



RMP Steering Committee Meeting

November 2, 2022

1:00 PM – 3:30 PM

IN PERSON (masks required)

SFEI

4911 Central Ave, Richmond, CA

REMOTE ACCESS

<https://us06web.zoom.us/j/92590225613>

Meeting ID: 925 9022 5613

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AGENDA

Steering Committee Meeting		
1.	Introductions and Review Goals for the Meeting	1:00 (10 min) Tom Mumley
2.	Decision: Approve Meeting Summary from July 20, 2022, and Confirm Dates for Future Meetings Scheduled meetings: January 25, 2023 Proposed meetings: April 26, 2023	1:10 (10 min) Tom Mumley, Group

	<p>Other scheduled meetings: TRC meeting: Thursday, December 8, 2022</p> <p>2023 Annual Meeting: October 5 or 12</p> <p>Materials: SC Meeting Summary, pages 5-14</p> <p>Desired outcomes:</p> <ul style="list-style-type: none"> • Approve meeting summary • Confirm future SC meeting and Annual Meeting dates 	
3.	<p>Decision: Confirm Chair and Review the Charter</p> <p>Confirm/select Steering Committee Chair and review the Program Charter.</p> <p>Materials: RMP Charter, pages 15-41; Suggested edits to the Charter, page 42</p> <p>Desired outcomes:</p> <ul style="list-style-type: none"> • Confirm Chair • Approve suggested edits to Charter 	<p>1:20 (15 min)</p> <p>Melissa Foley</p>
4.	<p>Information: TRC Meeting Summary</p> <p>Topics discussed at the most recent TRC meeting included:</p> <ul style="list-style-type: none"> • Status and Trends Review activities for 2023 <p>Materials: TRC Meeting Summary, pages 43-49</p> <p>Desired Outcome:</p> <ul style="list-style-type: none"> • Informed committee 	<p>1:35 (10 min)</p> <p>Melissa Foley</p>
5.	<p>Information: RMP Financial Update for 2022 Quarter 3</p> <p>The RMP Financial Update summarizes the balance of budgeted and reserved RMP funds as well as its cash position. The presentation will also review incomplete projects from the previous year and revised schedules to complete these projects.</p> <p>Materials:</p> <ul style="list-style-type: none"> • Financial Update Memo, pages 50-85 <p>Desired outcomes:</p> <ul style="list-style-type: none"> • Informed Committee 	<p>1:45 (15 min)</p> <p>Jen Hunt, Melissa Foley</p>

6.	<p>Decision: Draft Detailed Workplan and budget for 2023</p> <p>The RMP Manager will provide a draft Detailed Workplan and budget for 2023, including costs for S&T sampling in 2023 based on the revised design.</p> <p>Materials: Draft 2023 Detailed Workplan, pages 86-118</p> <p>Desired outcome:</p> <ul style="list-style-type: none"> Approval of 2023 workplan and budget (can be finalized in January, if need be), particularly for projects that require early release of funds 	<p>2:00 (15 min)</p> <p>Melissa Foley</p>
7.	<p>Discussion: Event-based monitoring and funding</p> <p>The recent HAB event is another example of the potential need for event-based monitoring in the Bay. The SC will discuss the role of the RMP in these events, process for reviewing event needs, and whether funds should be set aside in a designated account or used from the unallocated reserves.</p> <p>Materials: See Financial Report for balance of current set-aside and undesignated reserve accounts, pages 55 and 69</p> <p>Desired outcome:</p> <ul style="list-style-type: none"> RMP role for event-based monitoring, funding options, and process for reviewing event needs 	<p>2:15 (15 min)</p> <p>Melissa Foley</p>
8.	<p>Information: Website update</p> <p>Provide an update on changes to the RMP website and identify sections for SC input.</p> <p>Materials: Draft website, areas for SC input, page 119</p> <p>Desired outcome:</p> <ul style="list-style-type: none"> Informed Committee 	<p>2:30 (20 min)</p> <p>Martin Trinh</p>
9.	<p>Discussion: Communications</p> <p>Debrief RMP Annual Meeting and Pulse and Estuary News topics. Review communication product types for the RMP.</p> <p>Materials: None</p> <p>Desired outcomes:</p> <ul style="list-style-type: none"> Feedback on the 2022 Annual Meeting and Pulse Brainstorm topics for 2023 Estuary News articles Identify priority communication product types 	<p>2:50 (25 min)</p> <p>Jay Davis</p>

10.	<p>Discussion: Status of RMP Deliverables and Action Items Materials:</p> <p>Action Items & Deliverables Stoplight Reports, pages 120-123</p> <p>Desired outcomes:</p> <ul style="list-style-type: none"> ● Informed committee ● Feedback on progress and due dates 	<p>3:15 (5 min)</p> <p>Melissa Foley</p>
11.	<p>Discussion: Plan Agenda Items for Future Meetings</p> <p>Desired outcome:</p> <ul style="list-style-type: none"> ● Identify future agenda items, including science updates 	<p>3:20 (5 min)</p> <p>Tom Mumley</p>
12.	<p>Discussion: Plus/Delta</p>	<p>3:25 (5 min)</p> <p>Tom Mumley</p>
13.	<p>Adjourn</p>	<p>3:30</p>

Recently Completed RMP Reports/Products

Davis, J.; Foley, M.; Askevold, R. A.; Sutton, R.; Senn, D.; Plane, E. 2022. 2022 Pulse of the Bay. SFEI Contribution No. 1095. San Francisco Estuary Institute: Richmond, California.

Gilbreath, A.; Davis, J. 2022. Priority margin unit stormwater monitoring to support load estimates of PCBs into San Leandro Bay and the Emeryville Crescent. SFEI Contribution No. 1088. San Francisco Estuary Institute: Richmond, CA.

Jones, C.; Davis, J.; Yee, D. 2022. Strategy for In-Bay Fate Modeling to Support Contaminant and Sediment Management in San Francisco Bay. SFEI Contribution No. 1090. San Francisco Estuary Institute: Richmond, California.

Mendez, M.; Grosso, C.; Lin, D. 2022. Summary and Evaluation of Bioaccumulation Tests for Total Polychlorinated Biphenyls (PCBs) Conducted by San Francisco Bay Dredging Projects. SFEI Contribution No. 1092. San Francisco Estuary Institute: Richmond, California.

Shimabuku, I.; Chen, D.; Wu, Y.; Miller, E.; Sun, J.; Sutton, R. 2022. Occurrence and risk assessment of organophosphate esters and bisphenols in San Francisco Bay, California, USA. *Science of the Total Environment* 813. SFEI Contribution No. 982.

Wang, M.; Kinyua, J.; Jiang, T.; Sedlak, M.; McKee, L. J. .; Fadness, R.; Sutton, R.; Park, J. -S. 2022. Suspect Screening and Chemical Profile Analysis of Storm-Water Runoff Following 2017 Wildfires in Northern California. *Environmental Toxicology and Chemistry*. SFEI Contribution No. 1089.

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Bay RMP Steering Committee Meeting

July 20, 2022

San Francisco Estuary Institute

Meeting Summary

Attendees

SC Member	Affiliation	Representing	Present
Eric Dunlavey	City of San Jose	POTW-Large	Y
Amanda Roa	Delta Diablo	POTW-Small	Y
Karin North**	City of Palo Alto	POTW-Medium	Y
Adam Olivieri	BAMSC / EOA, Inc.	Stormwater	Y
John Coleman	Bay Planning Coalition	Dredgers	N
Tessa Beach	US Army Corps of Engineers	USACE	N
Tom Mumley*	SF Bay Regional WQCB	Water Board	Y
Maureen Dunn	Chevron	Refineries	Y

* Chair, ** Vice Chair, alternates in gray and italicized

Staff and Others:

- Melissa Foley, SFEI
- Jen Hunt, SFEI
- Martin Trinh, SFEI
- Luisa Valiela, EPA
- Kelly Moran, SFEI
- Rebecca Sutton, SFEI
- Ezra Miller, SFEI
- Diana Lin, SFEI

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1. Introductions and Review Goals for the Meeting

After a roll call, Tom Mumley briefly reviewed the meeting's agenda. Items of interest include the ongoing Water Quality Improvement Fund (WQIF) proposal, 2023 Special Study approval, and Annual Meeting and Multi-Year Planning Workshop planning.

2. Decision: Approve Meeting Summary from April 27, 2022, and Confirm Dates for Future Meetings

Tom Mumley asked the group for any final comments on the previous meeting's summary. Receiving no comments, he continued to confirm the dates for upcoming meetings. The date of the 2022 Annual Meeting was confirmed for October 3, 2022. The upcoming joint Multi-Year Planning (MYP) and Steering Committee (SC) meeting was confirmed for November 2, 2022. The next SC meeting was proposed for January 25, 2023, with members approving this date. Upcoming Technical Review Committee (TRC) meetings will be held September 21, 2022, and December 8, 2022. No members voiced any conflicts with upcoming meeting dates and all confirmed they received calendar invites for the upcoming Multi-Year Planning Workshop and RMP Annual Meeting.

Action Items:

- Send out 2022 AM calendar events to RMP committee members (Martin Trinh, August 20, 2022).
- Send January SC meeting invitation (Martin Trinh, September 1, 2022)
- Confirm digital hosting platform for 2022 Annual Meeting (Melissa Foley, September 1, 2022)

Decision:

- Adam Olivieri motioned to approve the meeting summary. Karin North seconded the motion. The motion was carried by all present members.

3. Information: TRC Meeting Summary

Melissa Foley provided the SC with a summary of the previous month's TRC meeting, including the WQIF Update, Annual Meeting and other communications items, as well as recommendations for 2023 funding for special studies and SEP funding proposals. Many of these items were also on the agenda for the SC Meeting so a brief overview of each was given.

Tom noted an inaccurate statement in the TRC meeting summary, which suggested microplastic levels in the Bay were above regulatory thresholds. He clarified that there is not an established microplastic threshold for the Bay and expressed that it would not be appropriate for such a statement to be on the public record. Kelly Moran noted that state legislators are currently proposing and developing microplastic thresholds.

Action Item:

- Update TRC Summary with edit from Tom (Martin Trinh, September 7, 2022).

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4. Information: RMP Financial Update for 2022 Quarter 2

Jen Hunt provided the regular financial update for Q2 of 2022 to the Committee. Looking at the big picture, there was a small surplus of \$3.5k in 2021 due to higher dredging fees than planned. There is \$14k in SEP funding, with Tom clarifying that is the current accumulation of MMP funds. For 2018 and 2019, 99% and 94% of fees have been collected, with hopes to unencumber 2018 soon (one active project remaining). Currently, 90% and 70% of the budget has been expended for 2020 and 2021, respectively, with 100% of 2020 fees already collected and 98% of 2021 fees collected. 26% of the 2022 budget has been expended and 49% of invoiced fees have been collected. There is a surplus of \$138k for 2022 after \$350k was transferred to the S&T Set Aside fund.

Jen mentioned the Q1 LAIF interest rate of 0.32% (\$3,481) that had gone down from 0.36%, but noted it should increase in the future. The funds obtained from Schnitzer Steel for years 2018-2021 were put into the undesignated reserve. There were no additional requests to the unbudgeted funds. There were no decision items this quarter. There were no questions or comments from Committee members.

5. Information: Website Update

Martin Trinh of SFEI provided an update on the status of the ongoing redesign of the RMP webpage. He highlighted the goals of unifying SFEI pages, enhancing access to information most used by stakeholders, and easy access to data. Working with Tony Hale, the redesign will primarily focus on organizing the varied projects of the RMP into a navigable structure that will be intuitive for SC and TRC members. Adopting an aesthetic that resembles the newly redesigned SFEI Environmental Informatics and Resilient Landscape pages, the RMP webpage will follow a hierarchy of main tabs, related sub tabs, and accordions. SC members expressed interest in having a “SC/TRC only” area for draft products. Martin will work with Tony on how to implement this, as not everyone can access Google Drive files. WordPress and SharePoint were recommended for accessing files. Following the presentation, SC members provided feedback on aesthetic and structural aspects. Martin gave an update on the anticipated timeline of the effort. A beta version will go live at the beginning of September and all feedback regarding text and structure should be submitted by the end of September. It will be important for TRC/SC to test drive the structure to make sure they can find what they need easily. The site is planned to go live by October, following final comments by SC. Tom recognizes the desire to have the website live, but has concerns about the timeline for incorporating feedback. Martin reassured the group that feedback can be continuously incorporated and the website will be constantly evolving.

Action Items:

- Share updated RMP website beta with Steering Committee (Martin Trinh, September 6, 2022)

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6. Discussion: Water Quality Improvement Fund Proposal Approval Process

Melissa gave an update on the ongoing joint RMP and NMS WQIF proposal and reviewed the upcoming timeline. The RFA will be open for eight weeks once announced. Ian Wren will oversee proposal development as a representative of both the RMP and NMS committees. Melissa confirmed that Committee members gave approval to use RMP funds as match for the proposal, including Status & Trends and already approved Special Studies. Special Studies in the Multi-Year plan but not yet funded will not be used as match in order to retain the RMP process for prioritizing and funding studies in future years.

Melissa outlined some key upcoming dates for proposal preparation. Requests for letters of support will be sent to partners at the end of July. Letters should link efforts to management and implementation items. Adam requests that drafts be sent to individual committee members. Luisa clarified for Tom that letters should make explicit how partners will be able to use the information provided by the studies proposed. Letters of support will be due to Melissa by September 9. The list of projects being used as matching funds will be sent to the SC by August 19. This budget will outline what funds will be requested from the EPA and which funds will be matched by the RMP. A draft proposal narrative will be sent by August 29, with comments due on September 9. The RFA has a 15-page limit and will be a higher-level description. Tom requested to be an initial reviewer. Final proposals will be submitted to the EPA by September 20. Luisa clarified to the Committee that there were two pots of funding available for this funding round: \$5 million was made available from the bipartisan infrastructure bill for environmental justice projects, and is intended to provide funds to community-based organizations. The funds the RMP will be requesting will come out of the \$24 million pot, with requests typically totaling \$1-3 million for more on the ground projects. Luisa confirmed that matches are not set in stone and could be moved around accordingly after funds are received, but applicants must demonstrate the ability to match EPA funds in the proposal. She informed the Committee that Tomás Torres will be the official approver of applications.

7. Decision: Approve Special Studies for 2023 and List of Eligible RMP Studies for SEP Funding

Melissa reviewed the recommendation from the TRC to fund 15 out of 16 special studies across five workgroups and the NMS, totaling \$1,436,00 in funds. An additional \$158k was requested to support workgroup strategies. Core funding of \$1,083,586 is available, with additional alternative monitoring funds for contaminants of emerging concern (CECs) of \$329,600, for a total available funds of \$1,413,186. Additional funding is expected from two sources: \$100k of funds designated for stormwater CECs and \$119k from SEP funding. Without these funds, the request for studies exceeds available funds by \$119,814. Because these funding sources are relatively certain, the Committee tentatively agreed to fund this total request of \$1,533,000. If the funds do not come through, the Committee can decide to tap into reserve funds or cut some studies at a future meeting. However, if both funds are available, there would be \$100k left over which could fund the microplastic dryer fiber study. Tom clarified that the microplastics study had

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been moved to the SEP list, and had not necessarily been recommended for more funding by the TRC.

Following this review of the budget, Melissa outlined the strategy goals for each of the five workgroups, highlighting budgets and upcoming plans. Tom offered some hesitation but agreed that these funds will all contribute to the update of the RMP Multi-Year Plan (MYP). He added that workgroup structure must continually be optimized as more and more cross-workgroup coordination occurs. Melissa clarified that these strategy funds are necessary to support the background work leading up to annual workgroup meetings. Tom discussed the adapting nature of Status & Trends and asked how those fluctuating costs would be covered.

Discussion continued on the microplastic dryer fiber study. Following previous advice from the Microplastics Workgroup to prioritize and focus on sources and pathways, this study was designed to inform management strategies for fibers. Source assessment is needed to inform the contribution of the stormwater pathway for microplastics relative to other sources. This study requested one year's worth of funding from the RMP with no commitment for following years. This seed funding would be helpful in convincing the Ocean Protection Council (OPC) to fund additional years of the study. If technical aspects of the funding are not in question, then funding could be made contingent on the availability of alternative funding sources. Diana Lin clarified that previous microplastics studies found that stormwater concentrations were two orders of magnitude greater than wastewater concentrations, with half of stormwater concentrations by volume being fibers. Kelly Moran stated that there was not enough data to prove that dryers were urban sources of fibers, with European literature on this subject sparse. The tumble dryers used in the U.S. are not common in the rest of the world, so few studies are being conducted on the subject. Large industrial laundries could be observed, but residential units may be missed. Low air emissions, close to the ground, have been conceptually modeled as pathways into stormwater and into the Bay. Karin wondered how this study fits into the RMP specifically since it is an air monitoring study, noting that it is not dissimilar to past RMP air monitoring studies. Eric Dunlavey agreed that workgroup guidance to focus on sources is useful and actionable and stated that similar work has been conducted in the past (dioxin air emissions, copper brake pads). Maureen appreciated this reminder. Eric thought results from the study would be worthwhile information and liked the idea of keeping funding contingent on finding funding for additional years. Adam Olivieri suggested using SEP funds to support the project. Tom reiterated that the Water Board does not support this project, noting that the Workgroup advice was driven by external entities, not the RMP. He noted that the brake pad study was a result of requirements the Water Board imposed on Santa Clara to conduct source investigations. He posed a concern about how to directly measure sources, stating that extrapolating findings related to runoff requires a lot of effort and could introduce uncertainty. He stated that past efforts have also been more certain that action will follow. To consider funding this study, Tom would like a better idea of what would happen moving forward, after data is generated in Year 1 of the study. Diana agrees that there is uncertainty in the analysis and noted that no other groups were pursuing this. If findings are significant, then she thinks other parties would be interested in pursuing similar efforts. Kelly noted there is statewide interest in collecting fibers from washing machines, following the passage of statewide guidelines by OPC, but that this study is guided by the science that points to stormwater as the major source of fibers to the Bay,

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not washers and wastewater. This microplastics study will be discussed if additional SEP or RMP funding becomes available.

Melissa reviewed recently funded SEP studies, which include PFAS and chlorinated paraffins in sediment, shoal mapping of nutrients and chl-a, sediment modeling in the Bay and additional studies totaling over \$300k in review. Two studies were proposed to be added to the SEP list: Measurement of sediment deposition in priority margin units (PMU) and measurement of water and sediment exchange between San Leandro Bay (SLB) and San Francisco Bay. Tom supported adding these projects to the list and emphasized their importance. PCB funding has been reduced in recent years and these efforts would help inform the upcoming TMDL recommendations. Luisa voiced her support as well, but is open to funding the projects through alternative pathways.

Decisions:

- Adam Olivieri motioned to approve the TRC special study recommendations, recognizing the potential shortfall of \$120k. Projects will be funded conditionally on the availability of funds. Maureen Dunn seconded the motion. The motion was carried by all present members.
- Eric Dunlavy motioned to approve the two additions to the SEP list. Karin North seconded the motion. The motion was carried by all present members.

8. Discussion: Role of the RMP in Future Microplastics Work

Diana requested feedback from the Committee on the role of the RMP in future microplastics work. She noted that consensus from past stakeholder meetings advised the Microplastics Team to focus on sources and pathways to inform management actions, as well as understanding how much microplastic pollution is in the Bay and resulting impacts to aquatic life. The SFEI Microplastics Team is looking for clear direction and rationale from the Committee in order to plan its next steps. Kelly noted that widely discussed management actions on microplastics are not well supported by science. The Microplastics Team has been invited to join a wide variety of discussions on how to manage microplastics. Other scientists, agency staff, and environmental advocacy groups tend to focus on a narrow set of actions such as reducing/eliminating single-use plastics, requiring fiber filters on washing machines, wastewater treatment, and stormwater treatment using green stormwater infrastructure. However, these types of actions do not address the major sources of microplastics. Previous studies indicate the main pathway to the Bay was urban runoff, and 85% of particles were tire wear particles and fibers. Fibers in particular are a major data gap because this is the main type of microplastics that wildlife in the Bay and around the world are ingesting, but major sources are still in question. The RMP can help steer the science discussions and inform management. The Microplastics Team has encouraged OPC to include investigation of sources and pathways in the science strategy to inform solutions for microplastics. OPC has expressed interest in supporting the fiber study. If OPC includes source identification in their funding priorities, this would be the only funding source that the RMP is aware of that identifies source identification as a priority to inform microplastic management.

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Diana requested the Committee give further guidance on the priority management questions they would like answered, if they believe the Workgroup should be focusing on sources and pathways or on Bay monitoring, as well as the RMP's role in guiding science and management discussions. Finally, she asked how to apply relatively small, strategic investments to inform these discussions.

Tom clarified that management questions one and three were the primary drivers for the Workgroup, with question three informing question five. He noted that microplastics were considered a moderate level of concern based on the RMP's tiered risk framework. Tom voiced that he thinks going down the regulatory path is a rabbit hole, with Adam agreeing that the regulatory pathway is not the ideal way to focus on this issue. Luisa voiced that this should be a more round-robin styled discussion with input from everyone. She appreciated SFEI's desire to become leaders in this field and their proactiveness. As this potential contaminant does not have water quality objectives yet, she supports this concern but cannot justify huge financial investment. She also noted that source control should really be focused on clothes rather than dryers, and stated the need to work on the jargon to ensure nothing is misrepresented. Diana responded noting that a lot of research funding is going to understand health risks and there are conversations on how to best make clothing. Kelly added that this effort could develop similarly to how pesticides were eventually given water quality objectives.

On the issue of future funding, Tom noted how CEC studies were funded at around \$100k a year prior to the extra municipal wastewater funding and potential stormwater funding dedicated to CECs. He suggested looking for alternative funding resources for microplastics work. Diana noted a \$75k placeholder in the MYP for microplastics studies. Eric suggested figuring out an exact dollar amount allocation for the Microplastic Workgroup at the MYP Workshop. Tom reminded the group that SEP funds cannot fund part of a project, but the Committee agreed that this proposal should be kept on the table, expecting funding from OPC.

Luisa clarified for Tom that Mike Montgomery was the EPA lead for PCB clean up.

9. Discussion: Multi-Planning Workshop Agenda

The goal of this discussion was to identify agenda items for the 2022 MYP Workshop. This will be a higher level discussion, with the possibility of a small group meeting before the workshop to finalize the agenda. Possible items include stakeholder topics of interest, information priorities for 2023 and beyond, MYP update and vision for 2024, workgroup structure and cross-workgroup approach, program and project integration, and review of S&T plans for 2023 and 2024 with the revised design. Prior to the MYP, Melissa and Jay will provide RMP updates to the four stakeholder groups to get input on their priorities. Prioritizing information for 2023 and beyond requires a review of the management driver table to identify upcoming data needs. The MYP update plan and vision for 2024 (draft in October 2023) would consist of talking through plans for each workgroup to update strategies, timelines for the update, and processes to

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ensure coordination. Workgroup structure will be discussed in regard to timing and focus, in particular, the developing overlap between SPL and EC workgroups. Tom would also like to focus on integration on the program level, making sure efforts are coordinated and integrated.

Karin echoed the need to reflect on past cross-workgroup efforts and think about ways this process can become more efficient while supporting the increased demands on staff. Adam supported adding an item to discuss funding sources for collaborative efforts, like the aforementioned microplastics study. Tom reiterated the importance of this for sediment as well, as the RMP has not been able to adequately financially support recent and future sediment needs. The later November meeting will allow the Committee to better prepare itself for this meeting by reviewing items of interest in advance. Tom wants to ensure that workgroups are given enough resources and time to adequately prepare themselves ahead of the 2024 MYP update, emphasizing the need to be proactive. In light of recent collaborative efforts and the application for the WQIF grant, Eric would like to discuss ongoing pursuit of external grants. Melissa clarified for Adam that workgroups generally seek external funding for projects, but there is no coordinated effort within the RMP at the moment. This is starting to ramp up at the organizational level, but the RMP has to be careful as SFEI loses money on some state and federal projects as they fall below the breakeven multiplier. Tom notes that there is limited grant money available for studies as these funds are typically limited to implementation. Tom accepts that SFEI will have to challenge itself to find funds in the future, suggesting that funds from corporate sponsors may need to be investigated in the future. Karin suggested adding Luisa along with Tom and Karin to the planning process. Melissa will add Bridgette DeShields and Chris Sommers from the TRC as well.

Action Items:

- Touch base with workgroup leads in advance of MYP meeting (Melissa Foley, November 1, 2022)
- Finalize MYP agenda (Melissa Foley, October 15, 2022)

10. Discussion: Communications

Jay was not able to attend the meeting, so Melissa led the communications items. Melissa began this item by giving an update on the upcoming Pulse. Draft articles should be submitted as soon as possible. Some participants have already submitted their perspectives, with the Water Board slated to submit theirs soon. Participants requested the ability to review the work of others. Melissa requested that all draft articles be submitted by the end of August.

Discussion of the Annual Meeting began by discussing whether the meeting would be held in person or virtually. Melissa shared Lorien Fono's experience hosting the BACWA conference in person (early May). Tom agreed that it was too early to decide to shift entirely online and suggested some precautions that would allow for an in-person meeting. Melissa previewed the agenda for the day. The meeting will be organized into four blocks as usual, with the first segment focused on perspectives on Bay Area Water quality and the 50th anniversary of the

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Clean Water Act. Luisa and Jay are still coordinating with Jackie Speier’s staff, but the Committee is excited for her participation. Luisa could speak on the WQIF, although she will be embargoed from sharing too much. However, she could give perspective on past funded projects. Other Water Board members such as Andy Gunther, Jim McGrath, and Alexis Strauss-Hacker could speak as well. The Pulse authors were suggested to speak in a panel, but Committee members felt that individual speakers would be better. The main concern for this section is to have contingency plans hinging on Jackie Speier’s availability.

The second section will be focused on CECs, with Simona Balan (DTSC) presenting on essential use approaches and Martin Trinh previewing a report on PFAS in the Bay. Additional topics could include the State CEC synthesis, triclosan in small fish and sunscreen in wastewater although this is still waiting for data quality assurance. Eric supported the presentation of the State CEC synthesis, with Tom adding that this tiered risk framework has not been publicized yet. Tom likes the idea of integrating this with Melissa’s RMP program update as the Status & Trends is focused on CECs. The third block would focus on PCBs, with Jay Davis giving a general update on field studies and management developments in SLB and SS/RC in addition to the in-Bay modeling plan, Setenay Frucht providing an update on the Water Board’s TMDL review and potential revision, and Mike Montgomery or another EPA representative presenting on the EPA/Water Board cleanup of contaminated sites. Miriam Diamond, a workgroup advisor, could also give a big picture perspective on managing PCBs. The final block will focus on sediment, nutrients, and other RMP updates. Katie McKnight will present on the Sediment Conceptual Model, followed by a presentation on sediment work near Whale’s Tail marsh by Jessie Lacy of the USGS. Melissa Foley could give an update on the Status and Trends update in this section if not in the CECs block. Additional possibilities include a presentation on the Watershed Dynamic Model by Tan Zi, a high level overview of the NMS by Dave Senn, or a shoal synthesis by Ariella Chelsky or Dan Killam. The Committee recommended coupling the Whales Tail sediment talk with the sediment conceptual model and the shoal synthesis and moving the Status & Trends update to the CECs block.

The item concluded by previewing the upcoming Estuary News articles. The September edition will focus on the impacts of drought on RMP monitoring efforts. As there is no data available on the subject, the article will focus on how the drought has affected stormwater monitoring and planning. Melissa clarified that there are some effects we know about in the Bay from drought. For example, sediment is affected as there is less dredging in periods of low rain due to reduced sediment loading to the Bay. The December edition will focus on the 50th Anniversary of the Clean Water Act and the RMP Annual Meeting.

Action Items:

- Finalize Annual Meeting agenda (Jay Davis, September 1, 2022)

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11. Information: Recent RMP Communication Products

Melissa reviewed recently released RMP communications products. Completed manuscripts include: North Bay fire stormwater runoff (Sedlak, McKee, Sutton), health impacts of microplastics to humans and aquatic ecosystems (Miller), risk-based management framework for microplastics (Miller), tools for the exploration of microplastic toxicity (Miller), and organophosphate esters and bisphenols in SF Bay (Shimabuku, Miller, Sutton, Sun). Technical reports include POC stormwater monitoring (McKee and Gilbreath) and PCBs in stormwater flowing to PMUs (Gilbreath and Davis). The microplastics team has released a factsheet on tire particles in SF Bay, led by Kelly Moran. The Emerging Contaminants team has been giving presentations on tire wear particles and microplastics to the USEPA, SETAC EU conference, and Genetic and Environmental Toxicity Association. Tan Zi recently gave a presentation on the sediment module of the Watershed Dynamic Model to the CA Environmental and Water Modeling forum. The ECs team has been active in the media, presenting to news outlets about tire pollutants and chemicals, even in Spanish outlets, with Miguel Mendez giving an interview about plastic in fish to Telemundo. Additionally, the team has been supporting stakeholders in fulfilling 6PPD-quinone information requests, providing input on pesticide toxicity reference values, and peer reviewing copper analysis methodology.

12. Discussion: Status of RMP Deliverables and Action Items

Melissa reviewed the status of ongoing RMP deliverables. Overdue work includes the MTC land use layer update, sediment erosion and deposition in SF Bay report, sediment model calibration report (Watershed Dynamic Model), PCB sediment threshold, floating percentile method, and In-Bay modeling strategy. Delayed work includes the integrated modeling and monitoring strategy (late summer), bisphenols in sediment and wastewater report (late summer), margins sediment report (autumn), QA summary for 2020 (waiting for margins data), and sediment conceptual model (autumn). Deliverables with upcoming due dates include the PFAS in Bay water report, CECs in stormwater data QA, sediment settling velocity in South Bay, sediment flocculation at Benicia Bridge, non-target analysis of sediment and water, Steinberger Slough draft report, sediment bioaccumulation draft report, and bird egg collection.

13. Discussion: Plan Agenda Items for Future Meetings

Items of interest for the upcoming November 2, 2022, SC meeting include the 2023 workplan and budget, an update on the WQIF proposal, and potential external funding sources.

Adjourn

November 1, 2017

CHARTER

Regional Monitoring Program for Water Quality in San Francisco Bay

Purpose, Organization and Governance

1.0 Introduction and Background

1.1 Purpose

This Charter describes the purpose and function of the Regional Monitoring Program for Water Quality in San Francisco Bay (RMP). Established in 1993, the RMP is a collaborative effort between the San Francisco Estuary Institute, the California Regional Water Quality Control Board, San Francisco Bay Region, and the regulated discharger community.

1.2 Definitions

RMP or “the Program” means the Regional Monitoring Program for Water Quality in San Francisco Bay;

The “Regional Board” means Regional Water Quality Control Board, San Francisco Bay Region;

USEPA means the U.S. Environmental Protection Agency, Region IX;

SFEI or “the Institute” means San Francisco Estuary Institute;

“Participants” means organizations that contribute to the RMP to satisfy a permit condition, the Regional Board, USEPA, and SFEI (see Appendix A);

“Participant Groups” means groups of similar types of Participants such as publicly owned treatment works (POTWs), dredgers, stormwater agencies, industrial dischargers, dischargers, and the individual regulatory agencies;

“Representative” means a person who represents a particular Participant Group on a committee;

“Interested Parties” means organizations or individuals who have expressed an interest in the Program, such as non-governmental organizations, state agencies, federal agencies, and businesses, but are not Participants as defined above; and

“Water Board” means the San Francisco Bay Regional Water Quality Control Board.

2.0 Guiding Principles of the Regional Monitoring Program

The overarching goal of the RMP is to collect data and communicate information about water quality in San Francisco Bay in support of management decisions. The RMP was created in 1993 through Regional Board Resolution No. 92-043 that directed the Executive Officer to implement a Regional Monitoring Plan in collaboration with permitted dischargers pursuant to California Water Code, Sections 13267, 13383, 13268, and 13385. The goal was to replace individual receiving water monitoring requirements for dischargers with a comprehensive Regional Monitoring Program.

The Program is guided by a Memorandum of Understanding (MOU) between the Regional Board and SFEI, first approved in 1996 and amended at various times since (see Appendix C of this Charter). Section VIII of the MOU states the roles and responsibilities of the Regional Board and SFEI in the implementation of the Program. Participating dischargers pay fees to the Program to comply with discharge permit requirements. The cost allocation schedule for Participants is described in Appendix B. The RMP provides an open forum for a wide range of Participant Groups and other Interested Parties to discuss contaminant issues, prioritize science needs, and monitor potential impacts of discharges on the Bay.

In support of the overarching goal described above, the following guiding principles define the intentions and expectations of RMP Participants. Implementation of the RMP will:

- Develop sound scientific information on water quality in the Bay;
- Prioritize funding decisions through collaborative discussions;
- Conduct decision-making in a transparent manner that consistently represents the diversity of RMP Participant interests;
- Utilize external science advisors for guidance and peer review;
- Maintain and make publicly available the data collected by the Program;
- Enhance public awareness and support by regularly communicating the status and trends of water quality in the Bay; and
- Coordinate with other monitoring and scientific studies in the Bay-Delta region to ensure efficiency.

3.0 Regional Monitoring Program Governance Structure

The RMP governance structure is comprised of a Steering Committee, Technical Review Committee and Workgroups. In addition, Strategy Teams are created to focus on specific program interests. SFEI serves as the Implementing Entity for the RMP. Figure 1 illustrates the RMP structure. The following sections describe the functions, roles, membership, and decision-making protocols of the various committees, workgroups, and teams in the RMP governance structure.

3.1 Steering Committee

The Steering Committee is a formal stakeholder body, structured to represent all of the RMP Participant Groups.

3.1.1 Steering Committee Role

The Steering Committee is the decision-making body for the RMP. All recommendations and information from various groups in the RMP governance structure ultimately flow to the Steering Committee to support its decision-making. Steering Committee meetings are held quarterly and in person. Meetings are open to the public. Notice is provided to non-participants through an Interested Parties mailing list. Steering Committee Representatives are responsible to communicate relevant RMP information to their respective constituent groups.

The Steering Committee agenda packet is posted on the RMP website no less than one week before the meeting. SFEI staff attend meetings to share information, but do not participate in decision-making. Decisions are made by designated Representatives only (see sections 3.1.2 and 3.4).

The primary tasks of the Steering Committee include:

- Provide a management perspective that guides the direction of the RMP;
- Consider and decide whether to approve Technical Review Committee recommendations;
- Approve an annual workplan and budget;
- Allocate funds for key program areas and special studies;
- Track overall progress of the RMP;
- Review RMP operations and peer review processes to ensure optimal performance; and
- Address other administrative, strategic planning and “big picture” issues as needed.

3.1.2 Steering Committee Representatives and Commitment

The Steering Committee should include Representatives from each of the following Participant Groups:

- 1 seat for Bay Area Clean Water Agencies (BACWA) Principal POTWs;
- 2 seats for BACWA Associate POTWs;
- 1 seat for Bay Area Stormwater Management Agencies Association (BASMAA) representing stormwater agencies;
- 1 seat for the Western States Petroleum Association representing industrial dischargers;
- 1 seat for Bay Planning Coalition representing dredgers;
- 1 seat for the U.S. Army Corps of Engineers;
- 1 seat for the Regional Board.

The Steering Committee may add seats for other Participant Groups or adjust the number of seats for certain Participant Groups by using its decision-making procedures to change the Charter.

Each Participant Group selects their representative in a manner of their own choosing.

All Representatives work in partnership to fulfill their role on the Steering Committee. Representatives have no term limits and may continue to serve indefinitely with support of their Participant Group, unless removed as described in section 3.1.6.

Representatives are expected to read the agenda package and be prepared to discuss and act on recommendations from the Technical Review Committee as well as other issues related to the Steering Committee's primary tasks. Representatives are also expected to keep their Participant Group, as well as Technical Review Committee Representatives for their same Participant Group, informed about Steering Committee activities, decisions, and outcomes, and bring constituent views into the discussion in an informed and transparent manner. Representatives will strive to be physically present at meetings. Conference calls and use of web-based conferencing tools afford an alternative method for Representative attendance at meetings.

3.1.3 Steering Committee Chair and Vice Chair

The diversity of tasks and decision-making that falls upon the Steering Committee necessitates effective agenda planning, facilitation, and Representative participation at any given meeting. To coordinate this process, the Steering Committee will select or reaffirm a Chair and Vice Chair, during the last meeting of the calendar year, using its decision-making procedures (see Section 3.4). The Chair and Vice Chair have no term limits and may continue to serve annual terms indefinitely with support of the Steering Committee.

Meeting agendas will be developed by SFEI staff in consultation with the Chair and Vice Chair of the Steering Committee. The Chair will facilitate each meeting. If the Chair is

absent, the Vice Chair will facilitate the meeting. If both the Chair and Vice Chair are absent from a meeting without notice but there is a quorum, the Representatives present will select a temporary Chair for the meeting.

The Chair and Vice Chair are also responsible for maintaining consistent representation of RMP Participant Groups. This includes communication with existing Representatives to promote regular participation in RMP activities, to address when participation is lacking, and to ensure Representatives remain interested in being involved with the Program.

3.1.4 Steering Committee Alternates

To ensure continuity and broad Participant Group attendance at Steering Committee meetings, Representatives are encouraged, but not required, to use Alternates on an as-needed basis. Alternates must be identified by the Representative to the RMP Manager and the Steering Committee Chair and Vice Chair in advance of a given meeting, be fully briefed by the Representative, and be able to represent the interests of the Participant Group during the meeting. Alternates are expected to be informed on RMP activities by the Representative on an ongoing basis and be fully prepared to discuss agenda items and participate in decision-making. No items addressed at previous meetings will be revisited to accommodate an Alternate.

3.1.5 Steering Committee Representative Resignation and Replacement

Representatives may resign from the Steering Committee at their choosing. If this occurs, the Participant Group will be notified and will be requested to select a new Representative for the Group. The Representative will use the following steps to resign:

1. Provide written resignation communication (e.g., letter, email) to the Steering Committee Chair, Vice Chair and RMP Manager at SFEI; and
2. Notify the Representative's Participant Group.

3.1.6 Steering Committee Representative Removal

Representatives are expected to uphold their commitments to actively participate in all Steering Committee meetings, review all materials in a timely and thoughtful manner, and be prepared to provide input and participate in Committee decision-making. If a Representative does not fulfill these commitments, he/she can be removed from the Steering Committee and be replaced by another person from the same Participant Group. If warranted, a Representative will be removed through the following steps:

1. The Steering Committee Chair will contact the Representative in question to better understand why he/she may not be fulfilling their commitments (as reflected in 3.1.2).
2. The Representative in question (and organization) will be allowed time (as determined by the Chair) to resolve his/her participation challenge and fulfill his/her commitments to the process.

3. If after the prescribed period of time, the Representative in question does not resolve his/her participation challenges, the Chair will provide a removal recommendation to the Steering Committee for discussion.
4. The Steering Committee will use its decision-making procedures outlined in section 3.4 to remove the Representative and/or organization and to start Representative replacement steps.

3.1.7 Steering Committee Representative Recruitment

At times, the Steering Committee Chair, Vice Chair, or SFEI staff may need to assist in the recruitment of Representatives, particularly in the event that a Participant Group does not select a Representative or for any other reason a seat remains open. Under this scenario, the Chair, Vice Chair, and RMP Manager will seek out candidates who can represent the Participant Group and are familiar with the Program. If a potential candidate is found, the Chair, Vice Chair, or RMP Manager will present the candidate to the Participant Group. The Participants in this Group will decide whether or not this person will represent them on the Steering Committee.

3.2 Technical Review Committee

Similar to the Steering Committee, the Technical Review Committee is a formal stakeholder body, structured to represent the Program Participant Groups.

3.2.1 Technical Review Committee Role

The Technical Review Committee provides oversight of the technical content and quality of scientific investigations conducted for the RMP and serves as an advisory body and critical link for recommendations that emanate from Workgroups and Strategy Teams and advance to the Steering Committee. Representatives are expected to possess either technical expertise or management experience on the topics under consideration by the RMP.

The Technical Review Committee reviews special study proposals developed by the various Workgroups and Strategy Teams. Following a review of proposal pros, cons, and costs, the Technical Review Committee makes recommendations to the Steering Committee on which proposals should be funded. The Technical Review Committee also provides oversight for Status and Trends monitoring, reviews reports from completed studies, and reviews RMP communication products to technical accuracy.

Technical Review Committee meetings are held quarterly and in-person. SFEI staff attends Technical Review Committee meetings to provide information but does not participate in the making of recommendations. Meetings are open to the public. Notice is provided to non-members through the Interested Parties mailing list. The agenda packet is posted on the RMP website no less than one week before the meeting. Technical Review Committee Representatives are responsible to communicate relevant RMP information to their respective constituent groups.

3.2.2 *Technical Review Representatives and Commitment*

The Technical Review Committee consists of a diversity of technical specialists representing dischargers, regulatory agencies, and non-governmental organizations. To ensure a formalized connection between the Steering Committee and Technical Review Committee, it is desirable (but not required) that one Technical Review Committee Representative also sits on, or at least attends, the Steering Committee.

The Technical Review Committee has seats for Representatives from the following Participant Groups and other parties:

- 3 seats for POTWs, including 1 seat for South Bay dischargers;
- 1 seat for Bay Area Stormwater Management Agencies Association (BASMAA) representing stormwater agencies;
- 1 seat representing refineries;
- 1 seat representing industrial dischargers;
- 1 seat representing dredgers;
- 1 seat for the U.S. Army Corps of Engineers;
- 1 seat for the Regional Board;
- 1 seat for the U.S. Environmental Protection Agency, Region IX;
- 1 seat for the City and County of San Francisco;
- 1 seat for the City of San Jose; and
- 1 seat for a non-governmental organization that specializes in water quality in the Bay.

The Steering Committee may modify the number of seats on the Technical Review Committee by using its decision-making procedures to change the Charter.

Each Participant Group selects their Representative in a manner of their own choosing. The Representatives for the City and County of San Francisco and the City of San Jose are selected by those governments. The Representative from a non-governmental organization will be recruited from an organization that:

- Has focus on water quality issues in the bay;
- Maintains technical knowledge and understanding of RMP related topics/issues;
- Demonstrates a willingness to regularly participate in meetings and the process of making recommendations for Steering Committee consideration; and
- Has been involved in RMP activities or previously expressed interest to participate in the program.

All Representatives work in partnership with each other and SFEI to fulfill their role on the Technical Review Committee. Representatives have no term limits and may continue to serve indefinitely with support of their Participant Group, unless removed as described in section 3.2.6.

Continuity of attendance at Technical Review Committee meetings by a balanced and representative array of Participant Groups is critical to produce informed and equitable recommendations. Representatives are expected to read the agenda package and adequately prepare for meetings in order to discuss agenda items and make recommendations for Steering Committee consideration. Representatives are also expected to keep their respective Participant Groups, as well as Steering Committee Representatives for the same Participant Group, informed about Technical Review Committee activities, decisions, and outcomes, and bring constituent views into the discussion in an informed and transparent manner. Representatives will strive to be physically present at meetings. Conference calls and use of web-based conferencing tools afford an alternate method for Representative attendance at meetings.

3.2.3 Technical Review Committee Chair

The number and type of agenda items to be considered at each Technical Review Committee meeting requires thoughtful agenda planning, preparation of information, facilitation, and Representative participation. To coordinate this process, the Technical Review Committee will, during the last meeting of the calendar year, select or reaffirm a Chair using its decision-making procedures (see Section 3.4). The Chair may continue to serve indefinitely with support of the Technical Review Committee.

Meeting agendas are developed by SFEI staff in consultation with the Chair. The Chair will facilitate each meeting. If the Chair will be absent, he/she will appoint a temporary Chair in advance of the meeting to provide facilitation. If the Chair is absent from a meeting without notice but there is a quorum, the Representatives present will select a temporary Chair for the meeting.

As needed or appropriate, the Chair will attend Steering Committee meetings to explain the rationale behind recommended projects and/or studies and to answer questions.

3.2.4 Technical Review Committee Alternates

To ensure continuity and broad Participant Group attendance at Technical Review Committee meetings, Representatives are encouraged, but not required, to use Alternates on an as-needed basis. Alternates must be identified by the Representative to the RMP Manager and the Technical Review Committee Chair in advance of a given meeting, be fully briefed by the Representative, and be able to represent the interests of the Participant Group during the meeting. Alternates are expected to be informed on RMP activities by the Representative on an ongoing basis and be fully prepared to discuss agenda items and participate in decision-making. No items addressed at previous meetings will be revisited to accommodate an Alternate.

3.2.5 Technical Review Committee Representative Resignation and Replacement

Representatives may resign from the Technical Review Committee at their choosing. If this occurs, the Participant Group will be notified and will be requested to select a new Representative for the Group. The Representative will use the following steps to resign:

1. Provide written resignation communication (e.g., letter, email) to the Steering Committee Chair, Vice Chair TRC Chair, and RMP Manager at SFEI; and
2. Notify the Representative's Participant Group.

3.2.6 Technical Review Committee Representative Removal

Representatives are expected to uphold their commitments to actively participate in all Technical Review Committee meetings, review all agenda materials in a timely and thoughtful manner, and be prepared to forge recommendations for Steering Committee consideration. If a Representative does not fulfill these commitments, he/she can be removed from the Technical Review Committee and be replaced by another person from the Participant Group. The Technical Review Committee will follow the protocols outlined in section 3.1.6 and gain the concurrence of the Steering Committee to remove Representatives.

3.2.7 Technical Review Committee Representative Recruitment

At times, the Technical Review Committee Chair or SFEI staff may need to assist in the recruitment of Representatives, particularly in the event that a Participant Group does not select a Representative or for any other reason a seat remains open. If recruitment is necessary, the Technical Review Committee will follow the protocols outlined in section 3.1.7 as closely as possible.

3.3 Workgroups and Strategy Teams

Various Workgroups and Strategy Teams report to the Technical Review Committee. The Workgroups and Strategy Teams serve as the basis of the "bottom up" planning process by meeting as needed to develop long-term RMP study plans that address high priority topics.

3.3.1 Role of Workgroups and Strategy Teams

Workgroups and Strategy Teams guide the planning and implementation of pilot and special studies. Specifically, the Workgroups and Strategy Teams make recommendations to the Technical Review Committee regarding research priorities and technical products of specific Program areas. Workgroups cover broad themes (e.g., Emerging Contaminants) whereas Strategy Teams focus on more specific topics (e.g., PCB Strategy). Workgroups also provide peer review for specific Program areas.

Workgroup and Strategy Team meetings are held as needed. Meetings are usually in person, but occasionally via teleconference. SFEI staff develops Workgroup and Strategy Team meeting agendas, prepares relevant materials, and facilitates the meetings. Meetings are open to the public and notice is provided to Interested Parties through the Interested Parties mailing list. The agenda packet is posted on the RMP website no less than one week before the meeting. Conference calls and use of web-based conferencing tools afford an alternative method for attendance. Workgroup and Strategy Team Representatives are responsible to communicate relevant RMP information to their respective constituent groups.

As needed, Workgroup or Strategy Team Representatives may attend Technical Review Committee meetings to explain the rationale behind proposed projects and/or studies and to answer questions.

3.3.2 Workgroup and Strategy Team Representatives and Commitment

Workgroups consist of RMP Participant Group Representatives, invited scientists recognized as experts in their field (Science Advisors, see Section 3.3.3), SFEI staff, and Interested Parties. Strategy Teams consist of RMP Participant Group Representatives, local scientists, SFEI staff and Interested Parties.

Each RMP Participant Group may send Representatives at its own discretion based on interest in a particular Workgroup or Strategy Team topic. Workgroup and Strategy Team Representatives are expected to keep their respective Participant Groups informed about potential studies and research topics in order to bring constituent views into the discussion in an informed and transparent manner. Representatives will strive to be physically present at in-person meetings. Representatives are not required to have Alternates. Representatives who wish to resign will notify the RMP Manager via email. Participant Groups are encouraged to self-select replacements for Representatives that resign.

3.3.3 Science Advisors

An important component of the RMP planning and implementation process is robust, peer-reviewed science. RMP Workgroups include invited scientists that serve as external peer reviewers (Science Advisors). Science Advisors are individuals who possess expertise on topics applicable to the RMP. Each RMP science advisor is paid an annual honorarium. Science advisors have no personal interest or conflict of interest with studies performed under the RMP. Science Advisors are selected by SFEI in consultation with Steering Committee and Technical Review Committee Representatives that are knowledgeable in the subject area and then reported to the Technical Review Committee. The specific roles of Science Advisors include the following:

- Ensure objectivity and quality of RMP studies;
- Participate in Workgroup meetings and assist in the development of recommendations for pilot and special studies; and
- Provide input and peer review on workplans, progress of studies, and technical products.

Science Advisors shall serve for 5-year terms. There is no limit to the number of terms that an Advisor may serve. A Science Advisor may resign at any time by notifying the RMP Manager.

3.3.4 Workgroup and Strategy Team Chairs

No Workgroup or Strategy Team has an elected Chair. SFEI Senior Scientists prepare the meeting agenda and materials. The RMP Manager or Lead Scientist facilitates Workgroup and Strategy Team meetings except when the Workgroup or Team is making formal recommendations and the facilitation process in Section 3.4.3.2 should be followed. This

arrangement allows the SFEI Senior Scientists with expertise in the topic area to focus on technical presentations and discussion during the course of the meeting, rather than facilitating the discussion.

3.3.5 Nutrient Management Strategy

In 2012, the Regional Board published the San Francisco Bay Nutrient Management Strategy¹ (NMS). Nutrient research studies began in 2013 with partial funding from the RMP and are expected to continue for at least a decade. In 2014, a governance process for the NMS was established and documented in a charter. Multiple funding sources will be pooled to support the ongoing nutrient research including: RMP funds, funds mandated by a Bay-wide nutrient permit², the Regional Board, and other entities. As laid out in its charter, the NMS Steering Committee (NSC) will provide oversight for all nutrient studies completed with these pooled funds. Given that the RMP will likely contribute funds to nutrient research for at least a decade, it is important to outline how the RMP committees will interact with the NSC.

There are several connections between the RMP and the NSC. First, there should be at least one member of the NSC that also serves on the RMP Steering Committee. Second, the NMS Nutrient Technical Workgroup will serve as the forum through which RMP stakeholders can provide technical input on NMS work products, funding priorities, or other issues being considered by the NSC. Finally, both the RMP and NSC will monitor how RMP funds are spent for nutrient research.

The following steps aim to clarify the roles of the two programs when RMP funds are contributed to fund NMS studies:

1. Each year, RMP Participants set the approximate funding level for future, nutrient-related special studies.
2. Following its own charter, the NSC determines the best use of the potentially available RMP funds for studying nutrients in the Bay.
3. The NSC communicates the overall priorities and recommends nutrient projects with clearly defined deliverables to the RMP Technical Review Committee so that these studies can be included in the suite of special studies recommended to the RMP Steering Committee. If there are insufficient RMP funds available for all the nutrient studies, the RMP will request that the NSC modify the specific proposals to match the available funds. RMP funds assigned to nutrient special studies will remain in the RMP account at the Institute but be encumbered for the specific studies.

¹ http://sfbaynutrients.sfei.org/sites/default/files/Nutrient_Strategy%20November%202012.pdf

² Funds originating from the Bay Area Clean Water Agencies

4. Oversight of the RMP-funded nutrient studies will be the responsibility of the NSC. However, the RMP will receive progress reports prepared for the NSC, which will address both NMS and RMP reporting needs for deliverables. The RMP Steering Committee and Technical Review Committee Representatives will also be included on the mailing list when the deliverables are released for comments and when the deliverables are complete.

The NSC and the RMP Steering Committee may interact regarding nutrients for other reasons besides allocating RMP funds for nutrient-related studies. For example, the NSC may recommend changes to the RMP Status & Trends Monitoring Program. If the NSC has such recommendations, an item will be placed on the agenda for the Steering Committee or Technical Review Committee (whichever is more appropriate) for discussion at the next regularly scheduled meeting.

3.4 Decision-Making

In general, all RMP committees work towards consensus as a fundamental principle. The consensus-seeking decision method described in this section is most applicable, though not exclusive, to the RMP Steering Committee. Consensus is desirable, though not required, at the Technical Review Committee, Workgroups, and Strategy Teams. Varying levels of time and effort are expected to reach consensus with the highest degree of effort required by the Steering Committee.

3.4.1 Definition of Consensus

Consensus means that all Representatives on the committee support a decision or recommendation, and believe that a majority of their respective constituents do as well. In reaching consensus some Representatives may strongly endorse a particular decision or recommendation while others may accept it as “workable.” Others may only be able to “live with it.” Still others may choose to “stand aside” by verbally noting a disagreement yet allowing the group to reach consensus without them. Any of these actions still constitutes consensus.

3.4.2 Definition of a Quorum

A quorum is recommended, though not required, for Steering Committee and Technical Review Committee meetings to proceed. A quorum is a minimum of one-half of Steering Committee Representatives or Technical Review Committee Representatives present at their respective meetings, or attending via teleconference (vacant seats do not count in the quorum calculation). If a quorum is not achieved, the Steering Committee or Technical Review Committee meetings proceed and preliminary decisions (Steering Committee) or recommendations (Technical Review Committee) are made. Then, the procedures for making decisions or recommendations between meetings (Section 3.4.5) are followed to propose the preliminary decision or recommendation to the full committee and reach a formal decision or recommendation.

3.4.3 Consensus-Seeking Decision Method

The RMP consensus decision method is based on the principle of “consensus with accountability.” Consensus with accountability requires all RMP Representatives to try to reach consensus, while at all times supporting and expressing their self-interest. In the event a Representative must reject a proposal, that Representative is expected to provide an amendment to the proposal or an alternative proposal that attempts to achieve their interest and interests of other Representatives.

At all times, Representatives will ensure they are providing input commensurate to their prescribed role and reflective of the constituency they represent. In general, all RMP committees, groups, and teams will explore agenda topics and attempt to reach consensus decisions or recommendations using the following steps:

- Facilitate open discussion and dialogue on key agenda items;
- Weigh pros and cons of proposals and/or recommendations being discussed;
- Give minority opinion due consideration; and
- Take time needed to get to consensus.

3.4.3.1 Steering Committee Decisions

For items requiring Steering Committee decisions, the item in question will be presented and discussed. After discussion is completed, any Steering Committee Representative may make a motion for a decision, followed by a second, followed by a poll of those in favor and not in favor. If there is consensus, or lack thereof, it is noted verbally at the meeting and memorialized in the meeting summary. In the absence of consensus, the Steering Committee with a quorum will vote on a motion (see Section 3.4.4). Attendees who are not Representatives may participate in discussions, but do not weigh in on final decisions (see Section 3.4.6).

3.4.3.2 Technical Review Committee Recommendations

For approval of administrative decisions (see Section 3.4.4), the Technical Review Committee may express consensus through a simple, informal poll.

For substantive decisions (see Section 3.4.4), the item in question will be presented and discussed among seated Technical Review Committee Representatives.

After discussion is completed, consensus recommendations are made without a formal process or a vote. If recommendations do not reflect broad Representative input due to lack of attendance at a meeting, those not in attendance will be afforded an opportunity to weigh in on preliminary recommendations per the protocols that guide recommendation-making in between meetings (Section 3.4.5). Members of the public attending the meeting can participate in discussions, but do not weigh in on recommendations (see Section 3.4.6).

In the event that Technical Review Committee Representatives cannot come to consensus on a recommendation or set of recommendations, majority and minority

opinions will be noted verbally at the meeting and described in detail, with attribution of seated Representative viewpoints (see Section 3.5), in the meeting summary. The Technical Review Committee Chair will coordinate with the RMP Manager to ensure that the meeting summary adequately documents majority and minority viewpoints of the seated representatives, and will utilize the meeting summary as the primary tool to communicate Technical Review Committee discussions to the Steering Committee.

3.4.3.2 Workgroup and Strategy Team Recommendations

For approval of administrative decisions (see Section 3.4.4), the Workgroups and Strategy Teams may express consensus through a simple, informal poll.

Workgroups and Strategy Teams make recommendations to the Technical Review Committee regarding use of RMP funds for proposed pilot and special studies. Before these recommendations are made, all the Principal Investigators of the proposed studies and anyone with a conflict of interest are asked to leave the meeting to allow for free discussion of the merits of the proposals. One of the Workgroup members is assigned the duty to facilitate this portion of the meeting. The RMP Manager, RMP Lead Scientist, and a RMP staff person remain to provide information and take notes. After the Principal Investigators have left the meeting, Workgroup and Strategy Team recommendations are made by consensus if possible. In the event that consensus cannot be reached, majority and minority opinions will be noted verbally at the meeting and described in detail, without attribution, in the meeting summary. The RMP Manager will utilize the meeting summary as the primary tool to communicate Workgroup or Strategy Team recommendations to the Technical Review Committee.

3.4.4 Steering Committee Voting Decision Method

In the absence of consensus, the Steering Committee with a quorum will vote on a motion. For administrative decisions (defined below), the motion will pass if 50% or greater of the Representatives in attendance vote for it. For Substantive Decisions (defined below), the motion will pass if 67% or greater of the Representatives in attendance vote for it.

- Administrative Decisions. Administrative decisions are about the day-to-day activities (including but not limited to logistics, meeting dates and times, agenda revisions, schedules, etc.).
- Substantive Decisions. Substantive decisions concern financial and programmatic issues (including but not limited to budgets, contracts, policies, changes to the Charter, removal of Representatives, etc.)

In the absence of consensus, all other committees, workgroups and teams will simply document majority and minority viewpoints, verbally at the meeting and in the subsequent meeting summary, rather than voting in order to make a recommendation.

3.4.5 Decision-Making in Between Meetings

Decisions or recommendations in between meetings for any committee, workgroup, or team will be made either by email or, if warranted, by conference call.

For decisions or recommendations by email, the RMP Manager will present the Representatives with a motion and use a poll to determine if there is consensus. If one half of the Representatives reply, there will be a quorum for the decision or recommendation. If needed, the voting decision method from Section 3.4.4 will be used for the Steering Committee to take a formal vote on the motion. The number of Representatives that reply will be considered the number of attendees for calculating percentages of the vote.

Any Representative or the RMP Manager may request a conference call to make a decision or recommendation between meetings. Decisions or recommendations made by conference call would follow the same procedures as an in-person meeting. Criteria by which to forgo an email decision or recommendation in favor of a conference call may include the following:

- Inability to make a decision or recommendation via email;
- Complexity of topic or length of email; and
- Conference call request by a Representative or SFEI staff.

Decisions or recommendations made in between meetings will be reported by the RMP Manager and discussed by the committee at the following meeting. This practice allows for reconsideration of the decision if warranted and feasible. The decision or recommendation will be documented in the summary of that meeting.

3.4.6 Decision-Making and Public Engagement

For major decisions or recommendations by any RMP committee, workgroup, or team, public input is desirable and beneficial. The Institute will maintain a calendar of RMP events and a broad-based list of Interested Parties to support communication with Participant Groups and the wider public. If there is significant public input at a meeting, the Chair, Vice Chair, or temporary Chair will use the following basic approach to ensure effective discussion by the RMP group and appropriate feedback from the public.

- The meeting agenda with substantive decisions or recommendations will be distributed to Interested Parties no less than one week in advance so that the RMP committee, workgroup, or team and public know such a decision or recommendation is pending.
- The Chair, Vice Chair or temporary Chair will move the committee, workgroup, or team into discussion about the decision or recommendation topic and will begin with discussion by the Representatives only.
- When the committee, workgroup, or team Representatives have completed all the discussion they wish to have, the Chair, Vice Chair or temporary Chair will open the floor for public comment. Public comment will then ensue.
- When all Representatives of the public that wish to speak have spoken, the facilitator will check with the committee, team, or workgroup Representatives to see

- if they have any questions of the public. If so, Representatives will engage with the appropriate members of the public to discuss an item related to the pending decision or recommendation.
- When this/these discussions are complete, the Chair, Vice Chair or temporary Chair will bring the attention of the committee, workgroup, or team back to their decision or recommendation task. The Chair, Vice Chair or temporary Chair will clearly read the motion to ensure the committee, workgroup, or team knows what they are considering. The committee, workgroup, or team will then conduct decision-making and recommendation-making using the method described above.

3.5 Record Keeping

SFEI staff prepares summaries for all Steering Committee, Technical Review Committee, Workgroup, and Strategy Team meetings. As noted above, decisions, recommendations, and majority/minority viewpoints on substantive issues at any RMP meeting will be noted verbally at the meeting and subsequently memorialized in the appropriate summary. Any RMP Representatives holding a minority viewpoint will have the opportunity to coordinate with SFEI staff to ensure accurate representation of said viewpoint. In general, summaries will include the following:

- Attendees;
- Decisions or recommendations made;
- Action items;
- Pros, cons, and rationale behind proposals and decisions; and
- Documentation of majority/minority viewpoints on decisions or recommendations.

It is expected that Technical Review Committee meeting summaries will have the most level of detail, including attribution of Representative viewpoints on proposed recommendations. Steering Committee meeting summaries may follow the same general approach but have significantly less detail than Technical Review Committee meeting summaries. Workgroup meeting summaries will be similar to those for the Technical Review Committee except that comments during the anonymous review session will not be attributed to individuals.

3.6 RMP Implementing Entity

SFEI is the Implementing Entity for the RMP. In this capacity SFEI largely plays a facilitative and operational role for a stakeholder-driven process that prioritizes key questions and associated scientific investigations. Operating in this context SFEI helps identify stakeholder information needs, develops scientific workplans that address these needs, and then implements these plans. SFEI is also the fiduciary agent for RMP stakeholder funds. The SFEI Board does not provide direct oversight of the RMP but does approve the yearly RMP Workplan.

3.6.1 SFEI Roles and Responsibilities

Specific SFEI staff roles and responsibilities include, but are not limited to, the following:

- Provide fiscal, contractual, and programmatic administration;

- Conduct or cause to be conducted long-term monitoring of the Bay and implement special studies based on Technical Review Committee recommendations and subsequent Steering Committee approval;
- Organize and staff meetings of the Steering and Technical Review Committees, Workgroups, and Strategy Teams;
 - Prepare and disseminate information packages, meeting agendas, and announcements to all committees, workgroups, teams, and Interested Parties no less than one week before meetings, and post materials on relevant Program web pages;
 - Coordinate between-meeting decision-making (via email or teleconference) with all committees, workgroups, and teams on an as needed basis;
 - Prepare and disseminate all committee, workgroup, and team meeting summaries and post on the RMP webpage and other venues as appropriate.
- Coordinate with other agencies or organizations which monitor the water quality of the San Francisco Bay;
- Report on progress in executing annual workplan on a quarterly basis;
- Produce an annual report which provides analysis and interpretation of the results of the Program;
- Make all data available for public review;
- Ensure that thorough technical review of reports are conducted, and that reports are made available to the public; and
- Organize an annual meeting of the Program Participants for the purpose of review of the Program results.

3.7 Program Review

Periodically, with no fixed schedule, a Program Review of the RMP should be conducted. The Program Reviews are performed by experts in estuarine monitoring and management who are not associated with the RMP. The Steering Committee convenes these experts and provides them with a set of charge questions regarding how well the Program is achieving its mission. The specific charge questions for any given Program Review will depend on the priorities of the Steering Committee at the time. The reviewers report back to the Steering Committee with their findings.

Program Reviews for the RMP were performed in 1997 and 2003.

4.0 Finances

4.1 Funding for the Regional Monitoring Program

4.1.1 Core Funds from Participant Fees

Participating dischargers pay fees to the Program annually to comply with discharge permit requirements and satisfy obligations under section 13267 of the California Water Code (see Appendix C). Each year, the Steering Committee agrees on the total amount of core funds to be collected to fund the Program. This total cost is divided between the Participant Groups according to the cost allocation schedule in Appendix B. Core Funds are allocated to projects and programmatic expenses in the Annual Detailed Workplan which is approved by the Steering Committee.

4.1.2 Alternative Monitoring Requirement Funds

In March 2016, the Water Board adopted Order R2-2016-0018, establishing an alternative monitoring requirement (AMR) for municipal wastewater discharges to San Francisco Bay and its tributaries, in exchange for a set schedule of increased payments to the RMP. Participating wastewater treatment facilities who opt-in to this alternative are able to reduce their effluent monitoring costs for most organic priority pollutants and chronic toxicity sensitive species rescreening. In exchange for the reduced monitoring requirements, facilities make supplemental payments to the RMP for regional studies to inform management decisions about water quality in the Bay. The intended use of these funds is for monitoring and special studies for contaminants of emerging concern. However, the Steering Committee of the RMP has the authority to allocate these funds to other types of studies at its discretion. The required payment for each agency is described in Appendix D (Order R2-2016-0018, Attachment D).

4.1.3 Supplemental Environmental Project Funds

In October 2015, the Water Board and SFEI entered into an agreement that made the RMP an authorized Supplemental Environmental Project (SEP) funds administrator (Attachment E). Therefore, for an enforcement action against a discharger, the discharger has the option to direct up to half of the penalty to the RMP as a SEP. The State Water Resources Control Board SEP Policy requires a nexus between the violation and the SEP. There is nexus between the RMP and violations in general because the RMP studies a water body that is potentially affected by violations in the San Francisco Bay region. For smaller violations with Mandatory Minimum Penalties (MMP), this general nexus is sufficient and the funds may be assigned to any study (subject to the “above and beyond” requirement described below). For larger Settlements that are negotiated between the Water Board and the discharger, studies with a more specific nexus to the violation (e.g., geographical) need to be identified through the RMP planning process.

4.1.3.1 SEP Budgeting Process

For MMP payments, SFEI will receive the funds and save them separately from the base RMP fees. The Steering Committee will allocate the accumulated funds to a project of its choosing through its normal budgeting process. Separate MMP payments may be combined to jointly

fund a larger project. MMP payments may also be combined with Settlements (described below) to jointly fund a larger project.

For Settlements, the Water Board will request a list of eligible projects that have been vetted by the RMP to present as options during the negotiations. If the Water Board and the discharger agree to implement one of the RMP projects, the project will be incorporated into the Settlement Agreement. Funds for the project will be sent to the RMP after the Settlement Agreement is fully executed. These funds cannot then be allocated by the Steering Committee to any other project. The RMP Manager will communicate with the SC members about upcoming settlements as much as possible without compromising the negotiations.

4.1.3.2 Requirements for RMP Projects to be Eligible for SEP Funding

- The SEP Policy requires that the SEP must “go above and beyond” other applicable obligations of the discharger that proposes to satisfy a part of its monetary penalty with a SEP.
- SEP funds must be used to implement only those elements of the Program that would not otherwise be implemented through the base funding for the Program.
- To be eligible for SEP funding, RMP projects must have been reviewed and recommended by the Steering Committee but not funded.
- SEP funds may not be used to satisfy any permit requirements for any permittees but may augment a basic permit compliance study to make it more rigorous and comprehensive than it otherwise would have been.
- For Settlements, the project must be acceptable to both the Water Board and the discharger and must have a nexus to the violation.
- The project must implement or support implementation of the RMP’s Multi-Year Plan.

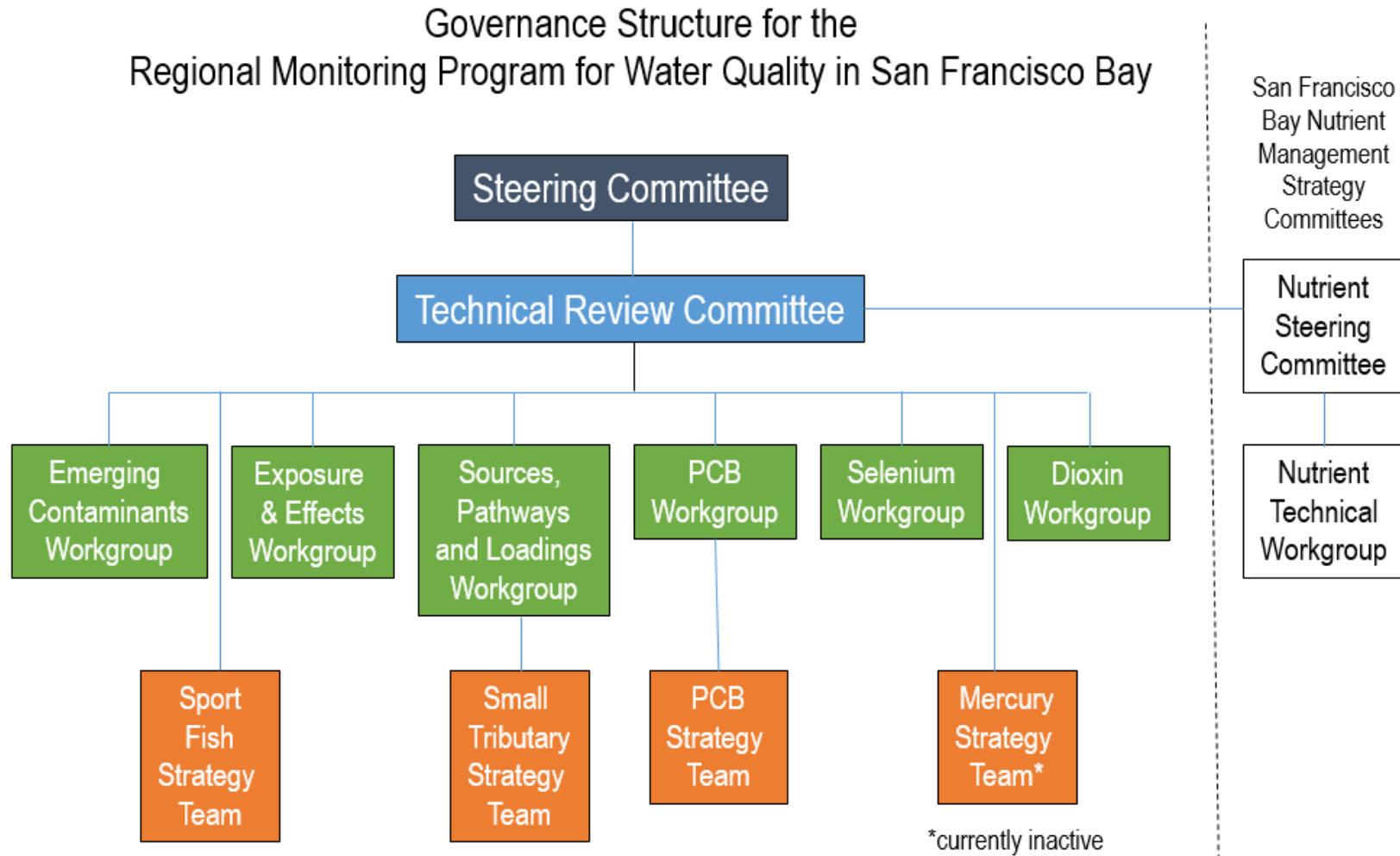
The Steering Committee will maintain a list of eligible projects that can be used during settlement negotiations. The list will reflect the priority science needs of the RMP at that time.

The Steering Committee can update the list at any time but at least once per year in July after the special studies for the following year are selected. The Steering Committee will have to the option to add the studies that were recommended but not funded to the list and to delete some older studies that are no longer a priority.

5.0 Charter Revisions

The Steering Committee, as the primary decision-making body of the RMP, may amend this Charter by following the consensus decision method described in section 3.4 above. Charter amendments may be proposed by Steering Committee or Technical Review Committee Representatives, or SFEI staff, either during or between meetings. Any proposed amendments will be placed on the Steering Committee meeting agenda for discussion and possible action, or decided through email or conference call communication if feasible and appropriate.

Figure 1. Governance Structure of the Regional Monitoring Program



Appendix A RMP Participants

POTW Dischargers

Central Contra Costa Sanitary District*
 Central Marin Sanitation Agency
 City of Benicia
 City of Burlingame
 City of Calistoga
 City of Millbrae
 City of Palo Alto
 City of Petaluma
 City of Pinole/Hercules
 City of St. Helena
 City and County of San Francisco, PUC*
 City of San Jose*
 City of San Mateo
 City of South San Francisco/San Bruno
 City of Sunnyvale
 Delta Diablo Sanitation District
 East Bay Dischargers Authority*
 East Bay Municipal Utility District*
 Fairfield-Suisun Sewer District
 Las Gallinas Valley Sanitation District
 Marin County Sanitary District #5, Tiburon
 Mountain View Sanitary District
 Napa Sanitation District
 Novato Sanitation District
 Rodeo Sanitary District
 San Francisco International Airport
 Sausalito/Marin City Sanitation District
 Sewerage Agency of Southern Marin
 Silicon Valley Clean Water
 Sonoma County Water Agency
 Town of Yountville
 Union Sanitary District
 U.S. Navy, Treasure Island
 Vallejo Sanitation & Flood Control District
 West County Wastewater Dist., Richmond

**Asterisk indicates BACWA Principals*

Stormwater

Alameda Clean Water Program
 Caltrans
 City and County of San Francisco
 Contra Costa Clean Water Program
 Fairfield-Suisun Urban Runoff Management Program
 Marin County Stormwater Pollution Prevention Prog.
 Santa Clara Valley Urban Runoff Poll. Prevention Prog.
 San Mateo Countywide Water Poll. Prevention Program
 Vallejo Sanitation & Flood Control District

Dredgers*

Port of San Francisco
 Port of Oakland
 Chevron Richmond Long Wharf Terminal
 Valero Refinery Terminal
 Phillips 66 Company, Rodeo Terminal
 U.S. Army Corps of Engineers
**The dredgers listed pay an annual fee to the RMP.
 There are also smaller dredgers who pay a fee to
 the RMP intermittently for specific dredging projects.*

Industrial Dischargers

Chevron Products Company
 Phillips 66 Company
 Shell Martinez Refinery
 Tesoro Refining & Marketing LLC
 Valero Refining Company
 C&H Sugar Company
 Crockett Cogeneration
 Eco Services Operations Corp.
 USS - POSCO Industries

Regulatory Agencies

SF Bay Regional Water Quality Control Board
 U.S. Environmental Protection Agency, Region IX

Appendix B Allocation of Costs for the Regional Monitoring Program

The total cost of the Program is set by the Steering Committee and divided up between the Participant Groups using cost allocation percentages. The current cost allocation for 2018³ and subsequent years is shown below:

Participant Group	Percent of Total Program Cost
Publicly Owned Treatment Works	45.8%
Stormwater Agencies	24.5%
Dredgers	18.2%
Refineries and Industrial Dischargers	11.5%

Each Participant Group uses a formula of its own choosing to divide up its cost allocation between the Participants in the Group.

The formula used by a Group must be flexible enough to account for Participants joining and leaving the Program. The formula for a Group may be changed by the Group at any time so long as the Group as a whole contributes the full cost allocation to the Program.

If all the Participants in a Participant group leave the Program, the Steering Committee will discuss and use its decision-making procedures to determine how best to allocate fees among the remaining Participants.

³ In 1997, Cooling Water participants phased out of the RMP because they ceased to have discharges to the Bay. One effect of the phase out of Cooling Water fees was that the cost allocation percentages for the Program, which had been in place since at least 1996, needed to be updated. Through 1997, the cost allocation for Cooling Water participants had been 4%. The new cost allocation percentages for 2018 and subsequent years divide up the 4% of the budget that was formerly assigned to Cooling Water to the other Participant Groups in proportion to the amount that each group contributes to the Program. The increased percentages do not mean that the remaining Participant Groups are responsible for covering the lost Cooling Water fees. The Steering Committee agreed that the 4% of fees formerly paid by the Cooling Water Participants would not be made up by the other participants. The new numbers just reflect the fact that the contributions from the remaining groups will make up the total budget and, therefore, their percentages need to sum to 100%, not 96%.

APPENDIX C

RMP Memorandum of Understanding

APPENDIX D

**San Francisco Bay Regional Water Quality Control Board
Order No. R2-2016-0008**

**Alternate Monitoring and Reporting Requirements for Municipal Wastewater Dischargers for
the purpose of adding support to the San Francisco Bay Regional Monitoring Program (RMP)**

Appendix E

Supplemental RMP Memorandum of Understanding: Implementation of the Supplemental Environmental Products Fund

Section	Page #	Current version	Suggested change	Reason for change
3	3	Figure 1	Update with general structure and point people to the website for the current active workgroups and strategy teams	Figure 1 is outdated. Suggested change would create a more durable figure that does not need to be changed every time there is a workgroup change.
3.1	3	Steering Committee meetings are held quarterly and in person.	Steering Committee meetings are held quarterly <i>with in person and remote attendance options</i> .	Add remote attendance option
3.1.2	4	1 seat for Bay Area Stormwater Management Agencies Association (BASMAA) representing stormwater agencies	1 seat for <i>Bay Area Municipal Stormwater (BAMS)</i> representing stormwater agencies	BASMAA no longer exists
3.2.1	6	Technical Review Committee meetings are held quarterly and in-person.	Technical Review Committee meetings are held quarterly <i>with in person and remote attendance options</i> .	Add remote attendance option
3.2.2	7	1 seat for Bay Area Stormwater Management Agencies Association (BASMAA) representing stormwater agencies	1 seat for <i>Bay Area Municipal Stormwater (BAMS)</i> representing stormwater agencies	BASMAA no longer exists
3.3.3	10	Science Advisors shall serve for 5-year terms.	Science Advisors shall serve for <i>2-year terms</i> .	5 years seems too long. I think we have asked for 2-year commitments from recently added science advisors.
3.3.5	11	RMP funds assigned to nutrient special studies will remain in the RMP account at the Institute but be encumbered for the specific studies.	RMP funds assigned to nutrient special studies <i>will be transfered to the NMS account at SFEI</i> .	Easier for SFEI accounting if we move the funds to the NMS bucket
3.6	16	The SFEI Board does not provide direct oversight of the RMP but does approve the yearly RMP Workplan.	Remove	This is not currently being done
4.1.2	19	2016 AMR details	Update with new AMR order for wastewater and MRP 3.0 for stormwater	Outlines additional funding to the RMP from wastewater and stormwater for CEC work. Also add the MRP as an attachment to the Charter (similar to AMR)
Appendix A	A-1	Participant names	Update discharger names	Some municipal and industrial wastewater entities names have changes since 2017

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Bay RMP Technical Review Committee Meeting
September 21, 2022

Meeting Summary

Attendees (all participants remotely attending)

TRC Member	Affiliation	Representing	Present
Yuyun Shang	EBMUD	POTW	Yes
Mary Lou Esparza	Central Contra Costa Sanitary District	POTW	No
Tom Hall	EOA, Inc.	POTW	Yes
Heather Peterson	City and County of SF	CCSF	Yes
Anne Hansen Balis	City of San Jose	POTW	No
Bridgette DeShields*	Integral Consulting	Refineries	Yes
Chris Sommers	BASMAA (EOA, Inc.)	Stormwater	Yes
Shannon Alford	Port of San Francisco	Dredgers	No
Richard Looker	SF Bay Regional WQCB	Water Board	Yes
Luisa Valiela	US EPA	US EPA-IX	Yes
Ian Wren	Baykeeper	NGOs	No
Tessa Beach	US Army Corps of Engineers	USACE	No

*Chair; alternates in gray and italicized

Staff and Others

- Jay Davis – SFEI
- Melissa Foley – SFEI
- Don Yee – SFEI
- Warner Chabot – SFEI
- Martin Trinh – SFEI
- Paul Salop – AMS
- Bryan Frueh – City of San Jose

1. Introductions and Review Agenda

Bridgette DeShields opened the meeting with a round of introductions and a brief review of the day's agenda. Key items on the agenda were updates on the joint RMP/NMS Water Quality Improvement Fund (WQIF) proposal, Status & Trends Monitoring, and the upcoming RMP Annual Meeting.

2. Staffing Change for RMP Manager

Melissa Foley formally announced to the Technical Review Committee that she would be stepping down from the Regional Monitoring Program Manager position following the Multi-Year Planning Workshop. She will be staying at SFEI, transitioning to the Resilient Landscapes (RL) Program to work with the Urban Nature lab. She hopes to be a bridge between RL and the RMP. Melissa will be available to train the new RMP Manager. Jay requested that TRC members recommend anybody they think would be a good fit. The TRC voiced support for Melissa's transition and echoed words of admiration for all the work Melissa has done for the RMP.

3. Decision: Approve Meeting Summary from June 15, 2022, and Confirm/set Dates for Future Meetings

Bridgette DeShields asked the group for any final comments on the previous meeting's summary. Receiving no comments, Bridgette confirmed the dates for upcoming meetings. The date of the upcoming Steering Committee meeting was confirmed to be November 2, 2022. TRC members were invited to attend the Multi-Year Planning Workshop preceding the SC meeting; the MYP meeting will be from 9 AM-1 PM. There is a possibility this meeting could be held in a hybrid format with the option to attend in-person at SFEI or virtually on Zoom. If the meeting cannot be hosted by SFEI, Tom Mumley has suggested holding the meeting at the Water Board. Bridgette DeShields, Luisa Valiela, and Richard Looker expressed interest in the in-person option.

The next TRC meeting was confirmed for December 8, 2022. Luisa Valiela noted the Restore America's Estuaries 2022 Coastal and Estuarine Summit would be meeting in person in New Orleans from December 4-8 so she is tentative for the December TRC meeting. Bridgette will not be able to attend the next proposed date of March 23, 2023. Melissa proposed moving the meeting to the following week on March 29, 2023. The RMP Annual Meeting will be held on Monday, October 3, 2022, and Melissa Foley confirmed that a post-meeting gathering will be held at the Study Hall in Berkeley.

Action Item:

- Send out calendar invites for March, 29, 2023, TRC meeting (Martin Trinh, September 24, 2022)

Decision:

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- Heather Peterson motioned to approve the meeting summary. Bridgette DeShields seconded the motion. The motion was carried by all present members.

4. Information: SC Meeting Summary from July 20, 2022

Melissa Foley provided an overview of the July SC meeting, noting it had a similar agenda to the June TRC meeting, covering topics such as WQIF funding, workgroup meetings, and Special Studies funding. The RMP and Nutrient Management Strategy (NMS) teams submitted a joint proposal to the EPA Water Quality Improvement Fund. The focus of the discussion with the SC was around the use of RMP funds as match (required 1:1 matching funds). The RMP allocated matching funds from already funded Special Studies or Status & Trends monitoring.

Melissa relayed feedback from the SC on the TRC's proposed Special Studies funding. The SC largely approved what the TRC had put forth, with Melissa noting the only study not approved by both committees was the microplastics air deposition/dryer study. The SC expressed they would be willing to revisit this study if additional funding was acquired, with the Ocean Protection Council identified as a potential source. Melissa noted there could be two additional funding sources to help cover the budget overage (\$119k) that exists with the approved suite of Special Studies. There is an in progress Supplemental Environmental Projects (SEP) for \$120k. Additional funding could arrive from the Municipal Regional Stormwater Permit provision for municipalities to contribute an additional \$100k to the RMP in lieu of individual CEC monitoring. The status of both potential funding sources should be known by the end of November.

Melissa previewed topics of interest the SC identified for the upcoming Multi-Year Planning workshop. Potential agenda items include: the full MYP update for 2024; cross-workgroup coordination and staffing constraints; and potential collaborative efforts to support RMP work, particularly with other regional entities to help support the Emerging Contaminants, Microplastics, and Sediment workgroups. A small group of TRC and SC members usually meet before the workshop to help plan the agenda. Tom Mumley and Karin North have volunteered and Melissa asked the TRC for any interest on their end. Luisa suggested Chris (not present at the time) and Richard Looker will check with Tom to see if he should be involved. Melissa will send an email to gauge interest and follow up with Chris.

The Annual Meeting and 2022 Pulse were also discussed at the SC Meeting but Melissa saved details because they were discussed in a later agenda item.

Action Item:

- Send out a one page PDF of the studies funded for 2023 (Melissa Foley, September 25, 2022)

5. Update:RMP Proposal for Water Quality Improvement Funds

Melissa and Jay led a discussion on the joint RMP/NMS proposal for the Water Quality Improvement Fund. The groups submitted their proposal on Monday, September 19, 2022. The proposal requested \$5.9 million, with half being provided from the EPA and half being matched by the RMP and NMS. The RMP will contribute ~\$2 million of the match. The project will be completed over four years and will focus on developing a water quality toolbox to support

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monitoring and modeling of PCBs, CECs, sediment, and nutrients. The proposal emphasized the role of modeling to improve water quality. The implementation of the modeling plan was outlined by Craig Jones in the In-Bay Modeling Strategy. This modeling in the proposal will be supplemented by \$400k from a Supplemental Environmental Project. Craig Jones will oversee the project, with SFEI and Integral staff supporting the work. Jay thanked Ian Wren and Melissa for their contributions to the proposal.

Luisa gave an update on the timeline of the overall process. Successful applicants will be notified by the end of November and awards will be given out in December and January. There were 25-30 applicants. If the RMP and NMS proposal is successful, SFEI will likely need to hire additional staff to complete the work. SFEI submitted two additional proposals to the WQIF and Jay helped All Positives Possible with their proposal.

6. Discussion: Status & Trends Monitoring for 2023

For this item, Melissa described the monitoring activities that will be occurring in 2023. This is a big year for Status & Trends. Wet season Bay water sampling will continue for a second year. Bay water was sampled during the wet season at nearfield and deep Bay sites in a pilot study last year. One storm was sampled with a focus on CECs, with tire contaminants added as a Special Study. Dry weather water sampling will also be conducted in 2023. CECs monitored include PFAS, bisphenols, and organophosphate esters.

Sediment samples from deep Bay and margins stations will also be collected, with a focus on PFAS and bisphenols. PCBs and metals will be sampled every 10 years with the next round of sampling planned for 2028. Paul Salop stated that AMS will be able to assist with dry season sampling (water and sediment), but will be harder to coordinate with in the wet season.

Prey fish will be sampled at targeted nearfield sites and will be paired with sediment sampling. Likely sampling locations include Richmond Harbor, San Leandro Bay, Redwood Creek, and Lower South Bay. A PCB Special Study for prey fish in Steinberger Slough was a success!

Marine mammals will be sampled opportunistically as part of a Special Study pilot, with hopes to add this sampling to Status & Trends. Blood and liver samples will be collected from seals and harbor porpoises.

The Status & Trends external advisors emphasized the importance of overlapping sampling locations. The target locations include Redwood Creek, Steinberger Slough, San Leandro Bay, and Lower South Bay, across the three matrices of water, sediment, and biota (prey fish and sport fish).

For interlab comparisons for 2023, Melissa outlined a potential method comparison for copper in water as well as for CECs in sediment and preyfish. Don added that two commercial labs will be analyzing PFAS samples for the RMP, which provides a straightforward pathway for doing an interlab comparison. He is hopeful that this can be done successfully, but warned the TRC that

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each lab has idiosyncrasies in their methods that could skew the results. Don stated that he is confident Brooks Applied Laboratory's new method for copper is sound. The RMP has been analyzing water samples via two methods for the last three cruises. Brooks is eliminating their legacy method, which was more unstable. However, he cautioned that results from the new method could be slightly higher than the old method, but no results last year were above the copper site specific objective.

Melissa notified the group that they would have the opportunity to provide feedback on the interlab comparison plans. Don will present a proposal for the PFAS intercomparison study at the December meeting. Additional monitoring details for the prey fish and targeted sediment locations will also be given.

Action Items:

- Present interlab comparison study at December TRC Meeting (Don Yee, December 8, 2022)
- Present prey fish and nearfield sediment sampling plan (Jay Davis/Miguel Mendez, December 8, 2022)

7. Discussion: Communications Update

Jay began the agenda item by reviewing the status of the Pulse. Jay noted that the Pulse would be released in an electronic format, with hard copies available by request. Physical copies will not be available by the Annual Meeting, but electronic copies should be. Write ups on nutrients and BOD are out for review and should be finalized soon. Once permission is obtained to publish the historic photos in this issue, the layout will be finalized and a draft will be sent for revisions.

For the upcoming Annual Meeting, Jay announced that Congresswoman Jackie Speier had submitted a short video that will serve as an introduction to the meeting and Clean Water Act, while providing a springboard for the WQIF presentation. Jay thanked Bridgette and Eric for agreeing to moderate and Luisa for presenting.

The Estuary News is set for the next two issues. The September issue will focus on the impact of drought conditions on the RMP's monitoring. The EN editor, Ariel, liked the previous profile on SFEI staff (Martin Trinh) and will feature one on Miguel Mendez in the October issue. Melissa thanked Chris for his contribution to the drought story. The December issue will highlight the 50th anniversary of the Clean Water Act and the RMP Annual Meeting. For future issues, TRC members suggested a focus on preparing for unforeseen events. Tom Hall recommended a post-mortem on the recent harmful algal bloom, interviewing different scientists working on it. Jay explained that the timing of that topic is delicate as it would be advantageous to highlight this issue soon to capture public attention, but there is a need to wait to ensure accurate information about the event are published.

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8. Information: Status of Deliverables and Action Items

Melissa reviewed the deliverables and action items with the TRC members. Beginning with overdue items, she requested that any TRC members with a contact at MTC help the RMP push them to provide the updated land use layers for the Bay. MTC is currently a year and a half behind schedule with no update on their timeline. Two projects in the RMP have had to be paused as a result of this delay. Tan and David cannot continue PCB modeling for the Watershed Dynamic Model; the update to the regional Watershed Spreadsheet Model is also on hold. These efforts are approaching the three year deadline for SEP projects. Tony Hale of SFEI has been in communication with the MTC, but it seems as though the person responsible for the land use layer update has recently left the position.

Overdue items that should be completed soon include the sediment erosion and deposition in SF Bay report that is undergoing internal review within the USGS, a Watershed Dynamic Model Sediment model calibration report, PCB sediment thresholds report, and floating percentile methodology report. Stanford is turning the Steinberger Slough PCBs report into a manuscript. A draft of the Sediment Conceptual Model report should come out before the upcoming Annual Meeting, where Katie McKnight will present the model.

Tom Hall asked about the RMP's current contracts with labs. Melissa replied that labs have been good communicators on the whole. Brooks Applied Labs have had some delays in data reporting, but the RMP has begun meeting with them every two weeks to better communicate our needs. Don noted that Eurofins is still adapting to our reporting methods, particularly with uploading to CEDEN. Their methodology and data are sent quickly but they are adapting to converting to e-files.

Projects that will be completed soon are the non-targeted analysis in sediment and water following a meeting with Lee Ferguson and UCSD; the sediment settling velocity in the South Bay and sediment flux at Benicia Bridge reports which will be completed by USGS by the end of the month. The margins report is delayed as Don is building remote samplers. The QA summary for 2020 is waiting for the margins data. The stormwater conceptual model has been completed for the state but the Bay-centric version is delayed due to workflow issues. Bird eggs have all been collected but the USGS and SGS AXYS are in the process of procuring the permits to send the samples internationally (to British Columbia).

9. Discussion: Plan Agenda Items for Future Meetings

Melissa previewed topics of interest to discuss at future meetings. The TRC expressed interest in getting to know the new RMP Manager if possible or, at least, being updated on the job search. The upcoming interlab comparison for PFAS analysis will be discussed. Finally, an update will be given on the status of the WQIF proposal as well as the timing of the first year of projects associated with the proposal. With the increased effort and amount of studies required to support the WQIF work, TRC members voiced concern about SFEI's bandwidth and ability to adequately handle this work. As key members continue to vacate important positions, TRC

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members asked if SFEI is in a position to take on more work, especially since the pandemic has affected hiring. Warner Chabot of SFEI agreed that there is a challenge associated with the large amounts of funding to come from the state and other entities. He ensured the TRC that SFEI is anticipating these issues and strategically thinking about the hiring process. Finally, he assured the TRC that although there have been key departures recently, SFEI has been able to identify and hire extremely passionate and capable new members to help ease those transitions.

10. Information: Preview of Annual Meeting Presentations

RMP Environmental Analyst, Martin Trinh, practiced his presentation for the upcoming RMP Annual Meeting, soliciting feedback from the TRC. Martin presented the RMP's findings on their recent PFAS in San Francisco Bay study. He began by giving a background on PFAS as a class of contaminants and outlined their bioaccumulative and toxic properties. He proceeded to introduce the RMP's role in monitoring PFAS in the Bay and outlined the program's many studies across various matrices. Following this, he overviewed the study design and objectives of the recent study monitoring PFAS in ambient Bay water samples. After discussing spatial and temporal trends, he concluded with key takeaways regarding classification of concern for PFAS levels in the Bay. TRC members recommended stripping down some of the more technical aspects of the background and including more current events, such as legislative and community building (environmental justice) efforts, and to speak to a more general audience. Additional feedback was given concerning how to best explain spatial trends, particularly the cluster of data points observed in Lower South Bay.

Jay outlined his presentation on ongoing RMP efforts on PCBs. He will overview long term trends observed by the RMP, particularly that the decreases expected are not being observed. He will also expand on efforts observing loadings from the General Electric property and collaborations with Stanford in Steinberger Slough. Melissa Foley briefly outlined her presentation, which will conclude the Annual Meeting and will provide an update on the inclusion of CECs in the revised Status & Trends Program and other RMP efforts.

Adjourn



DATE: October 26, 2022

TO: RMP Steering Committee

FROM: Jen Hunt, Melissa Foley and Sarah Lowe

RE: RMP Financial Update – Period Ending 9/30/2022

The purpose of this memorandum is to provide an update of budgets and expenses for all open RMP budget years and the balances of reserve and designated funds. All of the information presented is for job to date labor and expense billing through September 30, 2022, hereafter referred to as the “current period.”

RMP 2022 Budget

\$2,850,941 of the \$3,429,439 (83%) in 2022 invoiced fees have been collected. Notes:

1. The full 2022 revenue is \$4,038,513 and includes \$400,00 which is a pass through from USACE to USGS.
2. In RMP 2022, we are passing \$508,000 in revenue directly through to the NMS to support NMS projects;
3. The full 2022 planned expenses are \$3,688,513 (including the \$400k in item 1 above and \$508k in item 2 above);
4. The total amount invoiced does not include the \$400,000 that will go from USACE to USGS directly;
5. RMP 2022 has an overall surplus of \$137,713.
6. Table 6 showing the outstanding Accounts Receivable for 2022.

The expected fees are the sum of core fees (\$3,718,033) and supplemental fees paid by wastewater agencies (\$320,480) under Water Board Order R2-2016-0018 and updated Order R2-2021-0028 (hereafter referred to as Alternative Monitoring and Reporting funds or AMR funds).

As of September 30, 2022, we are 46% expended on the total budget.

RMP 2021 Budget

Revenue

\$3,588,054 of the \$3,675,093 (98%) in 2021 invoiced fees have been collected. Notes:

1. The full 2021 revenue is \$4,091,093 and includes \$400,00 which is a pass through from USACE to USGS and \$16,000 from undesignated funds. \$50,000 of RMP 2021 revenue was transferred (deducted from the revenue) from RMP 2021 to Set-Aside Funds for S&T Monitoring and an additional \$74,516 was transferred (deducted from the revenue) to the undesignated reserve. Therefore operating revenue is \$3,966,577;
2. The full 2021 planned expenses are \$3,963,060;

3. During Q1 2022, the dredger invoice amount was determined. This amount was \$5,391 higher than planned. The full revenue amount has been updated in item 1 above.
4. The total amount invoiced does not include the \$400,000 that will go from USACE to USGS directly;
5. Due to the higher than planned dredger revenue, RMP 2021 has an overall net surplus of \$3,517 (was previously a deficit of \$1,800).
6. Table 6 shows the remaining outstanding Accounts Receivable for 2021.

The expected fees are the sum of core fees (\$3,795,792) and supplemental AMR funds paid by wastewater agencies (\$279,301).

As of September 30, 2022, we are 75% expended on the total budget.

RMP 2020 BUDGET

Revenue

\$3,873,720 of the \$3,873,721 (100%) in 2020 invoiced fees have been collected. Notes:

7. The full 2020 revenue is \$3,991,846 which includes \$88,129 from set aside funds for RMP Program Review, \$30,000 from undesignated reserve, and deducts \$275,000 which was transferred to Set-Aside Funds for S&T Monitoring;
8. The total amount invoiced does include the \$400,000 that will go from USACE to USGS directly;
9. The total amount invoiced includes the \$93,196 for Caltrans;
10. The total RMP 2020 local dredger revenues have been calculated at \$82,814, which is lower than the original estimate of \$209,489; and
11. RMP 2020 budgets were adjusted to reflect the lower dredger revenue (reduced multiple budgets by a total of \$53,800) and there remains an overall revenue shortfall of \$18,168.

The expected fees are the sum of core fees (\$3,594,416) and supplemental AMR funds paid by wastewater agencies (\$279,301).

As of September 30, 2022, we are 91% expended on the total budget.

The RMP budget is now planned at \$3,735,014 which results in a deficit of \$18,168. We have closed all of tasks 1-5 and the balance remaining in these tasks is \$203k. After accounting for the \$18k deficit, there's a remaining balance of \$185k in tasks 1-5. We will hold these funds in the RMP 2020 account until we unencumber the entire year.

RMP 2019 BUDGET

Revenue

\$3,459,851 of the \$3,460,087 (99%) in 2019 fees have been collected. SFEI has written off the expected revenue from Marina Dredge Neighbors in the amount of \$200. After accounting for this write off, all 2019 funds have been received. Notes:

1. The full 2019 revenue is \$3,819,850 which includes \$109,762 from undesignated reserve funds;
2. The total amount invoiced does not include the \$250,000 that went from the USACE to the USGS directly.

The expected fees are the sum of core fees (\$3,430,087) and supplemental AMR fees paid by wastewater agencies (\$279,301). There is reduced dredger revenue of \$262,334 (\$150,000 in reduced revenue from USACE and \$112,334 reduced revenue from local dredgers). Due to this lower than expected revenue, the planned 2019 RMP expenses exceeded revenue by \$36,108. At the August 2019 Steering Committee meeting, a decision was made to move \$16,762 from Undesignated Reserve Funds to RMP 2019 and to reduce the RMP 2019 unallocated budget from \$19,346 to \$0. These two changes balanced the RMP 2019 budget.

Expenses

Overall, 94% of the 2019 funds have been spent through September 30, /2022. To date, we are over budget on some tasks by about \$58.7k (\$39.7k on workgroup meetings, \$10k on the water cruise, and \$9k on the Selenium North Bay clam study (these overages were previously approved by the RMP SC)). Through 3/31/2022, we have a positive balance of about \$115.7k on tasks-1-5 (program management tasks). This \$115.7k balance will be needed to cover previous Steering Committee approved overages. We aim to complete remaining tasks on budget and will wait until we are near 100% complete on projects to unencumber funds.

Unencumbrances this Quarter

- There is no request to unencumber at this meeting.

RMP 2018 BUDGET

Revenue

\$3,596,060 of the \$3,596,060 (100%) in 2018 fees have been collected. The expected fees are the sum of core fees (\$3,326,493) and AMR fees paid by wastewater agencies (\$269,575).

Expenses

Overall, 98% of the 2018 funds have been spent. The remaining projects are mostly special studies. For the Status and Trends tasks, most of the remaining expenses are laboratory invoices and data management.

Unencumbrances this Quarter

- There is no request to unencumber at this meeting.

RESERVE FUNDS

Dedicated Set-Aside Funds

The RMP has several dedicated set-aside funds. The purpose of these funds is to spread out the cost of large projects across multiple budget years. In the first quarter of 2022, \$350,000 was transferred to the S&T set aside funds from RMP 2022. The current balance of all set-aside funds is **\$1,377,975**. The current balance of each set-aside fund is shown in Table 2. The historical and projected balance of the S&T Set-Aside Fund is shown in Figure 3.

Dedicated Dredger Reserve Fund

The balance of the Dredger Reserve Fund was reset to zero on January 1, 2018, when new dredger fees took effect. In 2018, there was a \$62,665 credit to the Fund for dredger fees associated with the 6-month "stub year" that

was created when the new fee schedule was developed^[1]. There was also a debit of \$109,060 because the local dredger fee payments were below their target for the year. In 2019, 2020 and 2021, there was a dredger revenue reduction due to dredged materials below targets of \$262,334, 209,498, and \$196,757, respectively. Therefore, the balance of the Dredger Reserve is currently **-\$714,984**. Table 3 tracks the running balance of the Dredger Reserve Fund.

Undesignated Funds

The RMP has a policy to maintain a Reserve of Undesignated Funds of at least \$400,000 (this was increased from \$200,000 at the October 2018 Steering Committee meeting) to allow for response to unanticipated funding needs or revenue shortfalls.

Going forward, all RMP earned interest will be deposited directly into Undesignated Funds and will be reported each quarter.

Any remaining Undesignated Funds are available for spending at the discretion of the Steering Committee. Figure 2 shows how the balance of Undesignated Funds has changed over time. The balance of Undesignated Funds through the current period is **\$1,036,070**. Table 4 shows the withdrawals and deposits in the Undesignated Funds during the last two budget years. Q2 2022 LAIF interest was \$6015 (1.35% interest).

Supplemental Environmental Project (SEP) Funds

The total amount of RMP SEP funds received through the current period is \$3,375,520, which includes \$11,650 of additional funding for project oversight that supported previously completed and closed projects (no change since last reporting period). There are \$14,389 of unallocated SEP (MMP) settlement funds that were previously received and are available. There are \$93,000 of MMP (unallocated) funds that are pending payment. There was one new settlement order for Task 28: San Francisco Bay Sediment Transport and Fate Modeling for which payment was received during this reporting period.

As of the end of the current period, a total of \$2,033,391 have been spent on current and previous SEP projects, which includes 28 projects to date (10 of which have been previously completed and closed and 4 of which were closed during this reporting period). The current balance of SEP funds is **\$1,181,9799** (includes the received unallocated funds that have not yet been committed to a project). Table 5a summarizes the budget status for current, active SEP projects through this reporting period. Descriptions of the active and approved projects are shown in Table 5b.

FOR STEERING COMMITTEE APPROVAL

- No items for approval.

Figures and Tables

Budget Final and Actuals JTD

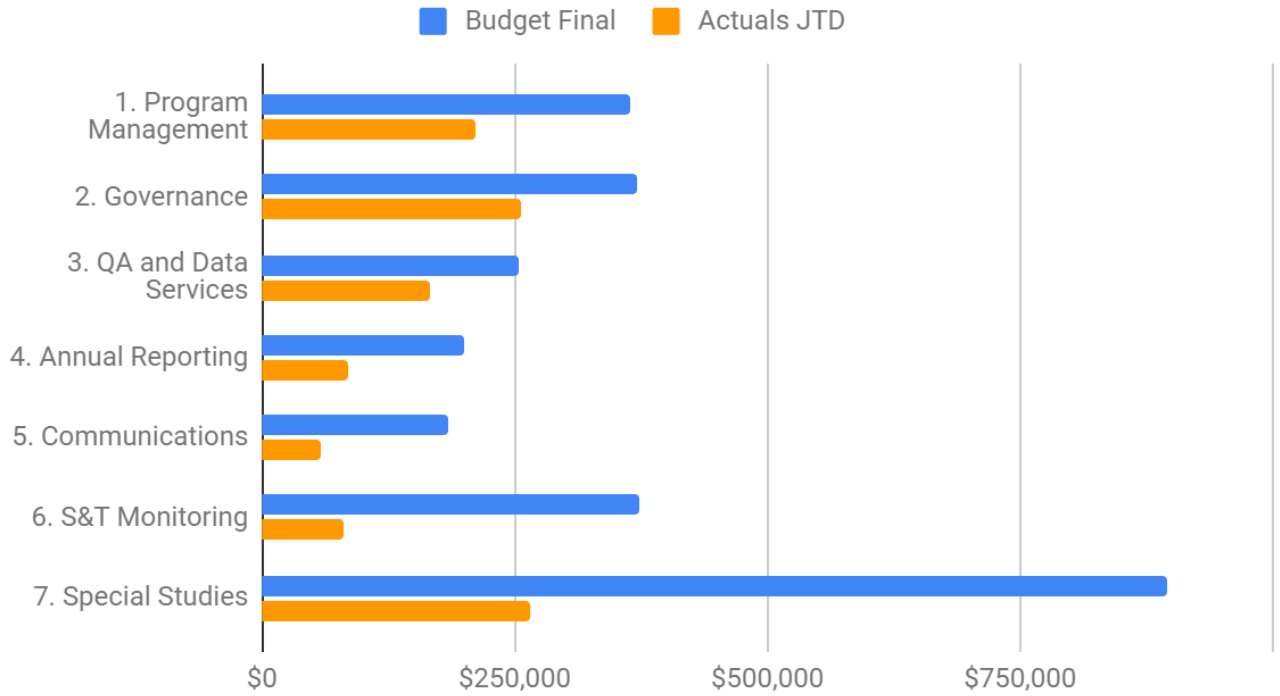


Figure 1 Bay RMP 2022 Budget. Budget and expenses through the current period by category.

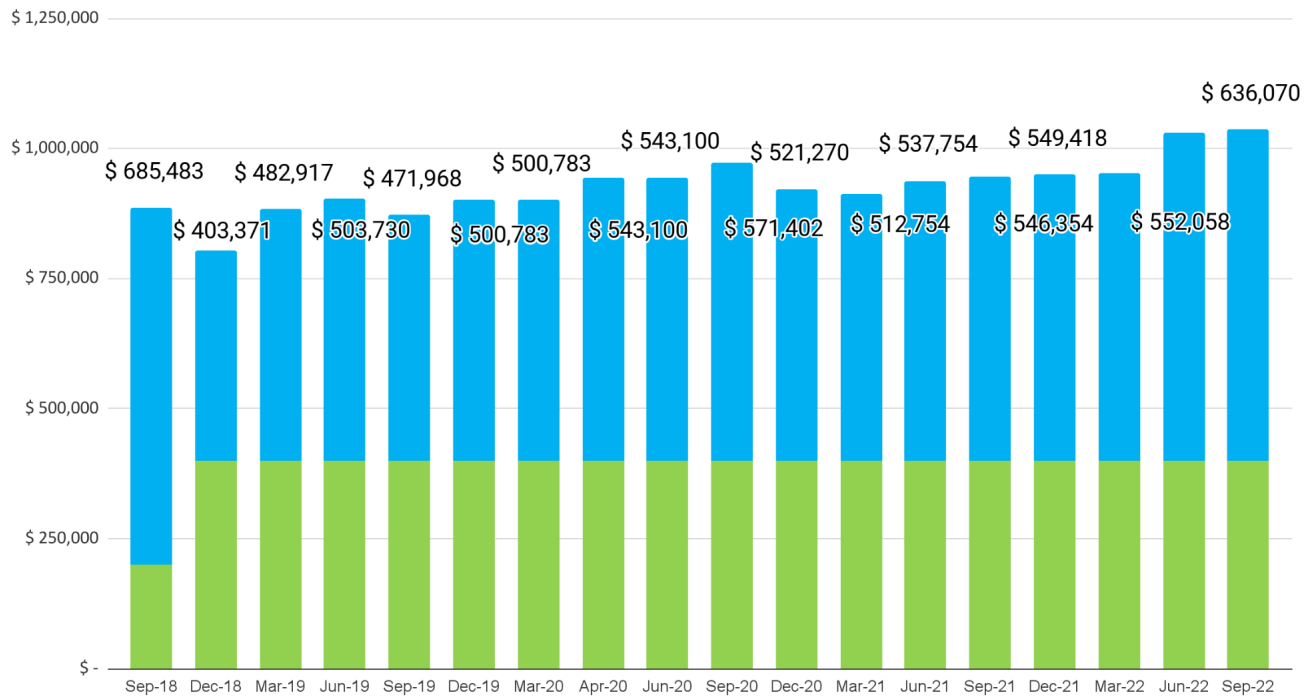


Figure 2: Bay RMP Undesignated Funds Balance over the past three years. The height of the bar shows the total balance of the Undesignated Funds. The bar is color coded to indicate the RMP policy that \$400,000 of the Undesignated Funds should not be spent. Note that prior to December 2018, the RMP policy for restricted Undesignated Funds was \$200,000. The increase to \$400,000 was approved at the October 2018 Steering Committee meeting.

S&T Monitoring Dedicated Set-Aside Funds and S&T Budget

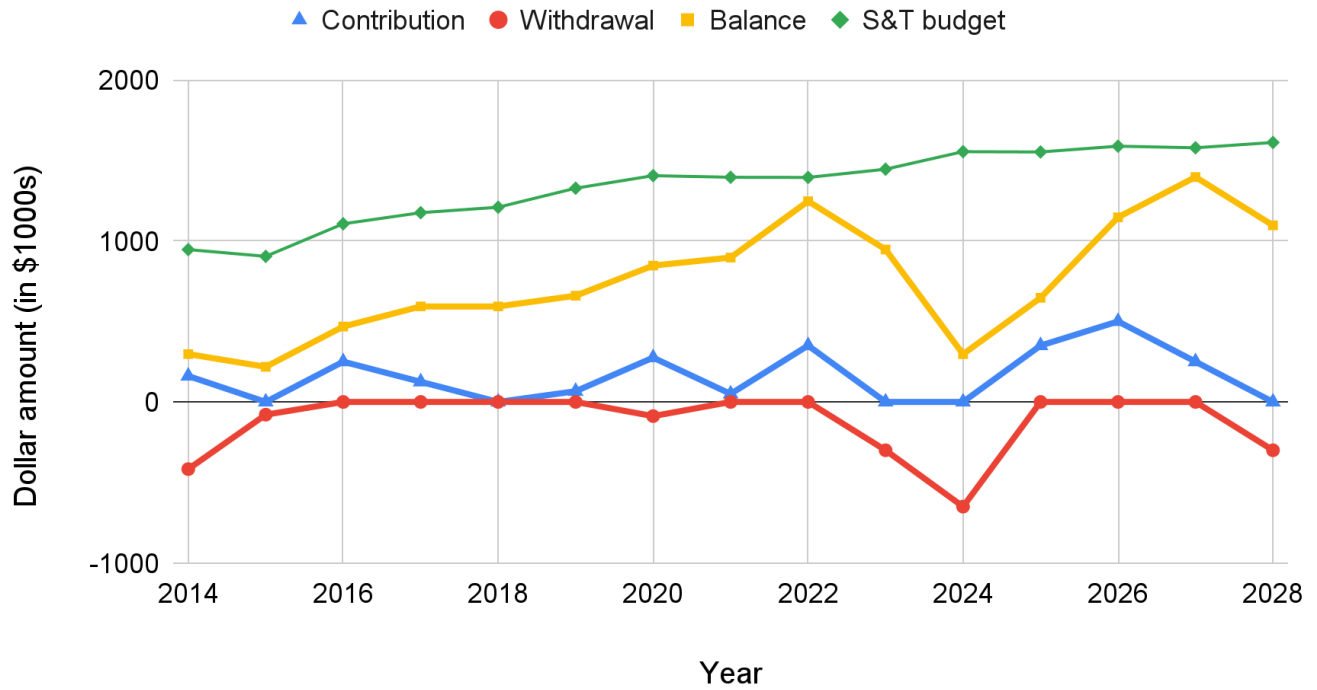


Figure 3. Contributions to and withdrawals from the S&T Set-Aside Fund from 2014 to 2022, anticipated contributions and withdrawals from 2023 to 2028, S&T actual budget for 2014 to 2021, and S&T projected budget for 2023 to 2028.

Table 1a: Bay RMP 2022 Budget: Budget and expenses for active tasks through the current period by line item.

Task	Sub-task	Subtask Name	Status	Budget	Expenses JTD	% Complete
Task Number: 001 Program Management	A	Budget and Workplan Development	Active	\$44,300	\$26,754	60%
	B	Contract and Financial Management	Active	\$105,200	\$42,042	40%

Task	Sub-task	Subtask Name	Status	Budget	Expenses JTD	% Complete
	C	Technical Oversight	Active	\$66,500	\$53,904	81%
	D	Internal Coordination	Active	\$98,200	\$64,617	66%
	E	External Coordination	Active	\$42,800	\$23,804	56%
	F	Administration	Active	\$7,000	\$264	4%
Task Number: 002 Governance	A	SC meetings	Active	\$54,500	\$32,087	59%
	B	TRC meetings	Active	\$55,700	\$29,070	52%
	C	General WG meetings (MF, E)	Inactive	\$58,000	\$50,425	87%
	D	External Science Advisors	Active	\$60,000	\$94	0%
	E	Emerging Contaminants WG	Inactive	\$46,000	\$45,938	100%
	F	Microplastic WG	Inactive	\$11,500	\$11,358	99%

Task	Sub-task	Subtask Name	Status	Budget	Expenses JTD	% Complete
	G	SPLWG	Inactive	\$28,800	\$34,840	121%
	H	Sediment WG	Active	\$40,300	\$33,583	83%
	I	PCB WG	Inactive	\$17,300	\$17,831	103%
Task Number: 003 QA and Data Services	A	Quality Assurance System	Active	\$36,100	\$24,951	69%
	B	Online Data Access: CD3	Active	\$69,100	\$28,531	41%
	C	Database Maintenance	Active	\$63,800	\$53,934	85%
	D	Updates to SOPs and Templates	Active	\$36,100	\$27,590	76%
	E	DMMO Database Support	Active	\$49,900	\$30,164	60%
Task Number: 004 Annual Reporting	A	Pulse Report	Active	\$129,000	\$56,465	44%
	B	Annual Meeting	Active	\$70,000	\$27,735	40%

Task	Sub-task	Subtask Name	Status	Budget	Expenses JTD	% Complete
Task Number: 005 Communications	A	Communications Plan Implementation	Active	\$47,100	\$12,590	27%
	B	Stakeholder Engagement	Active	\$27,000	\$13,054	48%
	C	Responses to Information Requests	Active	\$20,700	\$5,827	28%
	D	Outreach Products	Active	\$12,700	\$3,034	24%
	E	Presentations at Conferences and Meeting	Active	\$59,200	\$11,899	20%
	G	RMP Website Maintenance	Active	\$17,300	\$12,382	72%
Task Number: 006 S&T Monitoring	A	USGS Sacramento Support	Inactive	\$0	\$0	
	B	USGS Menlo Park Support	Active	\$0	\$0	
	C	Winter StormWater	Active	\$107,000	\$26,248	25%

Task	Sub-task	Subtask Name	Status	Budget	Expenses JTD	% Complete
	D	Winter StormWater Data Mgmt	Active	\$20,000	\$9,309	47%
	E	S&T Bivalves	Active	\$20,000	\$0	0%
	F	N Bay Se Mon DataMgt	Active	\$30,000	\$0	0%
	G	North Bay Selenium Monitoring	Active	\$97,000	\$21,051	22%
	H	Dry season Bay water cruises	Active	\$25,000	\$2,504	10%
	I	S&T Laboratory Intercomparison Studies	Active	\$22,000	\$1,319	6%
	J	Sample archive	Active	\$43,000	\$20,660	48%
	K	S&T Field Sampling Report & Support	Active	\$10,000	\$0	0%
Task Number: 020 Special Study: PCB In-Bay contaminant mo		Special Study: PCB In-Bay contaminant mo	Active	\$56,000	\$19,410	35%

Task	Sub-task	Subtask Name	Status	Budget	Expenses JTD	% Complete
Task Number: 021 PCBs in sediment and fish SS/RC		PCBs in sediment and fish SS/RC	Active	\$52,000	\$6,482	12%
Task Number: 022 Special Study: Nutrients Moored sensor h		Special Study: Nutrients Moored sensor h	Active	\$0	\$0	
Task Number: 023 Special Study: Microplastic Strategy		Special Study: Microplastic Strategy	Active	\$10,000	\$6,839	68%
Task Number: 027 Special Study: STLS Strat. Supp. & Coord		Special Study: STLS Strat. Supp. & Coord	Active	\$35,000	\$30,570	87%
Task Number: 029 Special Study: STLS Reg. Model Devpmt.		Special Study: STLS Reg. Model Devpmt.	Active	\$90,000	\$55,440	62%
Task Number: 030 Small Tributaries Pollutants of Concern	E	Labs and Subs	Active	\$43,000	\$9,558	22%
Task Number: 031 PCB monitoring at GE property		PCB monitoring at GE property	Active	\$21,200	\$855	4%

Task	Sub-task	Subtask Name	Status	Budget	Expenses JTD	% Complete
Task Number: 032 AQUA-GAPS passive sampler		AQUA-GAPS passive sampler	Active	\$10,000	\$0	0%
Task Number: 033 Special Study: EC Strategy Support		Special Study: EC Strategy Support	Active	\$90,000	\$58,332	65%
Task Number: 034 Special Study: EC in Urban Stormwater	A	Stormwater Sampling	Inactive	\$33,000	\$0	0%
	B	Data Management	Active	\$5,000	\$0	0%
	C	Analysis and Reporting	Active	\$62,000	\$0	0%
Task Number: 035 CEC modeling exploration		CEC modeling exploration	Active	\$25,000	\$5,729	23%
Task Number: 036 Spec Stud: MPWG RMP Tire Strategy		Spec Stud: MPWG RMP Tire Strategy	Active	\$25,500	\$20,726	81%
Task Number: 037 Spec Stud: EC Tire-related contam in Bay	A	Study Des & Smple Collection	Active	\$30,000	\$811	3%

Task	Sub-task	Subtask Name	Status	Budget	Expenses JTD	% Complete
	B	Data Mgmt	Active	\$10,000	\$0	0%
	C	Data Analysis & Report	Active	\$10,000	\$0	0%
Task Number: 038 Spec Stud: EC Ethoxyl Surfact in Water	A	Project Management	Active	\$2,509	\$0	0%
	B	Data Services	Active	\$3,500	\$0	0%
	C	Analysis and Reporting	Active	\$12,100	\$0	0%
	D	Laboratory analysis	Active	\$11,891	\$9,337	79%
Task Number: 039 Spec Stud: SPL SW monitor strat for CECs		Spec Stud: SPL SW monitor strat for CECs	Active	\$50,000	\$15,747	31%
Task Number: 043 Sediment WG Workplan		Sediment WG Workplan	Active	\$10,000	\$1,655	17%
Task Number: 044 Special Study: Upload Data to DMMO		Special Study: Upload Data to DMMO	Active	\$20,000	\$183	1%

Task	Sub-task	Subtask Name	Status	Budget	Expenses JTD	% Complete
Task Number: 045 Special Study: Sediment Temp variability		Special Study: Sediment Temp variability	Active	\$155,000	\$24,221	16%
Task Number: 046 PFAS in fish	A	PFAS in fish	Active	\$12,000	\$0	0%
	B	Data Management	Active	\$10,000	\$250	2%

Table 1b: Bay RMP 2021 Budget: Budget and expenses for active tasks through the current period by line item.

<i>Task</i>	<i>Sub-task</i>	<i>Subtask Name</i>	Budget	Expenses JTD	% Complete
Task Number: 001 Program Management	C	Technical Oversight	\$60,000	\$52,432	87%
	E	External Coordination	\$35,000	\$32,910	94%
Task Number: 002 Governance	B	TRC meetings	\$48,600	\$37,479	77%
Task Number: 003 QA and Data Services	E	DMMO Database Support	\$47,000	\$49,828	106%
Task Number: 004 Annual Reporting	A	Pulse Report	\$95,000	\$82,450	87%
Task Number: 005 Communications	A	Communications Plan Implementation	\$41,000	\$40,347	98%
	C	Responses to Information Requests	\$18,000	\$15,705	87%

<i>Task</i>	<i>Sub-task</i>	<i>Subtask Name</i>	Budget	Expenses JTD	% Complete
	E	Presentations at Conferences and Meeting	\$51,500	\$41,141	80%
Task Number: 006 S&T Monitoring	B	USGS Menlo Park Support	\$250,000	\$187,404	75%
	D	2021 Water Cruise Data Mgmt	\$35,000	\$27,316	78%
	E	Bird Egg Sampling	\$226,000	\$25,129	11%
	F	2021 Bird Egg Data Mgmt	\$30,000	\$250	1%
	I	S&T Laboratory Intercomparison Studies	\$28,000	\$11,488	41%
	J	Sample Archive	\$84,000	\$72,495	86%
	K	S&T Field Sampling Report & Support	\$12,000	\$3,012	25%
Task Number: 021 Special Study: PCB Remediation Monitorin	B	Field Work	\$32,666	\$33,290	102%
	C	Labs	\$39,034	\$12,480	32%
	D	Reporting	\$12,830	\$3,550	28%
Task Number: 024 Special Study: MicroP Conceptual Model		Special Study: MicroP Conceptual Model	\$40,000	\$31,232	78%
Task Number: 026 Special Study: STLS Integrated Conceptua		Special Study: STLS Integrated Conceptua	\$49,640	\$27,392	55%
Task Number: 029 Special Study: STLS Reg. Model Devpmt.		Special Study: STLS Reg. Model Devpmt.	\$150,000	\$149,551	100%
Task Number: 030 Special Study: STLS WY20 POC Recon Monit	C	Data Management	\$20,000	\$17,778	89%
	E	Labs and Subs	\$23,000	\$7,119	31%
Task Number: 031 Special Study: PFAS in Bay water	A	Sampling & Reporting	\$44,500	\$42,514	96%
	B	Data Mgmt	\$5,500	\$5,017	91%

<i>Task</i>	<i>Sub-task</i>	<i>Subtask Name</i>	Budget	Expenses JTD	% Complete
Task Number: 034 Special Study: EC in Urban Stormwater	B	Data Management	\$40,000	\$22,714	57%
	C	Analysis and Reporting	\$28,792	\$2,695	9%
Task Number: 035 Special Study: Toxicology Strategy		Special Study: Toxicology Strategy	\$60,000	\$40,162	67%
Task Number: 046 Special Study: DMMO Database Enhancement		Special Study: DMMO Database Enhancement	\$40,000	\$4,365	11%
Task Number: 047 Special Study: Sediment Delivery to Mars		Special Study: Sediment Delivery to Mars	\$80,000	\$80,000	100%
Task Number: 048 S&T RMP Prog Rev		S&T RMP Prog Rev	\$220,000	\$106,297	48%
Task Number: 049 Special Study: Microplastics Sed Core		Special Study: Microplastics Sed Core	\$3,500	\$0	0%

Table 1c: Bay RMP 2020 Budget: Budget and expenses for active tasks through the current period by line item.

<i>Task</i>	<i>Sub-task</i>	<i>Subtask Name</i>	Budget	Expenses JTD	% Complete
Task Number: 006 S&T Monitoring	E	2020 N Bay Margins Sediment Mon FieldWk	\$220,600	\$209,464	95%
	F	2020 Margins Sediment Report	\$65,400	\$46,619	71%
	G	2020 N Bay Margins Sediment Mon DatMgm	\$33,000	\$32,337	98%
	K	S&T Field Sampling Report & Support	\$23,000	\$1,284	6%
Task Number: 021 PCB PMU Monitoring with Passive Samplers	A	Sampling	\$35,000	\$32,638	93%
Task Number: 030 Special Study: STLS	E	Labs and Subs	\$9,349	\$0	0%

<i>Task</i>	<i>Sub-task</i>	<i>Subtask Name</i>	Budget	Expenses JTD	% Complete
WY20 POC Recon Monit					
Task Number: 031 Special Study: EC Bisphenols in sediment	A	Sampling & Reporting	\$16,300	\$16,186	99%
Task Number: 034 Special Study: EC in Urban Stormwater	C	Analysis and Reporting	\$15,727	\$7,679	49%
Task Number: 035 Special Study: EC Bisphenols in effluent	A	Planning & Reporting	\$46,100	\$43,211	94%

Table 1d: Bay RMP 2019 Budget: Budget and expenses for active tasks through the current period by line item.

<i>Task</i>	<i>Sub-task</i>	<i>Subtask Name</i>	<i>Budget</i>	<i>Expenses JTD</i>	<i>% Complete</i>
Task Number: 006 S&T Monitoring	K	S&T Field Sampling Report & Support	\$22,000	\$9,552	43%
Task Number: 021 Special Study: PCB Stormwtr Mon. for PMU		Special Study: PCB Stormwtr Mon. for PMU	\$30,000	\$16,045	53%
Task Number: 030 Special Study: STLS WY19 POC Recon Monit	A	Project Management	\$24,756	\$21,782	88%
Task Number: 035 Special Study: EC Ethoxylated Surf. Stud	A	Sample Collection and Reporting	\$98,300	\$64,027	65%
	B	Data Management	\$24,700	\$5,949	24%
Task Number: 042 Special Study: Selen'm Sturg Muscle Plug		Special Study: Selen'm Sturg Muscle Plug	\$22,000	\$7,333	33%
Task Number: 047 Special Study: Sed.Benefic.Reuse.Wrkshp		Special Study: Sed.Benefic.Reuse.Wrkshp	\$30,000	\$31,628	105%

Table 1e: Bay RMP 2018 Budget: Budget and expenses for active tasks through the current period by line item.

<i>Task</i>	<i>Sub task</i>	<i>Subtask Name</i>	<i>Budget</i>	<i>Expenses JTD</i>	<i>% Complete</i>
Task Number: 036 EC Non-Targeted Analysis of Sed & Water		EC Non-Targeted Analysis of Sed & Water	\$101,000	\$73,543	73%

Table 2: Bay RMP Dedicated Set-Aside Funds. Balances as of the current period.

Reserve Type	Purpose	Balance
Dedicated Set-Aside Fund	Monitoring Contingency	\$50,000
Dedicated Set-Aside Fund	S&T Monitoring	\$1,327,975
	TOTAL	\$1,377,975

Table 3: Bay RMP Dedicated Dredger Reserve Fund. Yearly surplus (deficit) and total surplus (deficit) as of the current period. Note that the previous running surplus/deficit was reset to \$0 in 2018.

Year	Yearly Surplus/Deficit	Balance
Starting Balance from "Stub Year"		\$62,665 (received) \$62,665 (total)
2018	-\$109,060	-\$46,395
2019	-\$262,334	-\$308,729
2020	-\$209,498	-\$518,227
2021	-\$196,757	-\$714,984

Table 4: Bay RMP Undesignated Funds. Withdrawals and deposits during the last two budget years and total balance as of the current period.

Budget Year	Deposit or Withdrawal	Authorization	Date of Authorization	Amount	Comment
2020	Deposit	Program Manager	3/31/2020	\$24,936	Deposited LAIF and other interest from CY Q1
2020	Deposit	Program Manager	5/1/2019	\$30,000	DWR funds for Hg monitoring at Winter's Island originally deposited to undesignated
2020	Withdrawal	Program Manager	6/15/2020	-\$30,000	DWR funds for Hg monitoring at Winter's Island transferred to RMP 2019
2016	Deposit	Steering Committee	7/22/2020	\$10,279	Unencumberd the remaining balance in RMP 2016 and moved to undesignated funds
2020	Deposit	Program Manager	6/30/2020	\$18,022	Deposited LAIF and other interest from CY Q2
2020	Withdrawal	Steering Committee	10/16/2020	-\$15,000	Approved by SC via email for RMP 2020 task 48 rmp review
2020	Withdrawal	Steering Committee	10/22/2020	-\$15,000	Approved by SC at 10/21/20 SC meeting - for task RMP 41 clam selenium project (RMP 2020)
2020	Deposit	Program Manager	10/15/2020	\$9,778	Deposited LAIF and other interest from CY Q3
2020	Deposit	Program Manager	12/31/2020	\$7,484	Deposited LAIF and other interest from CY Q4
2021	Withdrawal	Steering Committee	1/21/2021	-\$16,000	Withdraw \$16k from UR to RMP 2021 for \$6k for MPWG and \$10k for tire contaminant conceptual model
2017	Deposit	Steering Committee	4/27/2021	\$25,000	unencumbered \$25,000 from RMP 2017 to reserve
2021	Deposit	Program Manager	3/31/2021	\$5,083	Q1 2021 LAIF interest
2021	Deposit	Program Manager	6/30/2021	\$3,697	Q2 2021 LAIF interest
2021	Deposit	Program Manager	9/30/2021	\$2,884	Q3 2021 LAIF interest
2021	Deposit	Program Manager	12/31/2021	\$2,640	Q4 2021 LAIF interest
2021	Deposit	Program Manager	3/31/2022	\$3481	Q1 2022 LAIF interest
2022	Deposit	Steering	4/27/2022	\$74,516	new fees from schnitzer steel - from rmp 2021 to undesignated reserve

		Committee			
2022	Deposit	Program Manager	6/30/2022	\$6,015	Q2 2022 LAIF interest

Table 5a: Bay RMP Supplemental Environmental Project (SEP) Settlement Funds budget status for open, current projects or projects that ended within the last quarter. Listed are the amount of funds received and allocated to specific projects, the amount spent through the end of this reporting period, and the amount of unallocated funds available for this reporting period. The RMP maintains records of each settlement payment in their accounting system. * indicates that funding has not yet been received

Active RMP SEP Projects	Amount Funded	Amount Spent	SEP Project Balance
Task 011: PCB Stormwater Monitoring for PMUs (closed this period)	\$37,000	\$37,000	\$0
Task 012: PCB Shiner Surfperch PMU Survey	\$59,752	\$59,712	\$40
Task 013: Lower South Bay Sediment Transport Monitoring Study	\$158,000	\$141,962	\$16,038
Task 014: Quantifying Stormwater Flow and Sediment Flux to the Bay	\$385,000	\$270,840	\$114,160
Task 015: North Bay Selenium Clam and Water Data Management and Reporting	\$40,000	\$33,301	\$6,699
Task 016: Sunscreen in Wastewater	\$36,500	\$24,367	\$12,133
Task 017: Characterizing the settling velocity of suspended sediment across channel and shoals in South San Francisco Estuary	\$227,700	\$212,010	\$15,690
Task 018: USGS Sediment Flux Study at Benicia Bridge (closed this period)	\$36,300	\$36,300	\$0
Task 019: ECWG Special Study 2020 Q_Ammonium Compounds Survey	\$58,200	\$19,498	\$38,702
Task 020: SPLWG 2020 MTC Bay Area Land Use Update Support	\$50,000	\$45,988	\$4,012
Task 021: Sediment Dynamics Assessment and Uncertainty Analysis for San Francisco Bay	\$142,500	\$100,415	\$42,085
Task 022: Temporal Variability in Sediment Delivery to a San Francisco Bay Salt Marsh - USGS (Closed this period)	\$60,000	\$60,000	\$0
Task 023: Integrated Watershed-Bay Modeling Strategy and Pilot Implementation	\$200,000	\$12,231	\$187,769
Task 024: Regional Watershed Spreadsheet Model Update	\$23,300	\$569	\$22,731
Task 025: Temporal Variability in Sediment Delivery to a San Francisco Bay Salt Marsh - USGS Closed this period)	\$59,511	\$59,511	\$0
Task 026: Characterizing Per- and Polyfluoroalkyl Substances (PFAS) and Chlorinated Paraffins in San Francisco Bay Sediment	\$106,150	\$589	\$105,561
Task 027: High speed mapping of water quality parameters on the eastern shoal of South San Francisco Bay	\$184,470	\$0	\$184,470

Active RMP SEP Projects	Amount Funded	Amount Spent	SEP Project Balance
Task 028: San Francisco Bay Sediment Transport and Fate Modeling	\$408,000	\$0	\$408,000
Unallocated	\$14,389	\$0	\$14,389
Total for above active projects and unallocated funds	\$2,286,772	\$1,114,293	\$1,172,479
Total for all SEP Projects	\$3,375,520	\$2,033,391	\$1,181,979

Table 5b: Bay RMP Supplemental Environmental Project Descriptions

Study Name	Budget	Description	Status
Task 011 PCB Priority Margin Unit (PMU) Stormwater Study	\$67,000 total project cost with \$37,000 paid by SEP funding	<p>This study will yield valuable information on PCB concentrations and particle ratios in stormwater in two Priority Margin Unit (PMU) watersheds. The study areas include the major subwatersheds draining into the Emeryville Crescent, and one subwatershed draining into San Leandro Bay. The subwatershed draining into San Leandro Bay is downstream of a recently remediated hotspot, the former General Electric (GE) transformer and electrical equipment facility, where PCB contamination was severe. The goals of the study are to better estimate current PCB loads into these PMUs (a critical component of the PMU mass budgets) and to support tracking of the effectiveness of the major remediation action on the GE property. Sampling will be completed over two years, as storms allow.</p> <p>This project is funded by RMP Core Funds & SEP Funds:</p> <p>\$30K in Bay RMP Core Funds (3018-021), \$22K in MMP settlement funds, and \$15K in an ACL settlement (R2-2018-1021).</p>	Approved (closed this period)
Task 012 PCB Priority Margin Unit (PMU) Surfperch Survey	\$59,752	<p>Conceptual site models for PCBs in priority margin units have been developed for the Emeryville Crescent and San Leandro Bay. The San Leandro Bay model was supported by an intensive field study. These conceptual site models identified shiner surfperch as a crucial indicator of impairment in these areas, due to their explicit inclusion as an indicator species in the TMDL, their importance as a sport fish species, their tendency to accumulate high concentrations, their site fidelity, and other factors. The conceptual site models recommend periodic monitoring of shiner surfperch to track trends in the PMUs, and as the ultimate indicator of progress in reduction of impairment. Shiner surfperch and other sport fish species will be monitored in 2019 as part of RMP Status and Trends (S&T) monitoring. A coordinated sampling of PCBs in shiner surfperch in four PMUs is proposed as an add-on to the 2019 S&T sport fish sampling. This coordination will yield significant savings in data management and reporting, because these results can be easily added to the S&T activities with negligible additional cost. In addition, a dataset for shiner surfperch will be obtained that is directly comparable across the four PMUs and the five locations that are sampled in S&T.</p>	Approved

Study Name	Budget	Description	Status
<p>Task 013 Lower South Bay Sediment Transport Monitoring Study</p> <p>(LSB Sediment Flux Study Year 2)</p>	\$158,000	<p>For January through September 2019, the San Francisco Bay Regional Monitoring Program (RMP) will continue the observations of suspended-sediment flux obtained in 2018 and will study the effects of flocculation on suspended-sediment flux measurements at the Dumbarton Bridge. The study will provide a monitoring dataset to understand the amount of sediment that is transported into and out of Lower South Bay (the “sediment flux”). An interpretive technical report for RMP’s 2018 – 2019 results will be submitted. This data is critically important for restoring marshes for the South Bay Salt Ponds Restoration Project and for understanding transport of sediment-associated contaminants. At two locations in the water column at Dumbarton Bridge, continuous, 15-minute observations of turbidity, water velocity, and depth will be collected. These datasets will be related to suspended-sediment concentration and channel discharge using periodic boat-based measurements; the product of these two quantities is suspended-sediment flux. This sediment flux monitoring will follow previously established United States Geological Survey (USGS) methods (Shellenbarger et al., 2013). To quantify the effect of flocculation on these sediment flux computations, additional field campaigns will be conducted to observe in situ floc size and particle size distributions through an entire tidal cycle during spring and neap tides of the dry (July – Sept) and wet (Oct – June) seasons.</p>	Approved
<p>Task 014 Quantifying stormwater flow and sediment</p>	\$385,000	<p>Information on urban storm water flow, either measured or estimated using modeling, is fundamental to policy development, planning and environmental management and supports drainage engineering, pollutant loading estimates, and models of transport and fate of pollutants. In the Bay Area, the majority of flow data have been collected by the USGS and partner flood control and water supply agencies in less urbanized larger watersheds mainly in support of flood risk analysis, the operation of water supply systems, and riparian flows for fish and wildlife. Presently there are 12 watershed being gauged by USGS and six others being gauged by flood control and water district staff or consultants to support these issues. Flow data are not being collected in the smaller highly urban watersheds that fringe the Bay that have rainfall-runoff characteristics that are distinctly different to larger non-urban watersheds. This project aims to fill these data gaps.</p>	Approved

Study Name	Budget	Description	Status
Task 015 North Bay Selenium Clam and Water Data Management and Reporting	\$40,000	The goal of the study is to provide data quality assurance, data management, and preparation of a data report for clam and water selenium monitoring conducted by the Regional Monitoring Program for Water Quality in San Francisco Bay (RMP) in North San Francisco Bay. This monitoring is being conducted by the RMP in support of the North Bay Selenium TMDL. This study will cover clam and water selenium data generated by RMP monitoring in 2019 and 2020.	Approved
Task 016 Sunscreens in Wastewater	\$36,500	Recent qualitative work has indicated the presence of one sunscreen active ingredient, oxybenzone, in Bay water and wastewater effluent. Oxybenzone and other sunscreen active ingredients have been shown to cause adverse effects, such as endocrine disruption in fish and bleaching on coral reefs. The City of San Francisco is considering a resolution to examine the occurrence and potential impacts of some of these compounds. This sunscreen screening study will help assess whether they may be a potential concern for the Bay.	Approved
Task 017 USGS Characterizing the settling velocity of suspended sediment across channel and shoals in South San Francisco Estuary	\$227,700	The goal of this work is to collect needed data on flocculation and variation in settling velocity of suspended sediment particles simultaneously in the channel and shoals of South San Francisco Estuary. These data will improve our understanding of the processes controlling sediment flocculation and ground-truth parameterizations of settling velocity that can be used to improve models of sediment transport for the San Francisco Estuary. Results will inform management questions regarding the beneficial reuse of dredged sediment, the sediment accretion in tidal marshes, and sources and trajectories of sediment-bound contaminants from watersheds and Bay margins into the Estuary. Informing these management questions is a priority of the San Francisco Bay Regional Monitoring Program for Water Quality.	Approved Started 7/2020
Task 018 USGS Sediment Flux Study at Benicia Bridge	\$36,300	<p>The goal of this USGS study is to reanalyze the existing model of sediment flux estimates for Suisun Bay at the Benicia Bridge. The existing model does not account for flocculation, which has been found to be an important component of sediment transport in other locations of San Francisco Bay. Incorporating sediment flocculation into the model will provide robust sediment flux estimates for Suisun Bay, which are of interest because Suisun Bay is the entry point for sediment, nutrients, and contaminants from the Estuary's primary freshwater source, the Sacramento-San Joaquin Delta.</p> <p>The Regional Monitoring Program will re-analyze data from 2002-2019 to include flocculation dynamics and revise sediment flux estimates based on those findings.</p>	Approved (closed this period)

Study Name	Budget	Description	Status
Task 019 ECWG Special Study 2020 Quaternary Ammonium Compounds Survey	\$58,200	<p>Quaternary ammonium compounds (QACs) are surfactants widely used in a variety of consumer products, particularly as antimicrobials. The current COVID-19 pandemic is thought to have increased use of products containing QACs, which is expected to continue into the near future. QACs have been detected in San Francisco Bay sediment, and are considered Possible Concern within the RMP tiered risk-based framework for emerging contaminants in the Bay.</p> <p>This ECWG special study will determine the concentrations of at least 22 QACs in Bay Area wastewater influent and effluent and begin to assess the temporal trends related to COVID-19.</p>	<p>Approved</p> <p>Started 7/2020</p>
Task 020 SPLWG 2020 MTC Bay Area Land Use Update Support	\$50,000	<p>Geographic information on land use forms the basis of data and information generated to inform many key planning, management, and policy decisions. The first comprehensive information on Bay Area land use was released by the Association of Bay Area Governments (ABAG) in 1995, updated in 2000, and again in 2005 to reflect the (then) latest information about land use on a parcel basis.</p> <p>The goal of this project is to support the Metropolitan Transport Commission (MTC) in generating a one-time regional update of the basic land-use information for the Bay Area to support timely planning and assessment needs within the RMP community. Working with RMP staff, the MTC plans to develop the digital geospatial product in a way that can then be updated regularly on 2-5 year intervals.</p>	<p>Approved</p> <p>Started 7/2020</p>
Task 021 Sediment Dynamics Assessment and Uncertainty Analysis for San Francisco Bay	\$142,500	<p>The goal of this project is to produce a detailed conceptual model of sediment dynamics for San Francisco Bay. The model will be linked to key management questions and developed at appropriate spatial and temporal scales, which can be used to inform policy decisions and build frameworks for management, monitoring, and modeling decisions. When coupled with an analysis of the uncertainties for major variables relative to their magnitude within the system, this conceptual model will also be used to prioritize monitoring and modeling studies.</p>	<p>Approved</p> <p>Started 9/2020</p>
Task 022: Temporal Variability in Sediment Delivery to a San Francisco Bay Salt Marsh	\$60,000	<p>The goal of this work is to investigate the influence of tides, waves, and water levels on sediment delivery and deposition on a tidal marsh surface in south San Francisco Bay. The project will include measurements of suspended sediment concentration (SSC) and suspended sediment flux (SSF) in the shallows adjacent to a marsh, SSF into the marsh through a tidal creek, deposition and accretion on the marsh, and the variation in deposition with elevation and vegetation density and type. Data will be collected in summer 2021 and data analyzed and reported by summer 2023. USGS subcontract 1515 - These SEP funds partially fund RMP 2021 Task 047.</p>	<p>Approved</p> <p>(closed this period)</p>

Study Name	Budget	Description	Status
Task 023: Integrated Watershed-Bay Modeling Strategy and Pilot Implementation	\$200,000	This project will produce and implement a strategy that integrates, links, and advances modeling tools to evaluate transport and loading of pollutants and sediment to San Francisco Bay from its tributary watersheds and other sources and pathways, and to evaluate the fate and transport of the resulting exposure of the pollutants in the Bay. Currently available models include watershed and Bay dynamic simulation models, watershed spreadsheet models, food web models, and mass balance conceptual box models of the Bay and Bay margins. Integrated use of these modeling tools and monitoring data will provide improved understanding of the linkages between ecosystem components and will better answer management questions to inform preventive and corrective actions for pollutants of concern, including contaminants of emerging concern, and management of sediment sources and supply needed for sea level rise resilience and adaptation, and habitat protection and restoration.	Approved
Task 024: Regional Watershed Spreadsheet Model Update	\$23,300	<p>The Regional Watershed Spreadsheet Model (RWSM) was developed to estimate average annual regional and sub-regional scale pollutant loads to San Francisco Bay from stormwater runoff. It is part of a class of deterministic empirical models based on the volume-concentration method. In the Bay Area, it has so far been used for providing first approximations of regional (Baywide) and sub-regional (e.g., individual county, Bay segment, or priority margin unit) estimates of PCBs, mercury, copper, nutrients, and microplastics.</p> <p>The model will be recalibrated for flow using a new calibration period (1991-2020) and updated land use data to be published by the Metropolitan Transportation Commission in March 2021. The recalibrated flow model will be used to improve the model calibration and load estimates for mercury and one or more other pollutants.</p>	Approved
Task 025: Additional MMP Funding for Task 022 - Temporal Variability in Sediment Delivery to a San Francisco Bay Salt Marsh	\$59,511	The goal of this work is to investigate the influence of tides, waves, and water levels on sediment delivery and deposition on a tidal marsh surface in south San Francisco Bay. The project will include measurements of suspended sediment concentration (SSC) and suspended sediment flux (SSF) in the shallows adjacent to a marsh, SSF into the marsh through a tidal creek, deposition and accretion on the marsh, and the variation in deposition with elevation and vegetation density and type. Data will be collected in summer 2021 and data analyzed and reported by summer 2023. USGS subcontract 1515 - These SEP funds partially fund RMP 2021 Task 047.	Approved (closed this period)

Study Name	Budget	Description	Status
Task 026: Characterizing Per- and Polyfluoroalkyl Substances (PFAS) and Chlorinated Paraffins in San Francisco Bay Sediment	\$106,150	This study will assess PFAS concentrations in San Francisco Bay sediment samples to improve our understanding of the occurrence and risks associated with PFAS in the Bay. Sediment samples collected throughout the Bay in 2018 and archived for the Status and Trends (S&T) Program will be analyzed, as well as a subset of samples expected to be collected in 2023 to provide information on current status. PFAS will be analyzed via targeted methods using tandem liquid chromatography/mass spectrometry (LC-MS/MS), and may also include analysis via the total oxidizable precursors (TOP) assay, which allows characterization of the overall presence of precursors rather than individual PFAS.	Approved
Task 027: High speed mapping of water quality parameters on the eastern shoal of South San Francisco Bay	\$184,470	<p>This study will conduct high speed mapping of water quality parameters covering the eastern shoals of South San Francisco Bay (monthly) over 4 months. The mapping surveys will include information about water quality, nutrients, phytoplankton, and near-field remote sensing of high spatial resolution on the shoals and into the channels.</p> <p>The results will provide a quantitative understanding of phytoplankton and nutrient dynamics on the shoals and how they link to nutrient cycling processes in the channels of San Francisco Bay.</p>	Approved
Task 28: San Francisco Bay Sediment Transport and Fate Modeling	\$408,000	<p>This project will produce a foundational quantitative model of sediment transport and fate in San Francisco Bay that can be used to address management questions for polychlorinated biphenyls (PCBs), nutrients, and sediment.</p> <p>The study will have four major elements:</p> <ol style="list-style-type: none"> 1. Compilation of existing information on (a) sediment loadings and boundary conditions and (b) sediment properties and parameters in San Francisco Bay; 2. Diagnostic analysis of sediment transport and fate model development; 3. Application of the model to answer management questions for PCBs, nutrients, and sediment supply; and 4. Coordination among the scientists working on the multiple facets of this effort and the stakeholders (including Regional Water Board staff) providing guidance via San Francisco Bay Regional Monitoring Program and Nutrient Management Strategy workgroups. 	Approved (New)

Table 6: Steering Committee RMP Budget Summary								
as of 9/30/2022								
Budget and Current Expenses								
Year		Budget	Expended	Balance	Previously Unencumbered	Unencumbered this Period	Balance minus Unencumbered (Remainder)	% Remaining
		\$	\$	\$	\$	\$		
SEP		3,456,870	2,203,101	1,172,418	0	0	1,172,418	34%
2022		2,642,800	1,224,032	1,418,768			1,418,768	54%
2021		3,564,376	2,668,357	896,019	0	0	896,019	25%
2020		3,735,014	3,417,727	317,287			317,287	8%
2019		3,819,850	3,573,048	246,802	0	0	246,802	6%

2018		3,818,427	3,731,931	86,496	0	0	86,496	2%
	Grand Total	21,037,337	16,818,196	4,137,790	0	0	4,137,790	20%
Cash, Set-Asides, and Undesignated Funds as of reporting date								
	Item	\$	Notes					
	Cash on Hand	4,906,101						
	< 2018 A/R & Remaining Interest (see below)	0						
	Total Assets	4,906,101						
	Total Current Liabilities (figures above)	-2,965,372						
Set Asides	Monitoring Contingency							

	Program Review							
	S&T Monitoring	-1,027,975						
	Total Liabilities	-3,993,347						
	Undesignated Funds	912,754	RMP SC has set a policy to maintain a minimum balance of \$400K of Undesignated Funds (changed from \$200k to \$400k in Oct 2018).					
Year	Accounts Receivables & Remaining Interest:	Amount	Anticipated Collections by	Notes				
2022	3022.07 EBDA - Municipal	159,435						
	3022.17 Pinole/Hercules - Municipal	21,255						
	3022.32 Vallejo SFC - Municipal	50,313						
	3022.34 Yountville	6,485						

	- Municipal							
	3022.36 C&H Sugar Company - Industrial	18,672						
	3022.39 Schnitzer Steel Industrie s - Industrial	18,672						
	3022.41 Martinez Refining Company - Industrial	67,383						
	3022.43 Phillips 66 Company - Industrial	67,383						
	3022.45 Crockett Cogener ation - Industrial	18,672						
	3022.49 San Mateo - Stormwat er	103,053						
	3022.52 San Francisc o -	47,174						

	Stormwater							
2021	3021.32 Vallejo SFC - Municipal	50,815	core fees					
	3021.45 Crockett Cogeneration - Industrial	19,480	core fees					
	3021.64 City of Benicia Marina - Dredger	10,656						
	3021.65 Marina Dredge Neighbors - Dredger	200						
	3021.68 Saint Francis Yacht Club - Dredger	200						
	3021.74 San Francisco Marina - Dredger	5,504						
	3021.80 Marin Co Paradise Cove(SD #5) - AMR	184						

^[1] In December 2016, the Fee Schedule was updated to cover the 2017-2019 period. One of the changes was to switch from a fiscal year to a calendar year basis. Specifically, for the last cycle of the old Fee Schedule, the fees were assessed for the period 7/1/15-6/30/16. For the first cycle of the new Fee Schedule, the fees will be assessed using the period 1/1/17-12/31/17. This left a 6-month gap of 7/1/16 to 12/31/16 (the “stub year”). Dredgers with in-Bay dredge disposal in this stub year were charged a fee for this disposal using the old Fee Schedule.



RMP
REGIONAL MONITORING
PROGRAM FOR WATER QUALITY
IN SAN FRANCISCO BAY

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**Regional Monitoring Program for Water Quality
in San Francisco Bay**

2023 Detailed Workplan and Budget

Draft October 2022

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2023 RMP Detailed Workplan – draft**Summary**

In 2023, the Regional Monitoring Program for Water Quality in San Francisco Bay (RMP) is entering its 32nd year of collecting data and communicating information to support water quality management decisions. This Detailed Workplan and Budget describes the activities that will be completed in 2023, the proposed funding levels, and the deliverables for each task.

The *planned* revenue from RMP fees for 2023 is \$4,035k, with additional supplemental fees of \$329k from municipal wastewater and \$100k from municipal stormwater bringing the total revenue to \$4,656k. The *expected* revenue is \$4,456k as shown in Table 1 and Figures 1-2, which is reduced by \$200k to account for the lower volume of dredged sediment being disposed of in the Bay, per the Long-Term Management Strategy (LTMS) plan. The \$200k figure is a placeholder and the dredger contribution will be updated when we receive the final in-Bay dredge disposal volumes for calendar year 2022 (typically in March of the following year). The majority of the expenses in 2023 (69%) will be for Status and Trends monitoring and special studies (Tasks 6-7). The cost for running the RMP (Tasks 1-5) is \$60k higher in 2023 than 2022 and funding allocations have been shifted slightly within each subtask.

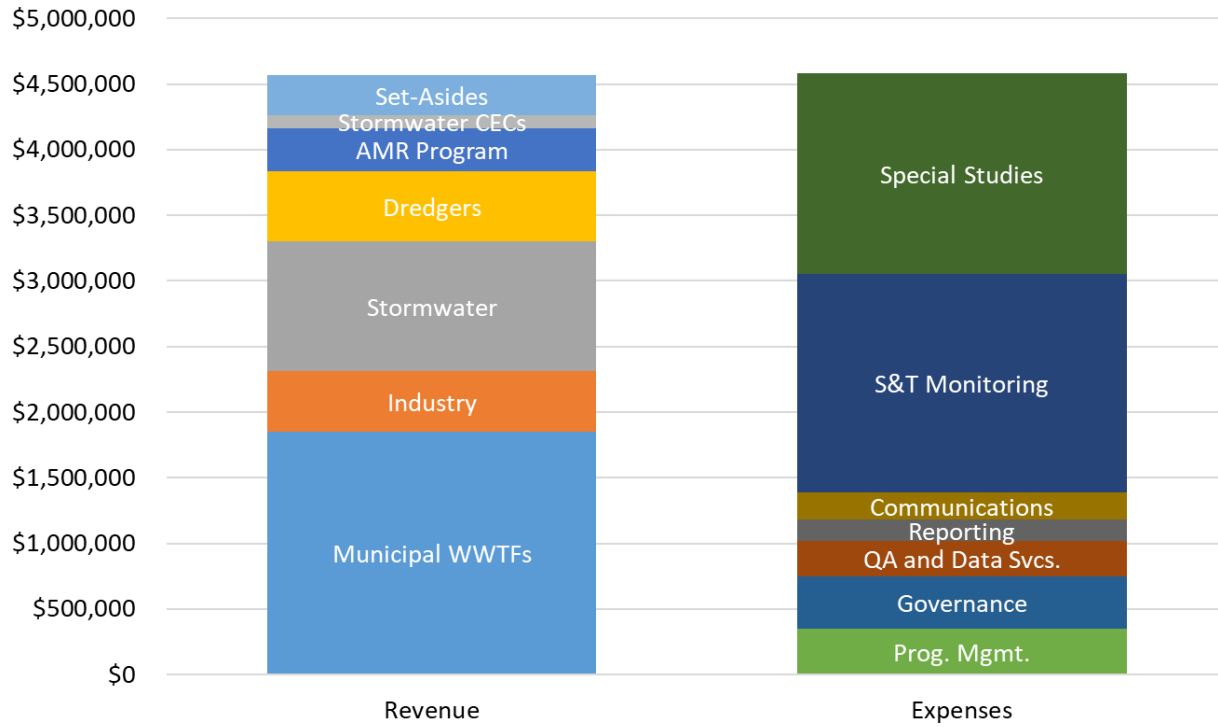
Table 1: Bay RMP 2023 Budget by Task.

	Grand Total
1. Program Management	\$351,100
2. Governance	\$396,800
3. QA and Data Services	\$270,000
4. Annual Reporting	\$165,000
5. Communications	\$202,500
6. S&T Monitoring	\$1,667,000
7. Special Studies	\$1,533,000
8. S&T Reserves	\$0
9. Unallocated	-\$20,226
Grand Total for Expenses	\$4,585,400
Revenue from Fees	\$3,835,574
Supplemental POTW Payments for AMR Program (FY23)	\$329,600

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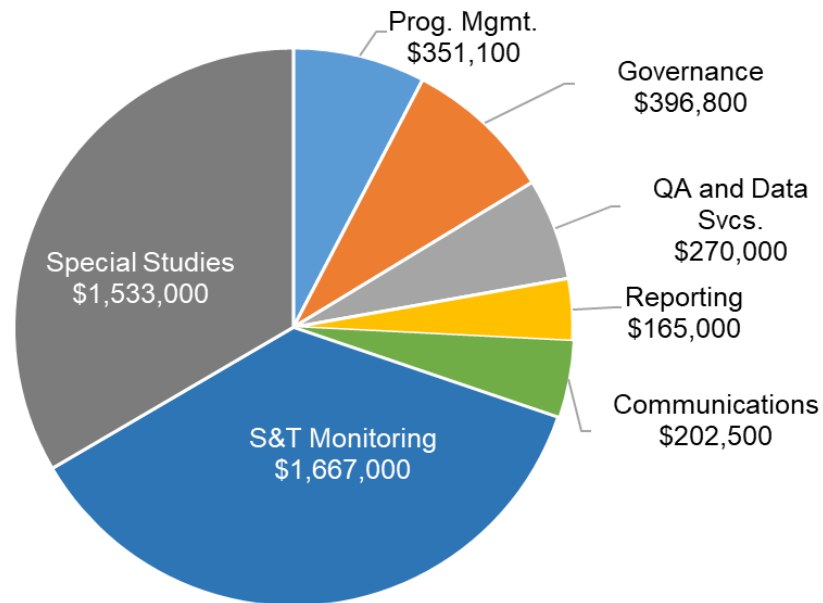
Supplemental Stormwater Payments for CEC Monitoring	\$100,000
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Figure 1: Bay RMP 2023 Revenue and Expenses.



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Figure 2: Bay RMP 2023 Budget by Task.

**2023 Revenue**

The total expected revenue for the RMP in 2023 is \$4,565,174. The breakdown of this revenue between participant fees, interest income, designated reserve funds, and Undesignated Funds is shown in Table 2.

a. Participant Fee Revenue

The target fee revenue for the RMP in 2023 is \$4,035,574. The manner in which the fees are divided up between Program Participants is shown in Figure 3. Fees were increased by 3% relative to the 2022 budget as approved by the Steering Committee on October 20, 2021.

b. Amended Monitoring & Reporting Order for RMP CEC studies (BACWA)

For FY2023, the RMP will receive approximately \$329,600 of supplemental funding from the municipal wastewater agencies under the Amended Alternate Monitoring and Reporting (AMR) Program. The intended use of these funds is emerging contaminants studies.

c. Municipal Regional Stormwater Permit CEC monitoring (BAMS)

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For FY2023, the RMP will receive \$100,000 of supplemental funding from the municipal stormwater agencies as outlined in the Municipal Regional Stormwater Permit 3.0. The intended use of these funds is emerging contaminants studies.

d. Interest Revenue

RMP funds earn interest from the Local Agency Investment Fund. Interest in 2023 could be as high as \$15k, but is likely to be lower than recent years due to continuing low interest rates. Similar to 2022, this interest will not be included in the budget. Instead, the interest will accumulate in the Undesignated Funds account. Accounting for interest as income during the year was confusing to staff and risky because the income was not guaranteed. This money will be available for the Steering Committee to use at its discretion but it will first be saved as Undesignated Funds. The potential for using interest revenue to fund a contribution to the Status and Trends Set-Aside account is discussed later in this document.

e. Designated Reserve Funds

i. *Dredger Reserve Fund*

Dredging activity and in-Bay disposal of dredged material is variable in time. In years where there is a lot of activity, any dredger fees that are greater than the target fees are stored in the Dredger Reserve Fund. These funds are held in reserve and can only be used to pay for shortfalls in dredger fees in future years. The balance of the Dredger Reserve Fund is negative (-\$920,375 not including the USACE shortfall) because dredger fees in 2018 through 2022 were lower than target fees. The 2023 budget assumes that dredger fees will fall \$200k below the target of \$734,474 due to a reduced amount of sediment being dredged and disposed of in the Bay. This is an approximation based on in-Bay disposal volumes in 2019 and 2021. Revenue (and expense) in the budget may need to be revised based on actual fees from in-Bay disposal. The 2023 dredger fees, and whether there is a shortfall beyond the planned \$200k, will be adjusted in early 2023.

ii. *Set-Aside Funds*

The RMP uses designated funds (called “Set-Asides”) to smooth out the year-to-year expenses of the Status and Trends program. Rather than having a spike in expenses when multiple activities overlap in a single year, the Steering Committee designates some funds to be set aside in light years and withdrawn in years with a lot of monitoring. In 2023, the Status and Trends monitoring costs are higher than average so \$300k will be withdrawn from the S&T Designated Reserve. This withdrawal is discussed more in the section on Status and Trends expenses.

f. Undesignated Funds

The RMP maintains a balance of Undesignated Funds for contingencies. Higher than anticipated revenues and elimination or reduction of lower priority elements sometimes leads

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to accumulation of funds that can be used for high priority topics at the discretion of the Steering Committee. The current balance of Undesignated Funds is \$1,305k (end Q2 2022).

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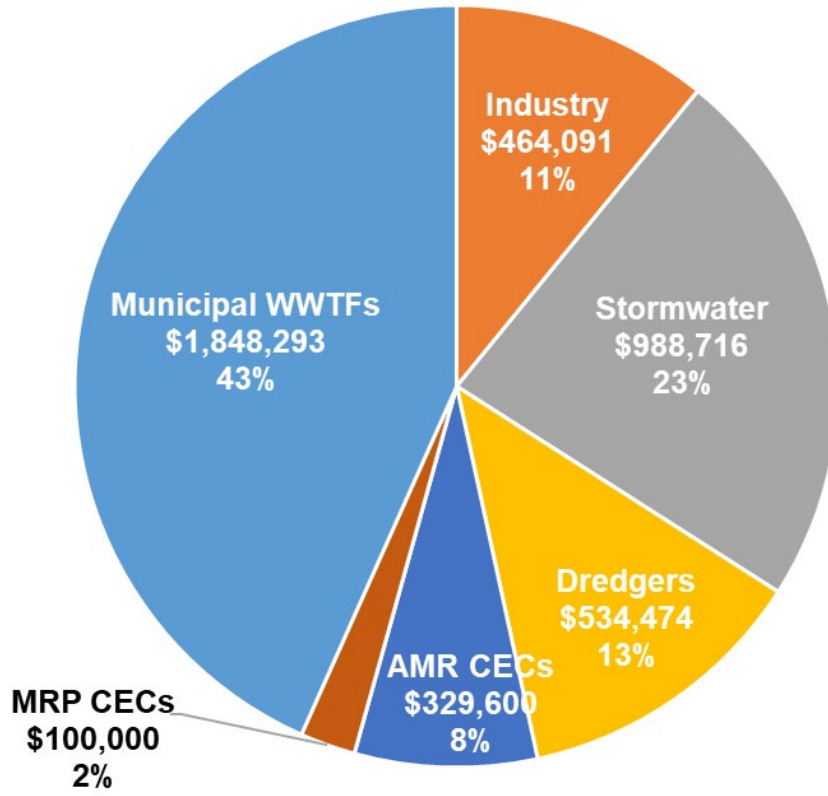
Table 2: 2023 RMP Revenue.

Revenue Category	Subcategory	Amount
Participant Fees	Municipal wastewater	\$1,848,293
Participant Fees	Industrial wastewater	\$464,091
Participant Fees	Stormwater	\$988,716
Participant Fees	Dredgers*	\$534,474
Supplemental POTW Payments for AMR Program (FY23)	Municipal wastewater	\$329,600
Supplemental Stormwater Payments for CEC Monitoring (FY23)	Municipal Stormwater	\$100,000
Interest Income		\$0
Designated Reserve Funds	Set-Aside Funds for S&T Monitoring	\$300,000
Designated Reserve Funds	Dredger Reserve Funds	\$0
Undesignated Reserve Funds		\$0
TOTAL REVENUE		\$4,565,174

*This value does not represent the full 18% dredger contribution but rather the expected contribution from the USACE and non-USACE dredgers for in-Bay placement (\$200k less than the full contribution).

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Figure 3: Bay RMP 2023 Fee Allocations for Program Participants.



2023 RMP Detailed Workplan – draft**2023 Programmatic Tasks**

RMP expenses fall into three broad categories: programmatic expenses, Status and Trends monitoring, and special studies. This section details the budgets for programmatic expenses for 2023.

The programmatic budget covers the following tasks:

- Program management
- Governance
- Quality Assurance (QA) and Data Services
- Annual reporting
- Communications

The total cost to implement these tasks in 2023 is \$1,385k. This budget is \$15k higher than the 2022 budget. The cost increases are summarized in Table 3. The budgets for Program Management, Governance, QA and Data Services, and Communication were all increased for 2023 to account for staff salary increases and a return to in-person meetings. The Annual Reporting task budget decreased from 2022. An RMP Update will be produced in 2023, which costs less than the Pulse.

Table 3: RMP 2023 Programmatic Budget Compared to the 2022 and 2023 Budgets.

	2022 Budget	2023 Budget	Difference
1. Program Management	\$360,000	\$351,100	-\$8,900
2. Governance	\$372,100	\$396,800	\$24,700
3. QA and Data Services	\$255,000	\$270,000	\$15,000
4. Annual Reporting	\$199,000	\$165,000	-\$34,000
5. Communications	\$184,000	\$202,500	\$18,500
Total	\$1,370,100	\$1,385,400	\$15,300

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1. Program Management

Program management subtasks include program planning, contract and financial management, technical oversight, internal and external coordination, and administration. The total expense for these tasks is \$351k, which is \$9k less than the 2022 budget (Table 4). Costs for the subtasks were modified based on previous years budgets, including a decrease in Contract and Financial Management and an increase in Internal Coordination. Additional funds were also allocated to the Budget and Workplan Development subtask in anticipation of a full Multi-Year Plan update in autumn 2023. Approximately one-third of the cost for this category is fiduciary oversight of program expenses and contractors. These financial management funds also support staff time to manage funds and contracts for Supplemental Environmental Projects (SEPs) that are carried out by the RMP.

The major deliverables that will be completed under subtasks 1a and 1b include the Multi-Year Plan and Detailed Annual Workplan, quarterly financial updates to the Steering Committee, quarterly tracking of deliverables and action items, and contract management. Funds for technical oversight allow for senior staff to provide an internal review of the many reports, presentations, posters, workplans, memos, and other communications coming out of the RMP. The funds for external coordination cover participation in meetings with external partners to coordinate programs and leverage RMP funds (e.g., coordinating work on the Pulse and other reports, coordination with SCCWRP, and serving as liaison to the Wetland RMP).

2. Governance

Governance subtasks include convening, coordinating, and facilitating Steering Committee, Technical Review Committee, and Workgroup meetings. Tasks and deliverables include preparing agendas and agenda packages, participating in meetings, writing meeting summaries, following up on action items, reviewing minutes from past meetings, reviewing special study proposals, and coordinating with committee chairs, advisors, and key stakeholders. This budget item also includes honoraria and travel for external advisors. The total budget for these tasks is \$397k which is 6% more than the 2022 amended budget (Table 4). The cost of workgroup meetings (\$294k) accounts for nearly 75% of this task. The budget for staff time to prepare materials and proposals and attend workgroup meetings is \$234k; the budget for honoraria and travel for external science advisors is \$60k. This budget assumes in person meetings for 2023. The Emerging Contaminants and Sources, Pathways, and Loadings Workgroups will continue to meet for two days. An additional day to allow for overlap between ECWG and SPLWG advisors may be added in 2023. Budgets for every workgroup were increased to accommodate an increasing amount of inter-workgroup coordination.

3. QA and Data Services

Quality assurance and data management are critical foundations for the scientific investigations of the RMP. The total cost for these tasks is \$270k, \$15k more than 2022. The major quality assurance tasks for 2023 are keeping the Quality Assurance Project Plan up to

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date and preparing QA summaries for datasets. In addition to processing new data, the RMP needs to maintain the millions of records generated since it began in 1993. Database maintenance includes incorporating updates and corrections to data, including re-analyzed results and updates implemented by CEDEN/SWAMP. RMP staff also maintain and enhance web-based data access and visualization tools, such as CD3, and an automated system to handle data submittals from the laboratories.

DMMO Database Support will continue in 2023. Special study funding in 2018 was used to migrate the DMMO database and website to the SFEI server. RMP funding ensures an updated and secure platform for the database. Benefits to the RMP include better access to sediment testing records in the DMMO database and more efficient invoicing methods for dredger fees. Ongoing funding for this project is included as part of the QA and Data Services task. The funding requested in 2023 is \$53k and will be used to update data templates, data uploads, and database structure. DMMO agencies are also identifying staff that can help with these efforts so the burden does not fall solely on the RMP.

4. Annual Reporting

The total cost for these tasks is \$165k. This budget is \$34k less than it was in 2022. An *RMP Update* will be produced in 2023 and released at the Annual Meeting in October. The *RMP Update* is less expensive to produce than *The Pulse of the Bay*. The *RMP Update* will contain summaries of upcoming projects and recent findings for each of the focus areas of the Program.

Tasks related to the Annual Meeting include developing the meeting agenda, coordinating speaker participation, managing logistics, advertising the meeting, preparing presentations, and staffing the meeting. The 2023 budget for the Annual Meeting is \$15k more than 2022 to account for the growing number of staff in the RMP and increasing costs associated with hosting the meeting.

5. Communications

Communications tasks include implementing the RMP Communications Strategy, approved by the Steering Committee in July 2014. The total cost for these tasks in 2023 is \$202k, \$18k more than the 2022 budget. The 2023 budget is higher because RMP staff are increasingly being asked to communicate RMP results to an increasing number of agencies and media outlets. In addition, funds were added to the Outreach Products subtask to provide support for graphic design staff who help produce our reports and factsheets. Deliverables include the distribution of RMP information to stakeholders, natural resource managers, and the public through multiple media channels (e.g., website, publications, email newsletters, fact sheets, social media). In 2023, the RMP will continue to provide support for *Estuary News* (\$16k) plus staff time to plan and review content.

Stakeholder engagement is critically important to addressing the information needs of RMP participants. Tasks include preparing for and attending RMP stakeholder meetings (e.g.,

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BACWA, BAMS, BPC, LTMS, WSPA, and RB2), as well as communicating directly with stakeholder representatives.

Other communications tasks include responding to inquiries for RMP data and reports, and producing summary information on important topics in convenient formats. Participation in workshops and conferences for SWAMP, SETAC, ACS, and other professional organizations allows sharing of RMP information, gathering of information from other investigators on the latest advances in monitoring and understanding, and identification of opportunities for collaboration with and funding from other organizations. Presentations at local meetings and to local audiences are also important for collaboration and information dissemination to scientific partners. Funding for this task also supports maintenance of the RMP website.

Table 4: Bay RMP 2023 Programmatic Budget by Subtask.

Task	Subtask	Direct Cost	Labor	2023 Total
1. Program Management	A. Budget and Workplan Development		\$46,000	\$46,000
	B. Contract and Financial Management		\$70,000	\$70,000
	C. Technical Oversight		\$71,100	\$71,100
	D. Internal Coordination		\$115,000	\$115,000
	E. External Coordination	\$4,000	\$37,500	\$41,500
	F. Administration	\$2,500	\$5,000	\$7,500
2. Governance	A. SC meetings	\$1,000	\$50,000	\$51,000
	B. TRC meetings	\$1,000	\$50,000	\$51,000
	C. WG meetings	\$2,000	\$61,800	\$63,800
	D. External Science Advisors	\$60,000		\$60,000

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	E. Emerging Contaminants WG		\$52,000	\$52,000
	F. Microplastics WG		\$13,000	\$13,000
	G. PCB WG		\$22,000	\$22,000
	H. Sediment WG		\$40,000	\$40,000
	I. Sources, Pathways, Loadings WG		\$44,000	\$44,000
3. QA and Data Services	A. Quality Assurance System		\$38,200	\$38,200
	B. Online Data Access: CD3		\$73,200	\$73,200
	C. Database Maintenance		\$62,000	\$62,000
	D. Updates to SOPs and Templates		\$43,800	\$43,800
	E. DMMO Database Support		\$52,800	\$52,800
4. Annual Reporting	A. RMP Update Report	\$20,000	\$60,000	\$80,000
	B. Annual Meeting	\$20,000	\$65,000	\$85,000
5. Communications	A. Communications Plan Implementation	\$16,000	\$35,200	\$51,200
	B. Stakeholder Engagement		\$28,000	\$28,000
	C. Responses to Information Requests		\$22,500	\$22,500

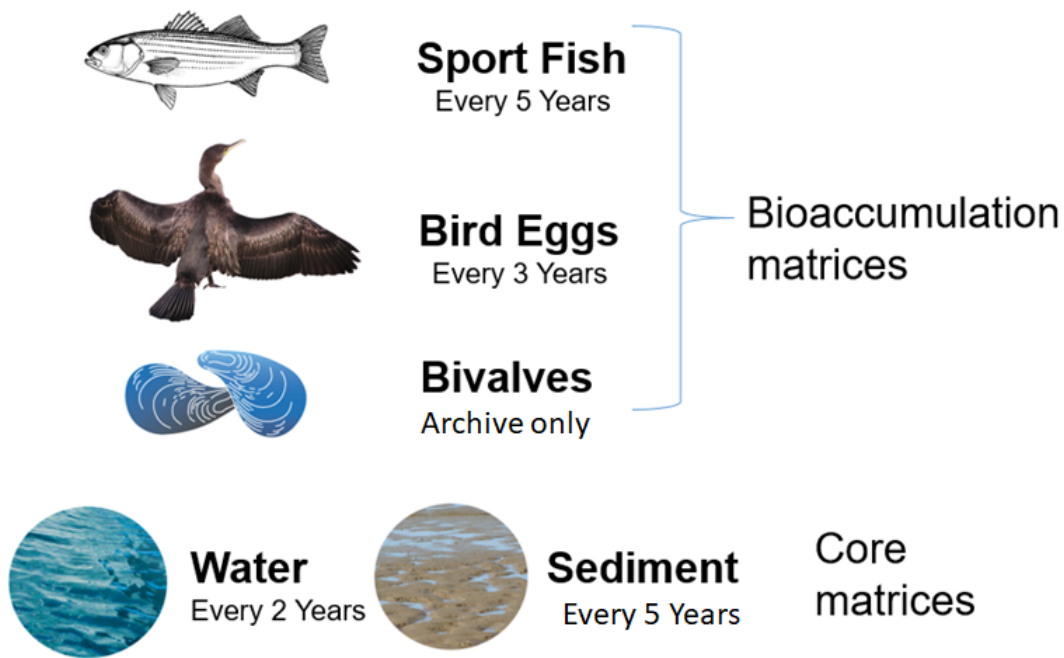
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	D. Outreach Products	\$1,000	\$16,000	\$17,000
	E. Presentations at Conferences and Meetings	\$12,000	\$53,000	\$65,000
	G. RMP Website Maintenance		\$18,800	\$18,800
Grand Total		\$139,500	\$1,245,900	\$1,385,400

2023 Status and Trends Monitoring and Reserve Funds

In 2020, the Steering Committee and Technical Review Committee began reviewing the Status and Trends (S&T) Program to identify how the program could be altered to accommodate the inclusion of CECs. This review resulted in recommended changes to the sampling matrices, frequency, and analytes included in the S&T Program. The sampling frequency for each matrix is shown in Figure 4. Sample collection from prey fish and marine mammals (special study from the Emerging Contaminants Workgroup) will be piloted in 2023.

Figure 4: RMP Status and Trends Monitoring Schedule



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In 2023, based on the revised S&T design, wet weather and dry weather water sampling, prey fish, and margins and deep Bay sediment collections are scheduled to occur. In addition, the RMP provides annual support to the USGS for suspended sediment and nutrient monitoring. This support will continue in 2023. We are also including \$66k for laboratory intercomparison studies given the multiple matrices that will be collected in 2023. The most likely intercomparison studies will include ongoing comparison of copper analysis methods, and comparison of CEC analytical methods for sediment and water. The total cost for S&T monitoring in 2023 will be \$1,667k. Funds will be deducted (\$300k) from the S&T set-aside account to offset the high cost of S&T activities in 2023.

More information about each of the S&T tasks is provided in the line item budget (Table 5) and the sections below.

USGS Sacramento Support: Continuous Monitoring of Suspended Sediment (\$400k)

This work is led by Dr. Paul Work of the USGS California Water Science Center. The USGS maintains four suspended-sediment stations in the Estuary with RMP funding (Richmond Bridge, Alcatraz Island, Pier 17, and Dumbarton Bridge). This funding leverages suspended sediment monitoring at two other stations (Mallard Island and Benicia Bridge) and salinity at seven stations that are funded by other partners. Funding for these activities is provided by the U.S. Army Corps of Engineers directly to the USGS. The contribution in 2023 is \$400k and will support ongoing suspended sediment monitoring in the Bay.

USGS Menlo Park Support: Monthly Basic Water Quality (\$265k)

This work is led by Dr. Brian Bergamaschi of the USGS California Water Science Center. Monthly water sampling is conducted to evaluate the spatial and temporal trends of water quality parameters at fixed stations throughout the Bay-Delta system. Measurements include salinity, temperature, dissolved oxygen, suspended sediment, and phytoplankton biomass. This information is needed to follow the seasonal and inter-annual changes in water quality and estuarine habitat, which may influence biological communities and the distribution and reactivity of trace contaminants.

The RMP pays a fraction of the total cost of these cruises. The RMP, Nutrient Management Strategy, and USGS California Water Science Center recently expanded an existing agreement that now includes the monthly Bay cruises. A multi-year agreement was implemented in FY2022.

Wet Weather Water Sampling (\$60k)

The Status and Trends schedule includes wet weather water sampling at targeted sites near stormwater inputs into the Bay, as well as ambient Bay stations. Water samples will be

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collected following two storms from targeted locations, including stations in Lower South Bay, and sent to laboratories for analyses of bisphenols, organophosphate esters, and PFAS for S&T and tire contaminants in the Bay for a two year special study (WYs 2023-2024). Samples will also be collected from ambient Bay stations during the Bay-wide nutrient cruises that occur closest to the storm event.

Dry season 2023 Water Cruise (\$257k)

The Status and Trends schedule calls for water sampling every two years. Water samples from 22 random and targeted sites will be collected and sent to laboratories for analysis of metals, CECs, and ancillary parameters (e.g., suspended sediment concentration, chlorophyll-a). Sample collection/logistics (\$67k), and subcontracts for the vessel (\$32k) and laboratories (\$75k) make up the majority of the cost. The cost to QA and manage the data from this sampling effort will be \$40k.

Nearfield, Margins, and Deep Bay Sediment (\$405k)

The S&T review resulted in the addition of sediment sampling locations at nearfield and margins locations, adding CECs to the list of contaminants (PFAS and bisphenols), and decreasing the frequency of sampling for legacy contaminants at deep Bay stations. The suggested sampling locations include nearfield stations close to stormwater and wastewater inputs, margins stations near the perimeter of the Bay, and deep Bay stations. Sampling frequency is every five years for CECs and every 10 years for legacy contaminants.

In 2023, sediment will be collected from 12 nearfield, 16 margin, and 15 deep Bay stations in Central, South, and Lower South Bays. Sampling is not being completed in North Bay because the concentration of CECs is typically lower in that subembayment compared to the others due to the smaller amount of urban land use. Samples will be analyzed for PFAS, bisphenols, total organic carbon, nitrogen, % solids, grain size, and possibly the final sampling for PBDEs.

Funds will be used to plan, implement, and report the results of the study. A more detailed study plan will be prepared by RMP staff and the TRC for Steering Committee approval before sampling begins.

Prey Fish Pilot Study (\$120k)

A pilot study for prey fish will be conducted in 2023 in concert with the nearfield and margin sediment sampling. Topsmelt from up to four locations (Richmond, San Leandro Bay, Redwood Creek, and Lower South Bay) will be collected and analyzed for PFAS and PCBs. These data fill a gap in our understanding of contaminant burden and bioaccumulation at lower levels of the food web and transfer of contaminants within the Bay food web.

Laboratory Intercomparison Studies (\$60k)

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Laboratory intercomparison studies boost confidence in analytical methods and results, act as an insurance policy for unforeseeable changes in analysis procedures and analytical contractors, and provide many other benefits. Potential intercalibration studies for 2023 include method comparisons for sediment, ongoing method comparisons for copper in water, and interlab comparisons for CEC samples.

Sample Archive (\$80k)

The RMP stores archives of sediment, bivalve, bird egg, and sport fish samples, as well as other miscellaneous samples in archives for potential future analyses. Short-term archives (< 10 years) are stored at Schaefer's Meat and Storage in Oakland. Long-term archives are stored at the National Institute of Standards and Technology (NIST) in Charleston, South Carolina. Costs in 2023 will cover continued storage fees for the archives (\$48k for Schaeffer's; \$26k for NIST), as well as labor to manage the archives and the archive database (\$6k). The cost includes subcontractor support from AMS to add samples to the archives and support ongoing organization and purging of samples. This task also includes time for the Data Services team to update and improve the archived sample tracking system. Multiple samples were used from the short-term archive in 2022 to support CEC analysis (PFAS and chlorinated paraffins in sediment and PFAS in sport fish).

Field Sampling Report and Support (\$20k)

At the end of the field season, RMP staff will update the Sampling and Analysis plans for each S&T activity completed. They will also compile all of the Field Sampling Reports produced by our partners, which document where samples were collected and any complications during field sampling. Clear documentation of field sampling effort is part of the overall quality assurance system for the Program.

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Table 5: Bay RMP 2022 Status and Trends Budget by Subtask.

Task	Subtask	Direct Cost	Subcontract	Labor	2023 Total
6. S&T Monitoring	A. USGS Sacramento Support		\$400,000		\$400,000
	B. USGS Menlo Park Support		\$265,000		\$265,000
	C. Dry Season Water Cruise	\$5,000	\$145,000	\$67,000	\$217,000
	D. Dry Season Water Cruise Data Mgmt			\$40,000	\$40,000
	E. Wet Season Water Sampling	\$5,000	\$20,000	\$20,000	\$45,000
	F. Wet Season Data Mgmt			\$15,000	\$15,000
	G. Nearfield and Margins Sediment & Prey Fish	\$5,000	\$240,000	\$30,000	\$275,000
	H. Nearfield and Margins Sediment & Prey Fish Data Mgmt			\$50,000	\$50,000
	I. S&T Laboratory Intercomparison Studies	\$10,000	\$20,000	\$30,000	\$60,000
	J. Sample Archive	\$48,000	\$26,000	\$6,000	\$80,000
	K. S&T Field Sampling Report & Support			\$20,000	\$20,000
	L. Ambient Bay Sediment	\$20,000	\$120,000	\$30,000	\$170,000

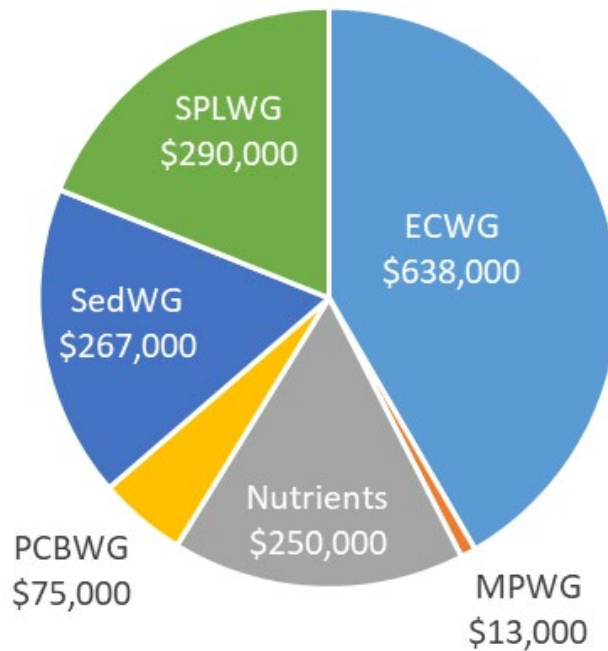
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M. Ambient Bay Sediment Data Mgmt			\$30,000	\$30,000
TOTAL	\$73,000	\$1,116,000	\$278,000	\$1,667,000

2023 Special Studies

The total costs for special studies in 2023 will be \$1,533k and there’s a budget of \$1,413k. Figure 5 shows how these costs are distributed across the seven focus areas. Additional funding for the \$119k overage is likely to be covered either by funds for a Supplemental Environmental Project or the additional funding for CEC monitoring from the municipal stormwater dischargers. If neither of those funding sources materialize, funds from the Undesignated Reserve may be used to cover the overage. Additional details on each of the studies are provided in the line item budget (Table 6).

Figure 5: RMP Special Studies Funding for 2023 by Focus Area.



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Table 6: Bay RMP 2023 Special Studies Budget by Subtask.

Workgroup	Task	Direct Costs	Labor	Subcontracts	Total
Strategy	CECs Strategy		\$60,000		\$60,000
Strategy	Tires Strategy		\$10,000		\$10,000
Strategy	Microplastic Strategy		\$13,000		\$13,000
Strategy	Sediment Workplan		\$10,000		\$10,000
Strategy	STLS Program Management		\$35,000		\$35,000
Strategy	SPLWG Strategy		\$30,000		\$30,000
ECWG	Stormwater monitoring strategy for CECs (year 2 of 2)	\$4,000	\$51,000		\$55,000
ECWG	Ethoxylated surfactants in ambient water, margin sediment, wastewater, Part 2 (year 2 of 2)	\$1,700	\$17,100	\$11,200	\$30,000
ECWG	Tire and roadway contaminants in wet season Bay water (year 1 of 2)	\$9,500	\$10,500	\$20,000	\$40,000
ECWG	Mining nontargeted analysis data for additional targets for future study		\$45,000		\$45,000
ECWG/SPLWG	CECs in stormwater: Groundwork	\$6,000	\$222,000	\$22,000	\$250,000

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ECWG	PFAS and nontargeted analysis of marine mammal tissues (year 1 of 2)	\$9,000	\$20,500	\$86,000	\$115,500
ECWG	PFAS in archived sport fish		\$32,500		\$32,500
Nutrients	Moored sensor high-frequency observation network		\$250,000		\$250,000
PCBWG	Baseline Survey of PCBs in Surface Sediment and Prey Fish in the Steinberger Slough/Redwood Creek Complex (Year 2)		\$16,000	\$59,000	\$75,000
SedWG	Temporal variability in sediment delivery to a North and a Central San Francisco Bay salt marsh			\$135,000	\$135,000
SedWG	Continuous Suspended Sediment and Wave Monitoring in South and Lower South San Francisco Bay	\$1,360	\$28,315	\$22,325	\$52,000
SedWG	Sediment flux at Richmond Bridge			\$70,000	\$70,000

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SPLWG	Small Tributaries Loading Legacy Pollutant Discrete Monitoring to Support Modeling		\$10,000		\$10,000
SPLWG	Regional Model Development to Support Watershed Loads and Trends		\$130,000		\$130,000
SPLWG	Tidal Area Remote Sampler Development and Pilot Testing	\$10,300	\$60,000	\$14,700.00	\$85,000
Total		\$41,860	\$1,050,915	\$440,225	\$1,533,000

Studies highlighted in red are funded or partially funded with the \$320k of Supplemental POTW Payments for the AMR Program (FY23).

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Appendix A. Special Study descriptions for 2023 projects.

Workgroup	Study Name	Budget	Summary	Deliverables
Emerging Contaminants	Stormwater monitoring strategy for CECs (year 2 of 2)	\$55,000	Prior RMP projects – including a multi-year stormwater CECs monitoring project initiated in 2018 – identified the presence of CECs of Moderate and Possible Concern in urban runoff. Available data from prior sampling are relatively limited, but nevertheless provide evidence that stormwater is a major pathway for CECs to enter San Francisco Bay. Due to high CECs monitoring costs and technical challenges, a well-thought out, carefully focused approach will be essential. The goals of this project are (1) to develop an approach for prioritizing CECs for stormwater monitoring, and (2) to develop an approach for sampling stormwater CECs in the context of the specific physico-chemical properties, sources, transport pathways, and fate of prioritized CECs. A stormwater CECs monitoring strategy is the first step in establishing a long-term stormwater CECs monitoring program and would form the basis for addressing both CECs and Sources, Pathways, and Loadings (SPL) management questions, such as estimating CECs loads discharged to the Bay. This proposal is for the second year of this two-year project	Development of draft stormwater CECs monitoring strategy, Update Presentations and draft strategy document to SPLWG and ECWG, Final strategy document
Emerging Contaminants	Ethoxylated surfactants in ambient water, margin sediment, wastewater, Part 2 (year 2 of 2)	\$30,000	Ethoxylated surfactants are nonionic surfactants that are widely used in industrial and household products. This contaminant class is currently classified as of Moderate Concern in the RMP tiered, risk-based framework for CECs. A 2019 RMP special study quantified a broad suite of ethoxylated surfactants in Bay water, effluent, and stormwater, including lauryl alcohol ethoxylates (C12-14EO), tridecyl alcohol ethoxylates (C16EO), nonylphenol ethoxylates, and octylphenol ethoxylates. Sum of ethoxylated surfactants concentrations ranged from 1-95 µg/L. A 2022 RMP special study supported Duke University to update analytical methods to include alkylphenols and short-chain alkylphenol ethoxylates. This new analytical method is the most comprehensive method available for this contaminant class, and few laboratories have the capabilities to perform this analysis. This project is the second half of the full proposal presented as a 2022 ECWG special study, and will include collection of	Finalize sampling design and protocol with wastewater treatment plants, wastewater effluent sample collection, laboratory analysis of samples, QA/QC and data management, draft/final report

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			<p>additional wastewater samples that will be analyzed using the updated analytical method. These wastewater samples are needed to refine estimates of concentrations of ethoxylated surfactants in wastewater effluent, due to the wide range observed in the initial 2019 screening study. These additional samples are important to further compare relative loads from wastewater versus stormwater runoff, a comparison which was initiated by prior studies. This project will supplement remaining funds from the 2019 and 2022 studies to complete project deliverables, including more comprehensive monitoring of ambient water and margin sediment samples. The full dataset will guide re-evaluation of this contaminant class in the tiered framework for CECs and inform development of a monitoring strategy.</p>	
Emerging Contaminants	Tire and roadway contaminants in wet season Bay water (year 1 of 2)	\$40,000	<p>6PPD-quinone and other toxicologically relevant contaminants derived from tires have been observed in Bay Area stormwater and in wet season Bay water samples from 2021. As part of its Status and Trends (S&T) program, the RMP is undertaking a pilot monitoring effort to quantify a number of contaminants in Bay water samples collected following storm events to provide information on the impact of stormwater discharges on Bay contaminant concentrations. This proposed study would leverage the pilot S&T effort to evaluate more fully the concentrations of tire and roadway contaminants in Bay water during the wet season. Results will indicate whether these stormwater-derived contaminants reach concentrations of concern within receiving waters, filling a data gap relevant to the RMP tiered, risk-based framework for emerging contaminants. Results will be shared with California Department of Toxic Substances Control’s Safer Consumer Products Program, which seeks data to support its evaluation of tire chemical ingredients.</p>	<p>Update sampling plan, field sampling wet season Bay water samples, lab analysis, QA/QC, data management and upload, Present to ECWG, draft/final short report</p>

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Emerging Contaminants	Mining nontargeted analysis data for additional targets for future study	\$45,000	<p>The RMP has invested resources in nontargeted analysis (NTA) of Bay matrices as a tool to inform follow-up targeted analysis and risk screening studies. At present, hundreds of contaminants have been tentatively identified in the Bay via NTA. Ongoing studies of tire-derived contaminants and ethoxylated surfactants are examples of RMP studies that are addressing the most readily identifiable and urgent science priorities arising from this analysis. However, the majority of the CECs observed via NTA have not been screened for information as to potential sources and/or ecological concerns. This proposal would fund a desktop exercise to compile data on sources and ecotoxicological information for a larger proportion of these contaminants, aiming to identify additional CECs that could be high priorities for further study in the Bay. The RMP has invested resources in nontargeted analysis (NTA) of Bay matrices as a tool to inform follow-up targeted analysis and risk screening studies. At present, hundreds of contaminants have been tentatively identified in the Bay via NTA. Ongoing studies of tire-derived contaminants and ethoxylated surfactants are examples of RMP studies that are addressing the most readily identifiable and urgent science priorities arising from this analysis. However, the majority of the CECs observed via NTA have not been screened for information as to potential sources and/or ecological concerns. This proposal would fund a desktop exercise to compile data on sources and ecotoxicological information for a larger proportion of these contaminants, aiming to identify additional CECs that could be high priorities for further study in the Bay.</p>	Develop spreadsheet structure, assemble available contaminant identifications, ancillary, and metadata, review available source and toxicity information, present to ECWG on additional targets, spreadsheet of compiled data mining results
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Emerging Contaminants and Sources, Pathways, and Loadings	CECs in stormwater: Groundwork	\$250,000	<p>This project will provide a means for the RMP to complete the groundwork necessary to develop robust, practical, and cost-effective systems for stormwater CECs monitoring. Proposed project elements include: (1) developing and pilot-testing remote stormwater samplers to support CECs sample collection; (2) expanding and rebuilding the SFEI stormwater sampling sites lists and converting it into a database focused on flow-gauged sites that includes the most important site characteristics for CECs monitoring site selection; (3) analyzing prior CECs stormwater monitoring data to inform integrated monitoring and modeling; (4) CECs model development groundwork sufficient to support this project and prepare for implementation of CECs monitoring; and (5) convening an ECWG/SPLWG stakeholder and science advisor team to support this project in parallel with the Stormwater CECs Strategy project.</p> <p>Because work in progress on the Stormwater CECs Strategy project, CEC Stormwater Loads Modeling Exploration project, and CECs monitoring data to be received in mid-2022 may create the need to refine the conceptual project scope and budget presented here, a revised budget with explanation of changes will be prepared upon project initiation and reviewed with stakeholders.</p>	Identification of the best remote stormwater sampler for stormwater CECs monitoring; stormwater sampling locations database (internal SFEI resource); and a report documenting the project's outcomes (some of which will be wrapped into other RMP deliverables)
Emerging Contaminants	PFAS and nontargeted analysis of marine mammal tissues (year 1 of 2)	\$115,500	<p>A recent review of the RMP Status and Trends (S&T) study design led to the recommendation to explore the addition of Bay marine mammals like harbor seals to the species included in periodic S&T monitoring. To inform the potential inclusion of marine mammals to the S&T program, this two-year study proposal includes examination of PFAS in multiple tissues of two local species, harbor seals and harbor porpoises. Nontargeted analysis of PFAS and hydrophobic halogenated compounds is recommended to leverage the sample collection in this pilot study, providing a means to identify unanticipated contaminants that may merit follow-up targeted monitoring. Anticipated study outcomes would include recommendations for S&T monitoring of marine mammals, as well as priorities for future investigations of newly identified CECs observed in marine mammal tissues.</p>	Establish study design and sample collection protocol, sample collection, target PFAS analysis, nontargeted analysis, draft manuscript(s), S&T study design recommendations (technical memo), presentation to TRC, final manuscript(s)

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Emerging Contaminants	PFAS in archived sport fish	\$32,500	California state agencies are prioritizing efforts to characterize existing PFAS contamination in our state and the associated ecological and human health risks. Locally, a virtual forum on PFAS in San Francisco Bay fish in February drew over 250 participants into a discussion about the risks this contamination may pose to fishing communities, including tribal members and residents in disadvantaged African American neighborhoods like Bayview Hunters Point in San Francisco and Bayo Vista in Rodeo. While RMP monitoring has provided some of the only data on PFAS in sport fish in California, samples analyzed to date are insufficient to determine PFAS status and trends in different species in the Bay. We propose analyzing archived sport fish samples to fill data gaps and enhance the RMP Status and Trends (S&T) study design to support evaluation of temporal trends.	Study design, ship archived samples to analytical laboratory, PFAS analysis, data QA review, draft/final report
Nutrients	Moored sensor high-frequency observation network	\$250,000	Bay-wide cruises have been critical to our understanding of the system. The Bay is spatially and temporally heterogeneous, however, and monthly measurements miss changes in water quality that are driven by short time scale processes, including tidal forcing, wind, and biological cycles. The eight sensors in the moored, high-frequency observation network in South Bay collect water quality data every 15 minutes and contribute to our understanding of Bay processes that affect nutrient and chlorophyll dynamics.	Sensor maintenance; data management
PCBs	Baseline Survey of PCBs in Surface Sediment and Prey Fish in the Steinberger Slough/Redwood Creek	\$75,000	This study would assess the spatial distribution of PCBs in surface sediment and prey fish in the Steinberger Slough/Redwood Creek (SS/RC) priority margin unit (PMU) to address information gaps in the conceptual model for this area and establish baseline data for evaluating the response of these receiving waters to load reduction efforts in the watershed. Funding for this effort would be spread over two years.	Draft/final technical report

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	Complex (Year 2)			
Sediment	Temporal variability in sediment delivery to a North and a Central San Francisco Bay salt marsh	\$100,000	<p>Salt marshes provide critical habitat as well as coastal protection. One of the key sediment management questions for San Francisco Bay is whether available sediment is sufficient for marshes to keep pace with sea-level rise. In 2022 the RMP funded Jessie Lacy and Karen Thorne to investigate the relationships between sediment accretion on marshes, suspended sediment concentration (SSC) in nearby shallows, and SSC at long-term channel stations, as well as temporal variability in these relationships, at the San Pablo Bay National Wildlife Refuge and Corte Madera Marsh Ecological Reserve. That project includes nine months of data collection; this proposal would extend all data collection at the two marshes for an additional six months. The longer study duration will span a full hydrologic year and capture a second spring-summer transition, following the drought conditions of 2022. Two new components are also proposed: collection of time-series of SSC at one marsh-top station at each site, and installation and monitoring of marker horizon plots. The project will produce data suitable for testing numerical models of sediment transport between the Bay and marshes. Results will be useful for prioritizing marsh restoration sites, assessing restoration actions, and understanding mechanisms of sediment delivery to marshes.</p>	<p>Data release: Bay shallows and marsh-top SSC data (PCMSC) Data release: deposition, accretion, and vegetation characteristics (WERC) Report (draft paper) investigating the relationships between SSC in the shallows, SSC at long-term channel stations, and sediment accretion on marshes Final Presentation to RMP Sediment Workgroup</p>

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Sediment	Continuous Suspended Sediment and Wave Monitoring in South and Lower South San Francisco Bay	\$52,000	<p>The South Bay Salt Pond Restoration Project funded the collection of continuous suspended sediment (SSC) and wave monitoring in shallow areas (shoals and sloughs) of South and Lower South San Francisco Bay (SB and LSB, respectively) during 2022. This proposed project would support continued data collection for a second year, which is needed to develop a robust calibration between turbidity and SSC. Continuous SSC data are essential to both empirical and model-based sediment studies and until recently were only available at one SB/LSB station near the Dumbarton Bridge. The SB/LSB shoals play an important but understudied role in sediment dynamics, and these dynamics are strongly influenced by wind waves. This project will continue to generate continuous SSC time-series data at a the recently established SB station directly offshore from the Eden Landing “Whale’s Tail” area along with three existing turbidity stations (several of which have been collecting turbidity data since 2015) in support of generating turbidity-to-SSC relationships for SB/LSB. The existing turbidity stations are supported by the Nutrient Management Strategy (NMS); parallel SSC sampling is also underway at four stations in South Bay; turbidity-SSC calibration will be developed for these stations as well. The proposed second year of the project would include: Ongoing collection and processing of SSC samples at four stations; Development of site-specific turbidity-to-SSC relationships at eight stations; Curation and public sharing of resulting SSC time series from all eight stations; Curation and public sharing of wave height and period data from one shoal station in South Bay.</p> <p>By leveraging existing NMS instrumentation and field servicing, this project would significantly expand available SSC data in SB and LSB at a considerably lower cost than independently implementing additional sediment monitoring stations.</p>	<p>Publically available 15-minute SSC time series from eight stations in South Bay and Lower South Bay Report detailing data collection, turbidity-to-SSC calibrations, and limited, descriptive interpretation Project update presentation to the RMP Sediment Workgroup Publically available wave height and period data from one station in South Bay</p>
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Sediment	Sediment flux at the Richmond-San Rafael Bridge	\$70,000	<p>Sediment budgets are integral in the San Francisco Bay (SFB) for management and research purposes regarding key habitats, light attenuation, contaminant transport, bathymetric change, as well as aiding the investigation of potential impacts from climate change or water-management decisions. These budgets are developed from numerical models calibrated and checked using direct measurements of suspended sediment at key points within the SFB system. Sediment flux at the cross section at Richmond-San Rafael Bridge (RIC) has been a major gap of knowledge in past sediment budgets due to the lack of available measurements. This proposal’s goal is to collect suspended-sediment flux measurements at RIC as the necessary first step towards the eventual goal of developing a sediment flux model for the cross-section. The work will include 80 hours of cross-channel transects using an acoustic doppler current profiler (ADCP) to measure both velocity and acoustic backscatter (ABS). Velocity-integrated suspended-sediment concentration (SSC) samples will be taken during the transects to correlate to the ABS. An ABS to SSC empirical model will be developed for the site to convert the transects into sediment flux measurements. All measurements will be published in a data release and in a model archive summary outlining the ABS to SSC model. The data from this project can be used in a future study as calibration/validation data for a new/existing hydrodynamic numerical model which can supplement the time series to determine future location(s) for stationary ADCP sensors to measure continuous flux at the site.</p>	<p>Data release including all new project data including ADCP transects and velocity-integrated point-SSC samples Model archive summary detailing the ABS-SSC empirical model to convert ADCP transects to sediment flux measurements Presentation to the Sediment Workgroup</p>
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Sources, Pathways, and Loadings	Small Tributaries Loading Legacy Pollutant Discrete Monitoring to Support Modeling	\$10,000	<p>The RMP has monitored stormwater throughout the region using two main techniques over the last 20 years. With the exception of 2011, from 2002 to 2014, intensive load monitoring (discrete sampling during at least four storms per year and at least two years but mostly three or more) was carried out at eight watersheds to compute loads in single watersheds and extrapolate these to estimate regional loads. In contrast, in 2011 and from 2015 to 2021, a reconnaissance monitoring style (single storm composite samples) was adopted to identify high-leverage watersheds of potential management interest. While reconnaissance monitoring cannot be used to support modeling, discrete samples at flow monitoring locations serve as important calibration data for the regional model. In this study, we propose a two-year effort for sampling at two sites during six storm events each, collecting four discrete samples over the hydrograph. This level of data is sufficient and optimal for supporting a cost-effective modeling-monitoring approach for loads and trends estimation to support the PCB TMDL reevaluation planned for 2028. After two years of sample collection, and in consultation with our modeling team, the SPLWG will decide whether to continue sampling these same two sites or to move on to new locations to support model calibration. This is primarily a field study and the level of effort will be tailored to the amount of budget available.</p>	<p>Selected site list and preparation for sampling Wet season water samples collected and sent to the labs for analysis Laboratory analysis, QA, & Data Management Interpretation & reporting for BAMSC Draft report Final report</p>
Sources, Pathways, and Loadings	Regional Model Development to Support Watershed Loads and Trends	\$130,000	<p>The RMP's 2018 Modeling and Trends Strategy prioritized further assessment of the regional estimates and temporal trends in contaminant loads from watersheds, and developed a multi-year plan for model development. Although initially conceived as a tool for evaluating only PCB and Hg trends, advice provided at the May 2019 RMP Sources, Pathways, and Loadings Work Group (SPLWG) meeting caused the RMP to broaden the modeling work plan to include support for better estimates of loads of sediment and other contaminants, such as contaminants of emerging concern (CECs), in addition to PCBs and Hg. The two main objectives of the pollutant of concern (POC) model development are to: 1) create a flexible watershed modeling platform for</p>	<p>Model data collation and preparation Control measures impact estimation Draft modeling report for peer review Final modeling report and data sharing portal</p>

2023 RMP Detailed Workplan – draft

			<p>general contaminant simulation; and 2) answer management questions related to PCBs, Hg, sediment, and (in the future) contaminants of emerging concern (CECs). This proposal is for funding in 2023 for phase 2 of the contaminant modeling. Phase 1 of the POC modeling, currently in progress, is developing a flexible modeling framework to quantify stormwater flow, sediment, and contaminant baseline loads at both watershed and regional scales, using PCBs and Hg as pilot examples. Phase 2 will focus on setting up a modeling framework for evaluating the benefits of control measures and developing a web-based data sharing platform. We also propose three meetings with key stakeholders to get input on model data needs and assumptions, interim model review, and model final review. The developed model structure will be a basis for and further modified for other contaminants in the future. Trends associated with control measures, land-use and climate change, or other scenarios could then be explored</p>	
<p>Sources, Pathways, and Loadings</p>	<p>Tidal Area Remote Sampler Development and Pilot Testing</p>	<p>\$85,000</p>	<p>Old industrial land use is the main source of the greatest yields as well as total mass of PCB loads in the Bay Area. Provisions C.11.c and C.12.c of the revised tentative order of the Municipal Stormwater Regional Permit (MRP) call for control measure implementation in old industrial areas. However, we have been unable to sample stormwater runoff from much of this area. Greater than 50% of the old industrial landscape in the Bay Area lies within 1 km of the Bay and is often tidally influenced. Such sites are difficult to sample, requiring stormwater runoff during a very low tide to avoid sampling Bay water. Furthermore, these areas often have public access limitations. In this study, we propose to modify and field test an EPA-developed remote sampler coupled with an auto-logging micro salinity probe that we can anchor in the water column in tidally influenced areas receiving stormwater runoff from old industrial areas. The sampling equipment would be installed just prior to a storm and retrieved after. The salinity probe will be used to control the sampling to ensure samples contain mostly fresh stormwater. Samples would be analyzed for total PCBs, total Hg, and suspended sediment. The primary focus in this first year is on modification of the samplers and pilot testing at up to four field sites, with field replicates and blanks tested at every</p>	<p>Development/selection/modification of remote sampler Pilot testing during rainy season Update presentation at SPLWG on the results to date Data upload to CEDEN Report (draft and final)</p>

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			<p>site. Prior to the first field deployment, two blanks will be collected in the SFEI laboratory to ensure the equipment does not cause contamination. Once the EPA-sampler is successfully modified and piloted, it could be used to help identify which tidally influenced industrialized drainage areas on the Bay margin could be prioritized for management consideration.</p>	
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Parent Tab	Child Tab	Draft Text Needed	Drafts Requested	Edits Requested	Editors
Bay RMP	About	N/A	MMF	Text	SC/TRC
	RMP History	N/A	N/A	N/A	N/A
	Program Structure	N/A	N/A	Text	SC/TRC
	Status and Trends	Text	MMF	Text	SC/TRC
	Special Studies	Text	MMF	Text	SC/TRC
Data	CD3	N/A	N/A	Text	SC/TRC
	CEDEN	N/A	N/A	Text	SC/TRC
	Report and Data Tables	N/A	N/A	N/A	N/A
Communications	Pulse	N/A	N/A	Text	JD
	Annual Meeting	N/A	N/A	Text	JD
	RMP Update	N/A	N/A	Text	JD
	Estuary News	N/A	N/A	N/A	N/A
	All Publications	N/A	N/A	N/A	N/A
Governance	Steering Committee	Yes	SC/TRC	Text	SC/TRC
	Technical Review Committee	Yes	SC/TRC	Text	SC/TRC
	Council of Wisdom	Yes	SC/TRC	Text	SC/TRC
Workgroups	Sediment	N/A	N/A	Text, Projects	WG Leads
	CECs	N/A	N/A	Text, Projects	WG Leads
	SPL	N/A	N/A	Text, Projects	WG Leads
	Microplastics	N/A	N/A	Text, Projects	WG Leads
	PCBs	N/A	N/A	Text, Projects	WG Leads
	Past Workgroups	N/A	N/A	Text, Projects	WG Leads

Bay RMP Deliverables Stoplight Report_new

Bay RMP Deliverables Scorecard Report

Key to Status colors:

Green indicates greater than 90 days until the deliverable is due.

Yellow indicates a deliverable is due within 90 days.

Red indicates a deliverable that is overdue.

Focus Area	Project	Task	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	Due Date Extended (external delay)	Due Date Extended (internal delay)	# of extensions	Status	Comments
142758	RMP SEP	20. MTC Bay Area Land Use Update	Collect and transform data relevant to RMP Stakeholders	Tony Hale	03/31/22	03/31/21	573	🚩	📅	3	🔴	A critical partner, MTC, was directed away from the land-use data layer renewal by more pressing concerns. They are now fully engaged, have approved our approach, and provided our team access to the requisite resources. All of SFEI's tasks will be complete by the end of Q1 2022 but the final map from MTC may be further delayed due to rearrangement of priorities for staff at MTC.
Sediment Strategy	RMP SEP	21. Sediment Dynamics Assessment and Uncertainty Analysis for San Francisco Bay	Interpretive Technical Report	Scott Dusterhoff	08/31/22	12/31/21	298	📅	🚩	2	🔴	Final report completed following comments at the Sediment WG in May 2022.
	Bay RMP (2020)	47. Sediment bioaccumulation threshold review for PCBs	Final report	Diana Lin	09/30/22	10/31/20	724	🚩	🚩	5	🔴	Delays coordinating DMMO database and reports and getting all needed data into the database from PDF reports; Currently finishing up report. workflow issues delaying final report. In review with stakeholders
	Bay RMP (2020)	35. EC Bisphenols	Technical Report	Rebecca Sutton	10/15/22	09/20/21	400	🚩	📅	3	🔴	Lab delays have delayed report preparation. Edits from stakeholders due by 9/15/2022
Sediment Strategy	RMP SEP	17. USGS Sediment Settling Velocity South Bay	Technical Report	Melissa Foley	10/31/22	01/31/22	267	🚩	📅	3	🟡	Draft expected the week of October 17th for RMP review. Jessie Lacy (USGS) lead, Date of subcontract term
	Bay RMP (2021)	E. 2021 Bird Egg Sampling	Final report	Melissa Foley	10/31/22			📅	📅		🟡	Josh Ackerman responsible PI
	Bay RMP (2021)	Special Study: PFAS in Bay water	Task 7. Final Report	Rebecca Sutton	10/31/22	09/01/22	1	📅	📅		🟡	Report delayed to take advantage of pilot wet season monitoring.
	Bay RMP (2021)	Integrated watershed modeling and monitoring implementation strategy	Complete draft integrated watershed modeling and monitoring implementation strategy	Lester McKee	10/31/22	09/01/21	419	📅	🚩	2	🟡	Have spend the last 4 weeks laying out the vision (again) and getting internal agreement. Made a start on the writing in earnest yesterday. Plan to have a full internal working draft by mid April and a draft ready for external review by April 30th and then complete the project by June 30th. Main slow down has been staff capacity. It was on my plate since last August and only now do I have bandwidth. Only me and Alicia at the moment have time - Kelly and Tan are busy until 3rd week of April. I suggest this could end up not being true as well so its possible the rest of the internal work wont get done in April, pushing the external review to June and completion in July or August. So I propose October 31st as the new deadline to give us plenty of room. OK?
	Bay RMP (2020)	22. PCB Loading in Steinberger Slough/Redwood Creek	Technical Report	Diana Lin	11/15/22	08/31/21	420	🚩	📅	3	🟡	Draft manuscript completed and shared with PCBWG. Delayed in order to get comments from PCBWG. we're expecting to get a draft from Stanford before Thanksgiving. Stanford will be analyzing additional sediment core results (pro bono) to support data interpretation. We are on target for due date. Draft report shared with PCBWG. Final comments will be discussed during PCBWG 6/3 and final report submitted shortly. Comments slow coming from PCBWG
	Bay RMP (2021)	Impact of Remediation Actions on San Leandro Bay Recovery from PCB Contamination	Task 3: Laboratory analysis	Diana Lin	11/15/22	07/31/22	86	🚩	📅	1	🟡	Lab still analyzing samples
	Bay RMP (2021)	Regional Model Development to Support Watershed Loads and Trends	Sediment calibration and report	tanz@sfei.org	11/15/22	03/31/22	208	📅	🚩	4	🟡	Sent out for external review, now waiting for external comments from stakeholders and advisors. Workflow issues
Sediment Strategy	RMP SEP	18. USGS Sediment Flux and Flocculation, Benicia Bridge	Technical Report	Melissa Foley	11/30/22	01/31/22	267	📅	📅	2	🟡	Draft delivered: report going through USGS review. Daniel Livezey and Paul Work, leads (USGS). Checking in with Paul Work and David Hart in early December to assess progress and next steps. Date of subcontract term
	Bay RMP (2020)	6. Status and Trends Monitoring	Margins report	Don Yee	11/30/22	12/31/21	298	📅	🚩	2	🟡	SFEI workflow issues
		Floating percentile method	Revise sediment guidelines using floating percentile methodology	Don Yee	12/15/22	06/30/21	482	🚩	🚩	4	🟡	RB & EPA too busy with WQIF proposals for draft review, expect response early/mid Nov, draft to sed group ~Thanksgiving. Delay getting comments from DMMO team on methods; internal delays due to workflow issues. Adam will have data analysis done by end of 2021.; Draft ready for SedWG meeting in May
Sources Pathways and Loadings	RMP SEP	14. Quantifying Stormwater Flow and Sediment Flux to the Bay	Technical Report	Lester McKee	12/31/22	12/01/21	328	🚩	📅	2	🟡	COVID and dry years so far - not much data have been collected. Water Board staff and confirmed an extension is possible and we have informed contractors. I suggest we push this to December 31st, 2022. I think it doing to be hard to get USGS to work up the data in the spring - thats the time they spend setting up new monitoring stations.

Focus Area	Project	Task	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	Due Date Extended (external delay)	Due Date Extended (internal delay)	# of extensions	Status	Comments
Sources Pathways and Loadings	RMP SEP	14. Quantifying Stormwater Flow and Sediment Flux to the Bay	Summary Factsheet	Lester McKee	12/31/22	12/01/21	328	■	□	2	●	COVID and dry years so far - not much data have been collected. Water Board staff and confirmed an extension is possible and we have informed contractors. I suggest we push this to December 31st, 2022. I think it doing to be hard to get USGS to work up the data in the spring - thats the time they spend setting up new monitoring stations.
Sources Pathways and Loadings	RMP SEP	14. Quantifying Stormwater Flow and Sediment Flux to the Bay	Post data to CD3	Lester McKee	12/31/22	12/01/21	328	■	□	2	●	COVID and dry years so far - not much data have been collected. Water Board staff and confirmed an extension is possible and we have informed contractors. I suggest we push this to December 31st, 2022. I think it doing to be hard to get USGS to work up the data in the spring - thats the time they spend setting up new monitoring stations.
Emerging Contaminants	RMP SEP	16. Sunscreen in Wastewater	Technical Report	Diana Lin	12/31/22	10/31/21	359	■	□	2	●	SFEI will be leading report instead of Stanford U because Bill Mitch's student has graduated. Sample collection was delayed one year due to Covid pandemic. Samples will be collected summer 2021.
	Bay RMP (2020)	3. QA and Data Services	QA Summary Report for 2020 S&T Activities	Don Yee	12/31/22	03/31/21	573	■	■	6	●	Sample data receiving mid May 2021, so adjusted date based on time for QA of data; SFEI workflow issues Some sediment ancillary data review not yet complete.
	Bay RMP (2020)	21. Priority Margin Unit Stormwater PCB Monitoring	Stormwater sample collection at Emerald Crest sites in WY19 and WY20	Alicia Gilbreath	12/31/22	04/30/21	543	■	□	1	●	This project got an extension because of the low rainfall seasons during climatic years 2020 and 2021.
	Bay RMP (2020)	43. Update of Erosion and Deposition in San Francisco Bay	Technical Report	Scott Dusterhoff	12/31/22	03/31/21	573	■	□	2	●	The report will be presented at the May 2021 SedWG meeting, but Bureau Approval is taking longer than usual, so the report will not be posted on the USGS website until closer to the end of the year. 7/1/22 - Meeting with RMP staff in August to discuss uncertainty analysis and then submitting to publishing group for review, which will likely take 3 months.
	Bay RMP (2020)	41. Selenium in North Bay clams and water	Technical Report	Melissa Foley	12/31/22	06/30/21	482	■	□	3	●	Data and workflow issues No sturgeon results from 2020 and 2021; technical report likely delayed until 2022. Workflow issues
	Bay RMP (2021)	Selenium in Clams	Task 4. Draft Report	Melissa Foley	12/31/22			□	□		●	
	Bay RMP (2021)	Small Tributaries Loading POC Watershed Reconnaissance Monitoring	Laboratory analysis, QA & Data Management	Adam Wong	12/31/22	09/01/21	419	■	□	1	●	Final Samples only sent out end of August. Still don't have data. Haven't received data back from the lab, most notably from SGS AXYS as we haven't finalized the contract with them. Discussions still ongoing about wrapping analysis or WY21 samples in with WY22.
	Bay RMP (2021)	Integrated watershed modeling and monitoring implementation strategy	Final report	Lester McKee	12/31/22	12/01/21	328	□	■	2	●	
	Bay RMP (2021)	DMMO Database	DMMO Database Enhancements	Cristina Grosso	12/31/22	12/31/21	298	□	■	2	●	Due to staffing shortages, we will need to request an extension for this Special Study. The Data Services team was busy with other RMP-related projects, and we did not hire a new DBA/DBD to replace Shira until November.
	Bay RMP (2021)	3. QA and Data Services	QA Summary Report for 2021 S&T Activities	Don Yee	01/15/23	09/30/22	25	□	□	1	●	Bird eggs still outstanding
	Bay RMP (2020)	24. Stormwater Conceptual Model	Conceptual model report	Diana Lin	01/31/23	09/30/21	390	■	■	3	●	Main conceptual models were completed with joint funding from OPC. We will provide an additional memo that summarizes additional relevant findings and recommendations for the Bay. Delays in getting data needs from CalTrans and CARB. Main memo findings will be shared during MPWG, and written up afterwards. Some delay in getting numbers for calculations.
	Bay RMP (2021)	F. 2021 Bird Egg Data Mgmt	Processing and upload bird egg data	Adam Wong	01/31/23	10/31/22	-6	□	□	1	●	Samples still being processed. Guessed at an extension date
Selenium Strategy	Bay RMP (2017)	2017 Sturgeon Derby Monitoring	Data management	Adam Wong	02/28/23	09/30/17	1851	■	■	2	●	Data mgmt for this got lumped in with planned data mgmt for NB selenium monitoring work. No sturgeon plug monitoring in 2020 or 2021 delays data mgmt efforts another year. Extended due date to 2023, assuming fishing efforts happen in November 2022.
	Bay RMP (2021)	Selenium in Clams	Task 5. Final Report	Melissa Foley	02/28/23			□	□		●	
Selenium Strategy	Bay RMP (2019)	Selenium in Muscle Plugs	Collect and analyze muscle plug samples	Martin Trinh	03/31/23	03/31/20	938	■	□	2	●	Muscle plug samples will be collected during CDFW cruises between August and October 2019. Laboratory analysis will follow. Data management and reporting was not funded. https://www.sfei.org/sites/default/files/events/SeWG%20-%202003%20-%20Sturgeon%20Muscle%20Plug.pdf Not enough tissue was collected by CDFW in 2019 so this will be delayed until 2020. No ability for DFW to collect samples for the RMP in 2020 and 2021 so this will be delayed again until 2022.
	Bay RMP (2021)	Special Study: Toxicology Thresholds for Emerging Contaminants	Task 1. Synthesize and assess quality of available CEC toxicity thresholds; identify toxicity threshold knowledge gaps	Ezra Miller	04/01/23	11/01/20	723	■	■	1	●	This work is complimentary to and leveraging work done for a statewide CEC synthesis and prioritization project for the State and Region 2 Water Boards, which has been delayed due to covid and delays in other related projects. As a result, this project is now slated to be finished for (and results presented at) the 2022 ECWG meeting.
	Bay RMP (2021)	Special Study: Toxicology Thresholds for Emerging Contaminants	Task 2. Calculate thresholds to fill knowledge gaps, preliminary results presentation to the ECWG	Ezra Miller	04/01/23	04/01/21	572	■	■	1	●	This work is complimentary to and leveraging work done for a statewide CEC synthesis and prioritization project for the State and Region 2 Water Boards, which has been delayed due to covid and delays in other related projects. As a result, this project is now slated to be finished for (and results presented at) the 2022 ECWG meeting.
	Bay RMP (2021)	Special Study: Toxicology Thresholds for Emerging Contaminants	Task 3. Compare measured concentrations and updated thresholds to assess placement of Possible Concern contaminants within the tiered risk-based framework and identify priorities for future work	Ezra Miller	04/01/23	09/01/21	419	■	■	1	●	This work is complimentary to and leveraging work done for a statewide CEC synthesis and prioritization project for the State and Region 2 Water Boards, which has been delayed due to covid and delays in other related projects. As a result, this project is now slated to be finished for (and results presented at) the 2022 ECWG meeting.
	Bay RMP (2021)	Special Study: Toxicology Thresholds for Emerging Contaminants	Task 4. Presentation to the ECWG and "living document" made available to stakeholders	Ezra Miller	04/01/23	04/01/22	207	□	■	1	●	
	Bay RMP (2021)	Special Study: PFAS in Bay water	Task 5. Presentation at ECWG	Rebecca Sutton	04/30/23	04/01/22	207	■	□	2	●	Analysis delayed to take advantage of pilot wet season monitoring. Postponed until 2023
	Bay RMP (2021)	Special Study: CEC in Urban Stormwater Year 3	Task 4. Draft manuscripts and management summary	Rebecca Sutton	05/01/23			□	□		●	

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	Bay RMP (2021)	Impact of Remediation Actions on San Leandro Bay Recovery from PCB Contamination	Task 4: Draft technical report	Diana Lin	05/01/23	10/31/22	-6			1		Pushed back because due to delay in receiving laboratory results.
	Bay RMP (2021)	Special Study: Nutrients Light Attenuation and moored sensors	Task 2: Technical memo evaluating the potential utility of remote-sensed products for estimating surface turbidity and light attenuation.	Dave Senn	05/31/23	12/31/22	-67			1		Major shift in modeling-related work focus (including evaluation of RS-Kd) due to HAB event. Work thus far suggests that RS products have promising potential, but the in-depth analysis will happen over the next several months we pursued the sediment transport model trials first, and remote-sensing second).
Emerging Contaminants	Bay RMP (2018)	Non-targeted Analysis of Sediment and Water	Fact sheet	Rebecca Sutton	06/30/23	08/02/19	1180			7		While Eunha's manuscript is already in preparation, Lee is no longer able to take the lead on preparing a manuscript. He has turned over data to SFEI staff. We anticipate presenting a revised scope and budget for this deliverable by end of the year. De-prioritized for ECWG meeting in favor of North Bay Fire NTA. Draft report and fact sheet by fall '19; Final report and fact sheet by Dec '19. Lee and Eunha would like to present their findings to the ECWG in spring 2020 before finalizing the report. Lab and internal COVID-19 impacts and continued prioritization of the North Bay Wildfire NTA study have delayed this project. Lee and Eunha would like to present preliminary findings to the ECWG in spring 2021 before finalizing the deliverables. Preliminary findings were presented at the ECWG meeting. The GC-based manuscript is in preparation now, while the LC-based analysis is ongoing. Complete analysis via LC-based methods (Duke University) has been delayed due to equipment failures. Analysis should be complete in January 2022. Manuscript preparation for the GC-based results (SDSU) has also been delayed, and will resume in January 2022.
Emerging Contaminants	Bay RMP (2018)	Non-targeted Analysis of Sediment and Water	Technical report	Rebecca Sutton	06/30/23	08/02/19	1180			7		While Eunha's manuscript is already in preparation, Lee is no longer able to take the lead on preparing a manuscript. He has turned over data to SFEI staff. We anticipate presenting a revised scope and budget for this deliverable by end of the year. De-prioritized for ECWG meeting in favor of North Bay Fire NTA. Draft report and fact sheet by fall '19; Final report and fact sheet by Dec '19. Lee and Eunha would like to present their findings to the ECWG in spring 2020 before finalizing the report. Lab and internal COVID-19 impacts and continued prioritization of the North Bay Wildfire NTA study have delayed this project. Lee and Eunha would like to present preliminary findings to the ECWG in spring 2021 before finalizing the deliverables. Preliminary findings were presented at the ECWG meeting. The GC-based manuscript is in preparation now, while the LC-based analysis is ongoing. Complete analysis via LC-based methods (Duke University) has been delayed due to equipment failures. Analysis should be complete in January 2022. Manuscript preparation for the GC-based results (SDSU) has also been delayed, and will resume in January 2022.
	Bay RMP (2021)	Special Study: CEC in Urban Stormwater Year 3	Task 5: Final manuscripts and management summary	Rebecca Sutton	07/01/23							
	Bay RMP (2021)	Impact of Remediation Actions on San Leandro Bay Recovery from PCB Contamination	Task 5: Final technical report	Diana Lin	07/01/23	12/31/22	-67			1		
Emerging Contaminants	RMP SEP	19. Quaternary Ammonium Compounds (QACs) in Bay Area Wastewater	QA/QC and data management	Diana Lin	12/31/23	12/31/21				1		Bill Arnold received an NSF grant that allows for two additional years of monitoring (pro bono). Preliminary data for samples collected to date will be presented at the 2022 ECWG meeting. Bill Arnold will present preliminary data at ECWG
PCB Strategy	Bay RMP (2019)	Priority Margin Unit Stormwater PCB Monitoring	Stormwater sample collection at Emeryville Crescent sites in WY19 and WY20	Alicia Gilbreath	12/31/23	04/30/20	908			2		Extended through WY2023 Analysis of samples will be covered by SEP funds (3300-011-A). Results will be reported in the WY20 STLS POC Reconnaissance Monitoring Report (due 12/31/20). https://www.sfei.org/sites/default/files/events/PCBWG%20-%202022%20-%20Priority%20Margin%20Unit%20Stormwater%20PCB.pdf Due to low rainfall, sampling was not completed in WY20 and so the study shall be extended into WY21. This project got an extension because of the low rainfall seasons during climatic years 2020 and 2021.
Emerging Contaminants	Bay RMP (2019)	Ethoxylated Surfactants Study	Manuscript and summary for managers	Diana Lin	04/15/24	08/01/20	815			2		Draft due 8/31/20. Final due 1/31/21. Sampling delayed due to COVID-19. Draft due February 1, 2021. Final due July 1, 2021. The manuscript will be ready for RMP review before the end of the year. Summary for managers will be provided after additional results from ethoxylated surfactant 2021 study results are in. Extension in deadline to incorporate additional results for Part 2 funded RMP study.
Emerging Contaminants	RMP SEP	19. Quaternary Ammonium Compounds (QACs) in Bay Area Wastewater	Present data at ECWG	Diana Lin	05/31/24	05/31/22						Additional funding from NSF increased the scope of the project. The ECWG agreed to the suggested revised due dates for the deliverables so they can include the additional data.
Emerging Contaminants	RMP SEP	19. Quaternary Ammonium Compounds (QACs) in Bay Area Wastewater	Technical Memo	Diana Lin	08/31/24	08/31/22				1		Additional funding from NSF increased the scope of the project. The ECWG agreed to the suggested revised due dates for the deliverables so they can include the additional data.
	Bay RMP (2021)	C. 2021 Water Cruise										

Bay RMP Action Items Stoplight Report_New







Bay RMP Action Items Scorecard Report

Key to Status Colors:

Green indicates greater than 90 days until the deliverable is due.

Yellow indicates a deliverable due within 90 days.

Red indicates a deliverable that is overdue.

Primary	Deliverable	Assigned To	Due Date	Old Due Date	Days overdue	# of extensions	Due Date Extended (external delay)	Due Date Extended (internal delay)	Status	Comments	Meeting Date
TRC Action Items from 09/22/21	Gather small group for Bivalve design review	Jay Davis	12/31/22	01/31/22	267	2				Item is of low urgency. Will convene the small group this fall.	09/22/21
SC Action Items from 07/21/2021	Create shortlists of research interests for EPA funding	SC Subgroup	12/31/22	10/15/21	375	1					07/21/21