



SAN FRANCISCO ESTUARY INSTITUTE

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RMP Technical Review Committee Meeting

June 30, 2015

San Francisco Estuary Institute

Meeting Summary

Attendees

TRC Member	Affiliation	Representing	Present
Nirmela Arsem	EBMUD	POTWs	No
Rod Miller	SFPUC	POTWs	Yes
Tom Hall	EOA, Inc.	South Bay Dischargers	Yes (By Phone)
Amy Chastain	City and County of San Francisco	CCSF	Yes
Eric Dunlavey	City of San Jose	City of San Jose	Yes
Bridgette DeShields*	Integral Consulting	Refineries	Yes
Ian Wren	San Francisco Baykeeper	NGOs	Yes
VACANT		Industry	NA
Ray Kellner	NRG	Cooling Water	Yes
Chris Sommers	BASMAA (EOA, Inc.)	Stormwater	Yes
John Prall	Port of Oakland	Dredgers	No
Rob Lawrence	US Army Corps of Engineers	USACE	Yes
Karen Taberski	SFB RWQCB	Water Board	Yes (By Phone)
Luisa Valiela	US EPA	US-EPA IX	Yes

*Chair

Guests and Staff

- Phil Trowbridge (SFEI)
- Rebecca Sutton (SFEI)
- Don Yee (SFEI)
- Jennifer Sun (SFEI)
- Amy Franz (SFEI)
- Lester McKee (SFEI)
- Naomi Feger (SFBRWCB)

1. Introductions and Review Agenda

There were no questions regarding the agenda. Phil Trowbridge noted that he would be presenting in place of Jay Davis, who was unable to attend the meeting.

2. Decision: Approve Meeting Summary from March 11, 2015

The group had no comments about the meeting summary from the previous TRC meeting on March 11, 2015. The group verbally agreed to approve the meeting summary.

Action Items:

- Post March 11, 2015 TRC meeting summary to the website (Jennifer Sun).

3. Information: SC Meeting Summary from April 21, 2015

Phil Trowbridge presented a brief summary of items discussed at the April 21, 2015 Steering Committee meeting. The group had no comments about the meeting summary from the previous SC meeting on April 21, 2015.

4. Discussion: Presentation of Special Studies Proposals Recommended by Workgroups

The goal of this agenda item was to prioritize special studies to recommend for funding in 2016, and prioritize the remaining studies if additional funds are found. \$850k is currently available for special studies in 2016. Phil Trowbridge indicated that a small amount of additional funding may be able to be reappropriated from the RMP program management budget, but urged the group to aggressively pursue additional funding for the RMP.

Summaries of major discussion points are listed below:

- Chris Sommers encouraged the group to prioritize studies that will provide immediate management or regulatory support.
- Dioxins synthesis: The group agreed that the dioxin synthesis must be completed before dioxins are next sampled by the S&T (2018), because the results of the synthesis may indicate that dioxins may no longer need to be sampled (or sampled at a reduced frequency), resulting in significant cost savings.
- Exposure and Effects WG proposals: Karen Taberski indicated that understanding the impacts of clay on the *E. Estuarius* toxicity would not immediately influence management decisions (ie. SQOs or TMDLs), but it could in the future. Bridgette DeShields noted that the toxicity test has been put on hold until this study is completed, and multiple committee members confirmed that this field study would be necessary to revise the sediment toxicity protocol. This study was prioritized over the Ocean Acidification proposal, which is less linked to current management actions and is more likely to be able to find funding outside the RMP.
- Sources, Pathways and Loadings WG and Nutrients proposals: The group agreed that these proposals should be recommended at their lower funding levels, in order to reserve funds for other special studies.

- Chris Sommers and Naomi Feger expressed that the stormwater PCB studies have informed management decisions - largely through the identification of targets for Cleanup and Abatement Orders - and would continue to be valuable in the future. Point of concern monitoring will likely continue for only one or two years into the future, but funds would likely still be needed for other types of PCB monitoring (ie. tributary monitoring, BMP performance monitoring)
- Several group members indicated that the level of detail provided in these proposals made it difficult to understand the difference between the higher and lower funding options
- Selenium proposals: Bridgette DeShields explained the Selenium WG's prioritization of the 2016 Sturgeon Derby study, as well as additional funding for the 2015 Muscle Plug study, over the 2016 Muscle Plug study. A larger variety of data will be available through the Sturgeon Derby, and the opportunity to continue collecting samples from this event may no longer exist in the future. Naomi Feger expressed support for the muscle plug studies, which will inform monitoring for attainment of the TMDL, but indicated that understanding the relationship between selenium concentrations and reproductively mature females was a lower priority. The group agreed to prioritize the studies as proposed by the Selenium WG.
- Emerging Contaminants WG proposals: The group agreed that in general, the RMP should increase its focus on emerging contaminants, both through special studies funding and the S&T program. The current EC proposals are very timely and may be able to inform upcoming regulatory actions, and take advantage of pro-bono services offered by POTWs and collaborators. Several group members supported recommending all studies for funding in 2016, but agreed to defer funding for microplastics monitoring because samples can be easily stored and are likely to be able to be collected again in future years.
- PCB WG proposal: Several committee members suggested that follow-up monitoring at the Ettie Street site would be more valuable than the development of a new conceptual model for San Leandro. In general, there was interest in completing the conceptual model from Ettie Street and learning from that experience before investing too much in other priority margin units. The group recommended that the PCB WG proposal be funded at \$40k and asked to reprioritize the use of these funds.

Several group members provided suggestions for future RMP monitoring focus, funding, and process:

- Multiple group members expressed strong support for the Emerging Contaminants (ECs) program, and indicated that the RMP should be at minimum be fully funding EC studies and should consider a process for adding ECs to the S&T program. Chris Sommers echoed Lester McKee's prior suggestion that the S&T program periodically include broadscans to identify any contaminants that should be added to the monitoring list, and multiple group members supported this proposal.
- Naomi Feger suggested studying PAHs more closely, a class of contaminant showing increasing concentrations in the Bay.
- Rob Lawrence expressed concern that the proposed special studies largely did not address dredging interests. The group highlighted the relevance of shallow sediment monitoring, and the link between cleaner watersheds and cleaner dredged sediments. Group members also encouraged dredging stakeholders to participate in the proposal development process in future years.

- Naomi Feger indicated that with the release of the North Bay Selenium TMDL, the focus of the Selenium WG should shift towards the South Bay.
- Chris Sommers emphasized that much of the work the RMP is currently funding is relevant to work being conducted outside the Bay (ie. methods development), and that the State Board and other entities should be providing funding to support this work

5. Decision: Recommendation for Special Studies for 2016

The group recommended that the following studies be fully funded:

- Emerging Contaminants Strategy (ECWG) - \$48k
This funding was understood to be essential for Becky Sutton to run the EC program, and to ensure the completion of a pharmaceuticals in wastewater study that will take advantage of pro-bono analytical work from POTWs
- Non-targeted Analysis of Water-soluble compounds (ECWG) - \$52k
The group acknowledged that this was an innovative study. Funding in 2016 will ensure the project can take advantage of \$10k of pro-bono analytical work by the RMP's research partner at Duke University.
- Fipronil and Degradates in WWTP Influent and Effluent (ECWG) - \$30k
- Effects of Clay on E. Estuarius (EEWG) - \$30k. The group recommended that the RMP attempt to find matching funds from the State Board since this project has state-wide policy implications.
- Selenium Strategy Support (Selenium WG) - \$10k
This funding was understood to be essential for the coordination of the Selenium Workgroup
- 2016 Sturgeon Derby Monitoring (Selenium WG) - \$37k

The group agreed that the following studies be partially funded or funded at a lower level:

- Moored sensor monitoring (Nutrients) - recommend funding at the lower level of \$150k*
- Dissolved Oxygen monitoring in shallow margin habitats (Nutrients) - recommend funding at the lower level of \$150k*
- Implementation of Small Tributaries Loading Strategy (SPLWG)- recommend funding at the lower level of \$311k
- Priority Margin Unit Conceptual Model Development (PCB WG) - recommend funding at \$40k of the requested \$80k

*These studies were partially funded with the understanding that additional funds to complete these studies may be able to be obtained from the Nutrients Management Strategy (NMS) budget. Other studies funded by NMS may then need to be reprioritized.

The group agreed not to fund the following studies for 2016, but recommended the level of priority for funding each study in 2017:

1. Monitoring of Microplastics in the Margins (ECWG) - \$14,325
The group agreed to defer this study to 2017 if margins sediment samples will be collected in 2015 and archived. If additional funding from the Water Board becomes available to fund the recommended EEWG study (see above), those funds will be used to fund this study in 2016.
2. Priority Margin Unit Conceptual Model Development (PCB WG) - \$40k unfunded in 2016

3. Dioxin Synthesis Report (Dioxin WG) - \$40k
Funding for this study will be required in 2017 - this synthesis must be completed before 2018
4. Ocean Acidification Strategy Development (EEWG) - \$30k
Alternative funding for this work will be solicited outside the RMP program
5. 2016 Sturgeon Muscle Plug Monitoring (Selenium WG) - \$42k
This study can be deferred to 2017

Action Items

- Inform PCB Workgroup that the TRC has recommended a 2015 funding level of \$40,000. Obtain an updated proposal from the PCB Workgroup for studies that can be completed within this budget, and include this proposal in the July 21, 2015 Steering Committee meeting agenda package (Phil Trowbridge, Jay Davis)
- Follow up with Chris Beegan to determine if funds can be procured from the Water Board to partially fund the Effects of clay on *E. estuarius* study (Karen Taberski)

6. Discussion: Update on the Pulse and the State of the Estuary Report (SOTER)

Phil Trowbridge provided an update on the current status of the Pulse and SOTER reports. The first draft of the Pulse was sent out for review but did not receive any comments from TRC representatives. A second draft of the Pulse will be sent out for review near the middle of July. This draft will have already been formatted by the RMP's graphic designer, so major revisions to the structure of the report will not be able to be incorporated.

The Pulse report will be released at the same time as the SOTER at the State of the Estuary Conference in September. The Baylands Ecosystem Habitat Goals Update report will be released after the conference.

7. Discussion: Update on the State of the Estuary Conference and RMP Annual Meeting Planning

Phil Trowbridge outlined the plenary speakers and concurrent sessions planned for the RMP Annual Meeting section of the State of the Estuary Conference, and outlined the timeline leading up to the conference on September 18th.

Pre-registration for the conference will begin the first week in July and end at the end of July. The RMP Annual Meeting Save the Date flyer will include information for fee-paying participants of the RMP to request free registration for the second day of SOTEC, when the RMP Annual Meeting will be held. Once pre-registration closes, participants that have requested free registration will be sent a link to a page from which they can register for either the second day of the conference (free) or the full conference (\$100). The poster session will be organized during the last week of August, leading up to the conference.

Naomi indicated that limited space is available for Regional Board staff to attend the conference through their current registration mechanism, and asked if some Regional Board staff could be accommodated through RMP funding. Phil indicated that the RMP has paid for 100-120 conference registrations, which was not meant to include Water Board staff.

8. Discussion: Update on Bay Margins and Status and Trends Monitoring

Bay Margins Study Design Update

Phil Trowbridge presented a summary of the revised Bay Margins study design, including a stratified monitoring station design that reduced the number of monitoring locations in Marin, based on the Steering Committee's recommendations.

Bridgette DeShields suggested moving the monitoring site at Double Rock/Hunter's Point because a large amount of historical data is available at this site, and clean-up is planned to begin in 2017. Phil Trowbridge responded that the use of historical data introduces uncertainty due to differences in lab measurements, and Chris Sommers responded that removing this high-PCB monitoring site will remove representation of this type of hotspot from the report analysis. Chris argued that it be preferable to include this data in the report but to have a good discussion regarding uncertainties and the timeline for hot-spot cleanups in the narrative.

Chris Sommers and Bridgette DeShields both emphasized the need to carefully explain the distribution of data that is reported on in the final report, including the fact that high-PCB sediments at Double Rock will soon be removed. Chris Sommers suggested that the final report be widely reviewed, particularly by those familiar with current actions at the monitoring locations, such that details about the representativeness of the monitoring results can be included in the final report.

Phil then asked the TRC whether trace metals analyses were a necessary part of the Bay Margins study. These analyses cost about \$16,000, or about 20% of the total analytical cost. These analytes can be measured in archived samples, and the cost savings could be used to supplement the labor budget. Phil indicated that planning this study had taken longer than expected, as this type of shallow-water sediment monitoring is different from previous monitoring done and required careful development of new protocols not in the QAPP, and without some cost savings additional funds would need to be requested from the Steering Committee.

The group did not support eliminating trace metal analyses, but Rod Miller indicated that SFPUC could conduct these analyses at a lower cost. The group agreed that SFPUC should be contracted to conduct trace metals analyses instead of Brooks Rand Laboratories, and these cost savings could be used to supplement the current labor budget.

Action Items

- Obtain price quote for trace metals analyses by SFPUC (Don Yee)
- Update budget and study design to include trace metals analyses by SFPUC instead of Brooks Rand Laboratories (Phil Trowbridge).

2015 S&T Water Cruise Monitoring

Nutrients monitoring

Phil relayed that Dave Senn had indicated that he was not using S&T nutrients data to supplement data already collected by the NMS. Don Yee noted that nutrients monitoring may still need to be collected at boundary points (outside the Golden Gate Bridge, in tributaries). The group agreed to support a formal recommendation from Dave Senn to eliminate or reduce nutrients monitoring from the S&T Water Cruise.

Interlaboratory Calibration Studies

During previous Water Cruises, Cu, Ni, and CN interlab calibration studies have been conducted between Brooks Rand Laboratories and the SJSCRWF lab. Don indicated that the results between the two labs seemed similar, and Tom Hall indicated that interlab calibration studies were no longer necessary for CN, which now has a higher regulatory limit. The group agreed that, for the 2015 water samples, Cu and Ni could be just analyzed by the SJSCRWF lab (no interlab study with Brooks Rand) and that an interlab study of CN was not needed.

Bridgette DeShields indicated that the RMP should consult with Barbara Baginska at the Regional Board to determine necessity of conducting a selenium interlab calibrations study to evaluate the use of a Cutter-like method.

CTR monitoring

The group supported the idea of adding CTR monitoring to the 2015 Water Cruise, excluding dioxins, which have recently been sampled. The group agreed that new receiving water CTR data would be a very useful update to the prior 2002-2003 data to support upcoming reasonable potential analyses.

Phil indicated that adding CTR monitoring to the 2015 Water Cruise would cost approximately \$20k. The group agreed to request these funds from the RMP Undesignated Funds pool in 2015, and discuss the frequency of CTR monitoring in future years. Amy Chastain agreed to follow up with BACWA and the Water Board to discuss the reduction of effluent CTR monitoring requirements and transfer of cost savings from POTWs to the RMP.

Action Items

- Prepare a formal recommendation to remove or reduce nutrients monitoring in the S&T Water Cruise plan, based on data collected as part of the Nutrient Management Strategy and data needed by the NMS for modeling of boundary conditions, and bring this recommendation to the Steering Committee on July 21, 2015 (Phil Trowbridge, Dave Senn)
- Evaluate the possibility of conducting a selenium interlab calibration study using a Cutter-like method and discuss the priority for this work with Barbara Baginska (Don Yee, Phil Trowbridge)
- Prepare and present memo requesting Undesignated Funds to the Steering Committee on July 21, 2015 to add analyses of all CTR constituents not recently monitored to the 2015 Water Cruise (Jennifer Sun, Phil Trowbridge, Don Yee)
- Follow-up with BACWA and the Water Board discussions regarding the transfer of POTW monitoring funds to the RMP for conducting regular CTR monitoring in receiving waters (Amy Chastain, Eric Dunlavey)

2015 S&T Bird Egg Monitoring

Phil Trowbridge explained that the 2015 S&T bird egg sampling event was mistakenly missed, and will be delayed to spring 2016.

2014 S&T Sport Fish Monitoring

Jennifer Sun gave a summary of the samples that were collected and analyses completed during the 2014 S&T Sport Fish monitoring event, as well as an explanation of data gaps for pacific herring and white croaker samples. Phil Trowbridge explained that the RMP has implemented a new policy requiring communications with laboratories regarding problems to be documented in writing, as well as a formal internal process for approving sampling & analysis plans.

Jennifer then gave a brief summary of the data that will be collected at Artesian Slough during the summer of 2015, using 2014 S&T funds. The RMP will be sharing costs with the City of San Jose, who will also be collecting the fish. This data will be included in the 2014 RMP Sport Fish report.

2014 S&T Data Management and Archiving Web Tool

Amy Franz presented an update of the data collected during the 2014 S&T sport fish, bird egg, and bivalve monitoring events. Amy summarized the data sets have been received, QA-reviewed, and formatted, as well as the data sets that have yet to be received and fully QA-reviewed. 2014 sediment and bivalve data will be included in the 2015 Pulse report, but 2014 sport fish data will not.

Amy also presented the development of the RMP Archive Web Tool, which will allow external users to view RMP archives available in short and long-term storage and request archives for analysis. This tool will help streamline the archive sample request process, and reduce labor costs associated with evaluating these requests. This tool will be demoed at the December 2015 TRC meeting.

Phil Trowbridge noted that approximately \$40,000 is spent each year on archive samples, so the RMP should encourage that these samples are used. RMP staff will review the value of maintaining archives at current levels and discuss this issue with the TRC at a future meeting.

Action Items

- Add (1) an Archive Database Web Application Demo, and (2) a discussion of the current archive size and budget to the December 20, 2015 TRC meeting agenda (Phil Trowbridge).

9. Decision: Recommendation regarding Undesignated Funds for 2015 Sturgeon Muscle Plug Study

Jennifer Sun presented a request for \$12,000 of the Undesignated Funds pool to fully fund the 2015 Selenium in Sturgeon Muscle Plug study. This study was originally approved by the Steering Committee in 2013 at \$23,000, but additional funds are requested to support (1) higher labor costs associated with project coordination and field work that had been originally anticipated; and (2) the addition of blood plasma sex steroid analyses to determine fish sex and reproductive maturity information.

Chris Sommers expressed support for this funding, acknowledging that project coordination can be time-consuming. Ray Kellner asked whether this study could be combined with any other selenium studies to reduce costs, but because the timing of the studies cannot be changed, this is not possible.

The group agreed to recommend this request for funds to the Steering Committee

Action Item

- Add item to the July 21, 2015 Steering Committee meeting agenda for requesting undesignated funds for the 2015 Sturgeon Muscle Plug study (Phil Trowbridge)

10. Discussion: Comments on updated RMP Quality Assurance Project Plan

Don Yee presented a summary of the updated 2015 RMP QAPP, describing changes made since the 2014 RMP QAPP as well as similarities with QAPPs of other major monitoring programs (SWAMP QAPrP, SpoT QAPP). The group was asked whether or not the TRC, SC, and/or analytical labs should be required to sign off on the QAPP before it is approved, as is being required for the Delta RMP QAPP.

Multiple members of the group expressed trust in the RMP staff and indicated that formal approval by the TRC, SC, and analytical labs would not be necessary. A draft QAPP should be sent to the TRC for review and comment, and the analytical labs can be consulted for review. Following this review process, the document can simply be signed by internal RMP staff (Don Yee, Amy Franz, Jay Davis, Phil Trowbridge) before being considered formally approved.

Chris Sommers indicated that typically, analytical laboratories do not need to approve the QAPP, but reference to the QAPP should be made in lab contracts, leading the labs to review the document and ensure they will meet its requirements. Within these contracts, a link should be provided to the full QAPP documents, as well as a full citation of the document, including the year (or version number) to uniquely identify the document version. Laboratory signatures on these contracts will allow deviations from the QAPP to be attributed to lab error and associated costs can be recovered.

Rod Miller suggested that SFEI and/or the RMP consider using SharePoint software for document management and version control. SFPUC, the City of San Jose, and CH2M Hill use SharePoint, which is widely used and accepted.

Action Item

- Add a version number to the 2015 RMP QAPP to uniquely identify the document once it is approved (Don Yee).

11. Information: RMP Charter and TRC Membership

Phil Trowbridge relayed that the RMP Charter approved by the Steering Committee at the April 21, 2015 Steering Committee meeting formally created a new seat on the TRC for an NGO representative. The

group welcomed Ian Wren from the San Francisco Baykeeper, who has regularly attended TRC meetings in the past and will be filling this seat.

12. Information: Status of Deliverables, Action Items, and Upcoming Meetings

Phil Trowbridge briefly explained the status of all overdue deliverables on the RMP Deliverable Spotlight report and the Action Items report as of 6/19/2015.

Chris Sommers noted that an earlier release of the PCB Ettie Street conceptual model report would have provided more information for the group to better understand the proposal to develop a conceptual model for San Leandro, and consider fully funding the PCB proposal.

13. Discussion: Setting meeting dates for 2016 and planning agenda topics for future meetings

The group decided to tentatively schedule the spring 2016 TRC meeting date on March 29, 2016. Several committee members were no longer present during this discussion, so this date will be confirmed over email. The summer 2016 TRC meeting date will be scheduled at the September 2015 TRC meeting.

Action Item:

- Send an email to the all TRC committee members to propose and confirm the March 29, 2016 meeting date (Phil Trowbridge).

14. Discussion: Plus/Delta

Bridgette DeShields and Chris Sommers expressed approval of the Special Study discussion process, which was well organized and thus much shorter than in previous years. The early release of the agenda package allowed adequate time for review of the proposals, and the infographic categorizing the functions of the special studies provided good organization and a starting point for thoughtful discussion. The meeting was ended early.

Bridgette DeShields suggested that future proposals with multiple funding levels should be more explicit about the differences in what would and would not be funded under the different funding levels.

The meeting was adjourned at 3:00 pm.