



**Bay RMP Technical Review Committee Meeting**

March 14, 2018

San Francisco Estuary Institute

Meeting Summary

**Attendees**

TRC Member	Affiliation	Representing	Present
Mary Lou Esparza	Central Contra Costa Sanitation District	POTWs	Yes
Tom Hall	EOA, Inc.	POTWs	Remote
Ross Duggan	SFPUC	POTWs	Yes
Eric Dunlavey	City of San Jose	POTWs	Yes
Bridgett DeShields*	Integral Consulting	Refineries	Yes
Chris Sommers	BASMAA (EOA, Inc.)	Stormwater	No
Shannon Alford	Port of SF	Dredgers	No
Ian Wren	San Francisco Baykeeper	NGOs	Yes
Richard Looker	SFB RWQCB	Water Board	Yes
Luisa Valiela	US EPA	US-EPA IX	Yes
Jim Mazza	USACE	USACE	No

\*Chair

**Guests and Staff**

- Paul Salop - AMS
- Simret Yigzaw - City of San Jose
- Ryan Mayfield - City of San Jose
- Jay Davis - SFEI
- Phil Trowbridge - SFEI
- Ila Shimabuku - SFEI
- Cristina Grosso - SFEI
- Don Yee - SFEI (Remote)

## 1. Introductions and Review Agenda

Phil Trowbridge welcomed members of the committee and Bridgette DeShields took a moment to recognize Rod Miller in response to his passing on February 11, 2018. Ross Duggan spoke of Rod's 12-year involvement at SFPUC and his high regard as the lab director. Ross highlighted that Rod had made a serious push in recent years to involve more youth at SFPUC in an effort to expose students to STEM opportunities. Phil thanked him for his involvement in the RMP that spanned a decade. He will be missed.

Phil made one change to the agenda: Don Yee will be conducting his presentation on lab intercalibration studies remotely as he is home sick. Later in the meeting, the TRC decided to move Item 9 (Cristina Grosso's Data Analysis Challenge discussion) to before lunch to compensate for running ahead of schedule.

## 2. Decision: Approve Meeting Summary from December 14, 2017 and confirm/set dates for future meetings.

No changes were made to the December 14 meeting summary before approval.

Bridgette DeShields confirmed the upcoming June 14 meeting with everyone in attendance. The third-quarter TRC meeting was moved from Thursday, September 13, to Thursday, September 20, to allow for Bridgette's attendance. Ross Duggan will ask Heather Peterson to be his alternate at the September 20 meeting. Eric Dunlavey announced that this would be his last TRC meeting because he will be filling Jim Ervin's seat on the Steering Committee. Ryan Mayfield or Simret Yigzaw will likely fill Eric's seat.

*After the March 14, 2018, TRC meeting, the September TRC meeting was moved from September 20 to September 19 to accommodate committee member schedules.*

### **Decision:**

- Richard Looker motioned to approve the December 14, 2017, TRC meeting summary. Mary Lou Esparza seconded the motion. The motion for approval was carried by all present members.

### **Action Items:**

- Finalize the December 14, 2017, TRC meeting summary and post to the website and public-meetings folder. (Ila Shimabuku, 3/20/17)

- Confirm the September 20 meeting date with Chris Sommers, Shannon Alford, and Jim Mazza. Schedule meeting once confirmed. (Ila Shimabuku, 3/26/18)

### 3. Information: SC Meeting Summary from January 24, 2018

Phil Trowbridge briefly summarized the January SC meeting and highlighted the approval of the multi-year plan, a CEC science update, a sediment supply science update, and planning for the 2018 RMP Annual Meeting as key items. Phil explained his plans to simplify the Multi-Year Plan in order to steer next year's discussions towards bigger-picture content.

### 4. Information: Update on Purchasing of Acoustic-Release Systems for S&T Bivalve Monitoring

Phil Trowbridge commenced the discussion on the purchasing of the acoustic-release systems by explaining that erosion of the structures historically used as anchors for bivalve cages warrants a new methodology for Status and Trends bivalve monitoring. Paul Salop and Winn McEnery of Applied Marine Sciences had conducted extensive research into the different options and suggest that the RMP purchase eight EdgeTech acoustic-release samplers which involve retrievable weights. Phil reported on the preference expressed by the Steering Committee in January for the RMP to use roughly 10% of its reserves (\$77,000 out of approximately \$600,000) to purchase the equipment. Paul mentioned that all permits are currently in the approval process. Luisa Valiela warned Paul of past difficulties with the State Lands Commission's permit-approval process and encouraged him to use all tools necessary to push the Commission to approve the permit as soon as possible.

Ross Duggan, having used similar equipment, commented that the \$500/year estimate for equipment upkeep is reasonable as these samplers are generally low-maintenance. He recommended coating all exposed metal with zinc to prevent fouling.

Phil thanked Paul and Winn for their help and he plans to bring this item to the Steering Committee in April to approve the purchase using RMP reserves.

#### **Action Item:**

- Check on the status of 2018 bivalve sampling permits. (Paul Salop, 4/1/18)

## 5. Information: Bay Segment Names - Inconsistencies Across Agencies

Phil Trowbridge began by explaining that Tom Hall has requested this discussion on the differences in Bay segmentation between the RMP, USGS, and Water Board (WB). Some discussion took place around the actual differences (mostly occurring in Central and South Bay) and what could be done to address the inconsistencies. After agreeing that none of the boundaries should be altered, the TRC requested that a document or a web page be made to explain the differences in segmentation that could easily be cited. The document should contain links to older reports that discuss this issue. Other solutions are (1) adding Water Board Segments to CD3 (this change is currently underway), (2) creating a "master map" that would clearly show the different regions, and (3) adding footnotes to RMP reports where there might be confusion with WB segments.

### **Action Item:**

- Create a document or web page on the SFEI website which explains the differences in USGS, RMP, and WB segmentations; shows a map which delineates the differences in segmentation; and includes links to Phil's slides from today's TRC meeting as well as relevant historical materials such as the 1987 "Segmentation of the San Francisco Bay/Delta" report. (Ila Shimabuku, 6/1/18)

## 6. Discussion: Results from Selenium and Copper Laboratory Inter-Calibration (IC) Study and update on SCCWRP-led IC Study

In this Item, Don Yee reviewed results from a four-lab intercalibration study on analysis of dissolved and particulate selenium, presented on a disparity in Brooks Analytical's copper concentrations that resulted from two different preparation methods, and provided an update on the SCCWRP-led intercalibration study.

Don presented dissolved selenium results from ODU, USGS, BAL, and CCSF, and showed that all results were within 25% of the mean which he deemed an acceptable range. However, results from the same four labs were considerably more inconsistent for analysis of particulate selenium and included several compromised samples and results that fell below the detection limits. Don's proposed next steps included using larger pore filters, filtering 50% more volume per filter, and using pressurized filtration. He notified the TRC that all four labs plan to participate in a repeat IC study in 2019.

This repeat study will use samples from the 2019 Water Cruise (summer) or North Bay Selenium Monitoring (possibly earlier in the year). Richard said the Water Board is in support of the 2019 repeat study and Luisa Valiela is to report back on whether the EPA approves of this timeline.

Don moved on to discuss the differing copper analysis methods tested by Brooks Analytical Laboratories using 2017 Water Cruise samples. Brooks has attempted to switch from the reductive precipitation (RP) method to a ion column preparation (IP) method because of issues with the RP method that led to batch re-runs in 10-20% of samples. However, Don explained that the IP method yields higher concentrations with a 20% difference in results produced by the two methods, which, if real, would lead to trigger exceedances. Don explained that there is no current opinion on whether the RP method is low-biased or the IP is high-biased and that the current plan is to continue the RP and IP pairing over several years of sampling until the direction of the bias is revealed. The TRC decided to postpone publishing the 2017 copper data until they have confidence about which method is correct. The TRC proposed that Don compare BAL's RP and IP analyses with UCSC's copper analyses that were used prior to the RMP switching to BAL for copper analysis. TRC members also recommended comparing 2017 results to historical copper data from S.R. Hanson. The TRC decided to table this discussion until the June meeting where Don will present his findings from taking a look at historical copper data and 2017 DOC results.

Don quickly summarized the RMP's upcoming involvement in the SCCWRP-led intercalibration study. He provided a brief description of the IC Study Protocol for analysis of target analytes in sediment and tissue and discussed how the results are expected to fit into the larger reporting context. When Don asked for feedback regarding whether to conduct IC studies on an ongoing basis versus an as-needed basis using stockpiles, the TRC agreed that using stockpiled archives on an as-needed basis is preferred so long as the target analytes do not degrade over time. Mary Lou Esparza suggested looking into whether quality control parameters could be used as a proxy to tracking method changes at primary and backup labs (e.g., minimum detection limits and performance on low-level QC samples).

**Action Items:**

- Check whether BAL would consider lowering their minimum detection limit by a factor of two in anticipation of the 2019 selenium repeat study. (Don Yee, 6/1/18)
- Determine whether DOC results from the 2017 Water Cruise can provide insight the direction of the bias between the RP and IP results for copper. (Don Yee, 6/1/18)

- Look into historical copper data from USGS, San Jose, and S.R. Hanson. Ask Tony Rattonetti at SFPUC analyze samples collected for the selenium IC study for dissolved copper. Develop visual comparisons for presentation to the TRC in June. (Don Yee, 6/1/18)

## 9. Discussion: Plans for a RMP-sponsored Data Analysis Challenge

Cristina Grosso began by thanking the TRC for feedback that led to the genesis of the data analysis challenge and refreshed the TRC on the goal of the challenge: direct more users to use CD3 and RMP data. She provided the current draft outline for the project and solicited input.

TRC members made the following suggestions:

- Advertise the challenge to the following groups: Bay Area data visualization community, specifically, meetup groups; San Francisco State and UC Berkeley data visualization courses (reach out to instructors to gauge interest).
- Extend the timeline for accepting submissions through November.
- Participants should include a brief abstract that explains their processes, methods, and reasoning that led them to their final product in their submissions.
- Include judgement criteria in the challenge description to steer participants from subjects that could, unknowingly, be dull to judges, e.g., salinity fluctuations. Encourage them to aim for novel conclusions, i.e., not material from RMP products like the Pulse.
- Ask Greg Gearheart for general advice.
- Use social media platforms, such as LinkedIn, Twitter, and Facebook, to market the challenge.
- Update the CD3 fact sheet to augment the challenge description.

Phil Trowbridge explained that the prize money (total of \$3,500) will be taken out of RMP honoraria funds. Cristina asked the TRC to forward any ideas they may have regarding judgment criteria and Richard Looker requested that he be included in future challenge planning. Cristina will return to the TRC in June with a finalized plan.

### **Action Items:**

- Report back to the TRC with a draft final project description including judging criteria. (Cristina Grosso, 6/1/18)
- Notify the Steering Committee of the data analysis challenge by email. (Phil Trowbridge, 3/20/18)

## LUNCH

### 7. Information: Science Update on WY2017 Pollutants of Concern Reconnaissance Stormwater Monitoring

Phil Trowbridge introduced Jing Wu and her presentation on results from pollutants of concern (POC) monitoring in stormwater from 2015 - 2017. Jing explained that the central objective of POC monitoring is to characterize which watersheds are suspected to be the largest contributors of pollutants into the Bay. 55 sites were monitored from 2015 - 2017. Results show that almost every site monitored produced results that were in exceedance of the calculated 1.4 ng/g sediment TMDL target for PCBs. The highest concentration found was almost 6,000x the TMDL target. She also explained that the stormwater team has been investigating passive samplers as a tool to characterize watersheds and noted that the team will continue to use passive samplers during 2018 POC monitoring. Jing also provided an overview of the advanced data analysis project which aims to use a deep look at existing data to rework the way watersheds are ranked for future monitoring relative to their suspected contributions of PCBs to the Bay.

Richard Looker suggested that the mercury data presented do not appear to support the hypothesis that atmospheric deposition represents a large contribution to urban runoff. This is because atmospheric deposition should manifest as a fairly uniform concentration superimposed on background soil mercury concentrations as well as contributions from local sources. Since atmospheric deposition is probably mainly due to long-range transport from Asian fossil fuel combustion, this superimposed amount should be fairly uniform across the region. What we see in the data, however, is that there are many places where mercury particle concentrations are not that much higher than background native soil concentrations, so the atmospheric deposition contribution cannot be large in these locations. This could mean that observed mercury concentrations in urban runoff are more determined by local sources and not, as has been assumed, by atmospheric deposition. It does not make sense that atmospheric deposition could be causing large particle concentrations in some locations and not in others, assuming that the deposition is uniform. Richard's idea to explore this notion involved looking at the lower mercury-concentration data points and determining what fraction of those concentrations would be due to mercury supply from native soils which he estimated at around 0.06 - 0.10 µg/g-soil. We might want to compare sites in the western part of the region to those in the east since those in the west are less likely to be influenced by local air sources because of the direction of prevailing winds.

## 8. Information: Workgroup Meetings and Multi-Year Plan Budgets for 2019

Phil Trowbridge summarized the workgroup season by giving a quick run through of the calendar and highlighted a few major decisions. Jay notified the TRC that the selenium meeting will be scheduled soon and the sport fish meeting will not be scheduled until after the bulk of workgroup season is complete. Phil highlighted that, for 2018, the sum of the budgets for proposed studies comes out to over double the revenue from RMP fees and noted that there will be more cutting and prioritizing this year than in the past. Given this year's disparity, Richard Looker requested that the workgroups provide the TRC with additional prioritization of projects and tasks within projects. The TRC supported Phil's idea to ask the Steering Committee in April to identify what special studies they see as the highest and lowest priorities.

## 10. Information: Plans for the 2018 RMP Update Report, Annual Meeting, and Upcoming Reports & Communication Products

Jay Davis gave a brief update on communications. He anticipates that he'll release a draft of the RMP Update by early June. He quickly mentioned the proposed subjects for the June Estuary News and proceeded to solicit input for the Annual Meeting draft outline.

Bridgette DeShields was a strong proponent for a session representing the Bay Area at SETAC and wanted to revisit the RMP's current proposed involvement. Jay Davis also proposed that other similar monitoring programs from around the country should be included to make for an interesting session.

### **Action Item:**

- Replace the Guadalupe trends topic with a presentation on results from the Advanced Data Analysis project in the Annual Meeting draft agenda and update with other ideas. (Jay Davis, 4/1/18)
- Discuss organizing a Bay-Delta session at SETAC with Bridgette DeShields. (Phil Trowbridge, 4/1/18)

## 11. Information: Status of Deliverables and Action Items



Phil quickly summarized late deliverables and highlighted the issues with copper data as the reason for why those data have not been finalized. The Committee had no other comments.

## 12. Discussion: Plan agenda items for future meetings

The following ideas were suggested:

- Finalizing the data analysis challenge plan
- Report back on segmentation webpage or document
- Approving special studies
- Reviewing Status and Trends target analytes and CEC tiers
- Approving Annual Meeting agenda before finalization by the SC in July
- Report back on findings about copper method inconsistencies.
- Item on RMP involvement in ocean acidification monitoring in the Bay (SFSU buoy, MBARI collaboration) (September)

## 13. Discussion: Plus/Delta

The TRC thanked RMP staff for pluses and had no deltas.

Adjourn