Bay RMP Technical Review Committee Meeting
December 13, 2018
San Francisco Estuary Institute

Draft Meeting Summary

Attendees

TRC Member	Affiliation	Representing	Present
Nirmela Arsem	EBMUD	POTWs	
Mary Lou Esparza	CCCSD, BACWA	POTWs	**yes**
Tom Hall	EOA, Inc.	POTWs	**phone**
Ross Duggan	SFPUC	POTWs	**yes**
Simret Yigzaw	City of San Jose	POTWs	**yes**
Bridgette DeShields*	Integral Consulting	Refineries	**yes**
Chris Sommers	BASMAA, EOA	Stormwater	**yes**
Shannon Alford	Port of SF	Dredgers	
Ian Wren	San Francisco Baykeeper	NGOs	
Richard Looker	SFBRWQCB	Water Board	**yes**
Luisa Valiela	USEPA	US-EPA IX	**yes**
Sheila Swett	USACE	USACE	**yes**

*Chair

Guests and Staff

- Jay Davis - SFEI
- Don Yee - SFEI
- Nina Buzby - SFEI
- Ila Shimabuku - SFEI
- Scott Dusterhoff - SFEI
- Melissa Foley - SFEI
- Amy Franz - SFEI
- Cristina Grosso - SFEI
- Paul Salop - AMS
- Jing Wu - SFEI

1. Introductions and Review Agenda

Jay Davis welcomed the members of the Committee and made a special introduction of Melissa Foley, the new RMP Program Manager. Melissa gave brief detail on her background at UCSC, the Stanford Center for Ocean Solutions, USGS, and most recently with the Auckland Council in New Zealand. The Committee members welcomed Melissa and gave detailed introductions.

Jay then informed the Committee that there would be a change to the planned agenda as Karina Nielsen was unable to attend the meeting and quickly reviewed the other agenda items.

2. Decision: Approve Meeting Summary from September 19, 2018 and confirm/set dates for future meetings.

The Committee members had no comments on the meeting summary. No changes were made to the September 19th meeting summary before approval.

The TRC then confirmed the planned future meeting dates, including the rescheduled September 26th meeting.

Decision:
- Chris Sommers motioned to approve the September 19, 2018, TRC meeting summary. Mary Lou Esparza seconded the motion. The motion for approval was carried by all present members.

Action Items:
- Finalize the September, 2018 TRC meeting summary and post to the website. (Nina Buzby, 12/14/18)

3. Information: Multi-Year Planning Workshop and SC Meeting Summary from October 24, 2018

Jay Davis summarized the October 24th Steering Committee meeting and Multi-Year Planning workshop. Jay highlighted the confirmation of Tom Mumley and Karin North as SC chair and vice chair, approval of the budget and workplan for 2019, increase of reserved funds from $200K to $400K, and review of 2020 fees.

Following the brief summary of the SC meeting, Jay reported on the Multi-Year Planning Workshop. Jay outlined the new approach to WG budget planning to help lower the number of proposals, in order to prevent a repeat of the extensive efforts from RMP staff, WGs, the TRC, and the SC in 2018. The WG leads were asked to prioritize projects between "must do" and "should do" categories in order to more closely align the planning budget with available RMP funds. With this new prioritization approach, the planning budgets are 50% greater than available RMP funds (compared to 100% greater last year). Jay then summarized some other alterations made to WG budgets including a reduction of STLS proposed funding from $500K to $400K as well as the dormancy of the EEWG.

4. Decision: Multi-Year Planning

After Jay's presentation on the MYP Workshop, the TRC discussed planning budget amounts for the WGs. They recognized the need to have the planning budget be greater than actual RMP funds in order to identify proposals for possible SEP funding, but also recognized the challenge of having to review and prioritize a large number of proposals. Bridgette DeShields and Chris Sommers agreed that a 50% margin between the planning budget and actual funds seemed reasonable.

The TRC was then asked to weigh in on the prioritization of a proposed EEWG toxicology project that would be incorporated into ECWG work. Chris Sommers expressed concern that the funding amount ($60K) would not be sufficient. Jay Davis and Bridgette DeShields noted that the work would need to either be simplistic dose-response work or narrowed to a particular class or set of chemicals such as PFAS.

Decision:
- Allow a 50% buffer between workgroup planning budgets and available RMP funds. (Consensus)

Action Items:
- Revisit the 50% buffer margin between WG planning budget and available funds in future December TRC meetings. Add to annual TRC calendar. (Nina Buzby, 12/14/18)
- Ask ECWG about incorporating toxicology work (and funding) into existing studies (Rebecca Sutton, 4/30/19)

5. Information/Decision: Presentation on South Bay Margins Study

Don Yee gave a presentation on the results of the 2017 South Bay Margins study. The purpose of the presentation was to gain technical feedback on how to present these results, future plans for sampling in the North Bay and long-term efforts, as well as the possibility of assessing archive samples for legacy pesticides.

Don clarified that "margins" were defined as intertidal portions of the Bay; shallower than one foot below mean lower low water. The guiding questions of the study included establishing an inventory of general contaminants in these ecosystems and assessing if any chemicals were at levels of concern.

The target analytes for this study were PCBs (209 congeners), mercury, methyl mercury, metals, total nitrogen, total organic carbon, and sediment grain size. There were also funded add-ons that assessed microplastic in sediment, pesticides in sediment and water, as well as the use of bioanalytical tools on sediment and water samples.

Don presented bubble-plot maps of detected concentrations for each analyte - highlighting notable hits in the South Bay region and comparing such levels to previous Central Bay data. Don also showed the results of pairwise comparisons using Kolmogorov–Smirnov (K-S) tests between a variety of areas (i.e., three South Bay regions, open Bay regions, South Bay, Central Bay) to assess differences between contaminant levels. He also compared concentrations found in samples from margin areas to nearby open Bay sediments from previous RMP monitoring. For each analyte, meeting attendees discussed the significant differences between areas. There was also a discussion about whether the K-S test is the most appropriate for these data since the different areas have vastly different sample sizes (n). Chris Sommers suggested exploring other options for statistical testing.

Special attention was paid to analyses conducted using concentration data that were normalized by fine sediment fractions. The TRC suggested creating a correlation plot between sediment makeup (i.e., % fines) and analyte concentration, such as PCBs, to establish a relationship for this normalization.

Overall, Don showed that margin concentrations were significantly higher in the Central Bay than in the South Bay (SB), except for mercury, methylmercury, and sum 208

PCBs. Enhanced mixing in the SB area is likely to contribute to this difference. The difference between the margins and the adjacent open Bay for Lower South Bay (LSB) was greater than in the South Bay.

Don discussed the reporting timeline for this project and possible add-ons for assessing legacy pesticides in archived samples. The TRC discussed the potential value of these data and the approach of the work. Don suggested that a deterministic design would be best.

The discussion then moved on to future work on North Bay margins. The Multi-Year Plan for Status and Trends has sampling of North Bay margins slated for 2020. Richard Looker, Chris Sommers, and Bridgette DeShields all were proponents for continuing margins work to include this final region of the Bay. San Pablo Bay and Suisun Bay would both be covered in one round of North Bay sampling.

Because one of the intended uses of these initial data is to assess trends in margin regions, Don suggested collecting a Bay-wide total of 40 samples (splitting two north/south regions amongst years) every 8 to 12 years. This sampling would then be concurrent with open Bay sampling that occurs every 4 years. TRC members expressed some concern that 12 years could be too long of a cycle given personnel changes and management timelines. Don argued that management action pace would likely only be a concern for CECs. The details of the long-term plan for margins sampling will be worked out after completion of the North Bay sampling.

Decision:
- The TRC recommended to not proceed with legacy pesticide testing in margin archive samples. (Consensus)
- The TRC agreed that the RMP should study the North Bay margins in 2020. (Consensus)

Action Items:
- Create correlation plots between percent fines and various analytes to demonstrate that normalization is an appropriate technique for the South Bay. (Don Yee, 12/31/18)
- Begin plans for North Bay Margins monitoring. (Don Yee, 9/30/19)

6. Discussion: 2019 Pulse and Communications Update

Jay Davis gave a brief overview of the 2019 RMP Annual Meeting evaluation survey results, noting that speakers and moderators were well received. Additionally, Jay pointed out that there were few stormwater stakeholders in attendance and believes the planned theme for the 2019 Pulse will draw interest from all groups equally. When the TRC was asked to comment, Chris Sommers expressed satisfaction with the moderated discussions.

Jay then updated the Committee on the status of the 2019 Pulse outline. Jay highlighted the desire to develop good graphics/icons for the report and also for use in RMP materials moving forward. He asked the TRC for any resources they might suggest to help accomplish this goal. Chris Sommers expressed interest in participating on a piece covering stormwater.

Jay then gave a quick update on the upcoming Estuary News piece on the RMP's work with pharmaceuticals as well as planned e-updates to send to the RMP mailing list. These e-updates will include an announcement of Melissa Foley as RMP program manager as well as notifications on recent publications.

Action Items:
- Announce Melissa Foley's new role as program manager to the RMP mailing list. (Jay Davis, 01/22/18)

7. ~~Information: Dr. Karina Nielsen from SFSU on Ocean Acidification~~ - Postponed to the March meeting

8. Information: Data Services and Informatics Update

Amy Franz gave a presentation updating the Committee on the data management team's 2018 accomplishments and plans for 2019. The list of accomplishments included various uploads to CD3, including the 2017 water cruise, 2017 margins sediment, and WY17 POC in stormwater data. Amy then showed graphics outlining the timeliness of lab data submittal and upload steps, noting that Brooks Analytical was the only lab that did not meet the target reporting time (60-90 days after sampling).

Amy then gave an update on database maintenance and process improvements, highlighting the movement of the RDC database to a new server and successful

creation and usage of a data submittal portal. Amy also mentioned planned efforts to update procedures to prepare Pulse graphics, create expected QA tables and queries, as well as save a portion of database maintenance funds to cover possible overages from other data management tasks.

Luisa Valiela asked about the capacity of the data management team to upload upcoming Suisun Bay dissolved oxygen data. Amy noted that CD3 would be unable to accommodate the continuous measurements and Cristina Grosso suggested that the nutrients visualization tool would have the ability to hold these data. There was also discussion about the DMMO data being incorporated into CD3, which Cristina said would need to be discussed with the project team.

9. Decision: RMP Data Visualization Challenge Final Judging

Cristina Grosso began her presentation summarizing the challenge goals, eligibility and scoring criteria, and extensive outreach efforts. Before going through the details of each of the five submissions, Cristina noted the breadth of participant backgrounds despite the small number of actual submissions. The participants included students (high school - grad school), agency staff, and private sector workers.

Cristina then went through each of the submissions, explaining their graphic platform, statistics, analytical tools, as well as whether and how the submission fulfilled the challenge requirements. The TRC discussed each submission.

TRC members then had a chance to score each of the submissions (on a 1-5 scale) based on the four pre-determined eligibility criteria. Cristina Grosso and Nina Buzby then tabulated the results to determine the first and second place winners. The TRC had no questions or comments after the results were presented.

After scoring, the TRC had a discussion summarizing the challenge experience and lessons learned. The discussion focused on the low number of submissions, and Committee members posed multiple reasons for the low turnout such as timing (both of the announcement and contest duration), miscommunication in expectations, and too wide a scope. The biggest note from the Committee was that the submissions lacked analytical findings and full utilization of the CD3 tool. Chris Sommers brought up the point that another way to view the challenge would be as a public outreach/education effort, rather than a way for the RMP to gain new insights. Other members continued this discussion to reflect on possibly repeating the challenge in future years. Suggestions to present the challenge as an education effort included reaching out to

high school science fairs; partnering with specific universities, schools, and clubs; and framing the challenge as a scholarship opportunity. To ensure that educators can properly circulate and/or incorporate the challenge into curriculums, Committee members encouraged announcing the challenge at the October 2019 RMP Annual meeting, and open up for submissions starting at the beginning of the following calendar year.

Chris Sommers, Bridgette DeShields, and Luisa Valiela expressed interest in repeating the Data Visualization Challenge while implementing some of the proposed suggestions. The TRC agreed to discuss such plans for the challenge in subsequent meetings.

Cristina then presented data on CD3 usage, noting that users increased threefold from the previous year, conceivably due to the challenge, though session time decreased - possibly due to use of the data download tool. Cristina also noted popular downloads from the site and named a number of groups associated with users. The TRC then discussed how to disseminate the information of the challenge winners and next steps for the future data visualization challenge efforts.

Decision:
- The TRC voted for Kaveh Karimi Asli and Froggi VanRiper as 1st place winners of the RMP Data Visualization Challenge and Akshar Ramkumar as the 2nd place winner. (Consensus)

Action Items:
- Send messages to winners and other participants to thank them for their participation and follow up on their experience with the challenge. (Nina Buzby, 12/17/18)
- Announce winners in upcoming SFEI newsletter. (Jay Davis, 1/22/18)
- Update RMP Data Visualization webpage with a blurb announcing challenge winners. (Nina Buzby, 12/21/18)
- Summarize comments from the TRC and schedule a sub-group meeting with Chris Sommers and Richard Looker. (Cristina Grosso, 1/30/19)
- Present an outline of new outreach efforts, prize levels, and new scope communication to the sub-group. (Cristina Grosso, 1/30/19)

10. Information: Status of Deliverables and Action Items

Jay Davis gave a deliverables stoplight "spotlight" to Committee members, highlighting a number of reports with approaching due dates as well as recent publications including a manuscript by Rebecca Sutton, Jennifer Sun, et. al. The TRC had no questions on the status of deliverables and action items.

11. Discussion: Plan Agenda Items for Future Meetings

The TRC agreed that the March meeting would include the following items: confirmation of the TRC chair position, additional planning guidance to workgroups, discussion on plans for a second attempt on the data visualization challenge, and Karina Nielsen's presentation on ocean acidification. Based on a suggestion from Richard Looker, Jay Davis and Melissa Foley will think about how to use the March meeting to help set the stage for the proposal prioritization at the June meeting.

Bridgette DeShields noted that the best way to understand the key questions and forthcoming content of the workgroups would be to attend their meetings in the spring.

12. Discussion: Plus/Delta

The TRC thanked SFEI staff for their efforts, particularly in relation to the Data Visualization Challenge. They were excited to meet Melissa Foley and appreciated the festive snacks and productive discussion.