



RMP
Technical Review Committee
June 17th, 2014
San Francisco Estuary Institute
DRAFT Meeting Summary

Attendees

Bridgette DeShields, Integral, Inc.
 Karen Taberski, SFRWQCB
 Ian Wren, San Francisco Baykeeper
 Eric Dunlavey, City of San Jose
 Nirmela Arsem, EBMUD
 Rod Miller, SFPUC
 Mike Connor, EBDA
 Brian Ross, EPA
 Chris Sommers, EOA, Inc. (BASMAA)
 Amy Chastain, AECOM/ SFPUC

Jay Davis, SFEI
 Don Yee, SFEI
 Ellen Willis-Norton, SFEI
 Rebecca Sutton, SFEI
 Alicia Gilbreath, SFEI
 David Senn, SFEI

Call-In

Phil Trowbridge, SFEI

I. Introductions

Bridgette DeShields wondered if it would be worthwhile designating alternates for TRC meetings. Chris Sommers added that it may be useful to designate TRC members as workgroup chairs. Jay replied that the RMP is contracting with David Ceppos, Center for Collaborative Policy (CCP), to create foundational documents that detail RMP meeting procedures.

II. Action: Mesohaline Year 2 Funding [Jay Davis]

Jay Davis noted that in 2012 funding was allocated for a two-year study that would develop a benthic index for the San Francisco Bay mesohaline environment. Phase I of the study was completed in 2013 and the proposal for Phase II (\$106,000) was sent to the TRC. Karen Taberski stated that the study is no longer a near-term priority for the Water Board and noted that Naomi Feger, Tom Mumley, and she agreed that the second year of the study should not be funded in 2015, though it might be re-considered at a later time. Chris Sommers agreed with Karen's recommendation and stated that we would like a full account of how the Phase I money was spent and how much money was left over. Chris stated that the study should be brought back as a potential special study for 2016.

Action Items:

1. Phil Trowbridge will inform Chris Sommers how much money was left over from Phase I of the mesohaline work.

III. Action: Recommendation for Special Studies for 2015 [Group]

Bridgette DeShields noted that many TRC members would like to take the special study proposals to their respective agencies; therefore, the decision on what studies to recommend was not made during the meeting. Chris Sommers stated that he would prefer to receive the special study proposals at least two weeks before the meeting and would like a short paragraph from each workgroup on how the particular studies were developed, reviewed, and chosen. Jay Davis suggested telling the workgroups a specific date after which special studies will not be considered by the TRC. Additionally, Chris would like each study to have a distinct RMP deliverable. He was concerned that if the RMP is only funding a portion of the study it will be difficult to determine how the money is spent and when the work is completed.

Emerging Contaminants Workgroup Studies

1. *CEC Monitoring in Effluents (Sutton) (\$55,000)*
2. *Monitoring CUPs in Napa River/ North Bay (Willis-Norton) (\$55,000)*
3. *Monitoring Microplastics (Willis-Norton) (\$9,000)*

Rebecca Sutton stated that all of the special studies on emerging contaminants were vetted by the ECWG science advisors. The ECWG did not list their priorities between the three studies. Bridgette DeShields stated that her number one priority is CEC monitoring in effluents (Study #1).

Chris Sommers listed monitoring Current Use Pesticides in the Napa River as a moderate or high priority. Karen Taberski stated that the study could be deferred until 2016.

Ian Wren commented that it may be better to conduct sampling after a storm event for the microplastics study. Chris Sommers added that Chelsea Rockman at UC Davis is planning on sampling microplastics in the Bay/Delta region. He suggested contacting her and seeing if there is a possibility for collaboration. Chris also suggested that Ellen Willis-Norton list what the goals of the study are and determine if microplastic monitoring will become a long-term RMP effort. Eric Dunlavey supported microplastic monitoring because of the current lack of information and the low cost.

Sources, Pathways, and Loadings Workgroup Studies

4. *Small tributaries storm water wet weather characterization (McKee) (\$415,000)*
5. *Regional watershed spreadsheet model (RWSM) year 5 (McKee) (\$35,000)*
6. *Watershed loadings trends support (McKee) (\$35,000)*
7. *Small tributaries loading strategy (STLS) coordination support (McKee) (\$26,000)*

Jay Davis stated that the SPLWG met at the end of May and included participation of the workgroup's science advisors. At the meeting the members discussed changing the direction of the small tributary work and emphasizing examining a greater number of watersheds less frequently. The SPLWG members added that the group should also focus on source control options. Chris Sommers stated that reaching more watersheds will give the group a general idea of PCB and Hg sources; the study will help determine what types of old industrial land are associated with high PCB concentrations. The funds for study

#4 (Small tributaries stormwater wet weather characterization) will be used to reach as many watersheds as possible for sampling during the wet weather season.

Chris stated that the next step for the RWSM (study #5) is re-paramterizing the model. Study #6 (Watershed loadings trends support) was proposed because of a comment Barbara Mahler made during the workgroup meeting. Finally, STLS coordination support (study #6) is an ongoing program management cost. Chris noted that the information obtained from the four proposed SPLWG studies will inform the next five year permit term.

Chris and Alicia Gilbreath noted that if any cost reductions were necessary, it would have to come out of study #4 (Small tributaries storm water wet weather characterization), for which \$415,000 is requested. The number of sites sampled would be reduced. Alicia noted that approximately 20 sites could be sampled with \$415,000. Alicia added that labor costs will be reduced in the future because this year they are testing the accuracy of passive samplers, which will also facilitate future sampling at sites that are in confined spaces. Chris noted that the first flush is not as important to catch at the sites because the focus is no longer on loads.

Mike Connor asked how many high priority PCB and Hg sites exist in the Bay Area and if they all could be identified; Chris responded hundreds. But, there are thousands of land parcels that may be associated with PCBs. So far, BASMAA has collected dirt samples from approximately 700-800 sites that can help identify potential drainage sites. Chris stated that the goal is to implement source control at the identified sites. Bridgette DeShields stated that the study can be linked to future margins sampling work. Chris agreed and then noted that the study design will be re-worked if the first year is not successful.

Amy Chastain asked if the study will generate information for contaminants other than PCBs; Chris stated that Hg concentrations will also be analyzed. Dave Senn asked if there was a risk associated with focusing on just PCBs and Hg. He suggested thinking about a longer-term stormwater management strategy for other contaminants. Chris commented that the strategy is based on complying with the permit requirements.

Nutrient Studies

8. Nutrient Modeling (Senn and Yee) (\$100,000)

9. Moored sensor program continuation (Senn and Novick) (\$300,000)

10. Nutrient science program coordination (Senn and Novick) (\$20,000)

11. Monitoring program development (Senn and Novick) (\$50,000)

11.5. Conceptual Model Update (Senn and Novick) (\$30,000)

Dave Senn began the discussion by stating that the Nutrient SC is working on providing a level of oversight on Nutrient Studies that the RMP is comfortable with. In the five year plan the Nutrient SC put together, it stated that the focus of RMP studies would be modeling and moored sensor work. However, Dave noted that the RMP can discuss shifting priorities. Chris Sommers asked how long moored sensor work would be funded

by the RMP. Dave responded that moored sensor work cannot be fully funded by the RMP over the long-term; the RMP was charged with purchasing the infrastructure, setting up the database, and subsequently routine data analysis. The USGS may be able to incorporate moored sensors into future budgets. Dave noted that the coordination task (study #10) ensures that there are funds available to manage projects and provide updates to the RMP.

Ian Wren suggested allocating a lump sum to Nutrient studies and allowing Dave and the Nutrient Steering Committee to decide how to spend the money. Chris disagreed with Ian, stating that he wanted to ensure that each study had a distinct RMP deliverable and was concerned with the RMP only funding a portion of a study. Dave responded that he was following the RMP SC's instructions to set-up an umbrella Nutrient organization where funding was shared between entities.

12. SQO Analysis of Pacific Dry Dock (Willis-Norton) (\$45,000)

Karen Taberski stated that Pacific Dry Dock is a 303(d) listed site that was cleaned up in 1998 and the SFBRWQCB would like to conduct SQO sampling to determine if it can be removed from the 303(d) list. She noted that the study is the only Exposure and Effects Workgroup study and it was originally a 2014 special study that was deferred. Bridgette DeShields and Mike Connor commented that the study does not have any direct management ties and could be deferred another year.

13. Dioxin Synthesis (Yee) (\$40,000)

Chris Sommers and Karen Taberski agreed that the dioxin synthesis could be deferred to 2016.

Selenium Strategy Studies

14. Selenium in White Sturgeon Muscle Plugs (Davis) (2014)

15. South Bay Selenium Synthesis (Davis) (\$20,000)

16. Selenium Data Compilation and Literature Review (Davis) (\$10,000)

Mike Connor and Bridgette DeShields agreed that the Selenium studies were of high priority because they will inform the implementation of the Selenium TMDL.

Jay Davis stated that the Selenium Strategy team also suggested a 2014 study that would be funded by the RMP unencumbered funds (\$23,000). The proposal includes collecting plug samples during California Department of Fish and Wildlife's sturgeon population sampling in the Fall. The goal of the study is to increase the sample size of sturgeon collected for Se analyses. The TRC agreed to recommend the 2014 plug sampling proposal to the SC for funding.

17. PCBs: Priority Margin Unit Conceptual Model Development and Monitoring (Davis) (\$100,000)

Jay Davis stated that the PCB Strategy team met recently and included the Contaminant Fate Workgroup science advisor Frank Gobas. The group agreed to recommend a study proposal to the TRC that included carefully selecting a priority margin unit or units (potentially where management action is already planned upstream) and conducting a conceptual modeling and mass balance exercise to determine if the management action in the watershed would be expected to lead to changes in concentrations in the margin unit. The budget for prioritizing the margin units is \$30,000 and the budget for developing the conceptual and mass balance models is \$60,000, which is anticipated to cover one or two margin units. The Team also recommended allocating \$10,000 for strategy development and planning for 2016.

Chris Sommers suggested engaging stormwater agencies and city staff in developing these models. He added that it would be useful to pick a margin unit that was on a municipality's radar screen. He added that it would be useful to choose a margin unit associated with a relatively small watershed. Chris supported the study because it connects load allocations with Water Board targets. Chris and Rod Miller noted that 2015 stormwater sampling could occur upstream of the priority margin unit.

Amy Chastain noted that she would like to see in writing how the planned S&T margin sampling is connected to the proposed PCB margin conceptual model work.

Final Discussion

Mike Connor suggested allocating an equivalent lump sum to Nutrients and SPLWG for 2015 studies, meaning that SPLWG studies should for now be allocated \$500,000 instead of \$511,000. The TRC agreed to defer study # 2 (Monitoring CUPs in Napa River/ North Bay), study # 12 (SQO Analysis of Pacific Dry Dock), and study # 13 (Dioxin Synthesis) to 2016 or later. The TRC agreed to set up a call or communicate via email to decide whether to use \$76,000 from the reserve to fund the remaining studies or to reduce the funding for the PCB, Nutrient, or SPLWG work.

Action Items:

2. Jay Davis will send out an email to begin the discussion on whether to use \$76,000 from the reserve to fund the remaining special studies or to reduce the funding for the PCB, Nutrient, or SPLWG work.
3. Jay will provide an explanation to the TRC of how the planned S&T margin sampling is connected to the proposed PCB margin conceptual model.

IV. Approval of Agenda and Minutes [Bridgette DeShields]

Karen Taberski motioned to approve the previous TRC summary, Eric Dunlavy seconded, and the motion was unanimously approved. Mike Connor suggested that one person (Ellen Willis-Norton) send out all emails related to the TRC to make it easier to find emails.

V. Information: Steering Committee Report [Jay Davis]

Jay Davis provided the SC report to the TRC and noted that several SC members were interested in having shorter meeting summaries. TRC members agreed that they thought the length of the TRC summaries was appropriate. The RMP communications strategy was discussed during the meeting and is an agenda item for the next SC meeting. The SC agreed that it would be valuable to have a one page description of the RMP to provide to stakeholders.

The SC agreed to fund the collection of muscle plugs during the RMP sport fish collection effort. The SC also agreed to approve funding to turn the RMP Update into an e-book. The SC committed funds from the RMP Review Reserve to fund program-level work by Dave Ceppos from the Center for Collaborative Policy.

The SC also approved \$20,000 for margins sampling planning. Jay stated that at the quarter three TRC meeting a draft margins plan will be presented and TRC members will need to decide if they will recommend the plan to the SC.

VI. Action: Changes to S&T Monitoring [Jay Davis and Don Yee]*Water*

Jay Davis asked the TRC if PCBs, PAHs, pesticides, and toxicity should be sampled in water every 8 or 10 years. California Toxics Rule (CTR) pollutants are sampled every 10 years at three sites and the next round of sampling will occur in 2015. Mike Connor stated that it would be useful to conduct PCB, PAH, and pesticide sampling with the CTR pollutants so he supported a 10 year cycle. However, the EPA supports toxicity testing and Karen Taberski and Mike agreed that water toxicity should be tested biennially.

Sediment

Jay stated that the largest amount of savings will be from reducing the frequency and number of sediment sites sampled. The RMP has not yet decided if PCBs, PAHs, Hg, MeHg, and toxicity should be sampled on a 4 or 8 year cycle. Brian Ross stated that RMP sediment data are important for dredging operations; the data are used to calculate threshold concentrations of contaminants in dredged sediment. If the concentrations exceed the thresholds, the sediment cannot be discharged into the Bay. Additionally, the RMP data are used to calculate bioaccumulation triggers. If dredged sediment is below the bioaccumulation trigger, the dredger saves thousands of dollars because they do not have to conduct toxicity testing. He was concerned that the dredging community and the National Marine Fisheries Service would not be supportive of only sampling every 8 years. However, as long as the concentrations are stable, he thinks the dredging community would be okay with sampling every 4 years. Brian noted that he would prefer that all of the RMP sediment analytes, including metals, are sampled every four years alongside toxicity. The TRC agreed with Brian that the analytes should be sampled on a 4 year cycle.

Margins

SFEI's GIS shop is completing their analysis of the bathymetry and will send the information to a statistician, Don Stevens. The full list of sites will be determined by August and sent to the TRC in September. Don confirmed that the margins and open Bay results will be kept in separate databases.

VII. Action: Re-Analyzing Sediment Samples [Don Yee]

Don Yee reminded the TRC that EBMUD changed their drying procedures for organics in 2007. Therefore, the 2004-2006 numbers were lower by a factor of two or more compared to the 2002-2003 and 2007-2012 concentrations. Don recommended not reanalyzing the 2004-2006 samples because the RMP is moving to a 4 year sampling cycle anyways. Therefore, the 2004-2006 organics data will not be available on the Contaminant Data, Display, and Download tool. The TRC agreed that the three 2005 samples that were reanalyzed should be reported.

VIII. Discussion: RMP Update and RMP Annual Meeting [Jay Davis]

Jay Davis stated that the text of the RMP Update will be sent out by the end of June and will ask the TRC to review the text within one week.

Jay stated that the RMP Annual Meeting agenda is coming together and that the one session that still needs to be finalized is Nutrients, which Naomi Feger and David Senn will discuss. Mike Connor and Amy Chastain agreed that a talk about the Lower South Bay Synthesis report would be more interesting than a talk on the Nutrient Strategy.

Amy asked about the status of the green infrastructure projects SFPUC and SFEI were working on. Mike said that Rosie Jencks at SFPUC would be a good person to ask about the status and could also speak at the Annual Meeting. Mike also suggested shortening the S&T discussion portion and adding time to the talks about small tributaries loading and green infrastructure. Amy asked if the Municipal Regional Stormwater Permit (MRP) could be a talk at the Annual Meeting since it is being reissued next summer. Jay said that he would ask if BASMAA is ready to give a talk about the MRP.

Mike suggested that Adam Olivieri moderate the stormwater section of the Annual Meeting. Amy suggested that Karin North moderate the CEC section.

Action Items:

4. Jay Davis will ask if BASMAA is ready to give a talk about the MRP at the RMP Annual Meeting.
5. Jay Davis will inform Dave Senn that the TRC would rather hear a talk about the Lower South Bay Synthesis report than a talk on the Nutrient Strategy.

IX. Information: Update on Workgroups and Scorecard [Jay Davis]

Jay Davis went over the workgroup updates. He noted that PBDE manuscript is almost complete and that Rebecca Sutton will send the TRC the draft with a deadline for

comments. Meg Sedlak will draft the PFCs in Bay Biota manuscript by the end of August. The 2012 bird egg report has been combined with the 2006/2009 bird egg report and a draft will be completed by September.

The Selenium Strategy Team is considering looking at sturgeon movement in the Bay and putting all Se data into a centralized data database, and will start on this work with 2014 funds allocated for Strategy development. Mike Connor noted that Tetra Tech has recently completed work on Se; Bridgette DeShields replied that she will send the Selenium Strategy team a copy of their report. The PCB Strategy Team is beginning to plan the margin unit study. Jay added that the PCB Synthesis report will be completed by the end of June and sent to the team for final review.

Nutrients Updates [Dave Senn]

Dave Senn stated that the nutrient technical team has met twice now; he noted that future meetings will be planned farther in advance. The Nutrient SC will meet in September.

Dave informed the TRC that the majority of the nutrient modeling budget will be used to hire a water quality modeler. The rest will be used for the USGS and CASCaDe partnership, working with Deltares, and for the technical advisors. Mike Connor asked how many years it will take to develop the model and about the overall budget. Dave responded that it will take between 5 to 10 years to complete the model and will cost approximately \$500,000 a year. If all the nutrient work related to the modeling (e.g., nutrient sampling) is included, it will cost approximately \$2 million a year. Karen Taberski asked about the status of USGS water quality monitoring. Dave responded that the USGS assured him that they are doing everything they can to ensure the program will continue. They have asked the Nutrient SC to partner with them to purchase a research vessel, which they will subsequently staff.

Dave then informed the TRC of the status of algal toxin sampling with SPATT bags. Raph Kudela's lab at UC Santa Cruz has been running the study. They have not spent the funds the RMP allocated, but did complete the analysis for the 2013 samples. They are asking for a no-cost extension to complete a more substantial data analysis, analyze the 2014 SPATT results, and write a report. Raph is also planning to measure algal toxin concentrations in RMP mussel samples.

Karen stated that she thought the focus would be on increasing the accuracy of the estimation of toxin concentrations in water through lab studies. Dave responded that he will ask Raphe to focus on increasing the accuracy, but that the portioning rate makes it difficult to determine the actual concentration. The TRC was supportive of a no-cost extension for the algal toxin study and asked that the draft report be completed by March 2015.

Dave finished his presentation by stating that the stormwater project will be complete by July and will include two years of data. An interesting result was that there was a lot of organic nitrogen in the stormwater samples.

Action Items:

6. Rebecca Sutton will send the TRC the draft PBDE manuscript with a deadline for comments.
7. Bridgette DeShields will send the Selenium Strategy team a copy of the Tetra Tech Se report.
8. Dave Senn will ask Raphe Kudela to focus on increasing the accuracy of estimates of water concentrations from the SPATT bag algal toxin concentrations, as indicated in the original proposal.

X. Action: Set date for next meeting and Plus/Delta [Bridgette DeShields]

The next TRC meeting will be held on Tuesday, September 23 at SFEI.