# Technical Review Committee

December 8, 2022
9:30 AM –1:30 PM

**HYBRID MEETING**
**In-Person**
SFEI
First Floor Conference Room

**Remote Access**
https://zoom.us/j/91581187150
**Meeting ID: 915 8118 7150**

**Dial by your location**
**+1 669 900 6833 US (San Jose)**
**+1 253 215 8782 US (Tacoma)**

## AGENDA

| | | |
|---|---|---|
| **1.** | **Introductions and Review Agenda** | 9:30<br>(15 min)<br><br>Bridgette DeShields |
| **2.** | **Decision: Approve Meeting Summary from September 21, 2022, and Review/Confirm/Set Dates for Future Meetings**<br><br>Scheduled meetings:<br>Steering Committee -<br>January 25, 2023<br>April 26, 2023<br><br>Technical Review Committee -<br>March 29, 2023<br>June xx, 2023<br><br>Annual Meeting - October 12, 2023 | 9:45<br>(10 min)<br><br>Bridgette DeShields |

| | | |
|---|---|---|
| | Materials:<br>● TRC Meeting Summary, see pages 5-11<br><br>Desired outcomes:<br>● Approve meeting summary<br>● Set additional meeting dates | |
| **3.** | **Information: Update on Search for New RMP Manager and Other Staff**<br><br>Desired outcome:<br>● Informed Committee | 9:55<br>(10 min)<br><br>Jay Davis |
| **4.** | **Information: SC/MYP Workshop Meeting Summary from November 2, 2022**<br><br>Materials: MYP and SC Meeting Summaries, see pages 12-25, updated management drivers table from the MYP<br><br>Desired outcome:<br>● Informed Committee | 10:05<br>(15 min)<br><br>Jay Davis |
| **5.** | **Discussion: Bay Margins Sediment Survey - North Bay and Overall Summary**<br><br>Presentation of results from the last round of the initial survey of contaminants in margin sediment (in the North Bay), and a summary of the dataset for the whole Bay. A draft report will be distributed for review in early January.<br><br>Materials: None - Powerpoint presented at the meeting<br><br>Desired outcome:<br>● Committee receives a preview of the report<br>● Initial discussion of the findings | 10:20<br>(40 min)<br><br>Don Yee |
| **6.** | **Discussion: S&T Monitoring Update**<br><br>Update on implementation of the new S&T design, including response to recent storm events, and plans for upcoming sampling. Also including a summary of the near-field prey fish and sediment sampling plans.<br><br>Materials: None - Powerpoint presented at the meeting<br><br>Desired outcomes: | 11:00<br>(20 min) |

| | | |
|---|---|---|
| | ● Informed Committee<br>● Obtain input on S&T implementation | |
| **7.** | **Discussion: Interlaboratory Comparison Studies**<br><br>Discuss interlab comparison studies to support the revised Status and Trends design.<br><br>Materials:<br>● None - Powerpoint presented at the meeting<br><br>Desired outcome:<br>● Obtain input on planned interlab comparison studies | 11:20<br>(30 min)<br><br>Don Yee |
| **8.** | **Lunch** | 12:00<br>(30 min) |
| **9.** | **Information: Algae Bloom Followup**<br><br>Discuss latest status of followup on the algae bloom.<br><br>Materials:<br>● None - Powerpoint presented at the meeting<br><br>Desired outcome:<br>● Informed Committee | 12:30<br>(20 min)<br><br>Dave Senn |
| **10.** | **Discussion: Communications Update**<br><br>Discuss the 2022 Pulse and Annual Meeting, and the RMP Communications Strategy.<br><br>Materials: None - Powerpoint presented at the meeting<br><br>Desired outcomes:<br>● Obtain input on the Pulse, Annual Meeting, and Communications Strategy | 12:50<br>(30 min)<br><br>Jay Davis |
| **11.** | **Information: Status of Deliverables and Action Items**<br><br>Materials: Deliverables and Action Item tables, pages 26-29<br><br>Desired outcome:<br>● Informed committee | 1:10<br>(5 min)<br><br>Jay Davis |

| | | |
|---|---|---|
| **12.** | **Discussion: Plan Agenda Items for Future Meetings**<br><br>Desired outcome:<br>● Identify future agenda items | 1:15<br>(5 min)<br><br>Jay Davis |
| **13.** | **Discussion: Plus/Delta** | 1:20<br>(5 min)<br><br>Bridgette DeShields |
| | **Adjourn** | 1:25 |

Recently Completed RMP Reports/Products

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, CA.

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, 41(8): 1824-1837.

REGIONAL MONITORING PROGRAM FOR WATER QUALITY IN SAN FRANCISCO BAY

sfei.org/rmp

**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 any candidates 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 2022 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:**

- 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 Project (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 monitoring and modeling of PCBs, CECs, sediment, and nutrients. The proposal emphasized the role of modeling to improve water quality. The modeling plan in the proposal was outlined by Craig Jones in the In-Bay Modeling Strategy (SFEI Contribution #1090). The modeling in the proposal will be supplemented by $400k from a Supplemental Environmental Project. Craig Jones will be the technical lead on 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 or obtain assistance through subcontractors 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 samping 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 successfully obtained samples, which was good news because fish collection in this area has been challenging in the past.

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 prey fish. 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 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. Writeups 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 is published.

## 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 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**

REGIONAL MONITORING PROGRAM FOR WATER QUALITY IN SAN FRANCISCO BAY

sfei.org/rmp

**Bay RMP Multi-Year Planning Meeting**

November 2, 2022

# Meeting Summary

**Attendees**

| Member | Affiliation | Representing | Present |
|---|---|---|---|
| Yuyun Shang | EBMUD | POTW | **Remote** |
| Eric Dunlavey | City of San Jose | POTW | **Yes** |
| Amanda Roa | Delta Diablo | POTW | **Yes** |
| Karin North | City of Palo Alto | POTW | **Yes** |
| Tom Hall | EOA, Inc. | POTW | **Remote** |
| Mary Lou Esparza | Central Contra Costa Sanitary District | POTW | **Remote** |
| Xavier Fernandez | San Francisco Bay Water Board | Water Board | **Remote** |
| Tom Mumley* | SF Bay Regional WQCB | Water Board | **Yes** |
| Richard Looker | SF Bay Regional WQCB | Water Board | **Yes** |
| Bridgette DeShields | Integral Consulting | Refineries | **Yes** |
| Maureen Dunn | Chevron | Refineries | **Yes** |
| Adam Olivieri | BASMAA (EOA, Inc.) | Stormwater | **Remote** |
| Chris Sommers | EOA, Inc. | Stormwater | **Remote** |
| Luisa Valiela | US EPA | US EPA-IX | **Yes** |
| Ian Wren | Baykeeper | NGOs | **Yes** |
| Tessa Beach | US Army Corps of Engineers | USACE | **Remote** |
| John Coleman | Bay Planning Coalition | Dredgers | **Yes** |

*Chair; alternates in gray and italicized

**Staff and Others**

- Jay Davis - SFEI
- Melissa Foley - SFEI
- Rebecca Sutton - SFEI
- Don Yee - SFEI
- Martin Trinh - SFEI
- Scott Dusterhoff - SFEI
- Alicia Gilbreath - SFEI
- Tan Zi - SFEI
- Diana Lin - SFEI (Remote)
- Adam Wong - SFEI (Remote)

## 1. Introductions and Review Goals for the Meeting

Melissa Foley began the meeting by welcoming everyone to the Multi-Year Planning (MYP) Workshop and the first RMP meeting held in a hybrid format in two and a half years. Following a brief introduction to the technology and hybrid meeting etiquette, Tom Mumley oversaw a round of introductions. Tom then reviewed the agenda items, including Special Study funding for 2024, workgroup direction, and implementation of the revised Status & Trends (S&T) program. Tom concluded the item by reminding the group that a substantial update to the MYP will be made by next year, focusing on strategy and multi-year plan updates at the workgroup level.

## 2. Discussion: Setting the Scene – Planning for 2023 and Beyond

Melissa opened this agenda item by highlighting the work recently completed by the RMP. The first major work was the ongoing Status & Trends review, beginning with the wet season pilot that started last year in 2021. The In-Bay modeling effort has begun, a cross workgroup collaboration headed by Jay Davis within SFEI and Craig Jones of Integral Consulting providing technical expertise. This effort is supported with RMP Special Study funds, a Supplemental Environmental Project (SEP), and potentially WQIF funding. Melissa highlighted the increased collaboration between workgroups as the work of the RMP continues to integrate across projects to inform management in the region and beyond. Melissa also highlighted the ongoing high demand for RMP studies, particularly for microplastics and tires. Tom cautioned the group that there is an increased reliance on the RMP in this field by other entities as an outgrowth of the RMP's success. This could increase demand and stress on staff and affect budget decisions in the future. Review and possible revision of the PCB TMDL is planned for 2028 with the RMP providing key data.

Melissa provided an overview of the budget for 2023. Core fees for the RMP total $4 million with supplemental CEC monitoring funds providing an additional $430k. SEPs contribute between $300-$600k per year. If the WQIF proposal is awarded by the EPA, there will be an additional $2.9m to fund projects over the next four years. Awardees will be notified in mid-December; if approved funds would be available in spring of 2023.

Melissa proceeded to outline the design modifications to the S&T program. A wet weather pilot will be implemented in WY2023, with one storm sampled in WY2022. Sediment, prey fish, and marine mammal studies will be piloted in 2023, with the marine mammal study beginning as a

special study through the ECWG. This redesign has a strong connection to the Emerging Contaminant strategy update. Tom cautioned that there should be increased scrutiny on determining how much effort should go into monitoring different contaminants. Temporally and spatially, there should be distinct designations for brief screens as opposed to continued monitoring. Melissa noted that this redesign was not static and could change as it is continually reviewed.

Melissa noted that the update to the 2023 MYP is relatively light. Most workgroups have plans developed for 2024 and 2025, but not much beyond that. All workgroups will be reviewing and updating management questions and strategies this upcoming year, including devoting attention to cross-workgroup linkages for management questions and studies. The MYP for 2024 will include more robust multi-year plans for 2025 through 2027.

## 3. Discussion: Information Priorities for 2023 and Beyond

For this item, Melissa reviewed the RMP management driver table, which includes categories for high priority, low priority, and potential future drivers. High priority management drivers include the municipal regional stormwater permit, the nutrient watershed permit for municipal wastewater, the ongoing 303(d) list and 305(b) report, and TMDLs for PCBs and mercury. Melissa provided an update from recent stakeholder meetings. There is a universal demand for data on PFAS and, after this summer's event, nutrients and harmful algal blooms. PCBs, beneficial use of dredged sediment, and other large events were also identified as key priorities by stakeholders.The refinery stakeholders inquired about expected changes in selenium loadings to the North Bay from the Delta based on the new design for the tunnel project. Past projections from Tetra Tech were based on a two-tunnel system, but the project has been reduced to one tunnel. There is currently no updated analysis of the new configuration. Luisa suggested the analysis and tracking of selenium concentrations in the Delta should be handled by the Delta RMP. Tom noted that the Bay RMP should also stay on top of this. Selenium concentration data will need to be submitted to the State Board for the North Bay selenium TMDL review. Ian Wren noted that communities were surprised by ongoing developments, referencing USGS papers that found deformities in close-proximity communities and acute impacts near refineries.

Tom emphasized that a management priority for the Water Board is tribal and subsistence uses as beneficial uses. At some point in the near future, the Water Board will consider a standards action which designates these uses and accompanying water quality objectives. PCBs will be a major focus in order to protect people who consume fish from the Bay. Chris suggested adding tribal and subsistence uses to the management driver table as a potential future driver. Xavier Fernandez stated that the Water Board has begun the process of reaching out to tribes.

For the 303(d) and 305(b) list updates in March 2023, the Water Board is no longer incorporating new data and is reviewing potential water quality impairment decisions. Richard Looker offered to present a review of the potential decisions to the TRC in March if

recommendations are public at that point. Richard informed the group that the data solicitation for the 2030 update will be in 2026. RMP data are typically uploaded to CEDEN, especially Status and Trends data. This practice may need to be reviewed as more CECs are monitored. The data may be taken out of context, particularly due to the evolving methods and detection limits for contaminants over time.

**Action Item:**

- Update the RMP Management Decision Table (Melissa Foley, January 1, 2023).

## 4. Discussion: Status & Trends Monitoring Design

For this agenda item, Melissa updated the group on the Status & Trends redesign and the need for an ongoing review process, particularly for CEC monitoring and pilot activities. Currently, CECs identified as moderate concern in the Tiered Risk-Based Framework may be added to the S&T design if there is a management need and methods are available for analyzing samples. Melissa reviewed the CEC information matrix (expected pathways, existing data/modeling, chemical properties, and toxicity thresholds) that was used during the S&T review to identify which CECs should be included in S&T monitoring, as well as sampling design details for matrix, season, location, frequency, and site type. Tom suggested that sources should be included in S&T monitoring as an early indicator and not for regulatory purposes. Karin cautioned that data such as these should be screened and approved before being uploaded into CEDEN because the context of the data could be lost when data are being used for 303(d)/305(b) updates. Becky reminded the group that data uploads to CEDEN for special studies are approved on a case by case basis by the workgroup. Each special study proposal notes whether data will be uploaded to CEDEN. Eric noted that as more experimental analytical techniques are developed, for PFAS in particular, the data may be difficult to compare. The group understands that, as a public database, CEDEN should be used with caution.

Melissa proceeded to suggest an updated process for reviewing pilot studies, CEC additions to core sampling (sites and analytes), tiered risk-based framework changes, and sampling frequency for legacy contaminants. The suggested process starts with the S&T Review subcommittee (formerly known as the “Council of Wisdom”) reviewing data and logistics and developing questions for ECWG advisors, who will then review S&T data and questions. Their recommendations will be reviewed by the Subcommittee, who will make recommendations to the TRC for approval or refinement. The SC will vote on suggested changes. This review structure follows the process used for the S&T Review and incorporates advisors who can give technical input on design. Tom suggesting discussions of on-ramping new efforts should also be part of the review discussion. The group agreed it would be beneficial to have the stakeholder subgroup convene before advisors. Tom suggested recommendations for additional monitoring outlined in technical reports should be specific and detailed so that a sampling design can be developed. The three-year wet season pilot is a project example that will need review after the three year pilot is finished in spring 2024. Jay recommended reviewing the project sooner, if data are available so that adjustments can be made iteratively. In addition, he highlighted that the ECWG might need to add additional meetings for S&T review, particularly because the

meeting schedule may not align with review timing and the workgroup meeting agenda is already very full.

The group discussed moving model maintenance tasks out of the special studies budget and into the S&T budget or other long-term pot of funding. Tan explained that maintenance priorities include minor improvements and calibrations, hosting the model, and overhead costs amongst others to help support pathway monitoring in the watersheds and Bay. Tan estimated $50k per year for the watershed model, a similar amount for the in-Bay model, and $200k per year for PCB and Hg monitoring and modeling. Tom supports these costs being included in long-term planning, acknowledging that models must be maintained adequately to help inform S&T monitoring and other management needs. The group agreed that this was an important priority. The group will discuss this in more detail in January; model maintenance funding is needed beginning in 2024.

## 5. Discussion: Multi-Year Plan and Strategy Updates for Workgroups

Melissa reviewed the MYP and workgroup strategy update plan with the group. The SC previously agreed to this update by 2024. The goal for this agenda item was for the group to provide initial guidance on workgroup priorities ahead of the strategy subgroup meetings. The Sediment Workgroup is currently developing a workplan focused on management questions 3-5 (sediment transport monitoring and modeling), and the update for management questions 1-2 (dredging and beneficial use) will commence in 2023. The Emerging Contaminants Workgroup (ECWG) will continue its ongoing strategy update that started in 2022 through 2023. The Microplastics Workgroup (MPWG) will conduct a strategy and management question update in 2023 in concert with statewide efforts. The Sources, Pathways, and Loadings (SPL) Workgroup will conduct a strategy and management question update in 2023. Finally, the PCB Workgroup has been updating its strategy at each workgroup meeting, but Jay noted that a thorough review will be done at the 2023 PCBWG meeting to support the TMDL review. Currently, all workgroups except the PCBWG plan to hold subgroup meetings at the beginning of 2023 to get input on management questions and study priorities, and then produce drafts that will be reviewed by the workgroups in advance of the spring meeting. Workgroup feedback will be further discussed by subgroups, after which final updated management questions, strategies, and MYPs will be completed by October 2023.

RMP workgroup leads outlined their specific plans for their individual workgroup updates. Becky informed the group that the ECWG had formed their subgroup and finished reviewing the management questions. A draft strategy will be released before the workgroup meeting in April, with two additional subgroup meetings planned. Luisa inquired about the workgroup's current workload with Becky assuring the group that as monitoring and modeling work matures and expands, the workgroup will be able to meet information demands. Becky increased strategy funds in the 2023 MYP to account for ongoing stakeholder input and coordination on the strategy revision. Richard Looker reminded the group that as workgroups continued to integrate, governance costs will likely increase. Alicia Gilbreath and Tan Zi followed by explaining their

timeline for the SPL update. Modeling their process on ECWG, they are in the process of forming their core workgroup that will meet in March, followed by their workgroup meeting in April/May. The last SPL strategy update was in 2009, so the group will spend time defining how they relate to and support other workgroups, including connecting across management questions and study priorities. The SPL workgroup has also increased their request for budget allocations from $30k to $40k for 2023. Diana Lin outlined the timeline for the MPWG. They are currently forming a subgroup that will guide this process. With no special studies funding for 2023, the workgroup will be focused on identifying possible future directions. This strategy update will be done in parallel with a statewide effort being funded by the Ocean Protection Council (OPC). Chris Sommers stressed the importance of including RMP stakeholders in the process early on and not at the end. Diana's workplan includes RMP engagement from the onset. Scott Dusterhoff gave an update on the upcoming Sediment workgroup monitoring and modeling workplan, which focuses on management questions 3-5. Management questions 1-2 address dredging impacts, and have been a lower priority for the group in recent years. The strategy update in 2023 will focus on these questions and determine if they remain a low priority for the RMP. There are studies being conducted by the USACE and other regional partners that may satisfy the information needs for questions 1-2. Scott inquired if sediment transport continued to be the priority or if the RMP could conduct dredging related special studies in the near term. These management questions can stay on the table for the moment, but the RMP should set expectations for the future. If the questions are maintained, a strategy workplan will be developed for those questions as well. Tom noted that, similarly to the MPWG, the scope of these efforts requires external non-RMP funding. It is in the RMP's best interest to be a leader in this field, but it will be important to acquire more matching funds in the future.

Opening up discussion, Melissa polled the committees to see if they had any feedback on the process or questions regarding any timing. The group also identified TRC and SC members who could attend the subgroup meetings for each workgroup. Melissa and Tom agreed that these plans are ambitious and requested that workgroups provide updates at SC and TRC meetings. Improved MYPs will have to be realistic about what can be done this year, adjusting their breadth and depth as necessary. If the WQIF funds are awarded, then even more work will be necessary. More time and resources may be required in the future to update plans accordingly. Luisa inquired as to how dependent workgroups are on the RMP Manager, with Melissa clarifying that individual workgroup processes are largely independent. Jay will also help ease this transition to a new RMP Manager.

Melissa proceeded to review identified workgroup priorities for 2024. The in-Bay modeling project, funded by a SEP, crosses the Sed, PCB, and CEC workgroups. The SedWG will likely focus proposals on additional sediment monitoring and modeling studies. The PCB workgroup will propose additional studies on sport fish and sediment in priority margin units. The ECWG is proposing a PFAS synthesis, PFAS TOP assay, ongoing tire contaminants monitoring, OPEs in wastewater, and non-targeted analysis in fish, as well as a tires strategy and stormwater CEC monitoring and modeling along with SPL. The SPL will focus proposals on PCB/Hg monitoring, model maintenance, and developing remote samplers in addition to working with the MPWG on stormwater microplastics monitoring. Karin inquired if there was a methodology for creating new

workgroups if there is an issue that is growing and needs more focused attention. Jay suggested that the TRC and SC decide which workgroups should be meeting based on management priorities. Karin requested a flow chart of what triggers the RMP to make new/spinoff workgroups. This should be documented as well as any external funding, increased needs, and changing workloads and prioritizations. Chris agreed with the need to reflect on the current workgroup structure and suggested reviewing the workgroup list in this meeting annually. The strategy updates in 2023 are likely to inform future workgroup structure.

Finally, the group considered dedicating funding towards event-based monitoring. The RMP already has a generic fire response plan. Richard suggested that response plans could be more agile if the RMP takes the time to develop protocols and plans before events. The group agreed to discuss this in more detail starting in late 2024 after the workgroup strategy updates are done. Staff do not have the bandwidth to focus on this at the moment.

**Action Item:**

- Document the process for starting a new workgroup (Jay Davis, January 25, 2023)

## 6. Discussion: Workgroup Scheduling and Agendas

For this action item, Melissa reviewed the priority workgroup agenda items and scheduling plans. With the ECWG and SPLWG continuing to collaborate on CECs, a joint meeting will be held in mid April to discuss monitoring related updates and special study proposals for CECs in stormwater. There will be a SPLWG meeting focused on legacy contaminants in late May. Other workgroup meetings are planned to be spaced out more evenly to prevent staff burnout. Priority agenda items for workgroups include management questions and strategy process updates, MYP development, reviewing 2024 proposals, reviewing relevant related proposals from other workgroups, and project updates.

Luisa inquired about the staffing at SFEI. Melissa assured her that SFEI would be hiring more personnel in the event that WQIF funding was secured, although the number of hires and at what level is still being determined.

## 7. Summary and Action Items

Melissa reviewed the action items to be completed. The group collectively thanked Melissa Foley for her tenure as RMP Manager, expressing deep appreciation for her excellent work and expertise and tireless efforts managing the RMP.

**Adjourn**

**Bay RMP Steering Committee Meeting**
November 2, 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 | **R** |
| John Coleman | Bay Planning Coalition | Dredgers | **N** |
| Tessa Beach | US Army Corps of Engineers | USACE | **R** |
| 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
- Jay Davis, SFEI
- Martin Trinh, SFEI
- Luisa Valiela, EPA
- Jen Hunt, SFEI

## 1. Introductions and Review Goals for the Meeting

Tom Mumley began the meeting by giving an overview of the day's agenda and goals. Following the MYP workshop, the agenda items of interest for this meeting include discussion on event-based monitoring and funding, a Q3 financial update, and review of the 2023 detailed workplan and budget.

## 2. Decision: Approve Meeting Summary from July 20, 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 RMP Steering Committee (SC) meeting was confirmed for January 25, 2023, and the proposed date of April 26, 2023, was approved. There will be an RMP Technical Review Committee (TRC) meeting on December 8, 2022. Melissa asked the group to choose between October 5 and October 12, 2023, for the 2023 RMP Annual Meeting. The group chose October 12, 2023, for the Annual Meeting.

**Action Items:**

- Send out calendar invitations for the April 26, 2026, SC meeting (Martin Trinh, November 7, 2022).
- Send out calendar invitations to active SC and TRC members for October 12, 2023, Annual Meeting (Martin Trinh, November 7, 2022)
- Book October 12, 2023, for RMP Annual Meeting with David Brower Center (Melissa Foley, November 7, 2022).

**Decision:**

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

## 3. Decision: Confirm Chair and Review the Charter

Melissa provided a review of the RMP Charter and brought forth a list of proposed changes, including updating the general structure figure, adding a remote attendance option for SC and TRC meetings, replacing BASMAA with BAMS, editing SFEI accounting for nutrient studies, adding new AMR order and MRP 3.0, and updating participant names. These changes were approved. The group agreed to adjust Science Advisor term lengths from five years to three years, giving workgroups more flexibility to add advisors to suit their needs. The SC strongly advocated that the SFEI Board should be giving final approval to the annual RMP workplan. Jay will work with Warner Chabot to ensure this happens. Adam suggested some changes to legacy language, Tom will recommend text changes as well.

Tom Mumley and Karin North were unanimously voted to continue as Chair and Vice Chair of the Steering Committee, respectively.

**Decisions:**

- Adam Olivieri motioned to approve Tom and Karin as Chair and Vice Chair. Maureen Dunn seconded the motion. The motion was carried by all present members.
- Changes to the Charter were approved and the SC clarified that the SFEI Board should give final approval to the Annual RMP Workplan.

## 4. Information: TRC Meeting Summary

Melissa Foley provided the SC with a summary of the September TRC meeting. Status & Trends studies for 2023 were reviewed. Additional discussion on sampling plans and interlab comparison studies focused on CECs will be held at the December meeting. This interlab comparison will likely focus on the transition from academic labs to commercial labs for CEC monitoring. A plan for prey fish and margins sediment studies will be presented in December as well. The last portion of the TRC meeting was spent reviewing talks for the Annual Meeting.

## 5. Information: RMP Financial Update for 2022 Quarter 3

Jen Trudeau (formerly Hunt) provided the regular financial update for Q3 of 2022 to the SC. Thus far, 46% of the 2022 budget has been expended, with 83% of invoiced fees collected. There is a surplus of $138k in unallocated funds and $350k transferred to set aside funds. For 2021, 75% of funds have been expended on the year with 98% of fees being invoiced. There was a surplus of $3.5k, although not all tasks have been closed. All fees in 2019 and 2020 have been collected. For 2018, there is one remaining task, but all fees have been collected and the year should be unencumbered soon. The undesignated funds balance has increased slightly due to LAIF interest, with a Q1 payment of $6k. The SC discussed the issues with participant invoicing and provided input for accelerating the timeline of invoice requests. Possible options include issuing notes of violation if entities do not respond in a timely fashion. Jen will highlight how long bills are outstanding in the future as a guide.

Melissa reviewed a future budget request for the non-targeted analysis sediment project from 2018. Lee Ferguson no longer has the bandwidth to produce a final report following completion of lab analysis. Rebecca Sutton will assume responsibility for this report but will need additional time and budget to complete it. A formal request for additional funds will be made in January. Tom expressed that this would be a good opportunity to demonstrate the RMP's capability in non-targeted analysis.

At the most recent Small Tributary Loading Strategy Meeting, stakeholders expressed interest in additional engagement with Tan throughout the process of developing the contaminants module of the Watershed Dynamic Model rather than just at the end. This will require additional stakeholder meetings. The Water Board has also expressed interest in additional training on using the model. In addition, Tan will need to update the land use layer being used in the Watershed Dynamic Model when it becomes available. He is requesting $35.5k to facilitate this work. Tom noted that model development needs to be done in a manner that is consistent with and collaborates with other modeling programs. Three workgroups requested additional budget for updating strategies. The Emerging Contaminants Workgroup requested $35k; Sources,

Pathways, and Loadings Workgroup requested $10.5k, and the Microplastics Workgroup requested $27k for a full strategy update. Jay noted that good strategy development is an investment in the future. These additional funding requests constitute a total request of $108k. Melissa recommended using unallocated 2022 funds ($138k available) to support these efforts. Tom confirmed there are no other projected needs at the moment for the unallocated 2022 funds. The group also discussed the creation of a special fund for event-based monitoring, with Karin noting that the purpose of the reserve set-aside funds (of which there is a $200k minimum) was to support this eventuality. The SC asked for a summary of the additional funding needs in a memo.

**Action Items:**

- Highlight how long bills are outstanding in the future (Jen Hunt, January 25, 2023).
- Memo outlining additional funding requests and what funds will be used for (Melissa Foley, January 25, 2023)

**Decision:**

- Adam Olivieri motioned to approve the use of unallocated funding to support the additional funding requests totalling $108k. Karin North seconded the motion. The motion was carried by all present members.

## 6. Decision: 2023 Detailed Workplan and Budget

Melissa began her review of the 2023 workplan and budget by outlining expected financial contributions to the RMP by sector. Core RMP fee revenue for the 2023 year is $4,565,174, including the assumed dredger shortfall of $200k. This total includes $3,835,574 in core fees, $329,600 in AMR, $100,000 of MRP and $300,000 of S&T set aside funds. With expenses projected to total $4,585,400, there is a current negative balance of $20,226. However, this does not include $120K SEP tied to a sediment project that is projected to be funded. If this goes through as planned, there will be an overage of $100,000 in the budget with an additional $93k of unallocated SEP funds.

The three buckets of funding for 2023 include program implementation ($1.385m), special studies ($1.553m), and Status and Trends ($1.667m). This is a similar distribution between these activities as in previous years.

**Decision:**

- Karin North motioned to approve the 2023 workplan and budget. Adam Olivieri seconded the motion. The motion was carried by all present members.

## 7. Discussion: Event-based monitoring and funding

The group continued the discussion from the morning MYP Workshop on event-based monitoring, focusing on funding and identifying the RMP's role in the Bay to support this work. Tom noted there was money in the reserve and this discussion should center around setting

criteria on how to respond. Maureen suggested surveying other entities and their draft sampling plans and equipment needs. Jay noted that this year was not ideal to plan this, given the focus on updating strategy, incorporating the WQIF, and finding a new RMP Manager. Karin proposed an interim solution of reviewing past RMP documents concerning wildfires and other related events. If the opportunity arises, new documents will be written. Tom cautioned that the RMP should not be the default fund for these events, for example there are existing regulatory bodies designed to deal with oil spills. Karin suggested that the RMP could be instrumental in conducting post-event work and get reimbursed later. She wanted confirmation that the RMP was staffed enough to handle this. Adam suggested the group later identify what events the RMP should be interested in and carve out a role from that discussion.

**Action Items:**

- Discuss event-based monitoring planning at the December 2023 TRC meeting and January 2024 meeting (Jay Davis).

## 8. Information: Website Update

Martin Trinh of SFEI provided an update on the RMP website redesign. Following feedback from the SC and TRC, Martin and Tony Hale created a beta version for SC members to review. Martin invited committee members to provide feedback on text and structural components of the website. Once final feedback has been provided, the new website design will go live. Committee members recommended small tweaks to the current iteration of the design at the meeting.

**Action Item:**

- Provide text and structural feedback on Website Beta to Martin (SC/TRC, December 31, 2022).

## 9. Discussion: Communications

Due to time constraints, Jay will provide updates about the 2022 Pulse and 2022 RMP Annual Meeting at the upcoming January 2023 SC meeting. Tom informed the group that Estuary News would sunset after its final upcoming issue due to costs. Jay expressed appreciation for the impact Estuary News had in communicating RMP work to a broader audience.

## 10. Discussion: Status of RMP Deliverables and Action Items

Melissa provided an update on the status of RMP deliverables and action items. Just completed items included the bisphenols in water and sediment report, PCB bioaccumulation thresholds in dredged sediment report, and non-targeted fire monitoring summary for managers (and journal article). The non-targeted analysis in sediment has been delayed as Lee Ferguson is no longer able to provide a report; Rebecca Sutton will take on that responsibility going forward. The

selenium data report for 2019-2020 will be completed by the end of the year. Deliverables due before the next meeting include the South Bay settling velocity report, Benicia Bridge sediment flux report, sediment regional watershed dynamic model, interim updated land-use layer, sediment conceptual model, floating percentile sediment guidelines, and PFAS in Bay water final report. Delayed deliverables include the bird egg effort as SGS AXYS sorts through import permit issues, San Leandro Bay PCB report (lab delays), and the stormwater monitoring approach as the groundwork project has been prioritized. The sunscreen in wastewater report has also been delayed as Diana Lin has assumed responsibility for that report from Stanford. It will be completed in spring 2023. Don Yee will present on the North Bay margins at the December TRC meeting.

## 11. Discussion: Plan Agenda Items for Future Meetings

Proposed agenda items for the January SC meeting include the status of the new RMP Manager hire, adjustment to the workplan based on WQIF, communications update, and consideration of 2024 funding for model maintenance or pathway monitoring.

## 12. Plus/Delta

The group unanimously agreed that the meeting was highly productive, especially after the MYP Workshop. Both in person and virtual attendees appreciated the functionality of the OWL camera provided by Karin North. In person attendees reiterated that they enjoyed the opportunity to meet in person again.

**Adjourn**

**Current and anticipated management decisions, policies, and actions by the regulatory agencies that manage water quality in San Francisco Bay**

| Decisions, Policies, and Actions | Timing |
|---|---|
| BAY WATERSHED PERMITS (NEXT RENEWAL) | |
| Municipal Regional Stormwater Permit (five years) | 2027 |
| Mercury and PCBs Watershed Permit for Municipal and Industrial Wastewater (five years) | 2027 |
| Nutrient Watershed Permit for Municipal Wastewater (five years) | 2024 |
| CURRENT HIGH PRIORITY DRIVERS BY TOPIC | |
| *303(d) List and 305(b) Report*<br>Current listings and next cycle | 2024<br>2026* |
| *Beneficial Reuse of Dredged Sediment*<br>Review sediment guidelines+ and testing criteria<br>Evaluate the effectiveness of strategic placement | Ongoing<br>Ongoing |
| *Chemicals of Emerging Concern*<br>Updates to CEC Tiered Risk-Based Framework<br>Opportunities to inform regional actions and state and federal regulations | Annual<br>Ongoing |
| *Determination of Wastewater Permit Limits*<br>pH, temperature, salinity, hardness, California Toxics Rule | Ongoing |
| *PCBs*<br>Review existing TMDL and inform revisions | Complete by 2028 |
| *Mercury*<br>Review existing TMDL and inform revisions | Complete by 2026 |
| *Nutrients*<br>Nutrient Management Strategy | Ongoing |
| OTHER DRIVERS BY TOPIC | |
| *Beneficial uses*<br>Fish exposure (PCBs, Hg, and PFAS) and tribal uses | Ongoing |
| *Copper*<br>Site specific objectives triggers+ | Ongoing |

+ Comparisons to triggers updated every 5 years for sediment and every 2 years for water; *Data for 2029 Integrated Report needed by 2026

| Decisions, Policies, and Actions | Timing |
|---|---|
| OTHER DRIVERS BY TOPIC | |
| *Current Use Pesticides*<br>EPA Registration Review of fipronil and imidacloprid<br>DPR fipronil mitigation measures | Ongoing |
| *Cyanide*<br>Site specific objectives triggers+ | Ongoing |
| *Dioxins*<br>Review 303(d) listings and establish TMDL development plan or alternative | Ongoing |
| *Dredging Permits*<br>Bioaccumulation testing triggers and in-Bay disposal thresholds+ | Ongoing |
| *Legacy Pesticides (DDT, Dieldrin, Chlordane)*<br>Monitoring recovery (biota) | Ongoing |
| *Sediment Hot Spots*<br>Review 303(d) listings and establish TMDL development plan or alternative | 2024 |
| *Toxicity*<br>New state plan on effluent and receiving water toxicity | Ongoing |
| POTENTIAL FUTURE DRIVERS | |
| *Effects of reduced wastewater and stormwater inputs to the Bay* | TBD |
| *Effects of reverse osmosis concentrate discharge to the Bay* | TBD |
| *South Bay standards-related selenium assessment* | TBD |
| *Sea level rise adaptation and changes in salinity, pH, temperature, and dissolved oxygen due to climate change* | TBD |
| *Trash and Microplastics* | 2024 |
| *Wetland restoration permits and regional monitoring* | TBD |
| *Tribal and subsistence use as beneficial uses* | TBD |

# 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 | 607 | | | 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.<br>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 | 332 | | | 2 | | Final report completed following comments at the Sediment WG in May 2022. |
| | Bay RMP (2021) | Integrated watershed modeling and monitoring implementation strategy | Final report | Lester McKee | 10/31/22 | 09/01/21 | 453 | | | 2 | | Have spend the last 4 weeks laying out the vision (again) and getting internal agreement. Made a start on the writing in ernest yesterday. Plan to have a full internal wroking 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 | 454 | | | 3 | | Draft manuscript completed and shared with PCBWG. Delayed in order to get comments from PCBWG.<br>we're expecting to get a draft from Stanford before Thanksgiving.<br>Stanford will be analyzing additional sediment core results (pro bono) to support data interpretation.; We are on target for due date.<br>Draft report shared with PCBWG. Final comments will be discussed during PCBWG 6/3 and final report submitted shortly<br>Comments slow coming from PCBWG |
| | 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 | 242 | | | 4 | | Sent out for external review, now waiting for external comments from stakeholders and advisors<br>Workflow issues |
| Sediment Strategy | RMP SEP | 18. USGS Sediment Flux and Flocculation, Benicia Bridge | Technical Report | Melissa Foley | 11/30/22 | 01/31/22 | 301 | | | 2 | | Draft delivered; report going through USGS review<br>Daniel Livsey and Paul Work, leads (USGS)<br>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 | 332 | | | 2 | | SFEI workflow issues |
| | Bay RMP (2021) | Floating percentile method | Revise sediment guidelines using floating percentile methodology | Don Yee | 12/15/22 | 06/30/21 | 516 | | | 4 | | RB & EPA too busy with WQIF proposals for draft review, expect response early/mid Nov, draft to sed group ~Thanksgiving<br>Delay getting comments from DMMO team on methods; internal delays due to workflow issues.<br>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 | 362 | | | 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 | Summary Factsheet | Lester McKee | 12/31/22 | 12/01/21 | 362 | | | 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 | 362 | | | 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 | 393 | | | 2 | | SFEI will be leading report instead of Stanford U because Bill Mitch's student has graduated.<br>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 | 607 | | | 6 | | Sample data receiving mid May 2021, so adjusted date based on time for QA of data; SFEI workflow issues<br>Some sediment ancillary data review not yet complete. |
| | Bay RMP (2020) | 21. Priority Margin Unit Stormwater PCB Monitoring | Stormwater sample collection at Emeryville Cresent sites in WY19 and WY20 | Alicia Gilbreath | 12/31/22 | 04/30/21 | 577 | | | 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 | 607 | | | 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.<br>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. |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bay RMP (2020) | 41. Selenium in North Bay clams and water | Technical Report | Melissa Foley | 12/31/22 | 06/30/21 | 516 | | | 3 | | Data and workflow issues<br>No sturgeon results from 2020 and 2021; technical report likely delayed until 2022. Workflow issues |
| | Bay RMP (2021) | Small Tributaries Loading POC Watershed Reconnaissance Monitoring | Laboratory analysis, QA & Data Management | Adam Wong | 12/31/22 | 09/01/21 | 453 | | | 1 | | Final Samples only sent out end of August. Still don't have data.<br>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) | DMMO Database | DMMO Database Enhancements | Cristina Grosso | 12/31/22 | 12/31/21 | 332 | | | 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 | 59 | | | 1 | | Bird eggs still outstanding |
| | Bay RMP (2020) | 24. Stormwater Conceptual Model | Conceptual model report | Diana Lin | 01/31/23 | 09/30/21 | 424 | | | 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. |
| Selenium Strategy | Bay RMP (2017) | 2017 Sturgeon Derby Monitoring | Data management | Adam Wong | 02/28/23 | 09/30/17 | 1885 | | | 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<br>Extended due date to 2023, assuming fishing efforts happen in November 2022. |
| Selenium Strategy | Bay RMP (2019) | Selenium in Muscle Plugs | Collect and analyze muscle plug samples | Martin Trinh | 03/31/23 | 03/31/20 | 972 | | | 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.<br>https://www.sfei.org/sites/default/files/events/SeWG%20-%2003%20-%20Sturgeon%20Muscle%20Plug.pdf<br>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 | 757 | | | 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 | 606 | | | 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 | 453 | | | 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 | 241 | | | 1 | | |
| | Bay RMP (2021) | F. 2021 Bird Egg Data Mgmt | Processing and upload bird egg data | Adam Wong | 04/30/23 | 10/31/22 | 28 | | | 1 | | Samples still being processed. Guessed at an extension date |
| | Bay RMP (2021) | Special Study: PFAS in Bay water | Task 5. Presentation at ECWG | Rebecca Sutton | 04/30/23 | 04/01/22 | 241 | | | 2 | | Analysis delayed to take advantage of pilot wet season monitoring.<br>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 | | | | | | | |
| | 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 | 28 | | | 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 | -33 | | | 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<br>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 | 1214 | | | 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.<br>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.<br>Lee and Eunha would like to present their findings to the ECWG in spring 2020 before finalizing the report.<br>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.<br>Preliminary findings were presented at the ECWG meeting. The GC-based manuscript is in preparation now, while the LC-based analysis is ongoing.<br>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. |

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emerging Contaminants | Bay RMP (2018) | Non-targeted Analysis of Sediment and Water | Technical report | Rebecca Sutton | 06/30/23 | 08/02/19 | 1214 | | | 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.<br>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.<br>Lee and Eunha would like to present their findings to the ECWG in spring 2020 before finalizing the report.<br>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.<br>Preliminary findings were presented at the ECWG meeting. The GC-based manuscript is in preparation now, while the LC-based analysis is ongoing.<br>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 | -33 | | | 1 | | |
| | Bay RMP (2021) | Selenium in Clams | Task 4. Draft Report | Melissa Foley | 07/31/23 | 12/31/22 | -33 | | | 1 | | |
| | Bay RMP (2021) | Selenium in Clams | Task 5. Final Report | Melissa Foley | 09/30/23 | 02/28/23 | -92 | | | 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 Cresent sites in WY19 and WY20 | Alicia Gilbreath | 12/31/23 | 04/30/20 | 942 | | | 2 | | Extended through WY2023<br>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).<br>https://www.sfei.org/sites/default/files/events/PCBWG%20-%2002%20-%20Priority%20Margin%20Unit%20Stormwater%20PCB.pdf<br>Due to low rainfall, sampling was not completed in WY20 and so the study shall be extended into WY21.<br>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 | 849 | | | 2 | | Draft due 8/31/20. Final due 1/31/21.<br>Sampling delayed due to COVID-19.<br>Draft due February 1, 2021. Final due July 1, 2021.<br>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.<br>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

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 | 301 | 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 | 409 | 1 | | | | | 07/21/21 |