking lot.

Table 4.57 Land area in San Carlos WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	31	0.54		0.54			
	<b>Subtotal</b>	<b>0.54</b>	<b>0.0</b>	<b>0.54</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Parcel-Based New & Redevelopment or Retrofit	31	7.9	7.9				
	57	2.5		2.1	0.4		
	59	18.2	18.2				
	207	6.3	5.7	0.6			0.0
	1011	13.4	13.4		0.0		
	1016	2.6	2.6				
	1060	2.1	2.1				
	SCS	11.6		2.7	8.8		0.2
	<b>Subtotal</b>	<b>64.6</b>	<b>49.9</b>	<b>5.4</b>	<b>9.1</b>	<b>0.0</b>	<b>0.2</b>
<b>Total All GI</b>		<b>65.1</b>	<b>49.9</b>	<b>5.9</b>	<b>9.1</b>	<b>0.0</b>	<b>0.2</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

### **Municipal Operation and Maintenance Practices**

#### *Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the City of San Carlos has installed a number of small full trash capture devices in public storm drain inlets. These devices treat **465 acres** distributed across 12 WMAs, including **161 acres** of old industrial and **302 acres** of old urban land uses (Table 4.58). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.

Table 4.58. Extent of land area in City of San Carlos WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
31	71.54	41.10	14.20	15.92		0.31
57	57.52	0.85	35.80	19.98		0.89
59	6.08	3.10	2.98			
207	42.05	2.05	16.41	23.02		0.57
1011	5.22	2.68	2.54			0.00
1016	19.03	6.96	11.75	0.28		0.05
RCY	0.01		0.00	0.01		
SCS	64.67	2.14	29.36	33.15		0.02
80	15.48	0.49	12.95	2.04		
75	38.81	31.17	7.63			
32	21.12	5.77	13.18	2.17		
210	91.20	59.56	31.58	0.07		
1011D	31.14	5.34	4.82	20.98		
1011C	1.96	0.00	1.96			
<b>TOTAL</b>	<b>465.83</b>	<b>161.21</b>	<b>185.15</b>	<b>117.63</b>		<b>1.84</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of San Carlos between January 2010 and June 2021.

**Other PCBs and Mercury Controls**

As part of the CW4CB project, in 2013 San Carlos conducted a street flushing pilot project to test the effectiveness of this type of control measure in reducing PCBs and mercury in stormwater runoff (CW4CB 2017b). Additional street flushing is not currently planned in San Carlos or other locations in San Mateo County.

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in San Carlos or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

## 4.16. City of San Mateo

### *Watershed Management Areas*

Table 4.59 lists the 20 WMAs identified to-date in the City of San Mateo, and their total land areas and associated land uses.

**Table 4.59. City of San Mateo WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1007	San Mateo Creek	87	11%	31%	56%	0%	2%	0%
1008	16th Avenue Channel	111	5%	15%	79%	0%	1%	0%
1009	Multiple	175	33%	34%	33%	0%	0%	0%
101	Laurel Creek	211	5%	22%	73%	0%	0%	0%
1010	San Francisco Bay	2	0%	0%	0%	99%	1%	0%
1017	San Francisco Bay	18	82%	17%	0%	0%	1%	0%
111	San Mateo Creek	95	8%	57%	33%	0%	2%	0%
114	16th Avenue Channel	85	18%	24%	58%	0%	0%	0%
120	16th Avenue Channel	10	6%	14%	80%	0%	0%	0%
149	San Francisco Bay	399	5%	12%	82%	0%	1%	0%
156	16th Avenue Channel	40	17%	57%	25%	0%	1%	0%
25	Poplar Creek	219	6%	17%	77%	0%	0%	0%
399	San Mateo Creek	32	6%	9%	85%	0%	0%	0%
403	16th Avenue Channel	48	4%	13%	83%	0%	0%	0%
408	16th Avenue Channel	43	19%	51%	28%	0%	2%	0%
60	Laurel Creek	28	0%	13%	1%	85%	1%	0%
89	Borel Creek	98	15%	49%	35%	0%	1%	0%
90	Borel Creek	21	6%	10%	84%	0%	0%	0%
92	Borel Creek	136	3%	36%	61%	0%	0%	0%
SMO	Multiple	5,789	1%	21%	64%	4%	9%	0%

### *Existing and Planned Control Measures Summary*

Table 4.60 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of San Mateo.

Table 4.60. Existing (E) and planned (P) PCBs and mercury control measures in City of San Mateo WMAs.

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
25	E		E	E		E	E			E
60	E			E		E	E			E
89	E	E/P		E		E	E			E
90		E		E		E	E			E
92		E/P		E		E	E			E
101	E		E	E		E	E			E
111	E	E/P	E	E		E	E			E
114	E	P	E	E		E	E			E
120		E	E	E		E	E			E
149	E	E/P	E	E		E	E			E
156	E	E/P	E	E		E	E			E
399			E	E		E	E			E
403	E		E	E		E	E			E
408	E	P	E	E		E	E			E
1007	E	E/P	E	E		E	E			E
1008		E	E	E		E	E			E
1009	E	E/P	E	E		E	E			E
1010				E		E	E			E
1017				E		E	E			E
SMO	E	E/P	E	E		E	E			E

**Source Property Investigation**

Source property investigative work has been conducted in the City of San Mateo to-date in the 13 WMAs shown in Table 4.60. Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

## **Green Infrastructure**

Based on the information compiled to-date, GI at green streets and new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in the City of San Mateo treat **162 acres** of land which is comprised of **14 acres** of old industrial and **142 acres** of old urban land uses. Of this, **148 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.61). An additional **91 acres** will be treated by new or redevelopment projects and green streets that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

The City of San Mateo has five existing green street projects that are described in more detail below.

1. Laurel Elementary School Safe Routes to School. The San Mateo-Foster City School District, the City of San Mateo, and SMCWPPP created a project that built upon the Safe Routes to School program. A semicircular rain garden and seating area captures a portion of rooftop runoff while interior and perimeter stormwater planters in the parking lot manages building and parking lot runoff. Two street intersections now feature stormwater curb extensions that shorten crossing distance while at the same time capturing, slowing, and cleaning runoff before it enters Laurel Creek. The project was completed in 2015.
2. Delaware Street Bike Lane and Streetscape Improvement Project. The project consists of improvements to the bike lane and streetscape on South Delaware Street between Sunnybrae Boulevard and Charles Lane. Bioretention facilities are incorporated into street, traffic signage and striping, lighting, landscape, and irrigation improvements. In addition, the project includes a bioretention bulb-out at East 16th Avenue and South Claremont Street. The project was completed in 2014.
3. Poplar Corridor Safety Improvement Project. The project included safety improvements along the Poplar Avenue Corridor as well as neighborhood enhancements along Humboldt Street between Peninsula Avenue and Poplar Avenue. The project includes bioretention bulb-outs at the intersection of Humboldt Street and College Avenue and a mid-block bioretention curb extension along Humboldt Avenue in front of the San Mateo Superior Court, Central Branch location. The project was completed in 2016.
4. North Central Pedestrian Improvements Project. The North Central Pedestrian Improvements Project is part of the City's Pedestrian Master Plan. The intersection improvements include curb bulb-outs with bioretention. The project was completed in 2017.
5. East 4th Avenue and Fremont Street GI Project. The City built a Green Street project at East 4<sup>th</sup> Avenue and South Fremont Street (with curb extension and bioretention) as part of the San Francisco Estuary Partnership / BASMAA Urban Greening Bay Area grant from EPA through its San Francisco Bay Water Quality Improvement Fund. This project installed bioretention bulb-outs on the northwest and southwest corners of the intersection of East 4<sup>th</sup> Avenue and South Fremont Street, and on the northeast and southeast corners of South Delaware Street at East 5<sup>th</sup> Avenue and East 9<sup>th</sup> Avenue. The project included replacing concrete sidewalk, curb and gutter, and ramps, installing planters with bioretention soil and underdrain pipes, and adjusting the adjacent storm drain catch basins. The project was completed in 2020.

Table 4.61 Land area in City of San Mateo WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	111	1.1		0.4	0.7		
	156	2.1		0.7	1.4		0.1
	SMO	5.1		2.4	2.7		
	<b>Subtotal</b>	<b>8.3</b>	<b>0.0</b>	<b>3.4</b>	<b>4.8</b>	<b>0.0</b>	<b>0.1</b>
Parcel-Based New & Redevelopment or Retrofit	90	1.1	1.1				
	92	84.0	0.0	16.3	67.5		0.2
	111	0.3					0.3
	149	3.1	3.1				
	156	3.3		3.3			
	379	0.4	0.4				
	395	3.2		3.2			
	1007	0.3	0.3				
	1008	3.2	3.2		0.0		
	1009	3.4	3.4				
	RCY	0.5	0.5				
	SMO	36.9	0.4	26.8	5.8	4.0	0.0
	<b>Subtotal</b>	<b>139.8</b>	<b>12.3</b>	<b>49.7</b>	<b>73.3</b>	<b>4.0</b>	<b>0.5</b>
<b>Total All GI</b>		<b>148.1</b>	<b>12.3</b>	<b>53.1</b>	<b>78.1</b>	<b>4.0</b>	<b>0.6</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

4 – The land use at the point location for each project provided by Permittees was assumed to represent the land use for the entire project.

### Large Full Trash Capture Systems

The City of San Mateo has installed one large full trash capture treatment systems (i.e., public gross solids removal devices). This device treats **290 acres** of land, including **17 acres** of old industrial and **273 acres** of old urban land uses (Table 4.62). The system is owned and operated by the City and the treatment

area is distributed over three WMAs. In addition to the area currently treated by these systems, the City may also install additional large full trash capture systems to treat more land areas in the future. Installation of these devices will not only assist the City in achieving its trash load reduction goals, but will also provide additional load reduction benefits for PCBs and mercury.

**Table 4.62. Extent of land area in City of San Mateo WMAs that is addressed by publicly owned large full trash capture systems [i.e., Gross Solids Removal Devices (GSRD)].<sup>1,2,3</sup>**

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
DSBB	1007	8.58	0.39	2.43	5.76		
	SMO	94.89	3.10	26.15	65.64		
	25	186.96	13.13	29.58	144.24		
	<b>Subtotal</b>	<b>290.43</b>	<b>16.62</b>	<b>58.16</b>	<b>215.65</b>		

- 1 – Acres presented may not include all acres currently treated by trash full capture treatment systems.
- 2 – Trash systems only include Gross Solids Removal Devices (GSRDs) that are publicly owned. Inlet based full trash capture devices are described in the operation and maintenance practices section.
- 3 - Includes all existing full trash capture systems in the City of San Mateo that were installed between January 2010 and June 2021.

***Municipal Operation and Maintenance Practices***

*Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the City of San Mateo has installed a number of small full trash capture devices in public storm drain inlets. These devices treat **253 acres** distributed across 16 WMAs, including **21 acres** of old industrial and **230 acres** of old urban land uses (Table 4.63). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.



Table 4.63. Extent of land area in City of San Mateo WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
25	1.29	0.01	0.18	1.11		
101	2.51		2.51			
111	61.25	4.68	45.97	9.61		0.98
114	6.37	1.57	0.70	4.10		
120	7.50	0.58	0.71	6.21		
149	6.28	1.00	1.54	3.74		
156	1.65	0.29	1.29	0.00		0.07
399	19.84	1.64	1.73	16.42		0.04
403	40.36	1.26	1.74	37.36		
408	0.86		0.55			0.31
1007	9.55	2.49	3.59	3.48		
1008	42.89	5.12	2.22	35.54		
1009	5.02	2.18	2.38	0.47		
BUR	0.34		0.01	0.33		
RCY	0.51	0.51				
SMO	46.75		17.69	28.85		0.20
<b>TOTAL</b>	<b>252.96</b>	<b>21.32</b>	<b>82.81</b>	<b>147.22</b>		<b>1.61</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of San Mateo between January 2010 and June 2021.

**Other PCBs and Mercury Controls**

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in the City of San Mateo or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

## 4.17. Unincorporated San Mateo County

### Watershed Management Areas

Table 4.64 lists the 17 WMAs identified to-date in unincorporated County of San Mateo, and their total land areas and associated land uses.

**Table 4.64. Unincorporated County of San Mateo WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1005	San Francisco Bay	224	9%	33%	0%	0%	57%	0%
1011	Steinberger Slough	33	60%	38%	2%	0%	0%	0%
17	Guadalupe Valley Creek	850	1%	0%	0%	0%	99%	0%
181	Colma Creek	26	47%	44%	9%	0%	0%	0%
247	San Francisquito Creek	121	17%	70%	12%	0%	1%	0%
253	Atherton Creek	87	15%	4%	79%	0%	1%	0%
261	Redwood Creek	319	0%	13%	87%	0%	0%	0%
290	San Bruno Creek	224	0%	10%	0%	0%	90%	0%
293	Colma Creek	18	0%	0%	0%	0%	100%	0%
296	Colma Creek	131	0%	11%	37%	0%	52%	0%
307	Colma Creek	126	0%	0%	0%	0%	100%	0%
332	Atherton Creek	8	7%	6%	87%	0%	0%	0%
350	San Francisco Bay	40	0%	0%	0%	0%	100%	0%
379	Atherton Creek	403	28%	20%	50%	0%	1%	0%
71	Ravenswood Slough	158	0%	6%	94%	0%	0%	0%
77	Belmont Creek	27	81%	7%	11%	0%	0%	0%
SMC	Multiple	174,760	1%	1%	3%	0%	94%	0%

### Existing and Planned Control Measures Summary

Table 4.65 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in unincorporated County of San Mateo.

### Source Property Investigation

Source property investigative work has been conducted in unincorporated County of San Mateo to-date in the 14 WMAs indicated by Table 4.65. Updated results will be provided in the SMCWPPP's UCMR due in March 2022.

Table 4.65. Existing (E) and planned (P) PCBs and mercury control measures in unincorporated San Mateo County WMAs.

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
1005				E		E	E			E
1011	E	P		E		E	E			E
17	E			E		E	E			E
149 <sup>1,2</sup>	n/a <sup>5</sup>	E/P	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
181		E	E	E		E	E			E
247				E		E	E			E
253	E		E	E		E	E			E
261		P	E	E		E	E			E
266 <sup>1,3</sup>	n/a	P	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
290		P		E		E	E			E
293	E			E		E	E			E
296	E			E		E	E			E
307		P		E		E	E			E
327 <sup>1,3</sup>	n/a	P								
332	E			E		E	E			E
336 <sup>1,3</sup>	n/a	P	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
350	E			E		E	E			E
379	E	E/P	E	E		E	E			E
71	E	E		E		E	E			E
77		E		E		E	E			E
SMC	E	E/P	E	E		E	E			E
SMO <sup>1,2</sup>	n/a	E/P	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SSF <sup>1,4</sup>	n/a	P	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

1 – Although the WMA is not under unincorporated County’s jurisdiction, the County owns one or more parcels in the WMA that have existing or planned GI projects. Other control measures in these WMAs are identified in the existing and planned control measure tables for each municipality that has jurisdiction over the WMA land area, as identified below.

2 – WMAs 149 and SMO are located in the City of San Mateo. See Section 4.1.6 for all control measures in these WMAs.

3 – WMAs 266, 327, and 336 are located in Redwood City. See Section 4.1.3 for all control measures in these WMAs.

4 – WMA SSF is located in South San Francisco. See Section 4.1.8 for all control measures in this WMA.

5 – n/a = not applicable, because the control measure is or would be implemented by another municipality.

### **Green Infrastructure**

Based on the information compiled to-date, GI at green streets and new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in unincorporated County of San Mateo treat **202 acres** of land which includes **7.8 acres** of old industrial and **93 acres** of old urban land uses. Of this, **160 acres** were built from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) (Table 4.66). An additional **28 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

Unincorporated County of San Mateo continues to promote, plan and construct green street projects on public lands and ROWs. Existing green street projects treat **6.1 acres** of old urban land use. The County is also constructing or planning to construct additional green street projects as part of improvements planned for Encina Avenue and Vine Street.

The County is also participating in efforts to develop preliminary designs for 2 regional stormwater capture projects and identify 5 additional opportunities for further feasibility assessments.

Table 4.66 Land area in Unincorporated County of San Mateo WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	379	0.8		0.6	0.2		
	1007	2.1		0.1	1.9		0.1
	SMC	3.3		0.1	3.2		
	<b>Subtotal</b>	<b>6.2</b>	<b>0.0</b>	<b>0.8</b>	<b>5.3</b>	<b>0.0</b>	<b>0.1</b>
Parcel-Based New & Redevelopment or Retrofit	71	9.5		6.7	2.8		
	77	2.2	2.2				
	92	1.3			1.3		
	111	1.2	1.0	0.2			0.0
	149	6.1			6.1		
	181	1.0		1.0			
	261	1.0			1.0		
	307	2.3					2.3
	379	8.8	1.8	6.8	0.0		0.2
	SMC	119.5	0.0	13.5	23.0	0.0	82.9
	SMO	0.8		0.8			
	<b>Subtotal</b>	<b>153.5</b>	<b>5.1</b>	<b>29.0</b>	<b>34.1</b>	<b>0.0</b>	<b>85.4</b>
<b>Total All GI</b>		<b>159.7</b>	<b>5.1</b>	<b>29.9</b>	<b>39.2</b>	<b>0.0</b>	<b>85.5</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

### **Municipal Operation and Maintenance Practices**

#### *Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the Unincorporated County has installed a number of small full trash capture devices in public storm drain inlets. These devices treat 381 acres distributed across 8 WMAs, including 64 acres of old industrial and 311 acres of old urban land uses (Table 4.67). Because of additional maintenance requirements for these devices, the county must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.

Table 4.67. Extent of land area in Unincorporated San Mateo County WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/ Transportation	Old Urban - Residential/ Parks	New Urban	Ag/Open
181	0.44	0.01	0.32			0.11
253	6.62	2.71	0.35	3.53		0.03
261	4.97	0.12	4.46	0.39		
379	273.42	57.52	55.57	156.48		3.85
ATH	0.42		0.42			
COL	1.03		0.08	0.10		0.85
DCY	5.18	0.85	1.55	2.77		0.01
SMC	88.92	3.24	33.86	51.26		0.56
<b>TOTAL</b>	<b>380.99</b>	<b>64.44</b>	<b>96.61</b>	<b>214.53</b>		<b>5.42</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by Unincorporated San Mateo County between January 2010 and June 2021.

### **Other PCBs and Mercury Controls**

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures are present in unincorporated San Mateo County or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

## 4.18. City of South San Francisco

### Watershed Management Areas

Table 4.68 lists the 30 WMAs identified to-date in the City of South San Francisco, and their total land areas and associated land uses.

**Table 4.68. City of South San Francisco WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
1001	Colma Creek	410	42%	35%	17%	0%	6%	0%
1002	San Francisco Bay	293	62%	31%	0%	2%	5%	0%
1005	San Francisco Bay	7	0%	100%	0%	0%	0%	0%
1011	Steinberger Slough	40	41%	39%	0%	0%	21%	0%
291	Colma Creek	171	81%	18%	0%	0%	2%	0%
292	Colma Creek	65	95%	4%	0%	0%	2%	0%
293	Colma Creek	636	27%	22%	39%	0%	12%	0%
294	Colma Creek	67	92%	8%	0%	0%	0%	0%
295	Colma Creek	25	73%	22%	0%	0%	4%	0%
296	Colma Creek	568	4%	24%	70%	0%	2%	0%
297	Colma Creek	30	13%	18%	69%	0%	0%	0%
298	Colma Creek	122	9%	9%	72%	0%	10%	0%
306	Colma Creek	37	37%	23%	41%	0%	0%	0%
307	Colma Creek	943	1%	19%	74%	1%	5%	0%
311	Colma Creek	111	3%	11%	85%	0%	1%	0%
313	San Francisco Bay	77	42%	21%	34%	0%	4%	0%
314	San Francisco Bay	66	78%	16%	0%	0%	6%	0%
315	San Francisco Bay	108	84%	16%	0%	0%	0%	0%
316	San Francisco Bay	117	82%	18%	0%	0%	0%	0%
317	San Francisco Bay	32	89%	11%	0%	0%	0%	0%
318	San Francisco Bay	70	84%	16%	0%	0%	1%	0%
319	San Francisco Bay	99	75%	25%	0%	0%	0%	0%
352	Colma Creek	40	17%	2%	81%	0%	0%	0%
354	Colma Creek	10	85%	14%	0%	0%	0%	0%
356	Colma Creek	10	79%	20%	0%	0%	1%	0%
357	Colma Creek	17	65%	32%	0%	0%	3%	0%
358	Colma Creek	32	73%	27%	0%	0%	0%	0%
359	Colma Creek	23	92%	8%	0%	0%	0%	0%
362	San Bruno Creek	14	61%	39%	0%	0%	0%	0%
SSF	Multiple	1,539	13%	18%	56%	1%	12%	0%

### Existing and Planned Control Measures Summary

Table 4.69 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the City of South San Francisco.

Table 4.69. Existing (E) and planned (P) PCBs and mercury control measures in South San Francisco WMAs.

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
291	E	E/P		E		E	E			E
292	E	E	E	E		E	E			E
293	E	E/P	E	E		E	E			E
294	E		E	E		E	E			E
295	E		E	E		E	E			E
296	E	E/P	E	E		E	E			E
297			E	E		E	E			E
298		P	E	E		E	E			E
306	E	E/P	E	E		E	E			E
307		E/P	E	E		E	E			E
311				E		E	E			E
313	E	E/P	E	E		E	E			E
314	E	P	E	E		E	E			E
315	E	E/P	E	E		E	E			E
316	E	E/P	E	E		E	E			E
317	E			E		E	E			E
318	E	E/P	E	E		E	E			E
319	E	E/P	E	E		E	E			E
352			E	E		E	E			E
354	E			E		E	E			E
356	E			E		E	E			E
357	E			E		E	E			E
358	E	E	E	E		E	E			E
359	E	E	E	E		E	E			E
362	E	E		E		E	E			E
1001	E	E/P	E	E		E	E			E
1002	E	E/P	E	E		E	E			E
1005	E			E		E	E			E
1011	E			E		E	E			E
SSF	E	E/P	E	E		E	E			E

**Source Property Investigation**

Source property investigative work has been conducted in the City of South San Francisco to-date in the 25 WMAs indicated by Table 4.69. Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.



### **Green Infrastructure**

Based on the information compiled to-date, GI at green street and new and redevelopment project sites built since 2005 (the PCBs TMDL loading baseline year) in the City of South San Francisco treat **395 acres** of land which includes **308 acres** of old industrial and **85 acres** of old urban land uses. Of this, **180 acres** were built from July 1, 2013 through June 30, 2019 (i.e., FY 2013/14 through FY 2018/19) (Table 4.70). An additional **159 acres** will be treated by new or redevelopment projects that are currently under construction or planned for construction. It should be noted that the acres treated by GI reported in this section are preliminary and may be revised in the future as additional information becomes available.

The City has completed three green street projects that treat nearly **1 acre** of land. In addition, the Orange Memorial Park Stormwater Capture Project is a \$15.5M collaboration between the City of South San Francisco and the California Department of Transportation (CalTrans) which will provide water quality improvements and help keep San Francisco Bay healthy and clean. This regional stormwater capture project would potentially capture flows from approximately **2,486 acres** of a multi-jurisdictional area of primarily old urban land uses. The project will divert water from Colma Creek and filter the water through an underground water filtration system to reduce discharges of PCBs (Polychlorinated Biphenyls), trash, sediment, and mercury to the San Francisco Bay. The Project will capture runoff through the installation of an instream diversion and pre-treatment structure (trash screen and sediment removal chamber). Pretreated water will then enter a pipe leading to an underground cistern located under the sports field holding water for eventual non-potable irrigation use, which includes irrigation to the park and along portions of Centennial Trail. When full, the cistern overflows into an infiltration gallery which will provide groundwater recharge benefits. The project is scheduled to complete construction in Spring 2022.

Table 4.70 Land area in City of South San Francisco WMAs treated by GI built from July 1, 2013 to June 30, 2021.<sup>1,2,3</sup>

Project Type	WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
			Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
Green Street or Regional Retrofit	293	0.0		0.0	0.1		
	307	0.2		0.2	0.0		
	SSF	0.6		0.2	0.4		0.0
	<b>Subtotal</b>	<b>0.9</b>	<b>0.0</b>	<b>0.4</b>	<b>0.5</b>	<b>0.0</b>	<b>0.0</b>
Parcel-Based New & Redevelopment or Retrofit	291	7.6	7.6				
	292	26.5	26.5				
	293	20.2	18.2	1.9	0.2		
	296	0.5		0.5			
	306	0.7		0.7			
	307	10.0		10.0			
	313	27.6	27.6				
	315	7.2	3.6	3.6			
	316	14.0	14.0	0.0			
	318	4.8	4.8	0.0			
	319	5.0	5.0				
	359	3.4	3.3	0.0			
	1001	15.1	9.3	5.7			0.1
	1002	33.0	32.0	1.0			
	SSF	4.1		2.4	1.7		
	<b>Subtotal</b>	<b>179.8</b>	<b>152.0</b>	<b>25.8</b>	<b>1.9</b>	<b>0.0</b>	<b>0.1</b>

1 – Preliminary - may not include all acres currently treated by GI and treatment controls.

2 – GI includes (1) parcel-based new development, redevelopment, or retrofit projects; and (2) green street projects or regional retrofit projects.

3 – GI and treatment controls may include proprietary vault-based systems.

***Municipal Operation and Maintenance Practices***

*Enhanced Maintenance for Storm Drain Inlets with Small Trash Full Capture Devices*

In recent years, the City of South San Francisco has installed a number of small full trash capture devices in public storm drain inlets. These devices treat 1,330 acres distributed across 28 WMAs, including 487 acres of old industrial and 832 acres of old urban land uses (Table 4.71). Because of additional maintenance requirements for these devices, the city must clean these devices more frequently (i.e., two or more times per year) resulting in enhanced removal of trash and sediment-bound pollutants such as PCBs and mercury.

Table 4.71. Extent of land area in City of South San Francisco WMAs that is addressed by publicly owned small full trash capture devices (i.e., inlet-based full trash capture devices).<sup>1,2</sup>

WMA ID	Total Area (Acres)	2002 Land Use (Acres)				
		Old Industrial	Old Urban - Commercial/Transportation	Old Urban - Residential/Parks	New Urban	Ag/Open
291	97.82	79.64	17.76			0.42
292	10.39	8.86	1.21			0.32
293	227.05	85.53	78.29	59.57		3.66
296	84.84	4.45	16.85	63.05		0.48
306	25.58	4.49	7.29	13.80		
307	158.15		10.35	147.75		0.06
313	34.33	4.14	3.25	26.10		0.85
314	9.16	6.86	2.29			
315	9.38	6.47	2.91			
316	59.38	47.77	11.58			0.02
318	12.66	10.36	2.30			
319	4.09	3.47	0.62			
358	19.71	16.29	3.36			0.06
359	16.42	15.00	1.41			0.00
1001	82.36	46.40	30.40	5.48		0.08
1002	4.56	3.26	0.95			0.35
SMC	0.06			0.00		0.05
SSF	141.42	1.24	7.23	128.54		4.41
357	14.87	9.17	5.45			0.25
356	10.22	8.17	2.04			0.01
354	5.23	4.42	0.80			0.00
352	0.23		0.01	0.22		
317	31.23	27.78	3.44			0.01
311	59.03		2.94	56.09		
298	79.64	5.71	9.53	64.21		0.20
297	25.81	0.63	4.19	20.99		
295	17.91	13.43	4.28			0.21
294	39.63	34.75	4.84			0.05
1001D	27.80	21.93	5.85			0.02
1001C	12.00	10.37	1.62			0.01
1001B	9.57	6.39	3.19			
<b>TOTAL</b>	<b>1,330.54</b>	<b>486.97</b>	<b>246.25</b>	<b>585.79</b>		<b>11.53</b>

1 – Acres presented may not include all acres currently treated by small inlet-based trash full capture devices.

2 – Includes only inlet-based trash full capture devices that are publicly owned and were installed by the City of South San Francisco between January 2010 and June 2021.

***Other PCBs and Mercury Controls***

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in the City of South San Francisco or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

#### 4.19. Town of Woodside

##### Watershed Management Areas

Table 4.72 lists the two WMAs identified to-date in the Town of Woodside, and its total land area and associated land uses.

**Table 4.72. Woodside WMAs and associated land uses.**

WMA ID	Outfall Water Body	Total Area (Acres)	% Old Industrial	% Old Urban Commercial	% Old Urban Residential	% New Urban	% Open Space	% Other
261	Redwood Creek	46	0%	0%	98%	0%	2%	0%
WDE	Multiple	7,275	0%	5%	48%	2%	45%	0%

##### Existing and Planned Control Measures Summary

Table 4.73 provides a preliminary list of PCBs and mercury control measures currently in place or planned for future implementation in the Town of Woodside.

**Table 4.73. Existing (E) and planned (P) PCBs and mercury control measures in Woodside WMAs.**

WMA ID	Control Measure Categories									
	Source Property Investigation	Green Infrastructure and Treatment Control Measures	Trash Full Capture Systems	Managing PCBs during Building Demolition	Managing PCBs in Stormwater Conveyance Infrastructure	Operation and Maintenance Practices		Diversion to Wastewater Treatment Facilities	Addressing Illegally Dumped PCBs-containing Wastes	Reduction/Recycling of Mercury-containing Devices & Products
						Street Sweeping or Flushing	Inlet Cleaning			
261				E		E	E			E
WDE	E			E		E	E			E

##### Source Property Investigation

Source property investigative work has been conducted in the Town of Woodside to-date in WMA WDE. Updated results will be provided in the SMCWPPP’s UCMR due in March 2022.

##### Green Infrastructure

Based on the information compiled to-date, GI at new and redevelopment project sites have not been built since 2005 (the PCBs TMDL loading baseline year) in Woodside. There are currently 5.3 acres of land

that are planned or under construction for new or redevelopment. It should be noted that the information on GI reported in this section is preliminary and may be revised in the future as additional information becomes available.

***Other PCBs and Mercury Controls***

SMCWPPP is continuing to evaluate whether other relevant PCBs and mercury control measures (e.g., enhanced municipal O&M) are present in Woodside or should be planned there. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports.

## **5.0 PCBs AND MERCURY LOADS REDUCED**

Preliminary PCBs and mercury loads reduced through stormwater control measures implemented in San Mateo County during the current MRP term are reported in this section. The loads reduced were quantified for those control measures and projects reported in Section 4.0 that were implemented and/or completed from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21).

In general, the load reductions reported in this section are preliminary and do not include all existing and planned control measures. For example, the load reductions reported in this section do not account for any contamination site cleanups (referred to as “self-abatements”) or some types of municipal O&M enhancements (e.g., channel desilting, enhanced street sweeping) implemented by Permittees during the permit term. Any load reductions during the permit term associated with these controls will be reported in future reports. SMCWPPP will continue to track all relevant control measures and update the associated load reduction calculations as additional information becomes available and as new or enhanced actions are implemented.

### **5.1. Summary of Loads Reduced Accounting Methodology**

The accounting methodologies used to calculate the load reductions reported in this section were developed by BASMAA and approved by the Executive Officer of the Regional Water Board for the purpose of load reduction reporting during MRP 2.0. These methods and data inputs are described fully in the BASMAA *Interim Accounting Methodology Report* (BASMAA 2017). The equations and default data inputs that are used to calculate load reductions are summarized below. The data on acres addressed by each type of control measure that were reported in Section 4.0 were used in the equations below to calculate the PCBs and mercury load reductions.

#### **Source Property Identification and Abatement**

The projected POC loads reduced through source property identification and abatement were calculated using the equation below:

$$\text{Load of POC Reduced} = SP_A \cdot (SP_Y - OU_Y)$$

Where:

$SP_A$	=	Source property area (acres)
$SP_Y$	=	Source property POC yield
$OU_Y$	=	Old Urban land use POC yield

Default inputs:

PCBs Source property yield	=	4,065 mg/acre/year
PCBs Old urban land use yield	=	30.3 mg/acre/year
Mercury Source property yield	=	1,300 mg/acre/year
Mercury Old urban land use yield	=	215 mg/acre/year

Fifty percent of the load reduced is projected here for each anticipated source property referral that was identified in Section 4.0. (Per the MRP, the remaining 50% will be credited upon completion of the abatement process, or at ten years, whichever occurs first.)



### **Green Infrastructure and Treatment Controls**

#### **Parcel-Based GI/LID (e.g., New Development and Redevelopment)**

The POC loads reduced through parcel-based new development, redevelopment, and retrofit projects were calculated using the equation below:

$$\text{Load of POC Reduced} = P_A \cdot (P_Y - NU_Y)$$

Where:

$P_A$	=	Project area (acre)
$P_Y$	=	Existing PCBs or mercury yield (mg/acre/year)
$NU_Y$	=	New Urban PCBs or mercury yield (mg/acre/year)

Default inputs:

PCBs New Urban land use yield	=	3.5 mg/acre/year
Mercury New Urban land use yield	=	33 mg/acre/year

#### **Green Streets and Regional Retrofit Projects**

The POC loads reduced due to green streets and regional retrofit projects were calculated using the equation and inputs provided below:

$$\text{Annual Mass of PCB Reduced} = P_A \cdot P_Y \cdot E_f$$

Where:

$P_A$	=	Tributary area treated (acres)
$P_Y$	=	Area-weighted PCBs or mercury yield (mg/acre-year)
$E_f$	=	Efficiency factor for green infrastructure/retrofit treatment control measure (assumed to be 70%)

#### **Enhanced Operation and Maintenance Activities – Increased Inlet Cleanouts**

The POC loads reduced due to enhanced inlet cleanouts were calculated using the equation and inputs provided below:

$$\text{Annual Mass of PCB Reduced} = P_A \cdot P_Y \cdot E_f$$

Where:

$P_A$	=	Tributary area treated (acres)
$P_Y$	=	Area-weighted PCBs or mercury yield (mg/acre-year)
$E_f$	=	Efficiency factor for increasing from annual to twice annual cleanouts (assumed to be 2%); in this report, POC load reductions for enhanced inlet cleanouts only accounts for the increased cleanout frequency due to installation and maintenance of inlet-based trash full capture devices; in future reports, the additional load reduction due to the increased capture of sediment-bound pollutants because of the inlet-based full trash capture devices will be documented in future reports.

## **5.2. PCBs Loads Reduced**

### ***Preliminary Estimated PCBs Loads Reduced from July 1, 2013 through June 30, 2021***

The preliminary estimated PCBs loads reduced by San Mateo County Permittees from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) are shown in Table 5.1. Permittees achieved more than 334 g/year of PCBs load reductions cumulatively over this time period. Table 5.2 shows the PCBs loads reduced, itemized by control measure category. New and re-development projects have been and continue to be ongoing across all San Mateo County municipalities. Over the permit term to-date, more than 1,177 acres have been developed or redeveloped, including more than 437 acres of old industrial and 541 acres of old urban land uses. Green streets and regional retrofit projects have been constructed that treat an additional 34 acres of urban land uses. It is important to emphasize that the PCBs loads reduced that are reported here are preliminary and may not include all control measures that have been implemented by San Mateo County Permittees to-date. SMCWPPP will report on any additional controls and associated pollutant load reductions in future reports. Table 5.2 also illustrates that the 15 g/year PCBs load reduction through GI by the end of the permit term required by the MRP has been achieved.

In addition, as described in Section 4.15, during October 2018 SMCWPPP submitted two source property referrals (both in San Carlos) to the Regional Water Board. The total combined acreage of these properties is about 10 acres, resulting in an about 20 g/year PCBs load reduction (see Section 5.1 for the calculation methods).

Table 5.1. Preliminary estimates of PCBs loads reduced by San Mateo County Permittees from July 1, 2013 through June 30, 2021 (FY 2013/14 through FY 2020/21).

Permittee	PCBs Loads Reduced (g/year)								Cumulative Load Reduced
	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY20/21	
Atherton	0.03						2.80	0.20	3
Belmont	0.38		0.01	0.01	0.13	0.41	9.46		10
Brisbane	0.75		0.37		2.44	0.01	1.36	0.02	5
Burlingame	0.08	0.16	0.01	0.69	0.07	0.07	10.67		12
Colma	0.00	0.07		0.00	0.24	0.06	0.50	0.12	1.0
Daly City	0.06	0.18		0.51	2.25	0.05	38.88		42
East Palo Alto	0.12	0.24	0.03	0.36			15.33		16
Foster City	0.05		0.12	0.00	0.00	0.51	11.05	0.10	12
Hillsborough			0.00		0.00		4.09	0.00	4
Menlo Park	2.20	0.21	1.61	0.69	3.74	0.06	11.98	2.77	23
Millbrae	0.51				2.06		7.77	0.02	10
Portola Valley					0.04		1.66	0.31	2
Redwood City	0.65	1.09	0.67	0.46	0.64	1.24	28.21	0.89	34
San Bruno	0.16		0.50			0.14	15.10		16
San Carlos	2.20		0.75		21.69		10.67	1.15	36
San Mateo City	2.56	0.52	0.32	0.23	0.07	0.14	37.52	0.12	41
San Mateo County	1.42	0.36	0.34	0.05	0.09		23.15	0.19	26
South San Francisco	4.70	1.46	0.09	0.30	1.05	1.68	24.68	3.56	38
Woodside							2.06		2
<b>Total</b>	<b>16</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>35</b>	<b>4</b>	<b>257</b>	<b>9</b>	<b>334</b>

Table 5.2. Preliminary estimates of PCBs loads reduced in San Mateo County by control measure category from July 1, 2013 through June 30, 2020 (FY 2013/14 through FY 2020/21).

Control Measure Category		PCBs Loads Reduced (g/year)								Cumulative Load Reduced
		FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY20/21	
Source Property Identification and Referral	270 Industrial Road / 495 Bragato Road, San Carlos					16				16
	977 and 1007/1011 Bransten Road, San Carlos					5				5
GI and Other Stormwater Treatment Controls	Parcel-based GI/LID (i.e., new and redevelopment projects)	10	4	4	3	11	4	5	9	51
	Green Streets and Regional Retrofits	0.01	0.10	0.07	0.02	0.05	0.06	0.24	0.33	0.9
	Large Full Trash Capture Systems <sup>3</sup>	2				2		4		9
Enhanced O&M Measures <sup>4</sup>		3	0.1	0.5	0.7		0.2	0.1		5
Manage PCBs in Building Materials <sup>4</sup>								247		247
Manage PCBs in Infrastructure <sup>4</sup>										0
Diversion to POTW <sup>4</sup>										0
Source Controls / Other <sup>4</sup>										0
<b>Total – All San Mateo County Permittees and Controls</b>		<b>16</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>35</b>	<b>4</b>	<b>257</b>	<b>9</b>	<b>334</b>

1. Load Reduced = (Source Property Area (acre)) x (4.065 – 0.0303 (g/acre/year)).
2. For parcel-based projects, Load Reduced = (Project Area (acre)) x (Existing Yield – 0.0035 (g/acre/year)). For green street or regional retrofit projects, Load Reduced = (Project Drainage Area (ac)) x (area-weighted PCBs yield (g/acre/year)) x 0.70. See Section 4.0 for acres associated with this control measure.
3. Load Reduced = (Project Drainage Area (acre)) x (area-weighted PCBs yield (g/acre/year)) x 0.20.
4. Loads reduced = (Project Drainage Area (acres)) X (area-weighted PCBs yield (g/acre/year) x 2% (assumed efficiency factor for enhanced inlet cleanouts twice annually).

### **5.3. Mercury Loads Reduced**

#### ***Preliminary Estimated Mercury Loads Reduced from July 1, 2013 through June 30, 2021***

The preliminary estimated mercury loads reduced by San Mateo County Permittees from July 1, 2013 through June 30, 2021 (i.e., FY 2013/14 through FY 2020/21) are shown in Table 5.3. San Mateo County Permittees have achieved more than 790 g/year of mercury load reductions over this time period. Table 5.4 shows the mercury loads reduced by control measure category. New development and redevelopment projects currently account for 83% of the mercury load reduction reported to-date. Large full trash capture systems account for an additional 9% of the mercury load reduction reported to-date. Enhanced inlet cleanouts account for about 7% of the mercury load reduction reported to-date. Green streets and regional retrofit projects account for the remaining 1%. Table 5.4 also illustrates that the 6 g/year mercury load reduction through GI by the end of the permit term required by the MRP has been achieved.

Table 5.3. Preliminary estimates of mercury loads reduced by San Mateo County Permittees from July 1, 2013 through June 30, 2020 (FY 2013/14 through FY 2020/21).

Permittee	Mercury Loads Reduced (g/year)								Cumulative Load Reduced
	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY20/21	
Atherton	0.2						0.7	1.4	2.3
Belmont	3.1		0.1	0.1	0.8	4.5	0.1		9
Brisbane	11.4		4.8		37.2	0.1	0.1	0.1	54
Burlingame	0.7	1.5	0.1	9.7	0.8	0.5	0.8		14
Colma	0.0	0.5		0.0	1.6	0.4	0.0	0.8	3
Daly City	0.4	1.2		3.5	15.2	0.6			21
East Palo Alto	1.6	3.5	0.2	5.2			33.7		44
Foster City	0.3		0.8	0.0	0.0	7.2	2.5	0.7	12
Hillsborough			0.0		0.0			0.0	0.04
Menlo Park	31.7	2.5	21.0	9.3	56.4	0.4	5.3	39.4	166
Millbrae	3.9				15.4		0.1	0.1	19
Portola Valley					0.3			2.1	2.4
Redwood City	7.2	14.2	8.2	5.4	6.0	15.2	0.0	7.8	64
San Bruno	1.1		7.2			1.3	0.5		10
San Carlos	30.1		11.4		15.1		3.0	17.3	77
San Mateo City	24.3	7.4	2.4	1.5	0.8	1.2	18.3	0.8	57
San Mateo County	10.1	5.0	2.3	0.4	0.8		1.8	1.3	22
South San Francisco	66.0	22.3	0.6	4.1	15.9	23.6	27.8	53.7	214
Woodside									0
<b>Total</b>	<b>192</b>	<b>58</b>	<b>59</b>	<b>39</b>	<b>166</b>	<b>55</b>	<b>95</b>	<b>125</b>	<b>790</b>

Table 5.4. Preliminary estimates of mercury loads reduced in San Mateo County by control measure category from July 1, 2013 through June 30, 2021 (FY 2013/14 through FY 2020/21).

Control Measure Category		Mercury Loads Reduced (g/year)								Cumulative Load Reduced
		FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY20/21	
Source Property Identification and Referral	270 Industrial Road / 495 Bragato Road, San Carlos					4				4
	977 and 1007/1011 Bransten Road, San Carlos					1				1
GI and Other Stormwater Treatment Controls	Parcel-based GI/LID (i.e., new and redevelopment projects)	136	57	53	31	145	53	55	122	652
	Green Streets and Regional Retrofits	0.08	0.72	0.51	0.11	0.38	0.40	2.91	3.47	9
	Large Full Trash Capture Systems <sup>3</sup>	20				15		36		71
Enhanced O&M Measures <sup>4</sup>		36	0	6	8		1	1		53
Diversion to POTW <sup>4</sup>										0
<b>Total – All San Mateo County Permittees and Controls</b>		<b>192</b>	<b>58</b>	<b>59</b>	<b>39</b>	<b>166</b>	<b>55</b>		<b>125</b>	<b>790</b>

1. Load Reduced = (Source Property Area (acre)) x (1.033 – 0.215 (g/acre/year)).
2. For parcel-based projects, Load Reduced = (Project Area (acre)) x (Existing Yield – 0.033 (g/acre/year)). For green street or regional retrofit projects, Load Reduced = (Project Drainage Area (ac)) x (area-weighted mercury yield (g/acre/year)) x 0.70. See Section 4.0 for acres associated with this control measure.
3. Load Reduced = (Project Drainage Area (acre)) x (area-weighted mercury yield (g/acre/year)) x 0.20.
4. Loads reduced = (Project Drainage Area (acres)) X (area-weighted mercury yield (g/acre/year) x 2% (assumed efficiency factor for enhanced inlet cleanouts twice annually).

### ***Mercury Mass Collected via Countywide Hazardous Waste Collection Program***

San Mateo County municipalities participate in San Mateo County Health Department's Household Hazardous Waste (HHW) Program and Very Small Quantity Generator Business Collection (VSQG) Program (see Section 3.8). The estimated mass of mercury collected in FY 2017/18 through FY 2020/21 via these programs is shown in Table 5.5.<sup>6</sup> It should be noted that these mass estimates are not directly comparable to pollutant load reductions in stormwater runoff discharges.

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<sup>6</sup> The HHW Program canceled all collections from March 12 through June 3, 2020 due to the COVID-19 Shelter-in-Place order. This generally resulted in a relatively lower number of devices and associated mass of mercury collected in FY 2019/20.



Table 5.5. Estimated mercury mass collected via the San Mateo County Health Department's Household Hazardous Waste (HHW) and Very Small Quantity Generator Business Collection (VSQG) programs.

Mercury Containing Device/Equipment	FY 2017/18		FY 2018/19		FY 2019/20		FY 2020/21	
	Total Amount of Devices Collected	Estimated Mass of Mercury Collected (kg)	Total Amount of Devices Collected	Estimated Mass of Mercury Collected (kg)	Total Amount of Devices Collected	Estimated Mass of Mercury Collected (kg)	Total Amount of Devices Collected	Estimated Mass of Mercury Collected (kg)
Fluorescent Lamps (linear ft) <sup>1,2</sup>	125,582	0.3	107,269	0.2	77,004	0.2	148,912	0.3
CFLs (each) <sup>3</sup>	18,689	0.1	18,513	0.1	10,014	0.05	7,633	0.03
Thermostats (each) <sup>4</sup>	11	0.04	15	0.1	8	0.03	14	0.1
Thermometers (each) <sup>5</sup>	0	0	25	0.02	6	0.004	45	0.03
Switches (each)	0	0	26	0.1	0	0	45	0.1
<b>Total Mass of Mercury Collected (Kg)</b>		<b>0.4</b>		<b>0.5</b>		<b>0.2</b>		<b>0.6</b>

## 6.0 DISCUSSION AND NEXT STEPS

Building on the efforts described in this report, SMCWPPP and San Mateo County MRP Permittees plan to continue to work together to conduct a variety of activities to continue addressing MRP requirements for PCBs and mercury and making progress towards achieving the TMDL allocations, including the following tasks:

- An anticipated new sub-provision in the soon to be reissued MRP will require Permittees to implement control measures in some portion of old industrial and/or other areas that generally have moderate to high PCBs concentrations. SMCWPPP recently convened a workgroup of municipalities in San Mateo County that have the greatest extent of old industrial land use areas. The new workgroup had its first meeting in August 2021 and will continue meeting periodically during FY 2021/22 to explore implementing additional potential actions to address PCBs such as the following:
  - Develop a long-term plan for old industrial areas in San Mateo County that identifies (as feasible) the specific geographic areas projected to redevelop and considers realistic time horizons for redevelopment and the added potential benefit of progressive policies to address roadway frontages as part of redevelopment.
  - Increase efforts to find funding (e.g., from Caltrans) to implement trash full capture that would treat old industrial land uses or other areas with moderate to high PCBs, in addition to addressing trash.
  - Consider expanding the source property identification work to prioritize more moderate areas and possibly expand the municipal role in investigating and abating such properties as feasible and appropriate.
  - Explore additional opportunities, if any, to periodically remove PCBs-containing sediments that accumulate in stormwater drainage infrastructure (e.g., piping, inlets, pump station wet wells, detention ponds).
  - Conduct parcel-scale GIS analyses of relevant characteristics of old industrial areas (e.g., existing and planned controls, projected redevelopment patterns, PCBs screening and monitoring data) and develop color-coded maps and other on-line tools to visualize data, illustrate current status, and inform planning.
- SMCWPPP will continue to work with other Bay Area stormwater management programs to evaluate data collected during the programs to manage PCBs materials during building demolition in compliance with Provision C.12.f.
- SMCWPPP will continue to participate in the RMP PCBs Work Group to help oversee RMP studies concerning the fate, transport, and biological uptake of PCBs discharged from urban runoff to San Francisco Bay margin areas. A continued focus will be the conceptual model under development for Steinberger Slough in San Mateo County and associated monitoring fieldwork by the RMP.
- SMCWPPP will continue to work with San Mateo County Environmental Health Services (EHS) on education and outreach efforts to San Mateo County residents likely to consume locally-caught fish from the Bay. EHS's Fish Smart program conducts a variety of related activities, such as maintenance of strategically placed signs, training of healthcare workers to disseminate information, and targeted social media posts.

- C/CAG will continue implementing its Regional Stormwater Collaborative project in collaboration with the County of San Mateo’s Office of Sustainability. The project is funded by a \$200,000 grant from the California Natural Resources Agency and \$100,000 in grant funds from U.S. EPA. The multi-pronged partnership project is intended to advance implementation of regional-scale stormwater management in San Mateo County. The four interrelated project components are:
  1. **Building the Business Case for Regional-Scale Stormwater Management**
    - Drivers and Objectives: Establishes the “What” in terms of what can be achieved through regional-scale stormwater management through establishing key drivers and associated objectives. The Drivers and Objectives feed into the prioritization analysis, below, establishing the goals prioritized opportunities will need to address. The C/CAG Stormwater Committee approved the final Drivers and Objectives report at the May 2021 meeting.
    - Business Case: Establishes the “Why” in terms of why C/CAG’s member agencies would benefit from countywide collaboration on regional-scale stormwater management. The Business Case will be informed by the prioritized opportunities determined below, including quantitative analyses of the potential benefits provided through those opportunities.
    - Collaborative Framework: Establishes the “How” in terms of how C/CAG’s member agencies can collaborate across jurisdictional lines on regional scale stormwater management.
  2. **Prioritizing and Conceptualizing Regional-Scale Stormwater Management Opportunities**
    - Identify and Prioritize Opportunities: This will update analyses done for the San Mateo County Stormwater Resource Plan to find the best opportunities throughout the county for regional-scale stormwater management to address the Drivers and Objectives established above.
    - Project Concepts: Five new project concepts will be developed, showcasing high-priority stormwater capture opportunities throughout the county that directly address the above Drivers and Objectives. The project concepts are being funded in partnership with San Mateo County through the Office of Sustainability and its separate grant funding from the U.S. EPA
  3. **Credit Trading Marketplace Analysis**: This project will evaluate the potential for creating a stormwater credit trading marketplace in San Mateo County that would allow private developers or C/CAG member agencies to buy and sell stormwater management credits to increase rates of implementation and progress toward achieving the Drivers and Objectives identified above.
  4. **Innovative Funding and Financing Analysis**: This project will evaluate innovative funding and financing options for all scales of stormwater management, from large regional capture facilities to small-scale rainwater harvesting rebate and incentive programs, including key considerations when structuring potential funding initiatives to maximize flexibility for implementation on public and private properties.

## 7.0 REFERENCES

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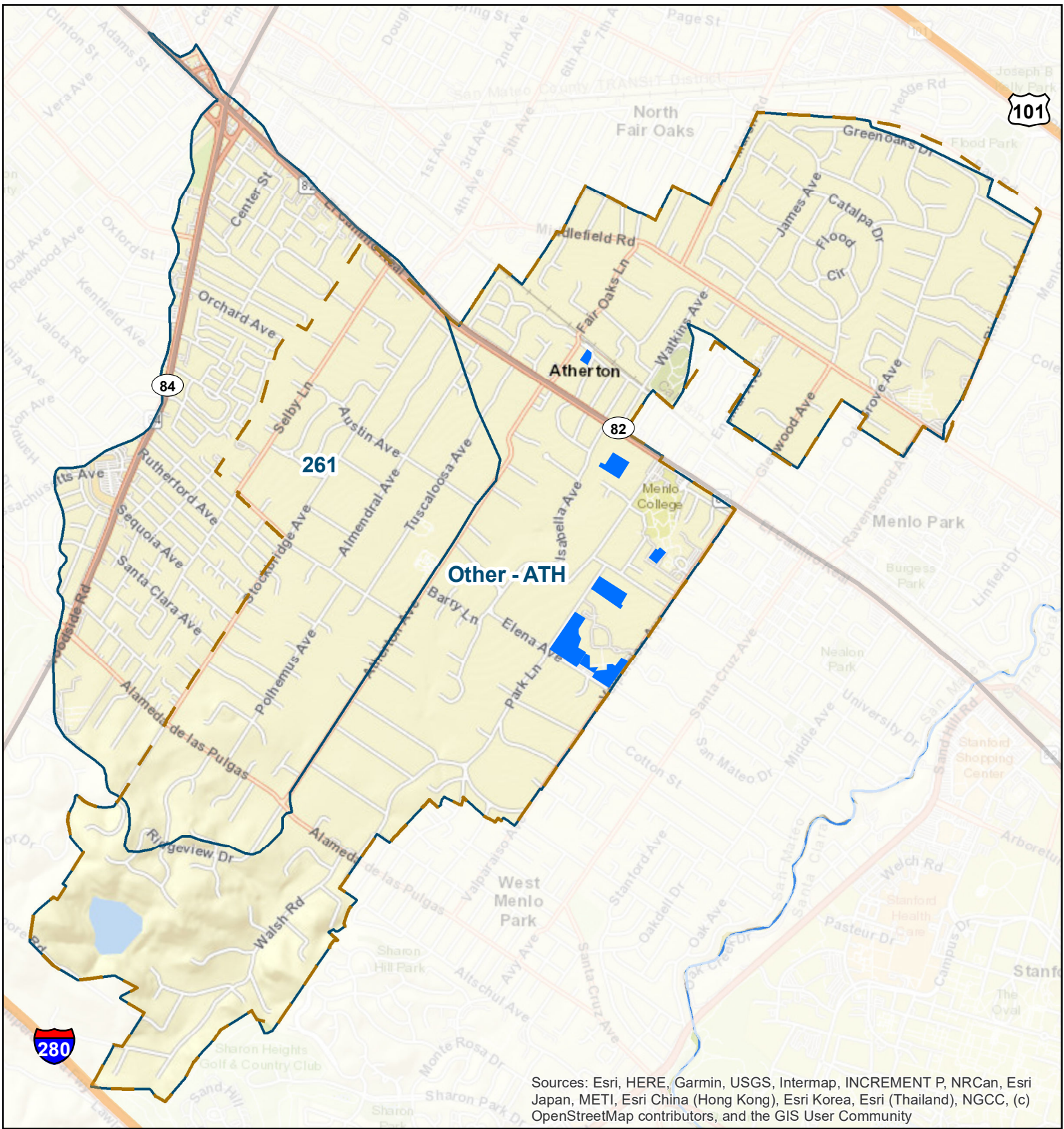
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## **Appendix A**

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Maps for each San Mateo County Permittee showing WMAs  
and GI/LID facilities



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

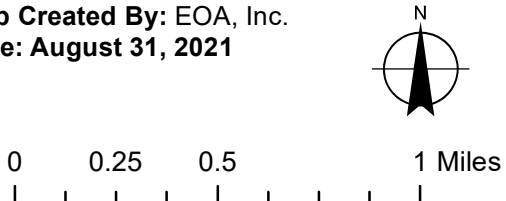
**Figure A-1. WMAs and GI/LID in Atherton**

**Atherton Watershed Management Area Map**

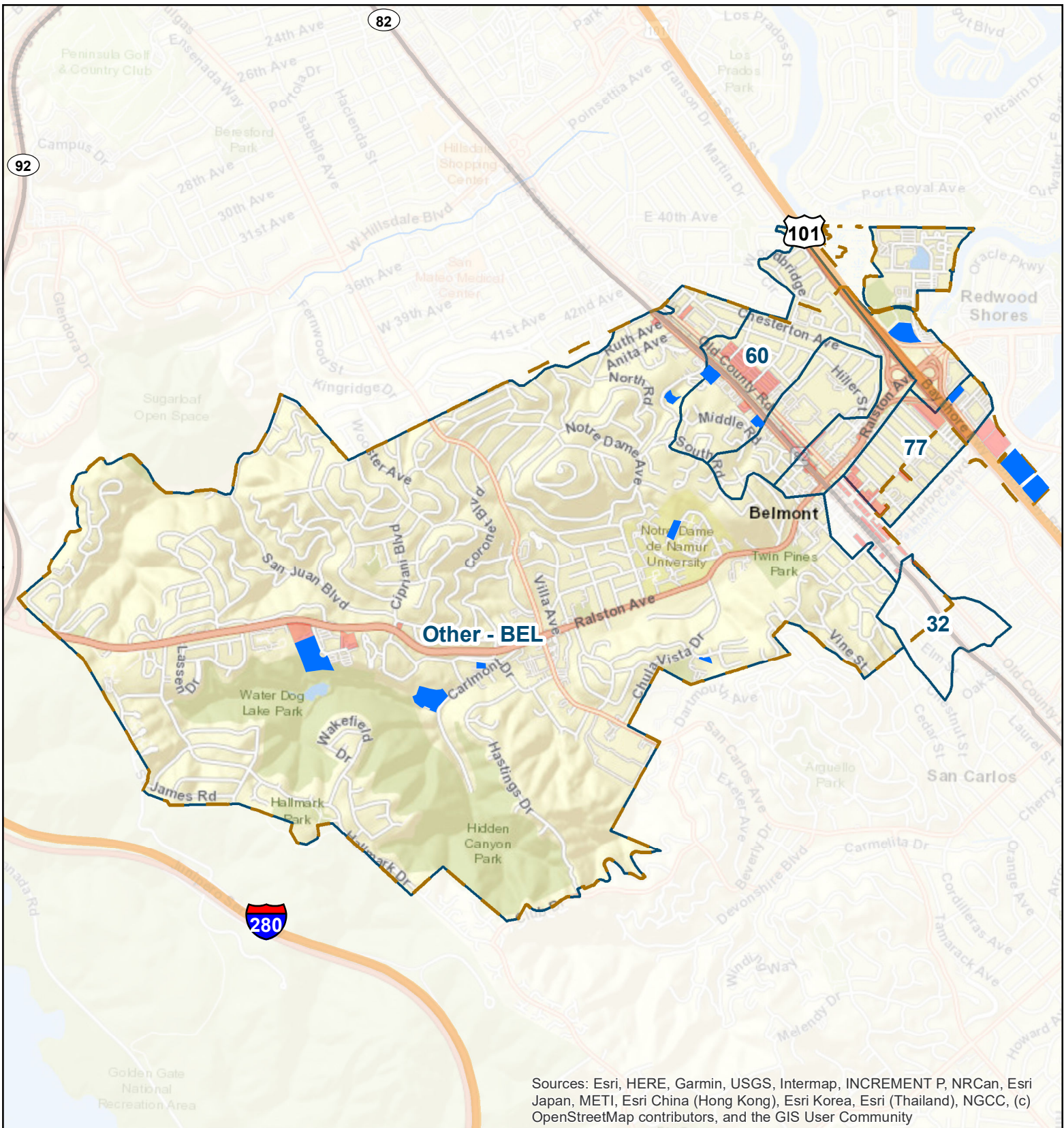
- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021







Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

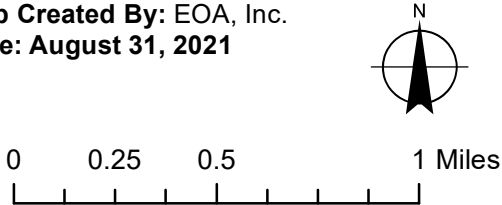
**Figure A-2. WMAs and GI/LID in Belmont**

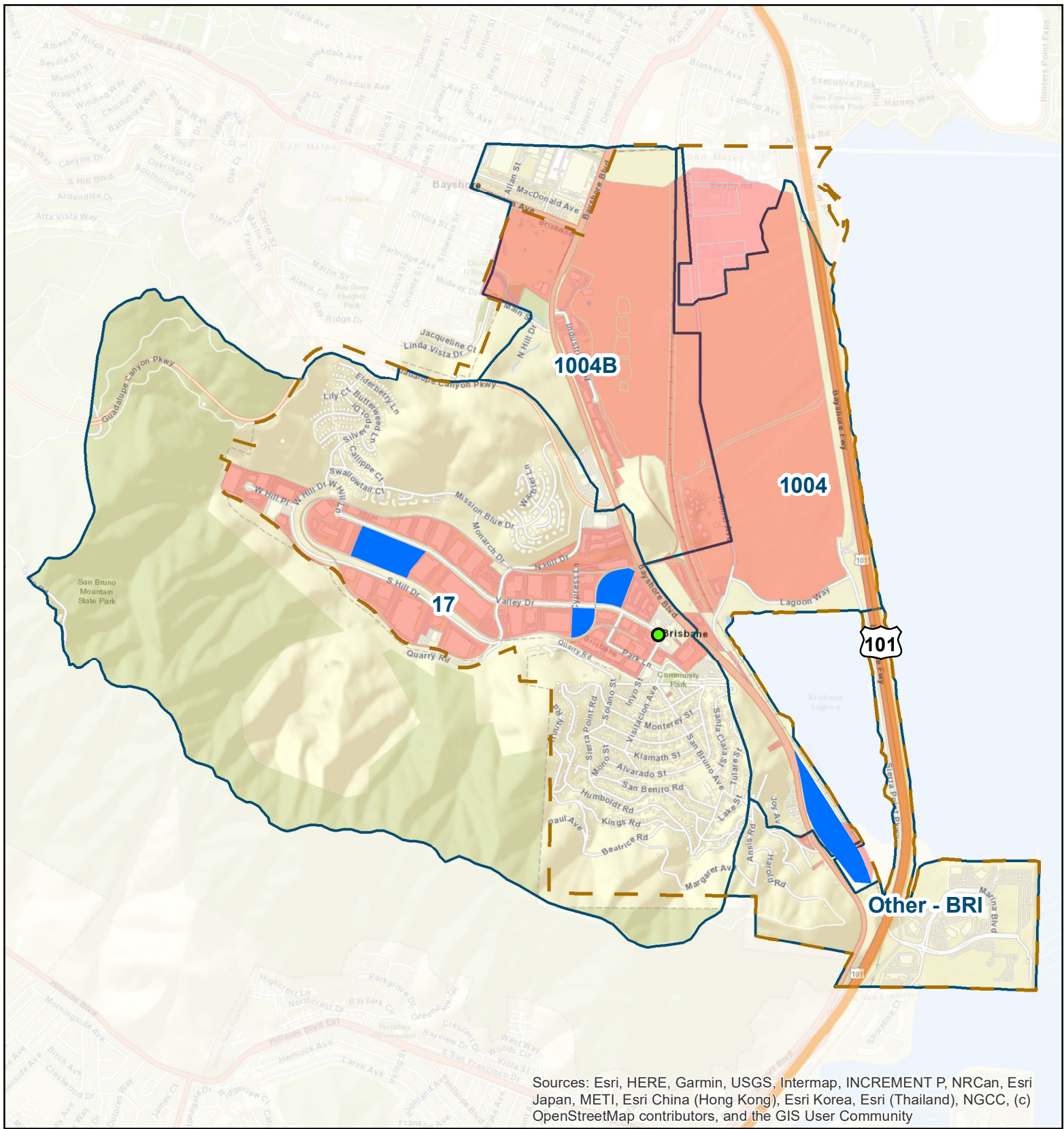
**Belmont Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

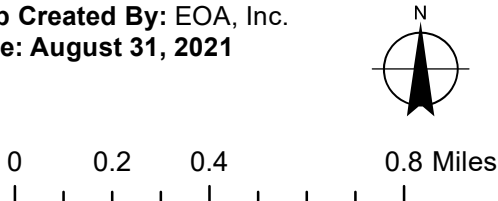
**Figure A-3. WMAs and GI/LID in Brisbane**

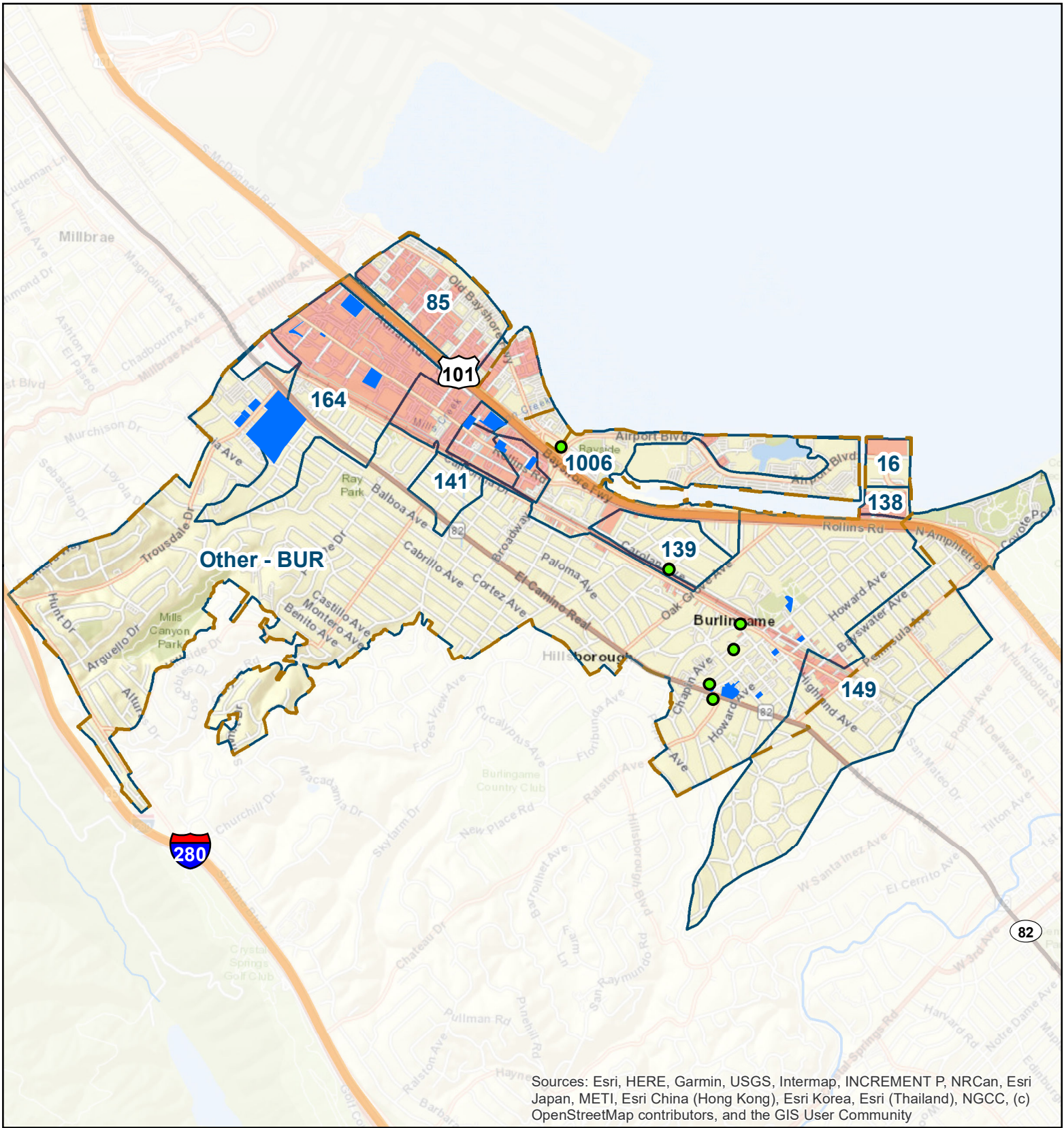
**Brisbane Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

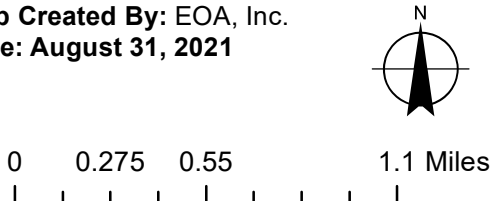
**Figure A-4. WMAs and GI/LID in Burlingame**

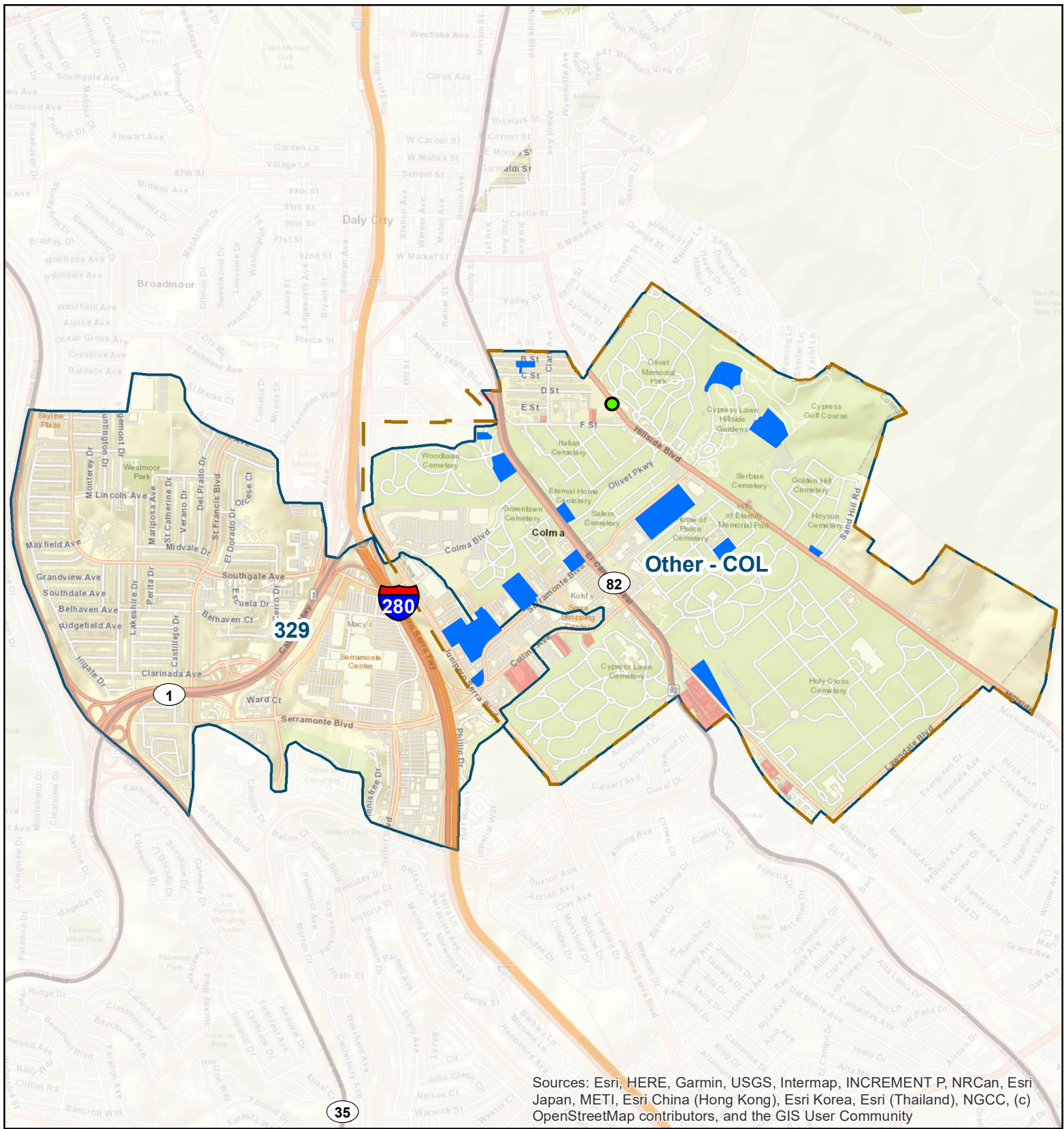
**Burlingame Watershed Management Area Map**

- Green Street Project
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Old Industrial Land Use
- Permittee Boundary
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

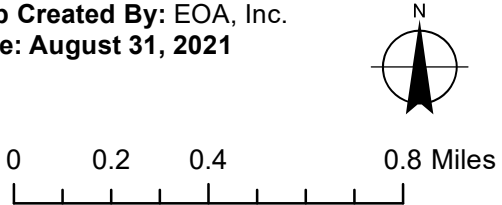
**Figure A-5. WMAs and GI/LID in Colma**

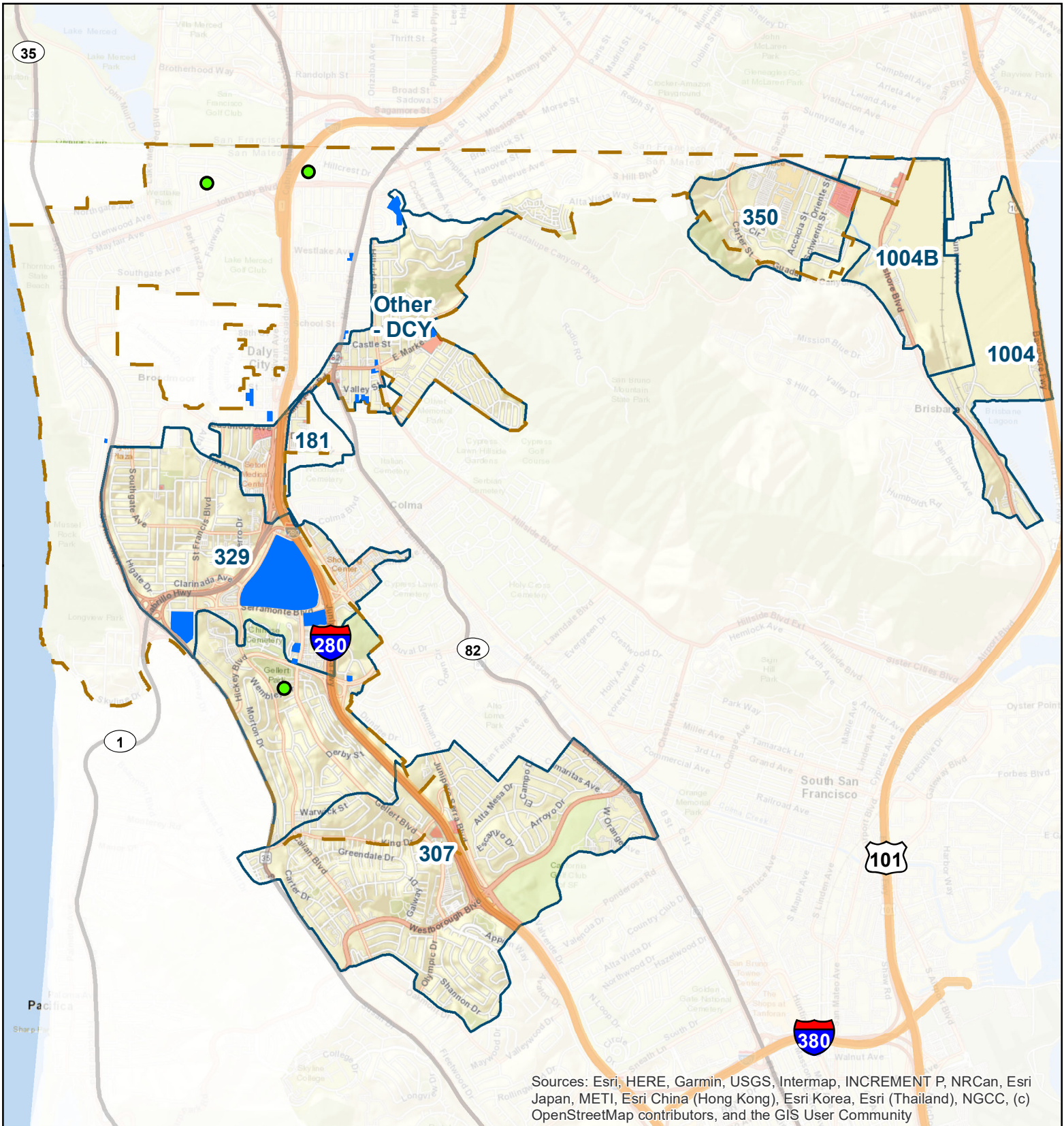
**Colma Watershed Management Area Map**

- Green Street Project
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Old Industrial Land Use
- Permittee Boundary
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





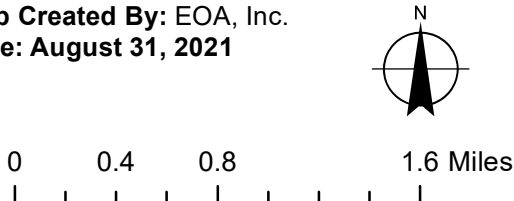
**Figure A-6. WMAs and GI/LID in Daly City**

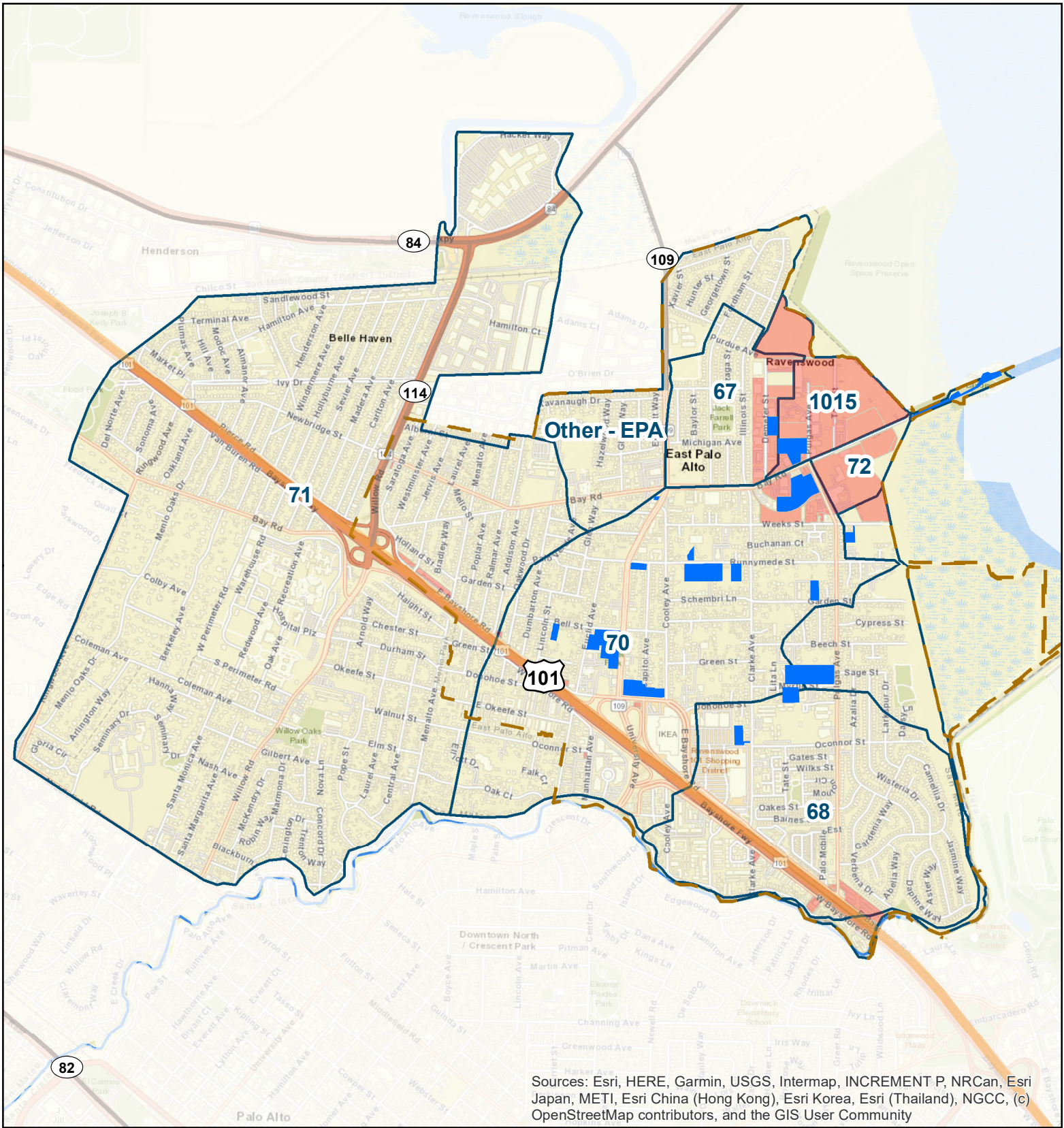
**Daly City Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





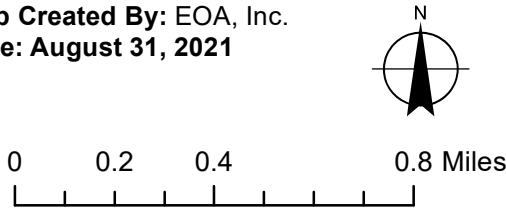
**Figure A-7. WMAs and GI/LID in East Palo Alto**

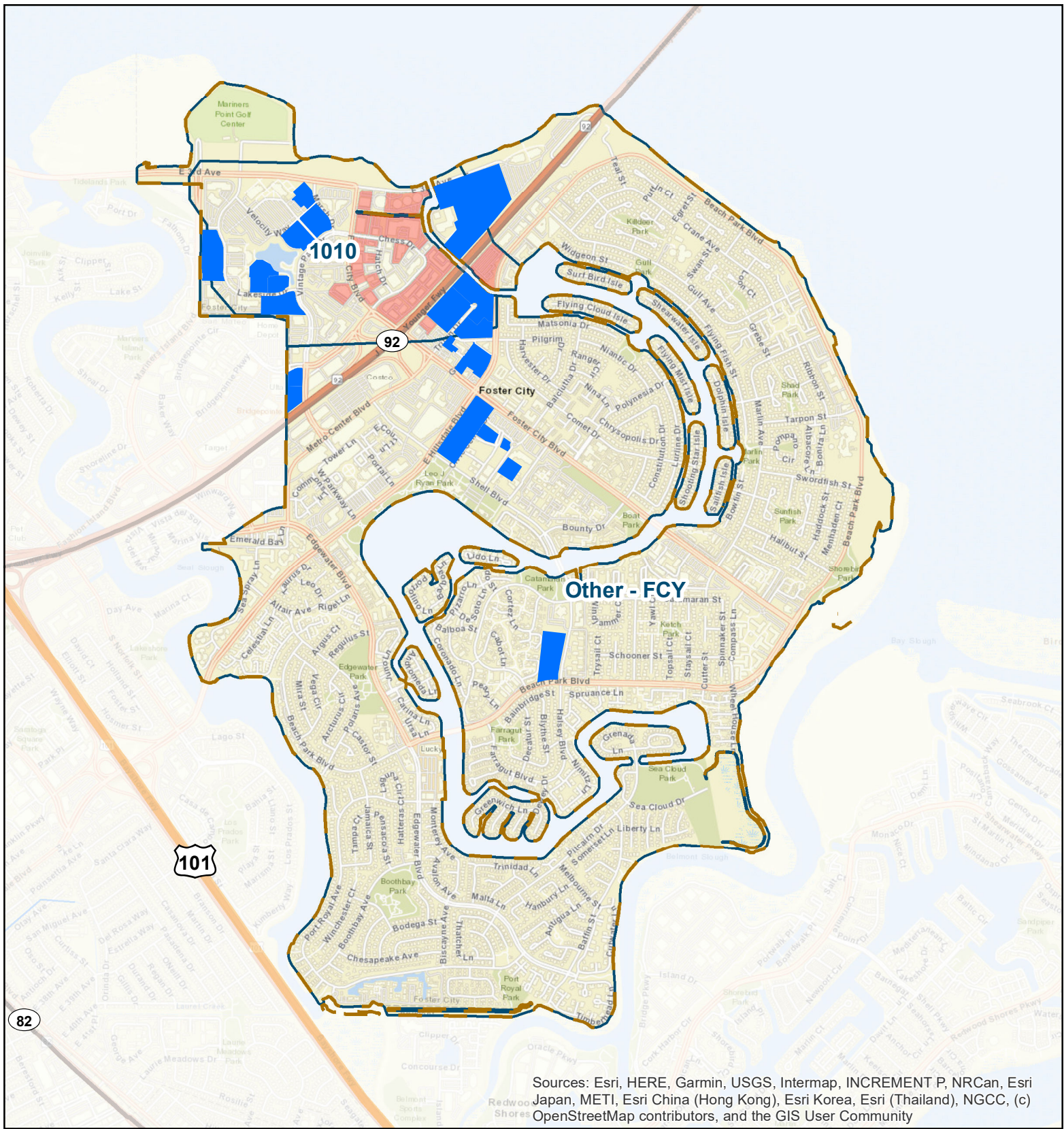
**East Palo Alto Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





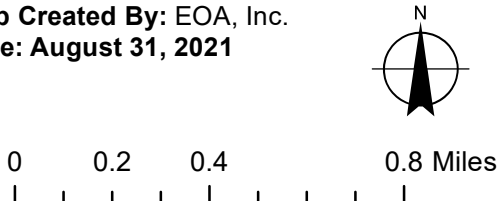
**Figure A-8. WMAs and GI/LID in Foster City**

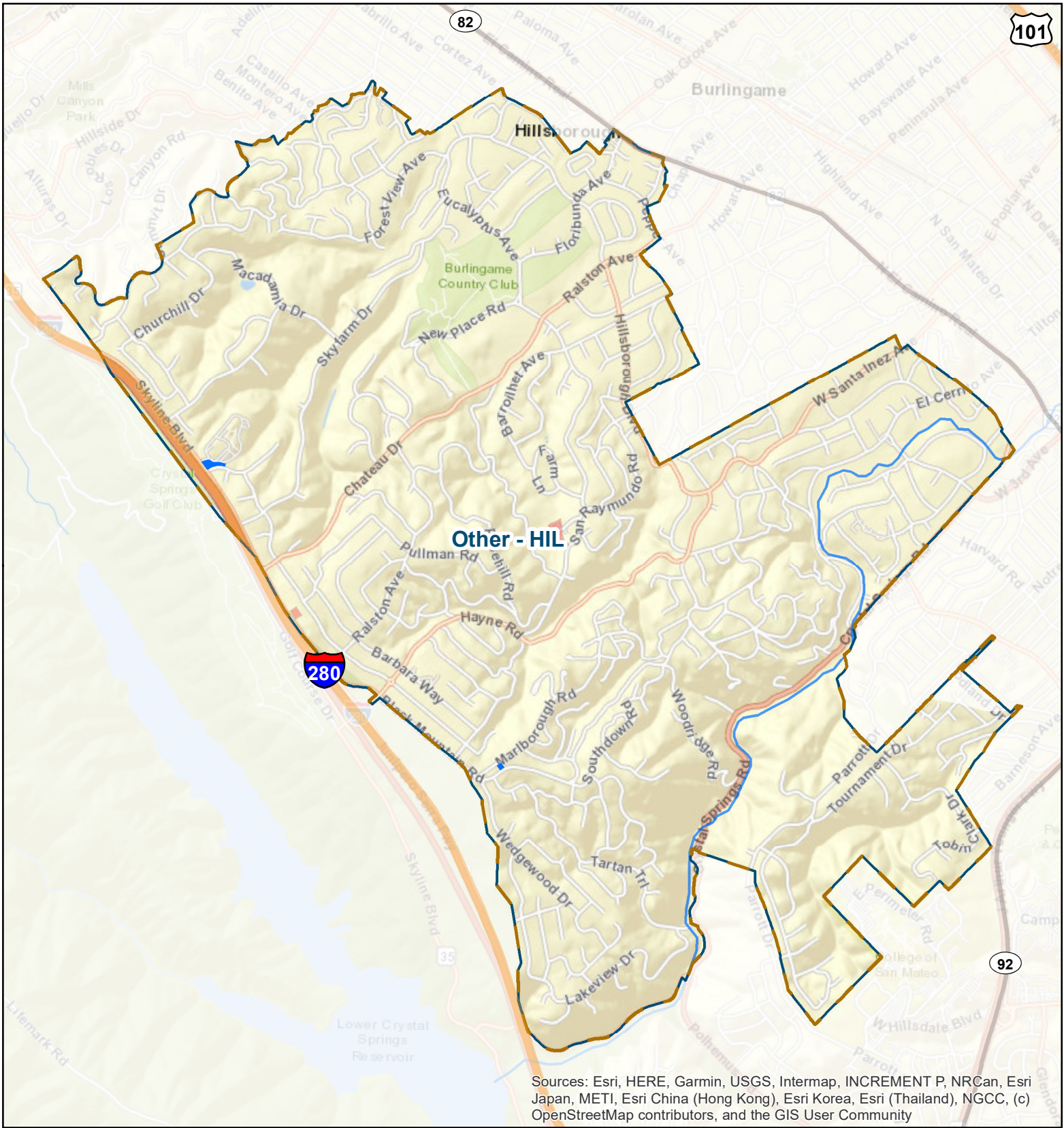
**Foster City Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





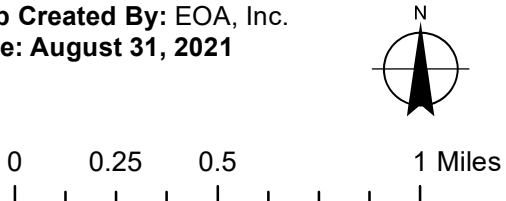
**Figure A-9. WMAs and GI/LID in Hillsborough**

**Hillsborough Watershed Management Area Map**

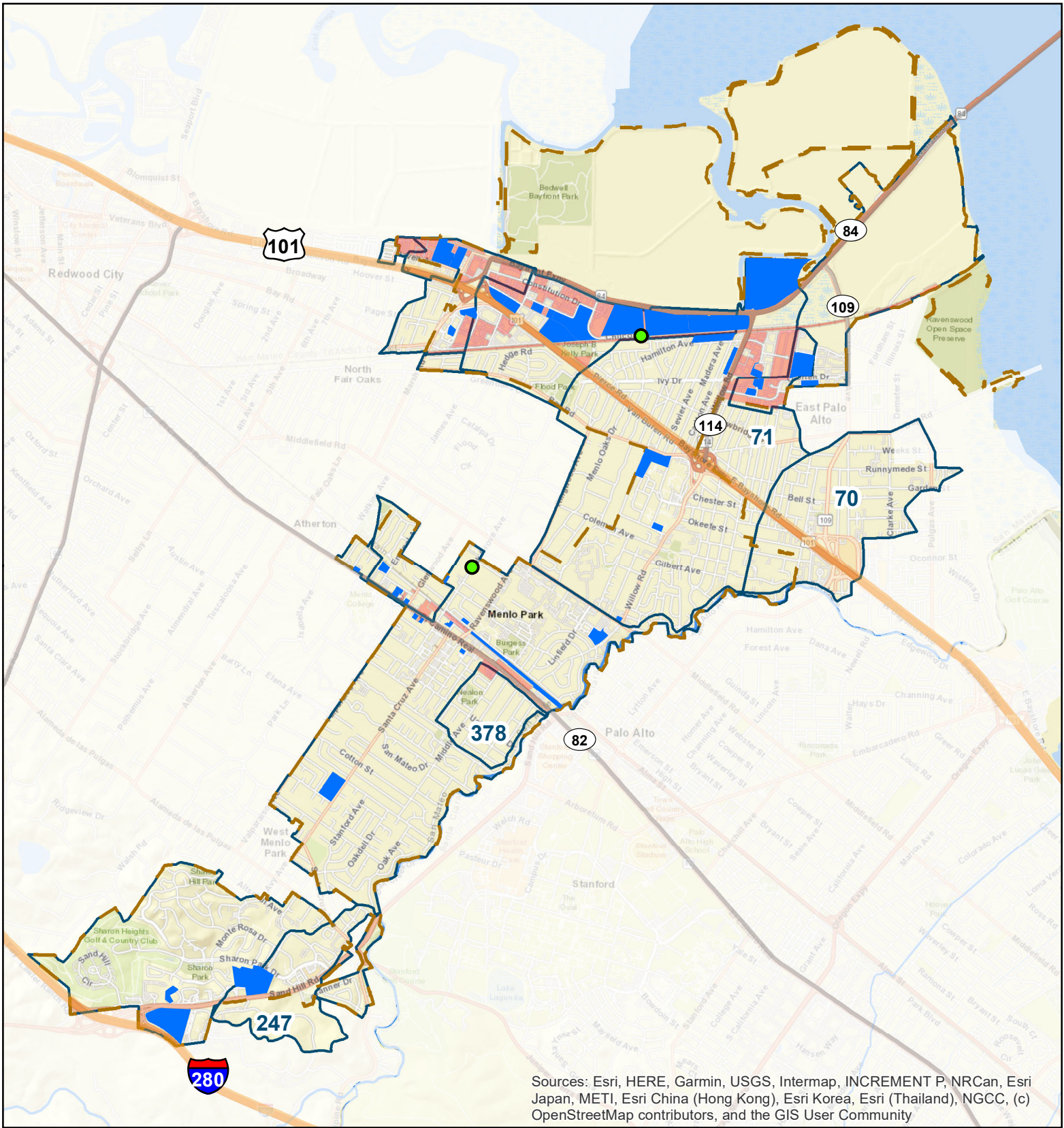
- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021







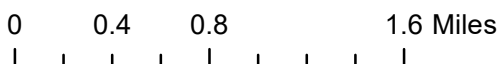
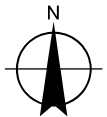
**Figure A-10. WMAs and GI/LID in Menlo Park**

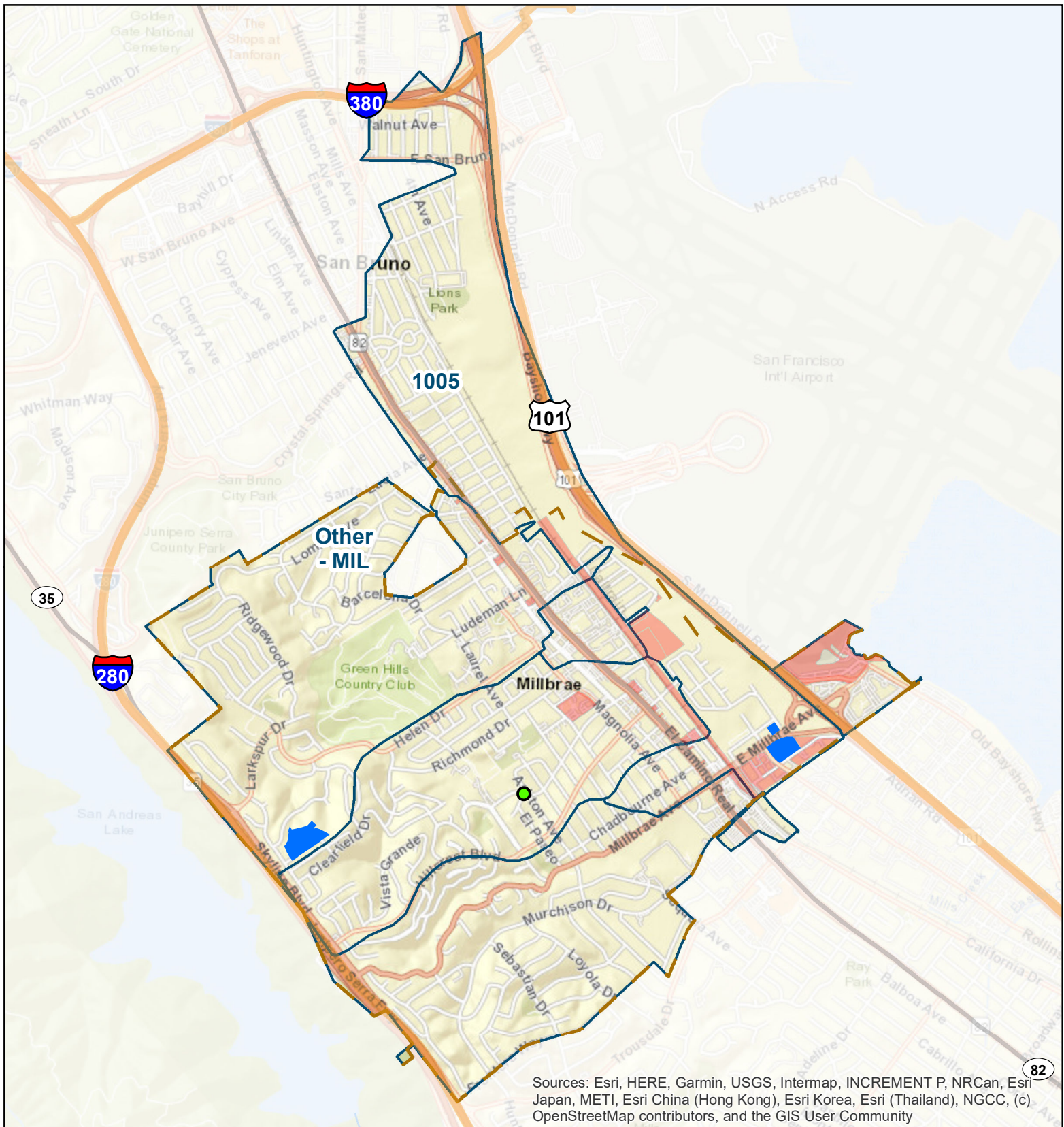
**Menlo Park Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





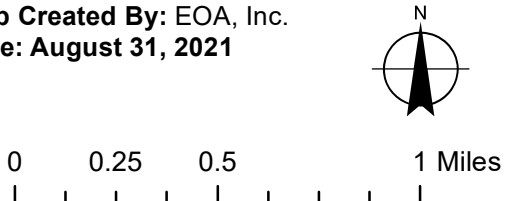
**Figure A-11. WMAs and GI/LID in Millbrae**

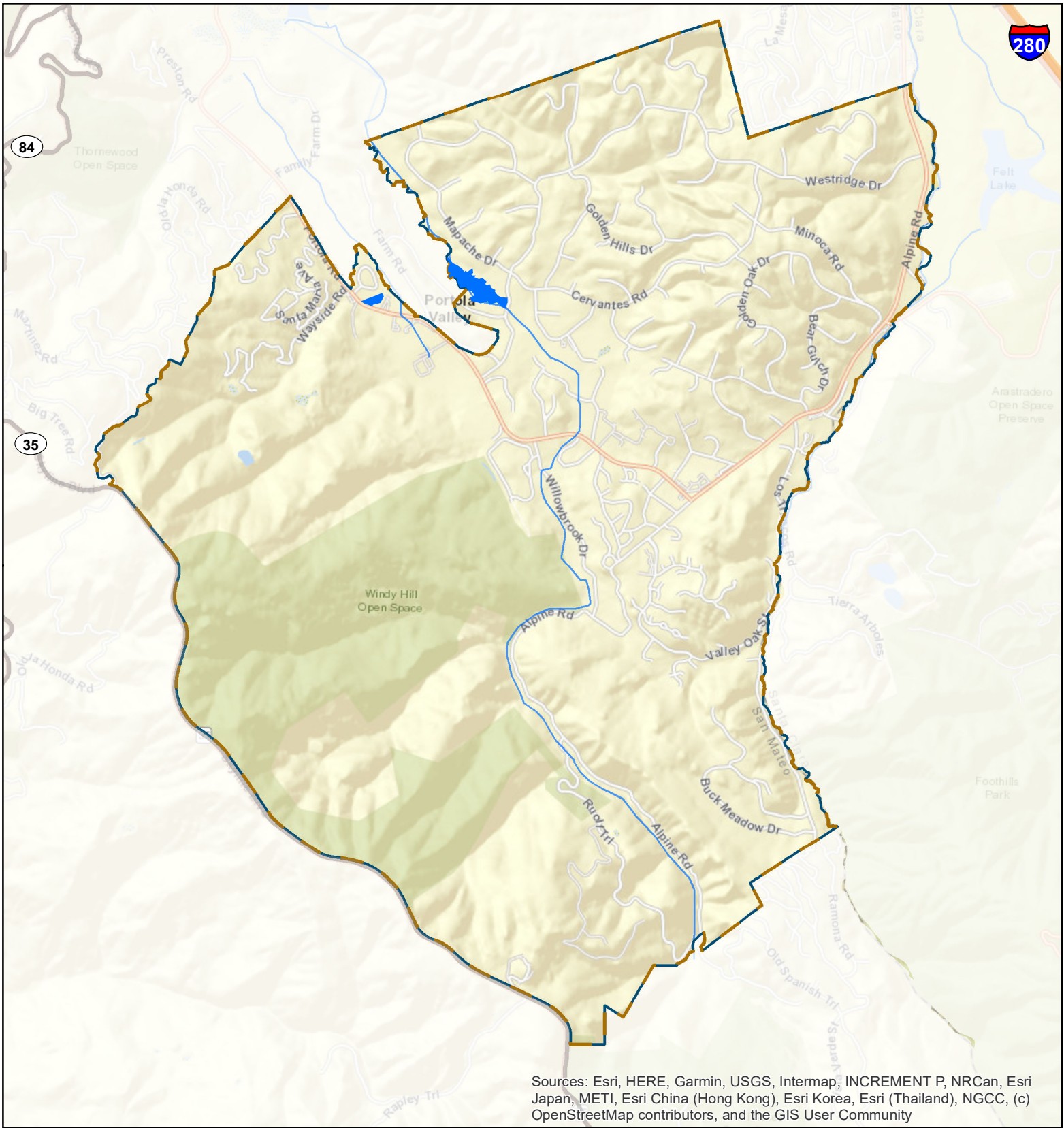
**Millbrae Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





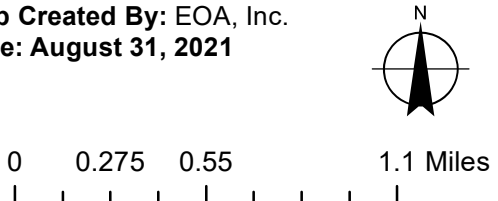
**Figure A-12. WMAs and GI/LID in Portola Valley**

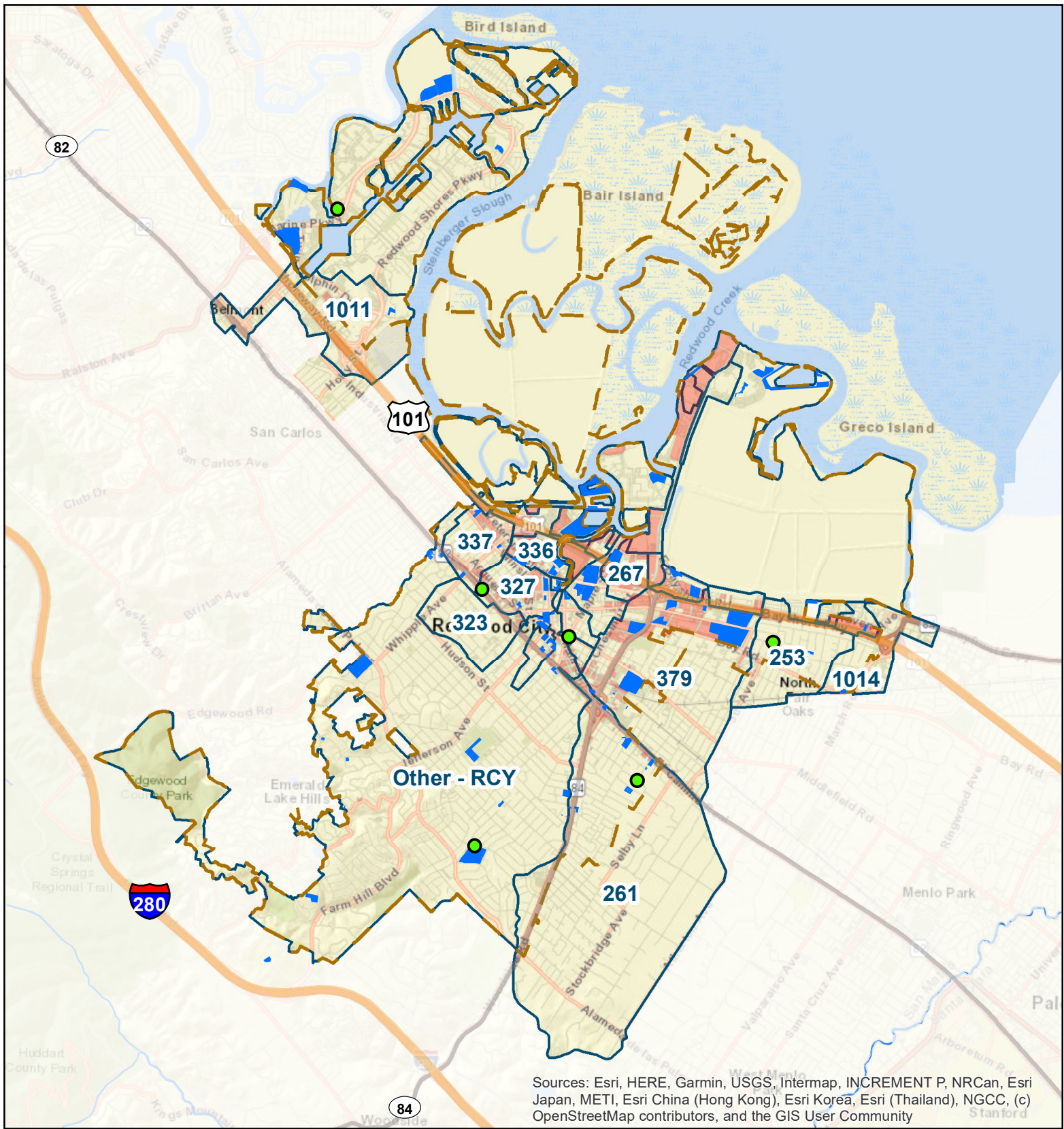
**Portola Valley Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





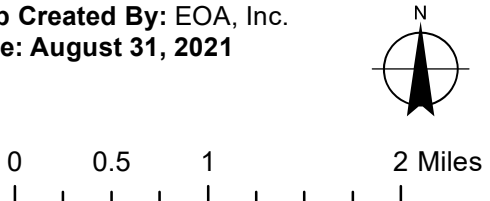
**Figure A-13. WMAs and GI/LID in Redwood City**

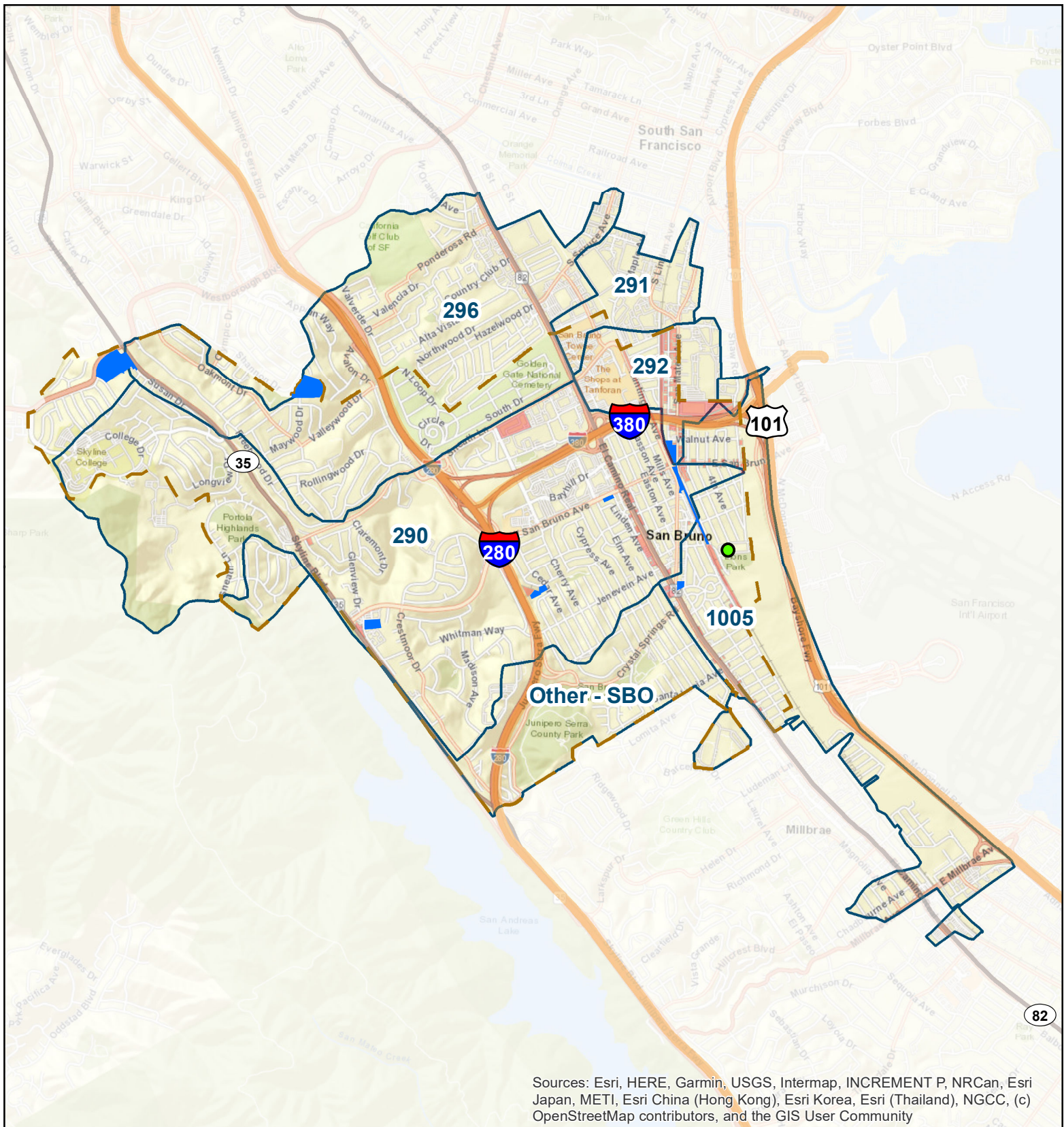
**Redwood City Watershed Management Area Map**

- Green Street Project
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Old Industrial Land Use
- Permittee Boundary
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





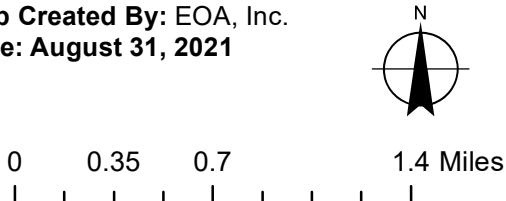
**Figure A-14. WMAs and GI/LID in San Bruno**

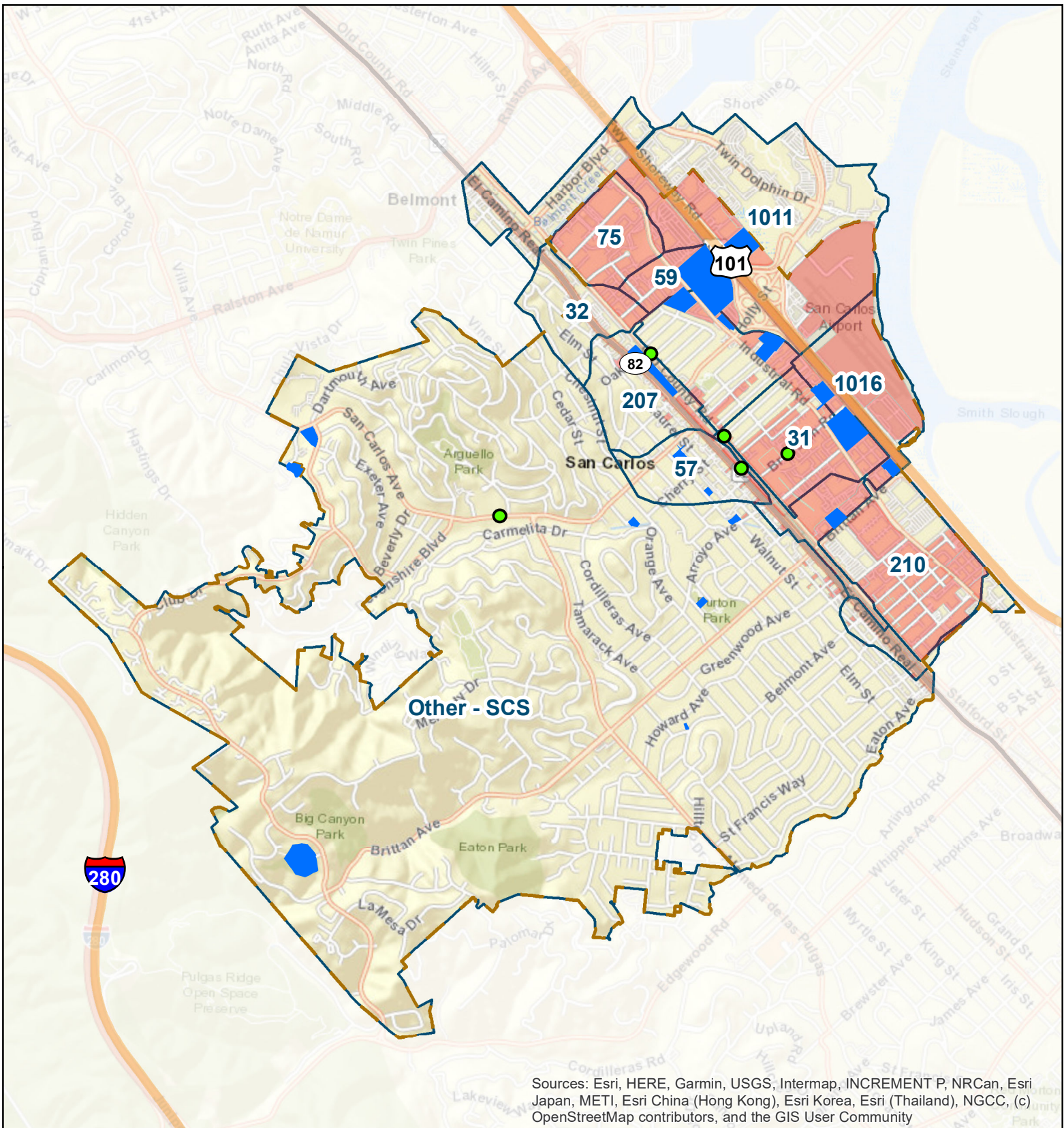
**San Bruno Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





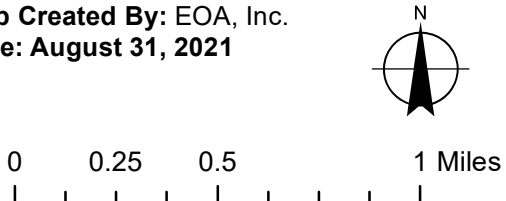
**Figure A-15. WMAs and GI/LID in San Carlos**

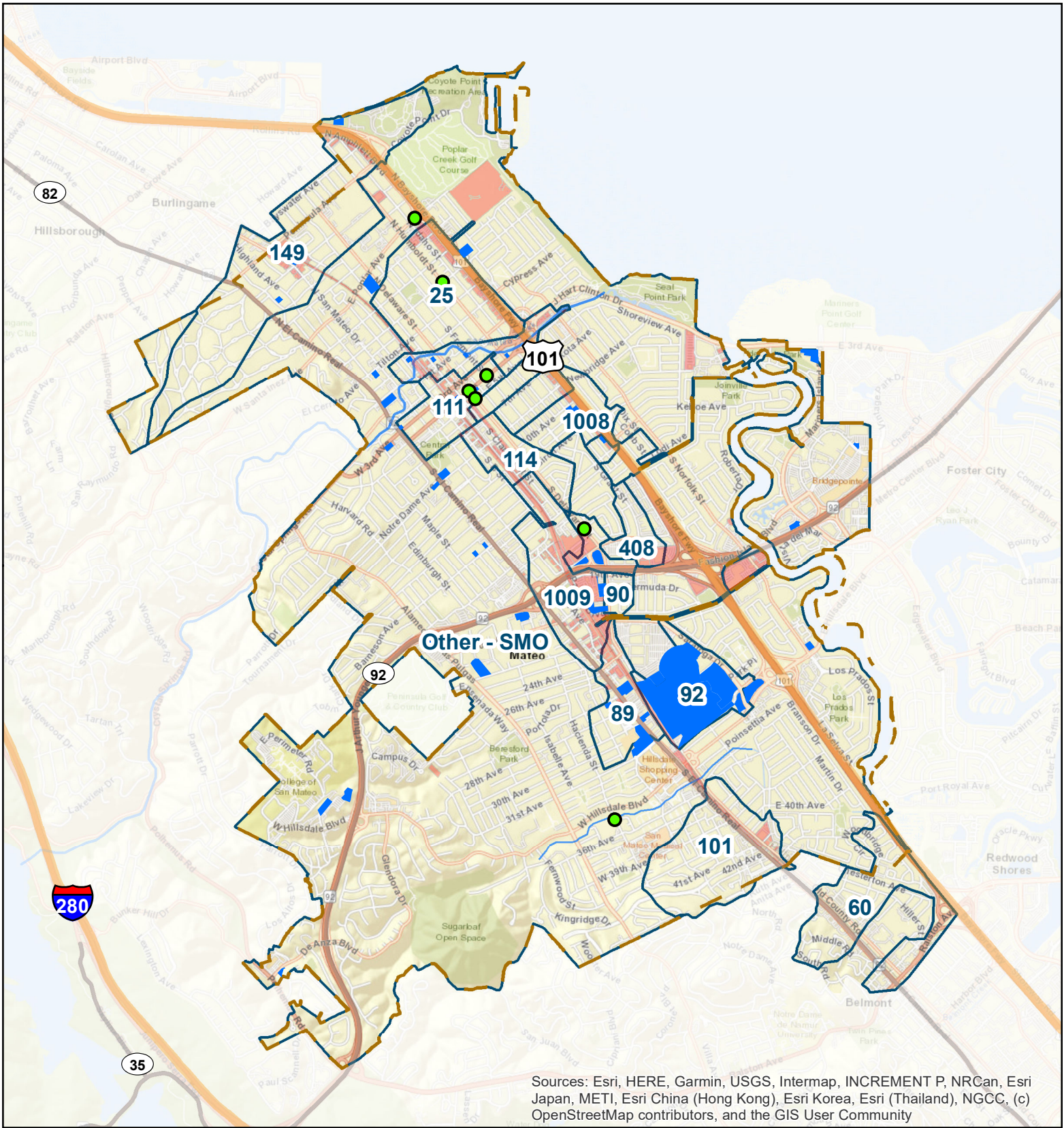
**San Carlos Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





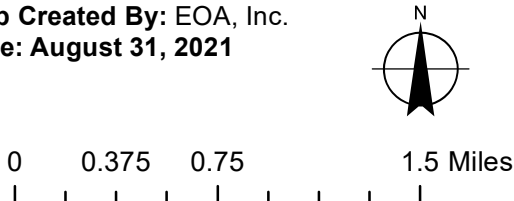
**Figure A-16. WMAs and GI/LID in San Mateo City**

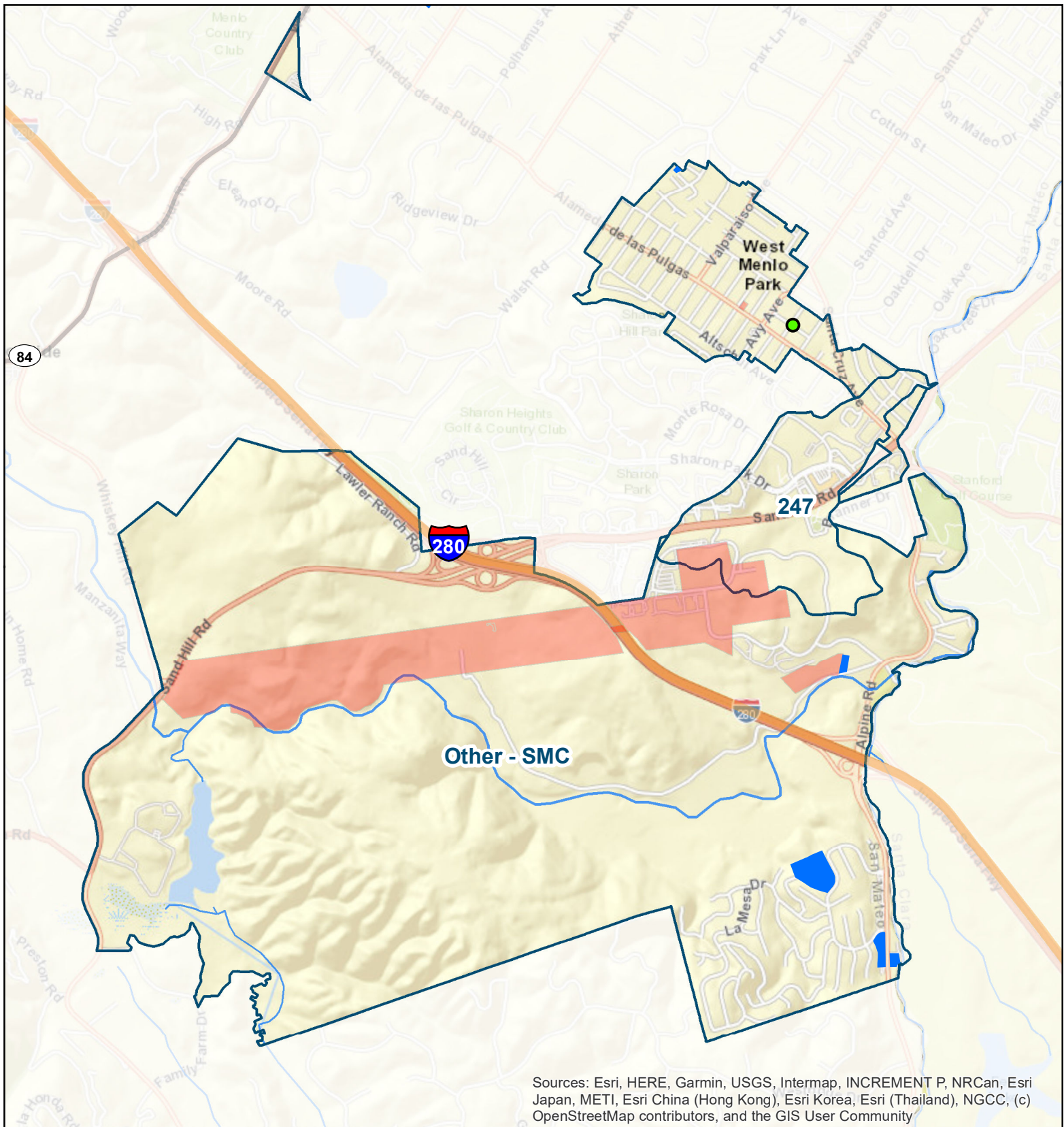
**San Mateo City Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021



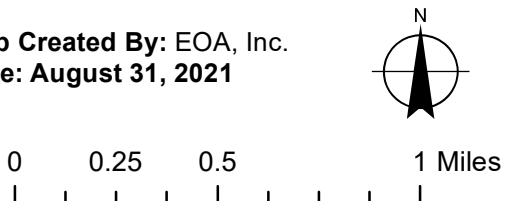


**Figure A-17a. WMAs and GI/LID in Unincorporated San Mateo County**

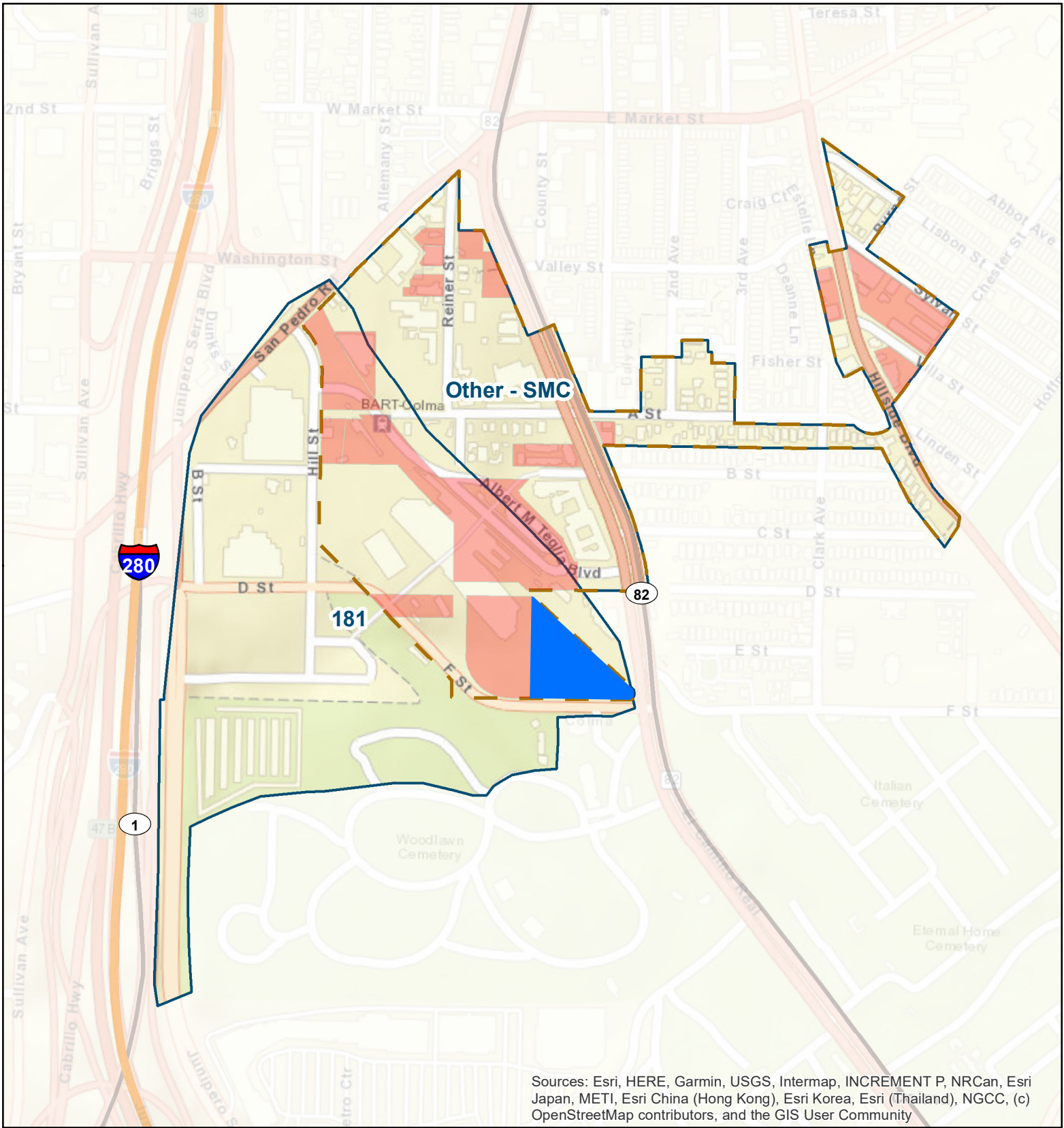
**San Mateo County Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map  
**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021







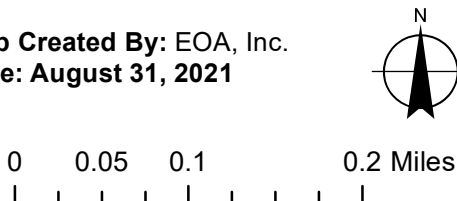
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

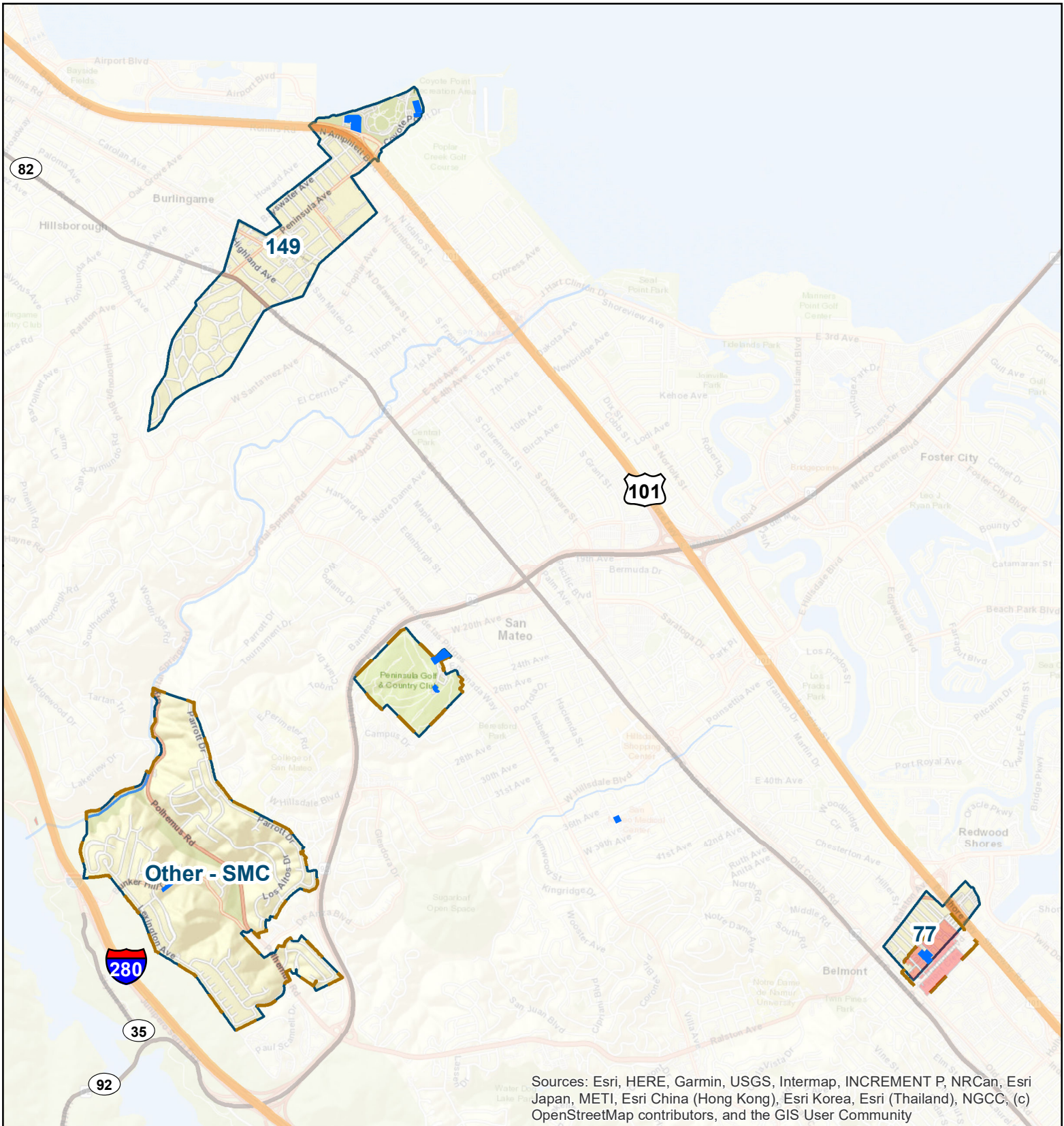
**Figure A-17b. WMAs and GI/LID in Unincorporated San Mateo County**

**San Mateo County Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map  
**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





**Figure A-17c. WMAs and GI/LID in Unincorporated San Mateo County**

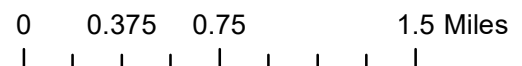
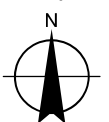
**San Mateo County Watershed Management Area Map**

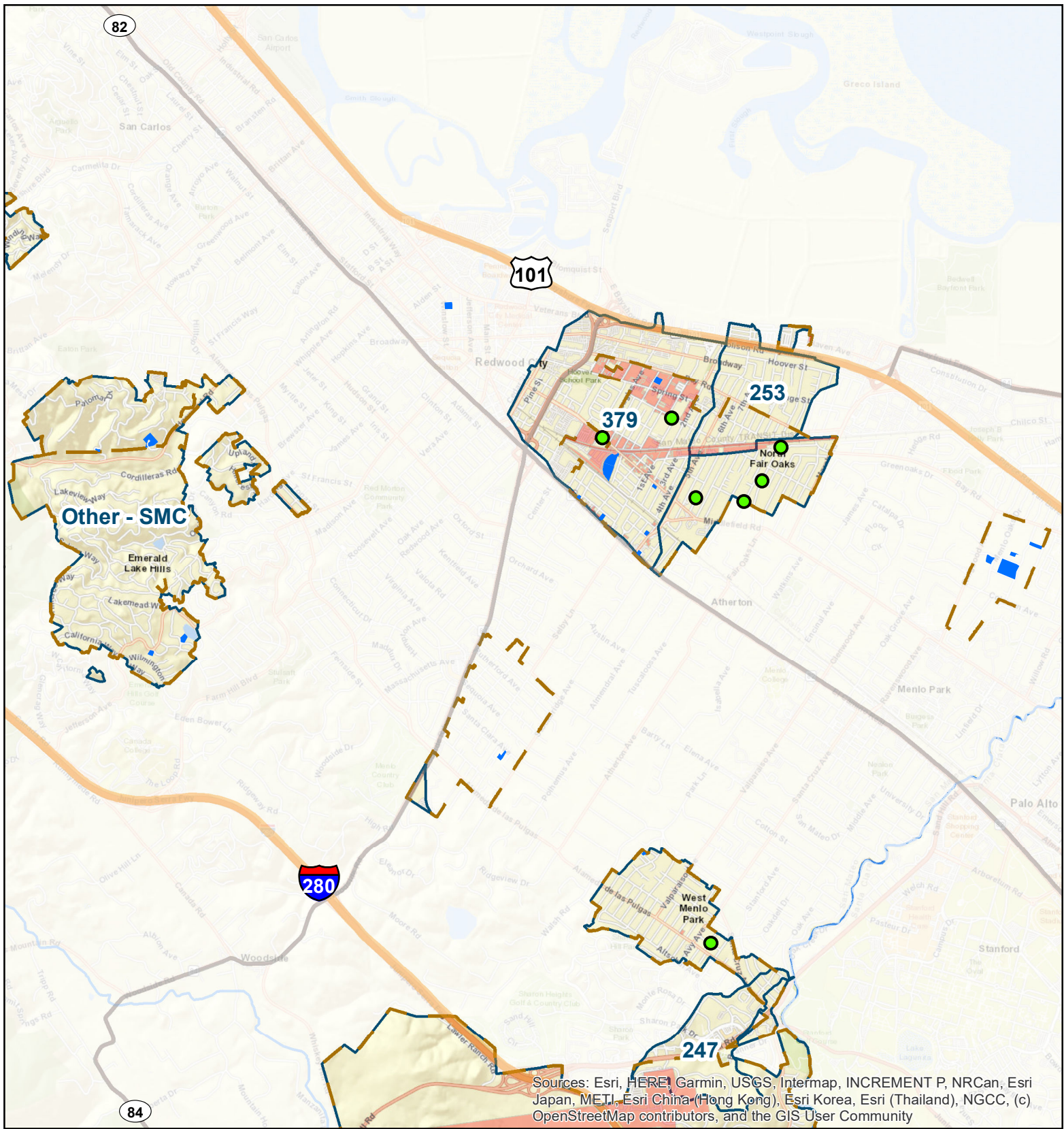
- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**

- City Boundaries:** San Mateo County
- Catchment Boundaries:** Mattern/WLA
- Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

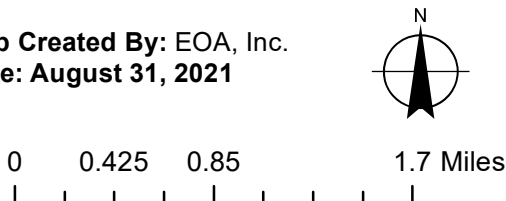
**Figure A-17d. WMAs and GI/LID in Unincorporated San Mateo County**

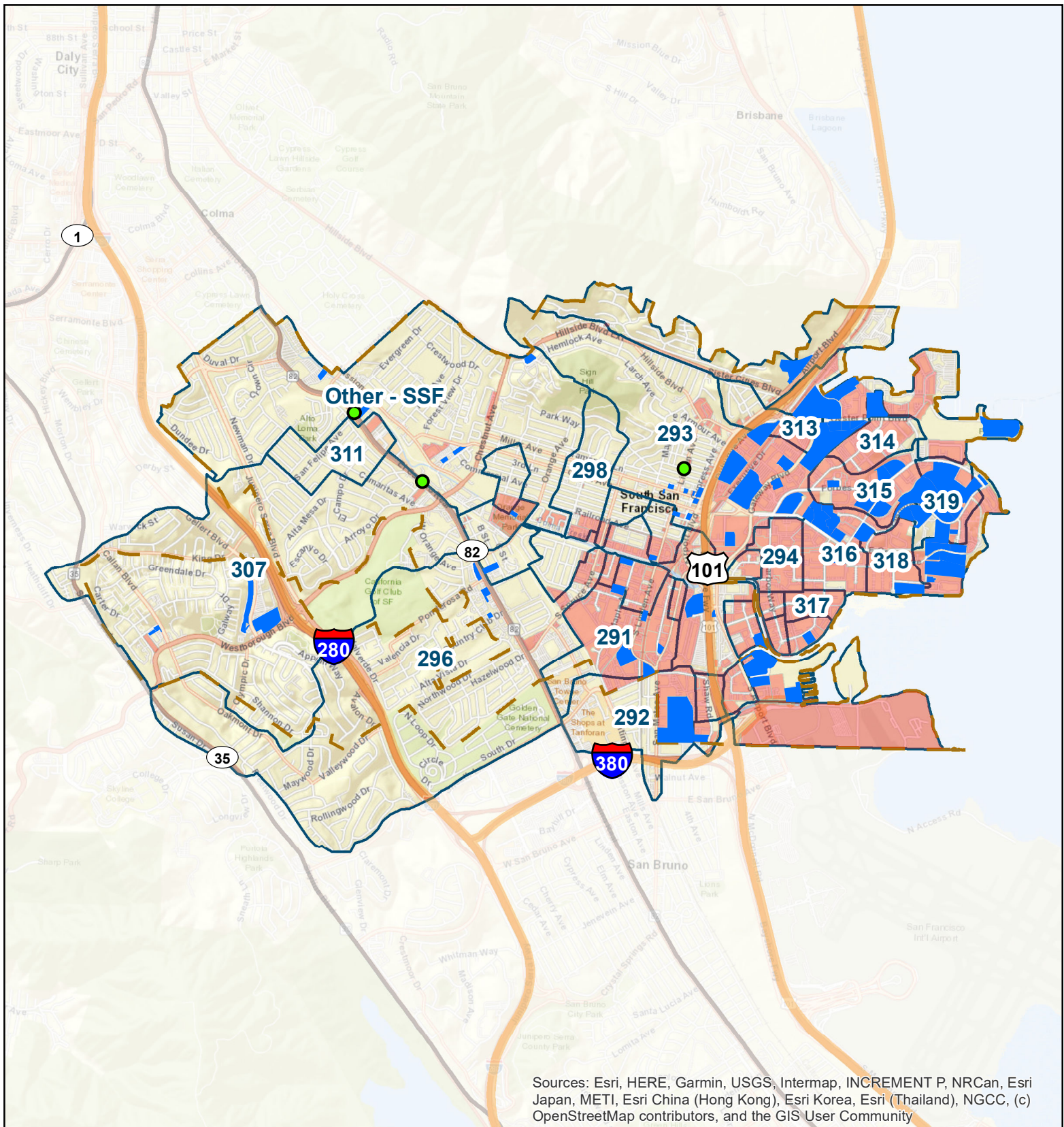
**San Mateo County Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





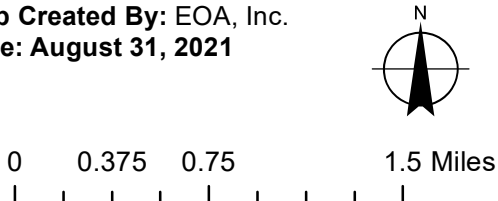
**Figure A-18. WMAs and GI/LID in South San Francisco**

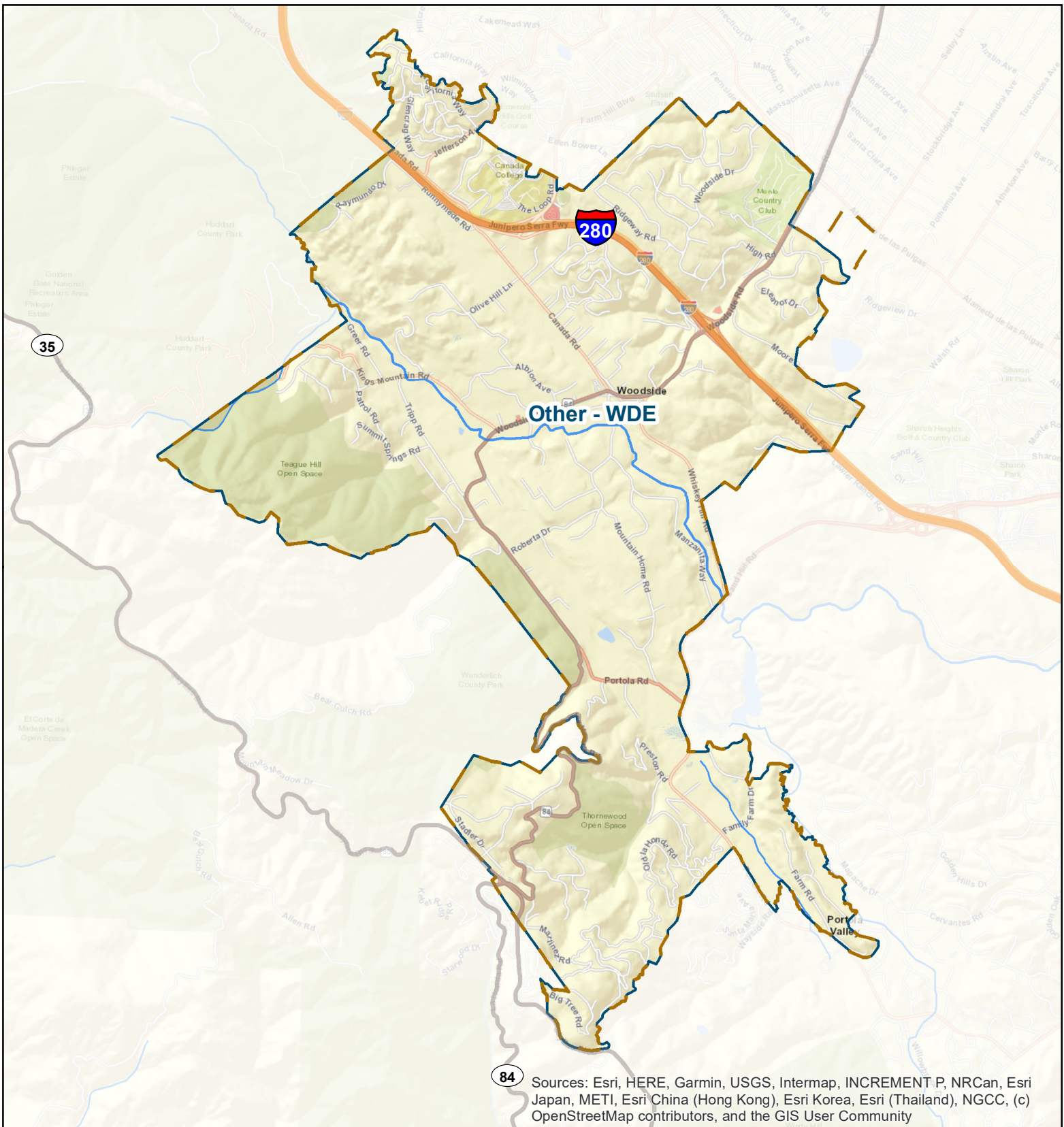
**South San Francisco Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- Watershed Management Area (WMA)
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021





84 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

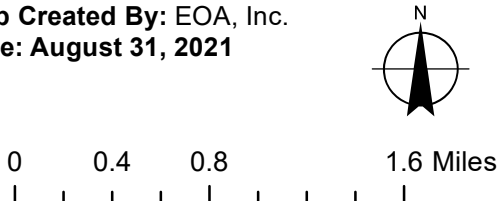
**Figure A-19. WMAs and GI/LID in Woodside**

**Woodside Watershed Management Area Map**

- Green Street Project
- Old Industrial Land Use
- Permittee Boundary
- GI/LID in Parcel-based New and Redevelopment Projects (Parcel Area)
- Watershed Management Area (WMA)

**Data Sources:**  
**City Boundaries:** San Mateo County  
**Catchment Boundaries:** Mattern/WLA  
**Background:** ESRI World Street Map

**Map Created By:** EOA, Inc.  
**Date:** August 31, 2021



## **Appendix B**

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Descriptions of Land Uses Referenced in this Report

## **Descriptions of Land Uses Referenced in this Report**

**Old industrial:** Area developed as an industrial land use before 1980 and not redeveloped before 2002, including railroads.

**Old urban:** Area developed before 1980 as any land use other than industrial or airport.

**New urban:** Area developed or redeveloped after 1980.

**Open space:** Area that is not developed or mostly pervious including large urban parks, channels, golf courses, and cemeteries.

**Other:** Airports.

# Appendix 12

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- Program for Management of PCBs during Building Demolition – Data Summary through FY 2020/21 for San Mateo County MRP Permittees



August 31, 2021

To: SMCWPPP NPDES Technical Advisory Committee and Representatives of Municipal Programs to Manage PCBs During Building Demolition

From: SMCWPPP Program Staff

Subject: Program for Management of PCBs during Building Demolition – Data Summary through FY 2020/21 for San Mateo County MRP Permittees

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## Background

Provision C.12.f. of the Municipal Regional Permit (MRP; Order No. R2-2015-0049) requires Permittees to manage PCBs-containing materials and wastes during building demolition activities. San Mateo County and other MRP Permittees have developed and implemented a program for managing materials with PCBs concentrations of 50 ppm or greater in applicable structures at the time applicable 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.

This technical memorandum documents the following items for San Mateo County MRP Permittees per the requirements in MRP Provision C.12.f.iii.(4):

- The number of demolition permits for applicable structures applied for during FY 2020/21, the reporting year and the second year of the program (data from FY 2019/20, the first year of the program, are also included); and
- A running list of the applicable structures that applied for a demolition permit (since July 1, 2019, the date the PCBs control program began implementation) that had material(s) with PCBs at 50 ppm or greater, with the address, estimated demolition date, and brief description of PCBs control method(s) used.

This memorandum was developed by SMCWPPP Program Staff on behalf of San Mateo County MRP Permittees. It will be included with the Program's FY 2020/21 Annual Report.

## Number of Applicable Structure Applications

Table 1 summarizes the number of demolition permits for Applicable Structures applied for during FYs 2019/20 and 2020/21 by each Permittee and the number of associated samples with PCBs concentrations equal to or greater than 50 ppm.

## List of Applicable Structures

Table 2 provides a running list of the Applicable Structures for which a demolition permit application was submitted since July 1, 2019 that had materials with PCBs concentrations of 50 ppm or greater. For each Applicable Structure, the address, estimated demolition date, number of samples with PCBs concentrations of 50 ppm or greater, and the range of PCBs concentrations in those samples are

included.

**Table 1: Number of Applicable Structure Applications Received in FYs 2019/20 and 2020/21.**

Permittee	Number of Applicable Structures		Number of Samples with PCBs ≥ 50 ppm	
	FY 2019/20	FY 2020/21	FY 2019/20	FY 2020/21
Atherton	0	0	0	0
Belmont	0	0	0	0
Brisbane	0	0	0	0
Burlingame	1	2	0	0
Colma	0	0	0	0
Daly City	0	0	0	0
East Palo Alto	0	0	0	0
Foster City	0	0	0	0
Half Moon Bay	0	0	0	0
Hillsborough	0	0	0	0
Menlo Park	1	2	1	0
Millbrae	0	0	0	0
Pacifica	0	0	0	0
Portola Valley	0	0	0	0
Redwood City	1	3	0	2
San Bruno	0	0	0	0
San Carlos	1	2	0	1
San Mateo	0	2	0	0
South San Francisco	6	7	1	0
Woodside	1	1	0	0
San Mateo County	1	0	0	0
<b>Total</b>	<b>12</b>	<b>19</b>	<b>2</b>	<b>3</b>

NA – Not Applicable (i.e., Applicable Structures and associated samples were not reported).

### Description of PCBs Control Method

#### Permittee Control Method

On behalf of all MRP Permittees, BASMAA conducted a Regional Project that developed an implementation framework, guidance materials, and tools for local agencies to ensure that PCBs-containing materials and wastes are properly managed during building demolition. The Regional Project also provided training materials and a workshop for municipal staff and an outreach workshop for the industry on implementing the framework/protocols developed via the project.

San Mateo County Permittees have implemented the following process for this control measure:

- The municipality informs applicable demolition permit applicants that their projects are subject

## SMCWPPP FY 2020-21 Program for Management of PCBs during Demolition – Data Summary

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 or greater 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 Program Staff. Program staff 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.

### Building Demolition Applicant Control Method

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<sup>1</sup>.

Additionally, the disposal of PCBs waste is subject to California Code of Regulations (CCR) California Code of Regulations (CCR) Title 22, Section Division 4.5, Chapter 12, Standards Applicable to Hazardous Waste Generators.

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<sup>1</sup> Located here: [https://www.epa.gov/sites/production/files/2016-01/documents/wste-memo\\_102412.pdf](https://www.epa.gov/sites/production/files/2016-01/documents/wste-memo_102412.pdf).

SMCWPPP FY 2020-21 Program for Management of PCBs during Demolition – Data Summary

Table 2. List of Applicable Structures with PCBs ≥ 50 ppm, FYs 2019/20

Fiscal Year of Demolition Permit Application	Permittee	Building ID	Address	Estimated Demolition Date	Number of Samples with PCBs ≥ 50 ppm	PCBs Concentration Range (mg/kg)
FY 2019/20	Menlo Park	SM-2	305 Constitution Dr., Menlo Park, CA, 94025	Jan 2020	1	54.5
	South San Francisco	SM-6	1 Chestnut Ave., South San Francisco, CA, 94080	Jan 2020	1	247
FY 2020/21	San Carlos	SM-17	1075 Commercial St./915 Old County Rd., Redwood City, CA, 94070	Mar 2021	12	52 – 250,000
	Redwood City	SM-28	975 Maple St., Redwood City, CA, 94063	Jul 2021	2	97 - 102
	Redwood City	SM-29	1150 Veterans Blvd., Redwood City, CA, 94063	Oct 2021	10	50 – 330,000

## Appendix 13

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- FY 2020/21 Regional Supplement for Tracking and Participating in Pesticide Regulatory Efforts, San Francisco Bay Area, Municipal Regional Stormwater Permit, Bay Area Municipal Stormwater Collaborative, September 2021.
- FY 2020/21 Regional Supplement for New Development and Redevelopment, San Francisco Bay Area, Municipal Regional Stormwater Permit, Bay Area Municipal Stormwater Collaborative, September 2021.
- FY 2020/21 Regional Supplement for Training and Outreach, San Francisco Bay Area, Municipal Regional Stormwater Permit, Bay Area Municipal Stormwater Collaborative, September 2021.

# **Annual Reporting for FY 2020-2021**

## **Regional Supplement for Tracking and Participating in Pesticide Regulatory Efforts**

### **San Francisco Bay Area Municipal Regional Stormwater Permit**

#### **Bay Area Municipal Stormwater Collaborative**

September 2021

**MRP Regional Supplement for Tracking and Participating in Pesticide Regulatory Efforts  
Annual Reporting for FY 2020-2021**

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Stormwater Quality Association, Final Report August 2021

# MRP Regional Supplement for Tracking and Participating in Pesticide Regulatory Efforts Annual Reporting for FY 2020-2021

## 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 tracking of pesticide regulatory activities related to the following MRP provision:

- C.9.f. Track and Participate in Relevant Regulatory Processes.

The essential requirements of Provision C.9.f are to track U.S. Environmental Protection Agency (USEPA) and California Department of Pesticide Regulation (DPR) actions related to urban uses of pesticides and actively participate in the shaping of regulatory efforts currently underway. This provision allows for cooperation among Permittees through the California Stormwater Quality Association (CASQA), BASMAA, and/or the Urban Pesticide Pollution Prevention Project (UP3 Project) – an approach the Permittees have engaged in for a number of years. Recognizing this approach is the most likely to result in meaningful changes in the regulatory environment, Permittees elected to continue on this course in FY 2020-21 to achieve compliance with this provision.

These regionally implemented activities were conducted by CASQA with funding from and in collaboration with members of the Bay Area Stormwater Management Agencies Association (BASMAA), a 501(c)(3) non-profit organization comprised of the municipal stormwater programs in the San Francisco Bay Area.<sup>1</sup> Most of the 2020-21 annual reporting requirements of the specific MRP Provision covered in this Supplement were completely met by these regional activities, except where otherwise noted herein or by Permittees in their reports.

## TRACKING AND PARTICIPATING IN PESTICIDE REGULATORY EFFORTS

### C.9.f. Track and Participate in Relevant Regulatory Processes

MRP Provision C.9.f states:

- i. **Task Description** – The Permittees shall conduct the following activities, which may be done at a county, regional, or statewide level:*

- (1) The Permittees shall track U.S. EPA pesticide evaluation and registration activities as they relate to surface water quality and, when necessary, encourage U.S. EPA to coordinate implementation of the Federal Insecticide, Fungicide, and Rodenticide Act and the CWA and to accommodate water quality concerns within its pesticide registration process;*

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<sup>1</sup> In late FY 20-21, 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). BAMSC members jointly prepared this Regional Supplement for FY 20-21.



## **MRP Regional Supplement for Tracking and Participating in Pesticide Regulatory Efforts Annual Reporting for FY 2020-2021**

- (2) The Permittees shall track DPR pesticide evaluation activities as they relate to surface water quality and, when necessary, encourage DPR to coordinate implementation of the California Food and Agriculture Code with the California Water Code and to accommodate water quality concerns within its pesticide evaluation process;*
- (3) The Permittees shall assemble and submit information (such as monitoring data) as needed to assist DPR and county agricultural commissioners in ensuring that pesticide applications comply with WQS; and*
- (4) As appropriate, the Permittees shall submit comment letters on U.S. EPA and DPR re-registration, re-evaluation, and other actions relating to pesticides of concern for water quality.*

**ii. Reporting** – *In their Annual Reports, the Permittees shall summarize participation efforts, information submitted, and how regulatory actions were affected. Permittees who contribute to a county, regional, or statewide effort shall submit one report at the county or regional level. Duplicate reporting is discouraged.*

### **Activities and Accomplishments during FY 2020-2021**

The actual work of tracking and participating in the ongoing regulatory efforts related to pesticides was accomplished through CASQA. CASQA conducted its activities on behalf of members and coordinated funding contributions and activities through its True Source Control Subcommittee (encompassing the former Pesticide Subcommittee, a group of stormwater quality agencies affected by pesticides or pesticides-related toxicity listings, TMDLs, or permit requirements, as well as others knowledgeable about pesticide-related stormwater issues). The CASQA 2021 Pesticide Annual Report and Effectiveness Assessment (Attachment 1) provides a comprehensive and detailed accounting of efforts to track and participate in relevant regulatory processes as well as accomplishments related to pesticides and stormwater quality.

## **Attachments**

### **Attachment 1**

**2021 Pesticide Annual Report and Effectiveness Assessment  
California Stormwater Quality Association  
Final Report  
August 2021**

# 2021 Pesticide Annual Report and Effectiveness Assessment

California Stormwater Quality Association



**Final Report**  
**August 2021**

## Preface

The California Stormwater Quality Association (CASQA) is comprised of stormwater quality management organizations and individuals, including cities, counties, federal agencies, state agencies, ports, universities and school districts, wastewater agencies, water suppliers, special districts, industries, and consulting firms throughout California. CASQA's membership provides stormwater quality management services to more than 26 million people in California. This report provides CASQA's members with focused information on its efforts to prevent pesticide pollution in urban waterways. It is a component of CASQA's True Source Control Initiative, which seeks to address stormwater and urban runoff pollutants at their sources. This report was funded by CASQA, Alameda Countywide Clean Water Program, Contra Costa Clean Water Program, Fairfield-Suisun Urban Runoff Management Program, Marin County Stormwater Pollution Prevention Program, Napa Countywide Stormwater Pollution Prevention Program, Sacramento Stormwater Quality Partnership, San Mateo Countywide Water Pollution Prevention Program, Santa Clara Valley Urban Runoff Pollution Prevention Program, Sonoma County Water Agency, and Vallejo Flood & Wastewater District.

This report was prepared by Stephanie Hughes under the direction of the CASQA True Source Control Subcommittee (Program Manager: Dave Tamayo), with input from Tammy Qualls of Qualls Environmental Consulting.

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## Abbreviations Used in this Report

**BACWA** – Bay Area Clean Water Agencies

**BE** – Biological Evaluation

**CASQA** – California Stormwater Quality Association

**CEQA** – California Environmental Quality Act

**CCRWQCB** – Central Coast Regional Water Quality Control Board

**CVRWQCB** – Central Valley Regional Water Quality Control Board

**CWA** – Clean Water Act

**DPR** – California Department of Pesticide Regulation

**EPA** – United States Environmental Protection Agency

**ESA** – Endangered Species Act

**FWS** – U.S. Fish and Wildlife Service

**FY** – Fiscal Year (July 1 through June 30)

**IPM** – Integrated Pest Management

**MAA** – Management Agency Agreement between DPR and the Water Boards

**MS4** – Municipal Separate Storm Sewer System

**NACWA** – National Association of Clean Water Agencies

**NPDES** – National Pollutant Discharge Elimination System

**OPP** – U.S. EPA Office of Pesticide Programs

**OW** – U.S. EPA Office of Water

**PAH** – Polycyclic aromatic hydrocarbon

**PEAIP** – Program Effectiveness Assessment and Improvement Plan

**PMAC** – Pest Management Advisory Committee

**PPI** – Pests, Pesticides, and Integrated Pest Management DPR initiative

**PMP** – Pesticides-specific Management Practice

**SPCB** – Structural Pest Control Board

**SFBRWQCB** – San Francisco Bay Regional Water Quality Control Board

**STORMS** – Strategy to Optimize Resource Management of Storm Water (a program of the State Water Board)

**SWAMP** – California Water Boards Surface Water Ambient Monitoring Program

**SWRCB** – State Water Resources Control Board or State Water Board

**TMDL** – Total Maximum Daily Load (regulatory plan for solving a water pollution problem)

**TSC** – CASQA True Source Control Subcommittee

**UP3** – Urban Pesticides Pollution Prevention Partnership

**UPA** – Urban Pesticide Amendments

**USGS** – U.S. Geological Survey

**Water Boards** – California State Water Resources Control Board together with the California Regional Water Quality Control Boards

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## Executive Summary

This report by the True Source Control (TSC) Subcommittee of the California Stormwater Quality Association (CASQA) describes CASQA's activities related to the goal of preventing pesticide pollution in urban waterways for the period of July 2020 through June 2021.

To address the problems caused by pesticides in California's urban waterways, CASQA collaborates with the California State Water Resources Control Board and the California Regional Water Quality Control Boards (Water Boards). By working with the Water Boards and other water quality organizations, we address the impacts of pesticides efficiently and proactively through the statutory authority of the California Department of Pesticide Regulation (DPR) and EPA's Office of Pesticide Programs (OPP). More than 17 years of collaboration with Urban Pesticides Pollution Prevention (UP3) Partnership, as well as EPA and DPR staff, has resulted in significant changes in pesticide regulation. A summary of CASQA's activities to address key management questions are described below, with more details and outcomes provided in Section 2.

**Near term / Current problems** – Are actions being taken by State and Federal pesticides regulators and stakeholders that are expected to end pesticide-caused toxicity or exceedances of pesticide water quality objectives in surface waters receiving urban runoff?

- 💧 CASQA shared its urban runoff expertise with pesticide regulators by preparing comment letters to EPA for six pesticide reviews, providing the Water Boards and other Partners with information that triggered additional letters on two more pesticide reviews. (See Tables 3, 4 and 5 and the Appendix.)
- 💧 CASQA provided feedback to EPA regarding the Fish and Wildlife Service (FWS) Biological Opinion for Malathion.
- 💧 In response to continued requests from CASQA and Partners, EPA continued following a precedent for improved label language for pool, spa, and fountain chemicals that was established by the decisions for lithium hypochlorite and copper.
- 💧 CASQA reviewed scientific literature in order to update and prioritize the Pesticide Watch List. The Watch List will be shared with pesticides regulators and with government agency and university scientists to stimulate generation of surface water monitoring and aquatic toxicity data for the highest priority pesticides. (See Table 2.)

**Long term / Prevent future problems** – Do pesticides regulators have an effective system in place to exercise their regulatory authorities to prevent pesticide toxicity in urban water bodies?

- 💧 DPR continues to demonstrate its commitment to addressing pesticide impacts on receiving waters through timely mitigation and implementation of improved evaluation procedures.
- 💧 The State Water Board continued to work toward development of the Urban Pesticide Amendments (UPA). The desired outcome for these amendments is to institutionalize the State's strategy of utilizing pesticide regulations as the primary mechanism for addressing pesticide water quality problems associated with urban runoff. This fiscal year, CASQA continued to directly support State Water Board staff's efforts to develop the UPAs. For example, CASQA organized a meeting of DPR, Water Board, and CASQA representatives on July 24, 2020. The goal of the meeting was for DPR to provide details to senior Water Board management on DPR's capacity and progress for addressing urban pesticide issues. The outcome was educational for all stakeholders, further advancing regulatory collaboration and solutions necessary for the UPAs.
- 💧 The State Water Board continued to work toward establishment of a coordinated monitoring program, which would be a new statewide urban runoff pesticides monitoring program to support the goals of the UPA. Such a program is intended to coordinate with existing Water Board and DPR urban pesticides and toxicity monitoring programs. The State Water Board is currently reconsidering the structure and function of the monitoring program. CASQA remains dedicated to supporting State Water staff.

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- Although many improvements have been made by OPP since the early 2000s, improvement in scientific evaluations supporting OPP's regulatory efforts and better understanding of urban runoff management systems are still necessary to adequately protect urban surface waters from pesticide impairments. In recent years, the regulatory climate of the federal administration limited progress by OPP in addressing these concerns. We will continue to work with OPP to further our goals.

In the coming year, CASQA plans to continue to address near-term pesticide concerns and seek long-term regulatory change. Future near-term and long-term tasks are identified in Section 3, Tables 5 and 6. Key topics include:

- Continued support of the eventual completion and adoption of the UPAs by the State Water Board;
- Continued development of a coordinated monitoring program in partnership with the Water Boards, DPR, and EPA Region 9;
- Registration review-related activities at EPA for pyrethroids and fipronil;
- DPR registration applications and proposed decisions for new products.



## 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 used pesticides are the primary cause of toxicity in California surface waters, including urban water bodies.<sup>1</sup> Under the Clean Water Act (CWA), when pesticides impact water bodies, local agencies may be held responsible for exceedances in surface waters, as well as costly monitoring and mitigation efforts. To date, some California municipalities<sup>2</sup> have incurred substantial costs to comply with pesticides-related Total Maximum Daily Loads (TMDLs) and additional permit requirements. In some cases (e.g., diazinon, chlorpyrifos), municipal compliance costs have continued more than a decade after termination of virtually all urban use. In the future, more municipalities throughout the state are expected to be subject to similar requirements, as additional TMDLs and Basin Plan Amendments are adopted (Table 1). Meanwhile, local agencies have no authority to restrict or regulate when or how pesticides are used<sup>3</sup> in order to proactively prevent pesticide pollution and avoid these costs and liabilities.

Under federal and state statutes, EPA and DPR have the authority and responsibility to regulate pesticides and protect water bodies from adverse effects (including impacts from pesticides in urban runoff). Unfortunately, until the relatively recent past, these agencies did not recognize the need, nor possess the institutional capacity, to exercise their authority to protect urban water quality. As a result, past registration actions have allowed a number of pesticides (such as pyrethroids and fipronil) to be used legally in ways that have resulted in widespread pollution in urban water bodies. This situation is depicted in Figure 1.

To change this situation, 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 (Figure 2).

#### ***New Pesticide 303(d) Listings Proposed in 2021***

In June 2021, the State Water Board released their 2020-2022 Integrated Report for which the Central Coast, Central Valley and San Diego Regions were scheduled for on-cycle 303(d) reviews. The report proposed numerous additional 303(d) pesticide listings for all three regions. While the most common listings were for pyrethroids, other proposed listings include imidacloprid, fipronil and diuron. Following a public comment period, the listings are expected to be adopted in January 2022 and submitted to the EPA in March 2022 ([State Water Board's 2020-2022 Integrated Report, June 4, 2021](#)).

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<sup>1</sup> See reports from the California Surface Water Ambient Monitoring Program Sediment Pollution Trends Program including Anderson, B.S., Hunt, J.W., Markewicz, D., Larsen, K., 2011. Toxicity in California Waters, Surface Water Ambient Monitoring Program. California Water Resources Control Board. Sacramento, CA.

<sup>2</sup> For example, Sacramento-area municipalities spent more than \$75,000 in the 2008-2013 permit term on pyrethroid pesticide monitoring alone; Riverside-area municipalities spent \$617,000 from 2007 to 2013 on pyrethroid pesticide chemical and toxicity monitoring.

<sup>3</sup> Local agencies in California have authority over their own use of pesticides but are pre-empted by state law from regulating pesticide use by consumers and businesses.

**Table 1. California TMDLs, Statewide Water Quality Control Plans, and Basin Plan Amendments Addressing Currently Registered Pesticides and/or Toxicity in Urban Watersheds<sup>4</sup>**

<b>Water Board Region</b>	<b>Water Body</b>	<b>Pesticide</b>	<b>Status</b>
<b>Statewide</b>	All MS4s/All Urban Waterways: 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 <sup>5</sup>	Approved
	Toxicity Provisions (Inland Surface Waters and Enclosed Bays & Estuaries)	Toxicity <sup>5</sup>	In preparation
<b>San Francisco Bay (2)</b>	All Bay Area Urban Creeks	All Pesticide-Related Toxicity	Approved
<b>Central Coast (3)</b>	Santa Maria River Watershed Lower Salinas River Watershed	Pyrethroids, Toxicity Pyrethroids, Toxicity Malathion, Chlorpyrifos, Diazinon <sup>6</sup>	Approved Approved In development
	San Lorenzo River Watershed (Santa Cruz)	Chlorpyrifos <sup>6</sup>	Approved
<b>Los Angeles (4)</b>	Marina del Rey Harbor	Copper (Marine antifouling paint) <sup>7</sup>	Approved
	Oxnard Drain 3 (Ventura County)	Bifenthrin, Toxicity	EPA-Adopted Technical TMDL
	Calleguas Creek, its Tributaries and Mugu Lagoon	Water & Sediment Toxicity <sup>5</sup> Diazinon & Chlorpyrifos <sup>6</sup>	Approved
	McGrath Lake (Ventura County)	Sediment Toxicity <sup>5</sup>	Approved
	Colorado Lagoon (Long Beach)	Sediment Toxicity <sup>5</sup>	Approved
	Dominguez Channel and Greater Los Angeles and Long Beach Harbors Waters Ballona Creek Estuary	Sediment Toxicity <sup>5</sup>	Approved Approved

<sup>4</sup> Excludes pesticides that are not currently registered in California, such as organochlorine pesticides.

<sup>5</sup> These TMDLs/Plan provisions can trigger toxicity testing stressor source identification studies, and additional follow up, even when toxicity is linked to current pesticides.

<sup>6</sup> Use prohibited in urban areas (diazinon) or no meaningful use due to use limitations (chlorpyrifos).

<sup>7</sup> Primarily addresses pesticides that are directly discharged and should not ordinarily appear in stormwater (marine antifouling paint).

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<b>Water Board Region</b>	<b>Water Body</b>	<b>Pesticide</b>	<b>Status</b>
<b>Central Valley (5)</b>	Sacramento River and San Joaquin River Basins	Pyrethroids	Approved
	Sacramento-San Joaquin River Delta Waterways	Diazinon & Chlorpyrifos <sup>6</sup>	Approved
	Sacramento & Feather Rivers	Diazinon & Chlorpyrifos <sup>6</sup>	Approved
	Sacramento County Urban Creeks	Diazinon & Chlorpyrifos <sup>6</sup>	Approved
	Lower San Joaquin River	Diazinon & Chlorpyrifos <sup>6</sup>	Approved
<b>Lahontan (6)</b>	Pesticide Discharge Prohibition	All Pesticides	Approved
<b>Santa Ana (8)</b>	Newport Bay	Copper (Marine antifouling paint) <sup>7</sup>	In preparation
	San Diego Creek, and Upper and Lower Newport Bay	Toxicity (Diazinon & Chlorpyrifos) <sup>6</sup>	EPA-Adopted Technical TMDL
<b>San Diego (9)</b>	Shelter Island Yacht Basin (San Diego Bay)	Copper (Marine antifouling paint) <sup>7</sup>	Approved
	Chollas Creek	Diazinon <sup>6</sup>	Approved

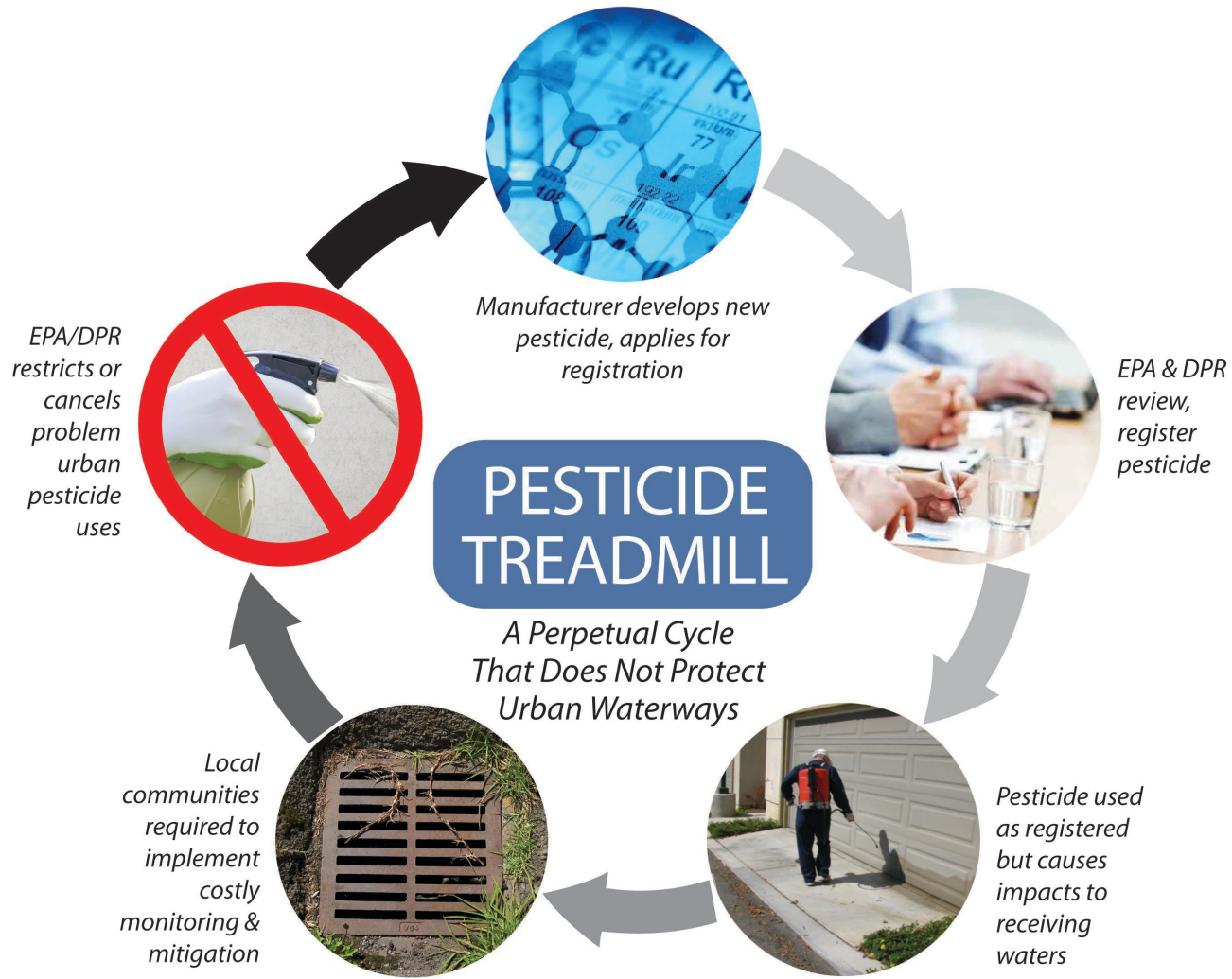


Figure 1. Current Pesticide Regulatory System.<sup>8</sup>

<sup>8</sup> Photos in Figures 1 and 2 of spraying pesticide along a garage was taken by Les Greenberg, UC Riverside



**Figure 2. Proactive Use of the Pesticide Regulatory Structure to Restrict Pesticide Uses that have the Potential to Cause Urban Water Quality Problems.**

## 1.2 CASQA'S GOALS AND APPLICATION TO PROGRAM EFFECTIVENESS ASSESSMENT

CASQA's *Vision for Stormwater*, first approved by the Board of Directors in 2015, is periodically updated to reflect developments in stormwater management. In October 2020, CASQA released the updated *Vision for Sustainable Stormwater Management*.<sup>9</sup> Within CASQA's Vision, Action 1.2 is to "Minimize Pollution Through True Source Control." Among the objectives described within Action 1.2, Objective 2 has the following scope:

### **Objective 2: Implement an Urban Pesticide Program**

For decades now, the uses of certain pesticides in urban areas – even when applied in compliance with pesticide regulations – have adversely impacted urban water bodies. Currently used pesticides are the primary cause of toxicity in California surface waters, including urban water bodies. 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.

Potential Collaborators: State Water Board, DTSC, EPA, DPR

The effectiveness of CASQA's efforts toward this scope can be expressed in relation to management questions established as part of Municipal Separate Storm Sewer Systems' (MS4s') program effectiveness assessments that are required in some MS4 permits. With respect to addressing urban pesticide impacts on water quality, the following two management questions are suggested for inclusion in MS4s' program effectiveness assessment:

**Question 1: (Near term / Current problems)** – Are actions being taken by State and Federal pesticides regulators and stakeholders that are expected to end recently observed pesticide-caused toxicity or exceedances of pesticide water quality objectives in surface waters receiving urban runoff?

**Question 2: (Long term / Prevent future problems)** – Do pesticides regulators have an effective system in place to exercise their regulatory authorities to prevent pesticide toxicity in urban water bodies?

This report is organized to answer these management questions and is intended to serve as an annual compliance submittal for both Phase I and Phase II MS4s. It describes the year's status and progress, provides detail on stakeholder actions (by CASQA and others); and provides a roadmap / timeline showing the context of prior actions as well as anticipated end goal of these activities. This report may also be used as an element of future effectiveness assessment annual reporting.

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<sup>9</sup> [https://www.casqa.org/sites/default/files/downloads/final\\_-\\_vision\\_for\\_sustainable\\_stormwater\\_management\\_-\\_10-07-2020.pdf](https://www.casqa.org/sites/default/files/downloads/final_-_vision_for_sustainable_stormwater_management_-_10-07-2020.pdf)

## Section 2. Latest Results of CASQA Efforts

At any given time, there are dozens of pesticides with current or pending actions from the EPA or DPR. Addressing near term regulatory concerns is important because some pesticides may pose immediate threat to water quality that can lead to compliance liability for MS4s, and because some of the regulatory decisions made by EPA and DPR will last many years. For example, pesticide registration decisions are intended to be revisited on a fifteen-year cycle. To inform its engagement on near-term regulatory concerns, CASQA uses the Pesticide Watch List in the prioritization of near-term efforts (Section 2.1).

Meanwhile, CASQA and BACWA continue to work on parallel efforts to effect long-term systemic changes in the regulatory process itself (see inset). By identifying inadequacies and inefficiencies in the pesticide regulatory process, and persistently working with EPA and DPR to improve the overall system of regulating pesticides, CASQA and BACWA are gradually achieving results (Section 2.2).

### 2.1 NEAR-TERM REGULATORY CONCERNS

CASQA seeks to ensure that the Water Boards and EPA's Office of Water (OW) work with DPR and EPA's OPP to manage problem pesticides that are creating near-term water quality impairments. These efforts address CASQA Vision Action 1.2 as well as Phase II MS4 Program Effectiveness Assessment and Improvement Plan (PEAIP) Management Question 1 regarding observed pesticide-caused toxicity or exceedances of pesticide water quality objectives in surface waters receiving urban runoff.

**Assessment Question 1: (Near term / Current problems)** – Are actions being taken by State and Federal pesticides regulators and stakeholders that are expected to end recently observed pesticide-caused toxicity or exceedances of pesticide water quality objectives in surface waters receiving urban runoff?

**Answer:** As detailed below, at the State level, significant progress has been made by DPR in addressing near-term and 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.

At the Federal level, less progress has been made at addressing near term problems. Some early actions were taken to address pyrethroid and fipronil problems at the urging of CASQA and DPR. However, EPA does not show a clear understanding of key urban uses in its analyses, and it is still unclear if its upcoming risk management decisions for pyrethroids, fipronil, and imidacloprid and other neonicotinoids will provide any additional protection of urban water bodies.

#### 2.1.1 Updated Pesticide Watch List

A key tool for identifying near-term regulatory concerns is CASQA's Pesticide Watch List. As time permits, CASQA reviews scientific literature, government reports, and monitoring studies 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). CASQA uses these insights to update the list each

### CASQA Cost-Sharing with BACWA to Track EPA and DPR Pesticide Regulatory Actions



There has been a long history of collaboration between CASQA, the Bay Area Clean Water Agencies (BACWA), and the State Water Board, as all entities seek to track and respond to pesticide regulatory actions, with the goal of avoiding pesticide-related toxicity.

For instance, CASQA and BACWA regularly track pesticide regulatory activities by EPA, DPR and other agencies that have significant potential to affect surface water quality. Over the years, the funding for these tracking tasks has shifted back and forth between the State Water Board (the original funding source), with CASQA and BACWA most recently funding separate, but similar efforts. In 2021, CASQA and BACWA combined resources to track stormwater and wastewater priorities into a single Action Plan.

Both CASQA and BACWA are committed to continued collaborations to streamline our proactive regulatory approach.

year (Table 2), which serves as a management tool to help focus efforts on the most important pesticides from the perspective of MS4 agencies.<sup>10</sup> There are 2 additions in the 2021 Pesticide Watch List – naled and antimicrobials in paints and coatings. Naled, registered for mosquito abatements, degrades to dichlorvos (DDVP) post-application and remains at levels toxic to aquatic organisms. There are a number of antimicrobial pesticides under review by EPA for uses in outdoor paints and coatings, the leaching of which can lead to water quality impacts; CASQA anticipates many more such pesticides in the coming months.

**2.1.2 Description of Near-Term Regulatory Processes**

Immediate pesticide concerns may arise from regulatory processes undertaken at DPR or EPA’s OPP. For example, when EPA receives an application to register a new pesticide, there may be two opportunities for public comment that are noticed in the Federal Register, as depicted in green in Figure 3. EPA’s process usually takes less than a year while DPR typically evaluates new pesticides or major new uses of active ingredients within 120 days. Now that DPR implements relatively robust surface water quality review procedures for new pesticide registrations, there is reduced need for CASQA to provide input to EPA on new pesticides.

**Table 2. Current Pesticide Watch List (July 2021)**

Priority	Basis for Priority Assignment	Pesticides		
1	Monitoring data exceeding benchmarks; linked to toxicity in surface waters; urban 303(d) listings	Pyrethroids (20 chemicals <sup>11</sup> )	Fipronil	Imidacloprid (neonic) Malathion
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) <sup>12</sup> Chlorantraniliprole Copper pesticides *	Creosote (PAHs) Indoxacarb Neonics (other than Imidacloprid) <sup>13</sup> Pendimethalin	Pesticides with dioxins impurity <sup>14</sup> PHMB + Zinc pesticides (including Ziram) +
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 Chromium pesticides	Diuron Naphthenates	Simazine Silver pesticides + Trifluralin

<sup>10</sup> The first Watch List was published by the UP3 in 2005.

<sup>11</sup> Allethrin, Bifenthrin, Cyfluthrin, Cyhalothrin, Cypermethrin, Cyphenothrin, Deltamethrin, Esfenvalerate, Etofenprox, Flumethrin, Imiprothrin, Metofluthrin, Momfluothrin, Permethrin, Prallethrin, Resmethrin, Sumethrin [d-Phenothrin], Tau-Fluvalinate, Tetramethrin, Tralomethrin.

<sup>12</sup> Carbendazim is a registered pesticide, and also a degradate of thiophanate-methyl

<sup>13</sup> Acetamiprid, Clothianidin, Dinotefuran, Thiamethoxam (degrades into Clothianidin)

<sup>14</sup> 2,4,-D, Chlorothalonil, Dacthal, Pentachlorophenol

\* Used in pools, spas, and/or fountains



Priority	Basis for Priority Assignment	Pesticides		
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	Abamectin ADBAC pesticides <sup>15</sup> + Antimicrobials in paints/coatings Azoxystrobin Bacillus sphaericus + Bacillus thuringiensis + Bromacil N-Bromosulfamates Busan-77 + Carbaryl Chlorinated isocyanurates + Chlorine + Chlorine dioxide + Chlorfenapyr Chlorsulfuron DCOIT + DDAC + Dichlobenil	Dichlorvos (DDVP) Dithiopyr Halohydrantoin + Hydramethylnon Hypochlorites + Imazapyr Isoxaben Mancozeb Methomyl Methoprene + Methyl anthranilate + Mineral bases, weak + Mineral oil (aliphatic) + MGK-264 Naled Novaluron Oryzalin Oxadiazon Oxyfluorfen	PCNB Peroxyacetic acid + Phenoxy herbicides <sup>16</sup> Piperonyl butoxide (PBO) Prodiamine Propiconazole Pyrethrins Pyriproxyfen + Sodium bromide + Sodium chlorite + Sodium percarbonate + Sodium tetraborate + Spinosad + / Spinetoram Sulfometuron-methyl Tebuconazole Terbutylazine + Triclopyr Triclosan Trimethoxysilyl quats
5	Frequent questions from Partners	Chloropyrifos (near zero urban use)	Diazinon (no urban use) Glyphosate	Metaldehyde
New	Priority determined on the basis of proposed urban use, aquatic toxicity, and other information in registration application.	Not known but may include the following:	Cyantraniliprole Cyclaniliprole Flupyradifurone	Nitenpyram (Neonic) Nithiazine (Neonic) Sulfoxaflor (Neonic)
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		

<sup>15</sup> Alkyl Dimethyl Benzyl Ammonium Chlorides (ADBAC) includes a family of 21 different quaternary ammonium pesticides.

<sup>16</sup> MCPA and salts, 2,4-D, 2,4-DP, MCPP, dicamba

**Figure 3. EPA’s Registration Process for New Pesticides**



Another regulatory process, “Registration Review,” depicted in Figure 4, is meant to evaluate currently registered pesticides about every 15 years, to account for new data available since initial registration. In general, it takes EPA five to eight years to complete the entire process. In addition to this process, pesticides are typically evaluated based on Endangered Species Act criteria. EPA regularly updates its schedule for approximately 50 pesticides that will begin the review process in a given year.<sup>17</sup>

**Figure 4. EPA’s Registration Review – Process to Review Registered Pesticides at a Minimum of Every 15 Years.**



DPR also has an ongoing, but informal review process (called continuous evaluation) that can address pesticides water pollution. If it needs to obtain data from manufacturers, DPR can initiate a formal action, called “Reevaluation.” These evaluations, mitigation measure development, and mitigation effectiveness evaluation have involved ongoing communication with CASQA and partners.

While EPA must consider water quality in all of its pesticide registration decisions, at DPR this step is not yet fully established as standard (most outdoor urban pesticide registration applications are routinely routed by DPR for surface water review, but a few – notably antimicrobial products used in storm drains – do not automatically receive this review). CASQA monitors registration applications, to identify those relevant to urban runoff, based on the Pesticide Watch List in Table 2 and use pattern/toxicity analysis for pesticides that have not previously been reviewed.

**2.1.3 Key Near-Term Regulatory Activities and Progress**

Table 3 presents a summary of recent CASQA and partner activities to address near-term regulatory concerns and the latest results; for additional insight regarding on-going pesticide registrations, see the Appendix. CASQA monitors the Federal Register and DPR’s website for notices of regulatory actions related to new pesticide registrations and registration reviews. Since the Pesticide Watch List is not based on a comprehensive review of all pesticides, 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. Participating in these regulatory processes can take many years to complete.

In addition, EPA’s OPP strives to update their Aquatic Life Benchmarks table on an annual basis.<sup>18</sup> In September 2020, EPA’s Office of Pesticide Programs, Environmental Fate and Effects Division updated its pesticides Aquatic Life Benchmarks table.<sup>18</sup> These updates included benchmarks for 5 newly registered pesticides (and their degradates) and 9 previously registered pesticides (and their degradates) undergoing registration review. While none of those 14 pesticides

<sup>17</sup> See <https://www.epa.gov/pesticide-reevaluation/registration-review-schedules> for schedule information.

<sup>18</sup> <https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/aquatic-life-benchmarks-and-ecological-risk>

are on CASQA’s Pesticide Watch List, pesticides still awaiting benchmark updates include the many pyrethroids (other than new transfluthrin, which is not yet registered in California) and fipronil and its degradates. These pesticides are currently in EPA’s Registration Review process.

**Table 3. Latest Results of Efforts Communicating Near-Term Regulatory Concerns to EPA<sup>19</sup>**

Regulatory Action or Concern	CASQA Efforts			Partner Support (Letters)	Outcomes and notes
	Letter(s)	Call(s) or emails	Mtg(s)		
Pyrethroids Ecological Risk Mitigation Proposal for 23 Chemicals	✓		✓	BACWA SFBRWQCB NACWA City of Salinas	CASQA continued to recommend that EPA’s risk / benefit finding be revised to differentiate among the 23 pyrethroids and pyrethrins due to very different toxicity endpoints and outdoor urban uses of the 23 chemicals. EPA declined.
Bifenthrin Proposed Interim Decision	✓			SFBRWQCB BACWA NACWA	CASQA concluded that special measures to address bifenthrin are an important part of a pyrethroids mitigation strategy because, from the urban water quality standpoint, bifenthrin is far more problematic than other pyrethroid pesticides. CASQA continues to request that EPA terminate urban outdoor use of bifenthrin. EPA response: “EPA has considered these comments and has decided not to develop unique chemical-specific risk mitigation for bifenthrin at this time beyond what is already required as part of this ID.”
Cypermethrin Proposed Interim Decision	✓			BACWA SFBRWQCB	<b>Pending.</b> In the PID, EPA concluded that outdoor / urban uses present substantial risks to freshwater and estuarine/marine fish and invertebrates. On that basis, CASQA sought enhancements to the proposed label language to include a graphic to prevent spilling or dumping into storm drains, be clear and consistent regarding impervious and vertical surfaces, and provide California-specific labels for outdoor structural pest control.
Cyhalothrins Proposed Interim Decision	✓				<b>Pending.</b> In the PID, EPA concluded that outdoor / urban uses present substantial risks to freshwater and estuarine/marine fish and invertebrates. On that basis, CASQA sought enhancements to the proposed label language to include a graphic to prevent spilling or dumping into storm drains, be clear and consistent regarding impervious and vertical surfaces, and provide California-specific labels for outdoor structural pest control.

<sup>19</sup> Color coding in this table is meant to reflect the Pesticide Watch List prioritization color coding in Table 2.

Regulatory Action or Concern	CASQA Efforts			Partner Support (Letters)	Outcomes and notes
	Letter(s)	Call(s) or emails	Mtg(s)		
Malathion Fish and Wildlife Service (FWS) Biological Opinion	✓				<b>Pending.</b> The FWS Biological Opinion concluded that products containing malathion can result in serious impacts on endangered and threatened species and their habitats, including in urban surface waters. On that basis, CASQA has asked EPA to (1) identify mitigation measures to adequately protect affected listed species and habitats, and (2) to complete an updated ecological risk assessment as part of registration review, to identify potential impacts more broadly on other ecologically important species.
Thiophanate methyl/ Carbendazim Ecological Risk Assessment				Sacramento County	<b>Pending.</b> Asked that EPA perform surface water modeling for urban runoff, and quantitatively assess risks to surface water aquatic life for carbendazim products that are used outdoors for protection of building materials. In addition, the acute freshwater vertebrate toxicity endpoint used in the ERA conducted by the Antimicrobials Division differed from the acute endpoint used in the ERA conducted by EPA's Environmental Fate and Effects Division leading to a significant difference in the minimum surface area expected to lead to a toxicity endpoint.
Ziram Ecological Risk Assessment	✓				<b>Pending.</b> For freshwater invertebrates, EPA cited several reasons why the calculated risks were likely to be overestimates leading to a conclusion that appeared to be speculative and arbitrary, the results of which may not be sufficiently protective of aquatic life. Therefore, CASQA asked that EPA modify its risk assessment analysis for freshwater invertebrates. In addition, CASQA requested that the risk assessment be amended to include consideration of the results of a sediment toxicity study for freshwater invertebrates.
Creosote Interim Registration Review Decision	✓				<b>Pending.</b> EPA's Decision was made without the benefit of an Ecological Risk Assessment. This was due to a lack of data despite multiple data requests by EPA to the registrants (dating back to 2011). Therefore, CASQA asked that an Ecological Risk Assessment be completed before publishing a registration review decision. CASQA further requested that EPA seek monitoring data given that PAHs found in creosote are commonly detected in urban runoff and receiving waters.

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Regulatory Action or Concern	CASQA Efforts			Partner Support (Letters)	Outcomes and notes
	Letter(s)	Call(s) or emails	Mtg(s)		
Diuron Ecological Risk Assessment and Antimicrobial Use Risk Assessment	✓				<b>Pending.</b> EPA modeling results indicate a clear need for mitigation to protect aquatic life from legal uses of diuron within urban areas. CASQA requested that the risk assessment be amended to include consideration of the results of a sediment toxicity study for freshwater invertebrates. CASQA is also seeking consistency in toxicity endpoints within EPA documentation.
Chlorine gas/swimming pools Draft Risk Assessment	✓			SFBRWQCB BACWA NACWA	<b>Success!</b> 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: <i>“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.”</i>
Halohydrantoin/pools, fountains, spas – Draft Risk Assessment	✓			BACWA SFBRWQCB NACWA	<b>Partial Success.</b> 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: <i>“Before draining a treated [pool], [spa], [hot tub], or [fountain], contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated [pool], [spa], [hot tub], or [fountain] water to any location that flows to a gutter or storm drain or natural water body unless discharge is allowed by state and local authorities.”</i> CASQA also recommended that the “Environmental Hazards” label statements be applied on the basis of product end use rather than product size. This would mimic EPA’s decision for lithium hypochlorite and copper products. This suggestion was ignored.

## 2.2 LONG-TERM CHANGE IN THE PESTICIDES REGULATORY STRUCTURE

Since the mid-1990s, CASQA (and its predecessor organization the Storm Water Quality Task Force), have worked toward a future in which the pesticide regulatory structure at the state and federal level proactively restricts pesticide uses that have the potential to cause urban water quality problems. These efforts directly relate to Phase II MS4 PEAIP Management Question 2.

**Assessment Question 2. (Long term / Prevent future problems)** – Do pesticides regulators have an effective system in place to exercise their regulatory authorities to prevent pesticide toxicity in urban water bodies?

**Answer:** Improvements in processes at EPA and especially at DPR have moved us closer to that future. Many of these improvements are linked to the persistent work of CASQA and partners to educate regulators on how previous process deficiencies did not adequately address urban pesticide problems.

As detailed below, at the State level, significant progress has been made by DPR and the Water Boards in establishing a comprehensive statewide approach to utilizing pesticide regulatory authorities to prevent pesticide toxicity in urban water bodies. 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 NPDES MS4 permits. DPR and the Water Board, along with CASQA and other stakeholders, are working diligently to strengthen this system and to institutionalize it. The goal is to embody this process in the State's UPAs and the Management Agency Agreement (MAA) between DPR and the State Water Board.

At the Federal level, OPP has implemented some improvements in how it evaluates and responds to water quality problems associated with pesticides, but it does not yet do this reliably and does not have a system in place to ensure that this will happen consistently and adequately. Meanwhile, scientific studies are being conducted by USGS and EPA's Office of Research and Development to better understand the complexities of pollution in urban stormwater.

Effective regulation of pesticides by EPA is still an important goal for CASQA.<sup>20</sup> Although the recent regulatory climate at federal agencies was not favorable for additional improvements in pesticide regulations, CASQA expects OPP to be more receptive in the near-term. Therefore, CASQA will resume efforts to share scientific information and stormwater expertise. However, chronic under-staffing at OPP may hamper these efforts to some degree.

As a result, CASQA has decided for the time being to limit its efforts to affect long-term systemic change by EPA and other federal agencies. Instead, CASQA has focused more on solidifying advances made at the state level, which will leverage the considerable authority held by the State of California for regulating the use of pesticides.

### **2.2.1 Focus on MAA Between DPR and State Water Board**

In mid-2019, DPR and the State Water Board received approval to sign a major update to their formal MAA that memorializes their existing systems and growing cooperation and lays out the steps they are taking toward a "unified and cooperative program to protect water quality related to the use of pesticides." The two agencies agree "to work cooperatively to address the discharge of pesticides that may cause or contribute to surface water or groundwater pollution, including surface water toxicity."

For example, DPR will evaluate surface water quality risks and consider these risks when making registration decisions; promote environmentally sound pest management; and respond to water quality concerns that pose significant adverse effects to aquatic organisms. Meanwhile, Water Boards will confer with DPR when developing regulatory programs related to pesticides; ensure waters are monitored (in coordination with DPR's monitoring and including permittee and State

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<sup>20</sup> Long-term regulatory goals at the state and federal level are described in detail in Section 1.2.

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Water Board's own monitoring participation); and require and support use of best management practices relating to pesticides (structural management practices are not intended to be required in urban areas).

The Implementation Plan that accompanies the MAA describes opportunities for coordination and mutual enrichment (including cross-training), expectations for both staff and executive level communication (including an annual management-level meeting between the agencies), and current agency organization and interactions.

In the context of meetings on the UPA, CASQA has requested that the State Water Board be more active in its implementation of the MAA, in particular by providing resources and leadership in identifying water quality issues for urban use pesticides where action by DPR would be important.

### **2.2.2 Focus on California's UPA**

At the urging of CASQA, in 2014 the State Water Board made a strategically important decision to institutionalize its commitment to work closely with DPR and EPA to utilize pesticide regulatory authority as the primary mechanism for preventing and responding to impairments of receiving waters linked to current use pesticides in urban runoff. To accomplish this goal, the State Water Board established an urban pesticides reduction project (now titled the Urban Pesticides Amendments or UPAs) as a top priority project under the comprehensive stormwater strategy it adopted in December 2015, known as "Strategy to Optimize Resource Management of Storm Water" or STORMS.<sup>21</sup> The State Water Board continues to work towards developing the Urban Pesticides Amendments which will be incorporated into the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries, and the Water Quality Control Plan for Ocean Waters of California. It is important to note that a critical factor in the State Water Board's decision to move in this direction was DPR's demonstrated commitment and significant progress in addressing urban water quality issues caused by pesticides.<sup>22</sup>



CASQA representatives have been participating actively in the development of the Urban Pesticide Amendments since their inception, to ensure that they are consistent with CASQA's vision for pesticide control.<sup>23</sup> The key elements CASQA is advocating for are listed below.

- Element 1: Establishment of a framework for the Water Boards to work with DPR and EPA to utilize pesticide regulatory authority as the primary means for addressing pesticides in urban runoff.
- Element 2: Adoption of a program of implementation addressing urban pesticides water pollution that integrates a feasible compliance pathway for MS4s.
- Element 3: An MS4 Monitoring program designed to coordinate with existing DPR and State Water Board pesticides and toxicity monitoring to support effective implementation of Elements 1 and 2.

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<sup>21</sup> STORMS' overall mission is to "lead the evolution of storm water management in California by advancing the perspective that storm water is a valuable resource, supporting policies for collaborative watershed-level storm water management and pollution prevention, removing obstacles to funding, developing resources, and integrating regulatory and non-regulatory interests." ([http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/storms/](http://www.waterboards.ca.gov/water_issues/programs/stormwater/storms/))

<sup>22</sup> As reported in previous CASQA Pesticide Annual Reports, DPR's accomplishments include improved modeling, active ingredient screening for urban water quality issues, monitoring, and regulatory mitigation of pyrethroids and fipronil.

<sup>23</sup> These elements have been adapted from the CASQA document, "End Goals for Pesticide Regulatory Activities," 2014. Element 3 is directly tied to Elements 2, 4, and 5 of that document.

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- 💧 Element 4: Requirements for MS4s to support Elements 1 and 3 by contributing expertise on how pollutants present in urban environments enter and behave in urban runoff and water bodies.
- 💧 Element 5: Other actions that can reasonably be implemented by MS4s, such as IPM outreach, in support of pesticides reductions.

Elements 1-4 are consistent with CASQA Vision Action 1.2. Water Board staff have indicated their intent that the Urban Pesticides Amendments should also establish a consistent set of “*minimum pesticides source control measures for MS4 dischargers*” (Element 5).

CASQA representatives have worked with the Water Boards to ensure that such requirements are reasonable and consistent with similar measures already in place in some regions. At this time, the list of potential minimum measures includes use of IPM, education of and outreach to residents and professional pesticide applicators, providing urban runoff scientific and management expertise to support pesticide regulatory processes, non-stormwater discharge prohibitions, and pesticide and toxicity monitoring.

CASQA supports the stated goal to “create a comprehensive, coordinated statewide monitoring framework for pesticides and toxicity in urban runoff and receiving water that improves resource efficiency, usefulness of data, and coordination of data collection to support management decisions.”<sup>24</sup> A well-designed and managed monitoring framework that is properly representative of urban areas can simultaneously provide more useful information and improve the utilization of resources by eliminating unnecessary MS4 monitoring requirements that do not contribute to effective management of pesticides and pesticide-caused toxicity.

**Monitoring.** Previously an agreement was reached regarding decision-making channels and membership for a statewide coordinated monitoring program. However, progress in this direction has been slowed this year by changes in staffing at the State Water Board, by complications caused by COVID-19, and by reconsideration by the Water Boards of the structure and function of coordinated monitoring.

**Technical Support.** CASQA continues to provide technical support to the Water Boards on numerous crucial and highly detailed items related to the UPA, Staff Report, CEQA Document, monitoring program, model permit language, and the relationship of these to the MAA. CASQA organized a meeting of DPR, Water Board, and CASQA representatives on July 24, 2020. The goal of the meeting was for DPR to provide details to senior Water Board management on DPR’s capacity and progress for addressing urban pesticide issues. The outcome was educational for all stakeholders, further advancing regulatory collaboration and solutions necessary for the UPAs. Brief updates were provided by the State Water Board to CASQA via online meetings on December 9, 2020 and April 8, 2021, with additional various individual discussions between Water Board staff and CASQA.

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<sup>24</sup> Informational Document, CEQA Public Scoping Meeting, State Water Resources Control Board, January 25, 2017



**2.2.3 CASQA Participation in Other State Efforts**

As presented in Table 4, CASQA has been actively involved with various State agencies and advisory groups that affect pesticide use and pest management in urban areas.

**Table 4. Participation in Other State Efforts to Support CASQA’s Goals**

Agency or Conference	Latest Outcomes
DPR’s Pest Management Advisory Committee (PMAC)	<p>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. However, only two Pest Management Alliance grant proposals addressing urban pesticide use were submitted this year, and PMAC did not recommend funding for either of those. Two research proposal addressed urban pesticides. The project researching improved bait for German cockroaches was selected for funding. The other project, researching ground squirrel control, was not selected for funding.</p>
California Structural Pest Control Board (SPCB)	<p>A TSC member was an appointed member of the SPCB through May 2021. The SPCB recognizes the potential for excessive pesticide application to impact water quality. The SPCB is in the process of adopting regulations to increase continuing education hours required in the IPM category. Finalization of these regulations has been slowed due to the need for California to reconcile its structural licensing requirements with newly adopted Federal regulations for this industry.</p> <p>The SPCB continues to collect funding for its Research Fund, but elected not to solicit proposals this year since the amount of funding available was not yet sufficient.</p>
DPR’s Pesticide Registration Evaluation Committee (PREC)	<p>A TSC member was selected by the SPCB to serve as its representative on the PREC. The PREC membership includes public agency representatives, and is intended to advise DPR on issues related to pesticide registration. The representative requested discussion by PREC of issues related to urban issues, as listed below:</p> <ul style="list-style-type: none"> <li>• Need for additional transparency and timely access to DPR scientific evaluations that form the scientific basis for regulatory decisions;</li> <li>• Need to make notices for Materials Entering Evaluation more transparent and informative;</li> <li>• Update on plans to mitigate imidacloprid.</li> </ul> <p>Although the issues were not agendized, the representative met with DPR management to discuss them.</p>

### Section 3. CASQA's Approach Looking Ahead

At any given time, EPA and DPR may be in the process of evaluating and registering various pesticides for urban use. CASQA will continue to track and engage in EPA and DPR activities, with a focus on top priority active ingredients (as identified in the annual Pesticide Watch List) and sharing relevant urban runoff information and CASQA's water-quality specific expertise with pesticides regulators. Key documents to be reviewed will include risk assessments and risk management proposals with an eye toward ensuring that pesticide regulators have and consider accurate information on relevant factors in urban areas such as pesticide use patterns, urban pollutant transport mechanisms, and receiving water conditions. CASQA strives to ensure that pesticide regulators have access to relevant information such as monitoring data, water quality regulatory requirements, and urban runoff agency compliance liabilities and cost information. As necessary, CASQA will continue to recommend changes in an individual pesticide's allowable uses or use instructions, request consideration of impacts on water bodies receiving urban runoff, and/or ask that regulators fill critical data gaps by obtaining more data from manufacturers. As resources allow and circumstances warrant, CASQA will continue to collaborate with wastewater organizations (such as BACWA), other water quality stakeholders, and the Water Boards in commenting on EPA and DPR actions.

In the coming year, CASQA will continue to address near-term pesticide concerns and seek long-term regulatory change. Although changes at the federal level are important for fully achieving CASQA's goal of protecting water quality through the effective use of pesticide regulations, until there is a more favorable situation at that level, we will continue to focus our efforts on solidifying progress at the state level. In the coming year, CASQA will continue engagement on specific regulatory actions for priority pesticides at the federal level, while continuing the strategic focus on supporting State adoption of the UPAs. CASQA's current priority activities are as follows:

- (1) Continue collaboration with DPR to address near-term regulatory concerns, while seeking OPP and OW actions to reduce inconsistencies:
  - 💧 Ensure DPR action on fipronil water pollution is completed, including effective professional user education about restrictions on its outdoor urban use.
  - 💧 Ensure DPR enforces mitigation measures for pyrethroids and fipronil, and adopts additional measures as necessary.
  - 💧 Ensure the state continues to conduct surveillance monitoring to evaluate pyrethroids and fipronil mitigation effectiveness and to evaluate occurrence of new threats like imidacloprid and other neonicotinoid insecticides.
  - 💧 Continue to encourage EPA to complete scientific groundwork and to identify and implement pyrethroids, fipronil, malathion, and imidacloprid mitigation measures, recognizing that it is likely that necessary mitigation cannot readily be implemented entirely by DPR.
- (2) Seek long-term changes in the pesticide regulatory structure:
  - 💧 Leverage our success at the state level and continue to be a key stakeholder in the STORMS project to adopt the statewide UPA. Through this process, CASQA will work with other stakeholders to implement the planned restructuring of California's urban surface water pesticides monitoring to increase its effectiveness and improve coordination.
  - 💧 Encourage and assist the Water Board to actively implement its MAA with DPR and take a stronger leadership role in preventing and mitigating pesticide impairments through more effective pesticide regulation at the state and federal level.
  - 💧 Seek procedure changes such that DPR continues to refine its registration procedures to address remaining gaps in water quality protection.
  - 💧 Seek increased transparency of DPR regulatory activities, including timely access to scientific evaluation reports that are the basis of registration decisions.

CASQA will continue to seek opportunities to coordinate on high priority regulatory actions, with the Water Boards and other water quality stakeholders such as POTWs and non-profits, to take advantage of efficiencies, increase effectiveness, and ensure that the water quality community has a consistent message. Table 5 presents CASQA's activities anticipated for the coming year; CASQA will conduct these activities as priorities indicate and resources allow. Table 6 summarizes upcoming regulatory action items that are likely to proceed and may require CASQA attention in the coming year.

**Table 5. CASQA Pesticide Activities**

Activity	Purpose	
Regulatory Tracking	Track Federal Register notices	Identify regulatory actions for high priority active ingredients that may require review.
	Track DPR notices of registration applications and decisions	Identify pesticides meriting surface water review that are not within DPR's automatic routing procedures, identify gaps or potential urban runoff-related problems with current DPR evaluation or registration plans other regulations, procedures, and policies.
	Track activities at the Water Boards	Identify opportunities for improvements in TMDLs, Basin Plan Amendments, and permits.
	Review regulatory actions, guidance documents, and work plans	Identify potential urban runoff-related problems with current EPA evaluation or registration plans, other regulations, procedures, and policies.
Regulatory Communications	Briefing phone calls, informal in-person meetings, teleconference meetings, and emails with EPA and DPR	Information sharing about immediate issues or ongoing efforts; educate EPA and DPR about issues confronting water quality community. Provide early communication on upcoming proceedings that help reduce the need for time-intensive letters.
	Convene formal meetings, write letters, and track responses to letters	Ensure current pesticide evaluation or registration process accurately addresses urban runoff and urban pesticide use and management contexts. Take advantage of opportunities to formally provide information and suggest more robust approaches that could be used in future regulatory processes. Request and maintain communication on mitigation actions addressing highest priority pesticides.
Advisory	Serve on EPA, DPR, and Water Board policy and scientific advisory committees	Provide information and identify data needs and collaboration opportunities toward development of constructive approaches for managing pesticides.
Educational	Presentations to and informal discussions with EPA, DPR, Water Board, CASQA members,	Educate EPA, DPR, Water Board, and CASQA members about the urban runoff-related shortcomings of existing pesticide regulatory process, educational efforts to support process improvements, and report on achievements. Encourage 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. Inform development of new pesticides by manufacturers and selection of pesticides by professional users.
	Develop and deliver public testimony	Educate Water Board members about the problems with existing pesticide regulatory process, encourage change, and report on achievements.

Activity		Purpose
Monitoring and Science	Update Pesticide Watch List based on new scientific and regulatory information	The Pesticide Watch List (Table 2) serves as a management tool to prioritize and track pesticides used outdoors in urban areas.
	Data analysis of DPR/SWAMP/USGS/MS4 monitoring, pesticide use data, and information from scientific literature	Summarize data to educate CASQA members and water quality community, Water Boards, DPR, and EPA.
Reporting	Prepare Monthly Action Plans	Coordinate CASQA's regulatory actions with Partners
	Prepare Annual Report to describe the year's status and progress, provide detail on stakeholder actions, and the context of prior actions as well as anticipated end goal of these activities.	Provide CASQA's members with focused information on its efforts to prevent pesticide pollution in urban waterways. The document serves annual compliance submittal for both Phase I and Phase II MS4s. It may also be used as an element of PEAIIPs and future effectiveness assessment annual reporting.

**Table 6. Anticipated Opportunities for Pesticides Regulatory Engagement (July 2021 – June 2022)**

EPA Pesticide Registration Review (15-year cycle)
<p>Environmental Risk Assessments</p> <ul style="list-style-type: none"> <li>Priority 2-4 pesticides: ADBAC family, Chlorinated isocyanurates, Chlorothalonil, Copper 8-quinolinolate, Dacthal (DCPA), Dicamba, DDAC family, N-bromosulfamates, PCNB, Silver, Tebuconazole, others (schedule unknown)</li> </ul>
<p>Endangered Species Act Evaluations</p> <ul style="list-style-type: none"> <li>Priority 1 pesticides: Imidacloprid (Biological Evaluation (BE))</li> <li>Priority 2 pesticides: Clothianidin (BE), Cuprous iodide (ESA Final Effects Determination), Thiamethoxam (BE)</li> </ul>
<p>Proposed Interim Decisions</p> <ul style="list-style-type: none"> <li>Priority 1 pesticides: Etofenprox, Fipronil, Malathion, Pyrethroids: Permethrin</li> <li>Priority 2-4 pesticides: 2,4-D, Carbaryl, Chlorine Dioxide, Dichlorvos (DDVP), Diuron, Isothiazolinones (DCOIT, BIT, BBIT, MIT, OIT), MGK-264 (synergist), Mancozeb, Naled, o-Phenyl phenol, Oxadiazon, Oxyfluorfen, Peroxy Compounds (includes Peroxyoctanoic Acid; Sodium Percarbonate), Piperonyl butoxide (PBO) (pyrethroids synergist), Potassium Peroxymonosulfate and Potassium Peroxymonosulfate Sulfate, Propiconazole, Pyrethrins, Sodium pyrithione, Thiophanate methyl, Ziram, others (schedule unknown)</li> </ul>

#### Other EPA-related Items

- “Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process” affects how the EPA uses cost and benefit analysis in setting pollution standards. Rule proposal was expected in 5/19.
- Proposed rule to eliminate some OPP Federal Register Notices (was anticipated September 2018 according to EPA semi-annual regulatory agenda)
- EPA’s Update to Guidelines for Deriving Aquatic Life Water Quality Criteria. Draft scoping document external peer review is next step. Seeking OPP engagement.

#### DPR New Pesticide Product Registration Decisions

- Proposed new urban pyrethroids (momfluorothrin, alpha-cypermethrin, phenothrin and transfluthrin products)
- Proposed expansion of bifenthrin use in non-residential urban locations (including a bifenthrin-novaluron-pyriproxyfen product)
- Proposed new fipronil products: fipronil-bifenthrin landscaping product, termite product, product for yellow jackets
- Proposed new aerated indoxacarb powder
- Others (schedule unknown)

#### Other DPR-related Items

- Registration Application Surface Water Reviews – continue to follow up on communications requesting review of all storm drain products and outdoor antimicrobials

#### Water Boards

- STORMS Urban Pesticides Amendments
- Pesticides 303(d) listings
- Pesticide TMDL implementation requirements for permittees

#### Other Statewide Items

- [California Department of Food & Agriculture Program EIR on invasive species](#) control covering potential broadcast pesticide applications urban areas of multiple priority pesticides. In litigation (California Court of Appeal).

# Appendix

## Regulatory Participation Outcomes and Effectiveness Assessment Summary Tables

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**Chlorine Gas (February 2021)**

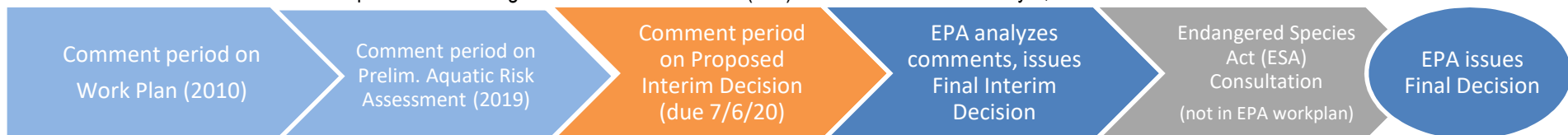
**Cypermethrins (June 2021)**

**Halohydantoins (February 2021)**

**Pyrethroids (June 2021)**

**Terbutylazine (August 2020)**

**Pesticide:** Chlorine Gas; EPA-HQ-OPP-2010-0242  
**Use:** Swimming pools, spas, and hot tubs.  
**Why we care:** Toxic to aquatic invertebrates.  
**Actions taken:** CASQA has been monitoring updates on the EPA docket.  
**Status:** EPA released the Proposed Interim Registration Review Decision (PID). Comments were due July 6, 2020. EPA issued a Final Interim Decision in Oct. 2020.



**Next steps:** ESA Consultation is required but unlikely to begin before 2022.  
**Recommendation:** Write a response letter, supporting the Sacramento County comments that EPA included in the Proposed Interim Decision.

<b>CASQA comments to EPA (July 6, 2020):</b>	<b>EPA Response:</b>	<b>Did EPA incorporate member comments?</b>
<p>CASQA recommends 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: <i>"Before draining a treated [pool,] [spa,] [hot tub,] or [fountain] contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated pool or spa water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities."</i></p>	<p>EPA adopted the following language for all products used to treat commercial and residential pools and fountains: <i>"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."</i></p>	<p>Yes.</p>



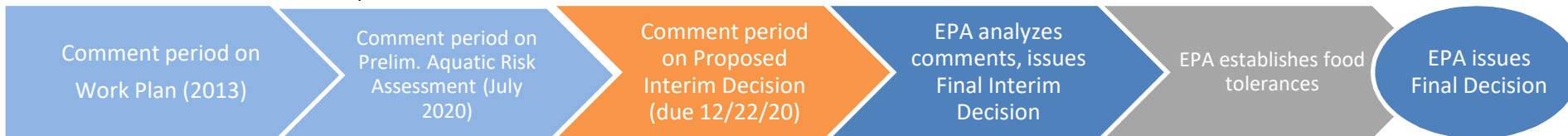
**Pesticide:** Cypermethrins – EPA-HQ-OPP-2012-0167  
**Use:** Insecticide  
**Why we care:** Priority pesticide due to toxicity, use, and monitoring data. Pyrethroids have multiple 303(d) listings and TMDLs.  
**Actions taken:** CASQA commented on the Preliminary Ecological Risk Assessment for Pyrethroids in 2017, the Ecological Risk Mitigation Proposal (February 2020), and the Cypermethrins Proposed Interim Decision (Nov 2020)  
**Status:** EPA released the Final Interim Registration Review Decision (ID) (April 2021)

**Next steps:** ESA Consultation is required but unlikely to begin before 2022.  
**Recommendation:** No action is needed at this time as there is no opportunity for public comment.

CASQA Comments to EPA (November 2020)	EPA Response	Did EPA incorporate CASQA's comment?
<p>The Cypermethrins PID does not provide any additional mitigation measures, beyond those found in the RMP, to address the documented impacts of pyrethroid use in urban (nonagricultural) areas, and the risks to aquatic life of continued use of pyrethroid pesticides. This is despite significant evidence presented both in EPA's risk assessments and in our previous comment letters, clearly demonstrating that pyrethroid insecticides as a class, including cypermethrins, continue to cause toxicity in urban waterways.</p>	<p>"EPA has considered these comments and has decided not to develop unique chemical-specific risk mitigation for the cypermethrins at this time beyond what is already required as part of this ID. EPA concludes that the cypermethrins provide high benefits for controlling pests in indoor residential areas, outdoor urban areas, and in agricultural crop production. The Agency is requiring risk mitigation primarily to address risk to non-target invertebrates and fish; however, risks may remain to non-target organisms even after mitigation. Any remaining risks are outweighed by the benefits of the cypermethrins use. In addition, EPA notes that all states, including California, are authorized to restrict pesticide use according to state requirements/standards. For a more detailed response to submitted water quality comments, please see the Pyrethroids and Pyrethrins Revised Ecological Risk Mitigation and Response to Comments on the Ecological Risk Mitigation Proposal For 23 Chemicals (September 30, 2020)." (ID, p.15)</p>	<p>No.</p>

<p>CASQA recommends the following enhancements to the proposed label language specified in Appendix B of the MRP:</p> <ul style="list-style-type: none"> <li>• Design a clear schematic graphic for product labels to completely and effectively address products that may be dumped or washed into gutters and storm drains;</li> <li>• Review proposed label language text, and edit as needed to provide clear and consistent descriptions of pervious and impervious surfaces, to ensure clarity with respect to allowable exceptions, including with respect to applications to vertical surfaces; and</li> <li>• Provide California-specific labels for outdoor structural pest control pyrethroids products that are completely consistent with California Surface Water Protection Regulations implemented by California Department of Pesticide Regulation.</li> </ul>	<p>“As discussed in the Pyrethroids and Pyrethrins Revised Ecological Risk Mitigation and Response to Comments on the Ecological Risk Mitigation Proposal For 23 Chemicals (September 30, 2020), EPA revised the label language to include an image of a required pictogram and added clarity to various statements on the pyrethroid labels. The substance and intent of the statements, however, have not changed. The label language changes are reflected in Appendix B.” (ID, p.15)</p>	<p>No. (The label language and pictogram EPA refers to is one suggested by BACWA of a diagonal strikethrough over a drain for indoor uses.)</p>
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**Pesticide:** Halohydantoins; EPA-HQ-OPP-2013-0220  
**Use:** Swimming pool, spa, hot tubs, and fountain disinfectant.  
**Why we care:** Degradants are toxic to aquatic organisms.  
**Actions taken:** CASQA sent EPA a comment letter on the Preliminary Risk Assessment on July 6, 2020.  
**Status:** EPA released the Proposed Interim Decision in October 2020. Comments were due December 22, 2020.



**Next steps:** EPA will issue a Final Interim Decision  
**Recommendation:** Submit a letter to thank EPA for incorporating proposed label language.

<b>CASQA comments to EPA (July 6, 2020):</b>	<b>EPA Response:</b>	<b>Did EPA incorporate member comments?</b>
<p>CASQA Requests Revised Labeling as a Mitigation Measure- CASQA requests that the current halohydantoins label language for any pool, spa, hot tub, and fountain products be changed to match the lithium hypochlorite and copper compounds labels, which would also provide consistent label language across pool, spa, hot tub, and fountain chemicals.</p> <p><i>“Before draining a treated pool, spa, hot tub, or fountain, contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated pool or spa water to any location that flows to a gutter or storm drain or natural water body unless discharge is allowed by state and local authorities.”</i></p>	<p>EPA included the revised language in its proposed labeling changes:</p> <p><i>“Before draining a treated [pool], [spa], [hot tub], or [fountain], contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated [pool], [spa], [hot tub], or [fountain] water to any location that flows to a gutter or storm drain or natural water body unless discharge is allowed by state and local authorities.”</i></p>	<p>Yes.</p>
<p>For all swimming pool, spa, hot tub, and fountain products, including those containing halohydantoins, we also recommend that the “Environmental Hazards” label statements be applied on the basis of product end use rather than product size. This would mimic EPA’s decision for lithium hypochlorite and copper products. As explained in our attached lithium hypochlorite comments, this approach avoids potential conflicting language on product labels.</p>	<p>None.</p>	<p>No.</p>

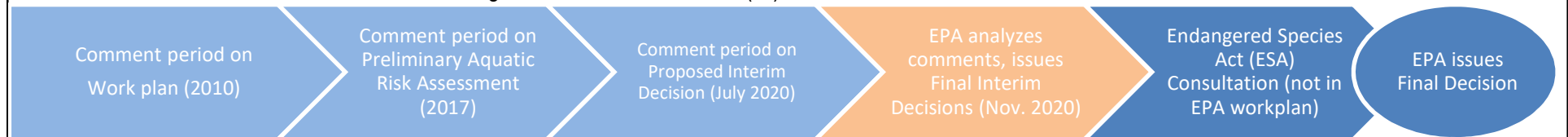
**Pesticide:** Bifenthrin – EPA-HQ-OPP-2010-0384, Cyfluthrins – EPA-HQ-OPP-2010-0684, Cypermethrins – EPA-HQ-OPP-2012-0167, Cyphenothrin – EPA-HQ-OPP-2009-0842, d-Phenothrin – EPA-HQ-OPP-2011-0539, Deltamethrin – EPA-HQ-OPP-2009-0637, Esfenvalerate – EPA-HQ-OPP-2009-0301, Etofenprox – EPA-HQ-OPP-2007-0804, Fenpropathrin – EPA-HQ-OPP-2010-0422, Flumethrin – EPA-HQ-OPP-2016-0031, Gamma-cyhalothrin – EPA-HQ-OPP-2010-0479, Imiprothrin – EPA-HQ-OPP-2011-0692, Lambda-cyhalothrin – EPA-HQ-OPP-2010-0480, Momfluorothrin – EPA-HQ-OPP-2015-0752, Permethrin – EPA-HQ-OPP-2011-0039, Prallethrin – EPA-HQ-OPP-2011-1009, Tau-fluvalinate – EPA-HQ-OPP-2010-0915, Tefluthrin – EPA-HQ-OPP-2012-0501, Tetramethrin – EPA-HQ-OPP-2011-0907

**Use:** Insecticides

**Why we care:** Priority pesticide due to toxicity, use, and monitoring data. Multiple 303(d) listings and TMDLs.

**Actions taken:** CASQA commented on the Preliminary Ecological Risk Assessment for Pyrethroids in 2017, the Ecological Risk Mitigation Proposal (February 2020), and the Bifenthrin Proposed Interim Decision (July 2020).

**Status:** EPA released the Final Interim Registration Review Decision (ID).



**Next steps:** ESA Consultation is required but unlikely to begin before 2022.

**Recommendation:** No action is needed at this time as there is no opportunity for public comment.

<b>CASQA Comments to EPA: General (02/12/2020) and Bifenthrin (07/06/2020)</b>	<b>EPA Response</b>	<b>Did EPA incorporate CASQA's comment?</b>
EPA's risk / benefit finding should be revised to differentiate among the 23 pyrethroids and pyrethrins and among the various outdoor urban uses of the 23 chemicals	"The pyrethroids have many uses across agricultural, residential, commercial, indoor and outdoor sites, and were grouped into broad categories to compare the potential exposure for those active ingredients that were not quantitatively assessed in the 2016 Ecological Risk Assessment. The ecological risk assessment grouped uses into four major categories: indoor uses, outdoor non-agricultural uses, outdoor agricultural uses and wide-area mosquito adulticide uses. For the purposes of risk-benefit analysis, and EPA considers this approach to provide adequate differentiation among uses assessed for the group of 23 chemicals. Among outdoor uses, EPA is aware of	No.

the potential for applications to impervious surfaces to contribute to waterway pollution. The Agency's mitigation for outdoor non-agricultural use as a category is reflective of those risk contributions. The Agency disagrees that a separate analysis of each pyrethroid or each specific use is needed to support EPA's risk assessment and risk management conclusions and disagrees that a representative analysis featuring bifenthrin is necessary, as bifenthrin is not outstanding among pyrethroids in terms of RQ exceedances, aquatic invertebrate toxicity, or environmental persistence.

EPA's risk assessment supports the conclusions that there are risks of concern for aquatic organisms from exposure to pyrethroids, which is supported by water monitoring data that indicate that pyrethroids are present in the environment that result in adverse effects to aquatic invertebrates. The benefits from the use of these chemicals for these uses is also very high. For further discussion on ecological risk assessment, see EPA's Joint Response from OPP's Environmental Fate and Effects Division and Pesticide Re-evaluation Division to Comments on the Preliminary Risk Assessments for Pyrethroids and Pyrethrins Insecticides. For more discussion on usage, alternatives, benefits and impacts conducted for the outdoor and indoor uses of the pyrethroids group, see the Usage Characterization and Alternatives Summary for Synthetic Pyrethroids Used in Residential Lawns and Outdoor Vegetative Spot Treatments and the Qualitative Overview of Alternatives for Selected Use Patterns of Pyrethroids Being Assessed for a Down-the-Drain Risk Assessment, available in the pyrethroids special docket (EPA-HQOPP-2008-0331). (Pyrethroids and Pyrethrins Revised Ecological Risk Mitigation and

	<p>Response to Comments on the Ecological Risk Mitigation Proposal For 23 Chemicals, p. 33)</p> <p>“The Agency appreciates the comments from NACWA, CASQA, SFBWQCB, and BACWA. EPA has considered these comments and has decided not to develop unique chemical-specific risk mitigation for bifenthrin at this time beyond what is already required as part of this ID.” (Bifenthrin Interim Registration Review Decision Case Number 7402, September 2020, p.14)</p>	
<p>EPA should end outdoor urban use of bifenthrin: Therefore, due to the widely documented impacts of bifenthrin use to aquatic life and the consequent costs to municipal agencies, CASQA urges EPA to take specific action to end registration of bifenthrin for outdoor urban (nonagricultural) uses. Our previous letter provides additional detail, so we summarize the reasons for our request here:</p> <ul style="list-style-type: none"> <li>• Monitoring and usage data clearly show that replacing bifenthrin with another pyrethroid would reduce water pollution.<sup>3</sup></li> <li>• There are more than a dozen alternative pesticides available to serve the same purposes served by bifenthrin outdoors, including other pyrethroids, pyrethrins, and newer chemistries like indoxacarb.</li> <li>• Less toxic pest control methods based on integrated pest management (IPM), such as use of containerized baits and sealants have proven highly successful in urban environments.</li> <li>• In light of available alternatives, outdoor urban bifenthrin use does not appear to have benefits that outweigh its environmental impacts and economic costs to municipalities.</li> </ul> <p>If EPA does not end all outdoor urban (non-agricultural) uses of bifenthrin, we request that EPA implement measures to make existing</p>	<p>“EPA concludes that bifenthrin provides high benefits for controlling pests in indoor residential areas, outdoor urban areas, in agricultural crop production, and as an adult mosquitocide to control vectors for human disease. The Agency is requiring risk mitigation primarily to address risk to non-target invertebrates and fish; however, risks may remain to non-target organisms even after mitigation. Any remaining risks are outweighed by the benefits of bifenthrin use.” (Bifenthrin Interim Registration Review Decision Case Number 7402, September 2020, p.14)</p>	<p>No.</p>

<p>label restrictions more effective. The following measures would support increased adherence to these label instructions:</p> <ul style="list-style-type: none"> <li>• Make the existing bifenthrin special restrictions more prominent.</li> <li>• Require bifenthrin registrants to conduct aggressive outreach and education to professional structural pest control applicators, aimed at ensuring that all applicators strictly comply with the label.</li> <li>• Provide California-specific labels for outdoor structural pest control products that are completely consistent with California Surface Water Protection Regulations. This will reduce the chance of confusion among end users and will provide a key mechanism in support of California’s more restrictive requirements, which are designed to prevent water pollution caused by bifenthrin and other pyrethroids.</li> </ul>		
<p>EPA should provide California-specific labels for outdoor structural pest control products that are consistent with California regulations</p>	<p>“EPA notes that all states, including California, are authorized to restrict pesticide use according to state requirements/needs.” (Bifenthrin Interim Registration Review Decision Case Number 7402, September 2020, p.14)</p>	<p>No.</p>
<p>CASQA supports EPA-proposed label changes, with modifications.</p> <p><u>CASQA supports these other proposed label changes:</u></p> <ul style="list-style-type: none"> <li>• Prohibition on applications during rain</li> <li>• Advisory statement to avoid applications if rain is forecast within 24 hours (We would prefer an enforceable statement)</li> <li>• Addition of water protection statements</li> <li>• Definition of spot treatment (2 sq. ft.)</li> <li>• Requirement that product labels explicitly state whether particular products are allowed to be used indoors only, outdoors only, or both indoors and outdoors</li> <li>• Reduction in height above ground level of building treatments from 3 feet to 2 feet</li> </ul> <p>To ensure that these label elements completely and effectively address products that may be dumped or washed into gutters and storm drains, we request that EPA modify the “label table” in Appendix B to:</p>	<p>“Regarding the suggestion...to add the down-the-drain advisory statements to all pyrethroids/pyrethins labels (both agricultural and non-agricultural), outdoor and agricultural product labels already have label statements to prevent these chemicals from reaching drainage systems. In contrast, products with indoor uses do not currently have this language. Therefore, EPA has determined that these down-the-drain advisory statements are only necessary on products with indoor uses. However, registrants have the option to consider including this language (i.e., “unless for use in pipes and sinks”) to agricultural product labels at their discretion. EPA recognizes that Spanish labeling may increase the size of residential labels, however the Agency determined that providing this advisory information in Spanish would inform more users that products should not be</p>	<p>No.</p>

1. Identify a specific outdoor drain graphic and require the same graphic be used on all products.

2. Establish minimum size for the outdoor graphic, to ensure that it is legible, i.e., no smaller than 1.5 square centimeters unless this size is greater than 10% of the size of the label.

3. Modify the list of products that must include the graphic, stewardship language, and Spanish translations to specify:

a. The graphic, stewardship language, and Spanish are required on all categories of products -**importantly including all outdoor non-agricultural products** – not just those labeled for indoor residential use as indicated in the header on the label table in Appendix B.

- At a minimum, the label table should be revised to indicate the graphic must be placed on all products labeled for outdoor use as well as those labeled indoor use in nonagricultural settings (as indicated in the text on page 39). We would prefer that the graphic be required on all products, as even agricultural and mosquito abatement products are often mixed at facilities served by a storm drain system.

b. The graphic, stewardship language, and Spanish are required on all types of products (except pet shampoos) that are packaged in a form that could be discharged into a drain (i.e., anything other than an impregnated material like a collar or fly strip).

- The graphic should not be placed on pet shampoo product labels, to avoid inadvertently implying that pet wash water should not be discharged to the sewer. The primary discharge alternative – outdoors, would likely direct wash water to storm drains where it could flow untreated to creeks.

c. The graphic, stewardship language, and Spanish are required for all 23 pyrethroids and pyrethrins (not just the subset listed in the left column of the label table in Appendix B), recognizing that all pyrethroids have potential to enter gutters and storm drains.

- The subset of the 23 chemicals identified for this requirement in Appendix omits pyrethroids (e.g., momfluorothrin) that could also enter gutters and storm drains from outdoor use.

d. A Spanish translation is required for the outdoor drain discharge prohibition (“Do not allow the product to enter any drain during or after application.” )

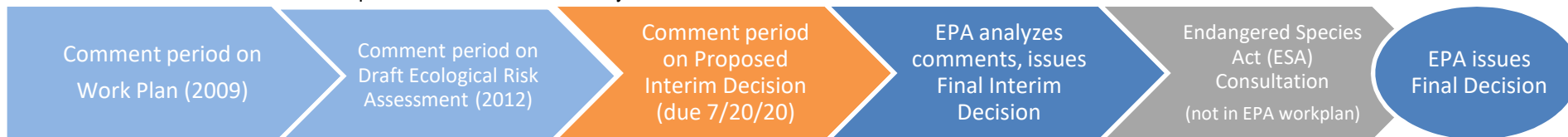
disposed of down the drain, unless they are specifically labelled for that use.” (Pyrethroids and Pyrethrins Revised Ecological Risk Mitigation and Response to Comments on the Ecological Risk Mitigation Proposal For 23 Chemicals, p. 7)

Yes, the EPA agreed to this suggestion to better clarify if pesticide is used indoors or outdoors. The label correction shows up in the appendices of the Revised Ecological Risk Mitigation as well as the bifenthrin and permethrin PIDs. (Pyrethroids and Pyrethrins Revised Ecological Risk Mitigation and Response to Comments on the Ecological Risk Mitigation Proposal For 23 Chemicals, p. 43)



<p>The Pyrethroids PIDs do not provide any additional mitigation measures to address the documented impacts of pyrethroid use in urban (non-agricultural) areas, and the risks to aquatic life of continued use of pyrethroid pesticides, despite significant evidence presented both in EPA's risk assessments and in our previous comment letters clearly demonstrating that pyrethroid insecticides as a class continue to cause toxicity in urban waterways.</p>	<p>EPA did not include additional mitigation.</p>	<p>No.</p>
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**Pesticide:** Terbutylazine; EPA-HQ-OPP-2010-0453  
**Use:** Fountain algaecide/microbiocide/microbiostat.  
**Why we care:** Highly toxic to aquatic invertebrates.  
**Actions taken:** County of Sacramento (a CASQA member) sent EPA comments on the Draft Risk Assessment in January 2020, respectively.  
**Status:** EPA released the Proposed Interim Decision in May 2020.



**Next steps:** EPA will review comments on the Proposed Interim Decision and issue a Final Interim Decision  
**Recommendation:** Write a response letter, supporting the Sacramento County comments that EPA included in the Proposed Interim Decision.

Sacramento County comments to EPA (Jan. 2020):	EPA Response:	Did EPA incorporate member comments?
<p>Our primary concern with the subject pesticides is that the Draft Risk Assessment neglected to consider storm drain discharges of terbuthylazine-containing fountain water and the ensuing risk to aquatic life. The Draft Risk Assessment assumed that there would be “no significant exposure to aquatic organisms...from the decorative/ornamental fountain uses given that the label prohibits discharge of this product into lakes, streams, ponds, estuaries, oceans, or other waters, unless in accordance with the National Pollutant Discharge Eliminations Systems (NPDES) permit.”</p>	<p>EPA made label changes (see below) that will help reduce the amount of terbuthylazine that is discharged into the storm drain by requiring notification to local sanitary sewer/ storm drain authorities.</p>	<p>Yes.</p>
<p>Sacramento County requests that the current language be changed to match the copper label, which would also provide consistency for label language across pool, spa, hot tub, and fountain chemicals, which follows: <b>“Before draining a treated pool, spa, hot tub, or fountain, contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated pool, spa, hot tub, or fountain water to any location that flows to a gutter or storm drain or</b></p>	<p>“The agency agrees with the requested label changes and is proposing additional label changes to address the potential ecological risks by reducing exposure and clarifying the appropriate use methods, as described in Appendix B.”</p>	<p>Yes.</p>

<p><b>natural water body unless discharge is allowed by state and local authorities.”</b></p>		
<p>Sacramento County also notes that the following language exists on several terbuthylazine labels: <i>“Experience will demonstrate the level of (product) is required.”</i> We are concerned that this vague label language could lead to overuse these products. We are also concerned that label language states that users should maintain a concentration of product, cited in ppm, to get adequate algae control, but does not specify a practical, low-cost method for determining terbuthylazine concentrations in treated fountain water. We respectfully request that EPA provide a dosing table, based on the size range (in volume of water) for fountains, to guide consumers in the application amount and frequency of application of the product.</p>	<p>EPA did not address this comment.</p>	<p>No.</p>
<p>For all fountain products, including those containing terbuthylazine, we also recommend that the “Environmental Hazards” label statements be applied on the basis of product end use rather than product size. This would mimic EPA’s decision for lithium hypochlorite products. As explained in our attached lithium hypochlorite comments, this approach avoids potential conflicting language on product labels.</p>	<p>EPA did not address this comment.</p>	<p>No.</p>

**Annual Reporting for FY 2020-2021**

**Regional Supplement for  
New Development and Redevelopment**

**San Francisco Bay Area  
Municipal Regional Stormwater Permit**

**Bay Area Municipal Stormwater  
Collaborative**

September 2021

**MRP Regional Supplement for New Development and Redevelopment  
Annual Reporting for FY 2020-2021**

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**LIST OF ATTACHMENTS**

**C.3.j.iii Participation in Processes to Promote Green Infrastructure**

1. Fact Sheet – *How to Navigate Federal Eligibility for Sustainable Streets (aka One Bay Area Grant) OBAG Program*
2. DRAFT Fact Sheet – *How to Build Sustainable Streets with SB 1 Funding*
3. Presentation – *Funding Solutions for Sustainable Streets: Regional Roundtable and Roadmap – Status Update*

# MRP Regional Supplement for New Development and Redevelopment Annual Reporting for FY 2020-2021

## 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 provision:

- C.3.j.iii. Participate in Processes to Promote Green Infrastructure.

These regionally implemented activities were conducted under the auspices of the Bay Area Stormwater Management Agencies Association (BASMAA), a 501(c)(3) non-profit organization comprised of the municipal stormwater programs in the San Francisco Bay Area.<sup>1</sup> Most of the 2020-21 annual reporting requirements of the specific MRP Provision covered in this Supplement were completely met by BASMAA Regional Project activities, except where otherwise noted herein or by Permittees in their reports. Scopes, budgets and contracting or in-kind project implementation mechanisms for BASMAA Regional Projects followed BASMAA's Operational Policies and Procedures as approved by the BASMAA Board of Directors. MRP Permittees, through their program representatives on the Board of Directors and its committees, collaboratively authorized and participated in BASMAA Regional Projects or Regional Tasks. Depending on the Regional Project or Task, either all BASMAA members or Phase I programs that were subject to the MRP shared regional costs.

## GREEN INFRASTRUCTURE PLANNING AND IMPLEMENTATION

### C.3.j.iii. 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 20-21. The BASMAA activities described in this section provide compliance for MRP Permittees with this provision.

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<sup>1</sup> In late FY 20-21, 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). BAMSC members jointly prepared this Regional Supplement for FY 20-21.

# MRP Regional Supplement for New Development and Redevelopment Annual Reporting for FY 2020-2021

## Activities and Accomplishments during FY 20-21

### Grant – Urban Greening Bay Area

*Urban Greening Bay Area* was a large-scale, grant-funded effort to re-envision Bay Area urban landscapes to develop stormwater-friendly dense, green urban infrastructure that addresses challenges associated with climate change, infiltrates or captures stormwater and pollutants near their sources, and in turn, promotes improved water quality in San Francisco Bay. *Urban Greening Bay Area* was funded by an EPA Water Quality Improvement Fund grant awarded to the Association of Bay Area Governments (ABAG), a joint powers agency acting on behalf of the San Francisco Estuary Partnership (SFEP), a program of ABAG. The term of the *Urban Greening Bay Area* grant project was July 1, 2015, to June 30, 2018, but the term was extended to December 31, 2020, and additional funding provided to support follow-up implementation.

BASMAA was one of the subrecipients of the grant and took the lead on two of the grant project tasks – a Regional Green Infrastructure Roundtable process and a Design Charrette, both of which were implemented between May 2016 and May 2018.

The Regional Roundtable was a two-year process, with work groups as needed, to identify and develop a list of recommendations for integrating GI and stormwater management funding and investments with future climate change and transportation investments within the region. The Roundtable included convening meetings with local, regional, and state stakeholders, agencies, elected officials, and staff to produce draft and final task reports that identified and recommended possible legislative fixes, agency agreements, consolidated funding mechanisms, and other means and actions as appropriate. The Roundtable used innovative participatory processes that included key experts, regulators, decision-makers, and other stakeholders to share information, solicit and discuss ideas and solutions, and to identify next steps (i.e., develop a “roadmap”). The [Final Roadmap of Funding Solutions for Sustainable Streets](#) was completed in April 2018. Following completion of the Roadmap, BASMAA and SFEP formed a Roadmap Committee to guide future implementation of the Roadmap.

The Design Charrette task involved coordinating with the cities of San Mateo and Sunnyvale to conduct a Bay Area design charrette to develop cost-effective and innovative “typical” designs for integrating GI with bicycle and pedestrian improvements at roadway intersections. The overall goal of developing standardized, transferable designs was to make progress in addressing the high cost of design, implementation, operations, and maintenance that inhibits the widespread use of GI and LID features.

Work products of the Urban Greening Bay Area grant are posted on the [SFEP website](#). The “Planning” section includes documents related to the Regional Roundtable and the “Implementation” section includes documents related to the Design Charrette.

## **MRP Regional Supplement for New Development and Redevelopment Annual Reporting for FY 2020-2021**

During FY 20-21, BASMAA's participation in activities to implement the Roadmap of Funding Solutions for Sustainable Streets included:

- Continued coordination with transportation agencies – including the Metropolitan Transportation Commission (MTC) and the California Transportation Commission (CTC) – to clarify GI eligibility in regional and state transportation grant programs (Roadmap Specific Actions 1-2 and 1-3).
- On July 29, 2020, BASMAA representatives met with staff from MTC to receive and discuss comments on the One Bay Area Grant (OBAG) regional fact sheet, which focuses on the eligibility of GI in projects funded by the Surface Transportation Block Grant Program (STP) and the Congestion Mitigation and Air Quality Improvement Program (CMAQ) through the OBAG program administered by MTC. The draft regional fact sheet was subsequently reviewed by the Roadmap Team, revised, and finalized (see Attachment 1).
- The Roadmap Team reviewed, revised, and completed a final draft SB 1 fact sheet – a statewide fact sheet that focuses on the eligibility of GI in projects funded by Senate Bill 1 (see Attachment 2). The Roadmap Team was unable to meet with CTC staff to review and finalize the fact sheet before the grant period expired.
- The Roadmap Team developed an outreach PowerPoint slide deck summarizing the Roundtable process and the final Roadmap of Funding Solutions for Sustainable Streets that can be used by SFEP or stormwater program representatives to educate elected officials or policy makers on the importance of integrating transportation and stormwater investments (Attachment 3).

### ***Other Participation and Comments***

In addition to the *Urban Greening Bay Area* grant efforts described above, Countywide Program representatives participated in the following forums related to GI promotion (in chronological order):

- Matthew Fabry (C/CAG, representing SMCWPPP) and Jill Bicknell and Vishakha Atre (EOA, representing SCVURPPP) participated in meetings of the organization Transportation Choices for Sustainable Communities (TCSC), a research and policy institute that supports “sustainable transportation as an essential component of livable communities and cities”, and helped plan a “Green Streets for Sustainable Communities” Symposium. The purpose of the symposium was to bring together elected officials, city staff leaders, stormwater experts, complete street/transportation experts, environmental activists, tree and urban ecology experts, and other stakeholders to explore how to better fund, design, build, manage and maintain streets to optimize performance for people and nature. The symposium, originally scheduled for March 2020 but postponed due to COVID-19, was held as three half-day virtual sessions on September 10, September 25, and October 8, 2020. Overall, the symposium attracted approximately 445 unique viewers over the three sessions. Details can be found on the [TCSC website](#).



## **MRP Regional Supplement for New Development and Redevelopment Annual Reporting for FY 2020-2021**

- Matthew Fabry (C/CAG, representing SMCWPPP), along with a consultant team, presented a two-hour training workshop at the 2020 CASQA conference (September 16, 2020) on “How to Create a Sustainable Streets Master Plan Linking Stormwater Goals with Transportation Planning.”
- Matthew Fabry (C/CAG, representing SMCWPPP) presented approaches to using GIS to prioritize Sustainable Streets opportunities at the Green Infrastructure Leadership Exchange in October 2020 and May 2021, with a focus on the San Mateo Countywide Sustainable Streets Master Plan.
- Matthew Fabry (C/CAG, representing SMCWPPP) and Jill Bicknell (EOA, representing SCVURPPP) continued to participate in meetings of the TCSC Green Streets Work Group during November 2020 – June 2021. The Work Group continued to meet to conduct follow-up actions to the Symposium, including: 1) developed draft language for Sustainable Streets legislation (building on existing State Complete Streets legislation); 2) met with State Senator Josh Becker and his staff several times to promote sustainable streets and encourage introduction of new legislation; 3) developed a presentation to elected officials on the need for and benefits of sustainable streets; and 4) developed a template comment letter promoting integration of sustainable streets goals and strategies into the MTC/ABAG draft Plan Bay Area 2050.
- Matthew Fabry (C/CAG, representing SMCWPPP) presented to the EPA Region 9 Stormwater Integration Workgroup on November 19, 2020 on stormwater infrastructure and Sustainable Streets in San Mateo County.
- Matthew Fabry (C/CAG, representing SMCWPPP), along with a consultant team, met with Kara Oberg of MTC on January 13, 2021 to discuss ways MTC could incorporate Sustainable Street concepts in its upcoming regional Active Transportation Plan. He subsequently presented on the San Mateo Countywide Sustainable Streets Master Plan at MTC's January 21, 2021 Active Transportation Working Group and March 18, 2021 Local Streets and Roads Project Delivery Workgroup (Joint Partnership Working Group).
- Matthew Fabry (C/CAG, representing SMCWPPP and BASMAA), presented as part of a panel to the Bay Area Regional Collaborative on January 15, 2021 on reissuance of the Municipal Regional Permit and focus on resilient green infrastructure. The panel included Keith Lichten from the Water Board, Josh Bradt from SFEP, and Robin Grossinger from SFEI.
- Matthew Fabry (C/CAG, representing SMCWPPP) provided comments regarding the importance of Sustainable Streets and green infrastructure for adapting roadways to the impacts of climate change in C/CAG's May 19, 2021 letter to the California Transportation Agency on the State's draft Climate Adaptation Plan for Transportation Infrastructure.
- Matthew Fabry (C/CAG, representing SMCWPPP), presented on stormwater capture and use at the June 9, 2021 US EPA and Water Environment Federation

## **MRP Regional Supplement for New Development and Redevelopment Annual Reporting for FY 2020-2021**

webinar “Achieving Multiple Benefits through Stormwater Capture and Use,” focusing on the regional stormwater capture project under construction at Orange Memorial Park in South San Francisco.

- Matthew Fabry (C/CAG, representing SMCWPPP and Bay Area municipalities) was invited to participate in a Green Infrastructure Funding Academy, co-sponsored by American Rivers, Corona Environmental, and the WaterNow Alliance, during which innovative approaches to funding and financing green infrastructure were presented. He presented on stormwater credit trading marketplace considerations for San Mateo County. C/CAG was subsequently selected to receive additional pro-bono support from American Rivers/Corona Environmental to explore the feasibility of a stormwater credit trading marketplace in San Mateo County and the WaterNow Alliance to look at innovative funding and financing approaches for implementing green infrastructure in San Mateo County. The outcomes of these analyses will be available and potentially relevant for all MRP permittees.
- A comment letter promoting integration of sustainable streets goals and strategies into the MTC/ABAG draft Plan Bay Area 2050 was submitted by Jill Bicknell (EOA/SCVURPPP) to MTC/ABAG on July 20, 2021.

## **Attachments**

### **Attachment 1**

#### **Fact Sheet**

*How to Navigate Federal Eligibility for Sustainable Streets  
(aka One Bay Area Grant (OBAG) Program)*



# How to Navigate Federal Eligibility for Sustainable Streets

*Learn how federal funding considerations relate to Bay Area complete/green streets projects*

## What Are Sustainable Streets?

Sustainable Streets are projects that integrate safety and mobility improvements of *Complete Streets*<sup>1</sup> with environmental benefits of *Green Streets* that utilize *green stormwater infrastructure* to manage runoff.

## Why Sustainable Streets Are Important

Sustainable Street projects cost-effectively achieve multiple local and regional priorities, including:

- **Transportation safety** – Providing landscaped areas between pedestrians and traffic (Photos 1 and 2) or between bicycle facilities and motor vehicles (Photo 3).
- **Climate change mitigation** – Providing bicycle and pedestrian improvements to help reduce *vehicle miles traveled* and incorporating landscaping that provides *carbon sequestration* and reduces *urban heat-island effects*.
- **Drainage management** – Green street facilities such as rain gardens or stormwater planters absorb stormwater runoff and can address common drainage challenges in *bulb-out* and *curb extension* designs (Photos 1 through 3).
- **Alleviation of localized flooding and drainage issues** – Green street facilities, such as stormwater planters or rain gardens, can be designed to help alleviate existing problems with localized flood control and storm drainage (Photo 4).
- **Regulatory compliance** – Most Bay Area municipalities are required to build green stormwater infrastructure into projects under the *Municipal Regional Stormwater Permit (MRP)*.
- **Local planning goals** – Many Bay Area municipalities and agencies have adopted Green Stormwater Infrastructure Plans, Complete Streets Plans, Bicycle and Pedestrian and/or *Active Transportation* Plans, which may prioritize Sustainable Streets projects.

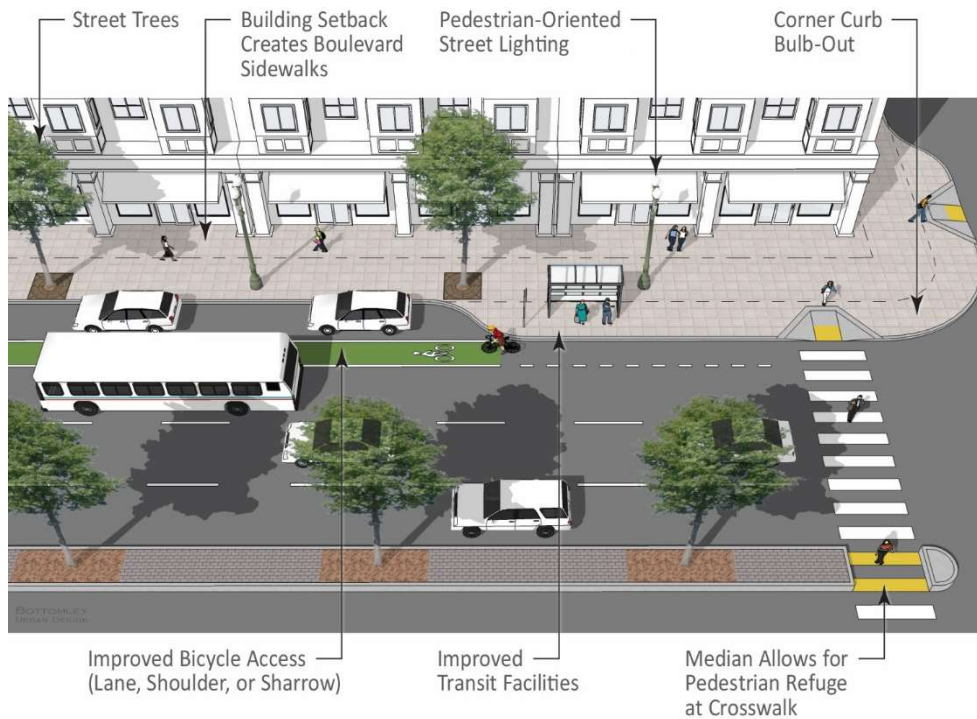


Photo 1. Bulb-out with raingarden in Burlingame, CA  
Photo: San Mateo Countywide Water Pollution Prevention Program

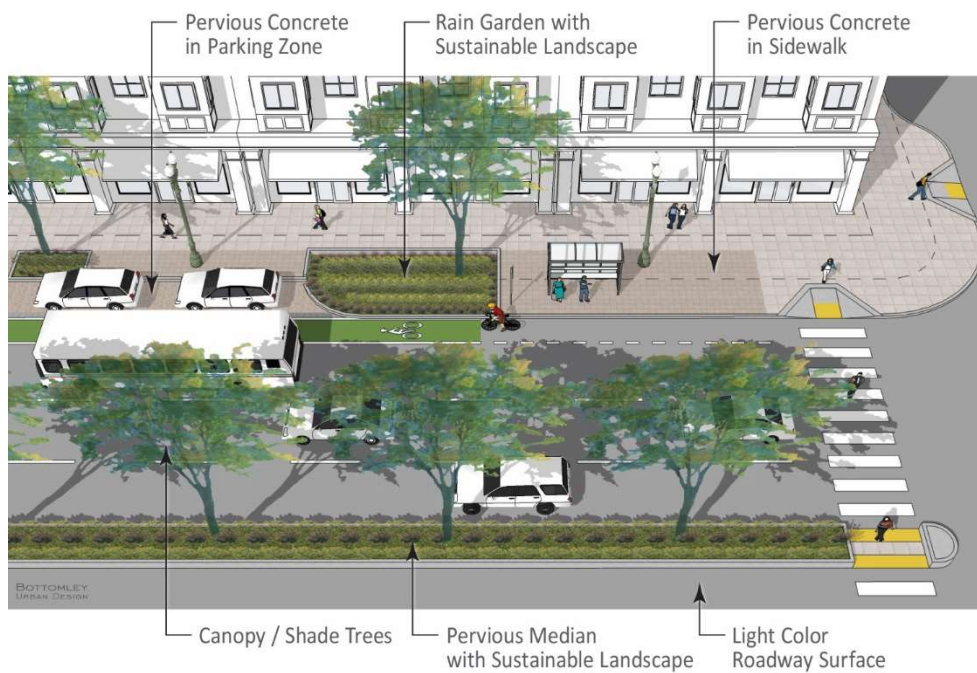
<sup>1</sup> Terms in *italics* are defined in hover text in the electronic file of this fact sheet, available at [www.sfestuary.org/urban-greening-bay-area/](http://www.sfestuary.org/urban-greening-bay-area/).

## Sustainable Streets = Complete Streets + Green Streets

The illustrations below include examples of both a Complete Street, which aims to ensure safe and convenient transportation options for all users, as well as a Sustainable Street, which integrates water quality and environmental benefits, in addition to safety measures and mobility options.



**Example of Complete Street:** Common features of Complete Streets include improved access for bicyclists and bus stops, pedestrian safety measures, and streetscape enhancements that help to encourage pedestrian activity such as landscaping, seating areas, and pedestrian-scale streetlights.



**Example of Sustainable Street:** Additional features commonly included in Sustainable Streets are *bioretention* features for stormwater infiltration and improved drainage (such as, rain gardens or stormwater planters, pervious medians and pavements) as well as large canopy trees to retain rainfall, and cool the urban landscape.

Images: Bottomley Urban Design

## What Types of Sustainable Street Improvements May Receive Federal Funding through OBAG?

Some federal surface transportation funding, such as the One Bay Area Grant (OBAG) program, can be used by cities and counties for Sustainable Streets by including complementary green stormwater infrastructure in eligible transportation projects. Examples of Sustainable Streets improvements that can be eligible for OBAG funding include:

- **Safe Routes to School projects** with *bulb-outs* that include *rain gardens* or *stormwater planters*, which can address drainage challenges, *buffer* pedestrians from traffic, and shorten pedestrian crossing distances (see Photo 1, below).
- **Pedestrian safety improvements** to the streetscape can include landscape enhancements that also provide stormwater management benefits (see Photo 2, below).
- **Road diet projects** that include bicycle lanes and stormwater planters or rain gardens beautify streetscapes and may be designed to provide a buffer between bicyclists and motor vehicle traffic (see Photo 3, below).
- **Pervious pavement** incorporated into a street rehabilitation or improvement project can address local drainage issues and provide aesthetic enhancements (see Photo 5, below).

## When Can OBAG Funding Be Used for Sustainable Streets?

All projects – including projects with green stormwater infrastructure elements – must be consistent with overall OBAG policies and must be recommended by the sponsor’s County Transportation Agency after a competitive prioritization process to be awarded funding by MTC. Proposed projects are limited to the requirement of OBAG’s federal funding program sources: Surface Transportation Block Grant Program (STP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ). Green Street features may be an eligible component of an OBAG project; however, please note the following:

- The project’s overall purpose and need must focus on transportation.
- Green Street features need to enhance or complement the transportation-based project.
- The Green Street share of the project budget should be appropriate as a project enhancement or complement.

**One Bay Area Grant Program** The OBAG program is one of the primary mechanisms by which the Metropolitan Transportation Commission (MTC) implements the vision laid out in Plan Bay Area 2040, the region’s long-range transportation and land use plan. A key component of OBAG is the County Program, which links transportation funding with key regional policy goals such as focusing growth to reduce vehicle miles traveled and greenhouse gas emissions and incentivizing the production and preservation of affordable housing. Working with County Transportation Agencies, MTC invests OBAG County Program funding in local priorities for bicycle and pedestrian infrastructure, Safe Routes to School, Transportation for Livable Communities projects, road diets, and transit improvements in support of implementing Plan Bay Area. The current cycle of the OBAG County Program (OBAG 2) provides nearly \$400 million in federal transportation funds to local transportation projects over a five-year period; the next cycle of funding (OBAG 3) is anticipated in 2023.



Photo 2: Stormwater planter, Latham Square, Oakland  
Photo: CD+A

## OBAG Limitations and Other Funding Sources

Please note that this fact sheet is provided for informational purposes only. MTC does not endorse any specific project type nor guarantee OBAG funding to any specific project or project type.

Local agencies developing Sustainable Streets projects may consider various types of funding sources, such as the Senate Bill 1 (SB 1) Local Streets and Roads Program and the Active Transportation Program. More information about these funding programs is available at the San Francisco Estuary Partnership's Sustainable Streets webpage, at the link shown below.

## Resources for More Information

Visit San Francisco Estuary Partnership's Sustainable Streets webpage: [www.sfestuary.org/urban-greening-bay-area/](http://www.sfestuary.org/urban-greening-bay-area/) or contact Josh Bradt, [josh.bradt@sfestuary.org](mailto:josh.bradt@sfestuary.org) for more information, including:

- Case Studies.
- Information on Sustainable Streets facilities.
- Information on funding options for Sustainable Streets.

For questions specific to MTC's OBAG program, please contact Mallory Atkinson by emailing [matkinson@bayareametro.gov](mailto:matkinson@bayareametro.gov).

## About Urban Greening Bay Area

Urban Greening Bay Area is a collaborative effort, led by the San Francisco Estuary Partnership, to re-envision Bay Area urban landscapes with widespread green infrastructure that improves water quality, reduces local flooding, and helps mitigate anticipated climate change impacts. This fact sheet was prepared in partnership with the Bay Area Stormwater Management Agencies Association, with funding from the United States Environmental Protection Agency.



Photo 3: Stormwater planter, Harrison Street, Oakland  
Photo: CD+A



Photo 4: Rain garden and stormwater planters in curb extensions, Donnelly Avenue, Burlingame  
Photo: City of Burlingame



Photo 5: Allston Way pervious pavement, Berkeley  
Photo: Friends of Five Creeks

## **Attachments**

### **Attachment 2 DRAFT Fact Sheet**

*How to Build Sustainable Streets with SB 1 Funding*





# How to Build Sustainable Streets with SB 1 Funding

Learn how to create integrated Complete/Green Streets using Senate Bill 1 (SB 1) Funding

## What Are Sustainable Streets?

Sustainable Streets are projects that integrate safety and mobility improvements of *Complete Streets*<sup>1</sup> with environmental benefits of *Green Streets* that utilize *green stormwater infrastructure* to manage runoff.

## Why Sustainable Streets Are Important

Sustainable Street projects cost-effectively achieve multiple local and regional priorities, including:

- **Transportation safety** – Providing landscaped areas between pedestrians and traffic (Photos 1 and 2) or between bicycle facilities and motor vehicles (Photo 3).
- **Climate change mitigation** – Providing bicycle and pedestrian improvements to help reduce *vehicle miles traveled* and incorporating landscaping that provides *carbon sequestration* and reduces *urban heat-island effects*.
- **Drainage management** – Green street facilities such as rain gardens or stormwater planters absorb stormwater runoff and can address common drainage challenges in bulb-out and *curb extension* designs (Photos 1 through 3).
- **Alleviation of localized flooding and drainage issues** – Green street facilities, such as stormwater planters or rain gardens, can be designed to help alleviate existing problems with localized flood control and storm drainage (Photo 4).
- **Regulatory compliance** – Municipalities throughout the State are required to build green stormwater infrastructure into projects under their municipal stormwater permits.
- **Local planning goals** – Many municipalities and agencies have adopted Stormwater Management Plans, Watershed Plans, Green Infrastructure Plans, Water Quality Improvement Plans, Complete Streets Plans, Bicycle and Pedestrian and/or Active Transportation Plans, which may prioritize Sustainable Streets projects.



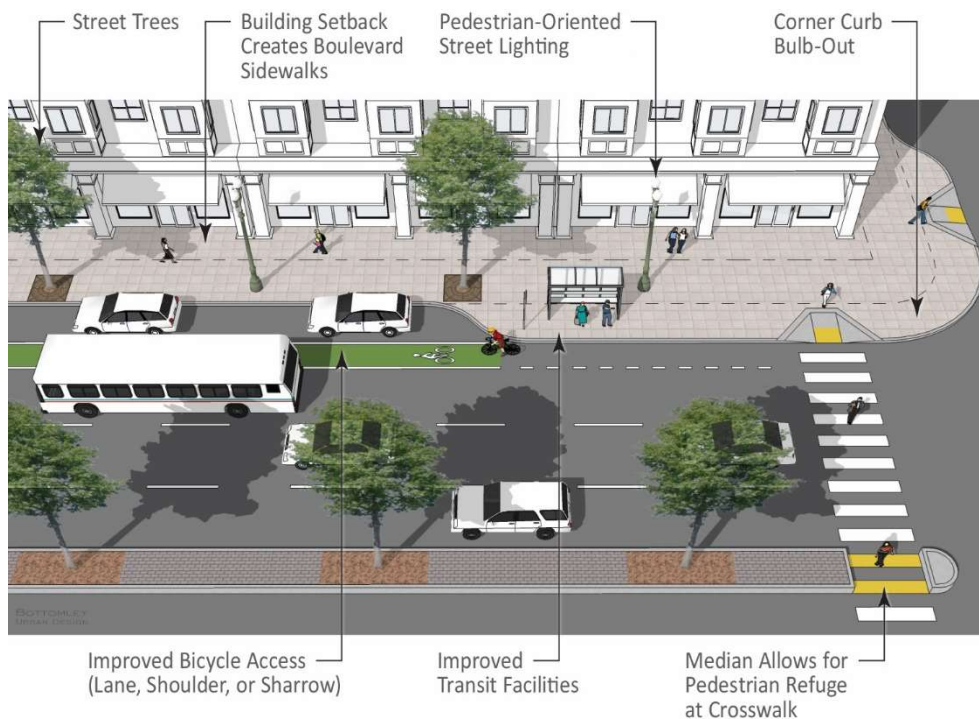
Photo 1. Bulb-out with raingarden in Burlingame, CA  
Photo: San Mateo Countywide Water Pollution Prevention Program

<sup>1</sup> Terms in *italics* are defined in hover text in the electronic file of this fact sheet, available at [www.sfestuary.org/urban-greening-bay-area/](http://www.sfestuary.org/urban-greening-bay-area/).



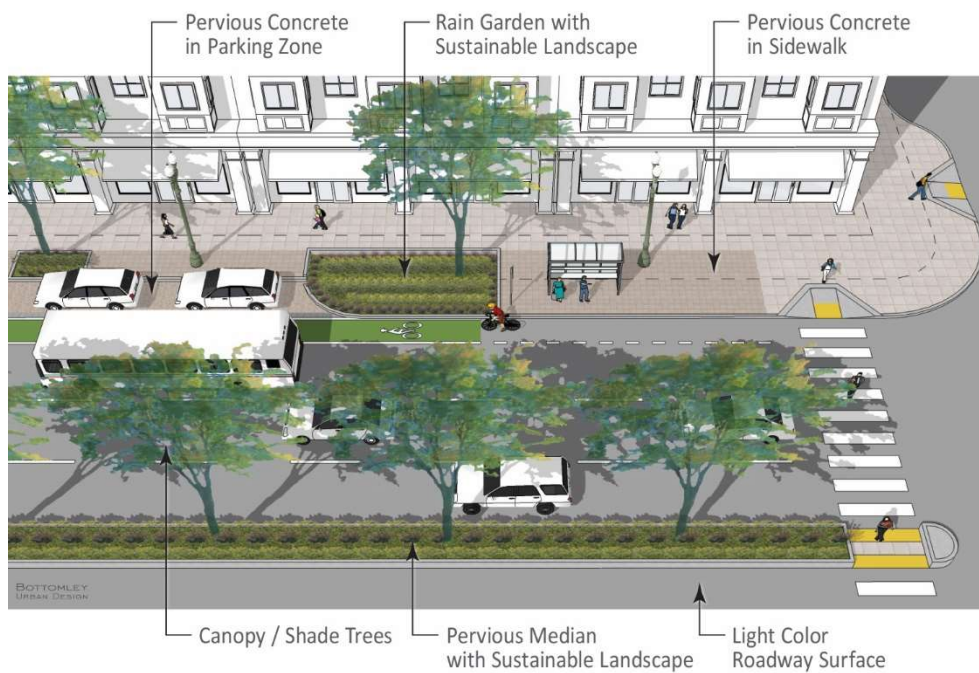
## Sustainable Streets = Complete Streets + Green Streets

The illustrations below include examples of both a Complete Street, which aims to ensure safe and convenient transportation options for all users, as well as a Sustainable Street, which integrates water quality and environmental benefits, in addition to safety measures and mobility options.



### Example of Complete Street:

Common features of Complete Streets include improved access for bicyclists and bus stops, pedestrian safety measures, and streetscape enhancements that help to encourage pedestrian activity such as landscaping, seating areas, and pedestrian-scale streetlights.



### Example of Sustainable Street:

Additional features commonly included in Sustainable Streets are *bioretention* features for stormwater infiltration and improved drainage (such as, rain gardens or stormwater planters, pervious medians and pavements) as well as large canopy trees to retain rainfall, and cool the urban landscape.

Images: Bottomley Urban Design



Re-envisioning urban landscapes for a greener California

## What Types of Sustainable Street Improvements Are Eligible For SB 1?

Cities and counties may use their formulaic Senate Bill (SB) 1 Local Streets and Roads Program funds for Sustainable Streets projects ranging from road maintenance and streetscape enhancements, to bicycle and pedestrian improvements. Examples include:

- **Safe Routes to School projects** with *bulb-outs* that include *rain gardens* or *stormwater planters*, which can address drainage challenges, *buffer* pedestrians from traffic, and shorten pedestrian crossing distances (see Photo 1, below).
- **Pedestrian safety improvements** to the streetscape can include landscape enhancements that also provide stormwater management benefits (see Photo 2, below).
- **Road diet projects** that include bicycle lanes and stormwater planters or rain gardens beautify streetscapes and may be designed to provide a buffer between bicyclists and motor vehicle traffic (see Photo 3, below).
- **Pervious pavement** incorporated into a street rehabilitation or improvement project can address local drainage issues and provide aesthetic enhancements (see Photo 5, below).

## Are There Other SB 1 Funding Programs where Sustainable Street Projects May be Eligible?

Sustainable Street projects may be eligible for the following SB 1 Funding Programs, in addition to the Local Streets and Roads Program.

- Active Transportation Program
- Local Partnership Program

For more information about these programs, visit the California Transportation Commission's website: <https://catc.ca.gov/>.

## When Can SB 1 Funding Be Used for Sustainable Streets?

All projects – including projects with green stormwater infrastructure elements – must be consistent with the California Transportation Commission's policies governing the applicable SB 1 Programs. Green Street features may be an eligible component of an SB 1-funded project; however, please note:

- The project's overall purpose and need must focus on transportation.
- Green Street features need to enhance or complement the transportation-based project.
- The Green Street share of the project budget should be appropriate as a project enhancement or complement.

## SB 1 Funding Program Highlights

SB 1 provides transportation funding through various programs, including:

**Local Streets and Roads Program** – This program dedicates approximately \$1.5 billion per year in new formula revenues apportioned by the State Controller to cities and counties for basic road maintenance, rehabilitation, and critical safety projects on the local streets and roads system.

**Active Transportation Program** – The State Legislature created this program in 2013 to encourage increased use of active modes of transportation, such as biking and walking. SB 1 directs \$100 million annually to this program, to augment other available funding.

**Local Partnership Program** – This program benefits local and regional transportation agencies that have passed sales tax measures, developer fees, or other imposed transportation fees. It provides a continuous appropriation of \$200 million annually to fund road maintenance and rehabilitation, sound walls, and other transportation improvement projects.



Photo 2: Stormwater planter, Latham Square, Oakland  
Photo: CD+A



## SB 1 Limitations and Other Funding Sources

Please note that this fact sheet is provided for informational purposes only. SB 1 funding is not guaranteed for any specific project or project type. Local agencies developing Sustainable Streets projects may consider various types of funding sources, such as federal funding administered by county transportation agencies under the Federal Highway Administration’s Surface Transportation Block Grant Program (STP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ). More information about funding sources for Sustainable Streets is available at the San Francisco Estuary Partnership’s Sustainable Streets webpage, at the link shown below.

## Resources for More Information

Visit San Francisco Estuary Partnership’s Sustainable Streets webpage: [www.sfestuary.org/urban-greening-bay-area/](http://www.sfestuary.org/urban-greening-bay-area/) or contact Josh Bradt, [josh.bradt@sfestuary.org](mailto:josh.bradt@sfestuary.org) for more information, including:

- Case Studies.
- Information on Sustainable Streets facilities.
- Information on funding options for Sustainable Streets.

For questions specific to SB 1 funding programs, please contact [CTC staff name] by emailing [CTC staff email address].

[[=Roadmap Team: We could potentially fill up this blank space by adding another section – which would go above the “Resources for More Information” section, rather than below it. One potential topic could be a summary of the results of the statewide survey. Another possibility would be to increase the amount of information on the three SB 1 programs described in the callout box on page 3. =]]



Photo 3: Stormwater planter, Harrison Street, Oakland  
Photo: CD+A



Photo 4: Rain garden and stormwater planters in curb extensions, Donnelly Avenue, Burlingame  
Photo: City of Burlingame



Photo 5: Allston Way pervious pavement, Berkeley  
Photo: Friends of Five Creeks

## **Attachments**

### **Attachment 3 Presentation**

*Funding Solutions for Sustainable Streets:  
Regional Roundtable and Roadmap – Status Update*



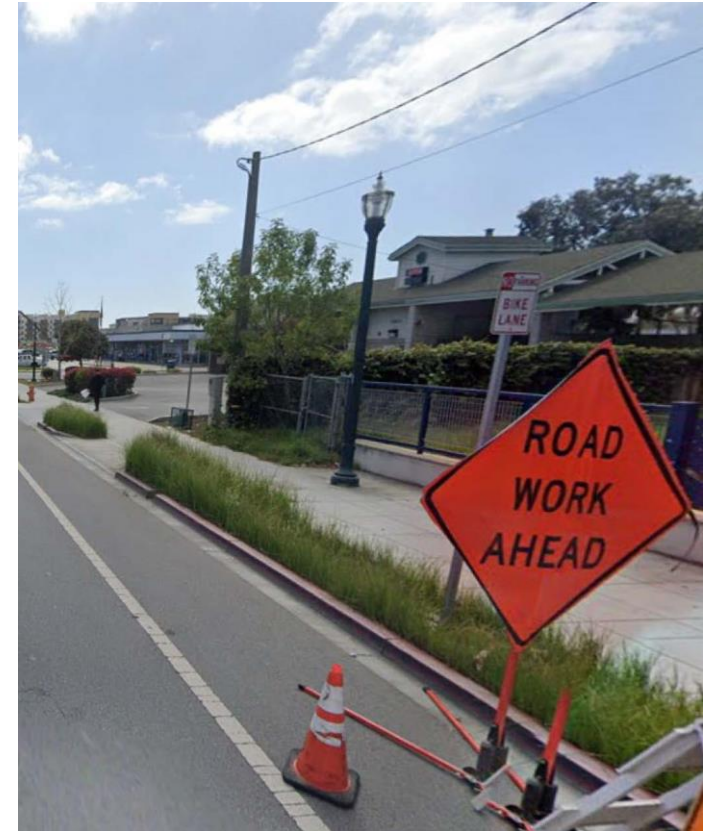
URBAN  
GREENING  
BAY AREA

# Funding Solutions for Sustainable Streets

Regional Roundtable and Roadmap – Status Update

# Overview

- What are Sustainable Streets?
- Challenges and opportunities
- Roundtable on funding solutions
- Roadmap and specific actions
- Implementing the Roadmap
- Next steps



# Sustainable Streets =

## “Complete Streets”

- Provides safe access for pedestrians, bicyclists, motorists, and transit riders
- Enhances public health
- Reduces greenhouse gas emissions



## Green stormwater infrastructure

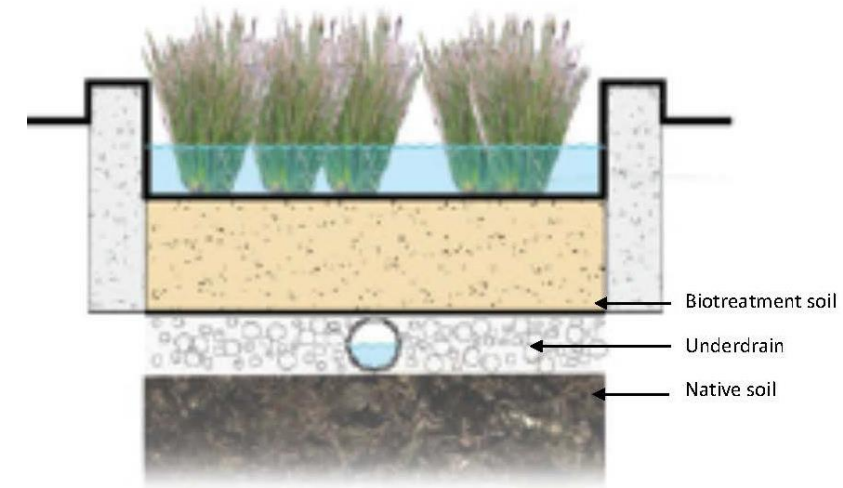
- Reduces air pollution
- Reduces water pollution
- Reduces the urban heat island
- Sequesters carbon
- Reduces localized flooding



# Sustainable Street Examples



City of San Mateo



*Cutaway view (Source: San Mateo Countywide Water Pollution Prevention Program)*



***Humboldt St  
City of San  
Mateo***



Image capture: Feb 2017 © 2017 Google United States Terms Report a problem



Google

Image capture: Feb 2017 © 2017 Google United States

# *Humboldt St City of San Mateo*

# Sustainable Street Examples



## Oakland

(Photo credit: CD+A)

# Sustainable Street Examples



## Beverly Hills

(Photo credit: Kevin Robert Perry)

# Sustainable Street Examples



Sacramento

# Challenges

- Some funding criteria do not encourage multi-benefit projects, even though these projects can reduce overall costs
- Assembling both transportation and resource grants adds challenges and costs
- Substantial investment required to remove pollutants from stormwater runoff in urban areas of California



# Opportunities

- Sustainable Streets are designed to cost effectively deliver multiple benefits, including:
  - Transportation safety
  - Health benefits of active transportation
  - Climate change mitigation
  - Air quality improvement
  - Water quality improvement
  - Drainage management and localized flood control
  - Local planning goals
- USEPA grant funding for Roundtable and Roadmap



**LEGISLATIVE RECOMMENDATIONS**

Augment the Active Transportation Program with cap-and-trade funds, given the program is severely oversubscribed and these projects advance climate goals.



# Regional Roundtable

- Convened 3 meetings of leaders from federal, state, regional, and local agencies, and NGOs
- Topics included:
  - Presentations on priorities for relevant grants, by agencies such as
    - Caltrans and the California Transportation Commission
    - California Strategic Growth Council
    - California Natural Resources Agency
  - Case studies of projects encountering funding obstacles
  - Facilitated discussions on potential solutions and priorities
  - Review/comment on Draft Roadmap of Funding Solutions



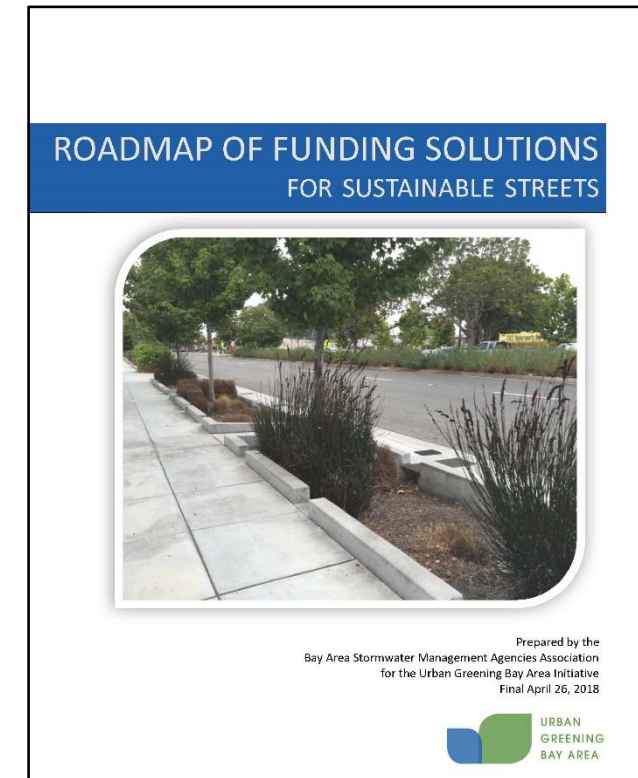
# Regional Roundtable

- More than 40 agencies and NGOs attended, including

Federal Highway Administration	State Water Resources Control Board
Federal Transit Administration	California Strategic Growth Council
Federal Emergency Management Agency	Metropolitan Transportation Commission
US Environmental Protection Agency	Association of Bay Area Governments
California Transportation Commission	Bay Area Air Quality Management District
Caltrans	Bay Conservation and Development Commission
California Department of Water Resources	Regional Water Quality Control Board
California Natural Resources Agency	Trust for Public Land
State Coastal Conservancy	Natural Resources Defense Council

# Roadmap of Funding Solutions

- Based on information from Roundtable
- Identifies 24 Specific Actions, including actions to:
  - Prioritize Sustainable Streets in funding sources
  - Improve conditions for projects funded by multiple grants
  - Improve Sustainable Streets funding with a range of options
- Implementation timeframes
  - Immediate, short-term, long-term
- Tasks assigned to applicable Roundtable participants
- San Francisco Estuary Partnership leads implementation



# Progress on Specific Actions

Specific Action	Timeframe	Status
1-1 Clarify GSI Eligibility in Federal Transportation Grants	Immediate	In progress
3-1 Provide Guidance on a Range of Funding Options	Immediate	Initial guidance provided / ongoing
3-2 Improve the Existing Web Presence for the Roadmap	Immediate	In progress
3-6 Coordinate with Local Agency Staff to Share Information	Short-term	Initial Bay Area meetings conducted Planning Bay Area, SoCal meetings
3-7 Prepare and Distribute a Roadmap Fact Sheet	Short-term	Finalizing second fact sheet Distribution in 2021

# One Bay Area Grant (OBAG) Fact Sheet

- Describes how to navigate eligibility of Sustainable Streets projects for OBAG funding
- Developed in partnership with Metropolitan Transportation Commission staff
- Approved in December 2020
- Target audience:
  - Local transportation staff, stormwater staff in Bay Area



## How to Navigate Federal Eligibility for Sustainable Streets

*Learn how federal funding considerations relate to Bay Area complete/green streets projects*

### What Are Sustainable Streets?

Sustainable Streets are projects that integrate safety and mobility improvements of *Complete Streets*<sup>1</sup> with environmental benefits of *Green Streets* that utilize *green stormwater infrastructure* to manage runoff.

### Why Sustainable Streets Are Important

Sustainable Street projects cost-effectively achieve multiple local and regional priorities, including:

- **Transportation safety** – Providing landscaped areas between pedestrians and traffic (Photos 1 and 2) or between bicycle facilities and motor vehicles (Photo 3).
- **Climate change mitigation** – Providing bicycle and pedestrian improvements to help reduce *vehicle miles traveled* and incorporating landscaping that provides *carbon sequestration* and reduces *urban heat-island effects*.



*Photo 1. Bulb-out with raingarden in Burlingame, CA  
Photo: San Mateo Countywide Water Pollution Prevention Program*

# Senate Bill 1 Fact Sheet

- Describes how to navigate eligibility of Sustainable Streets projects for funding under SB 1
- Developed in partnership with California Transportation Commission staff
- Approval pending
- Target audience:
  - Local transportation staff, stormwater staff – statewide

DRAFT 4



## How to Build Sustainable Streets with SB 1 Funding

*Learn how to create integrated Complete/Green Streets using Senate Bill 1 (SB 1) Funding*

**What Are Sustainable Streets?**

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Photo 1. Bulb-out with raingarden in Burlingame, CA  
Photo: San Mateo Countywide Water Pollution Prevention Program

# Next Steps

- Distribute fact sheets in coordination with partners
  - California Transportation Commission
  - Metropolitan Transportation Commission
  - County Transportation Authorities
- Complete Specific Actions in progress
- Work with partners to
  - Offer training on obtaining grants for Sustainable Streets
  - Develop targeted outreach strategy
  - Identify funding for further implementation of Roadmap



# **Annual Reporting for FY 2020-2021**

## **Regional Supplement for Training and Outreach**

### **San Francisco Bay Area Municipal Regional Stormwater Permit**

#### **Bay Area Municipal Stormwater Collaborative**

September 2021



**MRP Regional Supplement for Training and Outreach  
Annual Reporting for FY 2020-2021**

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**LIST OF ATTACHMENTS:**

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

Home Depot Letter of Support

# MRP Regional Supplement for Training and Outreach Annual Reporting for FY 2020-2021

## 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 76 municipalities and special districts (Permittees) by the San Francisco Bay Regional Water Quality Control Board (Water Board). The Regional Supplement covers training and outreach activities related to the following MRP provisions:

- Provision C.5.e., Control of Mobile Sources,
- Provision C.7.c.ii.(1), Stormwater Point of Contact, and
- Provision C.9.e.ii.(1), Point of Purchase Outreach.

These regionally implemented activities were conducted under the auspices of the Bay Area Stormwater Management Agencies Association (BASMAA), a 501(c)(3) non-profit organization comprised of the municipal stormwater programs in the San Francisco Bay Area.<sup>1</sup> Most of the 2020-2021 annual reporting requirements of the specific MRP Provisions covered in this Supplement are completely met by BASMAA Regional Project activities, except where otherwise noted herein or by Permittees in their reports. Scopes, budgets, and contracting or in-kind project implementation mechanisms for BASMAA Regional Projects follow BASMAA's operational Policies and Procedures as approved by the BASMAA Board of Directors. MRP Permittees, through their program representatives on the Board of Directors and its committees, collaboratively authorize and participate in BASMAA Regional Projects or Regional Tasks. Depending on the Regional Project or Task, either all BASMAA members or Phase I programs that are subject to the MRP share regional costs.

## Training

### C.5.e. Control of Mobile Sources

This provision requires:

*Each Permittee shall implement a program to reduce the discharge of pollutants from mobile businesses.*

*(1) The program shall include the following:*

- (a) Implementation of minimum standards and BMPs for each of the various types of mobile businesses, such as automobile washing, power washing, steam cleaning, and carpet cleaning.*
- (b) Implementation of an enforcement strategy that specifically addresses the unique characteristics of mobile businesses.*
- (c) Regularly updating mobile business inventories.*
- (d) Implementation of an outreach and education strategy to mobile businesses operating within the Permittee's jurisdiction.*
- (e) Inspection of mobile businesses, as needed.*

*(2) Permittees may cooperate county-wide and/or region-wide with the implementation of their programs for mobile businesses, including sharing of*

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<sup>1</sup> In late FY 20-21, 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). BAMSC members jointly prepared this Regional Supplement for FY 20-21.

## **MRP Regional Supplement for Training and Outreach Annual Reporting for FY 2020-2021**

*mobile business inventories, BMP requirements, enforcement action information, and education.*

BASMAA's long-standing [Surface Cleaner Training and Recognition Program](#) addresses the BMP and training aspects of the provision by focusing on the most common type of outdoor cleaning – cleaning of flat surfaces like sidewalks, plazas, parking areas, and buildings. Individual Permittees address the inspection and enforcement aspects of the provision.

Cleaners that take the web-based training and a self-quiz are designated by BASMAA as Recognized Surface Cleaners. BASMAA also created and provides marketing materials for use by Recognized Surface Cleaners. Cleaners can use the website to get trained and recognized for the first time or renew their training and recognition, as required annually. Recognized cleaners can also download marketing materials from the website. Potential customers, including Permittees can use the site to verify the recognition status of any cleaner, as can municipal inspectors.

### **Public Information and Outreach**

#### **C.7.c.ii.(1) Stormwater Point of Contact**

This provision requires:

*Each Permittee shall maintain and publicize one point of contact for information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives. This point of contact can be maintained individually or collectively and Permittees may combine this function with the spill and dumping complaint central contact point required in C.5.*

BASMAA assists with this provision by using the regional website: [BayWise.org](https://baywise.org) to list or link to member programs' lists of points of contact and contact information for the stormwater agencies in the Bay Area (<https://baywise.org/about/>).

### **Pesticides Toxicity Control**

#### **C.9.e.ii.(1) Point of Purchase Outreach**

This provision requires Permittees to:

- *Conduct outreach to consumers at the point of purchase;*
- *Provide targeted information on proper pesticide use and disposal, potential adverse impacts on water quality, and less toxic methods of pest prevention and control; and*
- *Participate in and provide resources for the "Our Water, Our World" program or a functionally equivalent pesticide use reduction outreach program.*

The Annual Reporting provision requires:

*Outreach conducted at the county or regional level shall be described in Annual Reports prepared at that respective level; reiteration in individual Permittee reports is*

## **MRP Regional Supplement for Training and Outreach Annual Reporting for FY 2020-2021**

*discouraged. Reports shall include a brief description of outreach conducted..., including level of effort, messages and target audience. (The effectiveness of outreach efforts shall be evaluated only once in the Permit term, as required in Provision C.9.f. [Ed. C.9.g]).*

Below is a report of activities and accomplishments of the *Our Water, Our World* program for FY 2020-2021. Store employee trainings and vendor outreach events were not conducted in FY 2020-2021 due to COVID-19 related safety concerns.

- Coordinated program implementation with major chains Home Depot and Ace Hardware National.
  - Home Depot Corporate (Atlanta) directed support of the program with their stores (see Attachment).
- Coordinated a bulk print of fact sheets, shelf tags, literature rack display signage, *10 Most Wanted* brochures, *Pest or Pal Activity Guide for Kids*, custom-designed product guide dispensers, and two versions of product guides (Home Depot and generic), from which participating agencies could purchase materials.
- Conducted monthly seasonal pests meetings with IPM Advocates for the month/season ahead.
- Updated less-toxic Product List for Home Depot.
- Updated the overall look and navigation of the [Our Water, Our World website](#).

## **Attachments**

### **Point of Purchase Outreach**

Home Depot Letter of Support



**Interoffice  
MEMORANDUM**

**DATE:** January 11, 2021

**TO:** California Store Managers, D28 ASMs and Department Heads

**FROM:** Ron Jarvis

**CC:** Steve Knott, Scott Jacobson

**SUBJECT:** Our Water Our World training

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OUR WATER, OUR WORLD is a coalition of organizations whose purpose is to encourage consumers to use less toxic 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 less toxic 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 less-toxic 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 less toxic and Eco Options 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.

A representative will contact you before the training or demonstration date to arrange details. Please contact Suzanne Bontempo at (415) 317-0475 if you have any questions.

Thank you

A handwritten signature in black ink that reads "Ron Jarvis". The signature is written in a cursive, flowing style.

from the desk of.....

**Ron Jarvis**  
**Merchandising Vice President – Sustainability**  
**THE HOME DEPOT USA, INC.**  
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