



RMP

REGIONAL MONITORING
PROGRAM FOR WATER QUALITY
IN SAN FRANCISCO BAY

sfei.org/rmp

Bay RMP Technical Review Committee Meeting March 10, 2021 - San Francisco Estuary Institute

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	Yes
Tom Hall	EOA, Inc.	POTW	Yes
Ross Duggan	City and County of SF	CCSF	Yes
Anne Hansen Balis	City of San Jose	POTW	Yes
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	Yes
Tessa Beach	US Army Corps of Engineers	USACE	Yes

*Chair; alternates in gray and italicized

Staff and Others

- Don Yee - SFEI
- Jay Davis - SFEI
- Melissa Foley - SFEI
- Nina Buzby - SFEI
- Adam Wong - SFEI
- Jamie Yin - SFEI
- Paul Salop - AMS
- Mary Cousins - BACWA

1. Introductions and Review Agenda

Nina Buzby began the meeting with a round of introductions, followed by Melissa Foley briefly reviewing the day's agenda. Melissa highlighted that there would be some presentations from SFEI staff along with an item to brainstorm about future priorities for the RMP.

2. Decision: Approve Meeting Summary from December 10, 2020, Confirm/set Dates for Future Meetings, and Confirm TRC Chair

Bridgette DeShields first asked the group for any final comments on the previous meeting's summary, and after receiving none she went on to confirm the upcoming meeting dates. Melissa mentioned to the TRC members that the July and October SC meeting dates were planned for a week earlier than normal. Bridgette mentioned a potential conflict with the September TRC meeting, which sparked a larger discussion about having some redundancy and succession planning for the TRC Chair position. Luisa suggested that if Bridgette was unable to attend the September meeting, someone else could serve in her place. Ian Wren agreed to take on this responsibility and Bridgette also mentioned that the TRC could consider a co-chair position, similar to the RMP SC.

The group recommended Bridgette continue as the TRC Chair for the next year; Bridgette accepted.

Decision:

- Mary Lou Esparza motioned to approve the summary of the December 10, 2020 TRC meeting. Ross Duggan seconded the motion and the motion was carried by all members present.

3. Information: SC Meeting Summary from January, 27, 2021

Melissa Foley went over the notable items from the January SC meeting, commenting that the big topic was discussing options to cover the 2021 budget deficit. A part of these discussions involved considering the pros and cons of a 2021 RMP Pulse publication, which the group decided would be better to save for 2022. In lieu of a Pulse, the SC agreed that the RMP should generate an RMP Update, for which the TRC would discuss potential topics later in the day. Melissa mentioned that the SC also reviewed the progress of the S&T redesign efforts and the status of incomplete projects.

4. Status & Trends Review Update

Melissa began the item by providing the TRC with a quick reminder on the progress and general process of the program redesign. Starting with the status of the water matrix work, Melissa explained to the committee members that the sampling design would focus on dual season sampling, with sampling in the wet season involving three types of sites, and a general focus on the Lower South Bay (LSB). The wet season effort would initially be treated as a pilot study to test feasibility for the first 2-3 years. In response to this Richard Looker mentioned that the RMP should think about how/when the program will look at the initial data to determine any necessary course corrections towards a more long-term approach.

Dry season work would generally continue current ambient monitoring, but also include aspects that would allow for wet season comparison. Melissa noted that the number of stations and sampling frequency would be budget dependent and could change during the final synthesis stage of the redesign, in order to have an affordable program. The TRC was in agreement that allowing some changes to occur to ensure a feasible budget at the end of the redesign was important.

Melissa then went on to give the group an update on efforts concerning the sediment matrix. Based on an initial meeting with the S&T subgroup, Melissa conveyed the basic sampling structure that would involve a lower frequency of sampling for ambient sites, along with the potential for wet and dry season sampling that would focus more on the margins areas of the Bay. Similar to the water wet-season work, the S&T subgroup is considering 'pilot' aspects to link in-Bay sites with watersheds.

Melissa also shared that PFAS is the one class of CECs that would definitely be added to sediment analyses, with potential additions of OPEs, bisphenols, microplastics, and ethoxylated surfactants depending on results from previous projects. Related to these analytes, Luisa Valiela asked about the status of existing CEC work. Melissa replied that OPEs were collected during the 2018 sediment work and the RMP had recently pulled archived 2017 margins samples for bisphenol analysis.

In addition to mapping out the timeline for the remaining sediment efforts, which includes additional meetings in late March and an expert meeting in late April, Melissa laid out the plan to start with biota subgroup meetings in early June and a potential expert meeting in early August. With this timeline, the RMP hopes to hold a synthesis meeting in September in order to have something substantial to share at the October Multi-Year Planning Meeting and to allow enough time before the December TRC meeting to generate and present a full design.

Following Melissa's presentation, Chris Sommers had a few comments and questions pertaining to the timeline of actual implementation and how that would play into special studies budgets. Melissa outlined the plan to implement the new sampling designs starting in 2022, which proves difficult when determining available funds for 2022 special studies. Chris reasoned that it would be difficult to take money away from the 2022 special studies, given that they are currently being planned and there is an option to phase in new S&T efforts. Additionally, Chris noted that it would be helpful in the short-term to have a ballpark idea of the increase in S&T costs in order to understand how much the 2023 special study budget would be reduced. Melissa agreed with Chris' point to phase in special study budget reductions. In addition, because much of the S&T work involves adding CEC monitoring, the ECWG budget might be subject to more reductions compared to other workgroups.

5. Information: Workgroup Dates, Special Studies Budget, and Workgroup Coordination

Melissa reviewed the workgroup meeting schedule for the TRC, noting that the PCBWG was still deciding on a date and that the Sediment Workgroup is holding two meetings. She also noted the Microplastic Workgroup, which was pared down this year, would be focusing on work from the Ocean Protection Council (OPC) and the statewide conceptual model for half of the meeting. The Selenium Workgroup would not be meeting at all, following the direction of the Steering Committee.

After quickly reviewing the budget, Melissa discussed the extensive coordination happening amongst workgroups. Melissa explained many proposals have WG leads coordinating and the resulting obstacles include finding time to present proposals at all WGs they cover, and how each workgroup should prioritize them. The meeting participants discussed potential solutions as well as considerations such as the sequence of meetings and WG advisor expertise. The group agreed that workgroups should provide more of a red flag check on coordinated proposals, rather than a full ranking. Richard Looker suggested that the RMP could consider email communication prior to the workgroups meetings to set up discussion (e.g., contact the SPLWG about potential red flags prior to the ECWG). Melissa also noted that all workgroup input can be compiled and communicated to the TRC during their decision-making process, so that final decisions don't have to be made on the date of the meetings.

The conversation then moved on to the special studies budget. Melissa asked the group whether proposals should be prioritized differently or stick with the already committed funding amount. The Committee members agreed that given the vague understanding of S&T impacts the Program should not change the budget. As discussed in an earlier item, the participants supported a phasing-in approach to funding shifts. Melissa also suggested that the Program could alter the way it uses SEP funds, specifically to put the money towards existing special studies rather than new projects.

Chris Sommers then brought up the topic of how cross-workgroup projects are implemented. Specifically, that most workgroups are contaminant-based, while the SPLWG focuses on components and ends up with a brunt of related responsibilities. Adding to this point, Melissa mentioned that the cost of workgroup projects also vary (e.g., ECWG budget covers five proposals while the SPLWG budget covers only two), so increasing cross-workgroup proposals may necessitate the hybridization of the budgets. The TRC came to the decision to hold some sort of joint meeting of the ECWG and SPLWG to determine the desired level of involvement from workgroup participants, and more generally ascertain the buy-in from workgroup stakeholders and not just advisors.

Action items:

- Schedule and hold smaller group meeting to continue to discuss cross-workgroup proposals and how to address them in future years. (Melissa Foley, 6/23/21)

6. Information: Copper and Cyanide Rolling Average Update

Jamie Yin presented to the group on the three-event rolling averages of copper and cyanide, values that were newly calculated using data from 2015, 2017, and 2019 water sampling efforts. When discussing the results, Jamie noted that the copper values were taken from the older method, reductive precipitate (RP), though agreement with the newer method, column chelation (CC) had improved from the past sampling effort. The RMP plans to continue to run both methods on 2021 water samples and keep an eye on the relationship. Don Yee added that the motivation to switch methods remains, given the greater accuracy of the CC method overall.

While presenting the cyanide results, the group discussed a single anomalous data point from San Pablo Bay. To provide more context on the calculated averages, the TRC suggested revising the graphics to include individual data points. Melissa also ensured the RMP would keep an eye on samples from similar locations in the future, and Mary Cousins suggested collecting some additional samples from the area. Further discussion with the Water Board after the meeting resulted in a decision to not sample additional stations in San Pablo Bay in 2021. The one anomalous value is not of concern at this point. If the 2021 water cruise documents additional high cyanide concentration stations, the decision to add samples in that subembayment will be revisited.

The conversation then pivoted to a discussion of cyanide method detection limits (MDLs) and the caution that is needed when interpreting data values below the MDL. Don explained that MDLs are often just below the cyanide trigger level so it's common to observe some noise in the data, and the saline matrix makes finding methods with lower MDLs difficult. Tom Hall mentioned that some wastewater plants have found labs with noticeably low MDLs and could share their information with the RMP.

Ian Wren then suggested including a fact sheet along with copper results, for example providing a timeline of events related to copper or information on brake pads. Tom Hall noted that Kelly Moran's expertise on the topic would make for a helpful product.

Action Items:

- Revise copper and cyanide average graphics and send to the TRC for final review. (Jamie Yin, 6/23/21)
- Contact wastewater plant laboratories about cyanide MDL and any potential challenges with a saline matrix (Don Yee, 6/23/2021)

7. Information: Data Services and Informatics Update

Adam Wong gave an update on the work of the Data Services team in 2020, paying note to personnel changes as well as COVID delays. He provided a quick overview of the finalized datasets for the year as well as database maintenance and process improvement efforts.

The main challenge Adam noted was pandemic-related delays, either related to sampling or analysis. Additionally, he explained further complications with ALS, an analytical lab which Don Yee is trying to find a replacement for (POC/DOC analysis). Adam also reviewed the datasets that are in progress and outlined their general timeline and associated deliverables.

Luisa Valiela asked for further details about the ALS timing issues. Adam explained that part of the issue is dealing with multiple labs. ALS is a lab conglomerate that has separate labs for processing DOC and POC, which adds an extra level of coordination and complexity to their data management. Our issues with ALS are not a single cruise issue and multiple stakeholders mentioned that they also had challenges getting data from ALS in a timely manner. Paul Salop added that a new project manager was assigned to AMS, which has been going well, but they are mainly working with ALS on organic analyses. Don mentioned that as labs get bigger, there tends to be less attention to detail so the RMP could implement more fail-safes to prevent issues.

Luisa also asked about Delta/Bay RMP data sharing, and whether the data services team does job sharing between the projects and the general workload. Adam noted that the team is somewhat lean, so there is work-sharing between himself and Michael Weaver. Previously John Ross was able to take on some of the QA tasks, but now all such work falls on Don. So there isn't strict silo-ing of work, but working through current changing conditions to address the workload issues. Melissa added that the data management team has been working incredibly hard with all the delayed data that has finally come in and is getting through a number of high priorities tasks. Chris Sommers asked (via chat) if the State Water Board pulling funding for the Regional Data Center role SFEI was impacting the data services budget. Melissa responded that it is at the scale of SFEI but is not having a direct effect on the RMP data services projects.

8. Discussion: Chlorophyll Data

Don Yee presented to the group on a previously asked question concerning the utility of the chlorophyll (Chl-a) data. He reminded the meeting participants that the general motivation for Chl-a analysis is as a proxy for algal biomass. Concerning the RMP data, Don observed that the low Chl-a values in relation to POC results indicates that the SF Bay's particulate matter does not seem to be dominated by algal biomass, but the relationship is very noisy. Apart from this exploration, Don noted that Chl-a can represent living or "new" carbon which could be important information in relation to modeling biouptake of contaminants.

Don summarized that the RMP does not often use the Chl-a data directly, likely due to a lack of efforts related to biouptake modeling. Because the analytical cost is low and the lack of a proxy in its absence, Don recommended continuing to monitor the analyte. Additionally, Don noted that the Chl-a data provides helpful context to CEC results, which are becoming an increasingly important group of analytes for RMP S&T monitoring.

Luisa Valiela suggested that the RMP confirm with the NMS, Karina Neilson at SFSU, and/or Alex Parker at Cal Maritime to see if they are also collecting similar data or if they'd like to utilize

the RMP data. In response, Don mentioned that the RMP data provides snapshots that wouldn't be incredibly useful to characterize ecosystems in the way that the NMS might need. The group agreed that the RMP should collect Chl-a data in the upcoming 2021 water sampling, and the S&T redesign conversations can provide further space to discuss the data's utility.

Action Items:

- Follow up with NMS, Karina Neilson, and Alex Parker to ensure no redundancies in Chl-a data collection and document the reasoning behind continuing Chl-a sampling. (Don Yee, 6/31/21)

9. Discussion: Future RMP Priorities

Melissa began by reminding the group that the motivation for this item is to prepare for a discussion of priorities at the October MYP meeting. The item was shortened to make up for previous agenda items that ran long. Prior to the larger discussion, Chris provided some context that adding new priorities/components that have been outside of RMP purview is possibly not a good idea at the moment, given the S&T redesign and growing complexity of special studies.

Melissa focused the discussion on the topic of beneficial reuse because the RMP has already included the topic in the Sediment Workgroup MYP and also because TRC input would help inform the Sediment Workgroup meeting the following week. Melissa then went over current and future projects related to dredging efforts with opportunities for beneficial reuse. She specified that of the three main modes of delivering sediment to marsh areas, the RMP could most easily plug into shallow water/strategic placement efforts. Example projects could include assessing the effects of burial related to strategic placements and/or the likelihood of sediment reaching the marsh surface based on sediment placement location.

Tessa Beach commented that the USACE hosted a charrette discussion the previous day on a Section 1122 strategic placement project and efforts surrounding identifying a suitable pilot placement site. Tessa explained that there would be a need for baseline as well as post-placement monitoring related to this work, along with modeling of sediment transport, which could be projects to which the RMP can contribute. There is also a potential nexus with the Wetland Regional Monitoring Program (WRMP) and their newly approved benchmark sites. The Army Corp is pushing for the work to be conducted in 2022, but the response at the charrette suggested that the proposed timeline was too aggressive, so 2023 may be a more realistic timeline for starting a pilot project.

10. Discussion: Communications Update

Jay Davis asked the group to brainstorm ideas for several communication items, the most time sensitive being the 2021 RMP Update featured project and Estuary News articles. Jay reminded the TRC that the SC decided to hold off on publishing a Pulse until 2022, but the Program should begin to think and start work on the articles now.

After Jay shared potential topics for the RMP Update and Estuary News articles, the group responded in support of covering 2019 sport fish data in the RMP Update. The TRC members came up with article ideas including new RMP modeling efforts and Karina Nielsen's (SFSU) work on ocean acidification and effects on juvenile dungeness crabs that live in SF Bay. Luisa Valiela also suggested that it would be a good idea to mention the tire contaminant, 6PPD, in the RMP Update and perhaps explain the RMP's link with DTSCs ongoing work on tire contaminants.

The conversation then moved on to the RMP Annual meeting. The meeting participants proposed presentation ideas including sport fish results and the S&T redesign efforts. Melissa also asked the TRC for feedback on having the meeting in person or remote, given that capacity will likely be limited in fall 2021. Chris Sommers noted that other conferences he is involved in are not doing in-person events and the group agreed that holding a remote RMP Annual Meeting would be the better option.

11. Information: Status of Deliverables and Action Items

In the interest of time, Melissa quickly went over deliverables and action items with the TRC members. She noted that the deliverables report included a few red items, though they were nearly complete. Melissa also highlighted some recently completed items and upcoming deadlines to alert the group to a number of publications coming from RMP projects.

12. Discussion: Plan Agenda Items for Future Meetings

The group was aware the June meeting would focus mostly on special study prioritization. Melissa noted that there would also be an update on the S&T review process. It may also be necessary to have further discussion on inter-workgroup coordination. Luisa Valiela also requested an update on the status of vessels for RMP sampling efforts.

Adjourn