



**CONTRA COSTA  
CLEAN WATER  
PROGRAM**

**MANAGEMENT COMMITTEE MEETING AGENDA**

**Wednesday, September 21, 2022**

**1:30 PM to 3:30 PM**

Join Zoom meeting:

<https://us06web.zoom.us/j/87930698822?pwd=b2IRT2ptV1VRcXFYR3dOU2xCUDBuZz09>

Meeting ID: 879 3069 8822 Passcode: 982003 Dial: 1 669 900 6833 US (San Jose)

One tap mobile: +16699006833,,87930698822#,,,,\*982003# US (San Jose)

If you require an accommodation to participate in this meeting, please contact Michael Burger at 925-313-2360 or at [michael.burger@pw.cccounty.us](mailto:michael.burger@pw.cccounty.us), or by fax at 925-313-2301. Providing at least 72 hours notice (three business days) prior to the meeting will help to ensure availability.

**VOTING MEMBERS** (authorized members on file)

City of Antioch	Phil Hoffmeister
City of Brentwood	Meghan Oliveira / Allen Baquilar/ Jigar Shah
City of Clayton	Reina Schwartz/Larry Theis/Jason Chen
City of Concord	Bruce Davis ( <b>Vice-Chair</b> )/ Kevin Marstall
Contra Costa County	Michele Mancuso/ Tim Jensen/ Allison Knapp
CCC Flood Control & Water Conservation District	Tim Jensen/ Michele Mancuso/ Allison Knapp
Town of Danville	Bob Russell/ Steve Jones/ Mark Rusch
City of El Cerrito	Stephen Prée/ Will Provost/ Yvetteh Ortiz/ Christina Leard
City of Hercules	Mike Roberts/Jeff Brown/Jose Pacheco/Nai Saelee/F. Kennedy
City of Lafayette	Matt Luttrupp/ Tim Clark
City of Martinez	Khalil Yowakim/ Frank Kennedy
Town of Moraga	Frank Kennedy/ Shawn Knapp
City of Oakley	Billilee Saengcalern/ Frank Kennedy/ Andrew Kennedy
City of Orinda	Scott Christie/ Kevin McCourt/ Frank Kennedy
City of Pinole	Misha Kaur
City of Pittsburg	Jolan Longway/ Richard Abono
City of Pleasant Hill	Philip Ho/Ananthan Kanagasundaram/Frank Kennedy ( <b>Chair</b> )
City of Richmond	Joe Leach/ Mary Phelps
City of San Pablo	Amanda Booth/ Karineh Samkian/ Sarah Kolarik/ Jill Mercurio
City of San Ramon	Kerry Parker/ Robin Bartlett/ Maria Fierner
City of Walnut Creek	Lucile Paquette/ Neil Mock/ Steve Waymire

**PROGRAM STAFF AND CONSULTANTS**

Courtney Riddle, Program Manager	Andrea Bullock, Administrative Analyst
Karin Graves, Sr. Watershed Planning Specialist	Alina Constantinescu, Consultant
Yvana Hrovat, Consultant	Mitch Avalon, Consultant
Liz Yin, Consultant	Michael Burger, Clerk
Lisa Austin, Consultant	Lisa Welsh, Consultant
Erin Lennon, Watershed Planner	Hilary Pierce, Consultant

**Contra Costa Clean Water Program  
MANAGEMENT COMMITTEE MEETING AGENDA  
Wednesday, September 21, 2022**

**AGENDA**

**Convene the Meeting /Introductions/Announcements/Changes to the Agenda:** **1:30**

**Public Comments:** Any member of the public may address the Management Committee on a subject within their jurisdiction and not listed on the agenda. Remarks should not exceed three (3) minutes.

**Regional Water Quality Control Board Staff Comments/Reports:** **1:32**

**Consent Calendar:** **1:35**

All matters listed under the CONSENT CALENDAR are considered routine and can be acted on by one motion. There will be no separate discussion of these items unless requested by a member of the Management Committee or a member of the public prior to the time the Management Committee votes on the motion to adopt.

- A. APPROVE** Management Committee meeting summary (Chair)
  - 1) August 17, 2022 Management Committee Meeting Summary
- B. ACCEPT** the following subcommittee meeting summaries into the Management Committee record: (Chair)
  - 1) Administrative Committee
    - August 2, 2022
  - 2) PIP Committee
    - August 2, 2022
  - 3) Monitoring Committee
    - July 11, 2022
  - 4) Municipal Operations Committee
    - July 19, 2022
  - 5) Development Committee
    - July 27, 2022

**Presentations:** **1:40**

- A. Report on HM Options and Next Steps (K. Graves/Y. Hrovat)
  - a. See project profile for background information
- B. Final Annual Mercury Monitoring Plan (L. Welsh)
  - a. See staff report for background information
- C. Emerging FY 22/23 Budget Issues (M. Avalon/K. Graves)
  - a. See staff report for background information
- D. Stormwater Funding Options Report Outline (M. Avalon)
  - a. See staff report for background information

- E. BMP Report on homeless discharges, scope and budget (E. Yin)
  - a. See staff report for background information

**Actions:**

**2:50**

- A. APPROVE the final scope and budget for the following conditionally approved budget item:
  - a. Peak Flow Calculator funds moved to Development Committee General Technical Services
  - b. Homeless BMP Report
- B. APPROVE changing from the current hydrology model to the Bay Area Hydrology Model.
- C. APPROVE the Final Annual Mercury Monitoring Plan and transmittal letter, and AUTHORIZE the Acting Program Manager to sign the transmittal letter and transmit the plan to the Regional Water Quality Control Boards, Region 2 and Region 5. (roll-call vote)

**Reports:**

**3:00**

- A. AGOL Work Group (E. Yin)
- B. Clean Watersheds Needs Survey by EPA (M. Avalon)
- C. Cost Reporting Work Group participants needed for regional project (K. Graves)

**Updates:**

**3:15**

- A. Personnel Update (K. Graves)
- B. BAMSC Steering Committee meeting (K. Graves)
  - a. MRP 3.0 Regional Projects (see attached)
- C. Annual Report (E. Yin)

**Information:**

**3:20**

- A. Zoom meeting changes (K. Graves)
- B. CASQA quarterly meeting registration request (A. Bullock)
- C. CASQA Newsletter article regarding unfunded mandates (M. Avalon)
- D. Internal and External Handouts for MRP 3.0 C.3 Updates (E. Lennon)
- E. C.3.j Green Infrastructure Forum September 28, 2022 (E. Lennon)

**Old/New Business:**

**3:25**

**Adjournment:** Approximately 3:30 p.m.

**Next Management Committee Meeting:** Wednesday, October 19, 2022, 1:30 PM

**Attachments**

*Consent Items*

1. *Management Committee Meeting Summary August 17, 2022*
2. *Administrative Committee Meeting Summary August 2, 2022*
3. *PIP Committee Meeting Summary August 2, 2022*
4. *Monitoring Committee Meeting Summary July 11, 2022*

5. *Municipal Operations Committee Meeting Summary July 19, 2022*
6. *Development Committee Meeting Summary July 27, 2022*

*Presentation Items*

7. *Staff report on HM Options and Next Steps*
8. *Staff report on Final Mercury Monitoring Plan*
9. *Final Annual Mercury Monitoring Plan and transmittal letter*
10. *Staff report on emerging budget issues*
11. *Suggested conditional budget item updates*
12. *Staff report on Stormwater Funding Options Report*
13. *Stormwater Funding Options Report outline*
14. *Excerpt from draft Options Report*
15. *Staff Report on Homeless BMP Report*
16. *Scope of Work for Homeless BMP Report*
17. *MRP 3.0 Regional Projects (BAMSC)*

*Information*

18. *CASQA Newsflash*
19. *C.3 Updates Memo with Internal Memo and External Handout*

<b>UPCOMING CCCWP MEETINGS</b>	
All meetings <b>will not</b> be held at 255 Glacier Drive, Martinez, CA 94553, but will be held virtually	
<b>October 4, 2022</b> 1 <sup>st</sup> Tuesday	Administrative and PIP Committee Meeting <b>9:30 a.m. – 12:00 noon</b>
<b>October 10, 2022</b> 2 <sup>nd</sup> Monday	Monitoring Committee Meeting, <b>10am – 12 noon</b>
<b>October 18, 2022</b> 3 <sup>rd</sup> Tuesday	Municipal Operations Committee Meeting, <b>10am-12 noon</b>
<b>September 28, 2022</b> 4 <sup>th</sup> Wednesday	Development Committee Meeting, <b>1:30 p.m.-3:30 p.m.</b>
<b>October 19, 2022</b> 3 <sup>rd</sup> Wednesday	Management Committee Meeting, <b>1:30 p.m.-3:30 p.m.</b>
<b>BAMSC (BASMAA) SUBCOMMITTEE/ MRP 3.0 MEETINGS</b>	
Times for the BAMSC (BASMAA) Subcommittee meetings are subject to change.	
<b>July 1, 2022</b>	Effective date of MRP 3.0
<b>1<sup>st</sup> Thursday</b>	Development Committee, 1:30 – 4:00 p.m. (even months)
<b>1<sup>st</sup> Wednesday</b>	Monitoring/POCs Committee, 9:30 a.m. – 3:00 p.m. (odd months)
<b>4<sup>th</sup> Wednesday</b>	Public Information/Participation Committee, 1:30 – 4:00 p.m. (1 <sup>st</sup> month each quarter)
<b>4<sup>th</sup> Tuesday</b>	Trash Subcommittee, 9:30 a.m.-12 noon (even month)



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**MANAGEMENT COMMITTEE MEETING MINUTES**

**08-17-2022**

**Attendance:**

<b>MUNICIPALITY</b>	<b>ATTENDED</b>	<b>ABSENT</b>
City of Antioch	Carlton Thompson	
City of Brentwood	Meghan Oliveira	
City of Clayton	Reina Schwartz	
City of Concord		Kevin Marstall
Town of Danville	Bob Russell	
City of El Cerrito	Christina Leard	
City of Hercules	Nai Saelee	
City of Lafayette	Matt Luttrupp	
City of Martinez	Frank Kennedy	
Town of Moraga	Mark Summers	
City of Oakley	Frank Kennedy	
City of Orinda	Frank Kennedy	
City of Pinole	Misha Kaur	
City of Pittsburg	Jolan Longway	
City of Pleasant Hill	Frank Kennedy (Chair)	
City of Richmond	Mary Phelps	
City of San Pablo	Amanda Booth, Allan Panganiban	
City of San Ramon	Kerry Parker	
City of Walnut Creek	Lucile Paquette	
Contra Costa County	Allison Knapp	
CCC Flood Control and Water Conservation District	Allison Knapp	

**Program Staff:** Karin Graves, Erin Lennon, Andrea Bullock, Michael Burger

**Program Consultants:** Mitch Avalon, Yvana Hrovat, Liz Yin, Sandy Matthews, Lisa Austin, Hilary Pierce

**Members of the Public/Others/Guests:** Dan Cloak

**Introductions/Announcements/Changes to Agenda:** Due to the Covid-19 pandemic, the meeting was conducted by video-conference call.

**Public Comments:** No members of the public called in.

**Regional Water Quality Control Board Staff Comments/Reports:** Regional Board staff did not call in.



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1. **Roll call was taken and the meeting was convened by the Chair at 1:30 p.m.**
2. **Announcements:** There were no announcements or changes to the agenda. Mitch Avalon noted that the agenda was full and discussions should be timely to accommodate all information.
3. **Consent Calendar:** Reina Schwartz (Clayton) asked for clarification on a comment from the Municipal Operations Committee minutes regarding the 90% trash reduction. The Chair noted that the intent was for trash to be reduced to 10% of base line levels.

Misha Kaur (Pinole) motioned to approve with changes noted, Bob Russell (Danville) seconded. The Chair called for a vote. There were no abstentions or objections. The motion passed unanimously, and the Consent Calendar was approved.

**4. Presentations:**

- a. **WQIF grant application guidelines (K. Graves):** Karin Graves displayed the draft application and noted that two potential grant applications would be discussed. Amanda Booth (San Pablo) would lead discussion on a Program specific grant application.

Applications for grants were opened in late July and were due September 20. Staff and Permittees had been working with Alameda, San Mateo, Santa Clara, and Solano Counties on the scope of a regional trash monitoring grant application.

Staff was looking for authority to move forward with writing the grant applications. One of the objectives is to have the fewest resources expended to secure the grant. The Program would be funding \$10k toward this application, taken from the BAMSC regional collaboration budget line item.

The grant has been divided into different tasks with the Monitoring Committee and the Municipal Operations Committee reviewing the scope and providing recommendations to the grant workgroup. The excel grant worksheet could be shared with the Management Committee after the meeting.

Karin Graves noted the grant had three sections and described the components involved in each section. Two aspects were related to permit requirements: the full trash capture impracticability report was not needed for match and it was recommended that this task should be removed. Creating a framework guidance to municipalities on asset management was recommended to be removed also because it was not needed for match and there was no specific permit requirement regarding the framework.



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The third section was the largest portion of the grant application and includes Stormwater Outfall Monitoring and Receiving Water Monitoring Methods Testing. San Mateo would be the grant recipient and would contract with a consultant to conduct monitoring throughout the Bay Area.

Karin Graves further discussed information dissemination, noting the importance of developing a trash monitoring methods playbook, trash prevention and monitoring information portal, and a Bay Area Trash Webinar.

Project administration and management would fall to San Mateo as the grant recipient, but funds would be used to create a technical advisory group as required by the new Permit.

Karin Graves asked if there were any deal breakers and, if there were none, for authority to negotiate with the grant application group on behalf of the Program. The Committee had an overall favorable opinion of the grant application process. The Chair asked if this would be done via Program staff time or if it would require additional work from Permittee staff. Karin Graves noted the grant was not anticipated to require extra funding and that the match would be fulfilled by work already required by the permit even if the maximum grant amount was requested.

Lucile Paquette (Walnut Creek) noted that there was a general program need for diverse Permittee input.

The second WQIF grant was a potential alternative compliance grant. Staff had met with Amanda Booth (San Pablo) to discuss the grant application. The application would be paid for by an approved budget line item. Staff was looking for authority to start the work.

Amanda Booth explained that the grant could help cover budget line items to pay for C.12.c and C.3.j permit requirements. This was a new idea, so the full scope was not yet available.

The general outline includes four components: a study to determine acres to treat under C.12.c and C.3.j with a focus on looking for acres in disadvantaged communities (acreage in these communities would not require matching funds), a report to identify short term and long term funding mechanisms to support the alternative compliance program, cover the staff and consultant time to set up the administrative aspects of running the program, and to provide funding for the design of one or more projects for implementation (either C.12.c or C.3.j projects) so they would be ready to be built. Amanda Booth (San Pablo) asked if the Committee was generally agreeable with moving forward with writing the application and when a good time was to present a more



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detailed scope for this project (at a regular Management Committee meeting or a special meeting).

Jolan Longway (Pittsburg) noted that she was generally in favor of it and suggested that the Development Committee would likely be the best committee to discuss this. She further asked if the first component would be determined through existing analysis or if a new analysis with a focus on disadvantaged communities would be developed.

Amanda Booth (San Pablo) noted that the existing analysis would be used and refined in an effort to identify acreage for alternative compliance. Mitch Avalon asked if the grant was to cover the development of the project or if it would also fund the completion of the projects. Amanda Booth (San Pablo) noted that the grant would pay for planning and design. There were no objections raised to moving forward with the grant application, and that the Management Committee would be invited to the 8/24/2022 Development Committee meeting to review a more robust scope.

**b. FY 22/23 Final Adjusted Budget (M. Avalon/A. Bullock):** The draft budget was discussed at the last Management Committee meeting with each line item described in detail. There had been a number of changes from the original draft budget that necessitated a budget adjustment. At the last Management Committee meeting there had been a question in regards to consultant hourly rates compared to County employee salaries. Mitch Avalon denoted the following, which included benefits provided to County employees:

- The Program Manager's annual salary was \$321,852 which results in an hourly rate of \$195.06
- The Senior Watershed Management Planning Specialist's (WMPS) annual salary was \$266,763 resulting in an hourly rate of \$161.67
- The WMPS annual salary was \$213,058 resulting in an hourly rate of \$129.13
- The Administrative Services Assistant III's annual salary was \$222,731 resulting in an hourly rate of \$134.99
- The Senior Clerk's annual salary was \$133,313 resulting in an hourly rate of \$80.79

When compared to consultant costs, the bulk of consultant work was in the \$150-\$220 hourly range. There was some upper-level staff work at \$270-\$290 hourly range, but there was also lower-level staff work at less than \$150 hourly rate.

The program labor cost was 19% and consultant staff cost was 72% of the total budget. This budget does not include a contingency and subtracts the salary savings.

There were two questions regarding the PCBs budget items. One part of this was the Annual Progress Report (\$10k) and the other is POC load reduction (\$20k). There was also a concern that they were both dealing with building demolition PCBs and was





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potentially being counted twice. Mitch Avalon noted that the costs were not counted twice and that there was a \$20k budget for work that would need to cover the new permit requirements relating to PCBs.

At the Administrative Committee meeting, there was a question about AGOL budget items and a desire to reduce budget costs on this item. Staff recommended not to reduce the budget due to the presence of conditionally approved items. A better opportunity to address budget reductions would be in December when a clearer picture of the costs associated with new permit requirements was available and discussion of the FY 23/24 budget would begin.

With this adjusted budget, two conditionally approved items were being addressed: staff augmentation for Watershed Resources Consulting for 6 months, as the Program Manager position was still vacant. Additionally, on-call staff augmentation would be increased to \$138k to cover additional operational needs.

The total budget adjustment was \$239,063. This included \$125,000 of advance work that was carrying over into FY 22/23.

- c. **Updates on Provision C.3 (Y. Hrovat):** Yvana Hrovat began by displaying the draft scope of work. It was noted that this was one of the conditional approval line items. This would be voted on as an Action Item later in the meeting. This was to finalize the C.3 guidebook updates. Using the tracking table from Dan Cloak, the scope of work was developed to outline the efforts needed to update the guidebook for MRP 3.0.

The general changes to each chapter of the guidebook were noted:

- Chapter 1: Update "Compliance with HM Requirements" section and other policy/procedure updates outlined by the Development Committee
- Chapter 3: Updates throughout the chapter to clarify HM Compliance pathway, potential updates on reduced bioretention sizing, and additional review and editing for flow and clarity
- Chapter 4: Add examples for pervious pavement design sheet
- Chapter 5: Minor edits for flow and clarity
- Chapter 6: Potential updates and guidance pending status of Green Infrastructure Design guidance
- Appendix D: Review of references and update links
- Appendix E: Review and revise HM related guidance and add additional topics requiring further background
- FAQs: expand with additional questions identified by the Development Committee

The Draft Guidebook was anticipated to be presented at the October Development Committee. The Final Guidebook was anticipated to be presented at the November or



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December Development Committee meeting. The Final transmittal memo and final guidebook would be presented at the December Management Committee meeting.

The budget for the update was \$36k.

Lucile Paquette (Walnut Creek) asked if the timing on the HM had a deadline. Yvana Hrovat noted that the outcome of the HM options review would be discussed at the Development Committee meeting next week with a presentation at the September Management Committee meeting. The deadline for the required report would depend on the Permittees' decision to use BAHM or not. If it was decided to not use BAHM, this report would need to be submitted with the FY 22/23 Annual Report (AR).

Yvana Hrovat displayed the handout for the updated Stormwater Management Design requirements. This was similar to previous years' handouts. These were to be external handouts for permittee Development Department counter staff to give to contractors/developers. A separate memo to be used by internal permittee staff would be made available. This handout would provide background and live links to more information. Key changes to parcel-based projects are shown in a bar chart. Yvana Hrovat suggested this could be changed to a table format if preferred. The second table gave more details for thresholds and requirements. The handout also included FAQs and resources on where to find additional information.

Amanda Booth (San Pablo) asked about the information presented in the bar chart, noting that the last two portions could be misleading. Yvana Hrovat noted that this could be changed to make the intention more clear. She further noted that this should be attached to the internal memo. Karin Graves asked if there was a timeframe on submitting comments on the handout. The sooner comments were received the better and ideally by the end of the next week.

The internal memo was still under development. The main question was who the memo should be addressed to. Currently, the memo was being addressed to any municipal staff that might utilize it. The draft memo was displayed. Lucile Paquette (Walnut Creek) asked if it was important that addressees were defined and suggested that Permittees could distribute the memo to pertinent staff. Erin Lennon noted that the Development Committee had received a comment that addressing the memo to specific staff could be useful, but it could be left to Permittees to decide who the memo goes to. It was decided that edits would be made and an updated version would be distributed for review.

- d. Overview of reports due with the Annual Report (L. Austin):** There were three reports due with the Annual Report. All three were in draft format and input and comments were requested. Each report was discussed in turn.



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The first was the draft Mercury and PCBs report updated for 2022. It was an attachment to the Program's AR for sections C.11 and C.12. It was the final report required under MRP 2.0. It had been presented to the Monitoring Committee and comments had been incorporated. The Final Draft report was available on Groupsite through the link in the agenda packet.

The second report was the Fish Risk Reduction Report for FY 21/22. This report summarized activities under C.11.e and C.12.h. It was also available on Groupsite. It had been reviewed and updated in response to comments from the Monitoring Committee.

The third report was the PCBs in Building Materials Management report. This report summarized the applicable buildings under the PCBs in Building Management Program that applied for a demolition permit and had 50 PPM or greater PCBs. This was an ongoing report that would continue to be submitted in the future. It was available on Groupsite and it was reviewed and updated in response to Monitoring Committee comments.

Lisa Austin requested that comments be submitted by August 24. They should be sent to Lisa Austin and Lisa Welsh.

- e. **Draft Pyrethroid Baseline Monitoring Report (L. Austin):** The Pyrethroid Control Program Baseline Monitoring Report for MRP 3.0 was discussed. It summarized Pyrethroid data collected but Kinetic Environmental, who had drafted the report. It summarized the monitoring results from 2012-2019. It compared the conditional prohibition triggers, summarized toxicity of water and sediment samples, and summarized other Pyrethroid monitoring data collected by the County. It was available on Groupsite. It was not part of the Annual Report but would still require approval alongside the other three reports during the special Management Committee meeting on September 12.

Lisa Austin requested that comments be submitted by August 24. They should be sent to Lisa Austin and Lisa Welsh.

**5. Actions:**

- a. **APPROVE the FY 22/23 Adjusted budget:** Amanda Booth (San Pablo) motioned to approve the adjusted budget, Bob Russell (Danville) seconded. The Chair called for a vote. There were no objections or abstentions. The motioned passed unanimously and the FY 22/23 adjusted budget was approved.



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- b. **APPROVE the final budget for the following conditionally approved budget items:**
- **Update Stormwater C.3 Guidebook**

Misha Kaur (Pinole) motioned to approve the update to the Stormwater C.3 Guidebook, Christina Leard (El Cerrito) seconded. The Chair called for a vote. There were no objections or abstentions. The motion passed unanimously and the update to the Stormwater C.3 Guidebook was approved.

6. **Reports:**

- a. **C.3 Bioretention Sizing Guidance Update (K. Graves):** Karin Graves informed the Committee that the Program was contacted by the Regional Water Board. The Board was concerned that the May 2020 update to the C.3 guidebook was not in compliance with the Municipal Regional Permit. The May 2020 update was made in response to a conditional letter of acceptance of a 2019 BASMAA Memorandum describing reduced sizing of non-regulated green infrastructure street projects.

The Water Board clarified that the conditional approval of reduced sizing was only for non-regulated projects. Their concern is that the update indicates regulated projects could be built using reduced sizing. The Water Board wanted to know if any regulated projects using a reduced sizing factor have been built.

The Program recommends working with the Water Board and has taken the May 2020 update down from the website. Karin Graves asked if any Permittees had received requests from the Water Board for this information. Amanda Booth (San Pablo) suggested sending an email request for this information. Karin Graves agreed and noted an email would be sent with a summary of the concerns and a request for any projects built or approved with reduced sizing between May 2020 and present. It was recommended that no regulated projects with reduced sizing (other than those allowed for road reconstruction) be approved. Amanda Booth (San Pablo) further requested clarification on whether C.3.j projects were considered regulated projects. Karin Graves responded that clarification would be requested during the meeting with the Water Board. Dan Cloak asked if the Water Board had provided guidance on how bioretention facilities should be sized instead of relying on interpretations by Permittees. Karin Graves noted that this question was not posed to the Water Board as it was a separate issue. Yvana Hrovat noted that the Water Board seemed open to future discussion on the matter of outlining a process to seek approval of guidance for reduced sizing in regulated projects.

- b. **Grant tracking spreadsheet (S. Matthews):** The spreadsheet was displayed for the Committee. Staff had created an inventory that would allow Permittees to see grant opportunities and identify GI projects. The spreadsheet identified the name of the grant, the funding source, administering agency, eligible project type, local cost share,



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application due date, and websites for more information. Further information will be added to identify when the last date each grant's information had been updated. Only the most relevant opportunities would be tracked. Karin Graves noted that this was intended to be shared quarterly at the Management Committee meeting. Sandy Matthews noted that this would also be posted on Groupsite and updated monthly. The Chair suggested that the sharing of the spreadsheet be linked to the application date of the grant.

- c. Final Caltrans paid media partnership campaign assets (H. Pierce):** Staff was seeking approval on the assets created for the Caltrans paid media campaign. The assets were displayed for the Committee. They were designed by Sagent in partnership with Caltrans and would be used to meet outreach requirements in the permit. A transit shelter ad, bus side ad, mobile ad messenger copy, and digital ads were displayed. The campaign was originally planned for August 29 but would be run earlier. These were approved by the PIP committee, but approval of the Management Committee was requested. Lucile Paquette (Walnut Creek) noted that there was a typo in the ad messenger copy.

The Chair asked if there were any objections to moving forward with the media campaign. There were none.

- d. C.3.j Forum at September 28 Development Committee meeting (E. Lennon):** Erin Lennon reminded that Committee that the forum was planned for the latter part of the September Development Committee meeting. A draft agenda had been submitted to the Development Committee for comment in August. Before the meeting, a table designed under the guidance of the Development Committee and containing current completed projects would be created. She requested Permittees that planned to attend let her know and noted that staff was still soliciting Permittees for case studies, though the length of the forum would likely only allow 2-3 case studies to be discussed. Lucile Paquette (Walnut Creek) suggested that a brief background summary of C.3.j issues to be discussed be included in the invitation.

**Commented [MB1]:** Per email from Erin

- e. Trash Load Reduction Table (L. Yin):** Liz Yin displayed the table (spreadsheet). The purpose was to give the committee a heads up and request information. The Municipal Operations Committee was starting to develop a plan to address upcoming C.10 requirements in FY 22/23. The goal was to anticipate what Permittee needs were going to be for FY 22/23. She noted the 90% full trash capture deadline that was upcoming. The table will be distributed to the Committee for Permittees to fill out for their municipality. Permittees were also requested to review and verify their Trash Reduction summary.

Lucile Paquette (Walnut Creek) asked if the table had information on the estimated percentage load reduction for June 2023. Liz Yin noted that there were a number of hidden columns, showing the estimated load after source control credits were no longer



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available in FY 22/23. Feedback to this information was requested by the end of the month.

- f. **AGOL Work Group (L. Yin):** Meetings for the AGOL workgroup have been planned and scheduled into the fall. Additional interested parties were requested from the Committee. Moving forward, the Workgroup was moving onto business needs. Additional members to provide input on creating scopes of work for GIS contractors were also requested. Meeting information is available through Outlook and Groupsite.

**7. Updates:**

- a. **Personnel Update (K. Graves):** This item was discussed during the discussion on the closed session.
- b. **BAMSC Steering Committee Meeting (K. Graves):** The Chair and Co-Chair election was discussed at the meeting with the intent to formalize the process and terms. The Steering Committee recommended 1-year terms for the Chair(s) and Vice-Chair. Next month there will be discussion of nominating the Chair and Vice-Chair in the Steering Committee. There was a request for Chairs and support for the Development Committee and Trash Committee.

BAMSC Steering Committee had started discussing regional projects. Each of the countywide programs would be providing in-kind support for deliverables on region wide projects. A spreadsheet had been created to show regional projects over the course of the next 5 years. Karin Graves displayed a table of the FY 22/23 regional projects and noted the leads for each project.

Lucile Paquette (Walnut Creek) asked who was attending the Steering Committee. Karin Graves noted that it was primarily the regional Program Managers, but there were several other attendees as well. Mark Summers (Moraga) noted that he didn't have access to the 5-yr workplan document. Sandy Matthews clarified that these projects were not started yet, but were being investigated for budgets to be presented to the Program Managers in August.

- c. **Annual Report (L. Yin):** Liz Yin displayed the Permittee Annual report timeline. Permittees should review and complete SMARTS registration for their Legally Responsible Person, Duly Authorized Representatives, and Data Entry Person. The Program will provide Permittees with a template submittal letter for their annual reports. She reminded the Committee of the Special Management Committee meeting on September 12 to approve the Program Annual Report. Mitch Avalon noted this would require a roll call vote and stressed the importance of voting members to be in attendance.

**8. Information:**



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a. **September 21 Management Committee meeting start at 1:00 with Closed Session (M. Avalon):** Allison Knapp noted that an invitation to the closed session meeting for September 21 had been sent. Brian Balbas, the Director of Public Works, would be in attendance to discuss confidential topics and the status of the Program Manager. She requested information on the attendees to the meeting and any topics that they would like discussed be sent to the Program.

b. **Regional Water Board is conducting random auditing of permittee trash capture devices:** The Chair asked if any Permittees had direct experience with this yet. Mitch Avalon noted that there had been a couple of Permittees that had already been audited. Mary Phelps (Richmond) indicated that Richmond had been audited, noting that they had asked for O&M records as well as inspecting trash capture devices.

9. **Old/New Business:** There was no old or new business.

10. **Adjournment:** The Chair adjourned the meeting at 4:04 p.m.



**ADMINISTRATIVE COMMITTEE SUMMARY**

**Meeting Minutes**

**Tuesday, August 2, 2022**

**10:30 – 12:00**

VOTING MEMBERS	ATTENDED	ABSENT
Contra Costa County	Michele Mancuso	
CCC Flood Control and Water Conservation District	Tim Jensen	
City of Lafayette		Matt Luttrupp
City of Martinez	Frank Kennedy	
City of Pittsburg	Jolan Longway	
City of Pleasant Hill	Frank Kennedy (Chair)	
City of Richmond	Mary Phelps	
NON-VOTING MEMBERS		
City of Danville	Bob Russell	
City of Moraga	Shawn Knapp	
City of Walnut Creek	Lucile Paquette	

**Program Staff:** Karin Graves, Erin Lennon, Andrea Bullock, Michael Burger

**Consultants:** Mitch Avalon, Yvana Hrovat

**Guests:** Reina Schwartz (Clayton), Amanda Booth (San Pablo)

- 1. Convene meeting and roll call (Chair):** The Chair convened the meeting at 10:30 a.m.
- 2. Announcements or Changes to the Agenda (Committee):** There were no announcements or changes to the agenda.
- 3. Approval of July 5, 2022 Meeting Minutes (Chair):** Michele Mancuso (Contra Costa County) motioned to approve the meeting minutes as submitted. Frank Kennedy (Pleasant Hill) seconded. There were no objections or abstentions. The motion passed unanimously and the meeting minutes were approved.
- 4. Review Final FY 22/23 Adjusted Budget (M. Avalon/A. Bullock):** The Program is in the process of adjusting the budget that was approved in March. There were 3 reasons to make changes: staffing changes, MRP 3.0 changes, and advance work that was not required this Fiscal Year. At the last meeting, the budget was discussed in detail and Karin Graves had described the strategic staffing plan in detail. This is the final adjusted budget.

At the last Management Committee meeting, there was a question regarding the comparison of County staff versus consultant staff. The Program is not fully staffed: there is still a vacancy in one



Watershed Management Planning Specialist (WMPS) position and the Program Manager is still on leave, both of which continue to require staff augmentation. There are also key consultants leaving at the end of the year which required shifting consultant coverage. It was difficult to compare staff and consultant costs due to the difference in the pay schedules. Staff had produced an hourly billable rate for Program employees that can be more easily compared to consultant hourly rates. This has been analyzed by the County several times over the last decade.

The methodology behind this assessment assumed 2000 working hours in a fiscal year, which does not include holidays. If you subtract from the total working hours, average vacation hours, military leave, State Workers Compensation insurance, floating holiday time, jury duty, administrative leave, and other minor instances when an employee may be out, this results in 1650 billable hours per year. County employees' salaries are then divided by 1650 to find the billable rate as follows:

- Project Manager: \$195.06 per hours
- Senior WMPS: \$161.67 per hour
- WMPS: \$129.13 per hour
- Administrative Services Assistant III: \$134.99 per hour
- Clerk: \$80.79 per hour

Consultant charges can vary from consultant to consultant, but the bulk of the Program work is conducted in the \$150 to \$220 per hour range. There are some charges by high level consultant staff in the \$270 to \$290 hour range and some charges by lower-level consultant staff at less than \$150 per hour.

The total cost for Program labor was \$824,299. The total cost for Consultant staff time was \$3,188,892. Of this, Staff augmentation was \$740,678, consultant technical support \$342,000, and consultant project support was \$2,011,214.

The Program Labor costs are based on current staffing and include the salary savings noted at the end of the budget. For this analysis, the total Program Budget does not include the contingency. All adjusted budget line items are highlighted in yellow in the packet. It included \$803,300 of conditionally approved budget items, two of which were discussed with the Strategic Staffing Plan and are being addressed with this adjustment. First, Mitch Avalon will remain in an augmented staff position for 6 months and the budget remains unadjusted. Second, the On-Call Staff Augmentation (LWA, GS, HA) was adjusted to \$138,000 from \$100,000.

Mitch Avalon addressed a comment that had been made regarding the PCBs items in the budget. There had been concerns that certain items were being double counted in the budget.

\$20,000 had been budgeted for a regional effort led by Sandy Matthews and Jon Konan for a PCBs guidance document. \$20,000 was a placeholder estimate because the budget was adopted before MRP 3.0. An updated scope and budget would be available soon, but it was unlikely to exceed \$20,000. This guidance will meet the new requirements in C.12.g for site inspections, enhanced control measures, tracking of when demolition occurs, and verification that PCBs in building

demolition waste were being managed. New forms and training will likely be required. The \$30,000 budget line item was for two reports attached to the Programs Annual Report: PCBs in Building Demolition Status Summary and POCs Load Reduction report. These reports were required in MRP 2.0 and will be carried forward into MRP 3.0. Standard costs estimated from previous years include: \$10,000 for the PCBs report and \$20,000 for POCs report. A new template for MRP 3.0 will be needed and permittees will need to compile data on bridges, infrastructure, utilities, source properties, old industrial areas, building demolition, and Caltrans specs. Lucile Paquette (Walnut Creek) asked if this was for this Fiscal Year. Mitch noted that this Annual Report was for the last Fiscal Year (21/22).

Lucile Paquette (Walnut Creek) voiced a concern that AGOL changes have been slow to be considered and frequently not completed. She further suggested that the budget item for AGOL could be used to solicit current consultants or produce an RFP for changes to AGOL before the next Annual Report cycle. Her concern was that changes were unpredictable and there may not be time to onboard a new AGOL consultant if the Program waits until June when the current consulting contract expires; the \$50,000 line item could be better used finding a new consultant rather than continuing to fund work that was not reliable. This was further complicated by Mitch Avalon's retirement at the end of the year. The Committee discussed the options and clarified what the Permittees wanted. Mitch Avalon noted that this was probably a topic for the Municipal Operations Committee. Lucile Paquette (Walnut Creek) suggested that this could be brought up at the Ad Hoc AGOL workgroup. Mary Phelps (Richmond) asked why the AGOL consultants weren't providing the services requested. Lucile Paquette (Walnut Creek) noted that the changes and updates from PSOMAS are generally not satisfactory and this doesn't appear to be a good use of Program funds. The Committee discussed the practicality of task orders and/or new contracts with existing consultants currently under contract for the work. Mitch Avalon noted that the AGOL budget item was conditionally approved and that when it is considered recommendations from the AGOL workgroup would be needed to direct the funding elsewhere.

Mary Phelps (Richmond) asked if the adjusted budget would change the costs to the Permittees. Mitch Avalon noted that there was no change to permittees, that overages would be taken out of the reserve fund.

- 5. Administrative Committee Work Plan (M. Avalon):** Each committee established a work plan at the beginning of the Fiscal Year. The Administrative Committee does not work on projects in the same way as other committees and instead provides recommendations to the Management Committee in budgetary/fiscal, personnel, and policy issues. The following issues may come before the Committee this year:

-Personnel: The program had one vacant WMPS position to fill and anticipated advertising for the position in early 2023. In addition, the question of when the Program Manager's leave will end could be resolved this Fiscal Year.

-Budget: The adopted budget would need to be adjusted in the beginning of the Fiscal Year and 16 conditionally approved budget items would need to be discussed and decided on throughout



the Fiscal Year. The Program would begin the budget process for Fiscal Year 23/24 in November 2022.

-Policy: There would be more policy related issues this year due to new MRP 3.0 requirements.

The following are some that can be anticipated:

- Alternative compliance: How will it be funded
- Minimum GI: Will we comply with C.3.j collective or individually
- AGOL: Define business needs and level of services desired/required by permittees
- SUA Funding Gap: How will funding be increased and/or spending decreased
- PCBs: The control measure plan will provide a list of options to meet load reduction
- Regional Collaboration: What projects would benefit from a regional approach
- Hydromodification Management: Have to decide whether to stay with current hydrology model or switch to BAHM.
- Outreach: We will need to figure out the best way to inform a variety of customer bases what the new requirements are
- Noncompliance Response: A large subset of Permittees will be noncompliant in one or more provisions
- Homeless: What's the best, most efficient way to address the homeless requirement
- Cost reporting: What is the optimal cost reporting framework that will provide the info we need

- 6. Approve August 17, 2022 Management Committee Agenda (Committee):** Mitch Avalon displayed the Management Committee agenda. He noted that there was a proposed addition. He noted each presentation, action item, report, update, and information item. The additional item would be placed under the Reports section and would be the Trash Load Reduction Table presented by Liz Yin.

Lucile Paquette (Walnut Creek) asked if the action items should be flipped (voting on the Conditional items before the adjusted budget). Mitch Avalon noted that the C.3 guidebook change is not a part of the adjusted budget. While they could be swapped, they would need to be voted on separately. Lucile Paquette (Walnut Creek) also noted that an update on the AGOL workgroup should be added. Mitch Avalon asked if there was an AGOL meeting before then. Lucile Paquette (Walnut Creek) stated there would be a meeting on August 9<sup>th</sup>. She also suggested an information item be added that Regional Water Board staff is inspecting cities for various compliance issues (e.g. trash, C.3 device maintenance) and expects to cover all cities in the next year.

Mary Phelps (Richmond) motioned to approve with the changes noted, Jolan Longway (Pittsburg) seconded. The Chair called for a vote. There were no objections or abstentions. The motioned passed unanimously and the agenda was approved with changes noted.

- 7. Old/New Business (Committee):** Mitch Avalon announced that Mike Carlson, former Flood Control Deputy Director, had passed away. The next meeting (September 6) is right after Labor Day. This item was discussed at the PIP meeting and it was decided that the meeting would remain on September 6.

- 8. Adjournment:** The Chair adjourned the meeting at 11:39 a.m.



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**PUBLIC INFORMATION/PARTICIPATION COMMITTEE  
MEETING MINUTES**

**Tuesday August 2, 2022 9:00 am – 10:30 am**

**Zoom Meeting**

<b>Voting Members</b>	<b>Attended</b>	<b>Absent</b>
City of Antioch	Julie Haas-Wajdowicz	
CCC Flood Control and Water Conservation District	Melinda Harris	
City of San Ramon	Kerry Parker (Chair)	

<b>Administrative committee Members acting as PIP Members</b>	<b>Attended</b>	<b>Absent</b>
Contra Costa County	Michele Mancuso	
City of Lafayette		Matt Luttrupp
City of Martinez	Frank Kennedy	
City of Pittsburg	Jolan Longway	
City of Pleasant Hill	Frank Kennedy	
City of Richmond	Mary Phelps	

**Program Staff:** Erin Lennon, Andrea Bullock, Michael Burger

**Consultants:** Mitch Avalon, Hilary Pierce, Suzi Senna (SGA), Paige Rosenberg (SGA), Finnisha Eastman (Sagent)

**Guests:** Reina Schwartz (Clayton), Amanda Booth (San Pablo), Lucile Paquette (Walnut Creek), Shawn Knapp (Moraga)

- 1. Introductions, Announcements, and Changes to Agenda (Chair):** There were no announcements or changes to the agenda.
- 2. Caltrans Outreach Campaign Partnership Assets (Sagent):** Finnisha Eastman announced that there were several pending assets for the paid media outreach campaign. The “out of home” assets for transit shelters and buses were displayed first. It utilized the Caltrans campaign imagery that the Committee had approved at the previous meeting. It was noted that this was not a full bus ad, but just a panel. The Committee had a favorable response to the assets, noting that it looked like they could be places in Contra Costa County.

The mobile ad messenger copy was displayed for the Committee to approve. This was a short, 160-character advertisement that will appear on social media apps and mobile websites and will link to the Clean Water Program website. It will include the Clean Water Program logo, URL, colors, and a tracking code for monitoring click throughs. The copy options were translated into Spanish as well.



There were 2 options: *“Put your trash and litter **in the bin** where it belongs. Help keep our highways and waterways clean. Learn more at [cccleanwater.org](http://cccleanwater.org)”* and *“Litter on the ground can enter our waterways. Put your trash and litter **in the bin** where it belongs. Learn more at [cccleanwater.org](http://cccleanwater.org)”*. The Chair noted that she liked the second option but suggested that there might be better language to target the desired audience. Different terminology to the word “bin” was discussed to imply that trash needed to be contained if a trash receptacle was not available. Frank Kennedy (Martinez) noted that he preferred the first option. The Committee discussed the idea of making the messaging clearer. The Committee discussed a “leave no trace” message and Finnisha Eastman asked if there was a portion of the copy message that could be swapped with this message. She also reminded the Committee that the Mobile Ad Messenger would not populate next to the Caltrans campaign assets and that should be kept in mind when deciding on language to use.

This campaign is planned for the end of the month so a decision would need to be made by end of the day so it could be submitted on time. Finnisha Eastman displayed an example of the Mobile Ad Messenger at the Committee’s request. Mary Phelps (Richmond) asked if these were available to be displayed on local cable channels. Finnisha Eastman didn’t believe there were any copyright issues with using these on local access networks. Hilary Pierce also noted that there was a video clip that went with this campaign that could be shared for use on local cable.

The Committee decided to use: *“Do your part! Put trash where it belongs. Help keep our highways and waterways clean. Learn more at [cccleanwater.org](http://cccleanwater.org)”*. Finnisha Eastman noted that this would be sent for translation to Spanish and would be submitted by the end of the week.

The digital assets were displayed. These assets use the same imagery as the “out of home” assets but were different sizes.

Mary Phelps (Richmond) asked how many bus ads were being run. Finnisha Eastman didn’t know, but suggested that she would reach out to the media team to find that information and let Hilary Pierce know. Mary Phelps (Richmond) asked which buses these would be put on. Finnisha Eastman was unsure, but thought it was West Cat, Tri-County, and West Delta.

The Committee approved the assets unanimously.

- 3. Fish Risk Video (Sagent):** The edits from the last PIP review of the video draft and the review from Hilary Pierce were incorporated into the video. The video was almost finalized and after approval, final purchases of stock images would be made. Finnisha Eastman played the video for the Committee.

The Committee had a favorable response to the video. Michele Mancuso (Contra Costa County) suggested that the timing and scene splitting on the video was unusual. Finnisha noted this may have been an issue with the lag from sharing the video.



Hilary Pierce noted that the Committee should approve this. Frank Kennedy (Martinez) motioned to approve, Julie Haas-Wajdowicz (Antioch) seconded. There were no objections or abstentions. The Committee approved the Fish Risk video, pending a review of the timing issues noted, unanimously.

4. **SGA Introduction (Chair/SGA):** Suzi Senna started by introducing herself as the Senior Project Manager. She further introduced Paige Rosenberg as the Assistant Project Manager. Sabrina Chin, the Project Manager, was unable to attend.
5. **Consent Items Approval (Chair):** Julie Haas-Wajdowicz (Antioch) noted that there was a discrepancy between the text and the image for one of the Facebook posts. Melinda Harris (Flood Control) asked if the verbiage was too long based on the discussion regarding the Mobile Ad Messenger. Julie Haas-Wajdowicz (Antioch) noted that this was probably ok as there was a larger character limit for posts. The Committee discussed the messaging and specific terms used. Suzi Senna noted that the text could be edited and suggested that the overall objective of the posts was to have small, clear messages. The Committee discussed that the tone should be more authoritative. The Chair stated that post should be updated to reflect the language used in the Mobile Ad Messenger copy.

Melinda Harris (Flood Control) motioned to approve with changes noted, Julie Haas-Wajdowicz (Antioch) seconded. There were no objections or abstentions. The Consent Calendar items were approved with changes noted.

6. **SGA Work Plan Discussion (SGA):** Suzi Senna started by displaying the work plan. The discussion would focus on this fiscal year's work plan while the other half of the discussion would be for future options. She noted the goals and permit requirements that were addressed.

One main task was to create brochures: the content and number of brochures would be determined by the PIP Committee.

The second task was school aged outreach and SGA was proposing a 1-month paid media plan to engage and target 13–18-year-old students during Earth Month/April 2023. These media posts will link students to the Program website with information about litter and a submission form for student ideas. Mary Phelps (Richmond) asked why the 13-18 age range was chosen over elementary age. SGA noted that younger children were not able to be targeted on social media and the younger age group was primarily handled by Mr. Funnelhead. Julie Haas-Wajdowicz (Antioch) asked if Earth Month was too saturated and a different time during the year (back to school or New Year) would provide better visibility. Suzi Senna noted that “back to school” was in 2 weeks and that may not be enough time to develop a plan, but could push for September. Lucile Paquette (Walnut Creek) asked if this was primarily to have teens click through to the polls. Lucile Paquette (Walnut Creek) suggested that the end of the year holidays could be a good time to push the outreach, as many teens were home from school. The Committee discussed a Halloween theme to target the single-use candy wrappers as well as a



boba tea themed campaign targeting disposable straws. The Committee discussed SGA's budget for this fiscal year and the types of campaigns that were feasible.

The third task was for Public Education & Outreach campaign support. SGA would support the Caltrans "Let's Change This to That" campaign that Sagent was working on by creating supplementary materials as desired by the Committee. There would also be a change from a monthly newsletter to a modular document that could be used throughout the quarter in municipal newsletters, social media, or websites.

The fourth task was Public Outreach/Media Management. The social media content will be built upon and expanded with a target to increase followers on Facebook and Instagram by 10%. This will involve paid media items. Suzi Senna discussed the change in the social media landscape, suggesting that there wasn't much room to grow a social media following organically anymore. SGA would also be auditing the current Program website to provide recommendations on improving content, user experience, and user interface to drive web traffic and engagement.

Suzi Senna touched briefly on the list of project ideas for fiscal years 23/24 and 24/25. This list was available in the agenda packet and gave an approximated budget for each type of project. It was also suggested that this item could be put on a future agenda for expanded discussion.

- 7. Mr. Funnelhead Wrap-Up and Budget Discussion (M. Bolender):** Matt Bolender displayed a video of the art contest ceremony. There was still not a clear picture of what the availability of in-person presentations would be. Schools were still considering their policies.

Matt Bolender described the challenges that Covid restrictions placed on the Mr. Funnelhead Program. His goal was to get back into the schools for the assemblies. He noted that a plan would be presented in September once the budget was confirmed. There was a concern that the budget was going to increase now that the change from Zoom to in-person assemblies was being considered and that Zoom meetings may not be the best use of the budget. State funds have been reduced over the years and only 12 assemblies were planned for the year.

- 8. September PIP Committee Meeting Date (H. Pierce):** Hilary Pierce noted that the September PIP meeting date was right after the Labor Day holiday. The Committee discussed their availability on September 6, and it was determined that the meeting would remain on September 6.
- 9. Adjournment:** The Chair adjourned the meeting at 10:28 a.m.



**Monitoring Committee  
Meeting Minutes  
July 11, 2022**

<b>VOTING MEMBERS</b>		
<b>MUNICIPALITY</b>	<b>ATTENDED</b>	<b>ABSENT</b>
CCC Flood Control District	Beth Baldwin (Chair) Michelle Giolli, Michele Mancuso	
City of Walnut Creek	Lucile Paquette (Vice-Chair)	
City of Pittsburg	Joe Camaddo	
City of Antioch	Phil Hoffmeister	
City of Pinole	Misha Kaur	
City of Richmond	Terri Mason	
<b>Non-Voting Members</b>		
City of San Pablo	Amanda Booth	
<b>Program Staff and Consultants</b>		
Augmented Staff	Lisa Welsh, Lisa Austin	
Program Staff	Karin Graves, Erin Lennon	
Program Consultant	Mitch Avalon	

- 1. Introductory Remarks, Announcements, and Changes to the Agenda.** There is a CASQA meeting on Thursday, July 14 on “Stormwater as a Resource.”
- 2. Elect Chair and Vice-Chair for FY22-23.** Phil H. made a motion to approve Beth Baldwin (CCC FCD) as Chair and Lucile Paquette (City of Walnut Creek) as Vice-Chair. Misha Kaur (City of Pinole) seconded the motion. Motion passed.
- 3. June 2022 Meeting Summary.** City of Pinole (M. Kaur) moved to approve the June 2022 meeting summary. Contra Costa County FCD (B. Baldwin) seconded. There were no objections or abstentions.
- 4. POCs Geodatabase Review.** Lisa W. presented the structure of and information contained within the POCs database that KEI is developing for the Program. It contains sediment and aqueous POCs data collected by the Program under MRP 2.0. The committee asked if the database could include data back to the 2000s and if we could evaluate trends over time. Lisa W. responded that the database does not contain data from 2000s but can inquire about the potential to do so.
- 5. Trash Monitoring Outfall Selection.** Lisa W. presented a status update on trash outfall monitoring site selection and a preliminary list of the potential locations. Potential sites were identified in Concord, Pittsburg, and Walnut Creek. Joe C. suggested an additional site downgradient of a GSRD treating moderate and very high trash generation areas in the City

of Pittsburg. Beth suggested reaching out to City of Pleasant Hill. They regularly walk their creeks, inspect outfalls, and might have a good understanding of potential feasible locations.

6. **WQIF Grant Opportunity.** Karin presented a summary of potential grant projects that the CCCWP could submit on their own as well as an update on the regional application for receiving water trash monitoring. Misha mentioned that Caltrans is planning to install 6 FTC devices on interchanges in Pinole. The group agreed that an application could be strengthened by including an implementation component in addition to monitoring. This year, EPA has \$24M, and in two years it will be back down to \$5M. The group also discussed the value of saving some program resources to apply for a grant next year for a regional project likely identified through the C.12.c plan. Lisa A. will reach out to permittees to learn about FTC devices in the pipeline and to pair monitoring with implementation and outreach. Outreach can also build from past programs and recently received awards through Clean California.
7. **C.11/12 Update and East County RAA Schedule.** Lisa A. reviewed a schedule to complete the Old Industrial PCBs Control Measure Plan (Attachment 01a) and described that the East County RAA Report is due in November 2022.
8. **CCCWP Monitoring Assessment Webpage.** The committee ran out of time to discuss this item and will plan to discuss it at the August Monitoring Committee meeting.
9. **CCCWP Annual Report Attachments Schedule.** Lisa W. reviewed the schedule with the committee.

Date	Action	Responsible
Mon, Aug 1	Draft Reports	Geosyntec to Mon Com for review
Mon, Aug 8	Discuss Draft Reports	Monthly Mon Com Meeting
Wed, Aug 9	Initial Comments	Mon Com to Geosyntec
Wed, Aug 17	Staff Presentation on Reports	Monthly Management Committee
Wed, Aug 24	Comments/Redline on Reports	Permittees to Geosyntec
Mon, Sept 12	Recommend Approval	Monthly Mon Com Meeting
Mon, Sept 12	Approval	Management Committee (Special Meeting)

Joe C. asked about upcoming reporting requirements for PCBs in Building Demo and protocols or guidance for site inspections. Lisa A. responded that the requirements won't begin until next FY and the 2023 wet season. There is a regional project to develop the guidance.

#### 10. Next Steps / Action Items

- Lisa W. to reach out to Pleasant Hill for potential outfall monitoring locations.
- Lisa W. to reach out to permittees on what FTC devices are in the pipeline.

**11. Adjournment.** The meeting was adjourned at 12:00 pm.

**Next Scheduled Monitoring Committee Meeting:** Monday, August 8, 2022, 10:00 AM- 12:00 noon, Zoom meeting.

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**Municipal Operations Committee (MOC)  
 Meeting Minutes  
 July 19, 2022**

<b>MUNICIPALITY</b>	<b>ATTENDED [via Web/Phone]</b>
<b>VOTING</b>	
City of Antioch	<i>Phil Hoffmeister, Jeff Cook</i>
City of Brentwood	<i>Melissa Barcelona</i>
City of Concord	
Contra Costa County	<i>Michelle Giolli (Former Vice Chair, Chair-elect), Beth Baldwin</i>
City of El Cerrito	<i>Stephen Prée, Christina Leard</i>
City of Hercules	<i>Jeff Brown</i>
City of Martinez	
City of Orinda	
City of Pittsburg	<i>Joseph Camaddo (former Chair), Jolan Longway (Vice Chair-elect)</i>
City of Richmond	<i>Mary Phelps</i>
City of San Pablo	<i>Amanda Booth</i>
City of Walnut Creek	<i>Lucile Paquette</i>
<b>NON-VOTING</b>	
Town of Danville	<i>Bob Russell</i>
<b>PROGRAM STAFF and CONSULTANTS</b>	
Staff Augmentation	<i>Elizabeth Yin</i>
Staff Augmentation	<i>Mitch Avalon</i>
Program Staff	<i>Karin Graves</i>
Program Staff	<i>Erin Lennon</i>
<b>GUESTS</b>	

- 1. Introductions/Announcements:** Joseph Camaddo (City of Pittsburg) welcomed the group to the Zoom call and asked for announcements:
  - Erin Lennon (Program Staff) is the Program’s Watershed Management Planning Specialist, joining CCCWP at the end of June. Erin supports Permittees in meeting MRP requirements relevant to the Municipal Operations and Development Committees.
  - This is the last MOC meeting that Elizabeth Yin (Staff Augmentation) will be leading, as she transitions into the role currently filled by Mitch Avalon (Staff Augmentation).

2. **Approval of Minutes:** Bob Russell (Town of Danville), Stephen Prée (City of El Cerrito), and Lucile Paquette (City of Walnut Creek) noted roster and spelling edits needed for the June 21, 2022 Meeting Summary. Stephen moved to approve the finalized June 21, 2022 Meeting Summary with corrections. Joe Camaddo (City of Pittsburg) seconded. The Committee voted to approve.
3. **Committee Chair/Vice Chair Elections:** Stephen Prée (City of El Cerrito) made a motion to nominate Michelle Giolli (Contra Costa County) as the new Chair. Amanda Booth (City of San Pablo) seconded the nomination. Michelle accepted the nomination. Lucile Paquette nominated Jolan Longway as Vice Chair. Joe seconded. Jolan accepted the nomination. The Committee elected Michelle Giolli as the new Chair, and Jolan Longway as the new Vice Chair of the Committee.
4. **WQIF Trash Grant Proposal:** Karin Graves (CCCWP) summarized key points from a recent meeting with other Bay Area countywide clean water program managers regarding the San Francisco Bay Water Quality Improvement Fund (SFB WQIF). The Program is currently deciding between applying for a Contra Costa County-focused grant application, or else collaborating with the San Mateo, Alameda, and Santa Clara countywide clean water programs on a joint application. Grant matching opportunities exist. Applications are due September 20, 2022.

The Committee discussed preliminary preferences and considerations for the scope and topics for grant applications. Considerations included the following: EPA funding priorities (i.e., maximum positive impact on underserved communities, climate change resiliency, and multi-benefit projects); the ease of implementation (e.g., time, staffing, resources, maintenance) of different trash control measures and effectiveness at reducing trash loads; the overlap between C.10 targets and existing programs/efforts in Contra Costa County (e.g., related to housing/homelessness, monitoring, green stormwater infrastructure as full trash capture, and other MRP provisions); and grant management logistics. Amanda noted that a competitive application should include sufficient statistical evidence and measurable outcomes to justify the approach selected. Next steps include compiling feedback on potential grant topics, deciding whether to proceed with a CCCWP or a joint application, and drafting a scope. The Program will share notes from both the Regional and Program grant ideas discussions with the MOC Committee.

5. **Program Update:**

- Budget FY22/23, conditional approval items
  - Mitch gave an update on the Program budget for Fiscal Year 2022/2023. The original budget was approved in March 2022, but due to staffing changes, MRP 3.0 additions, and advance work, an adjusted budget was needed. There are time-sensitive conditional items with scope, timeline, and cost estimates under way that will likely need review/approval at the next MOC meeting. The Management Committee will discuss the adjusted budget for FY22/23 this Wednesday, July 20, 2022, and Permittees are welcome to attend.
  - Mitch presented a chart summarizing the budget adjustment. Multiple Permittees offered suggestions to make the summary chart easier to understand.
- AGOL
  - Liz gave an update on AGOL technical issues and resolutions, which led to a discussion on Psomas contract and access to AGOL.
- Annual Report Status
  - Liz reminded attendees of FY 2021/22 Annual Report deadline. Each permittee should review their SMARTS registration and, if necessary, complete SMARTS registration for the Legally Responsible Person, Duly Authorized Representative, and Data Entry Person as needed. The Program will provide a template submittal letter for annual reports by August 26<sup>th</sup>.

- MRP 3.0
  - Erin invited Permittees to reach out anytime with questions about MRP 3.0 provisions relevant to municipal operations (C.2, 4, 5, 9, 10, 13, 17).
- AB 1276
  - Erin and Beth Baldwin (Contra Costa County) shared a California Dept of Public Health Assembly Bill 1276 fact sheet. AB 1276 aims to reduce the use of and waste generated by all single-use food service products. Food facilities and third-party food delivery services may only provide single-use foodware accessories and condiments upon request. Cities are required to authorize an enforcement agency to enforce this new law on or before June 1, 2022.
  - C4/C5 inspection programs should provide examples of how to incorporate AB 1276 with food service establishments (e.g., clear signage with QR code for customers).
  - Multiple Permittees have incorporated or are planning to incorporate AB 1276 into Municipal Foodware Ordinances, including Christina Leard (City of El Cerrito).
- SB 54
  - Erin shared a July 1, 2022 CASQA news brief on Senate Bill 54, which was signed by the Governor on June 30, 2022. SB 54 aims to reduce single-use plastic packing and foodware pollution by regulating and phasing out the sale, distribution, and import of those products at the production level.
- Clean Water Program Website
  - Erin will be trained on Program website update protocol this week.
  - The most current business inspection brochure will be uploaded to the Program website. Lucile notes that it would be useful to post information on AB 1276, SB 1383, and other relevant regulations/laws on the website. RecycleSmart.org (Central Contra Costa Solid Waste Authority website) may have more information.
  - Feedback on website content may be directed to Erin on an ongoing basis.

**6. Meeting Ideas for FY 2022/23:** Permittees offer suggestions for presentations or interesting topics for upcoming meetings. A summary of the topics discussed are identified below:

- Trash: Current generation rates based on OVTAs.
- MRP 3.0 language: Discussion with Permittees on any difficulties with understanding permit language. May be a recurring topic, focusing on different provisions/sub-provisions each meeting. In August, a summary chart could clarify trash requirements.
- 5-year Work Plan: Review summary spreadsheets with annual reporting and other deliverable requirements for each MRP 3.0 Provision over the next 5 years.
- WQIF Trash Grant: Discuss notes from Regional and CCCWP meetings and decide on preferred scope, topic, and next steps for the grant application.

**7. Old/New Business:**

- BAMSC Development Subcommittee is assembling Work Groups for C.3, some which may or may not be of interest to MOC members.

**8. Adjournment:** Chair-elect Michelle Giolli adjourned at 12:03PM.



**Meeting Summary (Approved)**

Development Committee

July 27, 2022

1:30 PM – 3:30 PM

**Voting Members:**

**Municipality**

City of Antioch  
City of Brentwood  
City of Clayton  
City of Concord  
Contra Costa County  
Town of Danville  
City of Lafayette  
Town of Moraga  
City of Pittsburg  
City of Pleasant Hill  
City of San Ramon  
City of Walnut Creek

**Attending**

Phil Hoffmeister  
Aman Grewal  
Larry Theis  
Mitra Abkenari  
John Steere  
Bob Russell  
Matt Luttrupp and Tim Clark  
Frank Kennedy  
Joe Camaddo  
Frank Kennedy and Phil Ho  
Rod Wui  
Joel Camacho, Lucile Paquette

**Absent**

**Program Staff/Consultants**

Erin Lennon	Staff
Karin Graves	Staff
Mitch Avalon	Consultant
Alina Constantinescu	Consultant, Larry Walker Associates
Yvana Hrovat	Consultant, Haley & Aldrich
Rachel Krai	Consultant, Lotus Water

## **Introductions, Announcements, and Changes to Agenda**

The meeting was held via Zoom.

### **Approve Previous Meeting Summaries**

On a motion by Frank Kennedy (Moraga), seconded by John Steere (County), the summary of the June 22, 2022, meeting was accepted.

### **Committee Leadership**

Attendees selected the committee leadership for FY2022/23. On a motion from Rod Wui (San Ramon), seconded by Joe Camaddo (Pittsburg), attendees unanimously voted Phill Hoffmeister (Antioch) as Committee Chair. On a motion from Joe Camaddo (Pittsburg), seconded by Bob Russell (Danville), attendees unanimously voted Tim Clark (Lafayette) as Committee Vice-Chair. Attendees also thanked Joe Camaddo and John Steere for their leadership as Chair and Vice-Chair, respectively, this past fiscal year.

### **Plan September Forum on C.3.j Retrofit Requirements**

Erin shared the draft agenda for a C.3.j Retrofit Forum being planned for the September Committee meeting and asked for input from attendees. Feedback included:

- Need to have well-defined purpose for the forum.
- Explain overview of qualifying criteria for C.3.j projects.
- Ask permittees to provide info on retrofit projects already 'in the pipeline' ahead of the meeting. Spreadsheet to be developed by staff and distributed soon. The goal is to understand where both individual agencies and the program as a whole stand in terms of meeting MRP Attachment H acreage requirements for retrofit.
- Have speakers from permittees on the agenda. Discuss successful/unsuccessful strategies and lessons learned.

Attendees also discussed a large project in Antioch that may qualify for C.3.j and count towards the program's total acreage.

### **Update on Committee Budget and FY2022/23 Projects**

Attendees discussed the scopes for two projects (discussed below) which have previously been conditionally-approved by the Committee for the FY 2022/23 budget.

C.3 Guidebook 8<sup>th</sup> Edition - Yvana presented the scope for completing the *C.3 Guidebook 8<sup>th</sup> Edition*. Dan Cloak completed several chapters and appendices in FY 2021/22; remaining updates were pending MRP 3.0 adoption. These remaining updates are part of the Haley & Aldrich project scope and, pending scope approval by Management Committee in August, are slated to complete in Fall 2022. Total project cost is \$36,000.

Green Infrastructure Design Guidance and Standard Specifications – The scope for this project is in the drafting stages. Rachel led a discussion with attendees on desired outcomes, level of detail, and expected final product. This task is not as critical as the *Guidebook 8<sup>th</sup> Edition* and it was agreed that Rachel would present a revised project scope and that the item will continue at the August Committee meeting. The scope and budget may be further reviewed at the September Management Committee meeting.



### **MRP 3.0 C.3 Updates Projects**

Staff are working on two items to inform permittees and the development community on C.3 updates in MRP 3.0. Erin will email drafts to the group for input. The goal is to share these with the Management Committee at the August meeting for their input/ approval:

- 1) Internal memo for Permittees to share with their staff re: changes to regulated projects and road construction and maintenance requirements.
- 2) 'Counter Handout' with C.3 updates for Permittees to distribute to developers and project applicants.

### **Hydromodification Options Report**

Haley & Aldrich is working on the 'HM Options Report' to evaluate CCCWP permittee options for compliance with MRP 3.0 C.3.g requirements. A draft report will be presented at next month's meeting.

### **MRP 3.0 5-Year Workplan and BAMSC Regional Subcommittees**

Staff drafted a [workplan](#) with MRP 3.0 implementation dates and reporting requirements; it will be emailed to the group. Erin will also email a list of new BAMSC Regional Subcommittees which are tasked with responding to the regional projects/ work products required by MRP 3.0. Attendees were asked to distribute to their agency staff; interested participants can sign-up using this [spreadsheet](#).

### **Review of C.3 [Website](#)**

Due to time constraints, this item was not discussed and will be added the August agenda.

### **Annual Report Schedule**

Due to time constraints, this item was not discussed and will be added the August agenda.

### **Open Discussion of C.3 and C.6 Implementation Issues**

A couple of attendees noted that Regional Water Board staff has been inspecting trash capture devices and auditing agencies' maintenance and inspection programs.

### **Next Meeting Date**

Wednesday, August 24<sup>th</sup>, 2022 (1:30p-3:30p)

### **Action Items**

Staff to send out several items for permittees' review/input:

- Draft C.3.j Forum Agenda
- Draft Internal Staff Memo on C.3 Updates
- Draft C.3 Updates Counter Handout
- Haley & Aldrich Scope of Work for completing C.3 Guidebook 8<sup>th</sup> Edition
- Spreadsheet to sign up for BAMSC MRP 3.0 Regional Subcommittees

### **Adjournment**

The meeting was adjourned at 3:37 PM.

**NEXT DEVELOPMENT COMMITTEE MEETING:**

**Wednesday, August 24<sup>th</sup>, 2022**

**1:30 PM – 3:30 PM**

Via videoconference

**Attachments to 7/27/2022, Meeting Summary**

- None



**Date:** September 21, 2022

**To:** Management Committee

**From:** Erin Lennon, Watershed Management Planning Specialist, and Yvana Hrovat, Haley and Aldrich

**Subject:** MRP 3.0 Hydromodification Management Compliance

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**Recommendation:**

Accept the MRP 3.0 Hydromodification Management (HM) Compliance Options Technical Memorandum and move forward with Compliance Option 3, directing applicants for development projects subject to HM requirements to use the Bay Area Hydrology Model (BAHM) to demonstrate HM compliance.

**Background:**

HM Options Report – Haley & Aldrich, Inc., with modeling support from Tony Dubin, conducted a technical analysis of four possible approaches for Contra Costa Permittees to comply with HM requirements in MRP 3.0. At the August 24 Development Committee Meeting, Haley & Aldrich presented a summary of the HM options, as well as a cost-benefit, technical analysis of several criteria. The contents of the presentation are described in more detail in an HM Options Memo (“Technical Memorandum: MRP 3.0 Hydromodification Management Compliance Options”), which was addressed to Karin Graves and distributed to the Development Committee on August 30, 2022.

Development Committee Recommendation – By a majority vote (8 voting yes, and 4 abstaining), based on the information presented at the Development Committee meeting, the Development Committee is recommending the Management Committee to move forward with Option 3: Use of BAHM to demonstrate HM compliance.

**Related Tasks and Next Steps:**

Should the Management Committee approve the Development Committee’s recommendation to move forward with Option 3, then the following are the next tasks and anticipated timeline associated with that decision.

- Task: HM Conditional Approval Items
  - Description: Develop scope of work and cost estimate for HM-related

FY 22-23 conditional approval line items (budget rows 32 and 35) to support Contra Costa-specific updates to BAHM, BAHM-related guidance and training.

- Timeline: Scope and fee for HM-related conditional approval line items will be presented at October Management Committee meeting for approval.
- Task: HM Exemptions Mapping Updates Scope of Work
  - Description: Develop scope of work and cost estimate to address San Francisco Regional Water Quality Control Board (SFRWQCB) comments on 2017 HM exemption maps, address data gaps and update GIS layers with more recent data layers.
  - Timeline: Scope and fee for HM exemptions mapping updates will be presented at November Management Committee meeting for consideration.
- Task: C.3 Guidebook HM Compliance-related Updates
  - Description: Update pertinent sections of C.3 Guidebook to direct project applicants to use BAHM for HM compliance and outline specific steps to guide applicants in the BAHM process and related HM calculations. This task is already covered under approved budget row 30.
  - Timeline: Guidebook will be updated for presentation at the October Development Committee meeting.
- Task: Contra Costa-specific BAHM Updates
  - Description: In conjunction with Regional BAHM-related updates (approved FY 22-23 budget row 39), Contra Costa-specific updates (once conditional item is approved) will be recommended to Clear Creek Solutions.
  - Timeline: To be confirmed/determined with Clear Creek Solutions as scope of work and fee for this conditional approval item is developed.
- Task: Detailed BAHM for HM Compliance Guidance and Training
  - Description: Develop detailed guidance and training for municipal staff and developers for ease of BAHM implementation. Guidance can be provided as a technical appendix to the C.3 Guidebook.
  - Timeline: Guidance technical document will be developed and training will be developed and delivered with a deadline to be determined, but no later than Spring of 2023.

**Fiscal Impact:**

There is no approval of conditional budget items at this time. Scope, cost and schedule will be presented at the October Management Committee meeting for review and approval.

**Attachments:**

MRP 3.0 Hydromodification Management Compliance Options Technical Memorandum



CONTRA COSTA  
CLEAN WATER  
PROGRAM

**Date:** August 30, 2022

**To:** Karin Graves, Acting Program Manager; Contra Costa Clean Water Program

**From:** Yvana Hrovat; Haley & Aldrich, Inc.  
Tony Dubin (Modeling Support)

**Subject:** Technical Memorandum:  
MRP 3.0 Hydromodification Management Compliance Options

**Background**

Provision C.3 of the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (MRP) requires municipal Permittees to use their planning and building authority to require applicants for development approvals to include Low Impact Development (LID) features and facilities in their projects. Within Provision C.3., Provision C.3.g. sets criteria, applicable to development projects creating an acre or more of new impervious area, for controlling increases in runoff flow and volume (hydromodification management [HM]).

As required by a 2003 amendment adding the Provision C.3 requirements to the then-countywide NPDES permit, the Contra Costa Clean Water Program (CCCWP) submitted a Hydrograph Modification Plan (HMP) in July 2005. The Water Board approved the HMP in 2006.

During these years, CCCWP consultants used Hydrologic Simulation Program – FORTRAN (HSPF) to develop sizing factors for a specified suite of standard HM facilities, including bioretention. The sizing factors allow simplified computing and calculations. Standardized designs and detailed criteria for HM facilities ensure that performance is accurately represented (i.e., there is consistency between what is represented in the model and what is built in the field), and that the controls are buildable and maintainable. The sizing factors, with adjustment equations for variations in rainfall, are published in Table 3-6 of the 7th Edition Stormwater C.3 Guidebook and are incorporated in the Integrated Management Practices (IMP) Sizing Calculator, which is available on CCCWP's website. The instructions, calculator, and design criteria facilitate LID designs that are integrated with the site and landscaping design of development projects and can be readily checked for compliance by a permit technician. The suite of controls and sizing factors were last updated in 2009, and the IMP Sizing Calculator was updated at that time (consequent with the Stormwater C.3

Guidebook 4th Edition). At the time of the update, the range of flows to be controlled was undefined in the Contra Costa countywide permit. Sizing factors were calculated using the range from two-tenths of the 2-year pre-project peak flow (0.2Q2) to the 10-year pre-project peak flow (Q10).

Also, during 2003 to 2006, the countywide stormwater programs in Santa Clara, Alameda, and San Mateo counties developed and adopted the Bay Area Hydrology Model (BAHM). BAHM is also HSPF-based. It was adapted from the Western Washington Hydrology Model (WWHM) created by Clear Creek Solutions. Section 2, Topic 11 of the Hydromodification Technical Report (Dubin, 2017) provides a detailed comparison of the hydrologic and hydraulic methods used in developing the Contra Costa sizing factors and in BAHM.

MRP 1.0 included a statement that “HM controls designed using Bay Area Hydrology Model (BAHM) and site-specific input data shall be considered to meet the HM standard.” This language has been carried through into MRP 2.0 (2015) and MRP 3.0 (2022).

With MRP 1.0, HM requirements were extended to Solano County Permittees. The City of Vallejo has adopted HM requirements based on Contra Costa’s Guidebook; other Solano County entities adopted BAHM.

In MRP 1.0 (2009), the Water Board extended technical standards used to size detention basins in BAHM to all MRP Permittees, including the range of flows from 0.1Q2 to Q10 and the curve-matching criteria brought forward from the WWHM. Since that time, CCCWP has pursued efforts, as directed by the Water Board, to show that the LID approach the Water Board approved in 2006 can meet the BAHM-based technical standards. This included a project to monitor the performance of five LID facilities during two rainy seasons (completed in 2011 to 2012, and reported in 2013), and show via modeled simulation how the facilities would perform in rainfall events that occur over a 30-year period.

In MRP 2.0 (2015), the Water Board allowed Permittees to propose a new standard, based on direct simulation of erosion potential, and also mandated that Contra Costa Permittees submit a report updating the sizing factors. CCCWP worked closely with Water Board staff to scope and implement the project during 2016 and 2017, and submitted the report as required in September 2017. The report proposed the direct-simulation-of-erosion-potential standard as a basis for determining compliance. CCCWP received Water Board staff comments on the 2017 report in 2020; however, there has not yet been a successful resolution to the comments.

In MRP 3.0 (2022), Provision C.3.g.vi.(2) requires CCCWP Permittees to submit a new Technical Report, subject to the Executive Officer’s approval, describing how the CCCWP Permittees will implement the new standard. Provision C.3.g.v. directs CCCWP Permittees to require development projects subject to HM to use the methods and

criteria in the current edition of the Stormwater C.3 Guidebook until the Executive Officer approves the Technical Report.

Alternatively, CCCWP Permittees may implement the HM Standard in Provision C.3.g.ii., which references BAHM.

The CCCWP Permittees collectively receive a total of, on average, 25 HM development projects to review annually, based on review of the most recently available 2019/2020 and 2020/2021 reporting year Annual Reports. The total new impervious surface area of HM projects for the 2019 through 2021 fiscal years was 6,780,421 square feet (or 156 acres).

### **Purpose and Approach**

This report identifies, analyzes, and compares the following options for HM implementation.

1. Use Direct Simulation of Erosion Potential (per Provision C.3.g.iii.) to calculate updated sizing factors based on a generic unit impervious area. Update Table 3-6 in the Stormwater C.3 Guidebook (C.3 Guidebook) and insert revised sizing factors into an updated IMP Sizing Calculator.

Under this option, the sizing factors in Stormwater C.3 Guidebook Table 4-6 would be updated using the methods and criteria in MRP Provision C.3.g.iii. This work was mostly completed in 2016 to 2017 and documented in the September 2017 Hydromodification Technical Report. That report recommends a “base case” sizing factor of 0.05 for a bioretention facility in “D” soils located near the Martinez rain gauge. However, MRP 3.0 Provision C.3.g. language requires that CCCWP use a larger base case sizing factor (0.065) than used in the 2017 Report.

To implement this option, the remaining technical work would involve additional computer simulations to complete the suite of sizing factors and rainfall adjustments in the C.3 Guidebook. The complete suite would include factors for the other facility types (flow-through planters, bioretention + vault, cistern + bioretention, and infiltration basins) in the Guidebook in each of the hydrologic soil groups (A, B, C, and D) and updated equations used to adjust the sizing factors for differing mean annual precipitation throughout Contra Costa County. The complete suite of sizing factors and rainfall adjustment equations would be incorporated into an updated IMP Sizing Calculator.



2. Use BAHM (per Provision C.3.g.ii.) to calculate updated sizing factors based on a generic unit impervious area. Update Table 3-6 in the C.3 Guidebook and insert revised sizing factors into an updated IMP Sizing Calculator.

Under this option, an updated version of BAHM would be used to generate sizing factors to be incorporated in C.3 Guidebook Table 3-6 and in an updated IMP Sizing Calculator.

This option would apply a similar methodology and similar procedures to those used in CCCWP's 2005 HMP and the 2009 Guidebook update to generate new sizing factors. Both BAHM and the modeling conducted by CCCWP 2005 to 2013 use HSPF, to continuously simulate the generation and movement of runoff and use flow duration control criteria to compare the post-project to the pre-project condition.

3. Direct applicants for development projects subject to HM requirements to use BAHM to demonstrate HM compliance.

Applicants would prepare a design submittal and accompanying calculations for stormwater treatment, and would also, on a separate track, retain a qualified hydrologist (consultant) with BAHM experience. The qualified hydrologist would use BAHM to design and test additional facilities to comply with the HM requirements.

Municipal review staff would have the option of reviewing the BAHM output and report themselves. However, based on experience with site-specific HM modeling (which has been done for a few Contra Costa projects since 2006), municipalities would be more likely to hire a second qualified hydrologist (consultant) to review the BAHM calculations and report prepared by the applicant's qualified hydrologist.

4. Update Table 3-6 in the C.3 Guidebook, and the IMP Sizing Calculator, with new sizing factors anticipated to allow all or nearly all projects to pass subsequent site-specific evaluation using BAHM. Direct applicants for development projects subject to HM requirements to use the C.3 Guidebook and the updated IMP Sizing Calculator. For each HM project, after completing their own review, municipal staff would forward the applicant's Stormwater Control Plan and IMP Sizing Calculator output to a designated BAHM reviewer. The designated BAHM reviewer would create a representation of the project in BAHM and use BAHM to either validate that the project design meets HM criteria or develop recommendations to alter the project design so that it can be validated in a successive iteration using BAHM.

Under this option, C.3 Guidebook Table 4-6 would be updated with sizing factors that are expected to allow all or nearly all development project submittals to pass BAHM review on the first try.

Similar to what is being done currently, municipal development review staff would review the Stormwater Control Plan for consistency with the C.3 Guidebook and for successful integration with the applicant's site plan, grading and drainage plan, and landscaping plan. However, with this option, municipal development review staff would then forward the development project Stormwater Control Plan, including IMP Sizing Calculator output, to a designated BAHM reviewer. The reviewer would validate that the project meets HM criteria or provide recommendations for revision of the project design—for example, to use a bioretention + vault configuration, rather than bioretention, or to increase facility area or volumes.

The applicant's options for HM control facilities would be limited to the five types of facilities in the current C.3 Guidebook, which would help ensure that the control facilities are robust and resilient throughout the life of the project. Similar to Option 2, this option could include the addition of site-specific facility exfiltration rates to the IMP Sizing Calculator input.

Use of a designated reviewer, rather than having Permittees retain a reviewer project-by-project, is intended to ensure that BAHM parameters and parameter values are used consistently, and that they accurately and fairly correspond to what will be built in the field. A designated BAHM reviewer or reviewers could be contracted by CCCWP; municipalities would reimburse CCCWP for CCCWP's cost from each project review. Municipalities could, in turn, charge development review fees to the applicant to cover the cost of the reimbursement.

To evaluate the feasibility of each option and illustrate their relative strengths and limitations, the project team conducted proof-of-concept modeling for two example projects that are representative of many of the projects occurring in Contra Costa County (see Appendix A for additional details):

1. The Fire Prevention Bureau in Pittsburg, which is a 1.1-acre property with six bioretention facilities for flow control and water quality treatment. Bioretention performance was monitored by CCCWP staff, and then their performance was modeled and documented in the 2013 IMP Monitoring Report (Dubin, 2013).
2. Residential Example #1 from the Program's C.3 website (CCCWP, 2018), which is a 3-acre site with a central roadway and nine single family homes. This example describes a residential subdivision designed with careful adherence to LID principles that uses the site grading and distributed IMPs to integrate stormwater control into the site design without needing to reserve space for large stormwater control facilities.

The modeling examined different rainfall conditions, soil conditions, and infiltration rates. The modeling was limited but sufficiently robust to identify benefits and challenges of each option.

The stormwater control IMPs in the two project examples were modeled using the IMP Sizing Calculator and BAHM. The results were then combined with observations about the tool's user interface, data input processes, reporting capabilities, and project review processes to summarize the capabilities and feasibility of each HM compliance option. Options were compared and rated according to the following criteria:

1. Relative footprints of stormwater facilities sized using the two tools.
2. Flexibility for examining different kinds of developments with the IMPs included in the C.3 Guidebooks and the ability to incorporate site-specific project information.
3. Level of effort (LOE) and technical expertise/training required by development engineers and municipal review staff.
4. Consistency with the Program's C.3 Guidebook.
5. Consistency with other programs in the Region.
6. Likelihood and ease (including timeframe for approval) of acceptance by the Water Board.
7. Cost to the Program and consultants to prepare for implementation.

## **Results**

Differences in HM procedures, design, and approaches to HM facility representation were demonstrated through two proofs of concept in Contra Costa locations hydrologically similar to locations already represented in BAHM. The scenarios differed in complexity to provide ranging scenarios and output. The IMP sizing modeling described above, BAHM and the IMP Sizing Calculators were compared (e.g., user interface, flexibility, and design/review process) for their applicability to the four HM compliance options. These characteristics were combined with programmatic and implementation issues in the table below, summarizing the benefits and challenges of each HM compliance option, as they relate to the seven criteria discussed in the Approach Section (Table 1).

**Table 1. Comparison of HM Compliance Options**

<b>Option 1. Use Direct Simulation of Erosion Potential to calculate updated sizing factors</b>	
<b>Benefits</b>	<b>Challenges</b>
<ul style="list-style-type: none"> <li>• Preserves simplified IMP sizing approach that has been used for the past 15 years (Criteria 3 and 4).</li> <li>• Promotes LID for stormwater compliance (Criteria 4).</li> </ul>	<ul style="list-style-type: none"> <li>• Permit language requires CCCWP use a larger base case sizing factor (6.5%) than used in 2017 Report which will result in larger sized and less economically feasible facilities (Criteria 1).</li> <li>• Approach is inconsistent with other MRP counties (Criteria 5).</li> <li>• Water Board did not accept the Erosion</li> </ul>

	Potential-based approach after submittal of the 2017 HMP Technical Report describing the approach and recommended Group D reference sizing factor (Criteria 6).
<b>Option 2. Use BAHM to calculate updated sizing factors based on a generic unit impervious area</b>	
Benefits	Challenges
<ul style="list-style-type: none"> <li>• Low LOE for municipal staff training and review time (Criteria 3).</li> <li>• Low LOE for development engineers with regards to use of already in-place methodology (Criteria 3).</li> <li>• Preserves simplified IMP sizing approach that has been used for the past 15 years (Criteria 3 and 4).</li> <li>• Incorporates BAHM hydrology for consistency with other MRP municipalities (Criteria 5 and 6).</li> </ul>	<ul style="list-style-type: none"> <li>• Resulting sizing factors are largely dependent on the facility exfiltration rate that is used, which are not currently user-defined (Criteria 2).</li> <li>• Approach is inconsistent with other MRP counties (Criteria 5).</li> <li>• Requires Water Board consultation to agree this is consistent with its interpretation of MRP language (Criteria 6).</li> <li>• Based on previous experience for similar reviews with the Water Board, could take numerous iterations and a lengthy period of time for approval, if granted (Criteria 6).</li> <li>• Requires significant hydrologic modeling analysis to produce sizing factors in BAHM (Criteria 7).</li> <li>• BAHM would need to be expanded to include Contra Costa's project selection map, rainfall data, and evaporation data (Criteria 7).</li> </ul>
<b>Option 3. Direct applicants for development projects subject to HM requirements to use BAHM to demonstrate HM compliance</b>	
Benefits	Challenges
<ul style="list-style-type: none"> <li>• Consistency with Alameda, San Mateo, and Santa Clara Counties (Criteria 5).</li> <li>• Path of "least resistance" with regards to Water Board involvement (Criteria 6).</li> <li>• Likely lowest initial implementation cost to Program. Most significant effort would involve a) contracting for software updates that include Contra Costa meteorological data and IMPs and b) training for municipal plan review staff and consulting engineers (Criteria 3 and 7). Preferred methodology of MRP 3.0 C.3. g. ii (Criteria 6).</li> </ul>	<ul style="list-style-type: none"> <li>• BAHM would require larger IMP sizing (compared to the current version of the IMP Sizing Calculator) for sites with lower infiltration rates (Criteria 1).</li> <li>• Some of the best management practices (BMPs) available in BAHM are not allowable in C.3 Guidebook or consistent with the Program's emphasis on LID (e.g., detention ponds, third-party/proprietary BMPs) (Criteria 2, 4, and 7).</li> <li>• Software is more complicated than the IMP Sizing Calculator and would require training for consultants and municipal staff (Criteria 3).</li> <li>• Design process may require more labor hours for consulting engineers/project proponents relative to IMP Sizing Calculator due to separate calculations for treatment and HM (Criteria 3). Under this option, municipal Permittees would</li> </ul>

	<p>separate currently integrated review processes for runoff treatment and for HM, allowing applicants to prepare a single analysis (using the C.3 Guidebook and the IMP Sizing Calculator), and to iterate the stormwater design process with site planning, grading and drainage design, and landscape design.</p> <ul style="list-style-type: none"> <li>• BAHM would need to be expanded to include Contra Costa's project selection map, rainfall data, and evaporation data (Criteria 7).</li> </ul>
<p><b>Option 4. Direct applicants for development projects subject to HM requirements to use the IMP Sizing Calculator and then confirm compliance with BAHM</b></p>	
<p>Benefits</p>	<p>Challenges</p>
<ul style="list-style-type: none"> <li>• Preserves simplified IMP sizing approach that has been used for the past 15 years (Criteria 3 and 4).</li> <li>• Uses BAHM hydrology as described in MRP 3.0 (Criteria 5 and 6).</li> </ul>	<ul style="list-style-type: none"> <li>• BAHM would require larger IMP sizing (compared to the current version of the IMP Sizing Calculator) for sites with lower infiltration rates (Criteria 1).</li> <li>• Approach is inconsistent with other MRP counties (Criteria 5).</li> <li>• Requires Water Board consultation, adding time to the compliance pathway process (Criteria 6).</li> <li>• Requires initial review of IMP Sizing Calculator results by municipal staff, then confirmation of HM compliance in BAHM by consultant (two steps) (Criteria 3 and 7).</li> <li>• Requires hydrologic modeling analysis to produce sizing factors for IMP Sizing Calculator that will be consistent with BAHM calculations (Criteria 7).</li> <li>• BAHM would need to be expanded to include Contra Costa's project selection map, rainfall data, and evaporation data (Criteria 7).</li> </ul>

**Ranking of HM Compliance Options**

The challenges and benefits of the four HM compliance options were compared by ranking each option from a scale of 1 to 3, with 3 being the highest ranking and 1 being the lowest, on the basis of the seven criteria identified in the Purpose and Approach Section. Based on this ranking system, Option 3 resulted in the most points based on the criteria (Table 2). Specifically, the criteria were assigned rankings as follows:

1. Relative footprints of stormwater facilities 1 = largest relative size (for lower infiltration rates), 2 = medium relative size, and 3 = smallest relative size.

2. Flexibility for examining different kinds of developments with the IMPs included in the C.3 Guidebooks and the ability to incorporate site-specific project information: 1 = least flexible, 2= medium flexibility, and 3 = greatest flexibility.
3. LOE and technical expertise/training required by development engineers and municipal review staff: 1 = highest LOE, 2 = medium LOE, and 3 = lowest LOE.
4. Consistency with 7th Edition of Program's C.3 Guidebook: 1 = least consistent, 2 = medium consistency, and 3 = greatest consistency.
5. Regional consistency: 1 = least consistent, 2 = medium consistency, and 3 = greatest consistency.
6. Likelihood and ease of acceptance by the Water Board: 1 = least likelihood/ease, 2 = medium likelihood/ease, and 3 = greatest likelihood/ease.
7. Cost to the Program and consultants to prepare for implementation: 1 = highest cost, 2 = medium cost, and 3 = lowest cost.

**Table 2. Ranking of HM Compliance Options**

Option	Ranking Criteria							Total
	1. Relative footprints of stormwater facilities	2. Design Flexibility	3. Municipal Staff/ Development Community LOE	4. Consistency with C.3 Guidebook	5. Regional Consistency	6. Likelihood and Ease of Acceptance by Water Board	7. Cost to CCCWP to implement	
1	1	3	1	3	1	1	1	11
2	2	1	3	3	1	1	2	13
3	1	2	2	1	3	3	3	15
4	1	3	3	3	1	2	1	14

## **Conclusion**

This study examined the benefits, challenges, and feasibility of four possible approaches for Contra Costa Permittees to complying with the requirements of MRP 3.0 Provision C.3.g. Option 3, directing applicants for development projects subject to HM requirements to use BAHM to demonstrate HM compliance, scored the highest in the option criteria analysis, with a distinguishing feature of being the only option that would have the greatest regional consistency, easiest pathway to compliance and lowest implementation cost (Criteria 5, 6, and 7, respectively). Based on this analysis, Option 3 is the optimal approach for CCCWP Permittees to implement for compliance with Provision C.3.g.



## References:

Contra Costa Clean Water Program (CCCWP). 2017. Stormwater C.3 Guidebook, 7th Edition. June 21, 2017.

Contra Costa Clean Water Program (CCCWP). 2018. Stormwater C.3 Guidebook Resources: Example Residential Subdivision, [https://www.cccleanwater.org/userfiles/kcfinder/files/ExampleStormwaterControlPlan-Residential%20Subdivision\\_2018-02.pdf](https://www.cccleanwater.org/userfiles/kcfinder/files/ExampleStormwaterControlPlan-Residential%20Subdivision_2018-02.pdf). February 21, 2018.

Dubin Environmental. 2013. Contra Costa Clean Water Program (CCCWP) IMP Monitoring Report, IMP Model Calibration and Validation Report. September 20, 2013.

Dubin Environmental, Geosyntec, and Dan Cloak Environmental Consulting. 2017. Contra Costa Clean Water Program (CCCWP) Hydromodification Technical Report. September 29, 2017.

**Attachment**

**Appendix A – Technical Addendum**



CONTRA COSTA  
CLEAN WATER  
PROGRAM

**Date:** August 30, 2022

**To:** Karin Graves, Acting Program Manager; Contra Costa Clean Water Program

**From:** Yvana Hrovat; Haley & Aldrich, Inc.  
Tony Dubin and Dan Cloak

**Subject:** Appendix A – Proof of Concept Modeling Results

### **Background**

The Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (also known as the MRP), issued by the San Francisco Bay Regional Water Quality Control Board, mandates certain stormwater pollution prevention measures for covered Permittees. One such measure involves hydromodification management (HM) controls. In response to HM provisions in MRP 3.0, the Contra Costa Clean Water Program (CCCWP) will consider a number of options for future HM compliance.

To evaluate the feasibility of each option and illustrate their relative strengths and limitations, the project team conducted proof-of-concept modeling for two example projects that are representative of many of the projects occurring in Contra Costa County:

1. The Fire Prevention Bureau in Pittsburg, which is a 1.1-acre property with six bioretention facilities for flow control and water quality treatment. Bioretention performance was monitored by Program staff, and then their performance was modeled and documented in the 2013 Bioretention Monitoring Report (Dubin, 2013).
2. Residential Example #1 from the Program's C.3 website (CCCWP, 2018) is a 3-acre site with a central roadway and nine single-family homes. This example describes a residential subdivision designed with careful adherence to Low Impact Development (LID) principles that uses the site grading and distributed IMPs to integrate stormwater control into the site design without needing to reserve space for large stormwater control facilities.

The modeling examined different rainfall conditions, soil conditions, and infiltration rates. The modeling was limited but sufficiently robust to identify strengths and

shortcomings of each option. The stormwater control IMPs in the two project examples were modeled using the Integration Management Practices (IMP) Sizing Calculator and Bay Area Hydrology Model (BAHM). The results were then combined with observations about the tools' user interface, data input processes, reporting capabilities, and project review processes to summarize the capabilities and feasibility of each HM compliance options.

## Results

### Example 1: Fire Prevention Bureau Modeling

Figure 1 shows the Fire Prevention Bureau site drainage layout and Figure 2 from the site plan shows the combinations of drainage management areas (DMAs) and IMPs that were sized using the IMP Sizing Calculator. The same combinations of DMAs and IMPs were modeled in BAHM.

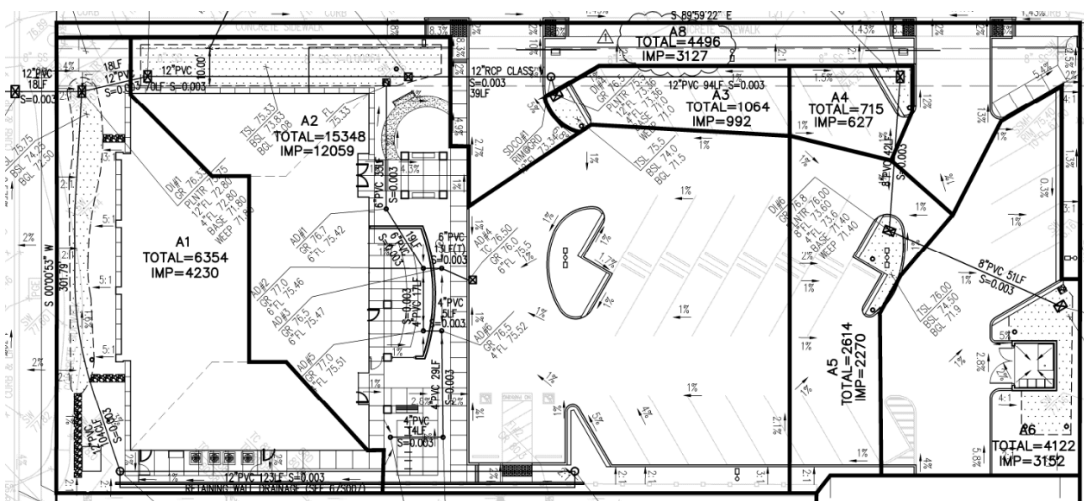


Figure 1. Fire Prevention Bureau Site Drainage Plan

STORM TREATMENT DESIGN (PER CONTRA COSTA COUNTY)															
IMP NAME	TYPE	SOIL GROUP	RAIN ADJ. FACTOR	A SIZING FACTOR	V1 SIZING FACTOR	V2 SIZING FACTOR	D.M. AREA (S.F.)	RUNOFF FACTOR	MIN. SIZE (S.F.)	PLANNED SIZE (S.F.)	V1 REQUIRED (C.F.)	V1 PROVIDED (C.F.)	V2 REQUIRED (C.F.)	V2 PROVIDED (C.F.) (POROSITY=0.4)	MAX. FLOW (ORIFICE SIZE)
A1	IN-GROUND (INFILTRATION) PLANTER	D	1.27	0.05	0.042	0.055	1582	0.7	339	542	285	316	373	379	0.01 CFS (0.51" DIAM.)
							4230	1							
A2	IN-GROUND (INFILTRATION) PLANTER	D	1.27	0.05	0.042	0.055	2415	0.7	873	874	734	874	960	961	0.02 CFS (0.81" DIAM.)
							12059	1							
A3	IN-GROUND (INFILTRATION) PLANTER	D	1.27	0.05	0.042	0.055	0	0.7	63	72	53	72	70	72	0.00 CFS (0.21" DIAM.)
							992	1							
A4	IN-GROUND (INFILTRATION) PLANTER	D	1.27	0.05	0.042	0.055	0	0.7	40	88	34	44	44	44	0.00 CFS (0.17" DIAM.)
							627	1							
A5	IN-GROUND (INFILTRATION) PLANTER	D	1.27	0.05	0.042	0.055	180	0.7	152	164	127	130	167	170	0.00 CFS (0.32" DIAM.)
							2270	1							
A6	IN-GROUND (INFILTRATION) PLANTER	D	1.27	0.05	0.042	0.055	562	0.7	225	408	189	204	247	258	0.00 CFS (0.41" DIAM.)
							3152	1							

Figure 2. Fire Prevention Bureau IMP Sizing from the Site Plan based on the IMP Sizing Calculator

## Appendix A – Proof of Concept Modeling Results

The DMAs and bioretention planters were added to BAHM (using the minimum sizing column in Figure 2). BAHM provides significant design flexibility where the user can enter the bioretention's footprint area, depths of surface storage volume, thickness of bioretention media, thickness of gravel layer, and underdrain and overflow structure location and geometry. Figure 3 shows the Fire Prevention Bureau layout and bioretention data entry form.

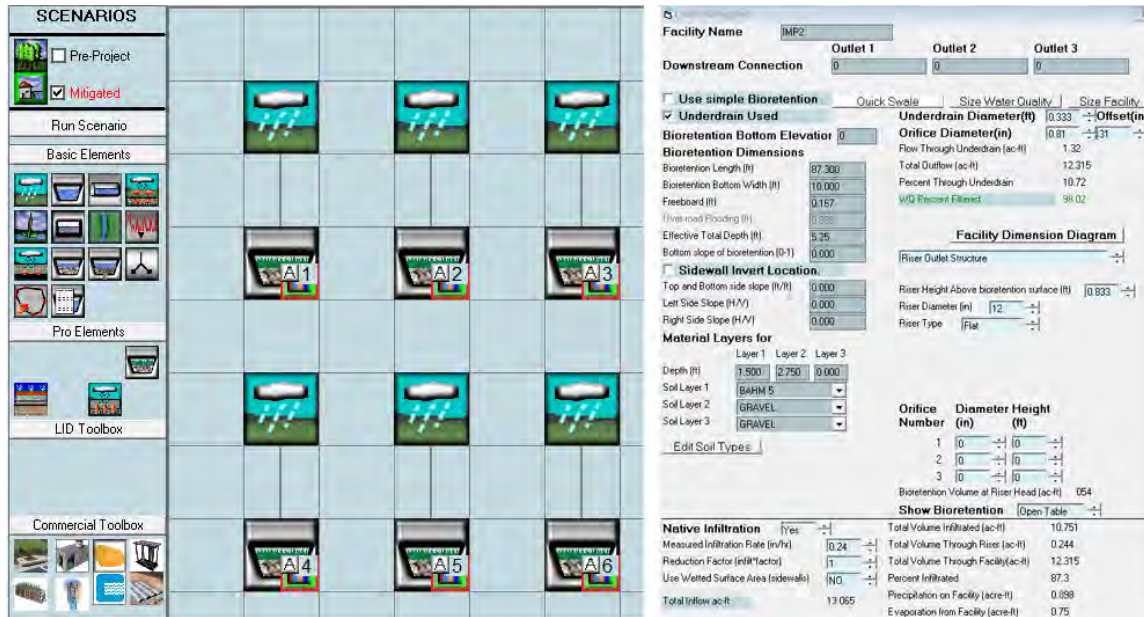


Figure 3. BAHM User Interface for Fire Prevention Bureau site

Significant for the Program, BAHM allows the project proponent to enter site-specific infiltration rates that would be collected by an engineer or hydrogeologist using a methodology approved by the Program. The hydrologic modeling behind the current version of the IMP Sizing Calculator was based on reference infiltration rates for Group A, B, C, and D soils, because the Program wanted to streamline the data requirements for small projects.

The user interface and data entry forms in BAHM provide additional flexibility for designing IMPs, but also require substantially more time and effort than the IMP Sizing Calculator. For expert users, BAHM provides an opportunity to design complex IMPs that may be helpful on large or otherwise challenging project sites. But BAHM is less suited than the IMP Sizing Calculator interface for quick, interactive site planning, and IMP design.

The Fire Prevention Bureau was modeled for Group C/D soils with native soil infiltration rates ranging from 0.06 to 0.24 inches per hour. Additionally, the site was modeled with mean annual rainfall amounts ranging from 14 to 26 inches. After the Group C/D modeling was complete, the site was modeled assuming Group A soils with a native soil infiltration rate of 2.0 inches per hour. The minimum IMP dimensions were generated from the IMP Sizing Calculator and then modeled in BAHM:

## Appendix A – Proof of Concept Modeling Results

- BAHM contains the hydrologic and hydraulic elements (e.g., pervious and impervious runoff, bioretention) needed to model the Fire Prevention Bureau site. Note: BAHM would need to be expanded to include Contra Costa's project selection map, rainfall data, and evaporation data before evaluating proposed development projects in the County.
- The IMPs modeled in BAHM with infiltration rates of 0.06 and 0.12 inches per hour did not meet the flow duration control standard. In each case, the post-project durations for the low end of the control range (near 0.1Q2), and upper end of the control range (Q10) exceeded the pre-project durations. When the infiltration rate was increased to 0.24 inches per hour, the BAHM model showed each IMP either met the flow control standards or exceeded the standard by a small amount near flow rates of 0.1Q2.
- The Group A soil modeling results in BAHM met the flow duration control standard. The modeling built into the IMP Sizing Calculator used conservative native soil infiltration rates. The ability to use site-specific native soil infiltration rates may result in a reduction in IMP sizing in locations with fast percolating soils.
- The modeling results for higher rainfall areas (tested up to 26 inches per year), were similar to the observations in the previous bullet point.
- In summary, BAHM produces similar IMP sizing when infiltration rates are approximately 0.24 inches per hour, which is the infiltration rate that was measured at this site in 2011 to 12 and documented in the IMP Monitoring Report, IMP Model Calibration and Validation Report (Dubin, 2013). BAHM would require larger IMP sizing (compared to the current version of the IMP Sizing Calculator) for sites with lower infiltration rates. This result is not surprising, because BAHM incorporates a 0.1Q2 lower control threshold that is used in Santa Clara, San Mateo, and Alameda Counties. When the IMP Sizing Calculator was developed, Contra Costa County was only required to control flows down to 0.2Q2. (Note: MRP 3.0 sets the lower control threshold to 0.1Q2 for all permittees).

### Example 2: Residential Subdivision Modeling

Figure 4 shows the example residential development. The site closely adheres to LID principles:

1. Includes distributed stormwater management.
2. Employs creative site grading to manage roof runoff with self-retaining areas.
3. Minimizes the number of constructed IMPs (e.g., bioretention).

The rooftops drain to self-retaining areas, and the driveways and roadways drain to bioretention facilities located at the subdivision's entrance and exit. This approach minimizes the conveyance infrastructure (pipes, catch basins).

## Appendix A – Proof of Concept Modeling Results

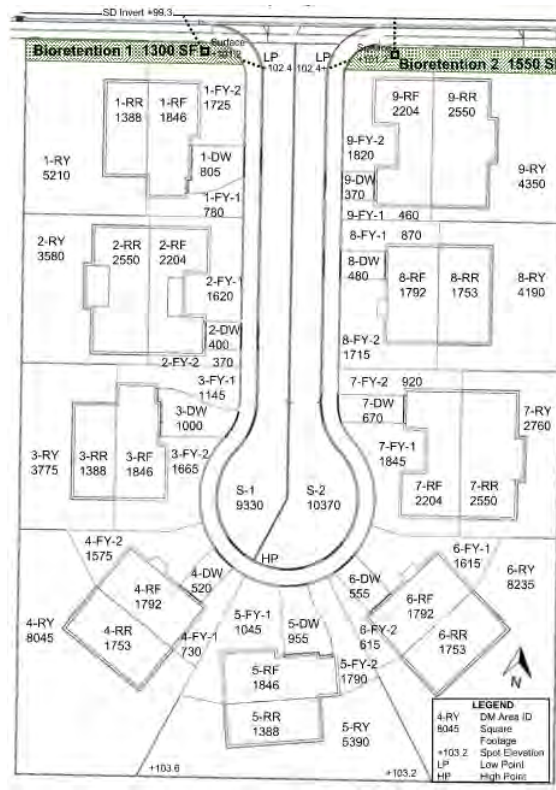


Figure 4. Example Residential Subdivision

The IMPs were modeled in BAHM using the DMA and IMP dimensions listed in the figure above:

- Similar to the Fire Prevention Bureau site, the BAHM model produced flow duration control when the native soil infiltration rate was set to 0.24 inches per hour. The flow control orifice diameter was also adjusted to restrict outflows flows near  $0.1Q_2$ , and the gravel layer was deepened by 6 inches to provide marginally more storage.
- The self-retaining areas (the DMAs named with “FY” and “RY” in the figure above) were challenging to model in BAHM, because BAHM does not include self-retaining areas among its stormwater control measure. Two other options were tested:
  - “Lateral flow impervious area” flowing to “lateral flow soil basin.” This approach most closely represents the intent of self-retaining areas. Runoff from an impervious surface flows onto a pervious surface, from which hydrologic processes determine the runoff, infiltration, and evapotranspiration fractions. The shortcoming of this approach is that the receiving pervious land surface element does not include an option for site grading. Self-retaining areas are depressed, landscaped surfaces with a roughly 3-inch-high rim that allows for an inch or more runoff to be captured and slowly infiltrated. Without the grading option, the “lateral flow soil basin” in BAHM produces more runoff than would be expected from a self-retaining area and produces results that do not meet the flow duration control standard.

## Appendix A – Proof of Concept Modeling Results

- Stormwater Ponds with shallow grading. This approach was more promising. Self-retaining areas were modeled as shallow ponds that allow water to infiltrate and overflow to surrounding areas (if the 3-inch-high rim is surpassed). However, there are practical issues with stormwater ponds. For example, the amount of data entry is significant if a project site contains many self-retaining areas. Further, modeling self-retaining areas as ponds may push the project proponent into complex 3D stage-area-volume calculations needed to generate the pond configuration. Because infiltration rate is an input parameter, the Program would want to constrain allowable values, based on real-world conditions for landscaped areas (not infiltrometer tests) to guard against the under-sizing of self-retaining areas.
- Instead of the self-retaining area workarounds described above, the Program should consider adding self-retaining areas as an element during the next update to the BAHM software.





**Date:** September 21, 2022

**To:** Management Committee

**From:** Lisa Welsh, Lisa Austin (Geosyntec), Augmented Staff

**Subject:** Approve the Annual Mercury Monitoring Plan, Water Year 2023, due on October 1 to Regional Water Board 2 and 5

---

**Recommendation:**

Approve the Annual Mercury Monitoring Plan, Water Year 2023 due on October 1 to Regional Water Board 2 and 5.

Direct the Program Manager to sign and certify the associated transmittal letter on their behalf.

**Background:**

On May 11, 2022, the San Francisco Bay Regional Water Quality Control Board issued MRP Order R2-2022-0018 (MRP 3). With the issuance of MRP 3, East Contra Costa County Permittees continue monitoring under the jurisdiction of the SF Bay Regional Water Quality Control Board (Region 2), while also incorporating requirements from the Central Valley Regional Water Quality Control Board (Region 5) TMDLs and Control Programs such as those outlined in Resolution R5-2017-0057 and MRP Provision C.19.

This staff report documents the following items required by Provision C.19.d.iii.(1) that East Contra Costa County Permittees must submit an Annual Mercury Monitoring Plan by October 1, 2022, that describes the annual monitoring design and specifies the proposed sampling locations for methylmercury sampling required under Provision C.19.d.ii.(2)(e):

*By January 1, 2024, address whether eutrophication and low dissolved oxygen concentrations increase methylmercury in ponded areas of Marsh Creek during low flow periods (depending on the year, low flow periods can range between mid-March and mid-November) and, if so:*

- Under what hydrologic or seasonal circumstances do increased methylmercury concentrations reach the Delta?*
- Are there reasonable and foreseeable management actions to ameliorate increased methylmercury concentrations?*

**Attachments:** Annual Mercury Monitoring Plan, Water Year 2023, and Transmittal Letter to Regional Water Board 2 and 5

**Fiscal Impact:** None.



CONTRA COSTA  
CLEAN WATER  
PROGRAM

October 1, 2022

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

Patrick Pulupa, Esq., Executive Officer  
California Regional Water Quality Control Board, Central Valley Region  
11020 Sun Center Drive, #200  
Rancho Cordova, CA 95670-6114

**SUBJECT: Submittal of the Annual Mercury Monitoring Plan (Water Year 2023) in accordance with MRP 3.0 Provision C.19.d.iii.(1)**

Dear Ms. White and Mr. Pulupa,

Attached please find the Annual Mercury Monitoring Plan for Water Year 2023 submitted on behalf of all Contra Costa Permittees per the Municipal Regional Permit (MRP) for urban stormwater issued by the San Francisco Bay Regional Water Quality Control Board MRP Order No. R2-2022-0018 (MRP 3). The Contra Costa Clean Water Program (CCCWP) is submitting this report concurrently to the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) and the Central Valley Regional Water Quality Control Board (CVRWQCB). With the issuance of MRP 3, East Contra Costa County Permittees continue monitoring under the jurisdiction of the SFBRWQCB, while also incorporating requirements from CVRWQCB TMDLs and Control Programs such as those outlined in Resolution R5-2017-0057 and Provision C.19 of MRP 3.

With approval and direction from duly authorized representatives of each Permittee, I am authorized to submit and certify under penalty of law that this document and all attachments were prepared under my direction of supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Regards,

Karin Graves  
Acting Program Manager  
Contra Costa Clean Water Program

cc: Joseph Martinez, SFBRWQCB  
Elizabeth Lee, CVRWQCB  
East Contra Costa County Permittees

255 Glacier Drive, Martinez, CA 94553-4825 • Tel: (925) 313-2360 Fax: (925) 313-2301 • Website: [www.ccleanwater.org](http://www.ccleanwater.org)

Program Participants: Antioch, Brentwood, Clayton, Concord, Danville, El Cerrito, Hercules, Lafayette, Martinez, Moraga, Oakley, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, Walnut Creek, Contra Costa County and Contra Costa County Flood Control & Water Conservation District

# Contra Costa Clean Water Program

## Annual Mercury Monitoring Plan: Water Year 2023

*Submitted to the Central Valley  
Regional Water Quality Control Board  
In Compliance with NPDES Permit Provision C.19.d.iii.(1)  
Municipal Regional Stormwater Permit (Order No. R2-2022-0018)*

September 2022



CONTRA COSTA  
**CLEAN WATER**  
P R O G R A M

255 Glacier Drive • Martinez, California 94553  
Tel (925) 313-2360 • Fax (925) 313-2301  
[www.cccleanwater.org](http://www.cccleanwater.org)

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# Contra Costa Clean Water Program

## Annual Mercury Monitoring Plan: Water Year 2023

**September 2022**

***Submitted to***

Central Valley Regional Water Quality Control Board  
In Compliance with NPDES Permit Provision C.19.d.iii.(1)  
Municipal Regional Stormwater Permit (Order No. R2-2022-0018)

***Prepared for***

Contra Costa Clean Water Program  
255 Glacier Drive  
Martinez, California 94553

***Contra Costa Clean Water Program Participants***

- Cities of: Antioch, Brentwood, Clayton, Concord, Danville (Town), El Cerrito, Hercules, Lafayette, Martinez, Moraga (Town), Oakley, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek
- Contra Costa County
- Contra Costa County Flood Control & Water Conservation District

***Prepared by***

Kinnetic Environmental, Inc.  
9057C Soquel Drive, Suite B  
Aptos, California 95003

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## ACRONYMS AND ABBREVIATIONS

CCCWP	Contra Costa Clean Water Program
CVRWQCB	Central Valley Regional Water Quality Control Board
Delta	Sacramento-San Joaquin River Delta
MRP	Municipal Regional Stormwater Permit
mgd	million gallons per day
Monitoring Plan	Annual Mercury Monitoring Plan
ng/L	nanograms per liter
NPDES	National Pollutant Discharge Elimination System
QA/QC	quality assurance/quality control
Reservoir	Marsh Creek Reservoir
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SWAMP	Surface Water Ambient Monitoring Program
TMDL	Total Maximum Daily Load
WTP	Brentwood Wastewater Treatment Plant



## 1.0 INTRODUCTION

The Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (MRP) (SFBRWQCB, 2022) requires East County Permittees of the Contra Costa Clean Water Program (CCCWP) to prepare an Annual Mercury Monitoring Plan to propose strategies, methodologies, and sampling locations for methylmercury monitoring required under Provision C.19.d.ii.(2). This Annual Mercury Monitoring Plan (Monitoring Plan) defines water quality monitoring to be implemented in water year 2023. The goal of this Monitoring Plan is to address whether areas of eutrophication and low dissolved oxygen concentrations increase methylmercury in ponded areas of Marsh Creek during periods of low flow.

### 1.1 MRP Provision

Contra Costa County lies within the jurisdictions of both the San Francisco Bay (Region 2) and Central Valley (Region 5) Regional Water Quality Control Boards (SFBRWQCB and CVRWQCB, respectively). Municipal stormwater discharges in Contra Costa County are regulated by the requirements of the MRP for urban stormwater in Region 2 (Order R2-2022-0018), which incorporates the eastern portion of Contra Costa County within the requirements of the Region 2 MRP. This Monitoring Plan complies with the reporting requirements specified in provision C.19.d.iii.(1) of the MRP, as issued by SFBRWQCB Order R2-2022-0018, and is designed to address Provision C.19.d.ii.(2)(e):

*By January 1, 2024, address whether eutrophication and low dissolved oxygen concentrations increase methylmercury in ponded areas of Marsh Creek during low flow periods (depending on the year, low flow periods can range between mid-March and mid-November) and, if so:*

- *Under what hydrologic or seasonal circumstances do increased methylmercury concentrations reach the Delta?*
- *Are there reasonable and foreseeable management actions to ameliorate increased methylmercury concentrations?*

### 1.2 Project Background

In 2010, the CVRWQCB established Methylmercury wasteload allocations for all dischargers to the Sacramento-San Joaquin River Delta (Delta) through the Delta Methylmercury Total Maximum Daily Load (Delta Mercury TMDL). The Delta Mercury TMDL is intended to bring mercury concentrations in fish down to levels considered to be protective of people and wildlife who consume fish from the Delta. The Delta Mercury TMDL translates desired levels of mercury in fish to a water column target of 0.06 ng unfiltered methylmercury per liter of water (0.06 ng/L). The objective behind this TMDL policy is that if all waters of the Delta were to attain a concentration of 0.06 ng/L, fish within the Delta would then attain desired levels of methylmercury (CVRWQCB, 2010).

Motivation for this study was a determination by the CVRWQCB that mercury concentrations in fish species found in the Delta exceed acceptable levels for protection of human health and wildlife that

depend on fish for food (CVRWQCB, 2010). The root cause of elevated levels of mercury is legacy mining and old industrial sources, along with global atmospheric sources and smaller contributions from urban stormwater sources (CCCWP, 2013). Methylmercury is a form of mercury of heightened environmental concern because it binds to proteins and, therefore, bioaccumulates in organisms and biomagnifies at successively higher levels of the food chain.

## 2.0 STUDY AREA

The Delta Methylmercury TMDL defines responsibility for action into eight geographic sub-areas of the Delta (Figure 1). In Contra Costa County, the West Delta, Central Delta, and Marsh Creek sub-areas are located within both the legal Delta boundary and Contra Costa County. Discharges into these sub-areas are regulated by Provision C.19.d of the MRP, in accordance with the Delta Methylmercury TMDL. For water year 2023, the Marsh Creek watershed (Marsh Creek sub-area) is the proposed study area for methylmercury monitoring (Figure 2).

### 2.1 Marsh Creek Watershed – Overview

Located in the northeastern part of Contra Costa County, the Marsh Creek watershed is the second largest in the county, encompassing over 60,000 acres and flowing 34.57 miles before exiting into the Sacramento-San Joaquin River Delta at Big Break Regional Shoreline (CCCDD, 2003).

The headwaters of Marsh Creek flow from the eastern side of Mount Diablo, across the Mount Diablo foothills and Morgan Territory preserve into the Marsh Creek Reservoir (Reservoir). Historically, downstream of the Reservoir, this area of Marsh Creek meandered through the alluvial plain north of the Reservoir before joining the Delta. However, at the turn of the twentieth century, flood control authorities and farmers began altering the channel and surrounding landscape to protect agricultural resources that have served the area since the mid-1800s. This intended alteration of flow, including the construction of levees, detention ponds and a dam, introduced a modified hydrological state from the creek's natural system in the lower watershed.

### 2.2 Marsh Creek Watershed – Key Features

Identifying key features of the Marsh Creek watershed relevant to methylmercury monitoring and management is essential to understanding the data and the proposed study approach in the Marsh Creek sub-area (CCCWP, 2020a).

The Marsh Creek Reservoir interrupts flow from the upper watershed 24.4 miles downstream of the headwaters. Flows only occasionally overtop the Reservoir's primary spillway to reach the lower watershed, typically late in the wet season after a series of strong storms. In addition to the Reservoir, multiple stormwater detention basins in the watershed are owned and maintained by the Contra Costa Flood Control and Water Conservation District.

In addition to reducing flood risk, the Reservoir and detention basins tend to trap sediment. The sediment trapping effect creates an impact which starves the stream of sediment downstream of the Reservoir. As a result, downcutting of the Marsh Creek channel bottom and erosion of the channel banks resulting from this sediment deficit necessitated the installation of check dams approximately every 300 feet along the channel bottom between the toe of the Reservoir and the mouth of Marsh Creek at Big Break (CCCWP, 2020a). These check dams have potentially interesting effects that are relevant to mercury methylation.

During periods of low flow, the area below the Reservoir and above the Brentwood Wastewater Treatment Plant (Brentwood WTP), becomes a series of interconnected ponds. These ponds experience intermittent dry weather flows. Agricultural and golf course irrigation, hydrant flushing and residential irrigation into the middle portion of Marsh Creek and its tributaries of Dry Creek, Sand Creek, and Deer Creek are all potential sources of non-stormwater flow into Marsh Creek. These dry weather flows tend to refill the ponds between check dams from time to time during the dry season.

Intermittent refilling of ponds between check dams during the dry season is relevant to mercury methylation as the bacteria that methylate mercury thrive under low oxygen (suboxic) or no oxygen (anoxic) conditions. Slow moving or stagnant water (i.e., pools and ponded water that accumulate between check dams) in Marsh Creek have exhibited periods of suboxic conditions, as noted in the Marsh Creek Stressor/Source Identification Study (CCCWP, 2020b). Eutrophication, as observed by algae blooms in the spring, tend to be more prevalent in ponded water and contribute to normal daily swings in pH and dissolved oxygen concentrations, creating more exaggerated ranges of these diurnal cycles, including lower than normal dissolved oxygen concentrations in areas of Marsh Creek (CCCWP, 2020b).

The geomorphic and environmental factors that can lead to enhanced methylation of mercury in water, and how they relate to the study approach, design and sample locations in this Monitoring Plan are discussed in more detail in Section 3 and Section 4.

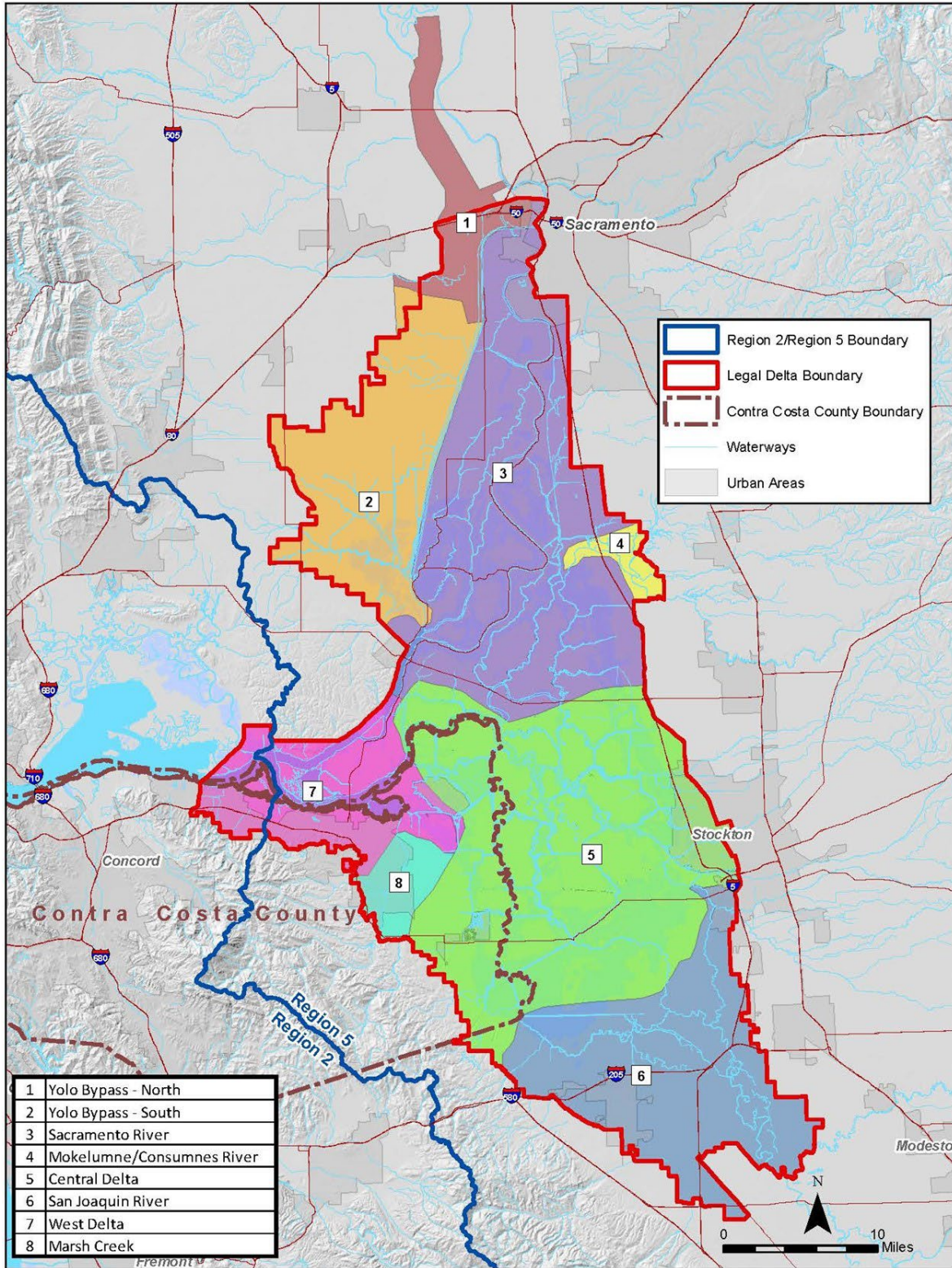


Figure 1. Delta Subregions Defined in the TMDL

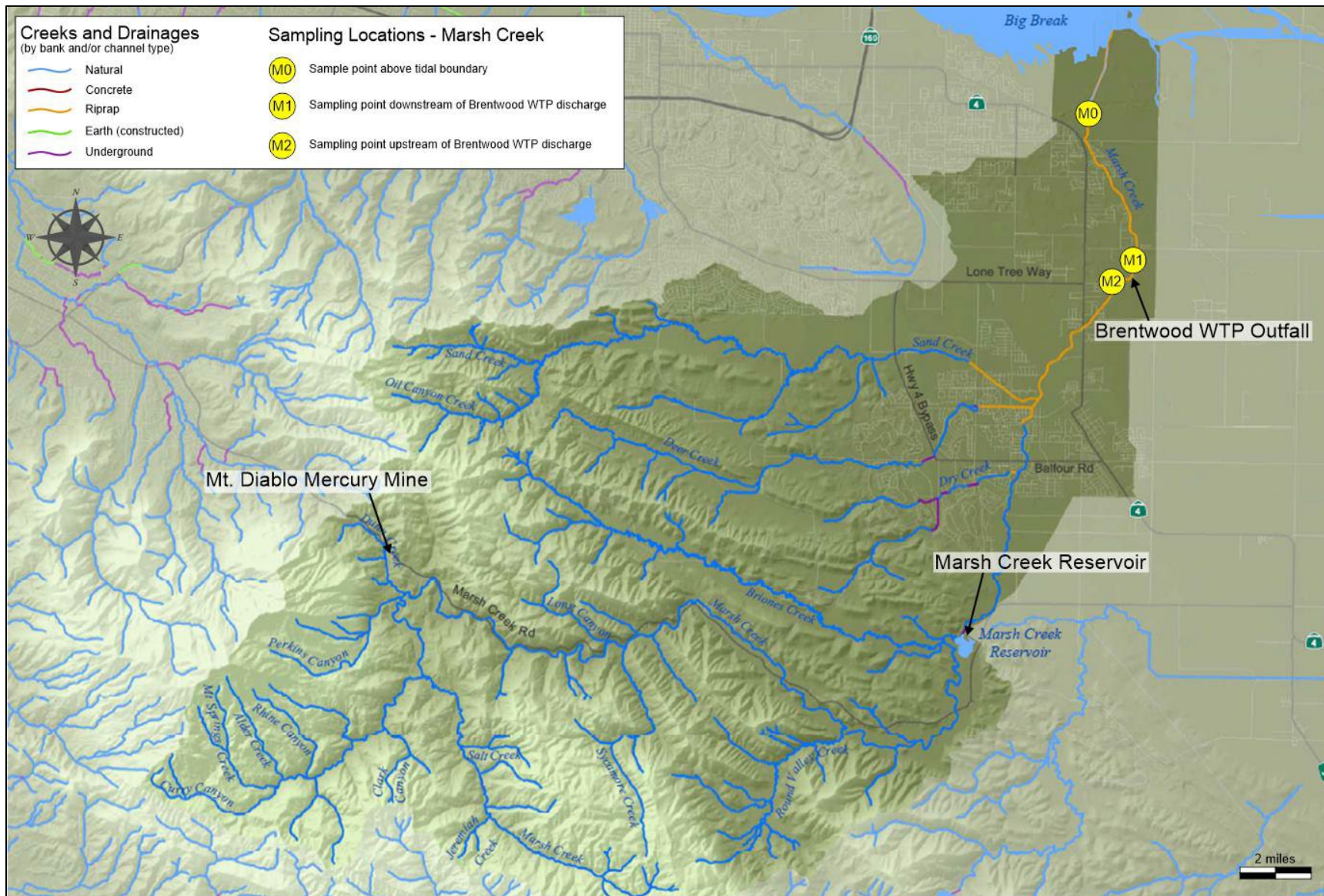


Figure 2. Overview of Marsh Creek Watershed

### 3.0 STUDY APPROACH

To determine whether eutrophication and low dissolved oxygen concentrations increase methylmercury in ponded areas of Marsh Creek during low flow periods, CCCWP will conduct a series of grab samples during various periods in the Marsh Creek stream flow cycle. Combined with strategic sample locations, this approach can also address under what hydrologic or seasonal circumstances increased methylmercury concentrations reach the Delta. Sample locations were selected based upon the variables of stream flow, proximity to key watershed features that may impact mercury methylation, proximity to Delta receiving waters, and availability of pre-existing data relevant to addressing the questions posed in C.19.d.ii(2)(e):

*By January 1, 2024, address whether eutrophication and low dissolved oxygen concentrations increase methylmercury in ponded areas of Marsh Creek during low flow periods (depending on the year, low flow periods can range between mid-March and mid-November) and, if so:*

- *Under what hydrologic or seasonal circumstances do increased methylmercury concentrations reach the Delta?*
- *Are there reasonable and foreseeable management actions to ameliorate increased methylmercury concentrations?*

The following subsections describe which field and laboratory methods will be used in the implementation of this Monitoring Plan, followed by details of proposed sampling locations. A discussion providing relevant past data collected and the identification of data gaps are discussed in further detail in Section 4 as they relate to the study approach.

#### 3.1 Field Methods

Water sampling will be performed following clean hands/dirty hands grab sampling protocols (EPA Method 1669) for low-level mercury analysis (EPA Method 1631E). Water sampling will be performed during dry and wet weather periods in Marsh Creek. Dry weather samples will be collected during periods of low flow when ponded water is observed in Marsh Creek. Two dry weather events will be targeted, one in early spring prior to observed eutrophication, and again during an opportunistic period of low flow absent of noticeable eutrophication, which may come during the wet season during an extended antecedent dry period prior to a storm. No mid to late summer dry weather samples are scheduled for sampling, as data from periods of high eutrophication/low dissolved oxygen are available from previous monitoring in Marsh Creek (see Table 3, Section 4).

Wet weather samples will be collected during elevated stream stages on the rising limb of the hydrograph as near as possible to peak storm discharge. Two storm events may be targeted, the first flush event of the 2022-2023 storm season during which the mobilization of suspended sediments that can contain elevated levels of methylmercury may be discharged to the Delta following a prolonged period of stagnant waters: and a second storm event, preferably an event with an extended antecedent dry period, such as a late spring storm event.

The intended targeted sample events hope to address whether methylation ratios are lower in dry weather samples collected prior to cycles of low dissolved oxygen conditions and observed eutrophication, and during which hydrologic or seasonal circumstances do increased methylmercury concentrations reach the Delta (e.g., first flush events).

### 3.2 Field Measurements and Laboratory Methods

At the time of grab sample collection, field measurements and observations will be made by the field crew, including dissolved oxygen concentration, pH, temperature, and the presence/absence of algal mats as an indicator of eutrophication. Photographs will be taken to document the extent or absence of algal mats.

Analytes, methods, reporting limits and holding times for analytes to be collected as part of this Monitoring Plan are presented in Table 1. Samples will be analyzed by Caltest Analytical Laboratory in Napa, California. Note that total mercury and total methylmercury are analyzed together (from the same sample). This is done so that methylation ratios can be calculated to indicate if samples were collected from an environment where enhanced methylation is present.

**Table 1. Analytes, Methods, Reporting Limits, and Holding Times**

Analyte	Method	Reporting Limit	Holding Time
Total (Unfiltered) Mercury	EPA 1631E	0.5 ng/L	90 days
Total (Unfiltered) Methylmercury	EPA 1631	0.05 ng/L	90 days
Suspended Sediment Concentration	ASTM D3977-97B	3 mg/L	7 days

### 3.3 Quality Assurance/Quality Control

California’s Surface Water Ambient Monitoring Program (SWAMP) provides timely and high-quality data to evaluate the condition of all waters throughout the state. This is accomplished through carefully designed, externally reviewed monitoring programs and assistance to other entities state-wide in the generation of comparable data through integrated assessments. This project will use SWAMP-specified methods related to sample handling, data review, verification and validation, and measurement quality objectives as the basis for evaluating project data with the goal of it being comparable to the standard of known and documented quality that has been set by SWAMP (California SWAMP, 2022).

Following SWAMP guidelines, adherence to proper sample collection, sample handling, and analytical methods will ensure water samples are collected and analyzed without the inadvertent introduction of contamination from an exterior source and that they are representative of their sampling locations. These methods and procedures include clean sample collection and handling protocols for field and field quality assurance/quality control (QA/QC) samples, use of appropriate sample containers and preservation, accurate and complete field logs and chain-of-custody forms, oversight by a qualified quality assurance officer, and all the internal QA/QC procedures performed by the laboratories.

For more details about sample collection and handling and other related issues, refer to the Project Sampling and Analysis Plan (ADH and AMS, 2020a). For more details regarding the Monitoring Plan’s



quality assurance and quality control measures, refer to the project Quality Assurance Project Plan (ADH and AMS, 2020b).

### 3.4 Sample Locations

Three sample locations along Marsh Creek have been selected for methylmercury monitoring in water year 2023 (Figure 3). The locations are presented in Table 2, followed by a brief discussion of key site features and siting rationale.

**Table 2. Sample Location, Site Coordinates, and Location Description**

Site ID <sup>1</sup>	Latitude	Longitude	Site Description
544MSHM2	37.96264	-121.68786	Site located upstream of Brentwood WTP
544MSHM1	37.96393	-121.68375	Site located downstream of Brentwood WTP
544MSHM0	37.99036	-121.69591	Site located upstream of tidal boundary

1 Stations are presented in order from upstream to downstream most location.  
WTP wastewater treatment plant

#### 3.4.1 Marsh Creek Monitoring Location 544MSHM2 (M2)

The monitoring station at 544MSHM2 (M2) is in the main stem of Marsh Creek. The site is downstream of the Lower Marsh Creek tributaries of Sand Creek, Deer Creek, and Dry Creek, and upstream of the Brentwood WTP outfall. Located downstream of the Marsh Creek tributaries and upstream of the Brentwood WTP, this location is subject to intermittent dry weather flows (as discussed in Section 2.2) independent of the Brentwood WTP discharge.

Located within a series of check dams, this area of Marsh Creek tends to experience pooled and ponded water during periods of low flow (mid-March to mid-November, depending on the year). The sampling point at station M2 is in an area of ponded water where eutrophication has been observed coinciding with low flow during previous sample events (see Table 3, Section 4). Station M2 is the location of previous wet and dry weather monitoring events, located 30 meters downstream from an active county gauging station, and immediately upstream of a drop structure and fish ladder. (Figure 4).

#### 3.4.2 Marsh Creek Monitoring Location 544MSHM1 (M1)

The monitoring station at 544MSHM1 (M1) (Figure 5) is located downstream of station M2. The site is downstream of the Brentwood WTP, placing the sample point in a section of Marsh Creek with perennial flow, maintained by Brentwood WTP discharges.

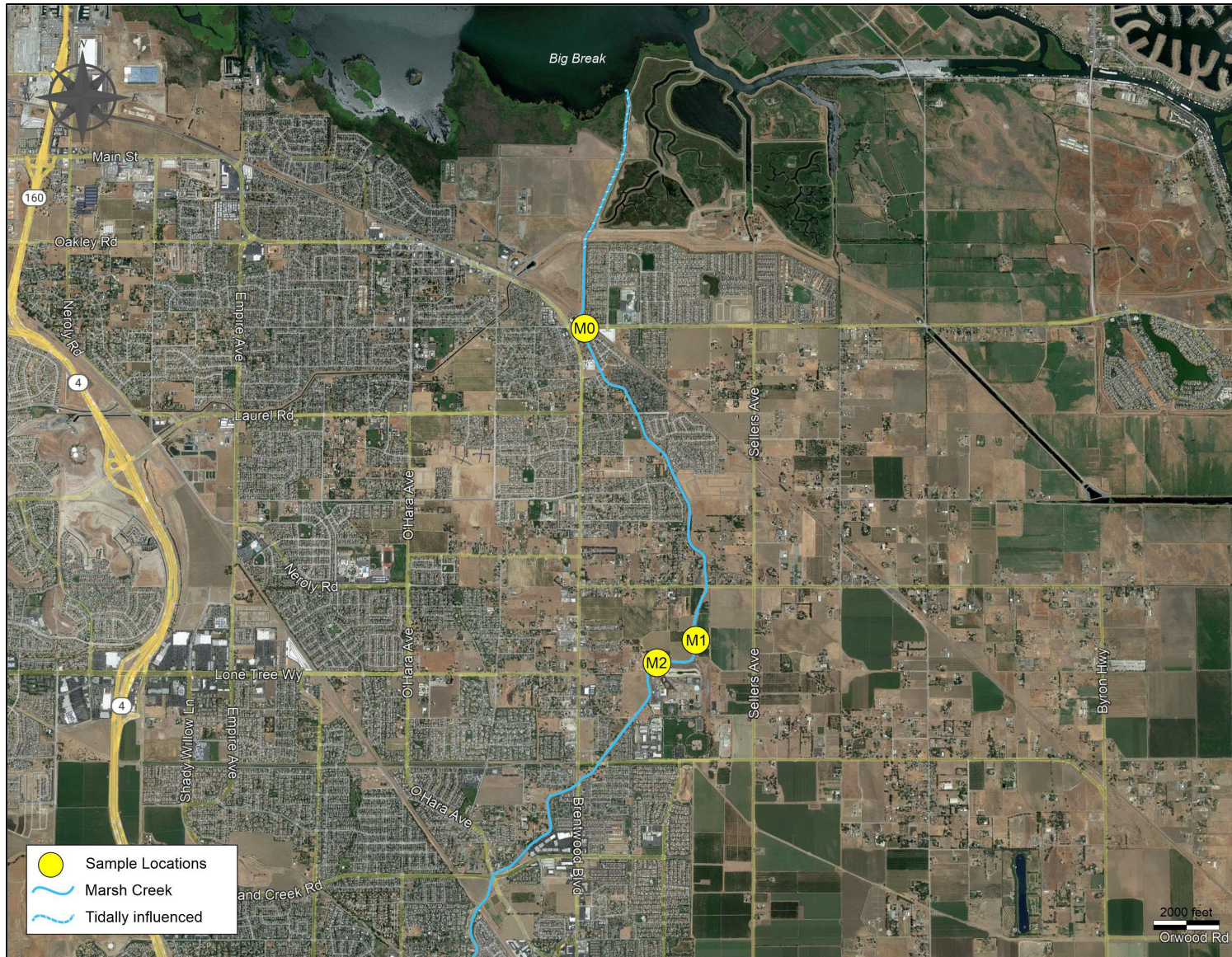


Figure 3. Marsh Creek Sample Locations



Figure 4. Monitoring Location 544MSHM2 (M2) Overview and Key Features

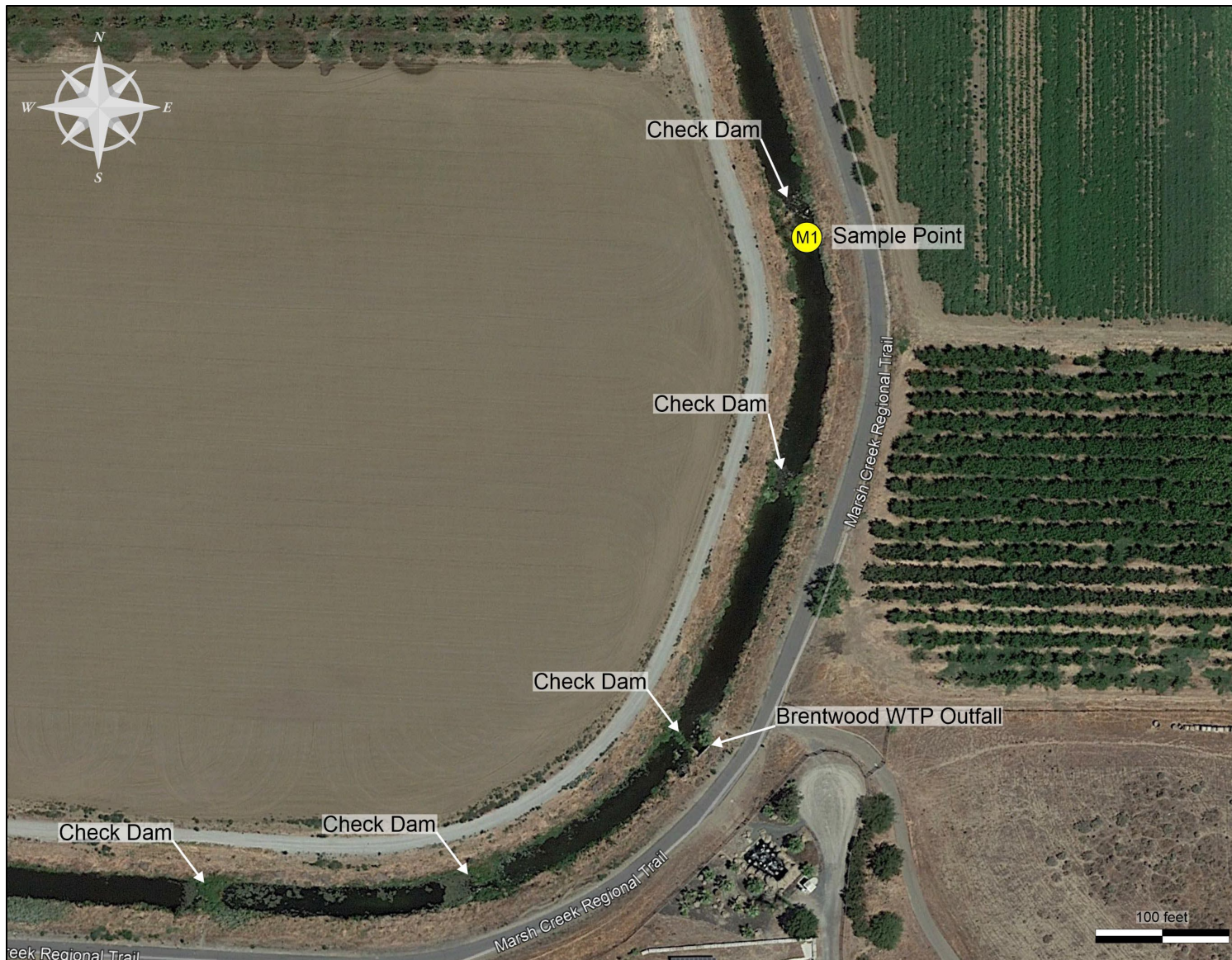


Figure 5. Monitoring Location 544MSHM1 (M1) Overview and Key Site Features

The Brentwood WTP is located approximately 3.6 miles southwest of the Delta at Big Break. The WTP treats sanitary wastewater from nearby residential areas and discharges its effluent into Marsh Creek. The treatment plant has a design capacity of 5 million gallons per day (mgd). Present actual flows are more typically in the range of 2 to 3 mgd, depending in part on recycled water consumption by irrigators. The WTP's effluent methylmercury concentrations average 0.02 ng/L, consistently below the TMDL implementation goal of 0.06 ng/L (CCCWP, 2020a).

Flows at station M1 in Marsh Creek follow daily cycles following peak discharges from the Brentwood WTP. Flow rates tend to peak mid-day, following peaks in early morning residential usage, and are at low in the pre-dawn hours, sometimes reaching zero for a few hours a day in the spring through early fall seasons. Thus, because of the check dams along the creek channel, during the dry season, this area of Marsh Creek can alternate between a flowing stream most of the day to a series of interconnected ponds by night, becoming isolated ponds for a few pre-dawn hours each day during the driest times of the year (May through September) (CCCWP, 2020a). However, beginning in 2019, a flow augmentation pilot project was conducted by the Brentwood WTP, at the recommendation of CCCWP, to provide a small amount (250,000 gallons) of water to augment flow between midnight and 6:00 a.m., when nightly dissolved oxygen minima occur (CCCWP, 2020b). Preliminary findings of the flow augmentation pilot project suggest that fish mortality events can be reduced or eliminated in Marsh Creek below the Brentwood WTP outfall with a constant supply of relatively oxygen-rich water.

Located downstream of the WTP, this area of Marsh Creek experiences year-round flow. The sampling point at station M1 will determine methylmercury concentrations during dry weather in a perennial section of Marsh Creek. If elevated concentrations of methylmercury are detected, then WTP discharges may act as a conduit to push methylmercury to the Delta. This occurrence can be confirmed by the concentration measured at downstream sampling point 544MSHM0.

### **3.4.3 Marsh Creek Monitoring Location 544MSHM0 (M0)**

The monitoring station at 544MSHM0 (M0) is the downstream-most monitoring location in Marsh Creek. Located approximately 0.4 miles upstream from the tidal boundary with the Delta, M0 is the gateway location for determining the hydrologic or seasonal circumstances during which increased methylmercury concentrations reach the Delta.

## 4.0 STUDY DESIGN

The conceptual model for methylmercury monitoring in Marsh Creek starts with the knowledge that methylmercury is formed from total mercury. Total mercury loads in watersheds are transported into waterbodies via stormwater. Potential sources of total mercury in stormwater include atmospheric deposition, mobilization from legacy mercury mines, and the improper disposal of mercury-containing consumer products, such as batteries or fluorescent lights. High methylation efficiency from total mercury to methylmercury occur primarily in slow moving or stagnant waterbodies, where metabolic activity by methylating bacteria is relatively high, either in the waterbody itself or in bottom sediments of ponds, reservoirs, and slow-moving streams. Eutrophication, as discussed in the Marsh Creek Stressor and Source Identification Study, has been observed in ponded and slow-moving water in Marsh Creek (CCCWP, 2020b). Areas of eutrophication impact the daily natural cycle of dissolved oxygen, causing very high levels of dissolved oxygen during daytime photosynthesis, and very depressed levels of dissolved oxygen during nighttime respiration.

With this conceptual model as a guiding framework, the hypotheses to be evaluated are:

- $H_0$  (null hypothesis) – Methylmercury concentrations in ponded water of Marsh Creek do not change with the presence of eutrophication and low dissolved oxygen.
- $H_A$  (alternate hypothesis) – Methylmercury concentrations in ponded water of Marsh Creek increase with the presence of eutrophication and low dissolved oxygen.

Percent methylation is an indicator for methylation efficiency, or net methylation rates (Krabbenhoft, 1999). Almost any uncontaminated soil-water system could be expected to have 1 to 3 percent methyl-total ratios. Moderately high methylation efficiency is indicated by methyl-total ratios of around 5 percent. Waters with methyl-total ratios exceeding 10 percent are considered to have high methylation efficiencies (i.e., are highly methylating).

### 4.1 Historic Results

CCCWP began Methylmercury Control Study Phase 1 actions in 2011, commencing wet weather Monitoring in Marsh Creek by 2012. To date, nine dry weather and nine wet weather events have been reported (Tables 3 and 4, respectively).

Examination of the dry weather results in Table 3 versus the wet weather results in Table 4 clearly show the following trend:

- increased methylation ratios occurred during dry weather while the opposite is true for wet weather samples

Table 3. Dry Weather Methylmercury Monitoring Results in Marsh Creek – Historic Data

Site ID	Date	Time	SSC (mg/L)	Total Hg (ng/L)	Total MeHg (ng/L)	MeHg to Hg Ratio (%)	Dissolved Oxygen (mg/l) <sup>1</sup>
544MSHM1	08/22/19	06:00	< 2	0.74	0.04 J	<b>5.4</b>	5.83
	08/22/19	08:30	< 2	0.65	0.03 J	4.6	4.9
	09/17/19	06:15	9.4	3.3	<b>0.11</b>	3.3	2.43
	09/17/19	10:00	3.5	2.3	<b>0.07</b>	3.0	2.38
	08/26/20	06:35	4.9	1.1	<b>0.1</b>	<b>9.1</b>	4.79
	08/26/20	06:36	4.9	1.2	<b>0.08</b>	<b>6.7</b>	4.79
	08/26/20	06:37	4.9	1.4	<b>0.08</b>	<b>5.7</b>	4.79
	08/27/20	10:50	3.2	1.1	<0.02	NC	4.79
	08/27/20	10:51	3.2	0.97	<b>0.22</b>	<b>22.7</b>	4.79
	08/27/20	10:52	3.2	0.84	<0.02	NC	4.79
544MSHM2	05/30/13	14:00	3.3	1.9	<b>0.09</b>	4.7	-
	12/05/13*	13:10	< 2	1.1	< 0.02	NC	-
	08/22/19	06:20	13	2	<b>0.29</b>	<b>14.5</b>	3.65
	09/17/19	06:35	9.1	3.9	<b>0.2</b>	<b>5.1</b>	0.72
	09/17/19	10:15	8.8	4.1	<b>0.24</b>	<b>5.9</b>	0.62
	08/26/20	06:20	8.2	1.9	<b>0.11</b>	<b>5.8</b>	3.05
	08/26/20	10:35	12	2.7	<b>0.11</b>	4.1	3.05

544MSHM1 Marsh Creek downstream of Brentwood WTP, referred to as M1

544MSHM2 Marsh Creek at fish ladder, upstream of Brentwood WTP, referred to as M2

1 Dissolved oxygen values are presented as the daily minima within a 24-hour window of the sample collection time

Hg mercury

J qualifier on concentration indicates that analyte was detected at a level between the MDL and the RL.

MeHg methylmercury

NC Ratio not calculable due to MeHg not being detected

SSC suspended sediment concentration

< Analyte not detected at or above the MDL; numeric value following the "<" symbol is the associated MDL value

\* This sample is a dry weather event as it is a non-stormwater sample.

Values in **bold italics** exceed the Delta TMDL for methylmercury of 0.06 ng/L or indicate an elevated methylation ratio.

Table 4. Wet Weather Methylmercury Monitoring Results in Marsh Creek – Historic Data

Site ID	Date	Time	SSC (mg/L)	Total Hg (ng/L)	Total MeHg (ng/L)	MeHg to Hg Ratio (%)
544MSHM1	01/14/15	11:30	< 2	1	< 0.02	NC
	02/26/15	12:20	4.7	1.1	< 0.02	NC
544MSHM2	03/16/12	22:47	180	32.4	<b>0.19</b>	0.6
	03/16/12	23:37	260	36.7	<b>0.24</b>	0.7
	03/17/12	01:31	130	17.4	<b>0.17</b>	1.0
	03/17/12	8:39	61	9.41	<b>0.08</b>	0.9
	11/30/12	03:43	29	11	<b>0.1</b>	0.9
	11/30/12	11:55	241	25	<b>0.24</b>	1.0
	11/30/12	16:40	108	12	<b>0.12</b>	1.0
	12/01/12	09:50	25	6.9	<b>0.07</b>	1.0
	12/22/12	08:58	223	39	<b>0.38</b>	1.0
	12/22/12	11:53	205	19	<b>0.22</b>	1.2
	12/22/12	15:00	66	9.9	<b>0.14</b>	1.4
	12/22/12	21:24	464	91	<b>0.66</b>	0.7
	04/04/13	07:11	242	35	<b>1.1</b>	3.1
	04/04/13	07:38	288	43	<b>1.2</b>	2.8
	04/04/13	10:51	50	11	<b>0.25</b>	2.3
	04/04/13	13:26	14	9.8	<b>0.15</b>	1.5
	01/08/17	09:20	48	15	<b>0.09</b>	0.6
	01/08/17	12:20	57	23	<b>0.11</b>	0.5
	01/08/17	14:45	174	47	<b>0.23</b>	0.5
01/08/17	17:45	236	80	<b>0.3</b>	0.4	

544MSHM Marsh Creek downstream of Brentwood WTP, referred to as M1.

544MSHM2 Marsh Creek at fish ladder, upstream of Brentwood WTP, referred to as M2.

NC Ratio not calculable due to MeHg not being detected

SSC suspended sediment concentration; Hg = mercury; MeHg = methylmercury

< Analyte not detected at or above the MDL; numeric value following the "<" symbol is the associated MDL value

Values in **bold italics** exceed the Delta TMDL for methylmercury of 0.06 ng/L

Note: No field measurements for dissolved oxygen were recorded during wet weather monitoring.



## 4.2 Identification of Data Gaps

In the context of the historic data presented above, two data gaps emerge:

- Sampling results of ponded areas in Marsh Creek during dry weather before the onset of seasonal eutrophication
- Sampling results of first flush storm events in the fall following prolonged periods of eutrophication

Section 4.3 details the dry and wet weather sampling planned for the coming water year to address these data gaps. With the combination of targeted sampling of ponded water early in the dry season and of the first flush storm event plus co-occurring measurements of dissolved oxygen and the observation of eutrophication conditions, this study plan should provide sufficient data to test the proposed null hypothesis of no impact of eutrophication and low dissolved oxygen on the level of methylation of mercury.

## 4.3 Sampling Schedule

This Monitoring Plan proposes to begin wet weather and dry weather sampling at locations M0, M1, and M2 in water year 2023.

At all three sites, two dry weather events and one or two wet weather events will be targeted. To address data gaps from previous monitoring, targeting of dry weather events will be selected at periods of low flow, where ponded water is present, prior to the onset of seasonal eutrophication. Dissolved oxygen measurements will be recorded, targeting the early morning hours just after dawn when dissolved oxygen concentrations are typically lowest (CCCWP, 2020b). Measuring dissolved oxygen will help determine if suboxic conditions exist which can support bacteria production that can promote the methylation of mercury.

For wet weather monitoring, the first flush event of the 2022/2023 season will be targeted. Monitoring the first flush event will fill a data gap and provide knowledge on methylmercury concentrations that reach the Delta following periods of prolonged stagnant water in Marsh Creek during the summer months. A second storm may also be targeted to determine if extended periods of stagnant water during the wet season also may contain higher concentrations of methylmercury. The second storm event will require a prolonged antecedent dry period in order to meet mobilization criteria. According to this sampling schedule, a minimum of nine grab samples will be taken (three stations x three events = nine), with the option of an additional three samples, given the required conditions are present for a second storm event to be monitored to benefit the study.

## 5.0 REFERENCES

ADH Environmental and Applied Marine Sciences (ADH and AMS). 2020a. Contra Costa Clean Water Program, Sampling and Analysis Plan, Pollutants of Concern Monitoring; Pesticides and Toxicity Monitoring. Feb. 14, 2020.

ADH Environmental and Applied Marine Sciences (ADH and AMS). 2020b. Contra Costa Clean Water Program, Quality Assurance Project Plan, Pollutants of Concern Monitoring; Pesticides and Toxicity Monitoring. Feb. 14, 2020.

California Regional Water Quality Control Board, Central Valley Region (CVRWQCB). 2010. Sacramento-San Joaquin River Delta Estuary TMDL for Methylmercury – Staff Report. Rancho Cordova, California. April 2010.

[https://www.waterboards.ca.gov/centralvalley/water\\_issues/tmdl/central\\_valley\\_projects/delta\\_hg/archived\\_delta\\_hg\\_info/april\\_2010\\_hg\\_tmdl\\_hearing/apr2010\\_tmdl\\_staffrpt\\_final.pdf](https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/delta_hg/archived_delta_hg_info/april_2010_hg_tmdl_hearing/apr2010_tmdl_staffrpt_final.pdf)

California Surface Water Ambient Monitoring Program (SWAMP). 2022. Surface Water Ambient Monitoring Program Quality Assurance Program Plan, version 2. January 2022.

[https://www.waterboards.ca.gov/water\\_issues/programs/swamp/docs/swamp-qaprp-2022.pdf](https://www.waterboards.ca.gov/water_issues/programs/swamp/docs/swamp-qaprp-2022.pdf)

Contra Costa Clean Water Program (CCCWP). 2013. Methylmercury Control Study Work Plan. Prepared for the Contra Costa Clean Water Program by AMEC Environment and Infrastructure, Inc. April 2013.

Contra Costa Clean Water Program (CCCWP). 2020a. Methylmercury Control Study Final Report. Prepared on behalf of CCCWP by ADH Environmental and Wood Environment & Infrastructure Solutions. September 2020.

Contra Costa Clean Water Program (CCCWP). 2020b. Marsh Creek Stressor and Source Identification Study: Year 2 Report. Prepared on behalf of CCCWP by ADH Environmental and Wood Environment & Infrastructure Solutions. February 2020.

Contra Costa County Community Development Department (CCCDD). 2003. Contra Costa County Watershed Atlas. Martinez, California. November 2003.

Krabbenhoft, D. P., Wiener, J. G., Brumbaugh, W. G., Olson, M. L., DeWild, J. F., & Sabin, T. J. March. 1999. A national pilot study of mercury contamination of aquatic ecosystems along multiple gradients. In *U.S. Geological Survey Toxic Substances Hydrology Program: Proceedings of the Technical Meeting*. Charleston, South Carolina (vol. 2, pp. 147-160).

San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). 2022. Municipal regional stormwater NPDES permit, Order R2-2022-0018, Permit CAS612008. July 1, 2022



**Date:** September 21, 2022

**To:** Management Committee  
**From:** Karin Graves, Acting Program Manager  
**Subject:** FY 22/23 Emerging C.3 Budget Issue

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**Recommendation:**

- Accept report from staff on emerging issues in the FY 22/23 budget and provide staff with any comments or direction.
- Approve movement of \$52,000 of FY 22/23 CCCWP budget funds from the conditionally approved Peak Flow Calculator line item to the Development Committee General Technical Services line item.

**Background:**

The budget for this year, FY 22/23, is more uncertain than prior budgets, due in large part to the new permit requirements in MRP 3.0. When the budget was approved in March, it was approved with 16 conditionally approved budget items that totaled \$803,300. These items, where the scope and budget were not yet known with enough certainty to warrant final approval, represented about 18% of the total budget – a remarkable amount. As we proceed to plan for permit compliance activities, we will understand the requirements better and be able to complete the scope and budgets for all budget items, and better understand the total costs involved.

We now realize, in one area, Development Committee General Technical Services, actual costs will exceed our budget estimates. This General Services line item was intended to cover consultant costs (primarily Haley & Aldrich's) attendance at CCCWP Development Committee, Management Committee, monthly task order meetings, BAMSC Development Subcommittee meetings, as-needed Permittee assistance, and project management. We estimated the costs of this work based on our past experience, however, the new compliance costs are proving to be more expensive than expected, and Haley & Aldrich has now spent most of the \$50,000 in this line item. Program staff and permittees have asked technical staff to attend additional meetings, permittees have requested development of new materials, and the time needed to resolve policy issues and

create scopes of work has taken longer than originally anticipated. Provision C.3 also has seven conditionally approved budget items, several of which are tied to the decision regarding hydromodification management modeling.

Staff asked Haley & Aldrich to draft a scope of work (Attached) which estimates the costs of completing additional tasks to date and estimates the cost to complete anticipated additional tasks through the end of the FY 22/23 fiscal year. The scope of work totals \$49,200. In order to fund these additional costs, CCCWP staff recommend the movement of \$52,000 of FY 22/23 CCCWP budget funds from the conditionally approved Peak Flow Calculator line item to the Development Committee General Technical Services line item.

A Development Committee work group met during 2020-2021 and recommended investigation of integrating flood control criteria into CCCWP's IMP Sizing Calculator and staff then included a \$52,000 line item in the CCCWP's budget to initiate this work. As any changes to the IMP sizing calculator are dependent on the selected Hydromodification Management compliance strategy, and a robust hydrological analysis will be needed to move forward with these updates, CCCWP does not anticipate that this work will be initiated this year. Thus, staff recommend that the funds be moved to the Development Committee General Technical Services line item to fund more pressing needs.

**Fiscal Impact:**

Approval of the scope of work and proposed budget, and removal of the conditional status on the budget line item increases the FY 22/23 budget by \$52,000.

**Attachments:**

New C.3 Tasks Scope of Work

\\PW-DATA\grpdata\NPDES\01\_Management Committee\02\_Agendas\FY 22-23\Agenda Packets\2022-09-21\MC\_Mtg\_09-21-2022\_( )\_Staff Report Emerging Budget Issues.docx Issues.2

# **Additional Provision C.3 Tasks (FY 22/23)**

## **Draft Scope of Work (September 5, 2022)**

### **BACKGROUND**

The San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) adopted the Final Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (also known as the MRP), for the third reissuance of the MRP, or MRP 3.0, on May 11, 2022 (Order No. R2-2022-0018). MRP 3.0 Provision C.3 imposes significant new requirements with deadlines for Permittee implementation.

A number of C.3 Provisions changed significantly between MRP 2.0 and 3.0. This scope of work covers tasks that were not included in specific FY 22-23 adopted budget line items but were deemed necessary to assist the Contra Costa Clean Water Program (Program) with providing updated guidance and complying with these changes.

These tasks are highlighted below. The budget and schedule for each task is outlined in Table 1.

### **SCOPE OF WORK**

#### **New Task 1: C.3 Updates Memorandum**

This task was identified by the Program and Development Committee as a helpful guidance document and involves an internal memorandum (memo) highlighting key MRP 3.0 Provision C.3 changes to various municipal departments and provides recommended actions for these municipal staff. C.3 Provisions that changed significantly between MRP 2.0 and 3.0 that are highlighted in the memo include: C.3.b Regulated Projects; C.3.e.ii Special Projects; and C.3.j Green Infrastructure Planning and Implementation.

Work related to this task includes:

- Preparation of Draft Memo
- Presentation of Draft Memo at Development Committee meeting
- Addressing of Program and Permittee comments
- Preparation of Final Memo
- Presentation of Final Memo at Management Committee meeting

#### **New Task 2: C.3 Updates Handout**

This task was identified by the Program and Development Committee as a helpful guidance document and involves an external, “planning counter” handout highlighting key MRP 3.0 Provision C.3 changes to the development community, focused on parcel-based project related requirements. The handout provides background on the MRP, changes to thresholds and requirements for these projects between MRP 2.0 and 3.0, and a Frequently Asked Questions (FAQs) section.

Work related to this task includes:

- Preparation of Draft Handout
- Presentation of Draft Handout at Development Committee meeting
- Addressing of Program and Permittee comments
- Preparation of Final Handout

- Presentation of Final Handout at Management Committee meeting

### **New Task 3: Scoping of Conditionally Approved Line Items**

This task involves scoping and costing of five conditionally approved FY 22-23 budget line items: Hydromodification Management (HM) lines items (budget rows 32, 35 and 37), C.3 Guidebook Updates (budget row 38) and Green Infrastructure (GI) Design Guidelines (budget row 36, scoping provided by Lotus Water).

Work related to this task includes:

- Preparation of draft scopes of work for each line item (5 total scopes)
- Presentation of scopes at Development Committee meetings (5 total presentations)
- Addressing of Program and Permittee comments
- Preparation of final scopes (5 total scopes)
- Presentation of final scopes for approval at Management Committee meeting (5 total presentations)

### **New Task 4: C.3.j Forum**

This task involves planning, research and lead activities relating to a forum being held to discuss Provision C.3.j. GI retrofit requirements on September 28<sup>th</sup>, 2022. The forum will provide a platform to share permit requirements, guidance on qualifying projects, and to discuss ideas for meeting the requirements. This task includes time for Lotus Water to assist with the below items as well.

Work related to this task includes:

- Preparation of a C.3.j. projects tracking table, documenting projects already identified by each Permittee
- Assistance with forum brainstorming and planning
- Preparation of forum meeting materials, including agenda, PowerPoint (if needed) and meeting minutes
- Assistance with moderating forum
- Assistance with follow-up action items resulting from the forum

### **New Task 5: Reduced Bioretention Sizing Guidance**

The SFBRWQCB contacted Program staff via email on June 24, 2022 to express their concerns with the May 2020 update to the Stormwater C.3 Guidebook, 7th Edition that was posted on the Program's website. The May 2020 update incorporated guidance from the Bay Area Stormwater Management Agencies Association's (BASMAA) "Guidance for Sizing Green Infrastructure Facilities in Street Projects" (Guidance) and the "Green Infrastructure Facility Sizing for Non-Regulated Street Projects Technical Report" (Report). The Guidance and Report, which propose recommendations for reduced sizing for green street bioretention treatment control facilities, were submitted to the SFBRWQCB in June 2019 and conditionally approved by the SFRWQBD in a letter dated June 21, 2019.

SFBRWQCB staff have recently clarified that they conditionally approved the Guidance and Report with the assumption that it was only applicable to "non-Regulated Project" green streets projects, including those included in Permittees' Green Infrastructure Plans and purely voluntary green streets projects. Their concern is the update appears to allow the reduced sizing for projects other than non-Regulated Project green street projects, in violation of the Municipal Regional Permit.

This task includes assistance with addressing this concern, specifically:

- Review of the Guidance and Report and May 2020 update to the Stormwater C.3 Guidebook and any related correspondence in preparation for meeting with the SFBRWQCB.
- Meeting with SFBRWQCB on August 9<sup>th</sup>, 2022.
- Follow-up meeting with SFBRWQCB (date TBD in September 2022) and related preparation.
- Follow-up action items and recommendations for the Program.

**New Task 6: Additional Meetings**

This task includes additional meetings where Haley & Aldrich/Lotus Water provides training or that requires more substantial preparation of materials compared with regular meetings (Development Committee, Management Committee, monthly task order meetings, BAMSC Development Subcommittee meetings, as-needed Permittee assistance, and project management are part of the existing General Services task). These additional meetings include:

- Preparation of training materials on C.3 updates for Contra Costa Planning Director meeting on July 8, 2022
- Delivery of C.3 updates training on July 8, 2022, to Contra Costa Planning Directors
- Attendance of SFRWQCB and other BAMSC C.3 Workgroup meetings. Attendance is split between CCCWP staff and Haley & Aldrich for cost savings
- Attendance at Low Impact Development (LID) and Trash Technical Advisory (TAG) planning meetings and attendance at occasional future TAG meetings (as-needed only)

**New Task 7: LID Monitoring Plan Coordination**

Kinnetic Environmental Incorporated and Geosyntec will lead this effort to prepare the Program’s LID Monitoring Plan for compliance with MRP 3.0 Provision C.8.d. The LID Monitoring Plan will be reviewed and approved by the CCCWP Monitoring Committee with input from the CCCWP Development Committee. Haley & Aldrich will facilitate presentations to the Development Committee on LID monitoring and peer review the LID Monitoring Plan. This task will be further developed at the commencement of the LID TAG meetings.

The Draft LID Monitoring Plan is due to the TAG by March 1, 2023.

**BUDGET AND SCHEDULE**

The schedule and budget for each task are outlines in Table 1, below.

**Table 1: Estimated Budget and Schedule**

<b>Task</b>	<b>Budget</b>	<b>Estimated Completion Date</b>
Task 1: C.3 Updates Memo	\$5,000	September 21, 2022
Task 2: C.3 Updates Handout	\$4,700	September 21, 2022
Task 3: Scoping of Conditionally Approved Line Items	\$9,000	October 19, 2022
Task 4: C.3.j. Forum	\$11,000	October 12, 2022

<b>Task</b>	<b>Budget</b>	<b>Estimated Completion Date</b>
Task 5: Reduced Bioretention Sizing	\$4,000	October 28, 2022
Task 6: Additional Meetings	\$10,500	June 30, 2023
Task 7: LID Monitoring Plan Coordination	\$5,000	March 1, 2023
<b>Total Budget</b>	<b>\$49,200</b>	



**Contra Costa Clean Water Program  
FY 2022-23 Group Program Budget- Adopted  
Adjusted August 17, 2022 (DRAFT)**

Budget Row	WO#	Description/Expenditure	ADOPTED Adj FY 2021/22 Dec 15, 2021 <sup>1</sup>	FY 21/22 Advance Work <sup>2</sup>	Adopted FY 22/23 Mar 16, 2022	FY 22/23 Conditional Budget Items <sup>3</sup>	Unspent Advance Work	Adjusted FY 2022/23 August 2022 (DRAFT)	FY 2022/23 Notes
1		<b>Administrative/Personnel</b> (See Admin Worksheet)			<b>\$1,575,009</b>			<b>\$2,064,798</b>	
2	7608	Staff Salaries and Benefits + County Overhead			\$1,345,809			\$1,304,120	5% COLA increase; Reduced Clerk to 20hrs/wk
3	7609	Staff Augmentation (Watershed Resources Consulting for 6 months)			\$109,200	\$109,200		\$109,200	Assumes PM position vacancy, SWMPS Support
4	7609	On-Call Staff Augmentation (as needed) (LWA, GC, H&A)			\$100,000	\$100,000		\$138,000	MOC and DC transition support + PIP Support (LWA)
4a	7609	Staff Augmentation (LWA for 6 months plus transition)			\$0			\$223,000	Assumes PM position vacancy, SWMPS support
4b	7609	Staff Augmentation (Geosyntec)			\$0			\$270,478	MonCom staff support
5	7608	Staff Training and Conferences			\$10,000			\$10,000	
6	7612	Non-Program County Staff Labor			\$10,000			\$10,000	
7		<b>General Supplies &amp; Equipment</b>			<b>\$7,788</b>			<b>\$7,788</b>	
8	7605	Misc. Office Equipment/Supplies not covered by County Overhead			\$6,600			\$5,640	
8a	7605	Zoom annual fee						\$960	trainings/training recordings/subcommittee meetings
9	7605	Groupsite Annual Fee			\$1,188			\$1,188	
10		<b>Association/Memberships/License Fees</b>			<b>\$33,554</b>			<b>\$33,554</b>	
11	7611	ESRI (AGOL Annual License Fee)			\$10,000			\$10,000	
12	7611	California Stormwater Quality Association (CASQA)			\$23,554			\$23,554	3% annual increase
13		<b>Legal Services</b>			<b>\$95,000</b>			<b>\$95,000</b>	
14	7606	County Counsel and Contract Administration			\$10,000			\$10,000	
15	7610	MRP 3.0 Appeal (Richards, Watson & Gershon)			\$35,000	\$35,000		\$35,000	Will be needed for Baykeeper appeal
16	7610	On-Call Legal Services (Richards, Watson & Gershon)			\$30,000			\$30,000	
17	7613	Alternative Compliance Legal Review (Richards, Watson & Gershon/County Counsel)			\$20,000			\$20,000	
18		<b>Regional Projects/Regional Cooperation</b>			<b>\$230,000</b>			<b>\$230,000</b>	
19	7618	BAMSC			\$30,000			\$30,000	
20	7618	SFEI - RMP			\$180,000			\$180,000	3% increase
21	7618	SFEI - CECs			\$20,000			\$20,000	
22		<b>General Consultant Services/Projects</b> (See Consultant Services/Projects Worksheet)			<b>\$282,000</b>			<b>\$342,000</b>	
23	7616	5-Year MRP 3.0 Budget (LWA/GC)			\$10,000			\$10,000	
24	7609	Financing Plan Strategy for MRP 4.0 (LWA/GC)			\$20,000			\$20,000	
25	7616	MRP 3.0 Compliance Checklist (LWA/GC)			\$10,000			\$10,000	
26	7616	Grant Tracking & Application (LWA/GC)			\$40,000			\$40,000	
27	7616	Alternative Compliance Administrator Set Up (LWA/GC)			\$55,000	\$55,000		\$55,000	
28	7616	Project Management, Technical Review, Regulatory Compliance, etc. (LWA/GC)			\$97,000			\$97,000	
29	7665	GIS/AGOL Maintenance, Minor Upgrades (Psomas)			\$50,000	\$50,000		\$50,000	Conditional approval is only for \$15,000 for minor upgrades
29a	7665	GIS/AGOL Support Staff (LWA)			\$0			\$35,000	Staff Support 3hrs/wk
29b	7620	Brochures (TBD)			\$0			\$25,000	
30	7654	<b>Municipal Operations (C.2)</b> - Training/Workshop (See MOC Worksheet)			<b>\$3,100</b>	\$3,100		<b>\$3,100</b>	
31		<b>New Development/Redevelopment (C.3)</b> (See Development Committee Worksheet)			<b>\$436,000</b>			<b>\$436,000</b>	
32	7641	Hydromodification Management Modeling, CCCHM and/or BAHM (TBD)			\$100,000	\$100,000		\$100,000	
33	7641	Hydrograph Management Compliance Options Report (H&A)			\$10,000			\$10,000	
34	7641	Hydromodification Management Maps (Psomas)			\$15,000			\$15,000	
35	7641	Hydromodification Management Calculator (TBD)			\$41,000	\$41,000		\$41,000	
36	7641	Green Infrastructure Design Guidelines (H&A)			\$40,000	\$40,000		\$40,000	
37	7641	Peak Flow Control Calculator (TBD)			\$52,000	\$52,000		\$0	(for consideration)
38	7645	Update Stormwater C.3 Guidebook (H&A)			\$36,000	\$36,000		\$36,000	
39	7641	BAHM Update (EOA/Clear Creek)			\$25,000			\$25,000	
40	7645	Alternative Compliance Program Implementation (2 Pilot Projects)(LWA/GC)			\$50,000	\$50,000		\$50,000	
41	7645	Frequently Asked Questions			\$5,000			\$5,000	
42	7645	Annual C.3 Training/Workshop (H&A)			\$12,000	\$12,000		\$12,000	
43	7645	General Technical Services Support (H&A)(LWA/GC)			\$50,000			\$102,000	3% increase; (for consideration)
44	7664	<b>Industrial/Commercial Controls (C.4)</b> - Training/Workshop (See MOC Worksheet)(LWA)			<b>\$3,100</b>			<b>\$3,100</b>	
45	7662	<b>Illicit Discharge/Detection and Elimination (C.5)</b> (See MOC Worksheet)			<b>\$0</b>			<b>\$0</b>	
46	7628	<b>Construction Controls (C.6)</b> (See Development Committee worksheet (LWA)			<b>\$0</b>			<b>\$0</b>	
47		<b>Public Information/Participation (C.7)</b> (See PIP Committee Worksheet)			<b>\$159,300</b>			<b>\$159,300</b>	
48	7617	School-Aged Children Outreach (SGA)			\$9,000			\$9,000	
49	7617	Watershed Stewardship Green Business Program			\$6,000			\$6,000	
50	7617	Public Outreach through Bringing Back the Natives Garden Tour (Kathy Kramer-Sponsor)			\$16,500			\$16,500	

**Contra Costa Clean Water Program  
FY 2022-23 Group Program Budget- Adopted  
Adjusted August 17, 2022 (DRAFT)**

Budget Row	WO#	Description/Expenditure	ADOPTED Adj FY 2021/22 Dec 15, 2021 <sup>1</sup>	FY 21/22 Advance Work <sup>2</sup>	Adopted FY 22/23 Mar 16, 2022	FY 22/23 Conditional Budget Items <sup>3</sup>	Unspent Advance Work	Adjusted FY 2022/23 August 2022 (DRAFT)	FY 2022/23 Notes
51	7617	Used Oil/Student Outreach /Youth Programs (Matt Bolender)			\$2,000			\$2,000	
52	7617	Outreach Campaign, Public Education, Citizen Involvement (SGA)(Caltrans)			\$70,800			\$70,800	
53	7617	Public Outreach through Website Maintenance and Hosting (WebSight Design)			\$15,000			\$15,000	
54	7617	General Youth/Public Outreach; Media Management (SGA)			\$35,000			\$35,000	3% increase
55	7617	Outreach Contingency			\$5,000			\$5,000	
56		<b>Water Quality Monitoring (C.8)</b> (See Monitoring Committee Worksheet)			<b>\$510,000</b>			<b>\$605,000</b>	
57	7618	LID Monitoring Plan (KEI)(LWA/GC)			\$60,000			\$60,000	
58	7618	Trash Monitoring Plan (LWA/GC)(KEI)		\$75,000	\$30,000		\$40,000	\$70,000	\$55,000 for outfall mapping
59	7618	Trash Monitoring (KEI)(LWA)			\$195,000			\$185,000	moved \$10,000 to Mon Mgmt Support (63c)
60	7618	Pollutants of Concern Monitoring (KEI)(LWA/GC)			\$50,000			\$50,000	Does not include source properties
61	7618	Pesticides and Toxicity Monitoring (KEI)(LWA/GC)			\$70,000			\$70,000	
62									
63	7618	Urban Creeks Monitoring Report (POC, Pesticides and Toxicity, Trash, LID)(KEI)(LWA/GC)			\$95,000			\$90,000	reduced by \$5,000
63a	7618	Creek Status Monitoring Follow-Up			\$0			\$20,000	Bio assessment follow up/lab reporting
63b	7618	POC Receiving Water Monitoring			\$0			\$30,000	needs MC approval
63c	7618	Monitoring Management Support						\$20,000	new item
64	7618	All Monitoring Contingency			\$10,000			\$10,000	Contingency for all monitoring items
65		<b>Pesticide Toxicity Control (C.9)</b> (See MOC Worksheet)			<b>\$81,023</b>			<b>\$81,023</b>	
66	7636	Our Water Our World Local Outreach and Training (Plant Harmony)			\$69,500			\$69,500	
67	7636	Our Water Our World Outreach Materials (Paid to CASQA)			\$5,080			\$5,080	formerly paid through BASMAA
68	7636	Pesticide Regulatory Coordination Program (Paid to CASQA)			\$5,943			\$5,943	formerly paid through BASMAA
69	7636	Outreach to Pest Control Professionals			\$500			\$500	
70		<b>Trash Load Reduction (C.10)</b> (See MOC Worksheet)			<b>\$60,000</b>			<b>\$60,000</b>	
71	7620	Trash Load Reduction Plan (LWA)			\$10,000			\$10,000	
72	7620	Trash Reduction and Impracticability Report (LWA)			\$50,000			\$50,000	
73	7618	<b>Mercury Controls (C.11)</b> (requirements addressed under C.12)			<b>\$0</b>			<b>\$0</b>	
74	7618	<b>PCBs Controls (C.12)</b> (See Monitoring Committee Worksheet)			<b>\$430,914</b>			<b>\$460,914</b>	
75	7618	Old Industrial Area PCBs Control Measure Plan (LWA/GC)		\$30,000	\$10,000		\$30,000	\$40,000	
76	7618	Old Industrial Area PCBs Treatment Project (first project to implement the Plan) (TBD)			\$200,000			\$200,000	project development includes guidance on funding O & M
77	7618	Annual Progress Report on Controlling PCBs (LWA/GC)		\$10,000	\$20,000		\$10,000	\$30,000	bidg demo, \$10,000 for new report format; regional collab/In-kind
78	7618	Source Property Investigation (KEI) (LWA/GC)			\$150,000			\$140,000	moved \$10,000 to Mon Mgmt Support (63c)
79	7618	PCBs in Electrical Utilities (LWA/GC)			\$10,000			\$10,000	
80	7618	Guidance for MRP 3.0 Building Demolition Requirements (LWA/GC)			\$20,000			\$20,000	regional collab/In-kind
81	7618	Provide Fish Risk Flyers/Signs			\$5,305			\$5,305	
82	7618	Distribute Fish Risk Flyers (KEI)			\$10,609			\$10,609	
83	7618	Annual Fish Risk Status Report (KEI)			\$5,000			\$5,000	
84		<b>Exempted and Conditionally Exempted Discharges (C.15)</b> (See PIP Committee Worksheet)			<b>\$15,000</b>			<b>\$15,000</b>	
85	7617	Firefighting Discharges (LWA/GC)			\$15,000			\$15,000	
86		<b>Unsheltered Homeless Discharges (C.17)</b> (See MOC Worksheet)			<b>\$120,000</b>			<b>\$105,000</b>	
87	7616	Homeless Mapping (TBD)			\$20,000	\$20,000		\$20,000	
88	7616	BMP Report (TBD)			\$50,000	\$50,000		\$35,000	
89	7616	Implementation Plan (TBD)			\$50,000	\$50,000		\$50,000	
90		<b>East Contra Costa County Projects (C.19)</b> (See Monitoring Committee Worksheet)			<b>\$70,000</b>			<b>\$105,000</b>	
91	7618	Methylmercury Monitoring for Delta TMDL (LWA/GC)			\$20,000			\$20,000	
92	7618	Marsh Creek Dissolved Oxygen Monitoring (LWA/GC)			\$30,000			\$30,000	Includes SSID response to Jan 3, 2022 RB letter
93	7618	Annual Mercury Monitoring Plan (LWA/GC)		\$15,000	\$10,000		\$15,000	\$25,000	
94	7618	Pyrethroid Control Program Baseline Monitoring Report (LWA/GC)			\$5,000			\$5,000	
95	7618	East County TMDL Control Measure Plan (LWA/GC)		\$30,000	\$5,000		\$20,000	\$25,000	
96		<b>Cost Reporting (C.20)</b> (see PIP Committee Worksheet)			<b>\$10,000</b>			<b>\$20,000</b>	
97	7617	Cost Reporting Framework (LWA/GC)		\$15,000	\$10,000		\$10,000	\$20,000	
98		<b>Asset Management (C.21)</b> (see Development Committee Worksheet)			<b>\$30,000</b>			<b>\$30,000</b>	
99	7645	Asset Management Framework (TBD - H&A)			\$30,000			\$30,000	
100		<b>ADVANCE WORK SUBTOTAL</b>		<b>\$175,000</b>			<b>\$125,000</b>		
101		<b>CONDITIONAL BUDGET ITEMS SUBTOTAL</b>				<b>\$803,300</b>			
102		<b>GROUP PROGRAM BUDGET SUBTOTAL</b>	<b>\$4,137,667</b>		<b>\$4,151,788</b>			<b>\$4,856,577</b>	
103	7698	<b>2% CONTINGENCY</b>	<b>\$82,753</b>		<b>\$83,036</b>			<b>\$97,132</b>	
104		<b>TOTAL GROUP ACTIVITIES BUDGET</b>	<b>\$4,220,421</b>		<b>\$4,234,824</b>			<b>\$4,953,708</b>	

**Contra Costa Clean Water Program  
FY 2022-23 Group Program Budget- Adopted  
Adjusted August 17, 2022 (DRAFT)**

Budget Row	WO#	Description/Expenditure	ADOPTED Adj FY 2021/22 Dec 15, 2021 <sup>1</sup>	FY 21/22 Advance Work <sup>2</sup>	Adopted FY 22/23 Mar 16, 2022	FY 22/23 Conditional Budget Items <sup>3</sup>	Unspent Advance Work	Adjusted FY 2022/23 August 2022 (DRAFT)	FY 2022/23 Notes
105		<b>CONTINGENCY EXPENSE</b>	\$0		\$0			\$0	
106		<b>SALARY CREDIT (PM)(12 Months)</b>	(\$107,782)		\$0			\$0	
107		<b>SALARY SAVINGS (SWMPS 12 months)</b>	\$0		\$0			(\$266,763)	
108		<b>SALARY SAVINGS (WMPS 12 months)</b>	(\$406,802)		\$0			(\$213,058)	
109		<b>SUBTOTAL</b>	(\$514,584)		\$0			(\$479,821)	
110		<b>NET SUBTOTAL GROUP PROGRAM BUDGET</b>	\$3,705,837		\$4,234,824			\$4,473,887	
111		<b>SUA FUNDING CAP</b>	\$3,500,000		\$3,500,000			\$3,500,000	
112		<b>NET TOTAL GROUP PROGRAM BUDGET</b>	\$3,705,837		\$4,234,824			\$4,473,887	
113		<b>SUA FUNDING GAP</b>	(\$205,837)		(\$734,824)			(\$973,887)	

**NOTES**

- <sup>1</sup> Budget totals are shown for the Midyear Adjusted Budget for FY 21/22, but line item budget numbers are not shown as there are significant changes and rearrangement of budget line items in the new FY 22/23 budget.
- <sup>2</sup> Advance work is the work that must be completed prior to July 1, 2022 to meet the permit schedule in the MRP 3.0 Tentative Order.
- <sup>3</sup> Conditionally approved budget items will require prior discussion to confirm task amount and when to begin work. Amounts will be removed from the conditional column once approved.



**Date:** September 21, 2022

**To:** Management Committee

**From:** Mitch Avalon, Consultant

**Subject:** Stormwater Funding Options Report Outline

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**Recommendation:**

Accept report from staff on the outline of the Stormwater Funding Options Report and provide staff with any comments or direction.

**Background:**

MRP 3.0 was adopted by the Regional Water Board on May 11, 2022 and will result in an increase in compliance costs over MRP 2.0. The FY 22/23 budget, adjusted on August 17, 2022, is \$989,217 more than the adjusted FY 20/21 budget, and \$783,350 more than the adjusted FY 21/22 budget, the last two budgets of MRP 2.0. Looking further back, the FY 22/23 budget is \$1,469,189 more than the FY 14/15 budget, the last budget of MRP 1.0. Additional funding is needed, and since it takes several years to implement any kind of a funding strategy, now is the time to decide how to address the escalating cost of permit compliance.

At the July 20, 2022 Management Committee meeting, the Committee received an overview of the various options available for increasing stormwater revenue for the Program and permittees. After some discussion, the Committee directed staff to prepare a Stormwater Funding Options Report that would rely heavily on the report completed in 2012 as part of the 2012 stormwater funding initiative. The report will be completed in two phases, the first phase will analyze all the options and identify those that are viable for further evaluation. The second phase will expand the analysis of the viable options, describe the process to implement the options and potential challenges, and recommend a pathway forward. Many of the options that will be reviewed in this report could apply to both the Program and to permittees individually. The first phase will cover both permittee and Program options, however, the second phase will focus solely on viable options for the Program.

Attached is an outline of the stormwater funding options report, which includes a summary list of all options to be analyzed. Also attached is an excerpt from the report for one section that discusses the options related to special taxes. This should provide the Committee with more detail on the structure, format, and content of the report. Staff would appreciate any comments or direction on the outline of the report, the list of options, and the excerpted section on special taxes.

**Fiscal Impact:**

None at this time, but there may be an increase or decrease in the budget depending on the final decision of whether to move forward with a funding option or not.

**Attachments:**

Options Report outline  
Excerpt from draft Options Report

G:\NPDES\Mgmt Committee/Agendas\FY 22-23\2022-09\MC\_Mtg\_09-21-2022\_Staff Report SW Funding Options Report

# Stormwater Funding Options Report: Draft Outline

## Phase 1: The Narrowing, August 17, 2022

The following is an outline of phase 1 of the Stormwater Funding Options Report.

### Introduction

- Purpose of options report (approved at the July 20, 2022 Management Committee meeting)
- Program sponsored report written from the Program perspective
- Use the 2012 Community Clean Water Initiative work (2012 Report) as the basis for this options report, update information in 2012 Report and incorporate lessons learned
- Describe the two phases of the options report

### Background

- Present state of funding and expected costs (five-year budget)
- History of funding measures
- History/purpose of \$3.5 million SUA limit
- Reserve history (chart)
- Reason that unspent funds go back to reserves each year
- Budget zeros out each year, no official carryover

### 2012 Funding Initiative

- Time to implement project was about 1.5 years with a total cost of about \$1.5 million
- Describe consultant team
- Describe 2012 Report
  - Five tasks and two reports (research original contract for intent and scope)
  - Describe key findings from each report (research task reports)
- Describe the election results
- Review changes since 2012
  - Dessins LLC vs City of Sacramento?
- Review lessons learned and their implications (refer to "Lessons Learned from Clean Water Initiative" dated November 14, 2013, revised)
- Review recent success and cost of stormwater funding initiatives in other counties

### Options Analysis

- Describe each option
- Note any changes from the 2012 Report (talk to Nick on legal changes)
- Identify pros and cons, risks/rewards
- Determine if application is best by individual permittee or collectively by Program
- Review the MRP 3.0 Five-Year Workplan to look for any additional opportunities to collaborate regionally on requirements (joint training, shared consultant costs for reports, etc.) beyond those identified in the regional projects for BAMSC
- Review Governor Gavin Newsom's Water Strategy Plan to identify potential future stormwater funding

### Summary

- Summary list of all options
- Non-viable options for Program
  - List options and describe why they are non-viable collectively
- Viable individual options for permittees
  - Identify actions Program could take to assist individual efforts, if there is support
- Viable options for Program
  - List options for consideration in Phase 2

### **Next Steps**

- Review and consider first phase of Stormwater Funding Options Report and conclusions
- Describe and discuss the process, at the Program and permittee level, to approve recommendations or decide on options
- Identify additional information needed, if any, prior to deciding on next steps
- Describe and discuss project objectives
  - Provide funding to as many permittees as possible to ensure equity?
- Direct staff to prepare Phase 2 of the report

## **Phase 2: The Decision**

The second phase of the Stormwater Funding Options Report is more difficult to outline, as it will depend on the outcome of Phase 1, but will likely include the following:

### **Introduction**

- Purpose of report, desired outcome
- Summary of direction/findings from Phase 1 report

### **Viable Options Analysis**

- Expand analysis of viable options in Phase 1
- Describe process to implement viable options and implementation challenges
- Estimate costs if possible
- Identify potential opposition, supporters, and partners

### **Pathway Forward**

- Describe political process to decide on best option
- Identify information needed to facilitate political process
  - Staff reports, MRP financial impact on jurisdiction, examples in other jurisdictions, etc.
- Decide on the best option to implement
- Direct staff to prepare and report on next steps needed to implement option

## **List of Options to be Analyzed in the Stormwater Funding Options Report**

Special tax  
 Parcel based tax  
 General obligation bonds

User tax  
Transient occupancy tax  
Sales tax  
Vehicle license fees  
Property related fee  
Benefit assessments  
Realignment of stormwater services  
Community facilities district  
Street cleanup district  
New SUA assessment (SB 231 process)  
Development impact fees  
Unfunded mandate claims  
Time schedule orders  
Grant funding  
Legislation to equate stormwater as a utility  
State revolving fund loans  
Maximize regional approach to permit compliance  
Review the State's Water Strategy Plan for funding opportunities



## Stormwater Funding Options Report

### Phase 1: The Narrowing

The following is an excerpt from the draft report that covers the analysis of special taxes:

#### Options Analysis

This section will review and analyze possible options available, determine if they are best implemented individually by permittees or collectively by the Program, and identify those that should not be considered further and those that should be further evaluated in Phase 2. The following options are listed in no particular order.

**Special Tax.** Special taxes are voted on by registered voters and require a two thirds majority for approval. Special taxes include parcel based taxes (the most popular), taxes linked with a general obligation bond, user taxes, transient occupancy taxes, sales taxes, and vehicle license fees. The analysis of special taxes are grouped together and described directly below.

**Parcel Based Tax.** These are taxes added to property tax assessments and their rates can be based on property use, size, and zoning. This is the only type of tax measure proposed for funding stormwater services in California over the last 20 years.

#### Pros

- **Legally Defensible.** These taxes are very reliable, rarely challenged, and when challenged the challenges are rarely successful.
- **Easy Administration.** Once approved, a property tax does not require an annual analysis (e.g. AB 1600), fee report, assessment roll coordination, etc.
- **Well Understood.** Parcel taxes have been around a long time and property owners and registered voters understand their concept, reach/limitations, and process.

#### Cons

- **Super Majority.** The necessary two thirds threshold for success is very difficult to achieve, and if success hinges on a few percentage points it wouldn't take much of a campaign by the opposition to defeat the measure. The survey in 2012 indicated support up to 70% only if the election was a high turnout, the voters were very familiar with the measure, and the tax rate was at \$14 per parcel.
- **Election Timing.** Tax elections are normally held along with the general election in November or the primary election in March or June, which can cause scheduling problems. However, an all-mail election can also be conducted at any time during the year. There are some downsides to this, as one of the lessons learned from the 2012 election was confusion when the elections office was not involved.

In conclusion, of all the tax options, a parcel tax is probably the most feasible and well understood tax to fund stormwater services. However, it is not recommended because of the difficulty in achieving a two-thirds supermajority.

**General Obligation Bonds.** A funding measure that ties the sale of bonds to construct capital improvements with a tax to pay debt service can be successful if the proposed projects

are very popular. The City of Los Angeles was successful in passing "Measure O" in 2004 for water quality related capital improvements, so it has been done. In the past, most of the work associated with stormwater permits has been less about projects and more about programs and monitoring. MRP 3.0 does include a significant amount of project work primarily around green infrastructure, either as a designated minimum acreage or as a vehicle to reduce pollutant loading, such as PCBs. A bond measure must be big and have the ability to reach everyone or benefit everyone. For example, a measure where the Program partnered with park districts and land trusts throughout the county and came up with projects that improved water quality and created protected open space or passive recreational space, might be at a scale that would be successful. The bond measure would build the projects and the park districts/land trusts would take over the projects for maintenance. Since the bonds have an underlying tax to pay debt service, the pros and cons are similar to a parcel based tax.

In conclusion, a general obligation bond and supporting tax would likely only be feasible if it could be scaled up in partnership with other agencies. This option has to achieve a two thirds supermajority to pass and has the added complexity of partnering with other agencies, but if polling showed there was sufficient interest, then this option should be considered.

**User Tax.** A user tax would be a charge for the "use" of stormwater or stormwater services. For example, a user tax that has been discussed in the past would be a user fee charged to all tourists traveling into the Tahoe Basin at designated entry points, such as Highway 50 into South Lake Tahoe. The implementation hurdles of this type of user tax are virtually insurmountable.

In conclusion, this option is not recommended as it would be extremely difficult to establish a nexus for the use of stormwater or stormwater services that would be defensible and even more difficult to explain to the voting electorate.

**Transient Occupancy Tax.** This tax is charged when occupying a room in a hotel, inn, or other lodging for 30 days or less. This option is not recommended as it would be difficult to make a nexus with stormwater quality and to gain political support.

**Sales Tax.** This is a tax on certain goods and services at the point-of-purchase and based on a percentage of the sale amount. In November, 2020, voters passed Measure X, a countywide .05% sales tax for 20 years that would "..... keep Contra Costa's regional hospital open and staffed; fund community health centers, emergency response; support crucial safety-net services; invest in early childhood services; protect vulnerable populations; and for other essential county services". The measure raised the County sales tax rate to 8.75% and passed by a margin of 58.45% (323,322) for and 41.55% (229,793) against. Some cities and towns have passed additional sales tax increases that are specific to their jurisdictions. In 1988 voters passed Measure H, with a 71.6% passage rate, "to finance improvements in emergency medical and trauma care system including expanded countywide paramedic coverage; improved medical communications and medical dispatcher training; and medical equipment and supplies and training for firefighter first responders, including training and equipment for fire services electing to undertake a specialized program of advanced cardiac care (defibrillation)." This was not a sales tax, however, but a benefit assessment administered through the formation of County Service Area EM-1. Assessment rates were based upon "benefit units" depending on how many residences were on a property and the demand for services. Measure H was passed and the assessments completed prior to the passage of Proposition 218.

In conclusion, the pros and cons for a sales tax would be similar to those of a parcel based tax. This option might be possible in specific jurisdictions with water quality issues that are widely supported, but would be difficult to establish as a countywide sales tax. There has been widespread support for a healthcare related tax/assessment in the past, but is unknown if the same broad support exists today for stormwater services. One possible scenario would be a countywide sales tax partnered with general obligation bonds, where a portion of the sales tax paid the debt service of the bonds and the balance of sales tax paid for stormwater programs (bonds can only fund projects). More research would have to be done to determine if a sales tax could be split to fund projects and programs, and an extensive survey would have to be conducted to understand the types of projects that resonates with the public and how much support could be expected.

**Vehicle License Fee.** In the late 1990s and early 2000's, there were efforts to add a surcharge to vehicle registration fees to pay for stormwater pollution cleanup. The nexus argument was that cars created pollution that was picked up by stormwater, such as lubricants and fluids leaking from vehicles and dust from brake pads. These legislative attempts were, locally, spearheaded by the Bay Area Open Space Council. In 2003, Assembly Bill 1546 authorized the San Mateo City-County Association of Governments to assess up to \$4 in motor vehicle fees for congestion management activities and stormwater pollution reduction programs until 2009. Similar legislation to add a surcharge to vehicle registration fees was attempted (unsuccessfully) in Alameda, Contra Costa, Marin, Napa, Sacramento, and Santa Clara Counties. Tax-payer associations pushed back on this approach, believing an increase in vehicle license fees should be through voter approval not through legislation. In 2010 the legislature passed a law allowing countywide transportation planning agencies to sponsor a measure to add no more than a \$10 surcharge to vehicle license registration fees, some of which could pay for pollution prevention projects and programs. That same year, voters in San Mateo County passed a local funding measure (Measure M) to increase and continue their vehicle registration fee surcharge.

In conclusion, this option is not recommended as the Howard Jarvis Taxpayers Association has been successful in convincing the legislature that a two-thirds majority vote should be required to increase vehicle registration fees.



**Date:** September 21, 2022

**To:** Management Committee

**From:** Elizabeth Yin, Consultant

**Subject:** Scope of work for Provision C17 BMP Report

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**Recommendation:**

- Accept the scope of work proposed to participate in the regional Bay Area Municipal Stormwater Collaborative (BAMSC) Unsheltered Populations WG and develop a Countywide BMP Report and;
- Approve the proposed budget for completing the scope of work.

**Background:**

MRP 3.0 was adopted by the Regional Water Board on May 11, 2022 with an effective date of July 1, 2022. MRP 3.0 introduced a new provision, C.17 Discharges associated with unsheltered homeless populations, that sets new requirements and deadlines for Permittee implementation. Under Provision C.17, several reporting items were introduced, including the development of a map, a report of best management practices (BMP), and the inclusion of an implementation evaluation into the 2023 Annual Report.

In the May 18, 2022 Management Committee meeting, the Committee conditionally approved several budget items along with a process for Program Staff to follow when seeking final approval of a conditionally approved budget item. In light of that process, staff have prepared a scope of work that details the scope, cost, and schedule of work associated with developing the regional BMP Report required by Provision C.17.

To support the development of the BMP Report, CCCWP intends to participate in a regional process that is facilitated by a BAMSC Unsheltered Populations Work Group. As part of developing the BMP Report, CCCWP representatives will conduct a significant portion of the work to develop a Countywide BMP Report that aligns with an outline and template developed by the BAMSC Unsheltered Populations Work Group.

Attached is the scope of work for completing the BMP Report through participation in a regional BAMSC Unsheltered Populations Work Group and development of a Countywide BMP Report. The scope of work provides the Committee with more detail on the level of commitment and process for completing this permit requirement, including the distribution of work between the BAMSC Work Group and CCCWP Representatives, as well as the cost and schedule for completing the BMP Report.

Staff would appreciate any comments or direction on the scope of work.

**Fiscal Impact:**

Approval of the scope of work and proposed budget increases the FY 22/23 budget by \$35,000. The budget for this work includes both match contributions for the regional effort as well as the cost for developing the Countywide BMP Report. The conditionally approved budget for this work was \$50,000, resulting in a \$15,000 cost savings by participating in the regional project.

**Attachments:**

CCCWP C17 BMP Report Scope of Work

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## C.17.a.ii(1) Best Management Practices (BMP) Report

*Scope of Work (September 15, 2022)*

### Background

The San Francisco Bay Regional Water Quality Control Board (RWQCB) adopted the Final Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (also known as the MRP), for the third reissuance of the MRP, or MRP 3.0, on May 11, 2022 (Order No. R2-2022-0018), with an effective date of July 1, 2022. MRP 3.0 introduced a new provision, C.17 Discharges associated with unsheltered homeless populations, that sets new requirements and deadlines for Permittee implementation. Under Provision C.17, several reporting items were introduced, including the development of a map, a report of best management practices (BMP), and the inclusion of an implementation evaluation into the 2023 Annual Report. This scope of work covers the development of the BMP Report.

To encourage ongoing regional, countywide and municipal coordination efforts, MRP Provision C.17.a.i.(2) requires Permittees to collectively develop a best management practice report (BMP Report) that identifies effective practices to address non-stormwater discharges associated with homelessness into MS4s that impact water quality and specific milestones for reducing such discharges within a given timeframe. The BMP Report is due for submittal to the RWQCB with the September 2023 Annual Report. **Table 1** shows the estimated budget and **Table 2** shows the schedule for the work products per this scope of work.

### SCOPE OF WORK:

MRP Provision C.17.a.i.(2) requires the BMP report to:

- Describe practices that may be implemented by Permittees, including those currently being implemented, to address discharges associated with homelessness that are impacting water quality;
- Identify regional and/or countywide efforts and implementation actions to address discharges associated with homelessness (including how those efforts and actions have been affected by unsheltered homeless population growth). Include recommendations for engaging in these efforts and incorporating discharge-reduction strategies that also help meet the unsheltered population's clean water needs;
- Identify actions taken during the COVID-19 pandemic to reduce the spread of the virus in homeless populations, such as temporarily housing homeless people in hotels, that may have reduced discharges associated with homelessness. Permittees shall consider the practicability of such actions for longer-term implementation;
- This task's broader goals are to recognize non-stormwater pollutant sources associated with unsheltered homeless populations, reasons for discharges, and means by which they occur, and develop useful information that can be used toward prioritizing individual Permittee and collaborative best management practices for reducing or managing such discharges, while

ensuring the protection of public health. Examples of collaborative implementation programs could include collaborative efforts between Permittees, Caltrans, sanitary sewer agencies, railroads, non-governmental organizations (NGOs), social service agencies and organizations, and other agencies

To support the development of the BMP Report, Contra Costa Clean Water Program (CCCWP) plans to participate in the development of the BMP Report through a regional process that is facilitated by a Bay Area Municipal Stormwater Collaborative (BAMSC) Unsheltered Populations Work Group (WG). CCCWP will send a representative to participate in the BASMC WG as an in-kind match contribution. Critical tasks and functions of the BAMSC WG include:

- Facilitation of regional collaboration and streamlined efforts to produce a Regional BMP Report.
- Development of an outline/template for the BMP Report, including necessary information required by Provision C.17.a.i.(2).
- Compilation of the Countywide Reports into a single Regional BMP Report.
- Development of an Executive Summary based on the information collected in the Countywide Reports.

The CCCWP representatives will also be responsible for critical tasks and functions outside of participation in the BAMSC WG. CCCWP representatives will solicit and gather information from the County's Permittees. Information that is collected will be developed by the CCCWP representatives into a Countywide BMP Report. After the development of the Countywide BMP Report, the CCCWP representative will need to bring the draft and final report to CCCWP Municipal Operations, Administrative, and Management Committees for review and approval.

### **BAMSC WG DELIVERABLES:**

- *Draft & Final BMP Report Outline*
- *Draft & Final Executive Summary*
- *Compiled Executive Summary and Countywide BMP Reports for submittal*

### **CCCWP DELIVERABLES:**

- *Draft Countywide BMP Report*
- *Final Countywide BMP Report*
- *Staff Report to Committees*

### **Assumptions:**

- *In-kind match contributions are limited to the Project Schedule and Deliverables identified by the BAMSC Unsheltered Populations Workgroup*
- *CCCWP Representatives and/or consultants will perform work associated with CCCWP Deliverables.*

## Budget & Schedule

**Table 1. Estimated Budget for the Development of the Regional and Countywide BMP Report**

Item	Budget
CCCWP Funding Contribution to BAMSC WG	\$10,300
CCCWP Development of Countywide BMP Report & Program Support	\$24,700
Project Budget	\$35,000

**Table 2. Project Schedule for Development of the Regional and Countywide BMP Report**

Task	Deliverable	Responsible Party	Due/Completed
Facilitate Work Group Meetings	Maintain email list, create agendas, schedule meetings, Chair Meetings	BAMSC WG	5 Meetings: Sept, Nov, April, June, Aug
Develop BMP Report Outline	Draft Outline Final Outline	BAMSC WG	October 2022 November 2022
Solicit Countywide Information		CCCWP	Dec 2022 – Feb 2023
Develop Countywide BMP report	Draft Countywide BMP Report	CCCWP	March 31, 2023
Draft BMP Report Review		CCCWP MOC Committee	April 18, 2023
Final BMP Report Approval		CCCWP Management Committee	May 17 <sup>th</sup> , 2023
Submit Countywide BMP Reports to BAMSC WG	Draft BMP Reports Final BMP Reports	CCWP	May 2023 July 2023
Executive Summary	Draft Executive Summary Final Executive Summary	BAMSC WG	July 2023 September 2023



Potential FY 22-23 Regional Projects and Cost Estimates

DRAFT – 09/09/2022

MRP 3.0 Provision	Project	MRP Due Date	BAMSC Oversight Group	Draft Project Costs					Totals
				ACCWP	CCCWP	SMCWPPP	SCVURPPP	SSA	
C.8.d	Regional LID Monitoring QAPP	1-May-23	MPC	\$ 6,184	\$ 4,330	\$ 2,788	\$ 6,698		\$ 20,000
C.10.g.ix	Trash Full Capture Impracticability Report	31-Mar-23	New Project Specific WG	\$ 17,214	\$ 12,051	\$ 7,759	\$ 18,642	\$ 2,834	\$ 58,500
C.12.g.iii(3)	PCBs in Demolition Protocol & Guidance Update	30-Sep-23	MPC	\$ 10,290	\$ 7,210	\$ 4,655	\$ 11,165	\$ 1,680	\$ 35,000
C.17.a.ii (1)	BMP Report/Unsheltered Homeless	30-Sep-23	New Project Specific WG	\$ 14,700	\$ 10,300	\$ 6,650	\$ 15,950	\$ 2,400	\$ 50,000
C.20.c.i	Cost Reporting Framework and Methodology	30-Jun-23	New Project Specific WG	\$ 18,228	\$ 12,772	\$ 8,246	\$ 19,778	\$ 2,976	\$ 62,000
C.22	Annual Report Format	1-Mar-23	Steering	\$ 4,410	\$ 3,090	\$ 1,995	\$ 4,785	\$ 720	\$ 15,000
	<b>Totals</b>			<b>\$ 71,026</b>	<b>\$ 49,753</b>	<b>\$ 32,093</b>	<b>\$ 77,018</b>	<b>\$ 10,610</b>	<b>\$ 240,500</b>
Proportion Cost Share				29.5%	20.7%	13.3%	32.0%	4.4%	
Pop-based Target				29.4%	20.6%	13.3%	31.9%	4.8%	

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

**Project Name: Regional LID Monitoring QAPP**

**Description/Scope/Tasks:**

MRP 3.0 Provision C.8.d requires permittees to submit an LID Monitoring Plan by May 1, 2023. These plans must include study-specific Quality Assurance Project Plans (QAPPs), which, at a minimum, are comparable to the SWAMP QAPrP. The objective of this project is to develop a regional QAPP that can be modified by each program for inclusion in the program's LID Monitoring Plan. Implementation of this project will provide two deliverables: (1) a SWAMP comparable QAPP for BAMSC, and (2) a programmatic eQAPP delivered directly to the CEDEN data node at Moss Landing Marine Lab (MLML) associated with transition to CEDEN 2.0 in early / mid 2023. Each item is briefly discussed below.

The narrative QAPP will be based in large part on the QAPP for the Clean Watersheds for a Clean Bay project. Modifications will include update of project-specific information that describes project participants, goals, efforts, data management, etc. Description of sampling methodology and general data quality and how it relates to BAMSC sampling will remain largely unchanged. Description of specific analytical measurement quality objectives (MQOs) is currently envisioned to be removed from the document and replaced with a reference to the eQAPP; this is, however, subject to change as CEDEN 2.0 protocols firm up over the next six months.

The eQAPP will be developed in cooperation with collaborating laboratories and MLML data quality staff. The eQAPP is a new product that will likely roll out in early 2023, so requirements, protocols, and deliverables are highly uncertain at this time. Specific efforts will likely include compilation of all laboratory methods associated with LID monitoring and delivery of method-specific data on MQOs employed for each along with associated numerical control limits. At this point it is unknown whether there will be minimum Water Board requirements overlain on top of the laboratory MQOs, as was the case with prior requirements for SWAMP comparability. The eQAPP delivery process is similar in nature to that associated with data delivery through GeoTracker portal but will present information in a single eQAPP covering all project analytical methods rather than requiring submittal of batch-specific data with delivery of each electronic data deliverable.

Delivery of the narrative QAPP is expected to take the longer duration, given the typical backlog of QAPPs requiring review by Water Board staff. After a brief kick-off to define project structure and roles, AMS will provide a draft QAPP for BAMSC review within 30 days of kickoff meeting. AMS will then revise the draft to address comments and deliver a revised draft to Water Board staff for review. AMS will then prepare a final version to address all comments received.

Concurrently, AMS will work with project laboratories to develop the eQAPP as the CEDEN 2.0 template becomes available (likely by end of 2022 calendar year). AMS maintains an on-call contract with MLML, which we can use to facilitate initial development of the eQAPP and update as laboratory methods / capabilities change.

**FY: 2022-23**

**MRP Provision Reference: C.8.d**

**Oversight Subcommittee/Workgroup: MPC**

**One-time   X   multi-FY**

**MRP Compliance date(s): May 1, 2023**

**Profile last updated on: 8/22/2022**

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

**Total Project Budget: \$20,000**  
(see below for details)

**Date Project and Funding Contributions  
Approved by Steering Committee:**

**Funding Contributions and Types by BAMS Collaborative Program:**

<b>Program</b>	<b>In-kind Contribution Amount (\$)</b>	<b>Lead In-kind Staff or Consultant</b>
ACCWP	\$6,184	AMS
CCCWP	\$4,330	AMS
SMCWPPP	\$2,788	AMS
SCCVURPPP	\$6,698	AMS
<b>Total</b>	<b>\$20,000</b>	

**Project Schedule:**

<b>Task</b>	<b>Deliverable(s):</b>	<b>Due/Completed</b>	<b>Budget</b>
Regional QAPP	Draft QAPP Final QAPP eQAPP	December 2022 April 2023	\$20,000
		<b>Total</b>	<b>\$20,000</b>

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

**Project Name: Trash Impracticability Report**

**Description/Scope/Tasks:**

MRP 3.0 provides the opportunity for Permittees to collectively submit a programmatic report that describes conditions under which it is impracticable to control trash via full trash capture devices. The report must be approved by the Water Board Executive Officer and conclusions included in the report can be used by Permittees when developing updated Long-term Trash Reduction Plans. As described in provision C.10.e, the impracticability report shall include, but not be limited to, the following:

- A description of the engineering constraints that prevent the installation of full trash capture devices;
- A process for evaluating and determining impracticability of full trash capture devices; and
- Alternative controls or a combination of controls that may be implemented to reduce trash loads to meet the requirements and deadlines in Provision C.10.a (Trash Reduction Requirements). Examples of alternative controls include, but are not limited to, requiring businesses or property owners to pick up litter, successful implementation of excess trash receptacles and collection services, increased code enforcement or parking enforcement/ticketing/towing, additional trash pick-ups, street sweeping, assessment and execution of cooperative implementation opportunities with Caltrans or neighboring Permittees, curb inlet screens, and long term measures such as pump station or storm drain retrofits, implementation of green stormwater infrastructure that controls trash, or changes to the catchment to allow effective implementation of full trash capture measures.

To guide this project, a Trash Impracticability Work Group will be formed that includes Program and/or Permittee staff. The Lead In-kind Staff/Consultant for the project will coordinate the Work Group meetings (budget assumes 3 meetings) and develop a draft report outline that further defines the project. The draft outline will be reviewed by the Work Group and other interested Permittees/Programs. Comments provided will be incorporated into the final draft outline for the report.

The lead in-kind staff/consultant will then develop a brief survey and distribute to MRP Permittees, engineering consultants, and vendors to identify the engineering constraints that prevent the installation or proper functioning of full capture devices. Following the completion of the survey, the lead in-kind staff/consultant will conduct follow-up communications with survey respondents and other engineers knowledgeable about trash full capture engineering feasibility, and document conditions under which full capture device installation is impracticable. Through the knowledge gained through this process, the lead in-kind staff/consultant will also develop a draft process flow-chart for Permittees to use when evaluating and determining whether a full capture system is impracticable to install and/or operate. Both large (high-flow capacity) and small (inlet -based) devices will be included in the engineering constraint survey and the process flow chart.

In parallel to the full capture engineering constraints evaluation, the lead staff/consultant will also document information on other types of trash controls or combinations of controls that may achieve a trash load reduction equivalent to full capture devices. Documentation will be constrained to existing information on the effectiveness of other types of trash control measures to achieve MRP milestones.

Lastly the in-kind staff/consultant will develop one draft and one final draft Trash Impracticability Report for review and comment by all MRP Permittee and Program staff. Each Countywide Program will be responsible for distributing the draft report to its member agencies and compiling the comments received and obtaining approval of final draft products according to the schedule below. One final Trash Impracticability Report will be developed as the final deliverable for the project and provided for submittal to Water Board staff by March 31, 2023.

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

FY: 2022/23

One-time X multi-FY \_\_\_\_\_

MRP Provision Reference: C.10.e

MRP Compliance date(s):

Submittal by March 31, 2023, for the approval of the Executive Officer

Oversight Subcommittee/Workgroup:  
Trash Impracticability Work Group (New)

Profile last updated on: 9/8/22

Total Project Budget:  
(see below for details)

Date Project and Funding Contributions  
Approved by Steering Committee: TBD

**Funding Contributions and Types by BAMS Collaborative Program:**

Program	In-kind Contribution Amount (\$)	Lead In-kind Staff or Consultant
ACCWP	\$17,214	EOA
CCCWP	\$12,051	LWA
SMCWPPP	\$7,759	EOA
SCVURPPP	\$18,642	EOA
SSA	\$2,834	SSA Manager
<b>Total</b>	<b>\$58,500</b>	

**Project Schedule:**

Task	Deliverable(s):	Due/Completed
1. Draft Report Outline and Survey	Draft outline and survey questions	Sept 30, 2022
2. Work Group Meeting #1	Meeting Summary	Week of Oct 3, 2022
3. Release Survey	Final Survey	Oct 17, 2022
4. Close Survey	Survey Results	Nov 1, 2022
5. Follow up Communications with Engineers	Documentation of additional information on engineering constraints	Nov 18, 2022
6. Identify Potential Alternative Equivalent Control Measures	Documentation of control(s) that have demonstrated full capture equivalency	Nov 18, 2022
7. Final Draft Report Outline	Final Draft Outline (annotated)	Nov 28, 2022
8. Work Group Meeting #2	Meeting Summary	Week of Dec 5, 2022
9. Draft Impracticability Report	Draft Report	Jan 23, 2023
10. Work Group Meeting #3	Meeting Summary	Week of Feb 20, 2023
11. Draft Final Impracticability Report	Response to Comments Draft Final Report	March 6, 2023
12. Final Impracticability Report	Final Report	March 20, 2023

## Bay Area Municipal Stormwater Collaborative Project of Regional Benefit Profile

### Project Name: Managing PCBs during Building Demolition – Guidance Update

#### Description/Scope/Tasks:

MRP 3.0 Provision C.12.g. requires that before issuing a demolition permit, Permittees continue to implement the program developed during MRP 2.0 for managing PCB-containing materials during building demolition. Applicable Structures are defined as buildings built or remodeled from January 1, 1950 through December 31, 1980, with the following exemptions: single-family residential buildings, wood-framed buildings, and buildings undergoing partial demolition. MRP 3.0 additionally requires new enhancements to the program, including as of July 1, 2023, for demolition of Applicable Structures containing building materials with PCBs concentrations  $\geq 50$  ppm, requiring Permittees to:

- Require demolition contractors to provide notification to the Permittees, the Water Board, and U.S. EPA at least one week before any demolition is to occur.
- Ensure construction sites are inspected during demolition and enhance their construction site control program to minimize migration of PCBs into the MS4. Enhancements may include inspecting demolition sites monthly during demolition activities in the dry season (May – September) and requiring the demolition contractors to sweep the project sites and the streets around the property with street sweepers that will effectively remove sediment and dust. Beginning with the 2023 rainy season, inspect demolition sites pursuant to MRP 3.0 Provision C.6 to ensure that effective construction pollutant controls are used to prevent discharge into the MS4.
- Verify that PCBs in demolished buildings are properly managed to minimize transport to the MS4 by obtaining official documentation that the building materials with PCBs concentrations  $\geq 50$  ppm in demolished Applicable Structures were disposed appropriately according to state/federal regulations.

MRP 3.0 Provision C.12.g. reporting requirements specify that in their 2023 Annual Report, Permittees discuss enhancements to their construction site control program to minimize migration of PCBs from demolition activities into the MS4. Beginning with their 2023 Annual Report, Permittees are required to provide:

- The number of Applicable Structures that applied for a demolition permit during the reporting year.
- A running list of the Applicable Structures that applied for a demolition permit since July 1, 2019, the number of samples each structure collected, and the concentration of PCBs in each sample.
- For each applicable structure, with PCBs concentrations  $\geq 50$  ppm: the project address, the demolition date, and a brief description of the PCBs-containing materials.

In addition, beginning with their 2024 Annual Report, MRP 3.0 requires that Permittees provide the following: whether the site was inspected during demolition, and for those cases where notification and advance approval from the U.S. EPA is not required and were approved for demolition after June 30, 2023, the hazardous waste manifest prepared for transportation of the material to a disposal facility.

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

The lead in-kind staff for this project will coordinate the following tasks:

1. To guide the project, form a Management of PCBs during Demolition Work Group that includes Program and Permittee staff. Industry and regulatory agency (e.g., Regional Water Board, EPA) staff may be included in selected discussions and/or asked to review selected deliverables as deemed appropriate by the workgroup. The project budget assumes the Work Group will meet twice.
2. Update the existing BASMAA Model Applicant Package to accommodate the new tracking and reporting requirements. A draft updated Model Applicant Package will be reviewed by the Work Group and other interested Program/Permittee staff. Each Countywide Program will be responsible for distributing the draft document to its member agencies and compiling the comments received according to the schedule below. Comments received will be incorporated into the final Model Applicant Package as appropriate.
3. Develop a proposed set of inspection program enhancements for consideration by Program/Permittee staff. The inspection program enhancements will consider the suggestions provided in MRP 3.0 and will build on the current C.6 inspection program. If enhancements include requirements for applicants, such as enhanced street sweeping, that information will be incorporated into the Model Applicant Package. Each Countywide Program will be responsible for distributing the draft document to its member agencies and compiling the comments received according to the schedule below. The final Model Applicant Package will be revised as appropriate based on the comments received.

**FY: 2022/23**

**One-time**  **multi-FY** \_\_\_\_\_

**MRP Provision Reference:** C.12.g.

**MRP Compliance date(s):**  
Implement program enhancements by July 1, 2023 and report on beginning September 30, 2023/4.

**Oversight Subcommittee/Workgroup:**  
MPC

**Profile last updated on:** 8/30/2022

**Total Project Budget: \$35,000**  
(see below for details)

**Date Project and Funding Contributions  
Approved by Steering Committee:** TBD

**Funding Contributions and Types by BAMS Collaborative Program:**

Program	In-kind Contribution Amount (\$)	Lead In-kind Staff or Consultant
ACCWP	\$10,290	LWA
CCCWP	\$7,210	LWA
SMCWPPP	\$4,655	EOA
SCVURPPP	\$11,165	EOA
SSA	\$1,680	FSSD
<b>Total</b>	<b>\$35,000</b>	

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

**Project Schedule:**

<b>Task</b>	<b>Deliverable(s)</b>	<b>Due/Completed</b>
1. Convene project Work Group	List of Work Group members	October 2022
2. Work Group Meeting #1	Meeting summary	October 2022
3. Develop Updated Model Applicant Package and Inspection Program Enhancements	<ul style="list-style-type: none"><li>• Draft Model Applicant Package</li><li>• Proposed Inspection Program Enhancements</li></ul>	January 2023
4. Work Group Meeting #2 (discuss draft Model Applicant Package)	Meeting summary	February 2023
5. Finalize Updated Model Applicant Package and Inspection Program Enhancements	<ul style="list-style-type: none"><li>• Final Model Applicant Package</li><li>• Final Inspection Program Enhancements</li></ul>	March 2023

DRAFT



**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

**Project Name: Unsheltered Homeless Work Group**

**Description/Scope/Tasks:**

To encourage ongoing regional, countywide and municipal coordination efforts, MRP Provision C.17.a.i.(2) requires Permittees to collectively develop a best management practice report that identifies effective practices to address non-stormwater discharges associated with homelessness into MS4s that impact water quality and specific milestones for reducing such discharges within a given timeframe. This report is due with the September 2023 Annual Report.

A BAMSC Unsheltered Populations Work Group (WG) will be formed and will conduct the following proposed approach. The BAMSC WG will develop an outline for the BMP Report. Each Countywide Program will be responsible for collecting information from the Permittees to complete a Countywide BMP Report. The Countywide reports will be compiled and the BAMSC WG will develop an Executive Summary based on the information collected in the Countywide reports. The BAMSC WG will finalize a regional BMP Report that includes the Executive Summary and the Countywide BMP Reports attached.

MRP Provision C.17.a.i.(2) requires the BMP report to:

- Describe practices that may be implemented by Permittees, including those currently being implemented, to address discharges associated with homelessness that are impacting water quality;
- Identify regional and/or countywide efforts and implementation actions to address discharges associated with homelessness (including how those efforts and actions have been affected by unsheltered homeless population growth). Include recommendations for engaging in these efforts and incorporating discharge-reduction strategies that also help meet the unsheltered population’s clean water needs;
- Identify actions taken during the COVID-19 pandemic to reduce the spread of the virus in homeless populations, such as temporarily housing homeless people in hotels, that may have reduced discharges associated with homelessness. Permittees shall consider the practicability of such actions for longer-term implementation;
- This task’s broader goals are to recognize non-stormwater pollutant sources associated with unsheltered homeless populations, reasons for discharges, and means by which they occur, and develop useful information that can be used toward prioritizing individual Permittee and collaborative best management practices for reducing or managing such discharges, while ensuring the protection of public health. Examples of collaborative implementation programs could include collaborative efforts between Permittees, Caltrans, sanitary sewer agencies, railroads, non-governmental organizations (NGOs), social service agencies and organizations, and other agencies

**FY:** 22/23

**One-time** X **multi-FY** \_\_\_\_\_

**MRP Provision Reference:** C.17.a.i.(2)

**MRP Compliance date(s):** September 30, 2023

**Oversight Subcommittee/Workgroup:**  
BAMSC Unsheltered Populations Workgroup

**Profile last updated on:** 9/8/2022

**Total Project Budget:**  
(see below for details)

**Date Project and Funding Contributions  
Approved by Steering Committee:**

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

**Funding Contributions and Types by BAMS Collaborative Program:**

<b>Program</b>	<b>In-kind Contribution Amount (\$)</b>	<b>Lead In-kind Staff or Consultant</b>
<b>ACCWP</b>	\$14,700	EOA
<b>CCCWP</b>	\$10,300	LWA (Liz Yin)
<b>SMCWPPP</b>	\$6,650	EOA
<b>SCVURPPP</b>	\$15,950	EOA
<b>Solano Alliance</b>	\$2,400	FSSD (Emily Corwin)
<b>Total</b>	<b>\$50,000</b>	

**Project Schedule:**

<b>Task</b>	<b>Deliverable(s):</b>	<b>Due/Completed</b>
<b>Facilitate Work Group Meetings</b>	Maintain email list, create agendas, schedule meetings, Chair meetings	5 Work Group meetings: Sept, Nov, Apr, June, Aug
<b>Develop BMP Report Outline</b>	Draft Outline Final Outline	October 2022 November 2022
<b>Countywide BMP Reports submitted to Work Group</b>	Draft BMP Reports Final BMP Reports	May 2023 July 2023
<b>Executive Summary</b>	Draft Executive Summary Final Executive Summary	July 2023 September 2023

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

**Project Name: Cost Reporting Framework and Methodology**

**Description/Scope/Tasks:**

MRP 3.0 Provision C.20 requires each Permittee to annually prepare and submit a fiscal analysis of the capital and operation and maintenance costs incurred to implement MRP requirements, beginning with the 2025 Annual Report (i.e., for FY 2-24-25). As a first step, Permittees are encouraged to collaboratively develop a cost reporting framework and methodology to perform the fiscal analysis “for purposes of efficiency, cost-savings, and regionwide consistency and comparability”. This project would accomplish the task of jointly developing the cost reporting framework and methodology as a project of regional benefit, with input from BAMS Collaborative member agencies. The framework will be informed by State Water Board efforts currently underway to develop a cost reporting framework. The products would then be used by individual Permittees to prepare their fiscal analyses. The products may be customized at the countywide or local level as needed, as long as consistency with the overall framework and assumptions is maintained. The cost reporting framework and methodology must be submitted to the Water Board by June 30, 2023.

A BAMSC Cost Reporting Work Group (WG) will be formed and approximately 4-5 meetings will be held at appropriate milestones (see Project Schedule). The BAMSC WG will develop: 1) a proposed approach to the framework (in Excel format); 2) a draft framework with worksheets for each MRP provision; 3) a draft methodology that explains how to complete the framework worksheets and assumptions; 4) a revised draft framework and methodology; 5) a final draft framework and methodology for Countywide Program and BAMSC approval; and 6) a final framework and methodology for transmittal to the Water Board. Each Countywide Program will be responsible for distributing the draft and revised draft products to its member agencies and compiling the comments received and obtaining approval of final draft products according to the schedule below.

**FY:** 22-23

**One-time**  **multi-FY** \_\_\_\_\_

**MRP Provision Reference:** C.20.b and C.20.c.i

**MRP Compliance Date(s):** June 30, 2023

**Oversight Subcommittee/Workgroup:**  
Cost Reporting Work Group (new)

**Profile last updated on:** 9/7/22

**Total Project Budget: \$62,000**  
(see below for details)

**Date Project and Funding Contributions  
Approved by Steering Committee:**

**Funding Contributions and Types by BAMS Collaborative Program:**

Program	In-kind Contribution Amount (\$)	Lead In-kind Staff or Consultant
ACCWP	\$18,228	EOA
CCCWP	\$12,772	LWA
SMCWPPP	\$8,246	EOA
SCVURPPP	\$19,778	EOA
SSA	\$2,976	Emily Corwin (FSSD)
<b>Total</b>	<b>\$62,000</b>	

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

**Project Schedule:**

<b>Task</b>	<b>Deliverable(s):</b>	<b>Due/Completed</b>
First Work Group Meeting		September 20 or 21, 2022
Provide information to BAMSC Steering Committee on framework approach for concurrence	Brief memo and/or PowerPoint presentation	September 22, 2022
Second Work Group Meeting		Late October 2022
Complete Draft Framework and Methodology and Distribute to Countywide Programs for Review	Draft Cost Reporting Framework and Methodology; presentation to BAMSC Steering Committee	December 7, 2022
Receive Comments on Draft Framework and Methodology	[Countywide Programs provide compiled comments to WG]	January 26, 2023
Third Work Group Meeting		Early February 2023
Complete Revised Draft Framework and Methodology	Revised Draft Cost Reporting Framework and Methodology	March 15, 2023
Receive Comments on Revised Draft Framework and Methodology	[Countywide Programs provide compiled comments to WG]	April 27, 2023
Fourth Work Group Meeting		Early May 2023
Provide Final Draft Framework and Methodology to Countywide Programs for Approval	Final Draft Cost Reporting Framework and Methodology	June 1, 2023
Approve Final Draft Framework and Methodology at BAMSC Steering Committee and Submit to WB	N/A	June 22, 2023
Submit Final Framework and Methodology to Water Board	Final Cost Reporting Framework and Methodology	By June 30, 2023

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

**Project Name: Annual Report Format**

**Description/Scope/Tasks:**

The individual Permittee Annual Report forms will be developed to meet the requirements of the Municipal Regional Stormwater NPDES Permit (Order No. R2-2022-0018) (MRP 3) through in-kind contributions. The work will be conducted by LWA on behalf of ACCWP and CCCWP, EOA on behalf of SCVURPPP and SMCWPPP, and Emily Corwin on behalf of SSA.

The tabular format that has been in use for the past several years will be updated for consistency with the new MRP requirements. LWA, EOA, and SSA will revise the Annual Report Forms to include updated and/or new sections. Project deliverables are: a Draft; Revised Draft; Final Draft; and Final Annual Report forms. The Draft will be sent to the BAMSC subcommittees and the countywide programs' subcommittees for comment. The Revised Draft will be sent to the BAMSC subcommittees and the countywide programs' subcommittees and management committees for comment. The Final Draft will be sent to the countywide programs' management committees for approval, then presented to the BAMSC Steering committee for approval.

On an annual basis, the forms will be reviewed and updated to incorporate items required to be reported on that fiscal year. The budget proposed is for the initial FY 2022-2023 update.

**FY: 2022-2023 initial update and annually thereafter**

**One-time \_\_\_\_\_ multi-FY x**

**MRP Provision Reference: C.22**

**MRP Compliance date(s): Initial submittal March 1, 2023 and annually thereafter**

**Oversight Subcommittee/Workgroup: Steering**

**Profile last updated on: August 25, 2022**

**Total Project Budget: \$15,000**  
(see below for details)

**Date Project and Funding Contributions Approved by Steering Committee:**

**Funding Contributions and Types by BAMS Collaborative Program:**

Program	In-Kind Contribution Amount (\$)	Lead In-kind Staff or Consultant
ACCWP	\$4,410	LWA
CCCWP	\$3,090	LWA
SMCWPPP	\$1,995	EOA
SCVURPPP	\$4,785	EOA
SSA	\$720	SSA/Emily Corwin
<b>Total</b>	<b>\$15,000</b>	

**Bay Area Municipal Stormwater Collaborative  
Project of Regional Benefit Profile**

**Project Schedule/Task Overview:**

<b>Task</b>	<b>Deliverable(s):</b>	<b>Due/Completed</b>	<b>Responsible</b>
<b>Develop Draft Annual Report Forms</b>	<b>Draft</b> MRP 3 Annual Report Forms	October 27, 2022	LWA/EOA/SSA
<b>Provide Comments on Draft</b>	Comments	December 8, 2022	BAMSC and Program Subcommittees
<b>Develop Revised Draft Annual Report Forms</b>	<b>Revised Draft</b> MRP 3 Annual Report Forms	January 9, 2023	LWA/EOA/SSA
<b>Provide Comments on Revised Draft</b>	Comments	January 26, 2023	BAMSC and Program Subcommittees
<b>Develop Final Draft Annual Report Forms for Approval</b>	<b>Final Draft</b> MRP 3 Annual Report Forms	February 2, 2023	LWA/EOA/SSA
<b>Permittee/Countywide Program Approvals</b>	<b>Approval of Final Draft</b> MRP 3 Annual Report Forms	No later than February 22, 2023	Countywide Management Committees
<b>BAMSC Approval</b>	<b>Approval of Final Draft</b> MRP 3 Annual Report Forms	February 23, 2023	BAMSC Steering Committee
<b>Final Annual Report Forms and Transmittal Letter for BAMSC Chair</b>	<b>Final</b> MRP 3 Annual Report Forms and Transmittal Letter	<b>February 27, 2023</b>	LWA/EOA/SSA
<b>Submittal Deadline</b>		March 1, 2023	BAMSC Chair



**CONTRA COSTA  
CLEAN WATER  
PROGRAM**

**Date:** September 21, 2022

**To:** **Contra Costa Permittee Municipal Staff involved in parcel and ROW-based CIP projects and ROW maintenance projects for the following activities:**

- Plan Review
- Maintenance
- Transportation
- Parks and Recreation
- Utilities
- Planning Development Entitlements
- Environmental Reviews

**From:** Erin Lennon, Watershed Management Planning Specialist, and Yvana Hrovat, Haley and Aldrich

**Subject:** Memorandum:  
Key Updates in MRP 3.0, Provision C.3 New and Redevelopment

### **Background**

The Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (MRP), issued by the San Francisco Bay Regional Water Quality Control Board, mandates certain stormwater pollution prevention measures for covered Permittees, which includes municipalities in Contra Costa County. MRP Provision C.3 requires Permittees to place conditions on certain development projects to incorporate site design measures, source controls, treatment measures, and, on some larger projects, flow duration controls.

The San Francisco Bay Regional Water Quality Control Board adopted the Final Order for the third reissuance of the MRP, or MRP 3.0, on May 11, 2022 (Order No. R2-2022-0018). MRP 3.0 Provision C.3 imposes significant new requirements with deadlines for Permittee implementation. This Memo summarizes key changes to Provision C.3 between MRP 2.0 (Order No. R2-2015-0049) to the newly adopted MRP 3.0 for Contra Costa Clean Water Program (CCCWP) Permittee municipal staff education and dissemination. Guidance for development project applicants is provided as a separate factsheet to be distributed to the public and included as Attachment 4 to this memo.

This Memo focuses on the following C.3 Provisions that changed significantly between MRP 2.0 and 3.0:

- **Provision C.3.b Regulated Projects** (pages C.3-2 to C.3-13) establishes thresholds at which new development and redevelopment projects must comply with Low Impact Development (LID) requirements in Provisions C.3.c and C.3.d (pages C.3-13 to C.3-19).
- **Provision C.3.e.ii Special Projects** (pages C.3-21 to C.3-29) covers LID Reduction Credit allowances for certain Special Project categories of smart growth/high density and affordable housing.
- **Provision C.3.j. Green Infrastructure Planning and Implementation** (Attachment H, Table H-1) establishes County- and Permittee-specific numeric (in the form of acres of impervious surface treated) implementation requirements for green infrastructure (GI) retrofits.

### **Effective Dates**

The timeline for the C.3. Provisions with key changes is as follows:

- Until July 1, 2023 – MRP 2.0 thresholds and requirements will apply to:
  - Projects with approved or conditionally approved Tentative Maps.
  - Projects with applications deemed complete.
  - Housing projects for which a preliminary application has been submitted (per SB 330 and SB 8).
- July 1, 2023 – Provisions **C.3.b.** and **C.3.e.** changes are effective.
- September 30, 2023 – Annual Reporting on New Regulated Projects begins.
- June 30, 2027 – Provision **C.3.j.** required implementation of numeric target GI retrofits need to be met.

### **Key Provision C.3 Changes**

Notable changes to Provision C.3 are summarized in Table 1. For further details on these changes, refer to the attachments as noted below:

- C.3.b. changes to Regulated Projects – Attachment 1: “MRP 3.0: Development Projects Requiring LID Treatment for Stormwater” table.
- C.3.j. retrofit assignments – Attachment 2: “MRP 3.0 Green Infrastructure Retrofit Assignments” table.
- All Provision C.3 updates – Attachment 3: “Changes to Municipal Regional Stormwater Permit, Provision C.3” presentation.



**Table 1: Key Provision C.3 Updates**

<b>C.3.b: Regulated Project Updates (See Attachment 1)</b>			
<b>Project Type</b>	<b>Municipal Target Audience</b>	<b>Key Updates to Requirements</b>	<b>Recommended Staff Actions</b>
Parcel-Based Projects	Staff involved in Environmental Review, Public Works Planning, Design, and Plan Review	<p>These projects are considered Regulated Projects which require LID treatment for stormwater:</p> <ul style="list-style-type: none"> <li>• Construction of one detached single-family home that creates or replaces 10,000 SF or more of impervious surface is a Regulated Project.</li> <li>• All other projects, regardless of land use, which create or replace 5,000 SF or more of impervious surface.</li> <li>• Renovation of parking lots and other paved areas where the base course is affected for 5,000 SF or more of impervious surface.</li> </ul>	<ul style="list-style-type: none"> <li>• Discussions between planning staff and prospective applicants often begin long before an application is deemed complete and considered for approval—particularly for larger projects. These discussions should include consideration of the C.3 requirements that will apply at the time of project approval, referencing the key updates in this Memo.</li> <li>• Revise application materials accordingly.</li> </ul>
Roads, Sidewalks and Trails	Staff involved in CIP, Env Review, Transportation Planning and Design, Parks and Recreation, Planning and Design	New roads and trails, or widening with additional travel lanes, which create 5,000 contiguous SF or more of impervious surface are now Regulated Projects.	<ul style="list-style-type: none"> <li>• Permittees may wish to review capital projects scheduled to be implemented during the permit term (by June 30, 2027) and determine if any might be Regulated Projects.</li> <li>• Revise application materials accordingly.</li> </ul>
Road Maintenance Projects	Staff involved in Utilities, Operations and Maintenance	<ul style="list-style-type: none"> <li>• One contiguous acre or more of pavement maintenance that affects the base course, or extends the roadway, is now a Regulated Project.</li> <li>• Utility trenching projects <math>\geq 8</math> feet in width that extend over a contiguous acre or more are now Regulated Projects.</li> </ul>	<ul style="list-style-type: none"> <li>• Review road maintenance projects scheduled to be implemented during the permit term (by June 30, 2027) and determine if any might be Regulated Projects.</li> <li>• Revise application materials accordingly.</li> </ul>
<b>C.3.e.ii: Special Projects</b>			
<b>Project Type</b>	<b>Municipal Target Audience</b>	<b>Key Updates to Requirements</b>	<b>Recommended Staff Actions</b>
Special Project Category C	Staff involved in Management, Planning, Project Management, and Engineering Design	<ul style="list-style-type: none"> <li>• Special Project Categories A and B remain unchanged.</li> <li>• Special Project Category C now applies to certain affordable housing projects only (and not transit oriented developments, as was the case in MRP 2.0).</li> </ul>	<ul style="list-style-type: none"> <li>• Become familiar with the new Special Project Category C definition and related LID Reduction Credit allowances.</li> <li>• Revise application materials accordingly.</li> </ul>

<b>C.3.j: Green Infrastructure (GI) Planning and Implementation (See Attachment 2)</b>			
<b>Description</b>	<b>Municipal Target Audience</b>	<b>Key Updates to Requirements</b>	<b>Recommended Staff Actions</b>
Additional Requirements for Implementation of Parcel- and ROW-based GI Retrofits	Staff involved in Management, Planning, Project Management, and Engineering Design	<p>Transitions from GI planning to GI implementation and sets the following minimum implementation requirements, to be met by June 30, 2027:</p> <ul style="list-style-type: none"> <li>• 3 acres of impervious surface to be treated by a GI retrofit per 50,000 population which can be met by each municipality or countywide.</li> <li>• Minimum of 0.20 acres of impervious surface to be treated by a GI retrofit in each municipality</li> <li>• Capped at 5 acres of impervious surface treated for municipalities &gt; 250,000 population</li> </ul> <p>Projects that may count towards the minimum retrofit requirements:</p> <ul style="list-style-type: none"> <li>• Excess existing impervious area retrofit in connection with a Regulated Project</li> <li>• Regulated Projects that are Roads Projects</li> <li>• Projects completed after January 1, 2021</li> <li>• Projects that are approved and funded by June 30, 2027</li> </ul> <p>Some other key considerations:</p> <ul style="list-style-type: none"> <li>• Retrofit of roofs, parking lots and other impervious areas on parcels will generally cost significantly less per square foot than retrofits within the street right-of-way.</li> <li>• Although not explicitly stated in the Permit, it is assumed that conversion of impervious surface to landscape, replacement of impervious surface with pervious pavement, and diversion of runoff from storm drains to landscape dispersal all qualify as Green Infrastructure projects and can be credited toward a Permittee's Retrofit Assignment.</li> </ul>	<ul style="list-style-type: none"> <li>• Begin (if not done already) tracking projects that may count towards the minimum GI retrofit requirements.</li> <li>• Discuss with other divisions/staff to identify qualifying GI retrofit projects that have already been built (since January 1, 2021) or that are in the planning stage.</li> <li>• Attend GI Retrofit forum to be held at Development Committee meeting on September 28, 2023 (see Other C.3 Provisions and Next Steps section of this Memo).</li> </ul>

## **Other C.3 Provisions and Next Steps**

### **GI Retrofits Forum**

The Development Committee noted the time needed to plan, design, fund, and build Green Infrastructure projects in roadways is typically more than the 5 years allowed by Provision C.3.j.ii.(2)(a). Further, Permittees have various options that can count toward fulfilling the retrofit assignments. Permittees will want to consider possible routes to compliance and begin formulating plans for getting there. Towards this goal, a forum to share GI retrofit ideas and strategies and initiate C.3.j.-related GI retrofit planning and guidance development will be held during the September 28<sup>th</sup>, 2022, CCCWP Development Committee meeting.

### **External MRP 3.0 C.3 Updates Handout**

Public guidance for development project applicants will be provided separately as a planning counter handout. This document is titled, "Updated Stormwater Management Design Requirements: New Development/Redevelopment Projects" and will also be posted on the CCCWP webpage. It is also included as Attachment 4 to this memo.

### **Stormwater C.3 Guidebook**

Updates to the Stormwater C.3 Guidebook are in progress and will include the updated MRP 3.0 thresholds and definitions, but not HM standards (still TBD). The Development Committee targeted October 2022 for completion of the 8th Edition. See CCCWP webpage at [www.cccleanwater.org/development-infrastructure/development](http://www.cccleanwater.org/development-infrastructure/development).

### **Hydromodification Management**

Provision C.3.g. includes an updated hydromodification management (HM) standard for Contra Costa Permittees and building on work during MRP 2.0, requires submittal of a technical report detailing how the HM standard will be implemented. CCCWP consultants completed a HM compliance options report in September 2022. HM standards and compliance requirements will be summarized in the next Stormwater C.3 Guidebook edition.

## **Attachments**

**Attachment 1:** Table, "MRP 3.0: Development Projects Requiring LID Treatment for Stormwater"

**Attachment 2:** Table, "MRP 3.0 Green Infrastructure Retrofit Assignments" (Based on MRP 3.0 Attachment H, pages H-2 to H-3)

**Attachment 3:** Presentation, "Changes to Municipal Regional Stormwater Permit, Provision C.3"

**Attachment 4:** Planning Counter Handout/Factsheet, "Updated Stormwater Management Design Requirements: New Development/Redevelopment Projects"

MRP 3.0: Development Projects Requiring LID Treatment for Stormwater					
Project Type/Description	Impervious surface area created or replaced			Notes	Subprovision
	Threshold Area	MRP 2.0	MRP 3.0		
<b>Parcel-Based Requirements</b>					
Detached single-family home not part of a larger plan of development	Cumulative	Exempt	10,000 SF	1, 2, 3	C.3.b.ii.(6)
Public/private development (e.g. new library on previously undeveloped site)	Cumulative	10,000 SF	5,000 SF	1, 2, 4	C.3.b.ii.(1), (2)
Public/private redevelopment project (e.g. renovated hospital)	Cumulative	10,000 SF	5,000 SF	1, 2, 4	C.3.b.ii.(3)
Renovation of existing public/private parking lots and other pavement (see applicable activities below)	Cumulative	Exempt	5,000 SF	1, 2, 4, 5	C.3.b.ii.(1)
<b>Roads, Sidewalks, and Trails</b>					
New roads, including sidewalks and bike lanes	Contiguous	10,000 SF	5,000 SF	1, 6	C.3.b.ii.(4)
Adding traffic lanes to an existing road	Contiguous	10,000 SF	5,000 SF	1, 6	C.3.b.ii.(4)
New stand-alone trail projects 10 feet wide or wider with impervious surface	Contiguous	10,000 SF	5,000 SF	1, 7	C.3.b.ii.(4)
Sidewalk gap closures, sidewalk replacement, ADA curb ramps not associated with a parcel-based project	Contiguous	10,000 SF	5,000 SF	1	C.3.b.ii.(3)
<b>Road Maintenance Projects</b>					
Reconstructing existing roads, including sidewalks and bicycle lanes (see applicable activities below)	Contiguous	Exempt	1 acre	1, 8, 9	C.3.b.ii.(5)
Extending roadway edge (e.g., lane widening, safety improvement, paving a graveled shoulder)	Contiguous	Exempt	1 acre	1, 8, 9, 10	C.3.b.ii.(5)
Utility trenching projects ≥ 8 feet wide on average over entire length of project	Contiguous	Exempt	1 acre	1, 8, 9	C.3.b.ii.(5)
<b>Specific Activities: Work Included or Exempt When Calculating Threshold Area of Project (e.g., 5,000 SF, 1 acre)</b>					
Upgrade from dirt to gravel (exempt if built to spec for pervious pavement)		Included	Included	1	C.3.b.ii.(1)(b)(iii)
Upgrade from dirt/gravel to pavement (exempt if built to spec for pervious pavement)		Included	Included	1	C.3.b.ii.(1)(b)(iii)
Removing/replacing asphalt or concrete to top of base course or lower		Exempt	Included	1	C.3.b.ii.(1)(b)(iii)
Repair of pavement base (i.e. base failure repair)		Exempt	Included	1	C.3.b.ii.(1)(b)(iii)
Extending the pavement edge or paving graveled shoulders		Exempt	Included	1	C.3.b.ii.(1)(b)(iii)
Interior Remodels		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Repair of roof or exterior wall surface		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Pothole and square cut patching		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Overlay gravel on existing gravel		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Overlay asphalt or concrete on existing asphalt or concrete (no increase in area)		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Upgrade from chip seal or cape seal to asphalt or concrete (no increase in area)		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Shoulder grading		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Reshaping/regrading drainage		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Crack sealing		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Pavement preservation that does not expand road prism		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Vegetation maintenance		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)

**Notes:**

1. Change effective July 1, 2023, per Provision C.3.b.iii.
2. Projects that fall under the planning and building authority of the Permittee
3. Includes addition of an ADU within a lot
4. "Project" includes any frontage improvements
5. Prior to MRP 3.0, implementation of stormwater treatment for renovated pavement has varied by jurisdiction and by project.
6. Caltrans highway projects are excluded
7. Work may be excluded if runoff is directed to a vegetated area
8. Acreage treated with road maintenance projects can count towards minimum Green Infrastructure numeric requirement (Provision C.3.j.ii.).
9. Alternative minimum sizing criteria for bioretention facilities (typically 2% or less of tributary area) may apply
10. These activities were moved from Provision C.3.b.ii.(1) during the May 11, 2022 adoption hearing

The new Special Project Category C becomes effective July 1, 2023. Until then, MRP 3 authorizes implementation of the old category C requirements, which are included in Attachment I.

See C.3.e.iii Implementation Level on pg. C.3-20

- (3) Prior to July 1, 2023, Permittees shall implement Provision C.3.e.ii in Attachment I, which are requirements from the Previous Permit.
- (4) Beginning July 1, 2023, Permittees shall implement Provision C.3.e.ii.

## MRP 3.0 Green Infrastructure Retrofit Assignments

(Attachment H)

57.32 acres countywide

<b>Municipality</b>	<b>Acres</b>
Antioch	5.00
Brentwood	4.45
Clayton	0.74
Concord	5.00
County	5.00
Danville	2.67
El Cerrito	1.53
Hercules	1.58
Lafayette	1.60
Martinez	2.30
Moraga	1.07
Oakley	2.55
Orinda	1.20
Pinole	1.16
Pittsburg	4.36
Pleasant Hill	2.09
Richmond	5.00
San Pablo	1.86
San Ramon	4.56
Walnut Creek	4.21

# Changes to Municipal Regional Stormwater Permit, Provision C.3



1

## Introductions

**Erin Lennon** Watershed Management Planning Specialist  
Contra Costa Clean Water Program

- New Staff - Ms. Lennon will act as Program contact for Development and Municipal Operations Committees and related NPDES MRP provisions (C.2-6, 9, 10, 13, 17, 21)
- Ms. Lennon has 15 years of experience of fostering healthy communities by:
  - Supporting cross-disciplinary, collaborative programs to prevent and address watershed pollution
  - Coordinating stormwater management and research efforts across the Bay Area
  - Ensuring public and private compliance with clean water permits/regulations

**Yvana Hrovat, PE, QSD** Water Resources Engineer, Haley & Aldrich

- Haley & Aldrich is assisting CCCWP and Permittees with C.3 implementation
- Ms. Hrovat has 18 years of experience in assisting California municipalities and agencies with:
  - Planning, design, construction, monitoring and maintenance of Green Infrastructure and LID measures
  - Development of LID guidance and stormwater standards manuals
  - Facilitation of outreach, trainings, and public workshops

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## Topics

- 1 Effective Dates
- 2 Regulated Project Thresholds
- 3 Hydromodification Management
- 4 Green Infrastructure Retrofits

California Regional Water Quality Control Board  
San Francisco Bay Region  
Municipal Regional Stormwater NPDES Permit

**Revised Tentative Order**  
No. R2-2022-XXXX  
NPDES Permit No. CAS612008  
~~September 10, 2021~~  
**May 11, 2022**



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## Changes are Effective July 1, 2023

- Until then, MRP 2.0 thresholds and requirements will apply to:
  - Projects with approved or conditionally approved Tentative Maps
  - Projects with applications deemed complete
  - Housing projects for which a preliminary application has been submitted (per SB 330 and SB 8)



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## Regulated Project Thresholds

### Parcel Based Projects

Project Type	Threshold Area	Now	MRP 3.0
<ul style="list-style-type: none"> <li>Parking lots</li> <li>Auto service facilities</li> <li>Retail gasoline outlets</li> <li>Restaurants</li> </ul>	Cumulative	5,000 SF	5,000 SF
<b>Other Development or Redevelopment</b>	Cumulative	10,000 SF	5,000 SF
<b>Parking Lot Renovation</b>	Cumulative	Exempt*	5,000 SF
<b>Detached Single-Family</b> (not part of larger plan)	Cumulative	Exempt	10,000 SF

\*Application of C.3 requirements to parking lot renovations has varied by jurisdiction and by project

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## Regulated Project Thresholds

### Roads, Sidewalks, and Trails

Project Type	Threshold Area	Now	MRP 3.0
<b>New roads</b> , including sidewalks and bike lanes <ul style="list-style-type: none"> <li>Includes widening with additional lanes</li> </ul>	Contiguous	10,000 SF	5,000 SF
<b>New stand-alone trail projects</b> $\geq$ 10 feet wide <ul style="list-style-type: none"> <li>Unless are pervious pavement per <i>Guidebook</i> criteria</li> <li>Or direct runoff to a vegetated area @ 2:1 ratio</li> </ul>	Contiguous	10,000 SF	5,000 SF
<b>Stand-alone Public Works ROW projects</b> <ul style="list-style-type: none"> <li>Sidewalk gap closures</li> <li>Sidewalk replacement</li> <li>ADA curb ramps</li> </ul>	Contiguous	10,000 SF	5,000 SF

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## Regulated Project Thresholds

### Roads, Sidewalks, and Trails

Project Type	Threshold Area	Now	MRP 3.0
Reconstructing* existing roads • Includes sidewalks and bicycle lanes	Contiguous	Exempt	1 acre
Extending pavement surface without adding lanes (e.g. safety improvements or paving shoulders)	Contiguous	Exempt	1 acre
Utility trenching projects $\geq$ 8 feet wide on average	Contiguous	Exempt	1 acre

\*Removing and replacing an asphalt or concrete pavement to the top of the base course or lower, or repairing the pavement base in preparation for surface treatment



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## Summary

### These are now regulated projects:

- Construction of one detached single-family home that creates or replaces 10,000 SF or more of impervious surface.
- All other projects that create or replace 5,000 SF or more of impervious surface.
- 5,000 SF or more of parking lot renovation where base course is affected.
- 1-acre (contiguous) or more of utility trenching, road maintenance that affects the base course and extension of the roadway without adding lanes.

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## C.3 Updates Summary Table

MRP 3.0: Development Projects Requiring LID Treatment for Stormwater					
Project Type/Description	Impervious surface area created or replaced				
	Threshold Area	MRP 2.0	MRP 3.0	Notes	Subprovision
<b>Parcel-Based Requirements</b>					
Detached single-family home not part of a larger plan of development	Cumulative	Exempt	10,000 SF	1, 2, 3	C.3.b.ii.(6)
Public/private development (e.g. new library on previously undeveloped site)	Cumulative	10,000 SF	5,000 SF	1, 2, 4	C.3.b.ii.(1), (2)
Public/private redevelopment project (e.g. renovated hospital)	Cumulative	10,000 SF	5,000 SF	1, 2, 4	C.3.b.ii.(3)
Renovation of existing public/private parking lots and other pavement (see applicable activities below)	Cumulative	Exempt	5,000 SF	1, 2, 4, 5	C.3.b.ii.(1)
<b>Roads, Sidewalks, and Trails</b>					
New roads, including sidewalks and bike lanes	Contiguous	10,000 SF	5,000 SF	1, 6	C.3.b.ii.(4)
Adding traffic lanes to an existing road	Contiguous	10,000 SF	5,000 SF	1, 6	C.3.b.ii.(4)
New stand-alone trail projects 10 feet wide or wider with impervious surface	Contiguous	10,000 SF	5,000 SF	1, 7	C.3.b.ii.(4)
Sidewalk gap closures, sidewalk replacement, ADA curb ramps not associated with a parcel-based project	Contiguous	10,000 SF	5,000 SF	1	C.3.b.ii.(3)
<b>Road Maintenance Projects</b>					
Reconstructing existing roads, including sidewalks and bicycle lanes (see applicable activities below)	Contiguous	Exempt	1 acre	1, 8, 9	C.3.b.ii.(5)
Extending roadway edge (e.g., lane widening, safety improvement, paving a graveled shoulder)	Contiguous	Exempt	1 acre	1, 8, 9, 10	C.3.b.ii.(5)
Utility trenching projects	Contiguous	Exempt	1 acre	1, 8, 9	C.3.b.ii.(5)
<b>Specific Activities: Work Included or Exempt When Calculating Threshold Area of Project (e.g. 5,000 SF, 1 acre)</b>					
Upgrade from dirt to gravel (exempt if built to spec for pervious pavement)		Included	Included		C.3.b.ii.(1)(b)(ii)
Upgrade from dirt/gravel to pavement (exempt if built to spec for pervious pavement)		Included	Included		C.3.b.ii.(1)(b)(ii)
Removing/replacing asphalt or concrete to top of base course or lower		Exempt	Included	1	C.3.b.ii.(1)(b)(ii)
Repair of pavement base (i.e. base failure repair)		Exempt	Included	1	C.3.b.ii.(1)(b)(ii)
Interior Remodels		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Repair of roof or exterior wall surface		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Pothole and square cut patching		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Overlay gravel on existing gravel		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Overlay asphalt or concrete on existing asphalt or concrete (no increase in area)		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)
Upgrade from chip seal or cape seal to asphalt or concrete (no increase in area)		Exempt	Exempt		C.3.b.ii.(1)(b)(ii)

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## Special Projects in MRP 3.0

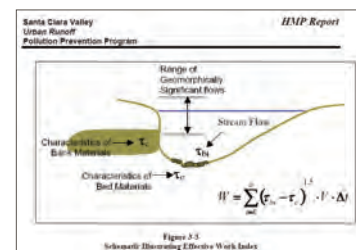
- **Category A** (unchanged):
  - Project size up to 1/2 acre, 85% lot coverage
  - Non-auto, pedestrian-oriented, zero surface parking
- **Category B** (unchanged):
  - Project size up to 2 acres
  - 25-100% non-LID, scales with FAR or DU/acre
- **Category C** (changed):
  - MRP 2.0: Applies to certain Transit Oriented Developments
  - MRP 3.0: Will apply to certain affordable housing projects only
    - Amount of non-LID is by proportion of extremely low, very low, low, and moderate-income housing
    - Additional credits for proximity to transit, more dwelling units per acre, and minimized surface parking



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## Hydromodification Management (HM)

- Applies to:
  - Projects that create or replace  $\geq 1$  acre impervious surface, unless:
    - Post-project impervious surface is less than or same as pre-project
    - Project drains to Bay/Delta or tidal zones
    - Project is in exempt/highly developed watershed
- HM Facility Sizing:
  - Continue to use methods and criteria (sizing factors) in Guidebook 7th Ed.
  - Methods and criteria will change during MRP 3.0
  - CCCWP is examining options for ongoing compliance



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## Green Infrastructure Retrofits since 2009

- **MRP 1.0:** Ten Green Streets Pilot Projects
- **MRP 2.0 (2015):**
  - Green Infrastructure Plans submitted in 2019
  - Review all capital projects for “no missed opportunities”
- **MRP 3.0 (2022)**
  - Implement retrofit projects during permit term to treat runoff from a minimum acreage of existing impervious surface



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## MRP 3.0 Minimum Green Infrastructure Retrofits

- By June 30, 2027
  - 3 acres per 50,000 population
  - May be met by each municipality or countywide
  - Minimum of 0.20 acres in each municipality
  - Capped at 5 acres for municipalities > 250,000 population
- May count toward minimum:
  - Excess existing impervious area retrofit in connection with a Regulated Project
  - Regulated Projects that are Roads Projects
  - Projects completed after January 1, 2021
  - Projects that are approved and funded by June 30, 2027



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## Green Infrastructure Retrofits Assignments

Municipality	Acres	Municipality	Acres
Antioch	5.00	Moraga	1.07
Brentwood	4.45	Oakley	2.55
Clayton	0.74	Orinda	1.20
Concord	5.00	Pinole	1.16
County	5.00	Pittsburg	4.36
Danville	2.67	Pleasant Hill	2.09
El Cerrito	1.53	Richmond	5.00
Hercules	1.58	San Pablo	1.86
Lafayette	1.60	San Ramon	4.56
Martinez	2.30	Walnut Creek	4.21

**57.32 acres  
countywide**

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## Next Steps

- C.3 Update Handout and Memorandum
- Updated C.3 Guidebook
- Inform prospective applicants and municipal planning staff of changes to applicability.
- Evaluate how permit changes impact road construction and road maintenance projects.
- Consider options and scenarios for meeting Green Infrastructure Retrofit Assignments.



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## Questions?

**Contact:** Erin Lennon, CCCWP: [Erin.Lennon@pw.cccounty.us](mailto:Erin.Lennon@pw.cccounty.us)  
 Yvana Hrovat, PE: [yhrovat@haleyaldrich.com](mailto:yhrovat@haleyaldrich.com)



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# Updated Stormwater Management Design Requirements:

## New Development/Redevelopment Projects

Changes stemming from San Francisco Bay Municipal Regional Permit (MRP) 3.0, effective July 1, 2022

Developers | Engineers | Planners | Project Applicants



## Background

The San Francisco Bay Regional Water Quality Control Board mandates stormwater pollution prevention measures for certain development projects. In May 2022, the San Francisco Bay Regional Water Quality Control Board adopted a new Municipal Regional Stormwater Permit (MRP 3.0), which included significant changes to thresholds that determine which parcel-based development and redevelopment projects are regulated. **The purpose of this handout is to communicate MRP 3.0 Provision C.3 updates that impact parcel-based projects.**

**TABLE 1. CHANGES TO REGULATED PROJECT THRESHOLDS**

Old (MRP 2.0) and new (MRP 3.0) development and redevelopment threshold areas that determine parcel-based projects. Threshold areas are cumulative.

Project Type	MRP 2.0 Threshold, sq ft	MRP 3.0 Threshold, sq ft
<ul style="list-style-type: none"> <li>• Parking lots</li> <li>• Auto service facilities</li> <li>• Retail gasoline outlets</li> <li>• Restaurants</li> </ul>	5,000	5,000
Other development or redevelopment	10,000	5,000
Parking lot renovation	Exempt*	5,000
Detached single-family (not part of larger plan)	Exempt	10,000

\* Application of C.3 requirements to parking lot renovations has varied by jurisdiction and by project.

**View or download the NPDES Municipal Regional Permit:**

(Order No. R2-2022-0018)

[https://www.waterboards.ca.gov/sanfranciscobay/board\\_decisions/adopted\\_orders/2022/R2-2022-0018.pdf](https://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2022/R2-2022-0018.pdf)

**TABLE 2. THRESHOLDS AND REQUIREMENTS FOR PARCEL-BASED PROJECTS**  
(excluding roads and public trails)\*

Non-Regulated Projects		Regulated Projects	
Impervious Area Threshold	Requirement	Impervious Area Threshold	Requirement
All projects requiring municipal approvals or permits (includes single-family residences)	As encouraged or directed by local staff, preserve or restore open space, riparian areas, and wetlands as project amenities, minimize land disturbance and impervious surfaces, cluster structures and pavements, include micro-detention in landscaped and other areas, and direct runoff to vegetated areas. Use Bay-friendly landscaping features and techniques. Include Source Controls specified in Appendix D**.	One single-family home, not part of a larger plan of development, creating or replacing 10,000 square feet	Prepare and submit a Stormwater Control Plan as described in Chapter 2**, including features and facilities to ensure runoff is treated before leaving the site. Use the LID Design Guide in Chapter 3 and the design criteria in Chapter 4**.
Projects creating or replacing more than 2,500 square feet that are not Regulated Projects	Using the template in Appendix C**, prepare and submit a Stormwater Control Plan for a Small Land Development Project. Implement one of four options: (1) Disperse runoff roof or paved area to a vegetated area; (2) incorporate permeable pavement into your project; (3) include a cistern or rain barrel if allowed by your municipality, or (4) incorporate a bioretention facility or planter box.	All other projects creating or replacing between 5,000 square feet (10,000 square feet for projects approved before 7/1/2023) and one acre	
		Projects creating or replacing one acre or more, unless exempted.	Design LID features and facilities for hydromodification management (HM) as well as stormwater treatment. Prepare and submit a Stormwater Control Plan as described in Chapter 2** and use the LID Design Guide in Chapter 3**.

\* Summary only. Requirements for your project are determined by your municipality.  
\*\* CCCWP Stormwater C.3 Guidebook

# FAQs

**Q - Why does this requirement matter?**

**A** - Development is a major contributor to stormwater pollution due to increases in impervious surfaces like roads, parking lots, and rooftops preventing stormwater from infiltrating into the ground. Storm drain systems collect and convey this urban runoff and, in most cases, discharge directly to surface waters without treatment, contributing significant quantities of pollutants to surface waters. However, if runoff is properly managed, stormwater pollutants can be attenuated and stormwater can be a valuable resource. MRP 3.0 requirements promote low impact development (LID) techniques and green infrastructure (GI) designs, aimed to encourage stormwater as a resource and prevent or minimize the discharge of pollutants contained in stormwater runoff.

**Q - What are the new regulated project thresholds for parcel-based projects?**

**A** - Impervious surface threshold for most projects will drop from 10,000 to 5,000 sq ft.

- New categories of regulated projects include:
  - Road and sidewalk repair projects ≥ 5,000 contiguous sq ft
  - Detached single family home that creates or replaces ≥ 10,000 sq ft

**Q - Are threshold areas cumulative or contiguous?**

**A** - Thresholds are cumulative for parcel-based projects.

**Q - When are the requirements in effect, and how will this impact projects already underway?**

**A** - Changes are in effect July 1, 2023. Until July 1, 2023, MRP 2.0 thresholds and requirements will still apply to:

- Projects with approved or conditionally approved Tentative Maps.
- Projects with applications deemed complete.
- Housing projects for which a preliminary application has been submitted (per SB 330 and SB 8).

**Q - Is there updated guidance that details these requirements?**

**A** - The CCCWP Stormwater C.3 Guidebook and related resources are in the process of being updated to reflect new permit requirements. Stay tuned! The current guidebook can be found on our website (below). Stormwater C.3 Guidebook - Contra Costa Clean Water Program ([cccleanwater.org](http://cccleanwater.org))

**Q - Where can I obtain further information?**

**A** - For any additional questions regarding this new guidance, please contact the Contra Costa Clean Water Program at (925) 313-2360 or visit us online at: <https://www.cccleanwater.org/development-infrastructure/development>.



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