



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

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).

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)

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

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,

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.

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

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

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)

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