Bay RMP Technical Review Committee Meeting
June 24, 2020 - San Francisco Estuary Institute

Meeting Summary

Attendees (all participants remotely attending)

TRC Member	Affiliation	Representing	Present
Irene Lui-Wong	EBMUD	POTW	**no**
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**
Simret Yigzaw	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

Guests and Staff

- Alicia Gilbreath - SFEI
- Becky Sutton - SFEI
- Cristina Grosso - SFEI
- Dave Senn - SFEI
- Derek Roberts - SFEI
- Diana Lin - SFEI
- Don Yee - SFEI
- Ezra Miller - SFEI
- Jay Davis - SFEI
- Jessie Lacy (USGS)
- John Coleman (Bay Planning Coalition, RMP SC member)

- Lester Mckee - SFEI
- Melissa Foley - SFEI
- Miguel Mendez - SFEI
- Nina Buzby - SFEI
- Scott Dusterhoff - SFEI

1. Introductions and Review Agenda

Melissa Foley began the meeting by quickly reviewing best practices while using the Zoom platform and then asking all the meeting participants to provide a brief hello. She then reviewed the items planned for the day's agenda, noting that it would be a packed meeting. Melissa reminded the group that at the June 2019 TRC meeting, the TRC requested more context from the Nutrients Program. Dave Senn's presentation would provide information on the special studies being proposed for funding by the RMP.

2. Decision: Approve Meeting Summary from March 12, 2020, and Confirm/set Dates for Future Meetings

None of the Committee members had comments on the March meeting summary. Melissa then reviewed the upcoming RMP meeting dates, noting that the program's Multi-Year planning meeting would take place on October 21, 2020. Previously, it was proposed to move the September meeting date to prevent back to back meetings for RMP staff and stakeholders involved in the Nutrient Management Strategy. A number of TRC members would be unable to attend the adjusted date, so the meeting time will remain as scheduled.

Melissa then reminded the group of the RMP Annual Meeting dates for both 2020 and 2021. The 2021 date was chosen ahead of time because the RMP was able to push the 2020 venue reservation forward as a result of coronavirus concerns. Due to the pandemic, the 2020 Annual Meeting will be a virtual meeting. There were some concerns that regular Water Board meetings could have a conflict with the 2021 date, but few committee members expressed other potential conflicts.

Decision:

- Chris Sommers motioned to approve the March 12, 2020 meeting summary, Richard Looker seconded the motion. The motion was carried by all present members.

Action Items:

- Confirm October 14th as 2021 annual meeting date with SC and report back to TRC (Melissa Foley, 9/10/20)

3. Information: SC Meeting Summary from April 22, 2020

Melissa Foley briefly summarized the April Steering Committee meeting, commenting that due to the remote platform, the group shortened the meeting time. A portion of the meeting was spent discussing the impacts from COVID-19 to the RMP, including fieldwork delays and some reduced staff hours due to childcare responsibilities. Additionally, the SC discussed the uncertainty associated with future RMP fees, noting the potential that a 3% increase in fees will not be feasible in 2022. In response to potentially unstable municipality budgets due to the coronavirus, the RMP is attempting to collect 2020 fees now and allowing participants less of a grace period than usual. Melissa commented that she would follow up with the TRC when more details on fee payments are available.

The SC also responded to the TRC's idea to not change workgroup spending, deciding to ask the TRC to explicitly cut 10-30% of workgroup function costs (e.g., planning meetings, strategy efforts). The TRC received a potential cost cutting proposal prior to the meeting that came out of a meeting with a smaller group of TRC/SC members and RMP staff. The TRC would discuss this plan prior to prioritizing special studies later in the day.

4. Information: Nutrients Program Update

Dave Senn, Nutrients Management Strategy (NMS) Program Director, gave an overview of the program and outlined the progress and efforts that contributed to the two projects proposed to the TRC for funding. While reviewing the NMS budget, Dave noted that the RMP helps support the USGS monthly nutrient cruises, as well as funding for special studies.

Dave went into detail explaining the program modeling efforts because both proposals will directly inform that work. He highlighted the differences in resolution and geographic scales of the different models by showing nitrogen mass balance scenarios in the South Bay. This example provided context on the types of questions and scenarios each model is optimized to address. From related mass balance work, Dave emphasized the importance of phytoplankton growth rates on nitrogen transport and uptake in the South Bay region. Meeting participants asked a few questions related to these findings, highlighting the data gaps in growth rate relationships that the NMS special studies are hoping to address.

5. Discussion: Presentation of Special Study Proposals Recommended by Workgroups

Melissa Foley quickly recapped the number and type of special studies that were up for consideration, noting that the time during this agenda item should be used to ask technical questions of the proposal authors that had joined the meeting. She then briefly outlined each proposal, presenting by type of study, rather than by workgroup, since many of the studies

involved cross-workgroup efforts. The study categories were strategy, desktop, modeling, and monitoring. With each study, Melissa pointed out how each related to other RMP efforts - both proposed or already completed - as well as time sensitivity aspects. Additionally, Melissa pointed out external funding contributions and any scalable study components.

During the proposal overview, Rebecca Sutton alerted the group of the recent completion of a manuscript draft, to which the RMP contributed stormwater data, that reveals the toxicity of a tire-related transformation product to coho salmon populations in the Pacific Northwest. The draft was recently sent out the TRC and Becky reminded the group that the RMP would appreciate their comments. Committee members noted that SFEI should be ready to answer questions on how the manuscript's findings relate to San Francisco Bay species, despite the fact that there are no coho salmon runs in the Estuary. Richard Looker also asked if the ECWG was including the contaminant on the stormwater CECs analyte list. Becky commented that Ed Kolodziej, a main author on the manuscript, is already a collaborator in the stormwater work, so the RMP is getting data on that component.

After reviewing all the proposals, the TRC members discussed some technical details for a number of studies. Chris Sommers asked for clarity on the timing of the San Leandro PCB work, to which Jay responded that it would establish a baseline before cleanup actions in the area are complete. The conversation also identified that the study could provide a more thorough understanding of the effectiveness of passive samplers in this sort of work, as well as possible source identification. The study would also require follow up sampling, but only after the cleanup efforts rather than a sustained effort over time.

The meeting participants also asked a few questions related to external funding. Chris Sommers asked where SCCWRP was getting funding for the ecotoxicology workshop, to which Ezra Miller responded that ze did not know, but noted the group's executive director was very committed to the effort. Mary Lou Esparza asked for clarification on whether the grant that Diana Lin received from the Ocean Protection Council (OPC) would cover the entirety of microplastic conceptual model funding. Diana Lin noted that the proposal was asking for additional funding to support efforts that would be Bay-Area specific.

6. Decision: Recommendation for Special Studies for 2021

The item began with a discussion of workgroup structure in response to the SC's directive to reduce WG operating costs. A proposed structure was sent to the TRC prior to the meeting that eliminated the Microplastic Workgroup (MPWG) and Selenium Workgroup (SeWG) by moving their efforts into the ECWG and Status and Trends efforts, respectively. Initial comments from the TRC covered a variety of topics, including the motivation behind the budget reduction, losses to the program, and scaling back the budget reductions. WG leads were able to provide context on the tradeoffs associated with decreases in both strategy and WG operating funds. For example, Lester McKee noted that some amount of discretionary funding in strategy

budgets allow leads the ability to make the most of novel opportunities and more ad-hoc efforts. Operating at the bare minimum would eliminate that ability.

The meeting participants generally agreed that eliminating MPWG funding would be too drastic of a cut, citing that the ECWG does not currently have an expert advisor for the topic and staff wouldn't have the bandwidth to take the lead on microplastic-related topics. Additionally the field of microplastics is rather new and constantly changing, so there is value in being able to stay up to date on the science and management needs. Reflecting on the idea of not holding an SeWG meeting in 2021, Jay Davis believed it could work given the group's existing plans to onramp some efforts into RMP S&T.

Richard Looker brought up the idea to have a more dynamic funding approach for WG activities, by allowing requests for additional funding to address greater WG needs. The idea was supported by the group, however, there was less consensus on the actual implementation of this approach. Luisa Valiela proposed the idea to fund WG leads, rather than the workgroups themselves as a sort of stop-gap measure. The approach could lessen the strain on leads, but not divert as much funding away from possible studies.

Wanting to have sufficient time to prioritize the special studies, the TRC agreed to wait on making any decisions until after special studies were chosen, which could inform the workgroups that are needed in 2021. This was partially motivated by participant thoughts that the decisions were under the purview of the SC, and also group consensus that cutting down by 15% would be more ideal than the initially proposed 30%. Because any cuts to the WG structure would divert more funds to special studies, Melissa suggested that the group flag any potential special studies that should be funded if cuts occur and money is available for more studies.

The conversation then pivoted to prioritizing the special studies proposals. Prior to this exercise, Melissa reminded the group that about half the studies were field-based and that the group should consider - in the case of COVID-19 constraints - whether they'd want to shift funds to other projects or simply postpone the work.

The process by which the group prioritized studies was similar to last year, and played out in a smooth and successful manner. Since the process was so successful in both years, the steps the group followed have been recorded in this process document, which can serve as a resource for future years.

Jay Davis noted that the Selenium WG proposals could be omitted from the decision-making process, given the likelihood that the workgroup restructure would move such efforts under the S&T category. The group made a concerted effort towards discussing proposals with funding ranges and possible multi-year spreads. For example, whether to fund the manuscript task of the ecotoxicology workshop proposal and shifting the sediment temporal variability study to cover two years. In relation to the nutrient program funding requests, the Committee members agreed that allocating 40% of the special studies budget was too high. Dave Senn provided the

group with more information about NMS priorities, noting that the program would move forward in extending the moored sensor program regardless of RMP funding, and prompting the first-pass decision to attribute funds to the other nutrient study on light attenuation. After a number of the TRC members commented on the use they get from moored sensor data, the group recommended allocating $250K in funding to the NMS projects.

In the process of attributing final funds, Committee members shared affiliation-specific reasoning for supporting various studies. For example, Yuyun Shang noted the interest POTWs have in studying Quaternary Ammonium Compounds (QACs) in the context of COVID-19. Richard expressed support for the SPLWG reconnaissance monitoring work, given that the CEC stormwater work relied on such efforts for cost saving opportunities.

When the remaining funds were at an amount that no longer could support an entire study, Jay Davis suggested increasing values for scalable studies like the ecotoxicology workshop and San Leandro Bay passive sampling. Additionally, SFEI staff reminded the group of other funding streams, specifically SEP and MMP funds. Melissa commented that any studies that are of high priority and time sensitive would be good candidates for currently accumulated MMP funds.

Action Items:

- Rework workgroup structure budget cuts and send to TRC for review (Melissa Foley, 7/24/20)
- Document TRC funding decision-making process for reference in future years (Nina Buzby, 9/10/20)

7. Decision: Update List of RMP Projects Eligible for Supplemental Environmental Funding and Recommended Allocation of Existing SEP Funds

Following on the last item's discussion, the goal of this item was to update and approve the studies on the current SEP list, approve the addition of new studies, and flag any potential studies for MMP funding. Melissa summarized that in addition to the unfunded special study proposals that would be automatically added to the SEP list, there were 10 new SEP ideas that resulted from the workgroup efforts. A few of these studies included updates and/or expansions of existing projects.

The discussion focused on potential projects that had an importance or urgency that warranted other, more immediate funding. Specifically, many meeting participants expressed the desire to flag the QACs study for MMP funding and the possibility of diverting reserve resources to support the land-use layer update. Related to the land-use layer work, TRC members expressed a concern that there may need to be a more tangible deliverable associated with the project, such as a technical memo or directory webpage.

When considering the unfunded special study proposals, Luisa Valiela highlighted the difficulty and rarity in collecting sediment cores. She suggested diverting some funds to collect sediment core material that could be archived for future microplastic analysis. The discussion led to the decision to attribute enough special study funding to support the field efforts, which would likely be a minimal amount.

Action Items:

- Update SEP list with unfunded special studies projects and TRC approved new SEP proposals (Melissa Foley, 9/10/20)
- Determine funding needed to collect sediment core material for later microplastic analysis (Diana Lin, 7/24/20)

8. Discussion: Data Exploration Challenge Scenario

Following up on the group's decision in March to continue the Data Exploration Challenge for one more year, Cristina Grosso presented the results of an initial brainstorm from the Data Challenge Subgroup. Two major changes to the Challenge implementation were suggested: 1) the challenge take place over a shorter time period, and 2) efforts should be spent on outreach to university level students. Additionally, Cristina reminded the TRC that the CD3 database now includes tutorial videos that should help participants navigate and access data more easily.

Cristina also presented a potential challenge scenario to the group. Focusing on PCB and Hg contamination, participants should examine data in sediment and tissue around a specific area that has a high density of available data. Leading questions would encourage participants to look at the data in terms of spatial and temporal trends, as well as possible source identification. Potential locations that the subgroup identified included San Leandro Bay, Oakland Harbor, and Mare Island.

The TRC response was generally positive, however multiple participants agreed that the scenario needed more of a storyline to make the content more relatable. Luisa Valiela expressed concern that students may not think to look at sediment and tissue data together to look at the issues on an ecosystem-level. Related to locations in the Bay Area, Ian Wren posed Richmond Harbor as an option; Melissa wondered about popular fishing locations; and Luisa suggested that participants might be interested in looking at locations close to where they live. Cristina and the Subgroup will work to incorporate these suggestions into the scenario.

Cristina then went over the planned timeline for the 2020 challenge; announcing the challenge sometime in August and asking for submissions by December 1st. Melissa noted that the due date might need to be moved up to allow more time to review submissions prior to sending out the TRC December Agenda Package on December 3rd. The TRC agreed with the proposed plan to use the same evaluation criteria.

Action Items:

- Update 2020 Data Challenge scenario to include a relatable storyline (Cristina Grosso, 8/1/20)
- Contact Cristina Grosso with Challenge outreach suggestions (TRC, 8/31/20)

9. Discussion: S&T Review Update

Meilssa Foley gave a brief recap of recent S&T review efforts, specifically going over the recently held expert workgroup meeting. The meeting mainly aimed to bring the experts up to speed on the RMP and past review work, and also covered the objectives and priorities of the review. The approach will involve developing sampling schemes for both CECs and existing contaminants. The CEC scheme would require an understanding of what CEC characteristics, pathways, and persistence would most inform/influence monitoring design. For existing contaminants, power analysis will be completed on existing data to assess the ability to detect change and to compare with the amount of change the program needs to detect.

While describing the review timeline, Melissa noted that the RMP will have a draft sampling design prior to each expert matrix meeting so that the advisors have something to respond to. The first of these meetings will be looking at water data and likely take place in August, with a preceding subgroup meeting in mid-July.

10. Discussion: Communications Update

Jay Davis began the item by quickly noting that there won't be an RMP Estuary News article until September, and that efforts will begin on the 2020 RMP Update soon with a featured story on the S&T redesign. The majority of the discussion was then spent on brainstorming potential speakers and ideas for the virtual 2020 RMP Annual Meeting.

To begin, Jay went through a number of potential speakers - noting the unique opportunity to invite non-local speakers and tap into the RMP scientific advisors. This also raised ideas about possible themes, including the S&T redesign, looking at different monitoring programs, COVID-19 related efforts, and encouraging greater diversity equity and inclusion (DEI) within the water quality community. The latter of these ideas had a lot of support from TRC members, though some meeting participants were unsure whether the exercise to "challenge the audience" would translate well through a remote platform.

Along these lines, the group discussed whether it was worth holding a meeting at all and strategies to make the experience better suited to the virtual environment. The group agreed that the opportunity to engage a larger audience, learn about other programs, and discuss more timely topics was worth holding the meeting remotely. Some potential adjustments included

holding the meeting over multiple days, utilizing smaller breakout groups, having speakers conduct shorter (e.g., ted-talk) talks, and holding panel discussions. Most importantly, the group discussed enticing people by advertising 'hot topics.' After polling the committee members, the top four topics were COVID/QACs, stormwater CECs, other regional monitoring programs, and DEI (diversity, equity, and inclusion). The meeting participants suggested polling other RMP email lists to come up with more data on what topics would be of most interest to the annual meeting audience.

Action Items:

- Bring TRC ideas on 2020 virtual Annual Meeting (multiple-days, stick to 'hot topics') to SC (Jay Davis, 7/24/20)

11. Information: Status of Deliverables and Action Items

Melissa presented the group with an update on outstanding deliverables and action items, noting the COVID-related delays in fieldwork referenced earlier in the day. She told the group of a number of reports that were in their final stages - reminding them of the importance of TRC feedback on report drafts. Melissa highlighted that a new lab was found to run TOC, TN, and grain size analysis on sediment and water samples, so the RMP can now start to scope a laboratory intercomparison study to compare the previous lab, ALS, with the replacement, Eurofins. The TRC had no questions or comments during this item.

12. Discussion: Plan Agenda Items for Future Meetings

Melissa suggested the possible science update for the next meeting could be on PFAS. She reminded the group that they expressed this interest at the March TRC meeting. The group was in support of this idea, however, giving feedback on the length of the meeting, Ian wren noted that technical updates should be kept brief. Melissa noted that the September meeting usually involves practice talks for the Annual Meeting, to which Bridgette suggested either scheduling separately or leaving off the agenda.

13. Discussion: Plus/Delta

Richard and Luisa gave special props to Melissa for being so successful in running such a long meeting, as well as all other WG meetings. The group as a whole was commended for their sustained effort and focus throughout the day, noting that they accomplished a lot and could look forward to shorter meetings going forward.

Adjourn