MRP 3.0 Steering Committee Meeting Provisions C.3, C.11, C.12 Room 2, 2nd floor, 1515 Clay Street, Oakland CA 94612 June 25, 2019

Name	Affiliation	Email Address
Danielle Lee	County of San Mateo	dlee@smcgov.org
Jim Porter	County of San Mateo	jporter@smcgov.org
Amanda Booth	City of San Pablo	amandab@sanpabloca.gov
Kirsten Struve	Santa Clara Valley Water District	kstruve@vallelywater.ogr
Lucile Paquette	Contra Costa Clean Water Program	Lucile.paquette@pw.cccounty.us
Michele Mancuso	Contra Costa County	Michele.mancuso@pw.cccounty.us
Karin North	City of Palo Alto	Karin.north@cityofpaloalto.org
Courtney Riddle	Contra Costa Clean Water Program	Courtney.riddle@pw.cccounty.us
Derek Crutchfield	City of Vallejo	Derek.crutchfield@cityofvallejo.net
Jennifer Harrington	Vallejo Flood and Wastewater District	jharrington@vallejowastewater.org
Robert Newman	City of Vallejo	Robert.newman@cityofvallejo.net
Kelly Havens	Geosyntec Consultants	khavens@geosyntec.com
Rinta Perkins	City of Santa Clara	rperkins@santaclaraca.gov
Craig Pon	City of Oakland	cpon@oaklandca.gov
Rafles Warners	City of Santa Clara	Rwarnars@santaclaraca.gov
Luisa Valiela	U.S. EPA	Valiela.luisa@epa.gov
Matt Fabry	City/County Association of Governments of San	mfabry@smcgov.org
•	Mateo County	
Pam Boyle Rodriguez	City of Palo Alto	Pamela.boylerodriguez@cityofpaloalto.org
Gary Grimm	Alameda Countywide Clean Water Program	Ggrimm@garygrimmlaw.com
Sharon Gosselin	County of Alameda	sharon@acpwa.org
Kristin Hathaway	City of Oakland	Khathaway@oaklanca.gov
Jim Scanlin	Alameda Countywide Clean Water Program	jims@acpwa.org
Sharon Newton	City of San Jose	Sharon.newton@sanjoseca.gov
Lisa Austin	Geosyntec Consultants	laustin@geosyntec.com
Terri Fashing	City of Oakland	tfashing@oaklandca.gov
Dan Cloak	Contra Costa Clean Water Program	dan@dancloak.com
Karin Graves	Contra Costa Clean Water Program	Karin.graves@pw.cccounty.us
Shannan Young	City of Dublin	Shannan.young@dublin.ca.gov
Jill Bicknell	EOA Inc.	jcbicknell@eoainc.com
Chris Sommers	EOA Inc.	csommers@eoainc.com
Melody Tovar	City of Sunnyvale	mtovar@sunnyvale.ca.gov
Chris McCann	City of Danville	cmccann@danville.ca.gov
Randy Breault	City of Brisbane	rbreault@brisbaneca.org
Obaid Khan	City of Dublin	Obaid.kahn@dublin.ca.gov
Reid Bogert	City/County Association of Governments of San	rbogert@smcgov.org
	Mateo County	
Joanne Le	City of Richmond	Joanne le@ci.richmond.ca.us
Neil Mock	City of Walnut Creek	mock@walnut-creek.org
Mitra Abkenari	City of Concord	Mitra.abkenari@cityofconcord.org
Tom Mumley	Water Board	Thomas.mumley@waterboards.ca.gov
Keith Lichten	Water Board	Keith.lichten@waterboards.ca.gov
Dale Bowyer	Water Board	Dale.bowyer@waterboards.ca.gov
Elyse Hailstorm	Water Board	Elyse.heilshorn@waterboards.ca.gov
Joseph Martinez	Water Board	Joseph.martinez@waterboards.ca.gov
Imtiaz-Ali Kalyan	Water Board	Imtiaz-ali.kalyan@waterboards.ca.gov
Richard Looker	Water Board	Richard.looker@waterboards.ca.gov
Zach Rokeach	Water Board	Zachary.rokeacy@waterboards.ca.gov

Workgroup and Steering Committee Coordinators

- C.3 Matt Fabry and Jill Bicknell
- C.8 Lucile Paquette and Bonnie de Berry
- C.10 Chris Sommers
- C.11/12 Lisa Austin and Jim Scanlin
- Reporting/Other BASMAA Board of Directors



Committee Agenda

I. Introductions, Announcements, and Changes to Agenda

Outcome: Attendees introduced themselves. Agenda approved without change.

II. Summary from Previous Meeting and Review of Action Items

Outcome: Edits to the draft summary from the March 2019 Steering Committee meeting were provided, so approval was delayed until the next Steering Committee meeting. The Steering Committee Meeting Email list should be expanded to include all of the SC attendees; send names to Zach to be added to the list. Water Board staff noted that it is important to document agreements and action items in a timely manner.

III. Summary of Recent SC Work Group Discussions

Summary of Recent Workgroup Discussions

The meeting started with reviews of the recent meetings of the C.8, C.10, C.11/12, and C.3 workgroups by their respective leads. Lucille Paquette spoke for the recent C.8 workgroup meetings (Bonnie de Berry was not present), Chris Sommers for C.10, Lisa Austin for C.11/12, and Jill Bicknell for C.3. Highlights of the discussions following workgroup summary presentations are provided:

C.8 workgroup review:

- The April workgroup meeting discussed lessons learned in MRP 1 & 2 regarding creek status, management questions, and trends monitoring.
- Water Board staff cautioned that it may be difficult to establish trends this early, and that we should be careful about spending resources to track trends that aren't trackable, vs. potentially more-appropriate surrogates.
- Challenges received from NGOs and others on previous iterations of the MRP regarding insufficient end-of-pipe monitoring to demonstrate progress should be considered. Need to be able to explain why MRP monitoring makes sense, how it is answering appropriate questions about urban runoff impacts, etc.
- The next C.8 BASMAA workgroup meeting will be July 30.

C.10 workgroup review:

- Permittees asked for an acknowledgement in the fact sheet or introduction of Provision C.10 of the reissued permit on the connection between homelessness and trash in receiving waters. Permittees asked that trash reduction credits associated with managing the impacts of homelessness via the Direct Discharge Program provision be continued into MRP 3.0 and the scope of the actions (e.g. housing) that could be credited under this program be further discussed.
- Water Board staff anticipates bringing a trash information item before the Board in late 2019 or early 2020, during which homelessness will likely come up. Before bringing this item to the Water Board, staff will further discuss this request and other related concerns with Workgroup members.
- Permittees have an interest in continuing trash load reduction credits into MRP 3.0 for source controls and offsets for creek and shoreline cleanups. Water Board staff have interest in accounting for credits/offsets if Permittees are able to clearly demonstrate the benefits claimed by those actions with data. Water Board staff have indicated that the existing credits for source control actions need to be reassessed; they are important supplemental controls to FTCD, which is not an end-all-be-all, but we need to be careful about crediting those actions. Some latitude for innovation and motivation of investment of political capital, which are early drivers for giving credit for source controls such as single use bag bans, may be provided with justification. Water Board staff indicated that they are having similar conversations right now with Caltrans.
- Water Board staff stated that we must be cognizant of double counting the benefits of trash control actions, recognizing that source control actions are part of the suite of actions needed to appropriately control trash, and the benefits should be realized in OVTAs. Staff want to avoid the situation where MRP accounting shows 100% reduction and there are still significant trash discharges from MS4s.
- There was a brief discussion of mapping of private land areas that discharge to Permittees' MS4s, with the Cities of Pinole and Hercules serving as examples of how to put together an ordinance that addresses trash discharges from those areas.
- The next C.10 workgroup meeting is on July 23rd, the same day as a BASMAA trash committee meeting.

C.11/12 workgroup review:

- There was a presentation with slides on the Hg TMDL, the PCBs TMDL, the implementation framework of those TMDLs, tying the TMDLs into the MRP 2.0 requirements, and next steps for MRP 3.0.
- The Permittees stated that PCBs/mercury load reductions for GI in C.11/12 can lead to GI being built in locations where there are minimal other community benefits, so POC load reduction is not an ideal GI driver. A suggestion is that metrics in C.3.j be used to drive GI instead of PCBs/mercury load reduction. PCBs/mercury loads reduced by GI can be accounted for in C.11/12.

- BASMAA will create a proposal for a programmatic control measure approach with implementation commitment mechanisms and quantifiable metric-based accountability for achieving stipulated load reductions. This will be discussed at workgroup meetings through the end of 2019.
 - Water Board staff are optimistic that "Plan A" the programmatic approach can work to everyone's satisfaction.
 - The programmatic control measure proposal and discussions will inform the C.11/12 reports, and potentially, these results could lead to an extension of the TMDL deadlines.
- Water Board staff talked about potentially taking action for Permittees that do not meet their commitments. Water Board staff also expressed a desire to establish tiers of permit requirements as a function of the density of source areas for POCs.
 - For example, the PCBs and mercury control requirements may be different for a municipality that has a high proportion of old industrial land use (PCB source areas) vs. a municipality that has little or no such land use.
- Water Board also provided the following comments on control measures for C.11/12:
 - Ongoing monitoring for PCBs in Building Demo could be incorporated into C.8.
 - For the programmatic approach, control measures are coming to the foreground need a systematic approach to deal with a source when it comes up (opportunistic approach, but some way to ensure that the opportunity is not missed).
 - Also need program development, education, ordinance, etc. What is the accountability to make programs happen and ensure that they are done at the appropriate scale and level of intensity?
 - An example is PCBs in transformers. There could be opportunities for pole replacement/ knock down; these opportunities support doing "Plan A" well.
 - To be effective, the programmatic approach needs accountability plus accounting methods, which could be tricky due to the intermittent nature of sources and the variable distribution of PCBs across the watershed.
- Permittee comment: Permittees don't have jurisdiction over PG&E, so a PG&E program may need to be voluntary? Water Board responded that they are aware of Permittee limitations.
- Permittee comment: should there be PCBs allocation Bay Area wide? Regional goal would help collaboration and working together. Water Board response: Section 303(d) of the CWQ governs the requirements for a TMDL. Namely, TMDLs must have load allocations for sources. This means that entities, like municipalities with an NPDES permit need to have load allocations. Since there are TMDL load allocations for municipalities, there must be load reduction requirements in the NPDES permit at this scale as well. Thisallocation of load to the Permittee level is a legal obligation. We have been and will continue to encourage collaboration (in the MRP) by assessing load reduction achievement through a tiered approach – i.e., assessing the regional load reductions first, , then countywide, then Permittee-specific load reductions. Water Board prefers regional scale but have the

obligation to express load reduction requirements at a finer scale in the MRP in order to maintain fidelity with the TMDL and the governing federal requirements.

The C.11/12 introductory presentation is attached below:



C.3 workgroup review:

- There was a presentation with slides on GI implementation drivers and indicators, a review of LID implementation to-date, alternative compliance, thresholds and exemptions, the matrix with Water Board vs. permittee perspectives, an asset management program including O&M, and the conceptual framework with potential indicators for GI implementation.
- There was some discussion about the appropriate size of a "push" for GI implementation in C.3, including Water Board staff support of a suite of programmatic and implementation indicators, the balance between the push and incentives, and the establishment of minimum standards and goals. Water Board staff also wants to recognize creek restoration and other GI-related efforts.
- Water Board staff and Permittees had a discussion regarding the development of a metric for the GI goal. Potential approaches:
 - o Establish minimum standard for implementation and goals for "champions."
 - Identify what is needed to achieve a range of beneficial outcomes.

The presentation and framework are attached below.



6-25-19 C3-GI Work(Indicators Flowchart

IV. Introduction and Discussion - Developing Long-term Goals/Targets for GI

• The final presentation was on SMCWPPP's GI planning and RAA results to-date, which covered cumulative load reductions to date in San Mateo County, the County's 2020 load reduction requirement for PCBs, and lessons learned from the RAA. Some SMCWPPP jurisdictions are concerned about the level of green streets that would need to be implemented to show reductions and are instead looking to regional projects and requiring retrofit by development of adjacent public ROW, for example.

Discussion highlights:

• Water Board staff stated that the C.3 workgroup has discussed developing alternative indicators for GI implementation, such as programmatic indicators, asset management plans, funding mechanisms, or alternative compliance programs. Water Board staff support a broad

goal like "greened acres" as well as a tiered suite of indicators; e.g., programmatic indicators tied to asset management plans.

- Water Board staff anticipate that GI Plans will estimate the rate of change over time and help explain why certain rates of change are needed. They acknowledged that it remains a challenge for many Permittees to incorporate GI into projects.
- Permittees expressed that getting away from PCBs as driver and use of greened acres or volume managed as metrics is the best way to push to "green." A driver is needed to make progress and get funding, e.g., in collaborations on regional projects.
- Water Board staff stated that they favor the simplicity of a numeric metric for GI, though they recognize this causes concern for Permittees.
- Water Board staff and Permittees discussed ways of achieving the goal of "no missed opportunities" (e.g., CIP-related or private development-based projects). Permittees provided comments relating to where/how to implement and require implementation of GI, and funding constraints. Programs for prioritizing and funding GI in transportation projects would be helpful. Permittees asked for time to get GI programs in place and credit for implementing those programs.
- Water Board staff suggested a mandate that pushes Permittees to develop GI funding source. Permittee response was that flexibility is important.
- Water Board staff and Permittees discussed a potential framework consisting of a greened acres requirement coupled with programmatic indicators, achieved over certain time frames, with flexibility for different types and sizes of communities.
- Water Board staff stated that reasonable measures toward accomplishing that framework should be tracked and credited.
- Permittees discussed potentially using "volume managed" to drive GI, and the multiple benefits associated with this water supply, mitigation for climate change, reduced flooding, etc..
- The presentation is attached below.



V. Action Items and Next Steps

- Review meeting summaries for this Steering Committee meeting (June 25, 2019) and for the previous Steering Committee meeting (March 26, 2019) at the next Steering Committee meeting (November 5, 2019).
- Next C3/GI Workgroup meeting is August 1, 2019, 10:30am-12:30pm [Post-meeting note: internal Workgroup meeting held July 15; next meeting with Water Board staff is September 5, 2019.].
- Revise the MRP 3.0 reissuance schedule as necessary, then re-distribute to the Permittees.

• Permittees will finalize their perspectives for the C.3 matrix.

Schedule of Steering Committee Meetings

- October 30, 2018 kickoff meeting
- January 29, 2019 process and structure
- March 26, 2019 C.10
- June 25, 2019 C.3/11/12
- November 5, 2019 Reporting/Other
- December 3, 2019 C.8

Attachments

Agenda

MRP 3.0 Steering Committee Meeting

Tuesday, June 25, 2019, 1:00 – 4:00pm State of California Building 1515 Clay Street, Oakland, CA 94612 2nd Floor, Room 2 Conference Call Line: 888-363-4734 Participant Code: 7861443

I.	Introductions, Announcements, and Changes to Agenda	1:00pm
	Process – Introduction of MRP Permittee, Water Board, and	-
	stormwater program representatives; announcements; and any modifications to draft	
	agenda.	

II.Summary from Previous Meeting and Review of Action Items1:10pm

Process – Review/revise the meeting summary and action items from the previous meeting. Revise as necessary. Review status of action items. Outcome: Approve meeting summary

III. Summary of Recent SC Work Group Discussions

- C.8 WQ Monitoring (Bonnie de Berry/Lucile Paquette) 5 min
- C.10 Trash (Chris Sommers) 5 min
- C.11/C.12 Mercury/PCBs (Lisa Austin) 30 min
- C.3 New Development and Redevelopment (Jill Bicknell) 15 min

Process – *Receive update on status, progress to-date, and schedule/topics of future meetings.*

Outcome: Committee updated

IV.Introduction and Discussion - Developing Long-term Goals/Targets for GI2:20pm(Matt Fabry/Committee Members)

Process: Receive presentation on SMCWPPP agency GI planning and RAA results to date. Discuss decoupling of mercury/PCBs from GI implementation, and development of indicators and drivers for GI in C.3.j.

Outcome – *Receive initial input from SC members on potential indicators and drivers for GI in C.3.j.*

 V.
 Action Items and Next Steps
 3:45pm

 Outcome – Confirm actions items and identify other next steps for the Steering
 Committee, including the next meeting date and agenda items, future meetings on today's topic, and updated schedule for MRP reissuance.
 3:45pm

VI. Adjourn

4:00pm

1:25pm

MRP Provision C.11/C.12 Workgroup Mercury and PCBs Load Reduction Summary of Workgroup Discussions

MRP 3.0 STEERING COMMITTEE MEETING TUESDAY, JUNE 25, 2019

Background

TMDL IMPLEMENTATION FRAMEWORK

Background – Mercury TMDL

Mercury Wasteload Allocations for Urban Stormwater Discharges

Entity	Wasteload Allocation (kg/yr)
Santa Clara Valley Urban Runoff Pollution Prevention Program	23
Alameda Countywide Clean Water Program	20
Contra Costa Clean Water Program	11
San Mateo County Stormwater Pollution Prevention Program	8.4
Vallejo Sanitation and Flood Control District	1.6
Fairfield-Suisun Urban Runoff Management Program	1.6

Mercury TMDL compliance can be demonstrated through three different approaches:

- 1. Show mercury concentrations are below 0.2 milligrams per kilogram (mg/kg) on a countywide level (i.e., monitoring-based compliance demonstration);
- 2. Meet the WLA (i.e., monitoring and/or modeling-based compliance demonstration); and
- 3. Demonstrate the required load reductions can be achieved (i.e., modeling-based compliance demonstration).

Background – PCBs TMDL

PCBs Wasteload Allocations for Urban Stormwater Discharges by County

County	Population (year 2000)	Wasteload Allocations (kg/yr)
Alameda	1,440,000	0.5
Contra Costa	790,000	0.3
San Mateo	600,000	0.2
Santa Clara	1,600,000	0.5
Solano	290,000	0.1

The MRP area portion of the 2 kg/yr urban stormwater WLA is 1.6 kg/yr.

PCBs TMDL compliance can be demonstrated through two different approaches:

- 1. Meet the WLA (i.e., monitoring and/or modeling-based compliance demonstration); and
- 2. Demonstrate the required load reductions can be achieved (i.e., modeling-based compliance demonstration).

PCBs/Mercury TMDL Implementation Framework

Implementation actions may fall into four categories depending on the available knowledge and confidence in a control measure's effectiveness (listed in decreasing order of confidence):

- 1. Full-scale implementation throughout the region.
- 2. Focused implementation in areas where benefits are most likely to occur (focus in MRP 2.0).
- 3. Pilot-testing in a few specific locations (focus in MRP 1.0).
- Other: This may refer to experimental control measures, research and development, desktop analysis, laboratory studies, and/or literature review (ongoing).

Background – MRP 2.0 Requirements

Provision	Title	Summary	
C.11/12.a	Implement Control Measures to Achieve Load Reductions	Implement control measures to achieve load reductions: PCBs in Table 12.1, no specific Hg	
C.11/12.b	Assess Load Reduction from Stormwater	Report loads reduced using Interim Accounting Methodology	
C.11/12.c	Plan and Implement GI to Reduce Loads	Implement GI to achieve load reductions: PCBs in Table 12.2, Hg in Table 11.1; GI RAA	
C.11/12.d	Prepare Implementation Plan and Schedule to Achieve TMDL WLA	Prepare plan, schedule, and RAA demonstrating attainment of TMDL WLAs	

MRP 2.0 Requirements (continued)

Provision	Title	Summary
C.12.e	Evaluate PCBs Presence in Caulks/Sealants Used in Storm Drain or Roadway Infrastructure in Public Rights-of-Way	Conduct a monitoring study
C.12.f	Manage PCB-Containing Materials and Wastes During Building Demolition Activities So That PCBs Do Not Enter Municipal Storm Drains	Develop a protocol to address PCBs in building materials during demolition of applicable structures
C.12.g	Fate and Transport Study of PCBs: Urban Runoff Impact on San Francisco Bay Margins	Conduct or cause to be conducted studies concerning the fate, transport, and biological uptake of PCBs in Bay margin areas
C.11.e/ C.12.h	Risk Reduction Program	Conduct ongoing risk reduction program to address public health impacts in Bay/Delta fish

Direction for MRP 3

GENERAL AGREEMENTS AND ITEMS FOR FURTHER DISCUSSION

Direction for MRP 3 - General Agreements

- Develop metrics for inclusion in MRP 3 that provide "accountability", which in this context means specification of concrete control measures with schedule, quantification of benefit (using agreed upon "currency"), and commitment to implement ("Plan A")
 - Next steps BASMAA will create a proposal for a programmatic control measure approach with quantifiable metric-based accountability for meeting TMDL load reductions
 - Schedule Workgroup to discuss BASMAA proposal October December 2019
 - The programmatic control measure proposal and discussions will inform the C.11/C.12.d reports
- Do not include required load reductions for GI in C.11/C.12; point to non-load related GI metrics in Provision C.3.j instead. Account for loads reduced by GI in C.11/C.12.
- Use RAA methodologies for GI and source controls (BASMAA's Refined Source Control Load Reduction Accounting for RAA, under development) to account for loads reduced in MRP 3.

MRP 3 - General Agreements (continued)

- PCBs in Infrastructure Caulk
 - Adopt a protocol or standard specification for removal of caulks/sealants in bridge decks during maintenance and implement as a program, similar to PCBs in Building Materials
 - Next steps meet with Caltrans
- PCBs in Building Materials
 - Require ongoing implementation of the new PCBs management program, data collection, and evaluation
 - Allow updating as needed based on lessons learned after 2 or 3 years of new data have been evaluated

MRP Provision C.3/GI Workgroup Provision C.3 and Green Infrastructure

Summary of Workgroup Discussions

MRP 3.0 STEERING COMMITTEE MEETING

TUESDAY, JUNE 25, 2019

Workgroup Meetings and Topics

Meeting Date	Topics Discussed
February 7, 2019	Workgroup schedule and topics; GI Plan expectations letter
March 7, 2019	GI implementation drivers/indicators/metrics
April 4, 2019	GI implementation drivers/indicators/metrics; Asset management; C.3/LID experience
May 2, 2019	C.3.ai. topics: Alternative compliance; thresholds; changes to exemptions
June 6, 2019 (internal)	Response to WB perspectives on C.3.ai. revisions; preparation for Steering Committee

Perspectives on C.3.a. through C.3.i.

- Water Board Staff Perspectives
 - Provided to Workgroup on June 5, 2019
 - > Reflects verbal list presented at January 29, 2019 SC Meeting
 - > Did not seem to be influenced by discussions to date
- MRP Permittee/Program Perspectives
 - Currently completing table of responses for review by Workgroup, programs, and permittees
 - > Overall, concerned about a number of WB staff positions
 - Plan to discuss next steps with BASMAA Board

Focus for Today: C.3.j. (GI) in MRP 3.0

- Water Board Staff Perspectives
 - > Focus on implementation, adaptive management, link with POC provisions
 - > Need to determine appropriate indicators/drivers for implementation
 - > Continue participation in processes to promote GI (e.g., funding sources)
 - Consider additional studies to inform GI design, implementation, funding
 - Include development of asset management program that includes O&M, data collection, feedback loops for improvement over time
- MRP Permittee/Program Perspectives
 - > Focus on implementation!
 - Need a suite of indicators and reasonable drivers

Conceptual Framework



Examples of Potential Indicators

• Programmatic

- Council or Board resolution
- Local funding mechanism
- > Enhanced LID standards or GI requirements for private development
- > Documented process to integrate GI into Complete Streets designs
- Implementation
 - > Number of projects identified, in design, or constructed
 - > Total tributary impervious acres retrofit
 - Percent of an identified zone retrofit with GI

Examples of Potential Indicators, cont'd

- Outcomes
 - RAA estimates of load reductions
 - Trash load reductions
 - Stormwater volumes captured by watershed
 - > Total area of facilities with multiple uses
 - Public engagement and community support

Key Areas of Agreement

- Permit should support the larger vision of GI implementation in the Bay Area with metrics for measuring progress
- If less emphasis on PCB load reductions, another driver is needed
- Suite of indicators (all three types) would be useful
- Indicators should be able to be tailored to community characteristics and scalable
- Indicators should include metrics that are already being tracked

Conceptual Framework and Potential Indicators for Green Infrastructure Implementation



Potential Drivers/Goals

- "Greened acres" (impervious area treated)
 - Currently being tracked; easy to track
 - Base on impervious area retrofit targets? (not consistently estimated)
 - Countywide goal?
 - How to scale?
- Volumes managed (captured/treated)
 - Need model (RAA) to estimate
- Pollutant loads reduced (PCBs or sediment)
 - Trying to decouple from PCBs
 - Greened acres and volumes can be surrogates
- "Do one project"

Programmatic Indicators

- Council or Board resolution committing to GI implementation?
- Enhanced standards for LID on private development?
- Green Infrastructure program as a line item in budget?
- Local funding mechanism for GI?
- Documented process for review of CIP projects for GI opportunities?
- Documented process to integrate GI into Complete Streets projects?
- Requirement for private development to incorporate GI in frontage, pay an in-lieu fee, or other mechanism beyond C3?
- Tracking system in operation and generating reports?
- Participation in regional/subregional interagency cooperative agreement or process?
- Development/funding of maintenance program?
- Incorporation of typical GI details into City standards?

Implementation Indicators

- Number of potential projects identified
- Number of projects with 10% or better conceptual design
- Evidence of grant applications submitted
- Number of public GI facilities in final design or construction
- Number of public GI facilities constructed and in operation
- Tributary impervious area retrofit to GI
- Percent impervious area retrofit to GI; OR
- Percent of impervious surface retrofit in GI priority area

Outcomes Indicators

- RAA estimates of PCBs load reductions (still use?)
- Trash load reductions (how to quantify?)
- Watershed hydrologic response; volumes captured
- Facilities area with active uses (?)
- Total facilities area (?)
- Public engagement in maintaining facilities
- Public support (expressed in different ways)



Lessons Learned from PCB Load Reduction Efforts and RAA Results

Matthew Fabry, PE

City/County Association of Governments of San Mateo County





SAN MATEO COUNTYWIDE Water Pollution Prevention Program Clean Water. Healthy Community. www.flowstobay.org

MRP 3.0 Steering Committee June 25, 2019

PCB Load Reductions As Reported by SW

Programs for All Control Measures

Control Measure Category	% of Reductions Reported
Stormwater Diversion	0.4%
Enhanced O&M	1 .4 %
Trash Full Capture (Public HDS)	15%
Green (Stormwater) Infrastructure	23%
Source Property Referral and Abatement	61%



PCB Load Reductions Associated with Green (Stormwater) Infrastructure

% of Total Reductions Reported
18%
29%
19%
21%
13%



PCB Load Reductions All Control Measures

Control Measure Category	% of Reductions Reported or Anticipated
Stormwater Diversion	<1%
Enhanced O&M	<1%
Trash Full Capture (Public HDS)	4%
Green (Stormwater) Infrastructure	6%
Source Property Referral and Abatement	16%
Managing PCBs in Building Materials (anticipated)	66%



Reasonable Assurance Analysis







Runoff Volume SAN MATEO COUNTYWIDE Water Pollution

Prevention Program



5. Colma

6. Daly City

8. Foster City



ediment **M** ota SAN MATEO COUNTYWIDE Water Pollution

Prevention Program





ediment Ń ohesive Water Pollution **Prevention Program**



9. Half Moon Bay 20. Woodside



oad **B** Q otal SAN MATEO COUNTYWIDE Water Pollution **Prevention Program**

Baseline MRP Load

Note: Results are preliminary/draft and should not be quoted or cited.

	Modeled PCB Load by Source (g/year)			
Land Use Group	Caltrans	General Industrial Permit	MRP	Other NPDES (Industrial, Phase II)
Open Space	0.01	0.02	1.1	0.03
Urban	80	90	1,300	225
Non-MRP Load: 395 g/year			MRP Load	SAN MATEO COUNTYWIDE Water Pollution Prevention Progra

PCB Reduction Target for GI

Note: Results are preliminary/draft and should not be quoted or cited.

1	2	3: From TMDL	4 = 2 - 3	5 = 4 / 2
Source	Existing PCB Load (kg/year)	PCB Wasteload Allocation (kg/year)	PCB Load Reduction (kg/year)	Percent Reduction
SMC loads based on RAA	1.3	0.2	1.1	84.6%
Load Reduction Achieved Through GI (20.8%)			0.23	17.6%



Based on SFEI RWSM



GI Opportunity & Sequence





Comparing Scenarios

Note: Results are preliminary/draft and should not be quoted or cited.

Prevention Program

Load Reduction Objective	Percent of Total GI Cost to Achieve Reduction Objective							
	Proportional (By Jurisdiction)	Targeted (County Wide)	Total Savings (Proportional vs. Targeted)					
<u>Cohesive Sediment</u> 17.6% Reduction	Scenario 1	Scenario 2	→ Savings					
<u>Total PCBs</u> 17.6% Reduction	Scenario 3	Scenario 4	→ Savings					
Total Savings (Sediment vs. PCBs)	↓ Savings	↓ Savings	↘ Overall Savings					
			SAN MATED COUNTYWIDE Water Pollution					



Optimization Scenarios

Jurisdiction	Management Metrics for GI			Green Infrastructure Capacity to Achieve 17.6% Reduction Target (Capacity expressed in units of acre-feet)							
	(al)	ue	sd	Existing/Planned		Green Streets		Â	-i-e-i-		
	% Load Reductior PCBs (Annu	Annual Volu Managed (acre-ft)	Imperviou Area Treat (acres)	Existing Projects	Future New & Redevelop ment	Regional Projects (Identified)	High	Medium	Low	Other GI Projects (TB	Total BMF Capacity (ac ft)
Atherton	20%	63.64	110.25	0.36	0.19	1.93	0.16	2.53	0.11	0.75	6.0
Belmont	19%	145.24	107.87	0.65	2.12	0.45	3.04	1.02	0.46	0.29	8.0
Brisbane	24%	199.30	163.61	0.50	16.82						17.3
Burlingame	18%	281.20	190.90	2.84	7.53		0.22	7.11	0.07	0.08	17.9
Colma	18%	116.53	68.98	1.39	0.30	0.26	0.80	0.00	0.54	0.16	3.5
Daly City	18%	380.34	170.74	8.99	2.37	1.19	0.06	3.67	0.56	0.00	16.8
East Palo Alto	24%	105.77	110.74	1.46	5.00		1.57	2.00			10.0
Foster City	19%	173.71	134.79	3.16	3.49		0.27	4.61			11.5
Hillsborough	19%	118.09	47.71	0.00	0.16			5.85		0.10	6.1
Menlo Park	18%	110.62	204.99	8.88	13.95	1.55	3.10	0.11	0.05		27.6
Millbrae	21%	192.01	120.81	0.51	3.49		0.09	6.23	0.00	0.09	10.4
Pacifica	19%	2.52	0.33		0.18	0.01				0.00	0.2
Portola Valley	19%	129.91	16.19		0.57			2.60	0.10	3.69	7.0
Redwood City	18%	388.40	272.91	9.15	13.35	33.13	0.51	0.75	0.82	0.30	58.0
San Bruno	18%	202.38	168.65	1.23	5.52	16.66	1.77	0.08			25.3
San Carlos	18%	308.40	236.31	2.69	3.22		2.16	8.48	1.85	0.44	18.8
San Mateo	18%	583.75	457.05	5.61	16.51		3.41	14.11		0.00	39.6
South San Francisco	18%	528.17	576.89	17.87	8.46	1.26	13.40	2.35	0.50	0.00	43.8
Unincorporated	18%	306.75	242.20	6.74	10.04	15.99	2.00	6.73	0.09	0.09	41.7
Woodside	18%	156.45	87.13	0.05	2.51	1.23		5.32	0.74	5.79	15.6
Total	18.5% ¹	4,493.2	3,489.1	72.1	115.8	73.6	32.6	73.6	5.9	11.8	385.3

Lessons Learned

- Tremendous amount of GI needed to meet
 PCB load reduction goals for 2040
- Overall, GI has been a small contribution so far
- Can't reduce PCBs where they don't exist
- Prioritizing GI in old industrial areas often doesn't align with community priorities
- Hard to get buy-in with PCBs as driver

